The geographies of financial activities within an emerging international financial center: the case of Beijing

Fenghua Pan

Faculty of Geographical Science, Beijing Normal University, E-mail: panfenghua@bnu.edu.cn

Sarah Hall

School of Geography, The University of Nottingham, E-mail: Sarah.Hall@nottingham.ac.uk

Hua Zhang

Faculty of Geographical Science, Beijing Normal University, E-mail: zhanghua@bnu.edu.cn (Correspondence Author)

January, 2018

This research is supported by the National Science Foundation of China (No. 41201107), the Fundamental Research Funds for the Central Universities (No.2012LYB36, No. 2013YB06) and Beijing Higher Education Young Elite Teacher Project (No.YETP0290).









The geographies of financial activities within an emerging international financial center: the case of Beijing

Abstract

Beijing is well-known as the political, cultural, education and innovation center, but not the financial center of China. This paper examines how despite the political and popular focus on Shanghai as mainland China's leading international financial center (IFC), Beijing has developed a significant financial centre in its own right. This paper shows that Beijing's financial activities have become increasingly agglomerated in some specific areas within the city. In particular, the Financial Street and Central Business District are the two core areas. The former has the potential to be world-class financial district, where the key financial regulators and lead financial institutions are located. The regression analysis shows that agglomeration economies and the urban planning are the key factors that have led to the geographical concentration of financial activities within Beijing. The results of this study could shed some lights on the research on locational behaviors of financial service firms in an IFC by providing a case from an emerging economy.

Introduction

Reflecting their rapid economic growth, cities from emerging economies are growing to be important nodes in global financial networks. This paper focuses on the development of international financial centers (IFC) within these economies through a focus on an emerging Chinese financial center, Beijing. In this respect, Chinese cities like Beijing and Shanghai have rapidly increased their significance within rankings of global cities and financial centers (Taylor et al. 2014a, Taylor et al. 2014b, Yao and Shi 2012, Timberlake et al. 2014, Chubarov and Brooker 2013, Wei and Yu 2006, Yusuf and Wu 2002, Zhang 2013). In particular, these cities are becoming increasingly important financial centers, reflecting the earlier development of relatively new financial centers such as Tokyo in the 1970s-1980s (Reed 1980). In the case of China, this reflects national economic planning policies and the development of national champions in different sectors. However, much of the political and academic interest in emerging Chinese financial centers to date has focused on Shanghai (Huang and Yang 2003, Karreman and van der Knaap 2009, Yang and Qin 2010). This reflects the fact that Shanghai has been designated as China's leading IFC by the Chinese central government and, as a result, has received considerable support in term of economic policy. Indeed, this designation has partly led to the development of a significant cluster of overseas banks and

financial institutions in Shanghai (Lai 2012). However, at the municipal level, both Shanghai and Beijing have ambitions to develop into IFCs and it is the less wellstudied case of Beijing that is the focus of this paper.

In this respect, despite Beijing being the well-known political center of China, its reputation as an IFC is not as well developed as that of Shanghai. Indeed, although it was pointed out 10 years ago that Beijing was the most competitive financial center (Zhao, Zhang and Wang 2004), Shanghai has been more recognized as the leading financial center in mainland China (Karreman and van der Knaap 2009). However, in the past decade, the financial sector in Beijing has experienced unprecedented growth and yet the nature of the financial services cluster in Beijing and its development remains poorly understood and largely neglected in a range of social scientific disciplines.

Drawing on the latest financial sector data at both regional and firm levels, this study revisits the function and competitiveness of Beijing as a financial center. What are the advantages of Beijing as a financial center in China and beyond? Where are financial service firms located in Beijing? Is there any salient financial district in Beijing, just as those in the matured international financial centers globally? What are the driving factors that have led to the geographical distribution of financial service firms in Beijing? By addressing these questions, the paper uses the case of Beijing, a rapidly growing financial center in China to advance understandings of IFCs more generally from the urban geography perspective, as the literature on which has been advanced most fully through a focus on IFCs in Western Europe and North America. In particular, the paper demonstrates that as financial services have developed in Beijing, so the spatial form of financial service sector has changed within the city over the last three decades. The paper examines the emergence of distinct financial clusters within Beijing and as such represents the first geographical analysis of Beijing's transformation as a IFC as it attempts to follow in the footsteps of other IFCs that have consciously sought to enhance their competitiveness such as through Singapore's new financial district (Wong 2004).

The paper is organized as follows. The next section raises the key underpinnings of an IFC, which will be used to understand Beijing's competitiveness as a financial center. The third section places Beijing in China's financial service sector by comparing its competitiveness and functions with other cities, which is followed by a spatial analysis of the financial services within the city. The fifth section illustrates the development trajectory of the Financial Street by highlighting the initial locational choices of several key financial institutions and urban planning. The sixth section applies regression models to explain the factors that might lead to the location patterns of financial service firms in Beijing. The final section reflects on the implications of this analysis for understandings of the role of Beijing as an IFC and how spatial evolution of financial service firms within the city could help to shape an IFC.

Key underpinnings of an IFC

Despite the significant changes to the international financial system following the 2007-8 financial crisis, London and New York have maintained their position as leading IFCs (Wójcik 2013, Faulconbridge 2004, Clark 2002) and the so called NY-LON connection between London and New York remains a key driver within global finance as well as a source of financial innovation (Knox-Hayes 2009, Wójcik 2013). In addition to these two cities, it is now well recognised that there are several second-tier IFCs, mostly located in advanced economies, e.g., Hong Kong, Singapore, Tokyo, Frankfurt, Luxemburg, and Amsterdam and so on. All these lead financial centers are underpinned by a number of common attributes set out below.

First, leading IFCs house major international stock exchanges such as the NYSE and Nasdaq in New York and the London Stock Exchange in London. They are the trading centers of stocks, futures, international currencies, gold, and other important merchants. In many cases, the financial regulators, including the central bank, regulators on securities transactions and other financial institutions are also located in these financial centers. As a result of these liquidity and regulatory benefits, top tier IFCs attract significant clusters for large international financial institutions (Clare, Gulamhussen and Pinheiro 2013), investors and highly skilled financial workers (Beaverstock 2005, Beaverstock and Hall 2012). In particular, foreign financial service firms are highly agglomerated in the top international financial financial centers. These financial activities are supported by significant agglomerations of advanced producer services firms, notably law firms (Sassen 2001, Friedmann and Wolff 1982, Taylor et al. 2014b). Partly due to the agglomeration of the APS firms, headquarters of large non-financial service firms are also quite concentrated in these financial center cities (Pan et al. 2015).

Second, it is widely observed that financial service firms and supporting APS are concentrated specific clusters within financial centers. These financial service districts evolve with time but are typically centered upon a central bank, a stock exchanges and the office of large international financial service firms. For example, financial districts in New York and London originated in Wall Street and the City of London respectively although increasingly these have expanded to Midtown in New York and both west into Mayfair and East into Canary Wharf and Old Street in the case of London (Cook et al. 2007, Gong and Keenan 2012). As a typical industrial cluster, the financial district can enjoy the benefits of agglomeration economies and underpin the competitiveness of a city and even a country (Porter 1980). For example, research in London shows that the applomeration of financial service firms can help innovate and defuse knowledge that is vital to the production of bespoke financial products, tailored to the needs of particular clients (Cook et al. 2007). Meanwhile, the New York case shows that, although some financial service firms left Manhattan after 11 September 2001, many returned shortly after due to the unique location attributes of the district (Gong and Keenan 2012). Importantly for our arguments later on in this paper, as a result of the success of these IFCs, Chinese financial centers have increasingly turned to London in particular as a city upon which to model their own financial services sector development (Lai 2012).

Third, the rise and fall of the national economy in which they are located and the state and regulatory support for financial services is also a key factor in shaping the nature and competitiveness of IFCs. Many cities have experienced variable fortunes at the regional and global level in terms of their relative importance as IFCs (McKay 2014, Reed 1980, Engelen 2007, Engelen and Grote 2009, Grote 2003). Perhaps most notably, Tokyo became an important IFC in the 1980s (Reed 1980). However, it has declined significantly in the last two decades. Indeed, Tokyo has lost its reputation as a first-tier IFC (McKay 2014). Some second-tier IFCs in Europe have also declined in relative importance as IFCs¹, partly due to the decline of the economic influence of their home countries. An important factor in shaping the relative fortunes of IFCs is state and regulatory support. For instance, regulatory changes have been used to maintain the attractiveness of IFCS to financial institutions, perhaps most notably in the case of London in the mid-1980s as it sought to compete with New York (Kynaston 2002). More recently, Hong Kong and Singapore have used state support to facilitate their growth as IFC (Woo 2015).

All in all, there exist some indicators to measure a financial center, such as the output and employment of the finance sector of the city (Zhao et al. 2004), presence of key financial institutions and financial infrastructure and so on. From an urban geography perspective, the spatial patterns of the financial activities within the city can well represent the development of the financial industry as a whole. In particular, it is of great importance for an IFC to have a well-known financial district in the city center. We will use this framework to analyze Beijing as an emerging financial center in the following sections.

Beijing's role in China's financial geography

Overall, Beijing has one of the largest financial sectors in mainland China and has unique advantages in this sector. As shown in Figure 1, from 2000-2014, Beijing and Shanghai had been the top two cities in the finance industry within mainland China and the outputs of the two cities were quite close to each other. Indeed, the output of the finance industry of Beijing was slightly larger than that of Shanghai in 2014. In 2014, the finance sector accounted for 15.4% of the GDP of Beijing in 2014, which is at a similar level with Hong Kong of 17% in the same year². In terms of employment in the finance sector, Beijing has outperformed other cities within China mainland since 2006 (see Figure 2). In 2013, the total employment of the finance industry in Beijing was as large as 390,000, over the quantity of that in London, which was 345,400 in 2014³. The National Equities Exchange and Quotations⁴, a Nasdaq-like stock exchange providing finance channels for high-tech firms, was established in

¹ See The Global Financial Centres Index 17.

http://www.longfinance.net/images/GFCI17_23March2015.pdf (11 January, 2018) 2 http://www.censtatd.gov.hk/hkstat/sub/sp350.jsp?productCode=FA10009 (11 January, 2018) 3 https://www.statista.com/statistics/298354/uk-financial-sector-total-financial-services-

employment-in-london/ (11 January, 2018)

⁴ http://www.neeg.com.cn/overview (11 January, 2018)

Beijing in 2012, and is likely to lead to a growth in the importance of the securities sector in Beijing⁵.



Figure 1. Output of the finance industry in Beijing, Shanghai and Shenzhen

Source: compiled from China City Statistical Year Book, Beijing Statistical Yearbook, Shanghai Statistical Yearbook and Shenzhen Statistical Yearbook



Figure 2. Employment of the finance industry in Beijing, Shanghai and Shenzhen

Source: compiled from China City Statistical Year Book, Beijing Statistical Yearbook, Shanghai Statistical Yearbook and Shenzhen Statistical Yearbook

⁵ https://www.ft.com/content/cc931ad6-d129-11e4-86c8-00144feab7de (11 January, 2018)

In addition, Beijing has a significant advantage in the financial services sector in China as it is home to most central financial regulators and headquarters of giant financial institutions across a range of different types of financial services activities (see Table 1). First, as the capital of China, Beijing is the financial policy-making center. China's central administrative bodies for the finance sector, including People's Bank of China (PBC), the China Securities Regulatory Commission (CSRC), the China Bank Regulatory Commission (CBRC), and the China Insurance Regulatory Commission (CIRC) are all located in Beijing. In addition, the Minister of Finance and National Development and Reform Commission (NDRC) are also located in Beijing. The major national associations of finance sub-sectors are mostly located in Beijing, including the Securities Association of China, China Banking Association, Insurance Association of China, Payment & Clearing Association of China (PCAC), and National Association of Financial Market Institutional Investors (NAFMII) and et al.

Second, most large domestic financial institutions including banks, insurance companies, securities companies and et al., are headquartered in Beijing. Of the largest 10 commercial banks in China, seven of them are headquartered in Beijing, and only one in Shanghai, Shenzhen and Fuzhou. Beijing is also one of the most attractive cities for foreign banks (He and Fu 2008). By the end of 2014, Beijing has 10 regional headquarters of foreign banks including Goldman Sachs, Morgan Stanley and UBS. As noted by Lai (2010) because Beijing acts as the command center within Chinese financial networks by virtue of its political and regulatory role, international investment banks are more likely to locate in Beijing to be close to their domestic clients and to be informed of relevant policymaking changes in China. In addition, Beijing also has the largest number of headquarters of Finance Companies⁶ and Automotive Finance Companies⁷ in China mainland. Beijing is also the center of the insurance sector in China mainland. By the end of 2014, Beijing has 55 headquarters of insurance companies, which accounts for about one third of the country's total.

Beijing is also the leading city in the securities industry as it has the 20 headquarters⁸ of security companies by the end of 2014, only second to Shanghai with 21 headquarters. Moreover, although some security companies are registered in other cities, the real headquarters are located in Beijing. For instance, CITIC Securities is registered in Shenzhen, however, the commanding center of the company is located in Beijing. In addition, Beijing is the dominant center of venture capital (VC) industry in China (Pan, Zhao and Wójcik 2016). Venture capital companies in Beijing are running the largest amount of capital. In addition, Beijing is the most dynamic city in setting up star-ups, VC investment and exit (Zhang 2011).

Finally, Beijing is the favored choice of headquarter location for important financial institutions of other types. For example, Beijing is the home to the four

⁶ A large group corporation can have a Finance Company as an affiliation, which needs to be approved by CBRC. There were 195 Finance Companies in China by the end of 2014. 7 An Automotive Finance company affiliated to an automobile company needs to be approved by CBRC. There are 19 automotive finance companies in total in China by the end of 2014. 8 Data are drawn from the official website of CSRC and it is calculated based on the registered address.

largest state-owned asset management companies, including China Orient Asset Management Corporation, China Huarong Asset Management Co., LTD., China Great Wall Asset Management Corporation, and China Cinda Asset Management Co., LTD. In addition, the major clearing companies are also located in Beijing, including China Securities Depository and Clearing Corporation Limited (CSDC), China Central Depository & Clearing Co., LTD (CCDC). Moreover, China's two sovereign wealth funds including China Investment Corporation, SAFE Investment Company Limited are headquartered in Beijing. Recently, the Silk Road Fund and Asian Infrastructure Investment Fund are all set up and headquartered in Beijing.

Major Institutions	Beijing	China mainland	Data source
Regulators	PBC, CSRC, CIRC, CBRC	-	Authors collect
National Stock Exchanges	the National Equities Exchange and Quotations	3	Authors collect
Headquarters of State-owned Commercial Banks ⁹ and Joint- Stock Commercial banks	9	18	CBRC
Regional headquarters of foreign banks	10	71	CBRC
Headquarters of Insurance companies	55	164	CIRC
Headquarters of Security Companies	20	115	Securities Association of China
Headquarters of Mutual Funds	22	96	Asset Management Association of China
Venture capital & Private Equity Funds	1462	8591	Zero2IPO

 Table 1:
 Headquarters of major financial institutions in Beijing

Note: all data were collected by the end of 2014

In addition to its strengths in financial services, in common with other leading IFCs, Beijing also houses a significant cluster of related headquarters of the largest APS firms in China (Zhao et al. 2004, Zhao 2013). Beijing holds the most connected position within China's urban system based on APS networks (Zhao et al. 2015). The co-agglomeration of APS of different types are common in other IFCs such as New York and London (Cook et al. 2007). For instance, headquarters of the media and broadcasting companies, such as CCTV from China, and Reuters and Bloomberg from abroad, are concentrated in Beijing, which is also helpful for the city to become an information center and financial center (Cook et al. 2007, Cook and Pandit 2004).

⁹ Postal Savings Bank of China is included.

The spatial patterns of Beijing's financial service firms

As mentioned above, the spatial patterns of the financial activities of a city matters a lot for an IFC. Indeed, the growth of Beijing as a financial center over the last 20 years can be seen clearly in financial employment figures. In 1996, the total employment in this sector was only 66,940. Five years later, the figure doubled to 136,957. In 2010, the figure doubled again to 292,770. With the rapid growth of the financial sector, the finance activities have become more concentrated in the inner city of Beijing. In the meantime, the Municipal Government of Beijing has been seeking to emulate other IFCs that all have their financial services clustered in particular locations. Drawing on the firm level data of 1996, 2001 and 2010¹⁰, this section will explore the geography of the finance sector in Beijing, paying special attention to the major financial service clusters.



(a) 1996

¹⁰ Data of 1996 and 2001 are drawn from the first and second Basic Unit Survey, and the data of 2010 are drawn from Firm Database of Beijing purchased from Xinhuaxin company.





(c) 2010

Figure 3. Distribution of financial employment of Beijing in 1996, 2001 and 2010

The overall geographies of the finance service firms

Figure 3 shows the geography of financial activities of Beijing in 1996, 2001 and 2010. In general, financial employment was growing fast during this period and the spatial pattern has been reshaped gradually.

The distribution of financial activities among different ring roads in Beijing shows that the financial sector had become more agglomerated in the inner city. The employment of the financial sector was concentrated within the fourth ring road area. In 1996, over 71% of the financial employment were working within the fourth ring road, but the figure grew to 83% in 2010 (see Table 2). More importantly, financial activities were increasingly seeking to concentrate even closer to the city center within the second ring road area. The employment of the financial sector in the region accounted for 33.8% of that in the whole city in 2010, rising from 26.3% in 1996.

Year	Total employ- ment	Within the 2 nd ring road (%)	Between the 2 nd and 3 rd ring road (%)	Between the 3 rd and 4 th ring road (%)	Between the 4 th and 5 th ring road (%)	Between the 5 th and 6 th ring road (%)	Beyond the 6 th rind road (%)
1996	66940	26.32	32.61	12.74	6.36	7.13	14.84
2001	136957	31.23	28.40	14.93	5.86	7.69	11.88
2010	292770	33.84	32.66	16.28	3.67	6.91	6.64

 Table 2:
 Distribution of financial employment in different ring road areas

Major financial service clusters in the city

The kernel density analysis based on employment in financial sector shows that some financial service clusters have emerged over time (Figure 4). Kernel density estimation is a non-parametric way to estimate the probability density function of a random variable (Botev et al. 2010; Rosenblatt 1956). It can help to smooth the distribution of financial employment and identify the high density regions, which are the financial service clusters. In 1996, there was no obvious cluster of financial activities in Beijing. Five years later, the Financial Street stood out as a significant cluster of financial industry, though still not large in size. In 2010, the Financial Street grew to be an even larger cluster of financial service. In the meanwhile, the CBD area also became an important financial service cluster. The dual center of the financial industry of Beijing finally emerged. In addition, Zhongguancun area also emerged as a financial district.

Employment¹¹ in the financial services sector calculated at the Jiedao level¹² provides additional support to the claim of the emergence of two most significant financial centers within Beijing. Table 3 lists the top ten Jiedao with the largest employment in the financial sector in Beijing in 2004, 2008 and 2012. As shown in

¹¹ The data are drawn from the Economic Census of Beijing in 2004, 2008 and 2012. 12 Jiedao is a basic administrative unit in Chinese cities, which is lower than district but higher than Juweihui.

Table 3, the total employment of the financial sector in Jinrongjie Jiedao¹³ grew from 58,707 in 2004 to 155,411 in 2012. The latter accounted over 40% of the total financial employment of Beijing in 2012. In addition, the Jinrongjie Jiedao ranked the first with dominant advantage from the very beginning. Similarly, in 2012, Jianwai Jiedao and Chaowai Jiedao had the second and the third largest employment of financial sector, which are in the CBD area. These figures confirm the emergence of two financial districts within Beijing, one around Financial Street and a newer one focusing in the CBD area.



(a) 1996

¹³ The Financial Street is located within and is the core area of Jinrongjie Jiedao (3.78 km²).



(c) 2010

Figure 4. Kernel Density Map of the Beijing's financial employment in 1996, 2001 and 2010

2004	Employment	2008	Employment	2012	employment
Jinrongjie	58,707	Jinrongjie	104,607	Jinrongjie	155,411
Lugouqiao	11,593	Chaowai	14,009	Jianwai	25,584
Guang'anmennei	10,087	Lugouqiao	12,021	Chaowai	22,552
Chaowai	9,334	Guang'anmennei	11,131	Chaoyangmen	19,379
Zhanlanlu	8,907	Zhanlanlu	10,614	Dongsi	15,625
Yuetan	8,342	Jianwai	10,527	Yangfangdian	13,014
Jianwai	5,449	Chaoyangmen	7,965	Hujialou	12,872
Xichang'anjie	4,539	Yuetan	6,523	Guang'anmennei	12,022
Chaoyangmen	2,556	Donghuamen	6,023	Beitaipingzhuang	8,753
Beixinqiao	2,344	Yangfangdian	4,556	Jianguomen	8,476

Table 3:Top Ten Jiedao with the largest financial employment in 2004,2008 and 2012

Source: compiled from the first national economic census in 2004, the second national economic census in 2008 and the third national economic census in 2012

The functions of these two financial districts are distinct in terms of the financial services activity that they house. The distribution of headquarters of financial companies in sub-sectors including banking, insurance, securities, mutual funds and venture capital (private equity funds included)¹⁴ are shown in Figure 5. The Financial Street and CBD are standing out as the home to most headquarters. Though, compared to the Financial Street, headquarters are more scattered in the CBD and its neighboring areas. Moreover, the Financial Street has more headquarters of banks, security companies, while the CBD and its neighboring areas have more headquarters of insurance and venture capital companies. Interestingly, Zhongguancun has many venture capital companies, indicating it might become a new financial service cluster focusing on high-tech investments.

The Financial Street: an emerging world-class financial district

The Financial Street is an icon of Beijing's financial industry. Not surprisingly, the Financial Street has become the leading financial district in China (Yao and Shi 2012). Located inside Beijing's innermost 2nd Ring Road, the Financial Street is only 1.18 Square kilometers in size, which is similar with its counterpart in London. However, it is the center of financial activity in Beijing. The total employment in the finance sector in the Jinrongjie Jiedao is 155.4 thousand in 2012, accounting for 41% of all employment in the sector in Beijing. Moreover, the employment of bank, insurance, security and the rest of financial industry of Jinrongjie Jiedao accounted

¹⁴ The information of the headquarters is drawn from the following websites: <u>http://finance.ce.cn/jrjg/index.shtml</u> (11 January, 2018) and <u>http://pe.pedaily.cn/201412/20141204374720.shtml (11 January, 2018)</u>.

for 56%, 30%, 28 and 14% of the total employment of each sub-sector in the city. With no doubt, the Finance Street is the most important financial district of the city.

The Financial Street is similar to its western counterparts as the key financial regulators and giant financial institutions are concentrated in its small area. All national regulatory commissions of the financial services industry including PBOC, CSRC, CBRC and CIRC are located within the Street. In addition, the headquarters of the most influential financial companies in Beijing (and in China), are highly agglomerated in the Financial Street and its neighboring areas. As shown in Figure 5, headquarters of a lot of large domestic financial companies, including banks, insurance companies and venture capital companies, are located in the Financial Street. Moreover, the foreign financial institutions also have their regional headquarters located in the Financial Street. For instance, Goldman Sachs, Morgan Stanley, UBS, Royal Bank of Canada, and et al., are all located in this cluster.



Figure 5. Distribution of headquarters of large financial companies in Beijing

The Financial Street in Beijing has a quite short history of only 30 years, while the move in of a couple of key financial regulators and lead financial institutions has provided seeds for the continuous clustering of financial service firms aftermath. Furthermore, the Municipal Government of Beijing has purposely developed the Street to be the lead financial district of the city via urban planning and other policy tools.

The starting point for the development of the Financial Street was that the PBC moved into this district in 1988. Shortly after that, the financial Street was planned to be the financial district in the master plan of Beijing (1991-2010). In this plan, it was written that the Financial Street would be "the national regulation center of the finance industry" and to be "home for the headquarters of national banks and other large financial institutions." The Financial Street and CBD became dual business centers of the city in this plan (Zhou, 1994). In 1992, a developing company "Jinrongjie Holding" was established to be in charge of developing the area to be a financial district.

Another milestone of the development of the Financial Street was that the CSRC moved into this region in 1996. After that, more financial regulators and giant financial companies rushed into this region. In the last ten years, foreign financial institutions have also begun to set up their regional headquarters in the Financial Street. With the rapid growth of the Financial Street, it was recently positioned as the core of the financial center of Beijing according to a strategic plan for the development of finance industry published in 2008 (BJMC and BJMG, 2008). In 2012, it was announced at the Eleventh Party Congress of Beijing that the Financial Street is going to be the "nation's financial center"¹⁵.

More recently, Financial Street has benefitted from the fact that the National Equities Exchange and Quotations was established and headquartered here in late 2012. This is a new national stock exchange with more than 5,000 firms listing on it, which will significantly enhance the competitiveness of the Financial Street as an influential financial district. In addition, the Asian Infrastructure Investment Bank¹⁶ and the Silk Road Fund¹⁷ are also headquartered in the Financial Street. With the "going out" of Chinese firms and internationalization of RMB, the Financial Street will play an increasingly important role in the global economy.

The determinants of financial service firms' location in Beijing

The locational behavior of financial activities within and across IFC has attracted a lot of research attention, although all the cases are drawn from western economies (Beaverstock 2004, Pain 2008, Gong and Keenan 2012, Cook et al. 2007). In this section, we explore the locational choice of financial service firm within Beijing. Several key factors that might influence the geography of financial activities are

^{15 &}lt;u>http://district.ce.cn/newarea/roll/201207/05/t20120705_23464006_2.shtml</u> (11 January, 2018)

^{16 &}lt;u>http://news.china.com.cn/2015-03/31/content_35200119.htm</u> (11 January, 2018)

^{17 &}lt;u>http://bj.people.com.cn/n/2015/0122/c82838-23651474.html (</u>11 January, 2018)

identified. First, to enjoy the benefits of agglomeration economies, financial service firms might prefer to locate near competitors and other related advanced producer service firms to improve information accessibility and share the infrastructure and et al. Usually, the information spillover comes from geographical agglomeration of competitors and related institutions and firms. Being close to financial service and other related high-end service firms, they can enjoy agglomeration economies through sharing, matching and learning mechanisms (Duranton and Puga 2004). We use the employment of financial service sector of the Jiedao (Fin_{it-1}) in the starting year to proxy the localization economies and the employment of other advanced producer service sectors (APS_{it-1}) to proxy the urbanization economies.

Second, as discussed in the previous section, urban planning and other related policies from the municipal government are very important for the location choice of financial firms. In the Master Plan of Beijing (1991-2010), the Financial Street and CBD were designed to be key districts specialized in financial and other advanced business service. In fact, given the finance sector is highly regulated in China, many financial firms are inclined to locate close to key financial regulators, such as PBOC and CSRC. In addition, those large and influential financial institutions and other types of advanced producer service firms are also attractive for other financial service firms. As observed in the previous sections, most influential financial regulators and institutions are located in the Financial Street Strict and the Central Business District. To test the effect of urban planning as well as the tendency to be close to exiting important financial institutions, we use the dummy variables of proxy whether a Jiedao is within or near to the Financial Street or CBD. The first dummy variable is whether the Jiedao within the two key financial districts ($Area_Fin_{it}$). The second one is whether the Jiedao is the geographically adjacent to the two districts (Near_Fin_{it}).

Finally, financial service firms might prefer to locate in places with better transportation accessibility as it will be easier for them to reach clients and for clients to find them. The finance related business needs intensive interactions based on trust relationships, and face-to-face communication is helpful to build up and sustain the mutual trust and also good for safety issue. Locating in places with better accessibility is easier for them get the chance to meet up each other. In this study, we use the number of subway stations of a Jiedao (Cnt_Subway_{it}) to measure the transportation accessibility. In addition, clients of advanced financial service firms are usually headquartered in the inner city (Pan et al., 2015), so the distance between the Jiedao and the city center ($Dis_Tiananmen_{it}$) is used to measure the market potential. We also include the residential population of each Jiedao (Pop_{it}) to test whether the market demand from residential population within a Jiedao could affect the locational choice of financial service firms.

We investigate the major determinants of the employment of financial sector in each Jiedao using the following equation:

$$\begin{split} Empol_{it} &= \alpha_0 + \alpha_1 Cnt_Subway_{it} + \alpha_2 Dis_Tiananmen_{it} + \alpha_3 Pop_{it} + \alpha_4 Fin_{it-1} \\ &+ \alpha_5 APS_{it-1} + \alpha_6 Area_Fin_{it} + \alpha_7 Near_Fin_{it} + error_{it} \end{split}$$

Variables	Meaning	Expected Relationship
Cnt_Subway _{it}	Number of subway stations in the	Desition
	Jiedao	Positive
Dis_Tiananmen _i	t_t Distance (kilometers) between the	Nanatina
	Jiedao to Tiananmen Square	Negative
Pop_{it}	Number of resident population	Positive
Fin _{it-1}	Financial employment of the Jiedao in	
	the starting year of the research	Positive
	period	
APS_{it-1}	Employment of advanced production	
	service firms of the Jiedao in the	Positive
	starting year of the research period	
Area_Fin _{it}	1 if the Jiedao overlaps with the	Decitive
	Financial Street or CBD, 0 otherwise	rositive
Near_Fin _{it}	1 if it is adjent to the Financial Street	Positivo
	or CBD, 0 otherwise	rositive

where $Empol_{it}$ denotes the employment in finance sector of Jiedao i in year t. The definitions of all the explanation variables are listed in Table 4.

Table 4:Independent variables for explaining the distribution of financialemployment in Jiedao

The regression results are shown in Table 5. Overall, the findings are supportive to the research hypothesis discussed previously. There exist strong agglomeration effects in the geographies of financial service firms in Beijing. The coefficients of Fin_{it-1} and APS_{it-1} are both significantly positive. It shows that financial service firms prefer to locate in places where many financial service and other advanced producer firms already exist. It indicates that just like other sectors, there are strong agglomeration economies and existing industrial cluster in the finance sector (Cook and Pandit 2004).

In addition, the coefficients of $Area_Fin_{it}$ and $Near_Fin_{it}$ are both significantly positive reflecting the importance of urban planning and being close to key financial regulators and flagship financial institutions in the locational decision of financial service firms. According to the urban planning and other related policies, financial service firms are more likely to obtain friendly supports from the local government when they are located in the specific areas guided by the government. More importantly, since the key financial regulators or other important financial institutions already located in the Financial Street and CBD, newcomers can enjoy the agglomeration economies and accessibility to crucial information in the finance sector. The findings are consistent to one recent study, which found that Chinese banks tend to be close to the Britain's financial regulators and those famous financial institutions when they make locational decisions within London (Hall 2017).

As we all know, Manhattan in New York and the City of London are both very well connected in the metro system and located in the very center in each city. The

regression results on Beijing confirm the importance of public transportation as a key factor for the location choice of financial service firms. The coefficient of Cnt_Subway_{it} is significantly positive of the year 2010. For the year 2001, the coefficient of Cnt_Subway_{it} is positive but not significant, the reason might be that the subway system of Beijing in 2001 was far away from matured and the measurement cannot reflect the true situation. Being close to city center also seems very important for financial activities, as the coefficients of $Dis_Tiananmen_{it}$ are significantly negative in both years. As a typical type of high-end service sector, financial service firms can afford the expensive cost in the inner city.

	200)1	2010			
	Coefficient	р	Coefficient p			
Constant	33.375	0.444	35.197 0.854	ł		
Cnt_Subway _{it}	59.020	0.125	127.696*** 0.009)		
Dis_Tiananme	e n_{it} - 2.203**	0.034	-0.510* 0.076	0.076		
Pop _{it}	-0.001	0.670	-0.004** 0.021			
Fin _{it-1}	0.780***	0.000	1.877*** 0.000)		
APS_{it-1}	0.072***	0.006	0.014** 0.035	5		
Area_Fin _{it}	5852.324***	0.000	2424.979*** 0.003	3		
Near_Fin _{it}	1233.142***	0.003	955.072** 0.049)		
N	32	0	320	320		
F	52.034		309.462			
Prob > F	0.0	00	0.000			
Adjusted R ²	0.52	27	0.871	0.871		
Table 5: R	Regression results of distribution of financial employment					

Note: ***denotes the significance at 1% level, ** denotes the significance at 5% level,

* denotes the significance at 10% level.

While the locational behaviour of financial service firms from varied subsectors might be different due to their distinctive nature of businesses, we run more regressions on the employment of banking, securities, and insurance in each Jiedao separately. Generally, as shown in Table 6, the geography patterns of banking activities are different from the other two types of financial activities. The banking activities are more related to residential population, as the coefficient of Pop_{it} is significantly positive for bank sector. But for the securities and insurance sector, the relationships between residential population and employment in Jiedao are negative.

The results show that banks prefer to be close to subway station as the coefficient of Cnt_Subway_{it} is significantly positive, but the coefficient is not statistically significant for securities and insurance sector. For securities and insurance firms, there exist stronger agglomeration effects as the coefficients of Fin_{it-1} and APS_{it-1} are both significantly positive. However, the coefficient of APS_{it-1} is not statistically significant for the bank sector, which indicates that banks do not tend to strongly agglomerate with each other as securities and insurance firms do. Finally, securities and insurance firms are strongly inclined to locate in the Financial Street and CBD as the coefficients of $Area_Fin_{it}$ and $Near_Fin_{it}$ are both significantly positive. One reason might be that many banks mainly provide retail

	Bank sector		Security sector		Insurance sector		
	Coefficient	р	Coefficient	р	Coefficient	р	
Constant	13.595	0.929	85.849	0.274	34.597	0.752	
Cnt_Subway	it ^{120.868***}	0.002	3.689	0.852	55.981	0.144	
Dis_Tianan	n 014 94	0.851	-1.506	0.264	-0.323	0.863	
Pop _{it}	0.002**	0.017	-0.001	0.839	-0.011***	0.007	
Fin _{it-1}	1.439***	0.000	0.931***	0.000	1.245***	0.000	
APS_{it-1}	0.009	0.223	0.007**	0.069	0.011**	0.029	
Area_Fin _{it}	323.744	0.614	1499.089***	0.000	4643.213***	0.000	
Near_Fin _{it}	672.043*	0.083	538.967***	0.005	535.671*	0.052	
Ν	320		320		320		
F	90.741		38.34	38.343		96.218	
Prob > F	0.000		0.000	0.000		0.000	
Adjusted R ²	0.663		0.450	0.450			

banking services for residential population rather than wholesale service for corporation clients.

Table 6:Regression results of the distribution of employment in bank,security and insurance sectors in 2010

Note: ***denotes the significance at 1% level, ** denotes the significance at 5% level, * denotes the significance at 10% level.

Conclusion and discussion

This paper has examined Beijing's role as a financial centre in mainland China. It shows that Beijing has become a dominant financial center and is the center of banking, security, security, asset management and venture capital in China. More importantly, the paper analyzes the geography of the financial services industry in Beijing based on firm level data. The analysis shows that financial activities in Beijing have been concentrating in the inner city and two particularly significant financial services clusters have emerged. Compared to its western counterparts, the Financial Street has the potential to become a world-class financial district. The rapid growth and the spatial reconstruction of the financial sector in Beijing indicate that Beijing will grow to be a competitive IFC in the future. Its development also shows how it is the intersection between national and municipal government policy and regulation that is central in accounting for Beijing's development as an IFC as well as the spatial patterns of financial service firms. Regression results show that agglomeration economies, urban planning and being close to metro stations and city center are key factors to shape the location patterns of financial service firms in Beijing.

Despite the importance of Beijing in China's financial sector, Beijing conspicuously remains absent from the public media on important international financial centers. Since Shanghai is planned to be the national financial center and IFC of China by the central government, Beijing is not as aggressive as its competitors in promoting its image as a financial center. In fact, Beijing has made great effort to develop the finance industry and become a financial center, though in a silent way. This demonstrates the need to pay greater attention to questions of power and politics in the development of IFCs than is often made explicit in the existing literature.

The future of Beijing as an emerging IFC will depend on the ongoing reform of China's political and economic system. The reform aimed to let markets play a dominant role in the economy has the potential to reduce the strength of Beijing as the regulatory center of China's finance sector. For instance, if the reform on the IPO process is finalized, the IPO application will be approved by the stock exchanges not the CSRC, which will benefit Shanghai and Shenzhen. Beijing, Shanghai and Shenzhen might play important but different roles in China's financial center networks (Lai 2012). Another key factor will be the internationalization of China's economy and RMB. With the affluence of Japan's economy, Tokyo once grew to be a world-class IFC. Similarly, Beijing has the potential to become an IFC. One reason for the failure of Tokyo keeping its status as a first-tier IFC is that Japanese Yen hasn't become an important international payment currency (McKay 2014). Thus, the ongoing internationalization of RMB as well as its position within national economic planning will be critical for Beijing's role in the global financial center networks.

Finally, the geographical analysis on the evolution of financial services firms' geographies within Beijing could also shed some lights on the research on locational behaviors of financial activities in financial centres by providing a case from an emerging economy in which there exist strict regulation on the financial sector and the state plays an important role in the economy. To build up financial centers like the role models in western countries, the Municipal Government of Beijing has speeded up the clustering of financial service firms in Beijing using planning and other policy tools. Several financial districts have emerged due to both market and institutional factors. In particular, the Financial Street is has the potential to become a world-class financial district as it is similar to its counterparts in advanced economies in many ways. It is not surprising that the market factors, such as the agglomeration economies, are found similar to those in the western counterparts, such as London (Cook et al. 2007), in driving financial service firms to locate in some specific areas of the city. The difference is that the intervention from the central and municipal governments are very strong from the very beginning of the development of the financial districts in Beijing and the clustering of the financial activities within the city.

References

- Beaverstock, J. (2004) Managing across borders: knowledge management and expatriation in professional service legal firms. Journal of Economic Geography, 4, 157-179.
- Beaverstock, J. V. (2005) Transnational elites in the city: British highly-skilled intercompany transferees in New York City's financial district. Journal of Ethnic and Migration Studies, 31, 245-268.
- Beaverstock, J. V. & S. Hall (2012) Competing for talent: global mobility, immigration and the City of London's labour market. Cambridge Journal of Regions Economy and Society, 5, 271-287.
- BJMC and BJMG, 2008, Beijing Municipal Committee and Beijing Municipal Government's Opinions on How to Develop Finance Industry of the Capital (Jingfa [2008], No.8), Beijing Municipal Committee of CPC and Beijing Municipal Government, Beijing.
- Chubarov, I. & D. Brooker (2013) Multiple pathways to global city formation: A functional approach and review of recent evidence in China. Cities, 35, 181-189.
- Clare, A., M. A. Gulamhussen & C. Pinheiro (2013) What factors cause foreign banks to stay in London? Journal of International Money and Finance, 32, 739-761.
- Cook, G. & N. R. Pandit (2004) Clustering in the British Broadcasting and Financial Services Industries: A Comparative Analysis of Three Regions. Problems and Perspectives in Management, 2, 72-88.
- Cook, G., N. R. Pandit, J. V. Beaverstock, P. J. Taylor & K. Pain (2007) The role of location in knowledge creation and diffusion: evidence of centripetal and centrifugal forces in the City of London financial services agglomeration. Environment and Planning A, 39, 1325-1345.
- Duranton, G. & D. Puga (2004) Micro-foundations of urban agglomeration economies. In: J. V. Henderson & J. F. Thisse (ed.) Handbook of Regional and Urban Economics, 1 (4), Elsevier, pp. 2063-2117.
- Engelen, E. (2007) 'Amsterdamned'? The uncertain future of a financial centre. Environment and Planning A, 39, 1306.
- Engelen, E. & M. H. Grote (2009) Stock exchange virtualisation and the decline of second-tier financial centres—the cases of Amsterdam and Frankfurt. Journal of Economic Geography, 9, 679-696.
- Friedmann, J. & G. Wolff (1982) World city formation: an agenda for research and action. International Journal of Urban and Regional Research, 6, 309-344.
- Gong, H. & K. Keenan (2012) The Impact of 9/11 on the Geography of Financial Services in New York: A Few Years Later. Professional Geographer, 64, 370-388.
- Grote, M. H. (2003) The evolution of the financial centre Frankfurt. Geographische Zeitschrift, 91, 200-217.
- Hall, S. (2017) Regulating the Geographies of Market Making: Offshore Renminbi Markets in London's International Financial District. Economic Geography, online first, 02 May 2017.
- He, C. & R. Fu (2008) Foreign Banking in China: A Study of 279 Branch Units in 32 Cities. Eurasian Geography and Economics, 49, 457-480.

- Knox-Hayes, J. (2009) The developing carbon financial service industry: expertise, adaptation and complementarity in London and New York. Journal of Economic Geography, 9, 749-777.
- Kynaston, D. (2002) The City of London. Volume IV: A club no more 1945-2000. London, UK: Pimlico.
- Lai, K. (2012) Differentiated Markets: Shanghai, Beijing and Hong Kong in China's Financial Centre Network. Urban Studies, 49, 1275-1296.
- McKay, H. (2014) Tokyo's Ultimately Failed Bid for First-Tier International Financial Center Status: Why Did It Fall Short? Asian Economic Papers, 13, 1-25.
- Pain, K. (2008) Spaces of practice in advanced business services: rethinking London
 Frankfurt relations. Environment and Planning D-Society & Space, 26, 264-279.
- Pan, F., J. Guo, H. Zhang & J. Liang (2015) Building a "Headquarters Economy": The geography of headquarters within Beijing and its implications for urban restructuring. Cities, 42, 1-12.
- Pan, F., S. X. B. Zhao & D. Wójcik (2016) The rise of venture capital centres in China: A spatial and network analysis. Geoforum, 75, 148-158.
- Porter, M. E. 1980. Competitive Strategy. New York: Free Press.
- Reed, H. C. (1980) The Ascent of Tokyo as an International Financial Center. Journal of International Business Studies, 11, 19-35.
- Sassen, S. (2001) The Global City: New York, London, Tokyo. Princeton University Press.
- Taylor, P., B. Derudder, M. Hoyler, P. Ni & F. Witlox (2014a) City-Dyad Analyses of China's Integration into the World City Network. Urban Studies, 51, 868-882.
- Taylor, P. J., B. Derudder, J. Faulconbridge, M. Hoyler & P. Ni (2014b) Advanced Producer Service Firms as Strategic Networks, Global Cities as Strategic Places. Economic Geography, 90, 267-291.
- Timberlake, M., Y. D. Wei, X. Ma & J. Hao (2014) Global cities with Chinese characteristics. Cities, 41, 162-170.
- Wójcik, D. (2013) The Dark Side of NY–LON: Financial Centres and the Global Financial Crisis. Urban Studies, 50, 2736-2752.
- Wei, Y. D. & D. Yu (2006) State policy and the globalization of Beijing: emerging themes. Habitat International, 30, 377-395.
- Woo, J. J. (2015) Beyond the neoliberal orthodoxy: alternative financial policy regimes in Asia's financial centers. Critical Policy Studies, 9, 297-316.
- Yao, Y. & L. Shi (2012) World city growth model and empirical application of Beijing. Chinese Management Studies, 6, 204-215.
- Yusuf, S. & W. Wu (2002) Pathways to a World City: Shanghai Rising in an Era of Globalisation. Urban Studies, 39, 1213-1240.
- Zhang, J. (2011) The spatial dynamics of globalizing venture capital in China. Environment and Planning-Part A, 43, 1562.
- Zhang, L.-Y. (2013) Dynamics and Constraints of State-led Global City Formation in Emerging Economies: The Case of Shanghai. Urban Studies.
- Zhao, M., X. Liu, B. Derudder, Y. Zhong & W. Shen (2015) Mapping producer services networks in mainland Chinese cities. Urban Studies, 52, 3018-3034

- Zhao, S. X. B. (2013) Information Exchange, Headquarters Economy and Financial Centers Development: Shanghai, Beijing and Hong Kong. Journal of Contemporary China, 22, 1006-1027.
- Zhao, S. X. B., L. Zhang & D. T. Wang (2004) Determining factors of the development of a national financial center: the case of China. Geoforum, 35, 577-592.