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VULNERABILITIES OF A STATE OWNED FINANCIAL SYSTEM: CASE OF CHINA

Bachelor's thesis
International Business Administration, Finance and Accounting

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Tallinn 2020

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ABSTRACT

This thesis provides a brief review of state-dominance in the Chinese financial system and explores the magnitude of government controls. Using data of Foreign Direct Investment inflows and Economic Freedom index scores, this paper investigates the relationship between the state-governance and Foreign Direct Investment. The aim of this research is to find whether the state-governance of the financial system in China hinders Foreign Direct Investment inflows. This study uses multiple linear regression analysis as a quantitative measure to find and examine this relationship. Results show that China's financial system under government control does not impact Foreign Direct investment inflows negatively. Empirical research concludes that China's state controlled financial system works beneficially for China.

Keywords: China, financial development, foreign direct investment, multiple linear regression.

INTRODUCTION

China has had rapid economic growth during the past few decades, at about ten per cent each year in real terms (Allen, Qian & Gu, 2017). The mystery is, how China has become one of the world's largest economies with an underdeveloped financial and legal system. In finance-growth literature, China is described as a unique case. China has enjoyed fast economic growth for over 30 years, while its financial sector is said to be highly under state control. China has gone through numerous reforms, but still today is considered to have an underdeveloped financial system (Zhang, Wang & Wang, 2012).

In previous literature, it has been recognised that China's financial system faces multiple difficulties due to a state-dominated financial system and that the financial sector is lagging behind the overall economy. The banking sector is mostly owned by the Chinese government and local governments. The bond, stock and real estate markets are extensively under government controls and regulation. Previous literature confirms that the degree of government control on financial transactions, is clearly visible inside the Chinese financial system. Government controls are represented by corruption, strict regulations and conflicts of interest in China.

There are several empirical studies on the impact of state-governance on regional capital mobility, as well as the impact on economic development. However, it has not been studied how state-governance effects the working of China's financial development on an international level. Researchers have come to conclusions that China does indeed have an underdeveloped legal and financial system, but have managed to thrive economically nevertheless. More empirical research is needed to understand how the state-governance of the Chinese financial system affects international capital mobility. As well as answer the question – how has China managed to thrive economically despite the vulnerabilities it faces due to state-governance.

The purpose of this paper is to investigate the level of government interventions that impact cross-border capital movement and whether the government owned financial system of China, hinders the movement of cross-border capital. The main research question is whether the state-dominated financial system effects the flow of FDI negatively. Economic theory assumes a higher level of Economic Freedom leads to larger FDI inflows. The research method used in this thesis is multiple linear regression, using FDI/GDP as the dependent variable and Economic

Freedom Indexes as the independent variables. The aim of using this research method, is to examine the relationship between the level of different Economic Freedoms and Foreign Direct Investment inflows.

The composition of this paper proceeds with an overview of China's financial system, starting with a brief historic review, continuing to an in-detail review of the five sectors of the Chinese financial system – the banking sector, the stock market, the bond market, the real estate market and asset management. The historic review of China's financial system walks through the main events in the financial development in China. The review of China's financial system gives a good overview of the working of the different parts in the financial system and how the government controls are apparent in each sector. Chapter 2 presents the theoretical framework of this study, introducing the economic theory representing the importance of the different factors and variables. The first subchapter represents the theory of greater Economic Freedom leading to higher Foreign Direct Investment (FDI) inflows. The second subchapter begins with a brief introduction to Foreign Direct Investment and its significance in this study. The third subchapter presents the Economic Freedom Indexes used in this study and explains their importance for this particular research. Chapter 3 presents the multiple linear regression as methodology in this thesis. Chapter 4 consists of data gathered from the Economic Freedom Index and World Bank World Development Indicators. The chapter begins by evaluating the importance of Economic Freedom indexes and finding the indexes that are most valuable for this study. Multiple linear regression analysis is applied once the requirements for conducting the regression model are fulfilled, to find whether the government regulations impact FDI inflows positively or negatively. Empirical results are presented in chapter 5 with a contradiction of the economic theory in the case of China.

Results show that Government Integrity, Investment Freedom, Financial Freedom and Business Freedom are exceptionally low, in comparison to United States, Japan and Germany. Trade Freedom and Monetary Freedom scores are below the world average, but rank favourably with the other large economies. Based on these scores, this study confirms that the state-ownership of the Chinese financial system is apparent. Linear regression results show that the impact of regulations and interventions that influence cross-border capital movement is actually positive in the Case of China. The low levels of Investment Freedom, Trade Freedom and Business Freedom result in higher FDI inflows. In contradiction to the theory, the low scores in Economic Freedom are found to impact FDI inflows positively. Based on empirical results in this thesis we

can make the assumption that China is one of the world's largest economies due to its state-ownership of the financial system.

1 OVERVIEW OF CHINA'S FINANCIAL SYSTEM

This chapter provides an overview of China's financial system as a whole, including all its different sectors and historic patterns. The first subchapter provides a brief review of the financial development in China, starting in the late 1970s, when China introduced reforms. The following subchapters will review the working of China's financial system from the view-points of five different sectors and how state-governance appears in these sectors.

1.1 A historic review of China's financial system

The first steps in the closed Chinese economy in the late 1970s began with reforms that led to the creation of Town and Village enterprises and to the replacement of collectivism by households (Quazi, 2007). The central bank, Peoples Bank of China (PBOC), was established in 1948 (Berger, Hasan & Zhou, 2009). The Peoples Republic was founded in 1949 and after the foundation all of the capitalist companies and institutions of 1949 and before were nationalized.

Between 1950 and 1978, China's financial system was composed of a single bank, PBOC. During this time PBOC served as both the central bank and commercial bank, controlling about ninety-three per cent of the total financial assets of the country and handling almost all financial transactions. At this time China exercised a mono-banking system (Allen & Gu, 2015).

The first main structural change began in the year 1978. By the end of 1970, the PBOC departed the Ministry of Finance and became its separate entity. Concurrently three state-owned banks took over some of PBOC's commercial banking business. The Bank of China (BOC) was established and given the authority to specialize in transactions related to foreign trade and foreign investment, the People's Construction Bank of China (PCBC) was established to handle transactions related to fixed investment and finally the Agriculture Bank of China (ABC) was formed to deal with all banking functions in rural areas (Allen & Gu, 2015). In 1984 the fourth state-owned bank, the Industrial and Commercial Bank of China (ICBC), was set up and took over the rest of the commercial transactions in advocacy of PBOC (Allen & Gu, 2015).

The most significant event for China's financial system in 1990, was the founding of China's stock exchange. Two domestic stock exchanges were established, the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) and both grew very fast during most of the

1990s. Not only did the stock market grow, but the real estate market grew from merely non-existent to one that is presently comparable in size with the stock market (Allen & Gu, 2015). These patterns of a relatively late inception of markets, are partly due to the fact that the development of a supportive legal framework had been lagging behind of the development of the financial markets. China's first bankruptcy law was passed in 1986 on a trial basis, but came effective only at the end of 1999.

In 1997 Asia faced a financial crisis, which resulted in the currency depreciation in many of the Chinese export countries, even though the Chinese yuan remained bound to the US dollar (Park, Yang, Shi & Jiang, 2010). After the 1997 Asian Financial crisis, the financial sector reforms have focused on state-owned banks and the problem with non-performing loans (Fernald & Babson, 1999).

China's entry to the World Trade Organization (WTO) in December 2001, marked the beginning of a new era (Allen & Gu, 2015). Numerous new rules began to take effect, and some of the already existing regulations and laws were revised to line up with the WTO agreement. In 2002, foreign banks started providing foreign currency services to Chinese residents and enterprises. Starting in 2004, China also opened its local currency market and gave foreign banks the authority to provide local currency services to Chinese enterprises (Berger, Hassan & Zhou, 2009).

Institutional investors began to emerge within the late 1990s. The first closed-end fund was set up in 1997, in which investors could not withdraw capital after making an initial investment. The first open-end fund, in which investors could freely withdraw capital after initial investment, was established in 2001. In 2011, China approved the renminbi qualified foreign institutional investors (RQFII), which allowed qualified foreign institutional investors (QFII) to invest in Chinese stock and bond market within a predetermined amount (Allen & Gu, 2015). In August 2006, a new bankruptcy law was laid out, and it became effective in June 2007 (Allen & Gu, 2015). China Investment Corporation (CIC), which works as China's sovereign wealth fund, was set up in September 2007, with the purpose of utilizing the accumulated foreign reserves for the benefit of the state. In 2007, 207.91 billion United States dollars (USD) in foreign exchange reserves were placed under management at the CIC. China's National Social Security Fund (NSSF) was established in August 2002 and is managed by the National Council for Social Security Fund. This fund is primarily financed by capital and equity assets obtained from the

listing of state-owned companies, fiscal allocations from the central government, and other investment proceeds (Allen & Gu, 2015).

Presently, the Chinese government has loosened its direct controls of the financial system and financial support has been extended to private businesses and enterprises (Song & Xiong, 2018). In 2016 China introduced a campaign to reduce systematic financial risks, that accumulated from the growth of shadow banking activities. As of 2019, the Asia Society Policy Institute found that the Chinese financial system was still becoming less efficient. Fernald and Babson (1999) have argued that Chinese leaders find the political risk of short-term reduction greater than the risk of long-term slowdown in growth, hence we can assume that China's efforts have and will be ineffective also in the future.

1.2 A review of China's Financial System

This subchapter, is divided into five parts, beginning with the banking sector in China, which consists of four large government owned banks. Following with the inception of the stock market and bond market. The fourth part provides an outline of the growth and current position of the real estate market. The final part discusses the three stages of development in asset management in China.

1.2.1 The Banking Sector

The banking system in China is one of the largest and most complex among other countries (Lin & Zhang, 2009). China's banking sector is dominated by a handful of large state-owned banks – the Big Four banks. Which consequently explains the low degree of competition within the banking sector inside China. As of the end of 2015, the Big Four banks valued for 40.5 per cent of the banking industry, in terms of total assets. Most of the Chinese commercial banks are also owned by the central or local governments. In a situation where the bank is not government owned, the government however operates as the ultimate controller (Allen, Qian & Gu, 2017).

In the past decade, the high level of non-performing loans (NPL) relative to assets have been one of the most severe issues in China's Banking sector, but have been mainly resolved in the early 2000s. After the global financial crisis in 2008, the high level of NPL's once again became one of the difficult issues inside the banking sector (Allen, Qian & Gu, 2017). The NPL's among the Big Four banks after the global financial crisis, were a result of the large number of investment

projects that were launched to stimulate the economy in regression after the crisis. If the growth of the economy substantially slows down while the growth of NPL's continues, problems within the banking sector could result in a new financial crisis in China. A large fraction of the NPL's within the Big Four, resulted from bad lending decisions made in the favour of state-owned enterprises.

Most of the commercial banks in China, which are state-owned, serve the intent of funding state-owned enterprises (SOE) and government projects. SOE's are defined as "noncorporation" economic units, in which the entire assets are owned by the state (Allen, Qian & Qian, 2005). These patterns reflect the old model of economic growth (Allen, Qian & Gu, 2017). After China's entrance into the WTO, many state-owned banks started executing new lending processes that allowed more authority to individuals in making loan decisions and to monitor loan performance. State-owned banks have also diversified and enhanced their loan structure by increasing consumer-related loans. Banks also began to be more active in risk management, as well as monitoring loans made to the SOE's (Allen, Qian & Gu, 2017). The main funding sources of the local government are bank loans, trusts and leasing financing as well as bond issuing. In terms of debt, most of the funds are used in municipal construction, communication, transportation and land preservation.

Hence the growth of the economy, the abrupt increase in personal income and the limited amount of investment opportunities, it is not surprising that total bank deposits from individuals have been growing fast since the mid-1980's (Allen, Qian, Zhang & Zhao, 2012). Bank loans have been one of the crucial financing sources especially for hybrid firms. However, the government supports the state-owned sectors more than the hybrid sectors. This shows by the government actively granting extensive bank loans through state-owned banks to the state-owned sector, rather than hybrid sector (Allen, Qian & Gu, 2017).

The initial public offerings (IPO) of the large state-owned banks were successful in terms of total proceeds acquired. The IPO's attracted significant foreign ownership at the IPO date as well. Nevertheless, there are two issues with the privatization process in China – whether more competition is good for improving efficiency of the banking sector, since the government is the largest owner and the fact that the government plays dual roles as both regulator and the majority owner of the banking sector. There could be a potential conflict between the governments dual

roles. Majority control could improve banking regulation and help prevent crises, but also lead to poor risk management in the large state-owned banks (Allen, Qian & Gu, 2017).

1.2.2 The Stock Market

After under three decades of development, China's stock market has become one of the largest ones in the world, in terms of market capitalization (Allen, Qian & Gu, 2017). After the opening of China's domestic stock exchanges, the SHSE and SZSE in 1990, they at first grew fast (Allen, Qian, Zhang & Zhao, 2012). However, growth in the stock market has been unsteady, from peaks to reversion and subsequently recoveries. After negative news worldwide and domestically, due to the global financial crisis of 2008, the stock market lost three-quarters of its value by the end of 2008 (Allen, Qian & Gu, 2017). As result to the government taking numerous measures to cool down the fast-growing real estate market, the stock market dipped again in the first half of 2010, At the end of 2010, the SHSE was ranked the sixth largest market in regard of market capitalization, while the SZSE ranked fourteenth. The Hong Kong Stock Exchange (HKSE), which consists of selected enterprises from Mainland China listed and traded, is ranked seventh largest in the world. Needless to say, the Chinese financial markets play and will play an increasingly important role in world financial markets now and in the future (Allen, Qian, Zhang & Zhao, 2012).

Despite the recent rapid development in China's stock market, there is adequate evidence that the market is still not completely efficient. The stock prices and behaviour of investors are not necessarily driven by the fundamental values of listed firms. The degree of manipulation and insider trading in China is substantial in comparison to the United States. In addition, given that each IPO must go through a process of approval by the China Securities Regulatory Commission (CSRC), politically connected enterprises are more likely to go listed. Once a firm is listed, it is rarely delisted in China. The problematic IPO and troublesome delisting process may further increase the inefficiency of the Chinese stock market (Allen, Qian & Gu, 2017).

1.2.3 The Bond Market

During the period of 1990-2013, the government bond market had an annual growth rate of 22.3%. In terms of newly issued bonds and total outstanding bonds a total of RMB 9547,1

billion was obtained by the end of 2013. The second largest element of the bond market in China are named policy financial bonds, with a total amount of RMB 6501.9 billion as of the end of 2011. These policy financial bonds are issued by policy banks, which function under the supervision of the Ministry of Finance. The proceeds of these bond issuances are invested in government-run projects and industries (Allen, Qian & Gu, 2017).

In comparison to government-issued bonds, the size of the corporate bond market is little. The small size of the bond market, relative to the stock market, is very common amongst Asian countries. Compared to Europe and the United States of America, it has been studied that the size of both the government and corporate bond market is smaller in Asia, excluding Japan. Moreover, the most under-developed component of China's financial markets is in fact the corporate bond market (Allen, Qian, Zhang & Zhao, 2012). However, the bond market has been growing drastically in recent years. In January 2015, the CSRC announced a new reform to the corporate bond market that removed both the sponsorship and screening systems for bond issuance. Afterwards, the magnitude of the corporate bond issuance grew sevenfold. By the end of July 2016, China's domestic bond market capitalization was RMB 41.63 trillion, a total very close to the market capitalization of the domestic equity market (Allen, Qian & Gu, 2017).

The slow growth of the bond markets in China results from various reasons. Mainly due to the lack of wholesome accounting and auditing systems. The lack of high-quality bond rating agencies has also been a factor. Given the low creditor protection and court efficiency in China, the recovery rates for bondholders during default are low, which later leads to underinvestment in the market by both domestic and foreign investors. Third, the lack of a well-constructed yield curve has played a negative role in China, given the small size of the publicly traded treasury bond market and lack of historical bond prices. Finally, regulation fragmentation has also led to the slow development of the bond markets in China. The number of multiple regulators make bond issuance a long, difficult and unfavourable process (Allen, Qian & Gu, 2017).

As of today, Asia Society Policy Institute report that one of the most closely watched indicators is the growth of foreign participation in China's bond markets. Over the past two years foreign participation has increased sharply in new inflows into China's bond market. Foreign ownership of China's government bonds has increased in recent years, according to State Administration of Foreign Exchange data.

1.2.4 The Real Estate Market

The real estate market has been operating under the dual tracks of both central planning and market-oriented systems for a long time. Prior to 1998, government control was dominant and mortgages were not appointed to anybody. Chinese citizens working for the government-owned companies and organizations were able to purchase properties at prices substantially below market prices. Since reform policies were introduced in 1998, the development of the real estate sector has been pushed forward by the residential housing reform and by the growth of individual mortgages. Rising household income and demand for quality housing has played a major role (Allen, Qian & Gu, 2017).

As the real estate sector began to gain weight in the overall economy, its impact on other industries, especially the financial and banking industry increased considerably. With the expansion of the real estate market, banks and other financial institutions had the incentive to lend more to keep up with the demand for financing real estate. When the fast expansion could not be slowed down, increased demand led to peaks in property prices and real estate bubbles surfaced (Allen, Qian, Zhang & Zhao, 2012).

One of the most closely watched and hotly debated issues in China are the real estate prices in big cities, which have risen sharply. Whether these fast-growing prices are bubbles and whether the markets can be cooled down, are questions on the surface. Since 2004, the government has been taking aggressive measures to restrain the fast growth of housing prices. From 2010 to 2013, the government exercised interventions such as increased equity down payment shares for first and second homes. Even direct administrative orders on how much land and how many building units may be developed, were taken into action. However, the impact of these measures on the housing market seems to be limited. A reason behind the limited impacts of these measures are that the various government agencies and officials have played a major role in developing commercial properties, and it is not in their best interest to see corrections in the market.

1.2.5 Asset Management

The mutual fund industry in China has gone through three different stages of development. The first stage is in between 1992 and 1997, when China’s first fund (ZiBo) was set up and the first

version of the mutual fund regulation was drafted and passed by the CSRC (Allen, Qian, Zhang & Zhao, 2012). The first fund, ZiBo, was a closed-end fund with a net asset value (NAV) of RMB 100 million and began to trade in 1993. While the industry experienced fast growth in the years after 1992, the lack of regulation and difficulties associated with fund trading complicated the further development of the industry.

The first open-end fund was established in September 2001 and was followed by the proposal for open-end fund investment by the CSRC (Allen & Gu, 2015). With only a small amount of funds in 1998, as of 2009 China had 65 fund companies managing 551 different funds. The growth of open-end funds contributed to most of the growth in the asset management industry.

The most popular investment style is actively managed equity, with only a few index funds and exchange traded funds. The first fund managed by a Qualified Foreign Institutional investor (QFII) was established in 2002. The QFII Act grants investors outside of China to invest into Chinese securities. The intention of this act is to present sophisticated foreign investors to the Chinese market and to have their presence improve market efficiency. The approval of Qualified Domestic Institutional Investors (QDII) to invest in international markets emerged after the QFII act, in July 2006. The QDII funds invest in stocks, bonds, real estate investment trusts and other recognized financial products in internationally acknowledged markets. As of early 2008, ten fund companies had obtained the approval to launch QDII (Allen, Qian, Zhang & Zhao, 2012).

With the continuous opening up of the domestic market to foreign investors, China's asset management industry is expected to continue its fast growth in the near future. The further the growth of the economy and the continuous reformation of the pension system, it will generate both demand and supply of capital for the industry (Allen & Gu, 2015). If this trend of opening up domestic markets to foreign investors continues, there will be an even greater inflow of QFII's (Allen, Qian, Zhang & Zhao, 2012).

2 THEORETICAL FRAMEWORK

In this section I will present the economic theory of a host country's attractiveness and its effect on FDI inflows. As well as examine the importance of Foreign Direct Investment inflows and describe Economic Freedom and its subcategories. I will also explain the six subcategories of Economic Freedom that will be taken into account in this study and their importance for this study.

2.1 Economic Freedom and its effect on Foreign Direct Investment

Chan and Gemayel (2004) present that the economic, financial and political risks, including the instability that stem from these risks are critical determinants of FDI into the Middle East. According to Dunning's electic paradigm (1997), the motivation behind expanding operations internationally are divided into three categories, Location-specific factors being one of them. Location-specific factors are characteristics of the host country that provide profit making opportunities for the foreign investor. This study focuses on these factors – the host country's characteristics and role in attracting FDI inflows. In this study, these host country's characteristics will be the factors of Economic Freedom.

According to the Heritage Foundation, in an economically free country, an individual can fully control his or her labour and property. The Heritage Foundation also states that there is a positive relationship between Economic Freedom and a number of positive social and economic goals. It is generally expected that a less constrained economic climate is more attractive to foreign investors. We expect that greater Economic Freedom leads to higher FDI inflows, in accordance to these assumptions of Economic Freedom. If a country is not economically free, we can assume that a foreign investor is not willing to financially commit, as the investor can't fully control their capital. Bayoumi, Gagnon & Sabrowski (2015) also support the assumption that capital controls may be a source of imperfect capital mobility. Therefore, the supposition is that FDI inflows increase with an increase in each subcategory of Economic Freedom.

We would like to test this theory for the case of China, as China has maintained a government-dominated financial system with two categories of government domination. The first category includes the entry barriers to commercial banking, investment banking and other financial

services which are tightly controlled so that the concentration of the financial sector in state-owned institutions remains extraordinarily high in spite of twenty-five years of reforms. The second category consists of the central government and especially the local governments at various levels actively interfere with the functioning of the capital market by directing and encouraging some bank loans or stock listings while discouraging or even prohibiting others (Boyreau-Debray & Wei, 2005). We expect the high rate of control in the financial system to hinder the movement of FDI, by making China a less attractive host country.

2.2 Foreign Direct Investment

International capital flows are broken down into multiple categories, Foreign Direct Investment being an important form of cross-border capital flows (Bluedorn, Duttagupta, Guajardo & Topalova). A Foreign Direct Investment is an investment made by a foreign firm or individual into business interests located in the host country. FDI inflows occur when an investor takes part in foreign business operations or acquires foreign business assets in a foreign company. The general principles of FDI are that corporations internalise inadequate or imperfect external markets until the costs of the internalisation overweigh the advantages and that corporations choose locations for their activities that minimise the general costs of their operations (Buckley, Clegg, Cross, Liu, Voss & Zheng, 2010). FDI flows register the value of cross-border transactions related to direct investment. Financial flows are compiled of equity transactions, reinvestment of earning and intercompany debt transactions. According to OECD (2020) FDI outflows represent transactions that increase the investments that Chinese investors have in enterprises in foreign economies. FDI inflows are the value of inward direct investment made by foreign investors, including reinvested earnings and intra-company loans, converting foreign currency into local currency and the repayment of loans.

The purpose of using FDI inflows is to present the performance of external financing resources in the form of direct investments, in the host economy. FDI inflows are considered a major source of external financing and thereby provide important instruments to the growth of the financial sector. This study will focus on the FDI inflows to examine the host country conditions, not the foreign country conditions. As was mentioned earlier in this chapter, FDI inflows can be explained to some extent by the host country attractiveness. In this thesis, I am examining whether the state-dominance structure of the Chinese financial system effects the attractiveness of China in regard of FDI.

2.3 Economic Freedom Scores

The Heritage Foundation measures economic freedom based on twelve quantitative and qualitative factors, which are divided into four key aspects of the economic environment over which governments typically exercise policy control – Rule of law, government size, efficiency of regulations and the openness of markets. The Heritage Foundation describes that in an economically free society, governments allow labour, capital and goods to move freely (Miller, Kim & Roberts, 2020). According to the Heritage Foundation, Economic Freedom is strongly associated with healthy societies, clean environments, high per capita wealth, human development, democracy and poverty elimination. Nations with higher degrees of economic freedom thrive because they make better use of the ability of individuals to innovate and prosper when unconstrained by heavy-handed government regulation (Miller, Kim & Roberts).

The Heritage Foundation classifies Economic Freedom into the following twelve subcategories – Property Rights, Judicial Effectiveness, Government Integrity, Tax Burden, Government Spending, Fiscal Health, Business Freedom, Labour Freedom, Monetary Freedom, Trade Freedom, Investment Freedom and Financial Freedom. Each one of these twelve freedoms are graded from a scale of 0 to 100, in which 100 represents the optimal and maximum freedom.

Out of these twelve subcategories, only the following six will be taken into account in this study.

1) Business Freedom, which measures the extent to which regulatory and infrastructure environments constrain the efficient operation of businesses. The quantitative score is obtained from a set of factors that affect the ease of starting, operating, and closing a business (Miller, Kim & Roberts, 2020). Naturally this will be taken into account when examining FDI inflows, as this factor is of significant importance when a firm is considering expansion into a foreign market (Quazy, 2007).
2) Trade Freedom, which measures the extent of tariff and nontariff barriers that affect imports and exports of goods and services. Factors taken into account when calculating the Trade Freedom score are quantity restrictions, regulatory restrictions, customs restrictions and direct government intervention (Miller, Kim & Roberts, 2020). As trade openness has an overall positive effect on FDI inflows, the trade freedom scores will be taken into account in the study.

3) Investment Freedom, which measures the amount of constraints on the flow of investment capital, especially foreign capital. In an economically free country, individuals and firms would be allowed to move resources around of specific activities, both domestically and internationally, without any restriction. However, in practise most countries have a variety of restrictions on investment (Miller, Kim & Roberts, 2020). As a rule, investors are found to be reluctant to invest in an economy where there are restrictive regulations on capital flows across the border, thus investment freedom scores are of great importance for this study (Quazy, 2007).
4) Government Integrity measures the systematic corruption of government institutions and decision making, by practises such as bribery, extortion, nepotism, cronyism, patronage, embezzlement and graft. Lack of government integrity can lead to increase in the costs of economic activity (Miller, Kim & Roberts, 2020). Government integrity score is important for this study, as corruption leads to inefficiency in an economy and may discourage international companies from investing in the economy (Quazy, 2007).
5) Financial Freedom is an indicator of banking efficiency, a measure of independence from government control and a measure of interference in the financial sector. Financial freedom is measured by the extent of government regulation on financial services and degree of state intervention in banks (Miller, Kim & Roberts). State-ownership of banks is an inefficient burden on financial freedom, thus in the case of China it is an important indicator.
6) Monetary Freedom is a measure of price stability, price control and inflation (Miller, Kim & Roberts, 2020). Price control and inflation distort market activity and cause uncertainty in investment, thus it is of importance in this study.

3 METHODOLOGY

The method of Multiple Linear Regression (MLR) is applied as a statistical technique to model the linear relationship between the independent variables and dependent variable (Weisberg, 2005). In other words, MLR examines how the independent variables are related to the one dependent variable. MLR is the extension of ordinary least squares regression, that involves more than one independent variable. MLR assumes there is a linear relationship between the dependent variables and independent variables (Poole & O'Farrell, 1971). Another important assumption is that the independent variables are not highly correlated with each other.

The formula for multiple linear regression is:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon \quad (1)$$

where,

y = dependent variable

x_1= independent variable

x_2= independent variable

x_3= independent variable

β_0= y-intercept

β_n= slope coefficients for each variable

$\in$ = model error

The target of the application of multiple regression analysis is to determine the strength of the independent variables on the dependent variable. An important statistic figure obtained by MLR is R-squared, which is the coefficient of multiple determination. R-squared is used to measure how much of the variation in the dependent variable can be explained by the variation in the independent variables. R-squared can't by itself be used to identify which predictors are of great significance, therefore other important statistics are the coefficients and P-values of the independent variables. The correlation coefficients represent the linear independence of each independent variable and dependent variable. The P-value helps determine whether there is evidence to reject the null hypothesis and whether the independent variables are statistically significant or not. This study will use Excel Analysis ToolPak to conduct the analysis and statistical figures.

The independent variables initially chosen were scores of government integrity, trade freedom, investment freedom, monetary freedom, financial freedom and business freedom. Data on the independent variables was gathered from the Heritage Foundation, Economic Freedom Index from 1995 to 2018. Each one of the independent variables is graded using a scale of 0 to 100, where 100 represents the ultimate maximum of Economic Freedom (Miller, Kim & Roberts, 2020).

The dependent variable is FDI/GDP, which is read as Foreign Direct Investment as percentage of Gross domestic product (GDP). This ratio is directly found from the data in World Bank and is derived by dividing net inflows of FDI by total GDP.

4 DATA

In this section I will represent data gathered for the multiple linear regression analysis and the regression analysis results.

The table below (see Table 1) represents the FDI/GDP and Economic Freedom scores in the four economically high performing countries as well as the world average. The four largest economies are ranked as United States of America in first place, China coming second, Japan third and Germany fourth according to the IMF's World Economic Outlook Database. From the previously mentioned table (see Table 1), it is apparent that China has the second largest FDI/GDP after Germany, however China scores the lowest in all Economic Freedom scores in comparison to the other three economies.

Table 1. FDI/GDP and Economic Freedom Scores; USA, China, Japan, Germany and World Average, 2018

	FDI/GDP	Government Integrity	Trade Freedom	Investment Freedom	Monetary Freedom	Financial Freedom	Business Freedom
USA	1,258	71,9	86,7	85	78,6	80	82,7
China	1,495	47,3	73,2	25	71,4	20	54,9
Japan	0,521	79,2	82,3	70	85,4	60	81,7
Germany	2,667	75,3	86,9	80	86,2	70	86,1
World	1,389	42,6	76	57,8	76,3	48,6	64,9

Source: World Bank Database & Economic Freedom Index 2020

The correlation matrix (see Appendix 1) between FDI/GDP and the Economic Freedom scores is calculated using the data from Table 1. The correlation matrix shows there is a positive correlation between FDI/GDP and Trade Freedom (TF), Investment Freedom (IF), Monetary Freedom (MF), Financial Freedom (FF) and Business Freedom (BF) in 2018. However, the correlation between FDI/GDP and Government Integrity (GI) is negative in 2018. This negative correlation will exclude government integrity scores from the regression analysis, as it is not positively correlated to the FDI inflows in this dataset. Monetary Freedom and Financial Freedom will also be excluded from the regression analysis, as previous literature finds these indicators to have less impact on FDI (Beheshtitabar & Irgaliyev, 2008).

Table 2. FDI/GDP; Investment Freedom; Trade Freedom & Business Freedom in China, 1995-2018

	FDI/GDP	Investment Freedom	Trade Freedom	Business Freedom
1995	4,88	50,00	20,00	55,00
1996	4,65	50,00	20,00	55,00
1997	4,73	50,00	30,00	55,00
1998	4,44	50,00	34,00	55,00
1999	3,75	50,00	38,20	55,00
2000	3,48	50,00	42,60	55,00
2001	3,51	30,00	46,00	55,00
2002	3,61	30,00	48,60	55,00
2003	3,49	30,00	50,60	55,00
2004	3,48	30,00	51,40	55,00
2005	4,55	30,00	54,40	55,00
2006	4,51	30,00	68,00	43,10
2007	4,40	30,00	68,00	46,90
2008	3,73	30,00	70,20	50,30
2009	2,57	30,00	71,40	51,60
2010	4,00	20,00	72,20	49,70
2011	3,71	25,00	71,60	49,80
2012	2,83	25,00	71,60	46,40
2013	3,04	25,00	72,00	48,00
2014	2,57	30,00	71,80	49,70
2015	2,20	25,00	71,80	52,10
2016	1,57	30,00	72,80	54,20
2017	1,37	20,00	73,60	53,90
2018	1,50	25,00	73,20	54,90

Source: WorldBank database & The Index of Economic Freedom 2020

The table above (see Table 2) represents the dataset used for the multiple regression. The dataset consists of yearly data from 1995 to 2018 from China on FDI/GDP, Investment Freedom, Trade Freedom and Business Freedom. From the previously mentioned table (see Table 2), it can be noted that investment freedom scores have declined throughout the time frame, trade freedom scores have steadily increased and business freedom has remained steady, while FDI/GDP has been declining.

To conduct the regression analysis, independent variables must not be correlated with each other. The correlation matrix of China's Investment Freedom, Trade Freedom and Business Freedom

scores (see Appendix 2), was conducted from the data in Table 2. The correlation matrix (see Appendix 2) shows there is no significant correlation between the independent variables, so a multiple regression can be performed using these independent variables.

Statistics from the regression analysis are presented in the table below (see Table 3). The regression statistics show Multiple R, R Square, Adjusted R Square, Standard Error and Observations. The most important statistic for this study is R Square, that is 0,722. This figure tells us that roughly 70% of the variance of FDI/GDP can be attributed to the Trade Freedom, Investment Freedom and Business Freedom.

Table 3. Regression Statistics

Multiple R	0,849977344
R Square	0,722461485
Adjusted R Square	0,680830707
Standard Error	0,592191016
Observations	24

The analysis of variance is represented below (see Table 4). Based on the analysis of variance the multiple linear regression equation can be formed:

$$y = 19{,}70 + (-0{,}029 \times x_1) + (-0{,}077 \times x_2) + (-0{,}209 \times x_3) \quad (1)$$

where,

y = FDI/GDP

x_1= Investment Freedom variable

x_2= Trade Freedom variable

x_3= Business Freedom variable

In addition to the presented multiple linear regression equation, Table 4 represents a negative relationship between the FDI/GDP and Economic Freedom scores. The correlation coefficients from the table below (see Table 4), tell us there is a negative correlation between each Economic Freedom score and FDI/GDP. The negative coefficients suggest that as the independent variables increase, the dependent variable tends to decrease. In this case the Investment Freedom coefficient in the multiple linear regression is -0,029. This coefficient figure represents the mean decrease of FDI/GDP for every additional one point score increase in Investment Freedom. The Trade Freedom and Business Freedom coefficients are -0,077 and -0,209 respectively, which

represent the mean decreases in FDI/GDP for every additional one point score increase in Trade and Business Freedoms.

Table 4. Analysis of Variance

	Coefficients	Standard Error	t Stat	P-value
Intercept	19,70136467	3,365593416	5,853756598	9,99804E-06
Investment Freedom	-0,029099954	0,025652098	-1,134408322	0,270037477
Trade Freedom	-0,076621436	0,016406247	-4,67025984	0,000147239
Business Freedom	-0,209165857	0,044842504	-4,664455371	0,000149237

The P-values for Trade Freedom and Business Freedom (see Table 4) are low (<0,05), which indicates that these independent variables are statistically significant. However, Investment Freedom is not statistically significant because its P-value is greater than the significance level of 0,05.

Economic significance is represented in the table below (see Table 5). We can see that, all else equal, for the FDI/GDP ratio to increase by 1 unit, Investment Freedom must decrease by over 34 points, Trade Freedom by 13 points and Business Freedom by over 4 points. Combining economic significance and statistical significance, Investment Freedom can be singled out as economically and statistically insignificant, while Trade Freedom and Business Freedom are economically and statistically significant.

Table 5. Economic Significance

	Coefficient	Economic Significance
IF	-0,029	34,48275862
TF	-0,0766	13,05483029
BF	-0,209	4,784688995

5 EMPIRICAL RESULTS

Data shows that especially Government Integrity, Investment Freedom, Financial Freedom and Business Freedom in China are significantly lower than in other large economies. While Trade Freedom and Monetary Freedom are also lower than the world average, they compete favourably with the other three large economies. An explanation to the low scores are the state-ownership of the financial system and gaps in the legal system that have impact in the scoring of the Economic Freedom Index scale. Government Integrity is low, due to the state-ownership and amount of control the government has on financial transactions. Trade Freedom scores favourably due to the fact that as of 2020, China became the world's largest exporter. Investment Freedom is significantly low due to the various restrictions and verification processes China places on investment projects. Monetary Freedom scores well due to price stability. Financial freedom is extremely low as China's banking sector lacks independence from government dominance and control, due to state-ownership in the banking sector.

Despite the low Investment and Business Freedom, China has managed to obtain a relatively high FDI/GDP ratio, in comparison to the other large economies in this study. This itself implies that China has managed to attract FDI despite the state-dominance of the financial system. As of 2019 ranked the world's second largest FDI recipient.

Empirical results show that correlation coefficients of Investment Freedom, Trade Freedom and Business Freedom are negative, which means higher scores affect FDI/GDP negatively. In other words, an increase in the previously mentioned Economic Freedom Indexes result in smaller FDI/GDP flows. Results in Trade Freedom and Business Freedom were statistically significant, while Investment Freedom shows to be statistically and economically insignificant. This implies the negative effect of Trade Freedom and Business Freedom on FDI/GDP is more reliable than the effect of Investment Freedom. These empirical results contradict the theory that greater Economic Freedom leads to higher FDI inflows, in the case of China.

There are limitations to this study, as not only Economic Freedom effects the flow of FDI. While factors of the Economic Freedom effect the movement of FDI, also factors such as infrastructure, human capital, natural resource endowment of the recipient country and rate of return of investment affect FDI flows. These factors were not taken into account in this study, hence we can't expect this study to fully explain the FDI inflows. However, the outcome of this study

shows the importance of Economic Freedom in determining FDI inflows. Another limitation to this study is the data gathered of China's FDI, to whether this data is reliable. China's FDI flows have been questioned in the past due to round-tripping, where capital originating from China has returned disguised as FDI.

As has been discussed, China scores relatively low in all Economic Freedom Indexes. Together with the regression analysis results, this implicates that China contradicts the economic theory of FDI inflows. China has managed to thrive despite low Economic Freedom. Empirical results conclude that China's state-owned and tightly controlled financial system does not hinder cross-border capital flows, in this case FDI inflows. As the empirical results represent a negative relationship between the increase in Economic Freedom Index scores and higher FDI/GDP ratio in the case of China, we can conclude that the effect of the state-owned financial system and tight government controls do not affect FDI/GDP negatively. In other words, the regression analysis implies that the tight government controls generate higher FDI inflows, in the case of China.

CONCLUSIONS

Despite China's relatively large inflows of Foreign Direct Investment and access to international capital markets, the financial system is still today underdeveloped and state-dominated, which could possibly lead to instability in the future. The aim of this thesis is to examine the vulnerabilities of the state-owned financial system in China, as well as find the level of impact of state-governance on cross-border capital movement. The main research question of this thesis is whether the low levels of Investment, Trade and Business Freedom affects Foreign Direct Investment negatively in China. This paper uses multiple linear regression to answer this question. The method of multiple linear regression provides insight to the strength of the relationship between FDI/GDP and the Economic Freedom Indexes.

The state-dominance of the financial system is apparent in all sectors of the Chinese financial system. The banking sector consists of four large state-owned banks and most commercial banks are owned by the central or local governments, which means nearly every financial transaction in China goes past the Chinese government. The Chinese stock market is under manipulation and insider trading, and has a problematic IPO and a sticky delisting process. State-dominance is visible in the Bond Market as multiple regulations and long bond issuance processes. The real estate market has worked in the favour of the government and government employees since the opening of the real estate sector. In addition, the state-ownership structure creates bureaucratic complexities and corruption.

Data shows that Economic Freedom in China is low, in comparison to other large economies in the world. Especially Investment and Business Freedom are exceptionally low in China. According to the Index of Economic Freedom, the low economic freedom scores imply that China does not utilize the innovations and wealth of individuals. The data gathered from the Index of Economic Freedom is not surprising in the case of China, since the amount of government controls on the financial system have been recognised to be extensive. However, FDI/GDP is relatively high in comparison to the other high performing economies, which raises the question of how does China manage to economically thrive despite the vulnerabilities of state-ownership.

My results find that higher Economic Freedom scores lead to lower FDI inflows in China. The multiple linear regression analysis discovered that the relationship between higher Investment,

Trade and Business Freedom scores and higher FDI/GDP is actually negative. These findings reject the economic theory of higher Economic Freedom resulting in higher FDI inflows in the case of China. Based on these results it can be argued that China's high FDI/GDP is an outcome of the high level of government controls on the Chinese financial system. My findings support the argument that China's unique institutional foundation is responsible for the remarkable economic growth in China. However, the government controls play a large role in the functioning of China's financial sector and there is no historical evidence in this study to support the assumption that this powerful role will decrease in the near future. Whether state-governance of the financial system will continue functioning in the favour of China is something only time can tell.

Acknowledgements presented in this thesis can be taken further to understand why the Chinese environment is attractive to FDI, despite the fact that China is not an economically free country. Despite the limitations to this research, Economic Freedom can't be disregarded when determining FDI inflows, as it is of great significance to study the attractiveness of the host country. This research can be taken even further by applying other functional variables and other forms of cross-border capital movement. It would be also interesting to apply qualitative research to understand the attractiveness of China in the case of FDI.

Further understanding the functionality of China's financial system is of great importance, as China is ranked the second largest economy in the world. It is widely acknowledged that China's financial and legal system is underdeveloped and operates outside the standard of Western institutions. This thesis presented a positive outcome of the state-dominated financial system, further research is needed to investigate whether all outcomes are positive in regard of financial development and whether the underdeveloped financial system is in fact the source of economic success in China. These conclusions and assessments are carefully drawn based on both data on Economic Freedom scores and the multiple linear regression results.

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APPENDICES

Appendix 1. Correlation Matrix: FDI/GDP and Economic Freedom Indexes 2018

	FDI/GDP	GI	TF	IF	MF	FF	BF
FDI/GDP	1						
GI	-0,02423813	1					
TF	0,25135657	0,87200852	1				
IF	0,11529765	0,74998726	0,93537429	1			
MF	0,13825808	0,85259493	0,77930947	0,76792618	1		
FF	0,10596009	0,74257002	0,94270568	0,99442865	0,71118902	1	
BF	0,13411638	0,91144589	0,96876139	0,94699073	0,89600648	0,93230782	1

Appendix 2. Correlation Matrix: Independent Variables

	IF	TF	BF
IF	1		
TF	-0,881693353	1	
BF	0,456465956	-0,601897287	1

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