

The Rise and Fall of China's Private Sector: Determinants and Policy Implications

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Abstract

On 3rd November 2020, Ant Group's world record-setting initial public offering in Shanghai and Hong Kong was surprisingly suspended. In fact, there have been major shifts regarding China's policies toward the privately-owned enterprises (POEs) recently. This study aims to examine the factors behind the rise and fall of Chinese POEs. Based on a Robust Least Squares model, this study finds that China's economic freedom and economic conditions are significantly associated with the growth of POEs. At last, this study discusses recent policies and the implications to the Chinese economy.

Keywords: *Ant Group, Alibaba, Jack Ma, privately-owned enterprises (POEs), Chinese Communist Party (CCP), economic freedom index, economic condition index, China*

1. Introduction

On 3rd November 2020, Ant Group, which might be the world's largest privately-held company, surprisingly suspended its record-setting initial public offering (IPO) in Shanghai and Hong Kong (*CNBC*, 3rd November 2020). Since then, Chinese billionaire Jack Ma, who is the founder of Ant Group and Alibaba, has disappeared from public view (*Financial Times*, 1st January 2021). It is argued that through halting Ant's IPO, China sends a warning to Chinese businesses: no privately-owned enterprises (POEs) get to swagger unless the government is on board with it (*The New York Times*, 6th November 2020).

Just two years ago, however, China sent a different message. On 1st November 2018, the Chinese President Xi Jinping held a meeting with some representatives of POEs. During this meeting, President Xi stated that China's policy of encouraging, supporting and guiding the POEs had not changed, and China's policies of creating a good environment and providing more opportunities for the development of the POEs had not changed (*Xinhua News*, 1st November 2018).

The backgrounds for this 2018 meeting and the following statements are complicated. Specifically, there were four new developments regarding the role of POEs in China. First, in November 2013, the central committee of the Chinese Communist Party of China (CCP) held the third plenum. The communique stated that China would implement mixed-ownership reform, meaning that POEs can invest in state-owned enterprises (SOEs) (*People's Daily*, 15th November 2013). However, this policy reminded the audience of the joint state-private ownership practice in the 1950s, when the mixed-ownership reform was considered as a way to nationalize the POEs. As a result of that, there were only 869 privately owned industrial enterprises left as of the end of 1956, while this number was 123,165 in 1949 (Zhao, 2016). Second, China has strengthened the efforts of establishing CCP cells and unions

in POEs recently. For example, as of the end of 2016, 67.9 per cent of POEs have established CCP cells (*Xinhua News*, 19th October 2017). Furthermore, in September 2018, a deputy minister from the Ministry of Human Resources and Social Security of China stated that the Chinese government would strengthen the democratic management of POEs by supporting the labour unions to play a bigger role (MORSS, 13th September 2018). It is also reported in September 2018 that the Shandong Provincial and Qingdao Municipal Federation of Labour Unions have sent 92 union chairmen to the POEs (*Qingdao News Network*, 9th October 2018). Third, some of China's recent policies seem to deliberately strengthen the role of SOEs and weaken POEs. For example, in March 2018, China Securities Regulatory Commission issued the 'Regulations on Securities Companies Ownership Management (consultation draft)' stating that the size of the net assets of the controlling shareholders should be not less than RMB 100 billion, and the aggregated main operating revenue of the past three years should be not less than RMB 100 billion (CSRC, 2018). According to these criteria, POEs will generally be forbidden to invest in securities companies. It is also reported in October 2018 that as many as 24 POEs have been acquired by SOEs this year in Chinese stock markets (*Xinhua News*, 10th October 2018). Fourth, as a result of recent policy changes, it is argued in September 2018 that POEs should gradually disappear (*Phoenix News*, 12th September 2018). This argument has brought major debates on the role of POEs in the Chinese economy among major mainstream media (*Economic Daily*, 4th November 2018; *China Business Times*, 13th September 2018; *People's Daily*, 14th September 2018), and greatly caused the panic among POEs. While there are discussions on the so-called "state advances and private retreats" (Du, Liu, and Zhou, 2014), it seems that this time is more than that.

Studies on the Chinese economy have been dominantly focused on SOEs. For example, Nolan and Wang (1999) documented China's SOE reforms before 2000. Szamosszegi and Kyle (2011) provided a comprehensive analysis on China's SOEs including their economic footprint (output and value-added, fixed investment, employment and wages, taxes), the strategic and pillar SOEs, state and state-owned banks' support to SOEs, the role of SOEs in Chinese government procurement and technology transfer and so on. They concluded that the state sector in China will continue to play an important role. Song (2018) conducted a comprehensive review of China's reforms on SOEs during 1978-2018.

At the same time, studies on POEs are not as many as those on SOEs. So far, some studies have examined Chinese POEs from different perspectives. First, from the perspective of economic development, Chen and Feng (2000) found that that POEs lead to an increase in economic growth based on datasets during 1978-1989. Further, Chu and Song (2015) examined the evolution of the private sector and its performance with comparison to the performance of the state sector, and suggested much further room for more productive use of economic resources by increasing the participation of POEs. Garnaut, Song, Yao and Wang (2014) focused on matters relating to the development of private enterprise in China such as market competition; finance; taxation; internal governance; and so on. Lardy (2014) argued that the freeing of China's private sector is the main reason for its extraordinary rapid growth since 1978. The second perspective is the relation between economic liberalism and political freedom, Tsai (2007) found that Chinese entrepreneurs are not agitating for democracy. The third perspective is corporate finance issues in Chinese POEs such as the political connections, auditor choice, and corporate accounting

transparency (Liu, Li, Zeng and An, 2017); political connections and corporate performance (Du and Girma, 2010; Song, Nahm and Zhang, 2015); collective and private corporate political actions (Jia, 2014) and the relations among managerial incentives, CEO characteristics and corporate performance (Liu, Lin, Song and Li, 2011). The fourth perspective is management and business such as the internationalization strategy and the motivations for foreign affiliate formation (Sutherland and Ning, 2011; Ning and Sutherland, 2012) of Chinese POEs.

At the same time, few studies have examined the causes of the rise and fall of China's POEs. Nee and Opper (2012) argued that the emergence of China's POEs was the result of endogenous institutional change rather than shifts in state policies, but did not provide empirical evidence. This study further contributes to the studies on Chinese POEs by examining the evolution of Chinese POEs from a novel perspective, i.e., the relations among economic freedom, economic condition, and the rise and fall of Chinese POEs.

The structure of this paper is as follows: Section 2 presents a brief background introduction on Chinese POEs including their history, present state, and the theoretical grounds for the existence and development of POEs in China. Section 3 empirically examines the effects of economic freedom and economic conditions on the rise and fall of POEs. Section 4 discusses the policy implications. Section 5 concludes this paper.

2. Background: China's Private Sector's History, Present State and Theoretical Grounds

Modern China's property rights reform can be dated back to the founding of the People's Republic of China in 1949 and the following 1950s. On 24th September 1953, the CCP Central Committee announced

the ‘transitional general policy’ on the reform on private ownership. As of the end of 1956, POEs had been generally integrated into socialist public ownership (Zhao, 2016). This situation did not change for over twenty years. For example, as of the end of 1979, 97.1% of retail sales were through state-owned or collectively-owned firms (Yang, 1998). China started the ‘reform and open-up’ policy in 1978. After that, POEs began to thrive. Huang (2012) provided a detailed account of the development of China’s township and village enterprises (mainly POEs) in the 1980s and 1990s. Jefferson and Su (2006) examined China’s SOE reforms including privatization and restructuring during 1995-2001. As of the end of 2017, there are 27 million POEs and 65 million sole proprietor businesses with a combined registered capital of RMB 165 trillion. Together they contribute to over 50% of government taxes, over 60% of GDP, over 70% of technological innovations, over 80% of urban employment, and over 90% of firm numbers (*Xinhua News*, 1st November 2018).

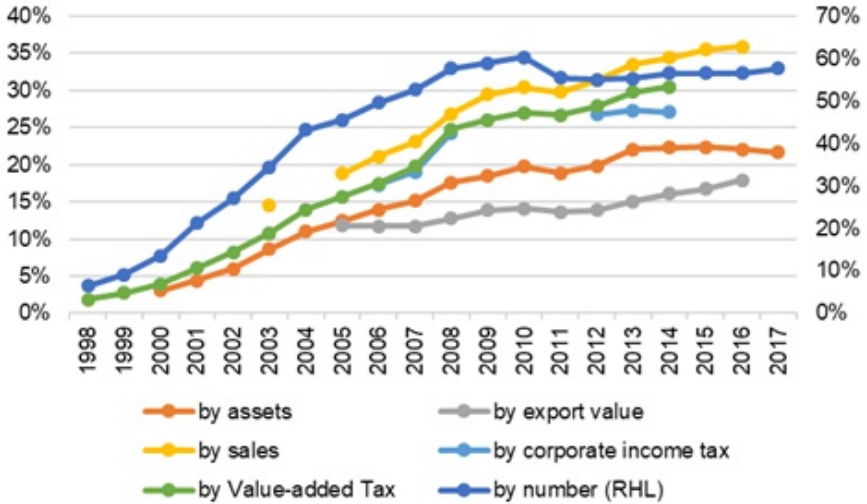
China’s National Bureau of Statistics reports the details of POEs in the banking and industrial sector. So, in this section, these two sectors are taken as examples to illustrate the presence of POEs.

As the Chinese financial system is dominated by banking, it is representative to look at the private ownership in the banking sector. As of the end of 2017, there are only 17 private-owned banks among 4,532 financial institutions classified as the banking industry. The number of people employed by these 17 private-owned banks only accounts for 0.1% of all banking staff¹. In terms of assets, China Banking Regulatory Commission does not publish the size of assets of privately-owned banks separately, but it is believed to be neglectable. In terms of the prudential regulatory indicators, during Q1, 2017 – Q2, 2019, China’s private-owned banks’ provision coverage, capital adequacy ratio, and liquidity ratio are the highest among all types of banks. At the same

time, China's privately-owned banks' Non-performing Loan Ratios are the lowest. So, we can conclude that although China's privately-owned banks' performance is the best, it is just marginal in the Chinese banking industry.

As to the industrial sector, the 5-year (2013-2017) average of the fraction of the industrial sector in GDP is 41.7%, so it is also representative to look at the private ownership in this sector. This sector includes mining, manufacturing, electricity, gas and water production and supply industries. In the below analysis, only firms above the designated size are considered. According to the criteria established by China's National Bureau of Statistics, the threshold of main business revenue was RMB 5 million before 2010 and RMB 20 million since 2011. Below Figure 1 shows the fractions of POEs in China's industrial sector by different measures for firms above the designated size. It is noted that some privately controlled companies are registered in the category of limited liability corporations (Lardy, 2014), only considering POEs may understate the role and size of the private sector. However, this may not be a serious issue in this study for two reasons. First, the purpose of his study is not to estimate the size of China's private sector, but rather the relations among the private sector, economic freedom, and economic condition. Second, the POEs are more sensitive to economic freedom and economic condition, thus using POEs data only is appropriate. At the same time, one of the main reasons why China's privately controlled companies are not registered as POEs may be related to pursuing protection and security, thus, they are less sensitive to the changes in economic freedom and economic condition.

Figure 1 Fractions of POEs in China’s Industrial Sector by Different Measures (firms above the designated size)



Source: Wind², China’s National Bureau of Statistics.

First, Figure 1 shows that China’s POEs have experienced significant development during the past twenty years no matter by number, assets, sales, or taxes. For example, in 1997, POEs in the industrial sector only accounts for 6.5% by number, and this figure has increased to 57.7% in 2017. In 2000, POEs in the industrial sector only accounts for 3.1% by the size of assets, and this figure has increased to 21.6% in 2017.

Second, China’s POEs have outperformed the industrial sector, which is consistent with the result from the banking sector. The POEs’ economic performance such as sales and taxes are higher than the corresponding level of assets for the market.

Third, although China's POEs have grown fast and become dominant by number, and they have contributed significantly to the Chinese economy by paying taxes (corporate income tax and value-added tax), they are still at a supplementary status if looking at the total size of POEs (assets). By the value of exports from POEs, they are even more marginal. The background is China has been adopting a qualifications registration and approval system for import and export business. As a result of this, the POEs are at a disadvantage.

Fourth, most important of all, although China's POEs have been generally growing, there are some periods of contraction. For example, the fraction of POEs by number dropped since 2010 for two consecutive years. The fraction of POEs by asset dropped in 2011 and in 2016-2017. The corporate income tax also dropped in 2014 although no data are available for 2015-2017. The issue that which factors have contributed to the rise and fall of POEs will be explored in Section 3.

The mainstream theory explaining the existence and development of China's POEs during the past four decades is the state capitalism theory. According to this theory, the state acts as the dominant economic player and uses markets primarily for political gain, and the main example is China (Bremmer, 2010). It is further argued that after the realization that the centrally planned socialist systems could not effectively compete with capitalist economies, former Communist Party political elites then started a limited form of economic liberalization in order to increase efficiency while still allowing them to maintain political control and power (Aligica and Tarko, 2012). Accordingly, the POEs are allowed to exist but marginal in the economy. However, this theory is challenged by Ferguson (2012) who argued that the key is the right balance between the economic institutions that generate wealth and the political institutions that regulate and redistribute it, and from this point of view, we're all state capitalists.

In this study, the neglected area, the ideology of communism, is re-examined. If looking at the evolution of the CCP's policies during the past forty years, it seems that they show a consistency with the core of the communist ideology. As argued by Marx and Engels (1948), the theory of communism may be summed up in the single sentence: abolition of private property. However, as argued by the then-general secretary of the CCP, since the level of productivity development in China was still relatively low and very uneven, it requires a variety of economic forms to coexist for a long time. At the same time, the SOEs must be dominant in the economy, and the POEs play a necessary and useful supplementary role (Hu, 1982). Five years later, this policy was further developed into the theory of preliminary stage of socialism arguing that the coexistence of a variety of economic forms is necessary during the preliminary stage of socialism (Zhao, 1987). After that, the general position of POEs being supplementary has been reiterated by following CCP leaders including Jiang Zemin (Jiang, 1992, 1997, 2002), Hu Jintao (Hu, 2007, 2012), and Xi Jinping (Xi, 2017). Specifically, the SOEs must be dominant, while the POEs must be under guidance. However, at the nineteenth National Congress of the CCP held in October 2017, Xi Jinping stated that China has entered a new era. This new era means the end of the preliminary stage of socialism, and China has upgraded from rising up, getting rich to getting strong (CCDI, 2017). When the level of productivity development in China has become very high, whether it is necessary to still have a variety of economic forms becomes a question mark. At the speech of the 200th anniversary of Karl Marx's birth in May 2018, President Xi Jinping said that Marxism remains totally correct, and people begin accepting the notion that Xi Jinping actually believes in Marx and Marxism (Reuters, 4th May 2018). At the same time, the ideology of abolition of private property re-emerges in the debates on Chinese policies (Zhou, 2018).

3. Empirical Analysis

In this section, the factors that can have an effect on the rise and fall of POEs are examined. In Subsection 3.1, the regression variables are introduced, followed by the hypothesis for later tests. In Subsection 3.2, the empirical analyses are performed.

3.1. Variables and Hypothesis

The dependent variable is the fraction of POEs by assets or numbers for the industrial sector.

Regarding independent variables, first, the rise and fall of China's POEs have been closely associated with the change of economic freedom. During the past forty years during 1978-2017, there have always been debates on conservatism on the left (左), which supports state ownership, and liberalism on the right (右), which supports private ownership, in Chinese politics (Pan and Xu, 2018). For example, after the June Fourth Incident in 1989, China turned to the left sharply, such as the role of state had been strengthened, the CCP had returned to a conventional Leninist model and re-established firm control over the press, publishing, and mass media, and many of the freedoms introduced during the 1980s were rescinded. The POEs were under severe attack arguing that private ownership was the foundation of liberalism. As a result of that, the number of POEs had dropped from 225,000 as of the end of 1998 to just 90,600 as of the end of 1989 (Yang, 1998), a significant annual drop of 57.8%. Second, the rise and fall of China's POEs are also assumed to be associated with China's economic conditions. As discussed in Section 2, the POEs have been positioned as the necessary supplement to the Chinese economy when the level of productivity development in China was still relatively low. After decades of development, the level of productivity development in China

has improved significantly. As a result of that, China re-positioned itself as entering a new era in 2017 rather than the previous theory of the preliminary stage of socialism. This can explain why the fraction of POEs by assets has dropped from 2015. While this is a big picture, the specific situations also apply. For example, as discussed at the beginning of this paper, before 1st November 2018, various pieces of evidence show that China was considering further strengthen its state sector while restraining or even nationalizing POEs, the China-US trade war broke out and exerts great uncertainties on the future of the Chinese economy (Liu, 2018a). The Chinese government had to adjust the policies and launched a series of measures to support the POEs afterward (*Shenzhen Metropolis Online*, 2nd November 2019). Accordingly, two hypotheses are proposed as follows:

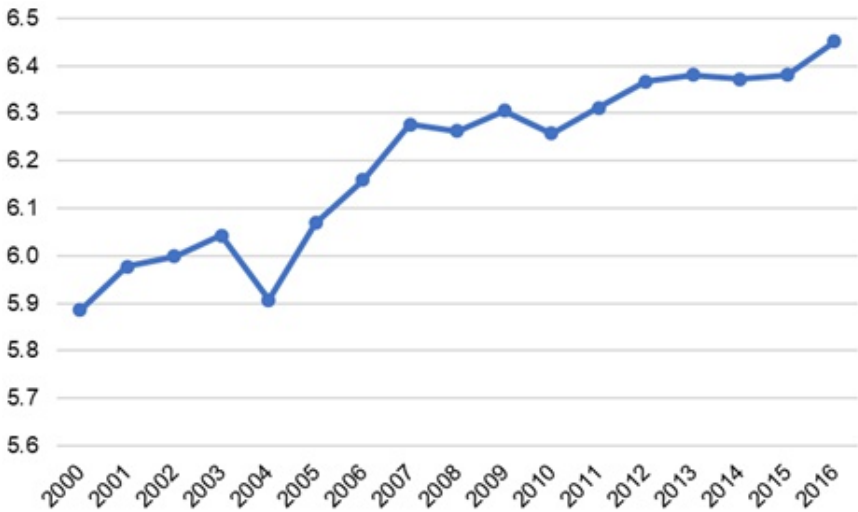
Hypothesis 1: The fraction of POEs is positively related to the Economic Freedom Index

Hypothesis 2: The fraction of POEs is negatively related to the Economic Condition Index

Regarding the variable of economic freedom index, there are three types of indices in the market. The first one is the freedom index created by Freedom House, a US-based US government-funded non-governmental organization. It measures political and cultural freedom, and also incorporates a range of indicators including the freedom to establish a business and freedom of union organisation. The issue is that this index is not very quantitative. For example, China's score almost does not change, which makes it difficult for regressions. The second freedom index is the Index of Economic Freedom, an annual index created by The Heritage Foundation and *The Wall Street Journal* to

measure the degree of economic freedom in the world's nations. The third one is the Economic Freedom of the World, an annual survey published by the Canadian think tank Fraser Institute. This one is the most widely-cited freedom index in the world. For example, the total citations for this index are 542 in 2018, 669 in 2017, and 412 in 2016³.

Figure 2 China's Economic Freedom



Source: Fraser Institute.⁴

This index measures the degree of economic freedom present in five major areas: the size of government; legal system and security of property rights; sound money; freedom to trade internationally; and regulation. Within the five major areas, there are 24 components in the index. Many of those components are themselves made up of several sub-components. In total, the index comprises 42 distinct variables. All

variables come from third-party sources, such as the *International Country Risk Guide*, the *Global Competitiveness Report*, and the World Bank's *Doing Business* project, so that the subjective judgments of the authors do not influence the index. The index for past years is updated with each new edition to take account of revisions in the underlying data⁵. Figure 2 shows China's economic freedom scores during 2000-2016.

The other independent variable is the economic condition index, which measures the current economic conditions. This index is created by the China Economic Monitoring and Analysis Centre, an affiliate of China's National Bureau of Statistics. This index includes four key aspects such as industrial production, employment, demand (investment, consumption, and foreign trade), and social income (government tax, corporate income, and household income).

3.2. Regressions

In this subsection, the factors that contribute to the rise and fall of Chinese POEs are examined. As discussed, the model specification is as follows:

$$\begin{aligned} \Delta\Delta\text{Fraction of POEs}_t = & \delta_0 + \delta_1 \Delta\text{Economic Freedom Index}_t \\ & + \delta_2 \Delta\text{Economic Condition Index}_t + \varepsilon_t \end{aligned} \quad (1)$$

The $\Delta\Delta\text{Fraction of POEs}$ is the second difference of the fraction of privately-owned enterprises by assets or numbers for the industrial sector. While it would also be helpful to look at the first difference of the fraction of privately-owned enterprises, this value is non-stationary. Further work can be done when more data sets become available. $\Delta\text{Economic Freedom Index}$ is the change of economic freedom index. $\Delta\text{Economic Condition Index}$ is the change of economic condition index.

They are all yearly data. The reason for using first difference or second difference is to make sure that all time-series data are stationary (unit root tests are presented in Appendix 1)

It may be argued that the change of economic freedom may cause a change of economic condition or vice versa. It may also be argued that the change of the POE may cause the change of economic freedom or economic condition. So, there may be an endogeneity issue. In order to test this issue, the Granger Causality tests⁶ are conducted. The results are presented below in Table 1.

Table 1 Granger Causality Tests

A. Economic Freedom vs Economic Condition

	Prob.			
Null Hypothesis:	Lag Order 1	Lag Order 2	Lag Order 3	Lag Order 4
Δ in Economic Freedom Index does not Granger Cause Δ in Economic Condition Index	0.648	0.847	0.852	0.940
Δ in Economic Condition Index does not Granger Cause Δ in Economic Freedom Index	0.855	0.498	0.615	0.345

B. Fraction of POE vs Economic Condition

	Prob.			
Null Hypothesis:	Lag Order 1	Lag Order 2	Lag Order 3	Lag Order 4
$\Delta \Delta$ in Fraction of POE by Assets does not Granger Cause Δ in Economic Condition Index	0.788	0.690	0.316	0.384
$\Delta \Delta$ in Fraction of POE by Numbers does not Granger Cause Δ in Economic Condition Index	0.372	0.398	0.575	0.215

Table 1 (Continued)**C. Fraction of POE vs Economic Freedom**

Null Hypothesis:	Prob.			
	Lag Order 1	Lag Order 2	Lag Order 3	Lag Order 4
$\Delta \Delta$ in Fraction of POE by Assets does not Granger Cause Δ in Economic Freedom Index	0.560	0.355	0.993	0.888
$\Delta \Delta$ in Fraction of POE by Numbers does not Granger Cause Δ in Economic Freedom Index	0.567	0.315	0.194	0.860

Table 1 shows that all null hypotheses have failed to be rejected, indicating that there is no endogeneity issue. The most significant conclusion is that the rising private ownership in China in the past did not improve economic freedom but possibly the opposite, which is consistent with the current situation of China (Liu, 2018a). Furthermore, the speed of the change of private ownership does not change the economic condition, but possibly the opposite.

The regression results based on equation (1) are presented in Table 2. The reason for applying robust least squares is the existence of outliers (see Appendix 2: Influence Statistics). The residual test (correlogram) is presented in Appendix 3, showing that there are no serial correlations.

The results presented in Table 2 show that the model specifications generally work well. The coefficients of the change of Economic Freedom Index are both significantly negative within a 10 percent confidence level, indicating that lower economic freedom is significantly associated with a decelerating growth of the fraction of POEs by assets or numbers. This effect will take a 1-year lag. This result is consistent

Table 2 Regressions Results for the Factors That Contribute to the Rise and Fall of Chinese POEs

Variable	Model 1: Dependent variable: the $\Delta \Delta$ in fraction of POEs by assets		Model 2: Dependent variable: the $\Delta \Delta$ in fraction of POEs by numbers	
	Coefficient	Prob.	Coefficient	Prob.
C	-0.004	0.195	-0.013	0.008
Δ in Economic Freedom Index (-1)	0.080	0.055	0.251	0.000
Δ in Economic Condition Index (-1)	-0.001	0.549	-0.003	0.087
Adjusted R-squared	0.329		0.669	

Notes: Method: Robust Least Squares. Sample: 2001-2016. Included observations: 16 after adjustments. Method: M-estimation. M settings: weight=Bisquare, tuning=4.685, scale=MAD (median centered). Huber Type I Standard Errors & Covariance.

with Hypothesis 1. It may also be possible that the fraction itself drops. However, because of the limitation of the datasets, this issue will be left for future work. The rationale is as follows: when the economic freedom deteriorates, Chinese POEs are then under unfair treatment. Historical evidence shows that they are either under discrimination, forced to retreat from their operations, or become even nationalized. Under some circumstances, these POEs transfer their assets abroad. As a result of that, the growth of the fraction of POEs slows down or the fraction itself drops. Vice versa. For example, after the June Fourth Incident and its seriously negative effects on POEs, the CCP introduced the socialist

market economic system in 1992. After that, China's economic freedom had improved greatly. The POEs also experienced a significant development afterward. For example, during 1992-1995, the annual growth rate of POEs was 47.1% by number and 98.9% by registered capita (Yang, 1998). Nee and Opper (2012) argued that the emergence of China's POEs was the result of endogenous institutional change rather than shifts in state policies, but did not provide empirical evidence. This study does not support such an argument but rather the opposite, i.e., a shift in state policies (in the form of economic freedom index) is the cause.

Also, the coefficient of the change of Economic Condition Index is significantly negative within a 10 percent confidence level for Model 2 with the fraction of POEs by numbers as the dependent variable but insignificant for Model 1 with the fraction of POEs by assets as the dependent variable. It indicates that a better economic condition is associated with a decelerating growth of the fraction of POEs although this relation is marginally significant. This result is consistent with Hypothesis 2. The rationale is as follows: when China's economic condition gets better, the Chinese government may find it more unnecessary to need the support of POEs. As a result, POEs are then under unfair treatment or SOEs receive more preferential treatments in order to maintain the socialist system. For example, after re-positioning China as beyond the previous preliminary stage of socialism and having entered a new era, China began to strengthen the SOEs sector, and stated that China should unswervingly make SOEs stronger, bigger, and better in 2015 (*Xinhua News*, 4th July 2016). As a result of that, the fraction of POEs by assets has dropped continuously for 2016 and 2017.

4. Policy Discussions and Implications

This study shows that the rise and fall of China's POEs are significantly associated with the change of economic freedom and economic conditions. China's economic freedom score is 57.8, making its economy the 110th freest in the 2017 Index⁷. Although China has benefited from integration into the global economy, the Chinese economy remains mostly unfree. As of the first half of 2018, no significant reforms had been achieved since the much-expected third plenum of the 18th CCP conference. There was little momentum for further reform, and SOEs still dominate the financial sector and many basic industries. With a new 'Socialism with Chinese Characteristics' guiding ideology, the leadership appears to be stepping back from liberalization. Chinese President Xi Jinping has centralized his authority, ousted internal political enemies, and backed authoritarian policies to tighten control of civil society since his taking power in 2013 (The Heritage Foundation, 2018). In March 2018, China's parliament approved the most dramatic change to the Chinese political system in three decades, removing term limits for the president, meaning that President Xi Jinping can rule for life. According to The Heritage Foundation (2020), China's overall economic freedom score has slightly improved in 2019 with most of the gains coming in areas related to the rule of law and business regulation. However, major reforms of the financial system have not occurred. China's overall economic freedom still lacks depth and breadth. It seems that China's POEs may face a continuously challenging environment ahead regarding economic freedom.

Regarding economic conditions, the dramatic U-turn happened after the 1st November 2018 meeting between Chinese President Xi Jinping and some representatives of POEs. This mainly reflects the Chinese government's concern over the China-US trade war and its negative

effect on the Chinese economy including welfare, gross domestic product, manufacturing employment, and trade (Li, He and Lin, 2018; Liu, 2020a). After November 2018 meeting, a series of policies had been implemented to support the POEs. For example, the head of China Banking and Insurance Regulatory Commission suggested that among the incremental corporate loans, large banks have no less than one-third of loans to POEs, and medium- and small-sized banks have no less than two-thirds; three years later, the proportion of the banking industry's incremental loans to POEs be not less than 50% (*China Securities Journal*, 8th November 2018). The People's Bank of China, security brokerages, and local governments have all begun to provide supporting treatments to POEs.

It seems that the China-US trade war had saved China's POEs (Liu, 2020b). That can explain why some POEs in China support the US president (Reuters, 21st November 2018). After the China-US trade war entered a truce in December 2019 (Liu, 2020a), the Chinese economy experienced a significant rebound from the shock of the COVID-19 (Liu, 2021a), and China may be the only country that will experience positive growth in 2020 among major economies (IMF, 2020), China's economic conditions have improved. It turns out to be a minus for Chinese POEs. On 13th September 2020, the Chinese authorities stipulate that firms that control two or more different types of financial institutions may need to establish financial holding companies. Liu (2021c) argued that this regulation primarily targets POEs, and one of the regulatory objectives is to restrict private ownership. As discussed at the beginning of this paper, one of the most recent examples is the crackdown on China's (once) largest privately-held firm, Ant Group, an affiliate company of Alibaba (which was China's largest technology firm by market capitalization, as of 30th November 2020). Strengthening antitrust efforts and preventing the disorderly expansion of private

capital are parts of the Chinese authorities' major goals in 2021 (*China Daily*, 19th December 2020).

Some of China's recent policy orientation towards POEs are subtler. For example, Chinese President Xi Jinping instructed that China should be confident in making SOEs stronger, better, and bigger (Liu, 2021b). In fact, based on a dataset of control rights transfer between listed POEs and SOEs as of September 2019, Liu (2021b) found that more POEs have been nationalized in 2019 than in any year during 2014-19. The CCP has also greatly enhanced the control over POEs recently. According to the constitution of the CCP, "all enterprises, rural areas, government departments, schools, research institutes, street communities, social organizations, local units of the People's Liberation Army, who have more than three members with an official membership of CCP, should set up a local cell of CCP"⁸. According to the Company Law of China, "(each) company should provide necessary conditions for activities organized by the CCP" (NPC, 2007). So, it means that the CCP has its legal right to establish local cells in POEs. According to the data provided by the Organization Department of the CCP at a news conference, as of the end of 2016, among two point seven million non-SOEs, 67.9 per cent of them have established CCP cells; among 106 thousand foreign firms, 70 per cent of them have established CCP cells (*Xinhua News*, 19th October 2017).

If China's POEs are continuously falling, it will have complicated implications for the Chinese economy. Various studies have shown that private ownership is more efficient than state ownership (Liu, 2018b), a more dominant SOE in the Chinese economy means more waste of resources and lower efficiency. Regarding the case of China, Du, Liu and Zhou (2014) found strong and consistent evidence of a systematic and worsening resource misallocation within the state sector and/or between the state sectors and private sectors over time, suggesting that

resources have been driven away from their competitive market allocation and towards the inefficient state sector. Johansson and Feng (2016) found that SOEs perform significantly worse than POEs after the introduction of the stimulus programme in 2008, and concluded that there will be negative consequences for aggregate performance in the economy if China's state sector is advancing. In summary, if the fraction of POEs continues to decline, the growth prospect of the Chinese economy will be further shadowed.

5. Concluding Remarks

Recently there have been major shifts regarding China's policies toward the POEs. While previous studies on the Chinese economy have been mainly focused on SOEs, POEs have received much less coverage. From this point of view, this paper contributes to the studies on POEs. Most importantly, this study examines the factors that have contributed to the growth of POEs. The empirical results show that the deteriorating (improving) economic freedom and improving (deteriorating) economic conditions are significantly associated with the lower (higher) speed of the growth of the fraction of POEs. These findings are closely related to the communist ideology held by the CCP from the very beginning of the reform and open-up policy in 1978 to the present Xi Jinping presidency. For example, the communist ideology advocates the abolishment of private ownership. The future of Chinese POEs depends on how China's economic freedom will evolve, and how China's future economic conditions are.

Previous studies argued that the emergence of POEs was the result of endogenous institutional change rather than shifts in state policies. For the first time in academic literature, this study provides empirical evidence showing that on the contrary, a shift in state policies (in the

form of economic freedom index) is the cause. Also, for the first time in academic literature, this study finds that the development of China's private sector does not Grange cause the improvement of economic freedom.

One limitation of this study is that the number of data items is very limited. As the datasets employed in this study are yearly, it may not be easy to obtain a large number of data items. Future studies can use firm-level data to further examine the development of Chinese POEs in and after 2018. Moreover, as this study examines the effects of the change of economic freedom and the change of economic condition on the speed of the growth (change) of POE fractions, it will be valuable to see how they will affect the growth (change) of POE fraction itself. When more data items or alternative variables are available, alternative models can be applied.

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Notes

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1. Source: Wind; China Banking and Insurance Regulatory Commission.
2. Wind Info is a Chinese economic data provider (<https://www.wind.com.cn/en/default.html>). It serves more than 90% of China's financial institutions and 70% of Qualified Foreign Institutional Investors.

3. For more information, please see <<https://www.fraserinstitute.org/economic-freedom/citations>>.
4. *Economic Freedom Rankings*. Vancouver, Canada: Fraser Institute. <<https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&page=dataset&min-year=2&max-year=0&filter=1&sort-field=country&sort-reversed=0&countries=CHN&year=2018>>
5. For more detail information on the methodology of this index, please visit the official website of Fraser Institute <<https://www.fraserinstitute.org/economic-freedom/approach>>.
6. The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another.
7. In The Heritage Foundation data, this value is assigned to its 2018 index. Since the Fraser Institute data are only as of 2016, The Heritage Foundation data is used here accordingly.
8. <<http://www.12371.cn/special/zggcdzc/zggcdzcqw/>> (in Chinese). This is the official website for CCP members, and set up by the Organization Department of the CCP.

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Appendix 1 Unit Root Tests

A. Augmented Dickey-Fuller Test Statistic: Null Hypothesis: Variable Has a Unit Root

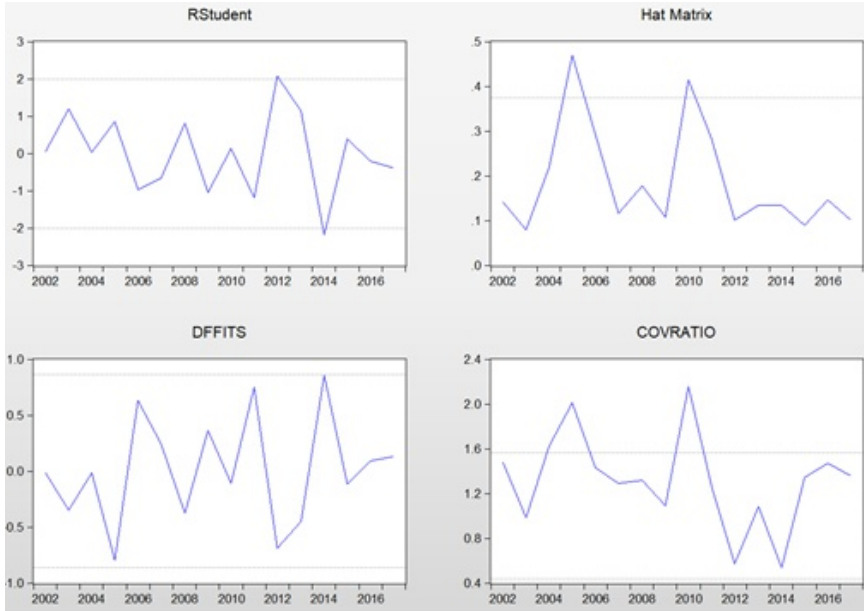
Variables	t-Statistic	Prob.*
Δ in Fraction of POE by Assets	-2.160	0.226
$\Delta \Delta$ in Fraction of POE by Assets	-4.127	0.010
Δ in Fraction of POE by Number	-2.275	0.189
$\Delta \Delta$ in Fraction of POE by Number	-7.059	0.000
Δ in Economic Freedom Index	-3.687	0.019
Δ in Economic Condition Index	-4.917	0.001

B. Phillips-Perron Test Statistic: Null Hypothesis: Variable Has a Unit Root

Variables	Adj. t-Stat	Prob.*
Δ in Fraction of POE by Assets	-2.160	0.226
$\Delta \Delta$ in Fraction of POE by Assets	-10.127	0.000
Δ in Fraction of POE by Number	-2.264	0.192
$\Delta \Delta$ in Fraction of POE by Number	-6.978	0.000
Δ in Economic Freedom Index	-5.167	0.001
Δ in Economic Condition Index	-4.923	0.001

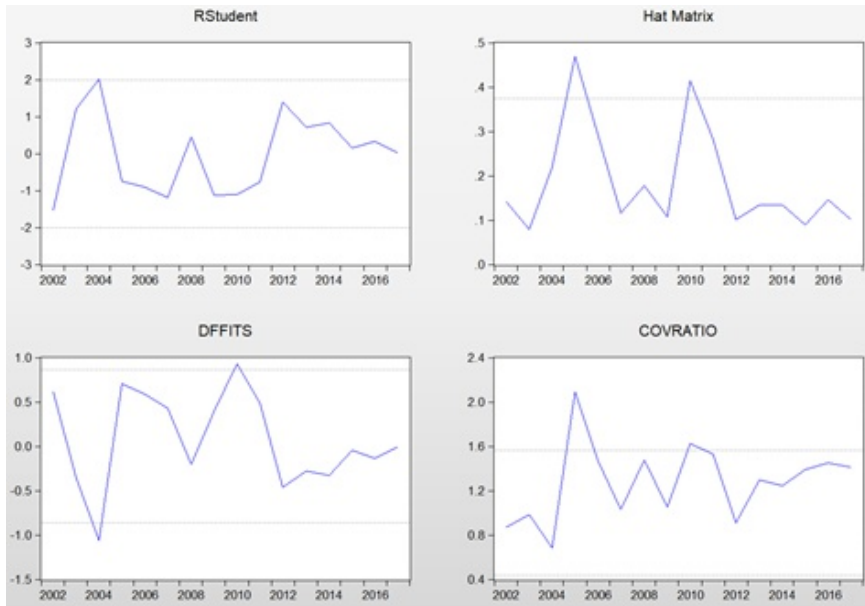
Appendix 2 Influence Statistics

A. Influence Statistics for OLS with Fraction of POE by Asset as the Dependent Variable








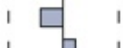



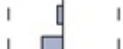

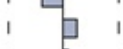








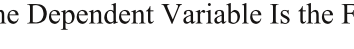
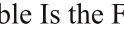
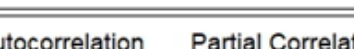
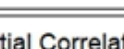
Appendix 2 (Continued)

B. Influence Statistics for OLS with Fraction of POE by Number as the Dependent Variable












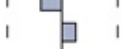









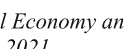
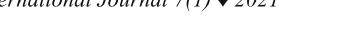
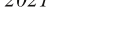


Appendix 3 Correlogram – Q Statistics

A. The Dependent Variable Is the Fraction of POE by Asset

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob*	
		1	-0.270	-0.270	1.3974	0.237
		2	-0.177	-0.269	2.0393	0.361
		3	0.058	-0.088	2.1130	0.549
		4	-0.117	-0.202	2.4439	0.655
		5	0.200	0.113	3.4870	0.625
		6	-0.385	-0.426	7.7624	0.256
		7	0.135	-0.044	8.3452	0.303
		8	0.080	-0.181	8.5743	0.379
		9	0.036	0.123	8.6277	0.472
		10	0.136	0.047	9.5214	0.483
		11	-0.135	0.157	10.568	0.480
		12	-0.001	-0.160	10.569	0.566

B. The Dependent Variable Is the Fraction of POE by Number

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob*	
		1	-0.270	-0.270	1.3974	0.237
		2	-0.177	-0.269	2.0393	0.361
		3	0.058	-0.088	2.1130	0.549
		4	-0.117	-0.202	2.4439	0.655
		5	0.200	0.113	3.4870	0.625
		6	-0.385	-0.426	7.7624	0.256
		7	0.135	-0.044	8.3452	0.303
		8	0.080	-0.181	8.5743	0.379
		9	0.036	0.123	8.6277	0.472
		10	0.136	0.047	9.5214	0.483
		11	-0.135	0.157	10.568	0.480
		12	-0.001	-0.160	10.569	0.566

Trade and Investment

