The Value of Independent Directors: Evidence from China

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ABSTRACT

The paper empirically investigates the contribution of independent directors to Chinese listed enterprises through a natural experiment. Our results show that in China, independent directors who are incumbent or retired government officials can promote performance of privately controlled listed enterprises, while other independent directors make little contributions to Chinese listed enterprises. In fact, Chinese independent directors cannot play monitoring and advising roles effectively and even exacerbate the agency problem in listed enterprises. Among them, government official independent directors, however, enable privately controlled listed enterprises to access to public resources to enhance firm performance. It can be concluded that Chinese independent directors act like “vases for decoration” in boards. Even worse, government official independent directors do play important roles in rent-seeking.

Key words: *independent directors, resignation, market reaction, Firm value*

1. Introduction

Yan Yiming, a famous lawyer and shareholder-rights activist in China, said in 2005: "The existing independent director system is not working at all" and "looks just like a vase for decoration". Besides, Liu Jipeng, the director of the capital research center at the China University of Political Science and Law, also mentioned (2012) that "The system is aimed at constraining the power of management and better protecting the interests of minority shareholders. But its role has not been fulfilled well as China's listed companies are usually controlled by a single majority shareholder." In China, independent directors are often criticized for their dereliction of duty by media and academia and called as "vase" independent directors, which means that they take positions in the board but contribute to firms scarcely.

However, the prevailing view in the field insists that independent directors can increase firm value when playing monitoring and advisory roles (Adams et al., 2010; Demb and Neubauer, 1992; Rosenstein and Wyatt, 1990). Theoretically, an independent director takes no position in the company other than being a member in the board of directors and has no personal relationship with major shareholders or

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executives of the company. She hence is supposed to more objective and independent than inside directors to reduce agency problem and be better at playing monitoring role (Fama, 1980; Fama and Jensen, 1983). Besides, Brickley et al. (1994), and Byrd and Mizruchi (2005) note that independent directors are also better at advisory since they are almost experts from related fields and often more experienced than inside directors.

To resolve the contradiction above, we, in this paper, empirically evaluate the value of independent directors to Chinese listed enterprises through a recent natural experiment. Xi Jinping launched an anti-corruption campaign since he took the president of China. On Oct 19, 2013, the Organization Department of the Central Committee of the Communist Party of China[†] promulgated the No.18 Decree titled "Opinions about Further Regulating Party and Government Leading Cadres' Part-time (and Full-time) Careers in Enterprises" (the 18th Decree hereafter), which prohibits incumbent and former party and government officials to take positions such as independent directors in any enterprises. In the first half year after the 18th Decree was enacted, more than 200 independent directors in Chinese listed enterprises who are incumbent and former leading cadres resigned. The natural experiment caused by the 18th Decree provides us a good opportunity to empirically examine the effectiveness of independent directors to listed enterprises without endogeneity.

Independent directors resigned in the period can be categorized into two groups: independent directors who resigned due to the 18th Decree and those who resigned due to other reasons. Independent directors who were forced to resign because of the 18th Decree include incumbent and retired government officials and executives in state-owned enterprises and institutions[‡] (bureaucratic independent directors hereafter). Besides, academics holding administrative positions in public universities and scientific institutions (for example, presidents of universities and dean of the colleges) who were independent directors in Chinese listed enterprises (academic independent directors henceforth) also had to resign due to the 18th Decree as they are regarded as leading cadres in China. In the same period there are however some independent directors resigned due to the reason other than the 18th Decree. Normally, independent directors quit when their term end. These independent directors (other independent directors henceforth) resigned serve as controls in our study.

We adopt the event study method (Dewally and Peck, 2010; Nguyen and Nielsen, 2010) to find that there were significantly negative market reactions when government official independent directors resigned. While no significant market reactions can be located when other independent directors resigned. It indicates that only government official independent directors can increase firm value in China. Our further study shows that rather than monitoring and advising controlling shareholders and executives of listed enterprises, government official independent directors in China contribute to Chinese listed firms by helping them in rent seeking activities: access to more public resources.

[†] The Organization Department of the Central Committee of the CPC is integrated functional departments in charge of personnel and party-building work.
[‡] Executives in state-owned enterprises and institutions are actually officials in Chinese bureaucratic system. They can directly transfer to government positions if needed.

Our study adds to the literature on the effectiveness of independent directors in several ways. Firstly, we highlight the heterogeneity of independent directors when investigating the contribution of independent directors to listed companies, which allows us to better understand the value of different types of independent directors. Secondly, we take advantage of a unique natural experiment providing exogenous changes in independent directors to measure the value of independent directors to listed firms without potential endogeneity problems besetting literature on boards of directors (Hermalin and Weisbach, 2003). Thirdly, our results show that Chinese independent directors hardly carry out their monitoring and advisory functions in boardrooms as prevailing theory expected, whereas some of them, i.e. government official independent directors, are found to help enterprises in rent seeking activities.

The remainder of our paper is organized as follows. Section 2 reviews the literature and develops hypotheses on the value of independent directors. Section 3 describes the data and methodology. Section 4 shows empirical results. Section 5, however, provides further discussion about our results. Finally Section 6 provides our conclusions and implications.

2. Literature review and hypothesis development

Debates on whether independent directors can increase firm value exist for many years. Fama (1980), Fama and Jensen (1983) believe that the system of independent directors can improve ineffective supervision to mitigate agency problem. Independent directors can reduce agency cost by monitoring the employment, assessment and dismissal of senior executives (Adams et al., 2010). On the other hand, Brickley et al. (1994) claim that independent directors can give better and critical advice to companies with their rich experience and professional knowledge.

A majority of empirical studies confirm that independent directors are helpful to promote firm performance (Brickley et al., 1994; Rosenstein and Wyatt, 1990; Deng et al., 2016). Macvoy and Millstein(1998) find the positive relationship between independent directors and firm performance by analyzing 154 American firms. Nguyen and Nielsen (2010) examine the stock market reaction after the death of independent directors and find that independent directors provide valuable service to shareholders. Baysinger and Butler (1985), and Peng (2004) also find similar results in their research.

However, Hermalin and Weibach (1991), and Cotter et al. (1997) shows that there is no significant contribution of independent directors to firm performance. Yermack (1996) empirically investigate the relationship between the proportion of independent directors in the board and Tobin’s Q for the corporation, and he obtains different results when utilizing different regression methods. Surprisingly, Fosberg(1989) , Agrawal and Knoeber (1996) even located the negative relationship between independent directors and firm performance. While Bhagat and Black (1999) insist that the independence of the boards decreases the profitability of enterprises.

A rational explanation for conflicting evidence above is that the board of directors is endogenously determined. Prior literature (Hermalin and Weisbach, 1998、2003; Bhagat and Black, 2000) point out that the composition of the board of directors depends on firm performance, CEO's bargaining power and other firm characteristics. For example, Hermalin and Weisbach (1998) identify that poor firm performance leads to more outside directors in the board. It is therefore difficult for us to empirically prove the causality between board composition and firm value. A potential approach to address the endogeneity problem in the area is to evaluate the effect of independent directors' departure from boards upon the firm value. However, the concern for endogeneity perhaps still exists because independent directors may depart from the boards due to companies' own issues. It is then in doubt whether departures of independent directors themselves or company problems causing the departures brings about the changes in market values of companies immediately after the departures.

A solution here is to find an exogenous event which directly leads to the departures of independent directors without any influences on the firms under study. Recently Nguyen and Nielsen (2010), and Cheng (2018) use sudden deaths of independent directors in America and in China respectively as natural experiments to measure the contribution of independent directors to firm value. Chakrabarti and Subramanian (2010) utilize resignation of independent directors subsequent to the Satyam scandal in India as a natural experiment to investigate the similar issue.

Among the literature most related to our study, Han and Zhang (2018), and Tang et al. (2016) both use the mandated resignation of Chinese independent directors due to The issuance of the 18th Decree[§] as a natural experiment to examine the effect of politically connected directors upon firm valuation though their results seems conflicting. Han and Zhang (2018) find a sizable increase in firm value after the independent director's resignation. Whereas, Tang et al. (2016) show that the value of firms decreases significantly following resignations of politically-connected directors. Different form above research focusing the impact of political connection upon firm performance, our study aims to explore the contribution of independent directors to Chinese listed enterprises comprehensively through the same natural experiment.

China Securities Regulatory Commission suggested in 1997 that listed companies should draw independent directors into boards in the Guidelines for Articles of Association of Listed Companies. In August 2001, the China Securities Regulatory Commission further released a decree titled "Guiding Opinions on Establishing the Independent Director Institution of Listed Companies" which requires that no less than one-third of board directors in a listed company should be independent. From that time Chinese listed companies extensively introduced independent directors into their boards.

There however exist some problems in the current system of independent directors in China. First, most Chinese enterprises have concentrated ownership therefore are controlled by their major shareholders. Independent directors in China are often nominated directly or indirectly[**] by controlling shareholders whom independent directors are assumed to monitor. This causes the concern that independent directors may be captured and therefore fail to play monitoring roles

[§] We have detailedly discussed the event before.

[**] Some independent directors are nominated by the boards which controlling shareholders dominate.

effectively. Actually it happens from time to time in China that independent directors lose their positions only because they oppose proposals raised by controlling shareholders or executives.

Second，independent directors are in fact outsiders to listed companies. They are seldom provided all of the relevant information about the companies. Normally they can only get the information that controlling shareholders or executives wish to disclose to other shareholders. Without actual information, it is quite difficult for independent directors to provide professional advice to effectively improve firm performance though most of them are experts in related areas. It is hence understandable that Chinese independent directors are believed to make little contribution to listed companies and called as "vase" independent directors. We thus hypothesize the following in the null form.

Hypothesis 1: Unlike what conventional wisdom states, independent directors in China can hardly perform their monitoring and advising roles effectively in the boards and therefore make little contribution to the performance of Chinese listed companies.

In China, however, the government directly or indirectly controls the allocation of key resources, such as financial resources including bank loans, government subsidies and tax preferences. Therefore recruiting politically connected independent directors is one of effective strategies enable Chinese enterprises to easier access to resources allocated by the government. Independent directors who are incumbent or retired government officials are believed to fulfill resourcing roles as they can bring in valuable government resources that firms need. That is, government official independent directors enable companies to have greater access to government resource hence increase value of firms. However, current literature provides rather mixed results on this. Both Shi et al (2018) and Han and Zhang (2018) find that the value of Chinese listed companies increases significantly when their politically connected independent directors are forced to resign due to the 18th Decree. Whereas Xu (2018) and Tang et al. (2016) show that Chinese listed companies lose their value remarkably due to the mandatory resignation of their politically connected independent directors after the release of the 18th Decree. To shed new light on the issue, we plan to examine the following hypothesis.

Hypothesis 2: In China, independent directors who are incumbent or retired government officials (government official independent directors) may perform their resourcing roles effectively in the boards and therefore improve the performance of Chinese listed companies.

3. Data and methodology

3.1 Sample and data

A large number of politically connected independent directors are forced to resign continuously after the 18th Decree is promulgated on October 18, 2013. Our initial sample includes all resignations of independent directors of A-share firms trading on the Shanghai Stock Exchange and Shenzhen Stock Exchange during the period of October 19, 2013 to October 31, 2016. We further exclude resignations of independent directors from financial firms, firms with two independent directors resigning at the same time and those experiencing suspension in the event windows. Our final sample therefore includes 998 resignations.

The paper utilizes two kinds of data. The data about listed companies are drawn from the China Stock Market and Accounting Research (CSMAR) database. The data about independent directors are manually collected from their biographies provided by the CSMAR database and from online searching through search engines and Chinese financial websites.

3.2 Methodology

We first adopt the event study method to measure the market reactions to resignations of independent directors in order to assess values of independent directors resigned to listed firms. Previous studies (Zhang et al., 2007; Ran et al., 2001) have proved that Chinese stock market is efficient. And there are no other exogenous events except resignations independent directors occurring in the estimation windows or event windows in our sample. Therefore the event study method is applicable to our study.

The basic idea of this method is to locate the abnormal return generated by the event being studied by adjusting for the return that stems from the market return (Gilson and Black, 1995). Specifically, we use the market model to estimate α_i and β_i:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where $R_{i,t}$ is the stock return of firm i on day t, and $R_{m,t}$ is the return of market portfolio represented by the Shanghai and Shenzhen 300 index on day t. α_i and β_i are estimated during the estimation window from 185 trading days (-185) to 6 trading days (-6) prior to the event day (0). The event day is the trading day when an independent director resigns or the first trading day after the resignation if the independent director resigns on a non-trading day.

We then calculate normal return using the following equation:

$$\widehat{R}_{it} = \widehat{\alpha}_i + \widehat{\beta}_i R_{mt}$$

Therefore, the abnormal return of firm i on day t is:

$$AR_{it} = R_{it} - \widehat{R}_{it}$$

The cumulative abnormal return is the sum of AR_{it} for each day during the event window.

$$CAR(-m, n)_i = \sum_{i=-m}^{n} AR_{it}$$

where $CAR(-m, n)_i$ is the cumulative abnormal return of firm i for days -m through n. To show the robustness of results, we here use different event windows to calculate cumulative abnormal returns. In the case that more than one company is affected by the event, average abnormal return (AAR) and cumulative average abnormal return (CAAR) of these companies will be calculated.

When measuring the abnormal returns and cumulative abnormal returns, we first take the sample as a whole. To explore specific contributions of different types of independent directors to listed firms, we then classify independent directors into several groups as mentioned above.

It has been noted that the18th Decree create initiates a natural experiment through which we can investigate the causal effect of independent directors upon corporate value in China without endogeneity problem. Specifically, Chinese independent directors receiving the treatment, namely, resigning due to the18th Decree, are of course assigned to the treatment group, while those resign not because of the18th Decree during the same period consist of the control group. As cumulative abnormal return actually reflects the change of stock price and even corporate value before and after the resignation of an independent director, the difference-in-difference method is hence applicable to estimate the causal effect of Chinese independent directors on the value of listed enterprises in the natural experiment. The difference-indifference estimator is actually the average change in stock prices for those in the treatment group before and after the experiment, minus the average change in stock prices for those in the control group before and after the experiment.

To mitigate the possible concern that the treatment group is not randomly assigned, but is partly based on the characteristics of listed firms, we here incorporate relevant firm characteristics prior to the experiment into the multiple regression model, and estimate the following model to obtain the unbiased difference-in-difference estimator:

$$\mathrm{CAR_i} = \alpha + \beta \mathrm{D(resignation)_i} + \gamma \sum \mathrm{Controls_i} + \varepsilon_\mathrm{i}$$

where $\mathrm{D(resignation)_i}$ is a dummy variable which equals one if firm i's independent director was forced to resign due to the 18th Decree. Pretreatment firm characteristics including the proportion of the largest shareholder, duality of chairman and general manager, the degree of independence, board size, growth opportunity, leverage of firm, age of firm, size of firm, and ROE are included as control variables. The definitions of them are shown in Table A1 in Appendix.

3.3 Descriptive statistics

Table 1 shows the distribution of independent directors' resignations during our research period. Instead of leaving immediately, independent directors targeted by the No.18 Decree resigned gradually in three years after the issuance of the No.18 Decree. It seems that a number of independent directors were reluctant to quit to lose high allowance and other benefits. They took a wait-and-see attitude and finally resigned if really no other good way. In fact, Chinese government had enacted regulations similar to the 18th Decree before. They however were not mandatory and hence did not work. Moreover, bureaucratic independent directors are found to resign dramatically in the first two years after the issuance of the No.18 Decree, while most academic independent directors resigned in the last two years of our study period. Although academic independent directors hold administrative positions in public universities and scientific institutions, whether they are supposed to be regulated by the No.18 Decree was not very clear until Chinese Ministry of Education issued a detailed implementation rule of the No.18 Decree in July, 2015. The number of other independent directors who resigned due to reasons other than the No.18 Decree did not have great change from year to year during our study period.

Table 1 Distribution of independent directors' resignations

		All	Academics	Bureaucrats	Other
Period 1	2013.10-2014.10	429	150	231	48
Period 2	2014.10-2015.10	354	147	176	31
Period 3	2015.10-2016.10	215	169	16	30
Total		998	466	423	109

Table 2 shows the reasons for independent directors' resignations in our research period. Over 85% independent directors in our sample are mandated to resign due to No.18 Decree. Others resign voluntarily for reasons such as expiration of term, health problem, personal reasons and occupational reason. Among these reasons, occupational problems and personal reasons are in the majority.

Table 2 Reasons of independent directors' resignations

	Period 1	Period 2	Period 3
Mandatory resignation	381	323	185
Expiration of term(six years)	6	3	7
Health problems	1	3	1
Personal reasons	26	13	16
Occupation reasons	15	10	6
Unspecified reasons	0	2	0

4. Empirical results

In this section, we use event study and DID estimation to empirically investigate the value of independent directors.

4.1 The value of independent directors: event study

We begin to measure the perceived value of independent directors by locating market reactions to resignations of independent directors. Specifically, we calculate the average abnormal returns and cumulative average abnormal returns caused by resignations of independent directors as a whole and those of different types of independent directors respectively.

4.1.1 Resignations of independent directors

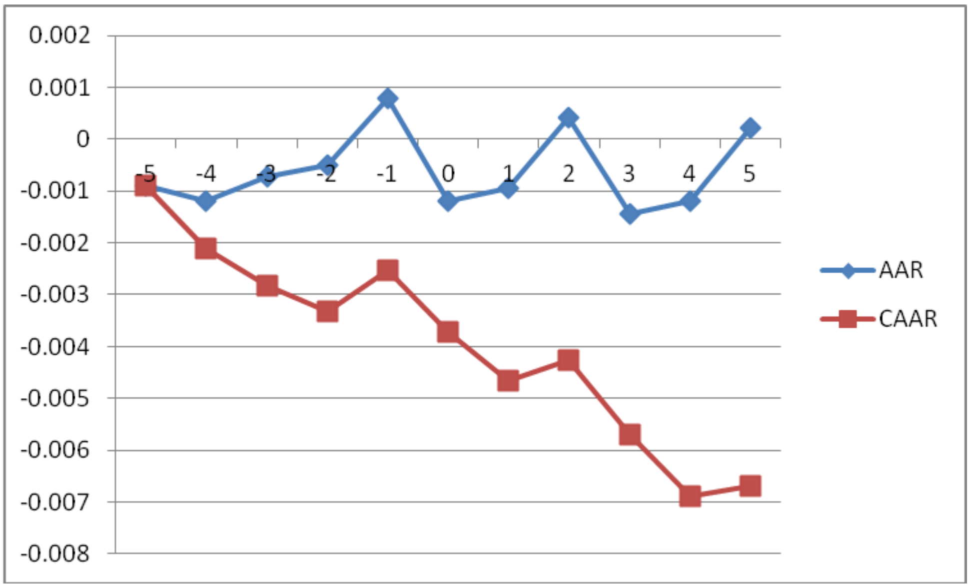
Table 3 exhibits the stock price reactions to all resignations of independent directors and mandatory resignations of independent directors during our research period respectively. Panel A shows the average abnormal return (AAR) for each trading day during the event window (-5, 5) surrounding the resignation date. Panel B reports the cumulative average abnormal returns (CAARs) for various event windows. It can be seen that most average abnormal returns are insignificantly negative in the event window (-5, 5), while cumulative average abnormal returns are negative in all three event widows and significant in two of them. And the magnitudes of CAARs appear relatively small. It seems that the value of Chinese listed firms decreases due to resignations and mandatory resignations of independent directors, which means that independent directors make contributions to listed firm in China. Evidence above is not statistically strong though it is similar to those of Xu (2018) and Tang et al. (2016). To better understand the value of independent directors to Chinese listed firms, we utilize subsamples of three types of independent directors to further explore the contribution of independent directors to Chinese listed companies.

Table 3 Market reactions to resignations of independent directors

Trading day	N	Average abnormal return	t	N	Average abnormal return	t
		Resignations of independent directors			Mandatory resignations of independent directors	
Panel A: Average abnormal returns						
-5	998	-0.0009	-1.0006	889	-0.00126	-1.32
-4	998	-0.0012	-1.4694	889	-0.00128	-1.47
-3	998	-0.00073	-0.7465	889	-0.00191*	-1.84
-2	998	-0.00049	-0.6267	889	-0.00076	-0.93
-1	998	0.0008	0.7226	889	0.00018	0.15
0	998	-0.00119	-1.2757	889	-0.00145	-1.48
1	998	-0.00095	-1.1188	889	-0.00091	-1.01
2	998	0.000412	0.4686	889	0.0001	0.11
3	998	-0.00144*	-1.7270	889	-0.00164*	-1.83
4	998	-0.0012	-1.2505	889	-0.0011	-1.06
5	998	0.000214	0.2466	889	0.00003	0.037
Panel B: Cumulative average abnormal returns						
(-3,3)	998	-0.003602	-1.343	889	-0.0064**	-2.24
(-5,5)	998	-0.00668**	-2.001	889	-0.0099***	-2.81
(-5,2)	998	-0.003174*	-1.685	889	-0.0073**	-2.5

Note: Significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 1 AAR and CAAR of independent directors' resignations in window (-5,5)



Note: AAR represents average abnormal returns, and CAAR means cumulative average abnormal returns.

4.1.2 Mandatory resignations of academic independent directors

We first study the forced resignations of independent directors due to the 18th Decree and begin with the mandated resignations of academic independent directors.

Table 4 shows the daily AARs of the event window (-5, 5) in Panel A, and CAARs of three different event windows in Panel B. From Panel A we can find that the daily AARs are almost insignificant, and their signs vary in the event window (-5, 5). The CAARs of all event windows in Panel B are negative but insignificant. Our results reveal that the value of Chinese listed firms does not change significantly when academic independent directors are forced to resign, which indicates that academic independent directors may make little contribution to Chinese listed companies. The finding however is inconsistent with previous studies such as Francis et al. (2015) which shows that academic independent directors improve firm performance by effectively playing advising and monitoring roles in America. More evidence is needed to support our finding.

In August 2001, China Securities Regulatory Commission requires in the Guiding Opinions on Establishing the Independent Director Institution of Listed Companies that at least one independent director in the board of a public company shall be an accounting professional. In our sample, therefore, approximate twenty percent of academic independent directors are accounting professors. Independent directors with accounting background are supposed to understand companies' financial situation better. Therefore, on one hand they are able to strengthen internal control of companies and improve the corporate finance conditions. On the other hand they may ensure high-quality financial reporting and thus protect the minority shareholders well. In a word, accounting professors in the boards are good advisors and effective monitors and will improve corporate governance and even corporate performance. Actually Defond et al. (2005) find a positive market reaction to the appointment of accounting experts as outside directors in America.

We hence focus on the market reaction to resignations of academic independent directors with accounting background (accounting professors). Table 4 also shows the AARs and CAARs due to resignations of academic independent directors with accounting background in Panel A and Panel B respectively. Similar to above, daily AARs in the event window (-5, 5) are all insignificant，and CAARs of all event windows are insignificantly negative though their magnitude is smaller than those of CAARs due to resignations of all academic independent directors. Our results indicate that even academic independent directors with accounting background scarcely contribute to listed companies in China, which implies that Chinese academic independent directors may not efficaciously perform their advising and monitoring functions in the boards.

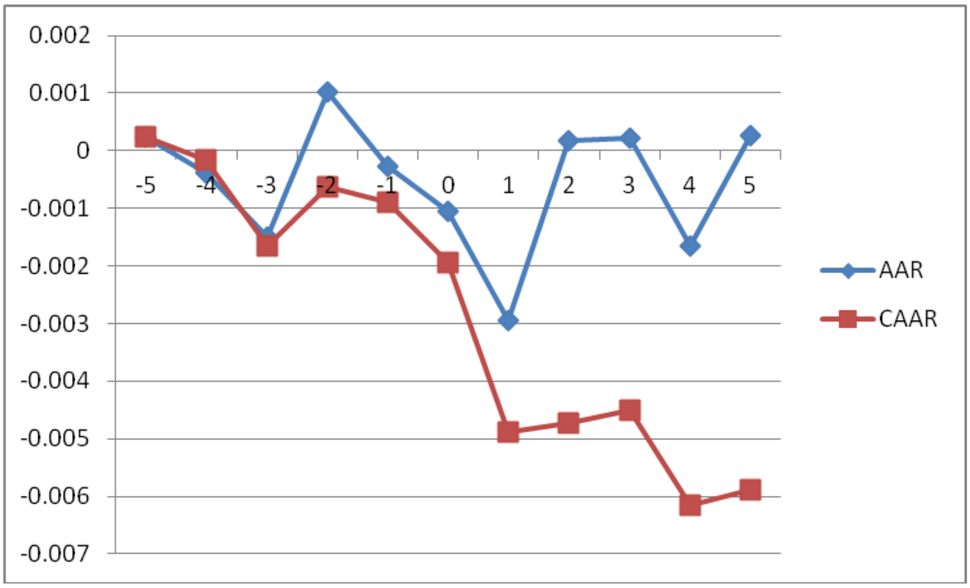
Overall, Chinese academic independent directors are found to add little value to public firms through a natural experiment caused by the 18th Decree, which preliminarily corroborates Hypothesis 1. To fully understand the finding, we will figure out whether Chinese academic independent directors play advising and monitoring roles effectively below.

Table 4 Market reactions to resignations of academic independent directors

Trading day	N	Average abnormal return	t	N	Average abnormal return	t
		All academic independent directors			Accounting background	
Panel A: Daily abnormal returns						
-5	466	0.000186	0.1331	91	0.001972	0.6247
-4	466	-0.00047	-0.3955	91	0.004337	1.4795
-3	466	-0.00153	-1.2037	91	-0.003215	-1.3065
-2	466	0.000986	0.8446	91	0.002471	0.9669
-1	466	-0.00022	-0.114	91	-0.00597	-0.7488
0	466	-0.001077	-0.7519	91	-0.004317	-1.6016
1	466	-0.00313***	-2.7432	91	-0.001896	-0.7431
2	466	0.000055	0.0418	91	0.001273	0.4572
3	466	0.000299	0.2303	91	0.002984	0.8104
4	466	-0.001634	-1.0489	91	0.001897	0.6122
5	466	0.000293	0.2208	91	-0.0035	-1.0435
Panel B: Cumulative abnormal returns						
(-3,3)	466	-0.0046	-1.18	91	-0.009236	-0.8404
(-5,5)	466	0.2231	-1.22	91	-0.004531	-0.3211
(-5,2)	466	-.0052	-1.3	91	-0.002523	-0.4788

Notes: significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 2 AARs and CAARs of academic directors' resignations in window (-5,5)



Note: AAR presents the average abnormal returns, and CAAR means cumulative average abnormal returns.

4.1.3 Mandatory resignations of bureaucratic independent directors

In this section, we will measure the market reaction to mandated resignations of bureaucratic independent directors to further test hypotheses proposed above.

As shown in table 5, most of the daily AARs due to forced resignation of bureaucratic independent directors are negative and some of them are significant, and CAARs are all negative, and significant in two of three event windows, which is similar to previous results about the resignations of all independent directors. It reveals that bureaucratic independent directors may contribute to firm performance as the value of listed companies decreases when bureaucratic independent directors leave.

The next question, of course, is how bureaucratic independent directors contribute to Chinese listed firms. We here provide primary evidence about it by studying the market reaction to resignations of different types of bureaucratic independent directors. There are mainly two types of bureaucratic independent directors: bureaucratic independent directors who are (retired) officials in government sectors and those who are leading executives of state-owned firms. In China, leading executives of state-owned firms are actually public officials appointed by organization departments of Party committees at high levels. They were hence regulated by the 18th Decree if they were independent directors of listed firms then. As entrepreneurs, leading executives of state-owned firms are certainly familiar with business operation. They are more likely than government officials to be good advisors and effective monitors in the boards, and therefore make more contributions to listed companies. We then empirically compare the market reactions to resignations of two types of bureaucratic independent directors.

Table 5 shows that both AARs and CAARs caused by the forced resignations of independent directors who are leading executives of state-owned firms are almost insignificant, which unfortunately rejects our conjecture. However, the AARs due to the mandated resignations of independent directors who are (retired) government officials are negative though insignificant. What is more, the corresponding CAARs are all significantly negative, and their magnitude and significance are considerably high. In addition, we find that Chinese listed firms tend to appoint government officials in relevant industrial administration sectors as independent directors, which implies that Chinese firms may prefer direct help from government officials. Direct relationship with government may bring about more benefits to firms, such as ease of access to financing, tax preferences, and financial incentives

We then can draw two conclusions from results so far. First, among all the independent directors forced to resign because of the 18th Decree, only the independent directors who are (retired) government officials remarkably contribute to Chinese listed firms as the value of listed companies falls significantly when they leave. Second, independent directors who are (retired) government officials may contribute to listed firms through channels other than advising and monitoring in the boards. It is hard to imagine that government officials can better understand enterprise operation and play advising and monitoring roles more effectively than accounting professionals and enterprise executives do. And our previous results have proven that in China even accounting professors and executives of stated-owned firms cannot effectively perform advising and monitoring functions to add value to listed companies when they serve as independent directors. Being independent directors, government officials presumably have their own ways to contribute to listed firms.

Pfeffer and Salancik (2003) consider the board of directors as an instrument that enables a firm to access critical resources. An independent director can increase a firm’s value if she can provide the firm an access to key resources. Independent directors therefore can play the resourcing role in the boards by bringing in key resources that firms need. In China where the legal institution is relatively weak, the government has great discretionary power in resource allocation (Adhikari et al., 2006; Chen et al., 2011). Government official independent directors lack of expertise on business may therefore play the resourcing role by providing firms the access to government-controlled resources such as government subsidies, external debt financing, and tax benefits (Yu and Pan, 2008; Wu et al., 2009). Whereas independent directors from academia and state-owned enterprises can hardly fulfill the resourcing role as they rarely participate in the allocation of resources. More evidence is in demand to further support our conjecture.

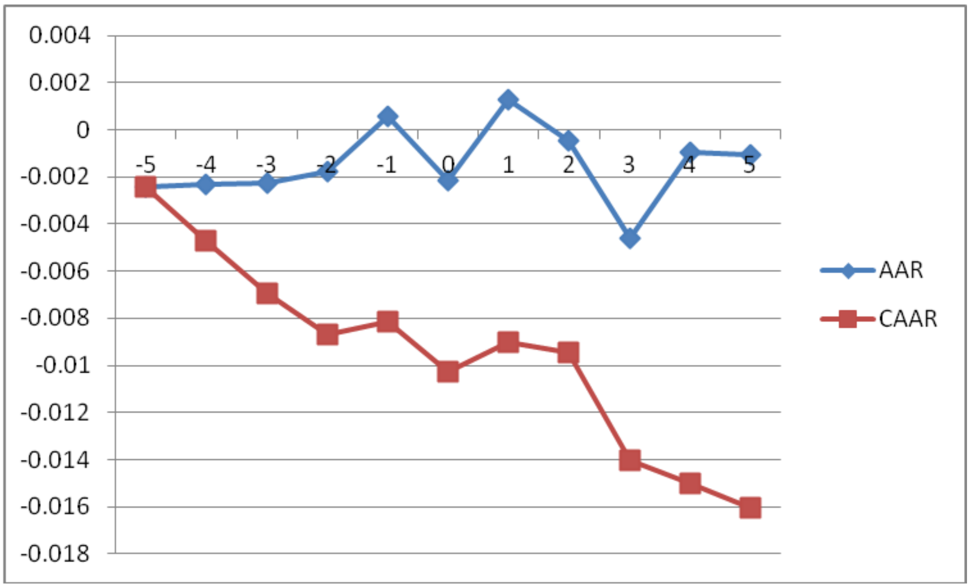
In China, state-owned enterprises backed by the government have preferential access to key resources controlled by the government. Privately controlled enterprises, however, experience ideological discrimination due to their non-state characteristics and often have difficulty in accessing government-controlled resources. We therefore can reasonably infer that Government official independent directors are more important for privately controlled enterprises than for state-owned enterprises if they are able to help enterprises to obtain scarce resources controlled by the government.

Table 5 Market reactions to resignations of bureaucratic independent directors

Trading day	N	Average abnormal return	t	N	Average abnormal return	t	N	Average abnormal return	t
		All			Executives in state-owned firms			Officials in government	
Panel A: Daily abnormal returns									
-5	423	-0.00285**	-2.187	167	-0.00452**	-2.051	256	-0.001742	-1.0875
-4	423	-0.002262*	-1.766	167	-0.0003137	-0.145	256	-0.00356**	-2.2637
-3	423	-0.002312	-1.375	167	-0.001983	-1.068	256	-0.002532	-1.005
-2	423	-0.00255**	-2.229	167	-0.0028845	-1.594	256	-0.002335	-1.5735
-1	423	0.000538	0.4024	167	0.002267	1.071	256	-0.00062	-0.357
0	423	-0.001851	-1.385	167	-0.002239	-1.004	256	-0.001592	-0.9578
1	423	0.001605	1.1423	167	0.003801	1.566	256	0.000142	0.0837
2	423	-0.00006	-0.045	167	0.0009695	0.421	256	-0.000745	-0.468
3	423	-0.0039***	-3.219	167	-0.000296	-0.143	256	-0.00633**	-4.3197
4	423	-0.0009751	-0.752	167	-0.000938	-0.429	256	-0.000999	-0.6249
5	423	-0.0003015	-0.23	167	-00005454	-0.241	256	-0.0001388	-0.0875
Panel B: Cumulative average abnormal returns									
(-3,3)	423	-0.0085**	-2.05	167	-0.000362	-0.054	256	-0.014***	-2.62
(-5,5)	423	-0.015***	-3.04	167	-0.00668	-0.873	256	-0.0205***	-3.19
(-5,2)	423	-0.011**	-2.23	167	-0.0031	-0.46	256	-0.013**	-2.4

Notes: significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 3 AARs and CAARs of bureaucratic independent directors' resignation in window (-5,5)



Note: AAR presents the average abnormal returns, and CAAR means cumulative average abnormal returns.

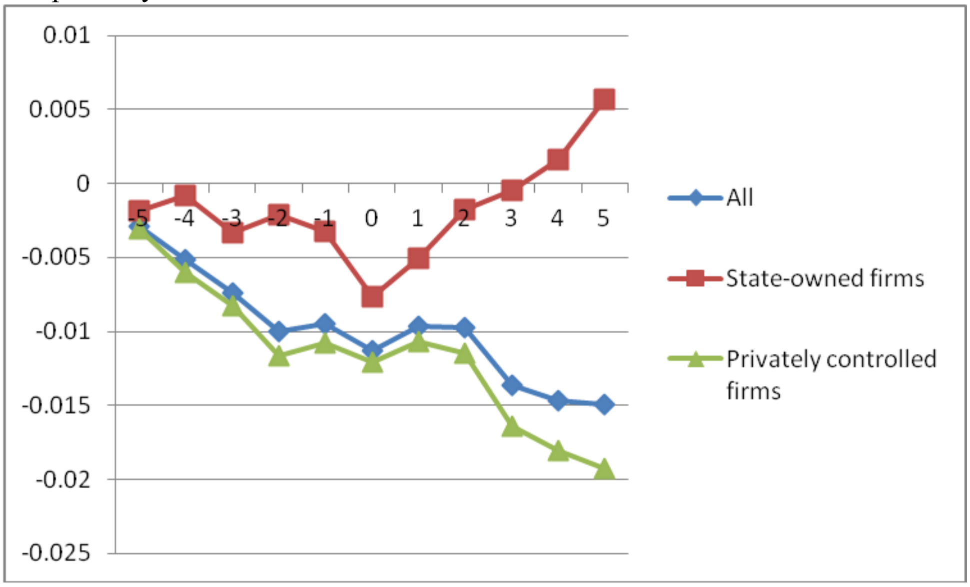
Table 6 confirms our deduction. It is shown that privately controlled companies have significantly negative AARs and CAARs when their government official independent directors are forced to resign. Whereas the value of state-owned enterprises hardly changes when their government official independent directors depart. In China, state-owned firms always enjoy the "parental" assistance from the government even without government official independent directors. Private-controlled firms, however, have to hire government officials to link them and the government controlling resource allocation so that they can obtain government-related benefits through officials' social networks (Luo and Tang, 2009; Deng et al., 2016). Resignations of government official independent directors are then interpreted as the clear loss of intermediaries between private-controlled firms and the government and even the access to economic resources controlled by the government, which naturally causes the obvious decrease of firms' value.

Table 6 Market reactions to resignations of government official independent directors in stated-owned and privately controlled firms

Trading day	N	Average abnormal return	t	N	Average abnormal return	t
Privately controlled firms				State-owned firms		
Panel A: Average abnormal returns						
-5	123	-0.0058**	-2.28	144	0.0003	0.14
-4	123	-0.0068***	-2.69	144	-0.0003	-0.17
-3	123	-0.0033	-0.68	144	-0.002	-1.12
-2	123	-.00612**	-2.55	144	-0.0013	-0.76
-1	123	0.00061	0.22	144	-0.0017	-0.8
0	123	-0.00017	-0.066	144	-0.002	-0.94
1	123	0.0015	0.54	144	-0.00007	-0.03
2	123	0.00019	0.08	144	-0.0005	-0.25
3	123	-0.0026	-1.08	144	-0.006***	-3.4
4	123	-0.0012	-0.43	144	0.00012	0.07
5	123	0.0023	0.81	144	-0.00032	-0.17
Panel B: Cumulative average abnormal returns						
(-3,3)	123	-0.026***	-2.98	144	-0.00015	-0.02
(-5,5)	123	-0.021**	-2.04	144	-0.015*	-1.94
(-5,2）	123	-0.02**	-2.16	144	-0.0034	-0.99

Notes: significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 4 CAARs of bureaucratic independent directors' resignations in state-owned firms and privately controlled firms



Notes: The figure presents CAARs of independent directors' resignations for all companies, privately controlled companies, and state-owned companies. CAAR means cumulative average abnormal returns.

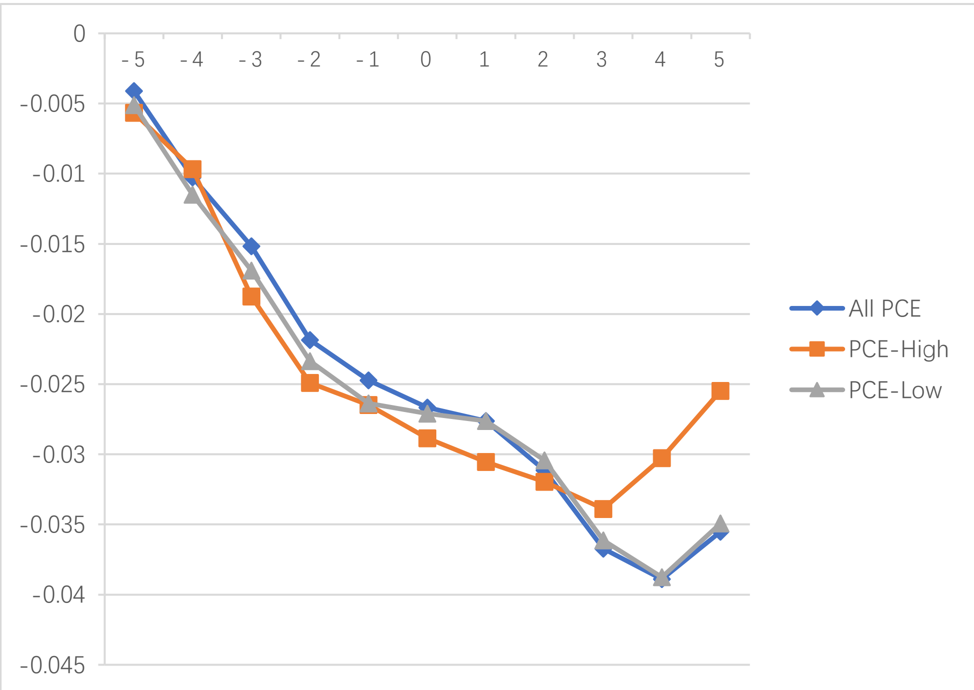
To reinforce our conclusion, we further investigate the market reaction to forced resignations of government official independent directors in privately controlled companies in regions of different levels of marketization. It is common sense that governments control less economic resources in regions of high marketization level than those in regions of low marketization level. As discussed above, government official independent directors contribute to Chinese privately controlled companies probably by aiding companies to access government-controlled resources. If it is true, government official independent directors will contribute more to privately controlled companies in Chinese regions of low marketization level than those in regions of high marketization level. According to NERI index of marketization of China's provinces(Fan et al., 2011), we choose median of the indexes in our sample as the standard to separate regions of high and low marketization levels. If the index of firm is below median, it is in the region of low marketization level; if the index of firm is above median, it is in the region of high marketization level. Table 7 shows that market reactions to mandated resignations of government official independent directors in privately controlled companies in regions of low marketization level are higher in significance and magnitude than those in regions of high marketization level, which affirms our inference. It is very likely that Chinese government official independent directors play the resourcing role to add value to privately controlled companies. Figure 5 also confirms that the market reactions in regions of low marketization level are more significantly than those in regions of high marketization level.

Table 7 Market reactions to bureaucratic independent directors' resignations in privately controlled listed firms in areas of different marketization levels

Trading day	N	Mean abnormal return	t	N	Mean abnormal return	t
Areas	High degree of marketization			Low degree of marketization		
Panel A: Daily abnormal returns						
-5	75	-0.0044	-1.22	49	-0.0036	-0.98
-4	75	-0.0063*	-1.97	49	-0.0058	-1.43
-3	75	-0.0075	-0.98	49	-0.001	-0.25
-2	75	-0.0043	-1.35	49	-0.01**	-2.6
-1	75	-0.0015	-0.45	49	-0.0049	-1.13
0	75	-0.0028	-0.84	49	-0.0006	-0.18
1	75	-0.0019	-0.57	49	0.0004	0.11
2	75	-0.0025	-0.78	49	-0.0051	-1.49
3	75	-0.0036	-1.33	49	-0.0085*	-1.87
4	75	0.0035	0.99	49	-0.01***	-3.5
5	75	0.005	1.45	49	0.0007	0.17
Panel B: Cumulative abnormal returns						
(-3,3)	75	-0.024**	-2	49	-0.03**	-2.33
(-5,5)	75	-0.026	-1.9	49	-0.05***	-3.09
（-5,2）	75	-0.031**	-2.48	49	-0.031**	-2.6

Notes: significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 5 CAARs of bureaucratic independent directors' resignations in privately controlled firms in areas of different marketization levels



Notes: This figure presents CAARs of independent directors' resignations for privately controlled companies in areas with different levels of marketization. All PCE represents all privately controlled enterprises. PCE-High represents privately controlled enterprises in area with high level of marketization and PCE-Low represents privately controlled enterprises in area with low level of marketization.

4.1.4 Resignations of independent directors for other reasons

There are some resignations of independent directors due to reasons other than the 18th Decree, such as personal reasons, career reasons and expiration of terms, in our study period. As discussed above, we take them as a control group in our research.

The market reactions to the resignations of these independent directors are shown in Table 8. It is interesting to find that most average abnormal returns of resignations of these independent directors are positive, and cumulative average abnormal returns are even significantly positive, which are quite different from results above. Our findings here maintain that independent directors hardly contribute or even do harm to Chinese listed firms. Considering that independent directors here include corporate executives, accountants and lawyers who are believed to be more equipped to perform advising and monitoring functions, new evidence has emerged here to support that Chinese independent directors cannot play advising and monitoring roles in the boards.

To control the potential reverse causality between corporate value and resignation of an independent director, we select resignations of independent directors due to expiration of terms as subsamples to reexamine the market reaction to them. According to the Guiding Opinions on Establishing the Independent Director Institution of Listed Companies issued by China Securities Regulatory Commission, the term of independent directors may not exceed six years. There won't be reverse causality between corporate value and departure of an independent director if the independent director has been in the board for six years. Table 8 shows that consistent with above results, the market reaction to resignations of independent directors due to expiration of terms is almost significantly positive, which further sustain our argument about the contribution of Chinses independent directors to listed enterprise.

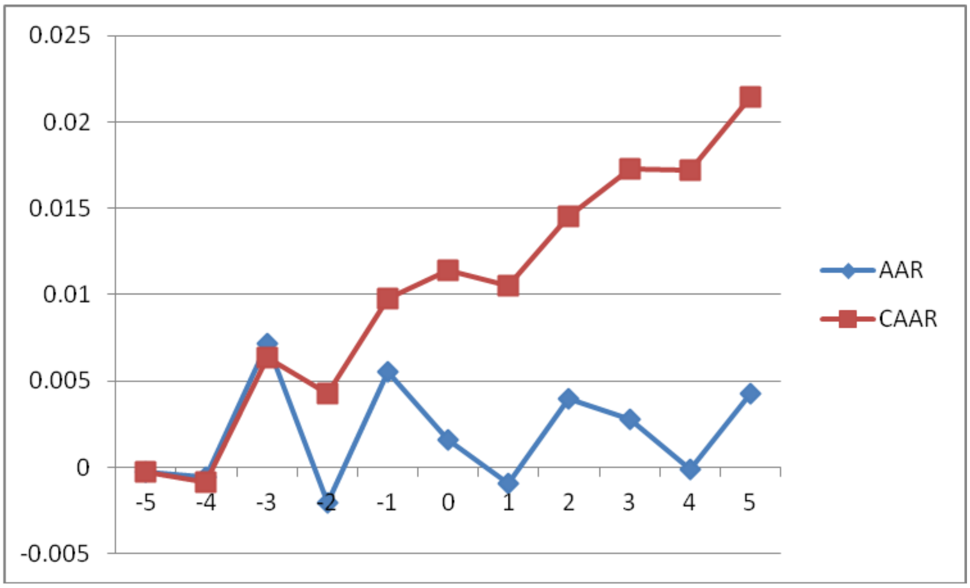
Table 8 Market reaction to independent directors' resignations not because of the 18th Decree

Trading day	N	Average abnormal return	t	N	Average abnormal return	t
	Resignations due to other reasons			Resignations due to expiration of terms		
Panel A: Average abnormal returns						
-5	109	0.002068	0.8286	16	0.0074	1.15
-4	109	-0.000333	-0.1549	16	-0.0033	-0.76
-3	109	0.008931***	3.233	16	0.016*	2.06
-2	109	0.001173	0.4407	16	0.0008	0.14
-1	109	0.006147**	2.4084	16	0.022**	2.34
0	109	0.000865	0.3049	16	0.0012	-0.34
1	109	-0.001459	-0.5531	16	-0.003	-0.83
2	109	0.004124	1.551	16	-0.0027	-0.32
3	109	0.001105	0.4942	16	0.0045	0.82
4	109	0.000577	0.2065	16	0.0008	0.19
5	109	0.002494	1.1275	16	-0.0006	-0.12
Panel B: Cumulative average abnormal returns						

(-3,3)	109	0.0209**	2.4825	16	0.022***	2.8
(-5,5)	109	0.0257**	2.2685	16	0.024**	2.38
(-5,2)	109	0.004636	0.8343	16	0.011	1.5

Notes: significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

Figure 6 AARs and CAARs of independent directors' resignations not because of the 18th Decree in window (-5,5)



Note: AAR presents the average abnormal returns, and CAAR means cumulative average abnormal returns.

From event study above, we confirm that in China only bureaucratic independent directors promote firms' value, whereas other kinds of independent directors make very little contributions. Specifically, government official independent directors make the most contributions to privately controlled firms in region of low marketization level. The results suggest the possible way that government official independent directors make contributions is providing the firms public resources. We will identify the channels through which government official independent directors contribute to Chinese listed enterprises later.

It is, however, worthwhile to note that according to above results, the value of Chinese listed enterprises significantly increases after voluntary resignations of independent directors. This means that Chinese independent directors may not only contribute little but also do harm to listed firms. How can Chinese independent directors destroy corporate value? Both Wang (2015) and Shi et al. (2018) find that politically connected independent directors in China increase agency cost in listed companies. We thus infer that Chinese independent directors may generally raise agency cost and adversely affect the value of listed companies though the Code of Corporate Government for listed Companies requires them to protect interests of all shareholders especially those of minority shareholders. The main reason for our inference is that Chinese independent directors may not be really independent (Cheng and Sun, 2018). As discussed above, independent directors in China are often nominated directly or indirectly by controlling shareholders or senior executives (when listed companies are widely held). According to Cheng and Sun (2018), Chinese controlling shareholders and senior executives tend to appoint independent directors who have solid social ties with them. Independent directors captured by controlling shareholders or senior executives therefore will remain silent and even provide help when controlling shareholders expropriate minority shareholders, or when senior executives impair the interests of shareholders. It significantly increases agency cost and finally reduces firm value. Empirical evidence will be shown below.

4.2 The value of independent directors: difference-in-difference estimation

In this section we exploit the natural experiment to investigate the value of Chinese independent directors with the DID estimation. As discussed above, cumulative abnormal return in fact reflects the change of stock price and even corporate value before and after the resignation of an independent director. We here alternatively use mandated resignations of independent directors (due to the 18th Decree) (Group T1) and forced resignations of government official independent directors (Group T2) as treatment groups, and voluntary resignations of independent directors (not because of the 18th Decree) (Group C1) and voluntary resignations of independent directors due to expiration of terms (Group C2) as control groups.

For the reason explained before, we successively adopt the univariate and multivariate tests to estimate the average causal effect of mandated resignations of independent directors due to the 18th Decree upon the value of Chinese listed firms. Table 9 shows that the differences of CARs between treatment groups and control groups, i.e. the DID estimators of the natural experiment, are all significantly negative. The results indicate that the value of firms decreases significantly after mandated resignations of independent directors especially government official independent directors due to the 18th Decree.

Table 9 Differences of CARs between treatment groups and control groups

Groups		CARs			
		CAR(-3,3)	CAR(-5,5)	CAR(-5,0)	CAR(-5,2)
Control Group	Group C1	0.021**	0.026**	0.019***	0.021***
	Group C2	0.036**	0.041*	0.041***	0.036**
Treatment Group	Group T1	-0.0064**	-0.0099***	-0.0065***	-0.0073**
	Group T2	-0.014**	-0.02***	-0.012***	-0.013**
Differences between groups		DID estimators			
	T1-C1	-0.027***	-0.036***	-0.025***	-0.029***
	T2-C1	-0.033***	-0.043***	-0.033***	-0.035***
	T2-C2	-0.049**	-0.058**	-0.055***	-0.049**

Notes: Significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

There is a potential concern that the treatment group in the natural experiment is not randomly assigned. To mitigate it, we follow Han and Zhang (2018) to include pretreatment firm characteristics, such as firm size, leverage, profit, cash flow, board size and ownership, into the difference-in-difference estimation. The difference-in-difference estimators with additional regressors are therefore exhibited in Table 10. Thereinto, D (resignation) is a dummy variable which equals one if an independent director resigned because of the 18th Decree. D (official) however indicates whether a government official independent director is forced to resign due to the 18th Decree, if she is, D(official) equals 1; otherwise 0. The DID estimators in all columns with different treatment groups and control groups are significantly negative, which is consistent with the results in univariate test above. Our robust results confirms the prior finding that government official independent directors make significant contributions to Chinese listed firms, while other independent directors may barely add value to listed firms. Our results are robust since we adopt different treatment and control groups and various windows in the DID estimation.

Table 10 Difference-in-difference estimators with additional regressors

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)
Treatment Group	T1	T1	T2	T2	T2	T2
Control Group	C1	C1	C1	C1	C2	C2
D(resignation)	-0.0288***	-0.0379***				
	(0.00826)	(0.0100)				
D(official)			-0.0346***	-0.0471***	-0.0497***	-0.0623***
			(0.00991)	(0.0114)	(0.0161)	(0.0205)
Growth	0.00182	0.000254	0.0172**	0.00997	0.0171*	0.0130
	(0.00118)	(0.00125)	(0.00798)	(0.00868)	(0.00891)	(0.00790)
Dual	0.00134	0.00138	-0.0114	-0.00601	-0.0113	-0.00843
	(0.00686)	(0.00902)	(0.0122)	(0.0130)	(0.0158)	(0.0163)
Indep	0.107*	0.103	0.0465	0.124	0.228*	0.246
	(0.0613)	(0.0781)	(0.111)	(0.143)	(0.117)	(0.153)
Boardsize	0.0241	0.0184	0.00379	0.0214	0.0304	0.0386
	(0.0158)	(0.0201)	(0.0248)	(0.0336)	(0.0271)	(0.0365)
Bigshare	0.0133	0.0296	0.00782	0.0225	0.0411	0.0560
	(0.0186)	(0.0229)	(0.0317)	(0.0351)	(0.0365)	(0.0426)
ROE	0.0132	0.0258	-0.0166	-0.00253	-0.0255	-0.0130
	(0.0157)	(0.0202)	(0.0174)	(0.0222)	(0.0177)	(0.0228)
Lev	-0.00966	0.0130	0.00576	0.0174	-0.00437	0.0148
	(0.0155)	(0.0209)	(0.0247)	(0.0292)	(0.0294)	(0.0340)
Size	3.22e-05	0.000351	0.00384	0.00578	-0.00229	-8.05e-06
	(0.00264)	(0.00337)	(0.00403)	(0.00512)	(0.00456)	(0.00589)
Firmage	3.98e-05	-0.00513	-0.0209	-0.0248	0.00684	0.0198
	(0.0115)	(0.0138)	(0.0200)	(0.0241)	(0.0223)	(0.0277)
Constant	-0.0621	-0.0513	0.0118	-0.0694	-0.0968	-0.196
	(0.0547)	(0.0721)	(0.102)	(0.133)	(0.107)	(0.137)

Observations	993	993	371	371	281	281

Notes: Robust standard error are reported in parentheses
Significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively.

5. Further discussion

Empirical evidences show that Chinese independent directors may not play monitoring and advising roles assumed by prevailing views thus unlikely contribute to listed enterprises, except that government official independent directors seems to add value to listed enterprises by playing the resourcing role, namely helping enterprises to access government-controlled resources.

To strengthen our results above, we further identify possible channels through which Chinese independent directors contribute to listed firms in this section. According to the literature, there are actually three possible channels: monitoring, advising and resourcing. We first measure the monitoring and advising channels empirically. As we know, if an independent director plays monitoring and advising roles indeed, she will persist in attending board meetings during her term of office where she can monitor and advise the controlling shareholder and senior management face to face. In other words, an independent director seems not to perform monitoring and advising roles effectively if she is often absent from board meetings. Also, if an independent director does perform monitoring and advising functions, she is more likely to issue dissenting opinions instead of remaining silent in board meetings especially in Chinese listed firms where investor protection is relatively weak. We therefore use two indexes to measure the monitoring and advising roles of independent directors. The first index (Oppose) is the independent directors' dissent opinions in board meetings, which is defined as whether an independent director voice a negative opinion in board meetings during the term of office. The second index (Absence) is the independent directors' attendance of board meetings, which is defined as the ratio of the number of board meetings an independent director is absent from to the total number of board meetings she should attend during the tenure of office.

In China the main government-controlled resources that enterprises need are bank loans, tax preferences and government subsidies. We therefore measure the resourcing channel with three corresponding indexes to see whether Chinese independent directors are able to help enterprises to access these resources. The first (Loan) is the bank loans listed firms obtain, which is defined as the ratio of a firm's bank loans to its total assets. The second (Tax) is the real tax rates of listed firms, which is defined as the ratio of corporate income tax that a listed enterprise pays to its profits. The third (Subsidy) is government subsidies listed firms enjoy, which is defined as the ratio of the government subsidies a listed company enjoys to its total assets. We incorporate all indexes above and control firm characteristics same as those in previous analysis in our regressions[††], and obtain the results shown in Table 11.

There are two robust findings from Table 11. First, Chinese independent directors cannot add value to listed enterprises through monitoring and advising channels since

[††] We adopt the data one year before resignation and exclude data when the tenure of independent directors is less than one year.

the coefficients of Oppose and Absence variables are not robustly significant. Second, among all independent directors, only government official independent directors remarkably contribute to privately controlled listed enterprises by enabling enterprises to obtain government subsidies and tax preference, as Subsidy variable is significantly negative while Tax variable is significantly positive. That is government official independent directors play the resourcing role in privately controlled listed enterprises. Results here are consistent with those from event study. We therefore can conclude that In China, independent directors cannot play monitoring and advising roles to contribute to listed enterprises, while government official independent directors add value to privately controlled enterprises by playing the resourcing role.

To reinforce conclusion above, we re-examine the roles that different type of Chinese independent directors can play in boards in an alternative way. Table 12 shows the regression results where D (official), D (academic)，D(executives) and D (other) are dummies representing government official independent directors, academic independent directors, independent directors being senior executives in SOEs and other independent directors respectively. The first three are mandated to resign due to the 18th Decree, while the last resign not because of the 18th Decree.

Table 12 confirms the results in Table 11 that Chinese independent directors play neither monitoring nor advising roles in boards, most of them therefore contribute little to listed enterprises. Only government official independent directors, however, add value to listed enterprises especially privately controlled listed enterprises by fulfilling the so-called resourcing role, namely, assisting Chinese enterprises to securing public resources. It seems that the resourcing role government official

Table 11 Possible channels through which Chinese independent directors contribute to listed enterprises

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Samples	Independent directors forced to resign because of the 18th Decree										Independent directors resigning not due to the18th Decree	
	Bureaucratic independent directors								Academic independent directors		All	
	Government officials						Executives in SOEs		All			
	All		Privately controlled enterprises		State-owned enterprises		All					
	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)	CAR(-3,3)	CAR(-5,5)
Loan	0.0007	-0.015	0.035	0.021	-0.071	-0.089	-0.057	-0.065	-0.01	0.026	0.051	0.044
	(0.042)	(0.04)	(0.053)	(0.049)	(0.051)	(0.071)	(0.061)	(0.068)	(0.027)	(0.046)	(0.091)	(0.13)
Subsidy	0.13	-0.5	-1.587*	-1.976*	0.82	0.27	1.13*	-0.42	0.34	-0.075	0.1	-1.38
	(0.69)	(0.82)	(0.94)	(1.06)	(1.02)	(1.4)	(0.66)	(0.92)	(0.37)	(0.53)	(1.07)	(1.8)
Tax	3.1e-05	6.9e-05*	6.4e-05**	0.00011***	-0.0002	3.92e-05	0.00075	0.00068	0.0003	0.0004	-0.001	-0.00078
	(2.9e-05)	(3.9e-05)	(2.8e-05)	(3.9e-05)	(0.0004)	(0.00045)	(0.0008)	(0.0008)	(0.0003)	(0.0004)	(0.0011)	(0.0013)
Oppose	0.032*	0.037	omitted	omitted	0.018	0.016	0.0059	0.00096	0.0036	0.004	0.00068	-0.05
	(0.018)	(0.043)			(0.027)	(0.049)	(0.02)	(0.023)	(0.018)	(0.034)	(0.027)	(0.04)
Absence	0.12	0.077	0.312	0.295	-0.029	-0.065	-0.064	-0.039	0.016	-0.0043	-0.11	-0.026
	(0.1)	(0.12)	(0.188)	(0.233)	(0.059)	(0.07)	(0.045)	(0.056)	(0.056)	(0.055)	(0.26)	(0.28)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	182	182	70	70	112	112	103	103	321	321	63	63

Notes: Robust standard error are reported in parentheses

Significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively independent directors perform in China is not exactly the one that Pfeffer and Salancik (2003) describe. According to resource dependence theory, independent directors may bring in resources such as expertise on industry, law and finance, experience in serving for other enterprises, social networks beyond insiders' circles and key information about future development to reduce firm uncertainty and enhance firm performance. The resources that Chinese government official independent directors are able to provide for their respective companies, however, are only government-controlled resources. Instead of fulfilling a general resourcing role, government official independent directors in China actually play an important role in rent seeking activities of companies especially privately controlled listed companies since rent seeking is defined as an attempt to obtain benefits through manipulating the political environment in which economic activities take place. As we know, rent seeking reduces economic efficiency due to poor allocation of resources.

Table 12 Roles that different types of independent directors play

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables	Loan	Subsidy	Tax	Oppose	Absence	Agency Cost I	Agency Cost II
D(official)	0.27**	0.011*	-28.03**	0.020	-0.013	0.37***	0.035*
	(0.14)	(0.0065)	(13.06)	(0.092)	(0.019)	(0.067)	(0.021)
D(executives)	0.20	0.010	-21.06	0.028	-0.017	0.38***	0.043**
	(0.13)	(0.0065)	(12.82)	(0.10)	(0.020)	(0.076)	(0.021)
D(academic)	0.17	0.010	-20.21	0.031	-0.016	0.37***	0.039*
	(0.13)	(0.0063)	(12.34)	(0.095)	(0.020)	(0.067)	(0.022)
D(other)	0.19	0.010	-20.41	0.041	-0.0098	0.36***	0.040*
	(0.13)	(0.0066)	(12.81)	(0.092)	(0.020)	(0.066)	(0.021)
Growth	3.27e-07	7.52e-08	-0.0003**	4.55e-07	-1.66e-07	7.39e-07	-2.27e-07
	(5.9e-07)	(5.11e-08)	(0.00016)	(2.61e-06)	(1.12e-07)	(1.03e-06)	(2.14e-07)
ROE	-0.0013***	4.34e-05*	-0.093**	0.00079	-3.62e-05	-0.00085**	-0.00011
	(0.0005)	(2.61e-05)	(0.037)	(0.00063)	(8.79e-05)	(0.00034)	(0.00015)
Dual	0.028*	-0.00066	1.29	-0.018	-0.00096	-0.016**	-0.0036
	(0.017)	(0.00082)	(1.19)	(0.012)	(0.0015)	(0.0077)	(0.0022)
Indep	0.080	0.0035	42.08**	0.23**	0.0058	-0.022	0.019
	(0.083)	(0.0057)	(21.32)	(0.12)	(0.023)	(0.123)	(0.017)
Lev	0.002***	-3.62e-05*	0.10***	0.00043	1.15e-05	-0.0015***	0.00034***
	(0.00048)	(1.90e-05)	(0.034)	(0.00028)	(3.72e-05)	(0.00037)	(0.00012)
Boardsize	0.061**	0.0057***	7.09**	-0.00045	0.00015	-0.034	0.0022
	(0.025)	(0.0020)	(3.23)	(0.029)	(0.0067)	(0.027)	(0.0071)
Firmage	-0.024	-0.00014	4.58***	0.0061	-0.0013	0.016	0.00060
	(0.019)	(0.00088)	(1.58)	(0.012)	(0.0023)	(0.011)	(0.0028)
Bigshare	-0.00019	4.41e-07	0.064*	9.76e-05	-1.57e-05	-0.00048	-0.00019***
	(0.00033)	(1.94e-05)	(0.035)	(0.00038)	(7.13e-05)	(0.00032)	(6.05e-05)
Size	-0.021***	-0.0012***	-0.70	-0.0102*	0.0016	-0.010*	-0.0031**
	(0.0071)	(0.000310)	(0.555)	(0.0061)	(0.0014)	(0.0058)	(0.0013)
Observations	475	657	615	761	761	630	630

Notes: Robust standard error are reported in parentheses
Significance levels 0.1, 0.05, and 0.01 are noted by *, **, ***, respectively

Last but not least, we here investigate whether Chinese independent directors destroy the value of listed firms through increasing agency cost to verify our prior inference. According to Young et al. (2008), Chinese listed enterprises confront two types of agency conflicts: the principal–agent conflict between owners and managers (Jensen and Meckling, 1976) which generates the first type of agency cost (Agency Cost I), and the principal–principal conflict between controlling shareholders and minority shareholders (Morck et al., 2005) which creates the second type of agency cost (Agency Cost II). The severer agency conflicts listed enterprises faces are, the higher agency cost are, and the lower the value of listed enterprises is. As discussed above, instead of monitoring controlling shareholders and executives to mitigate agency conflicts and decrease agency costs, Chinese independent directors may enable controlling shareholders and executives to expropriate firm wealth to exacerbate the agency problem and increase agency costs, which of course reduces firm value. We then use management fee rate (Agency Cost I), which is defined as the ratio of management expense to annual revenue, to measure the first type of agency cost due to the conflict between executives and shareholders (Ang et al., 2000; Chen, 2012). Capital occupation of major shareholders, which is defined as the ratio of accounts receivables to total assets (Agency Cost II), are used to measure the second type of agency cost caused by the conflict between controlling shareholders and minority shareholders (Jiang et al., 2010). The results in column (6) and (7) disclose that Chinese independent directors significantly increase agency costs, which confirms our inference that independent directors in China destroy firm value by exacerbating the agency problem.

Our empirical findings so far are summarized in Table 13, which reveal that all Chinese independent directors in our sample do not effectively fulfil monitoring and advising roles in boards as is widely assumed. On the contrary, they actually exacerbate agency conflicts in listed firms. It appears that independent directors in China add no value or even do harm to listed companies. The single exception to it is government official independent directors who assist especially privately controlled firms in rent seeking activities to contribute to listed firms. Considering the net effect of independent directors upon the value of listed firms, we find that government official independent directors create value for listed enterprises especially privately controlled listed enterprises mainly by helping them in rent seeking activities, while other independent directors do not create or even destroy value of listed enterprises due to exacerbating agency problems instead of playing monitoring and advising roles efficiently.

Table 13 Summarized empirical results

Independent directors / Effects of functions upon firm value / Functions (Roles)	Chinese Independent directors			
	Independent directors forced to resign because of the 18th Decree			independent directors resign not because of the 18th Decree
	Independent directors		Academic independent directors	
	Government official independent directors	Independent directors being senior executives in SOEs		
Monitoring	0 (×)	0 (×)	0 (×)	0 (×)
Advising	0 (×)	0 (×)	0 (×)	0 (×)
Agency costs	− (√)	− (√)	− (√)	− (√)
Resourcing — Rent seeking	+ (√)	0 (×)	0 (×)	0 (×)
Net value to listed firms (results from event study)	+	0	0	−

Notes: × and √ indicate that independent directors play, do not play the role respectively.

+, − and 0 represent that independent directors have a positive, negative and insignificant effect on firm value severally.

6. Conclusion

This paper examines the value of independent directors to Chinese listed firms by studying the market reactions to the mandatory resignations of independent directors in a natural experiment initiated by the issuance of the No.18 Decree. Considering the heterogeneity of Chinese independent directors, we utilize event study, DID estimation and OLS regressions to investigate their actual roles in boards and their real value to listed firms.

Unlike what classic theory predicts, our results indicate that Chinese independent directors do not fulfil monitoring and advising roles in boards effectively, and what is more, they exacerbate the agency conflicts in listed firms. It is in this sense that they are "Vase" independent directors and contribute little to listed firms. Among them, government official independent directors, however, are playing a resourcing role in boards, or to be more accurate, playing an important role in firms' rent seeking activities, and therefore add value to listed firms especially privately controlled firms. In this regard, government official independent directors are "accomplices" in appropriation of public resources.

In other words，independent directors in China have a value-decreasing effect upon listed enterprises due to not performing monitoring and advising roles efficiently and further worsening agency problems. Whereas government official independent directors have a value-increasing effect upon listed enterprises because of their assistance to listed enterprises particularly privately-controlled listed enterprises in accessing government-controlled resources. So the net effect of Chinese independent directors except for government official independent directors upon listed enterprises is negative or at least insignificant, while the net effect of government official independent directors upon privately-controlled listed enterprises is positive.

The policy implication of our comprehensive analysis is that China still has a long way to go to meet the modern standards of corporate governance though it has established strict and detailed rules about the requirements and appointment of independent directors. The utmost challenge Chinese independent director system confronts is that Chinese independent directors are not truly independent and are not able to fulfil their roles set out by the regulatory rules. Currently the first step have been taken by Chinese government to improve the independence of Chinese independent directors: bureaucrats，whether incumbent or retired, are forbidden from being independent directors of listed companies in case they help privately controlled listed enterprises in rent seeking activities which reduces economic efficiency and leads to severe corruption. More measures, however, should be taken in the future to ensure the independence of Chinese independent directors.

Our findings may shed light on corporate governance in other emerging economies such as Russia (Iwasaki, 2008) and Malaysia (Sharif and Kyid, 2016), which confront the similar problem of independent director system to that of China.

Appendix

Table A1 Definition of variables

Variables	Definition
D(resignation)	A dummy variable which equals one if an independent director resigned because of the 18th Decree
D(official)	A dummy variable which equals one if a government official independent director is forced to resign due to the 18th Decree
D(other forced resignation)	A dummy variable which equals one if an independent director resigned because of the 18th Decree except government officials
D(others)	A dummy variable which equals one if an independent director resigned not because of the 18th Decree
Bigshare	The fraction of total shares held by the dominant owners
Indep	Independence of the board, the proportion of independent directors in the board of directors
Boardsize	The natural logarithm of the total number of directors
Firmage	The natural logarithm of years of the company's establishment
Growth	Total growth rate of the company's assets
ROE	Rate of return on common stockholders' equity
Dual	If chairman of the board and general manager, it equals 1; otherwise 0.
Lev	Total debt divided by total assets
Size	The natural logarithm of the total assets of firm
Loan	The ratio of a firm's bank loans to its total assets
Subsidy	The ratio of the government subsidies a listed company enjoys to its total assets
Tax	The ratio of corporate income tax
Oppose	A dummy variable which equals one if an independent director voice a negative opinion in board meetings during the term of office
Absence	the ratio of the number of board meetings an independent director is absent from to the total number of board meetings she should attend during the tenure of office.
Agency Cost I	The ratio of management expense to annual revenue
Agency Cost II	The other accounts receivables to total assets

Notes: This table presents the definitions of all variables used in this paper.

Table A2 Descriptive statistics of variables

Variables	Observations	Mean	Standard Deviation	Min	Max
Bigshare	760	38.27	15.63	3.89	83.74
Indep	760	0.37	0.053	0.25	0.71
Boardsize	760	2.2	0.19	1.61	2.89
Firmage	760	2.69	0.35	0.69	4.01
Growth	760	77.59	1132	-30.77	2879
ROE	760	7.88	11.61	-57.7	112
Dual	760	0.21	0.41	0	1.00
Lev	760	43.92	21.9	1.1	94.09
Size	760	12.94	1.38	9.17	19.06
Loan	475	0.133	0.13	0.00003	1.855
Subsidy	657	0.0073	0.008	4.21e-06	0.061
Tax	615	18.72	14.27	-63.38	225
Oppose	760	0.021	0.024	0	1.00
Absence	760	0.0039	0.045	0	0.31
Agency Cost I	629	0.1	0.103	0.0024	1.45
Agency Cost II	629	0.018	0.028	0.0013	0.27

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