Do Controlling Ownership Structure Moderate the Link between Economic Policy Uncertainty and Firm Value?

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Abstract. In this study, we investigate the relationship between economic policy uncertainty (EPU) and firm value of Chinese listed companies. Our research is based on China's EPU index developed by previous researchers and financial data on 1749 Chinese listed companies from 2011 to 2020. The empirical results reveal that economic policy uncertainty negatively influences firm value, and that corporate governance affects the degree of the effect. To be more specific, we investigate the moderating effect of corporate governance in terms of ownership structure and use 3 variables, the largest shareholder's holding, board size, and independent directors' proportion, to measure ownership structure. The results show that the increase in the largest ownership and the expansion of board size can help companies go through the negative effect of EPU on firm value, while the increase in the proportion of independent directors can intensify the effect. The evidence illustrates that Chinese policymakers should pay attention to the possible impact of initiating a new economic policy on firm value. More importantly, our empirical results also give directors of Chinese listed companies advice about how they should adjust their ownership structure to mitigate the effect of the volatility caused by economic policy.

Keywords: Economic Policy Uncertainty; Firm Value; Ownership Structure.

1. Introduction

The global economic crisis in 2008 has aroused extensive attention from academia and policymakers to the uncertainty of economic policy. In the past 10 years, economists have measured the uncertainty of economic policy in different ways and found that there is a close relationship between the uncertainty of economic policy and macroeconomic fluctuations. Since Baker et al. (2016) measured economic policy uncertainty (EPU) and proposed an economic policy uncertainty index, the number of research about EPU has surged, not only because the scholars found a good way to quantify EPU, but because EPU is also an important macro-institutional factor affecting the performance of enterprises. At present, the Chinese economy is not the same as it was right after the Reform and Opening Up policy in 1978. Although China's economy after the implementation of Reform and Opening Up has developed rapidly, after the economic transformation, the problem of low-efficiency impact has happened on economic growth. In this case, the Chinese government should be more desirable to know the effect of EPU on every aspect of the macroeconomic environment, which reveals the meaning of our study.

Based on academic background in the past five years, we study the relationship between EPU and firm performance measured by market value. Reviewing previous papers, we find most studies on this topic use Tobin's Q or ROA to measure enterprise value or firm performance (Leora and Inessa, 2004; Zhu et al., 2020), but market value is seldom used. Additionally, we also introduce a moderating variable---corporate governance in terms of ownership structure. We expect to find whether a better ownership structure can intensify or mitigate the relationship between EPU and company performance in our research. Strong corporate governance has become more necessary since the financial crisis happened in 2008 (Festić et al., 2020). However, considering the practicality and operability, we decide to study ownership structure which is one aspect of corporate governance because whether the structure of the board of directors in a company is optimal can directly influence the decision-making process of the company and management quality (Heugens et al., 2009; Lin et al., 2009).

Our research can make a contribution in academia for three reasons. First, in terms of our study's model, we use market value to measure company performance. Market value reveals the role of the market system and is widely used as a foundational pricing index for different financial products, so Chinese policymakers should be interested in the evidence of how economic policy uncertainty influences a firm's valuation. Second, we use ownership structure as our moderating variable. In this case, our research can also inform Chinese companies about how they should optimize ownership structures so that they can withstand the huge effect of EPU. Previous studies seldomly consider the moderating effect of corporate governance in terms of ownership structure, so we believe that our research can fill this blank. Third, this study mainly uses EPU data collected and quantified by Davis, Liu and Sheng. The results of this research prove availability of their EPU data so that more researchers can use the data without worries.

In the following content, we discuss deeply about the topic and variables in our research. Besides, we elaborate the methodology of our study and give the data results of our research. Then, we test the robustness of our results and finally draw a conclusion.

2. Literature Review and Hypotheses Development

2.1 Economic Policy Uncertainty and Firm Value

We try to explore the relationship between EPU and company value. Honestly, we can see the potential relationship obviously from the evidence in reality. For instance, the Financial Times Stock Exchange index dropped almost 6% after Brexit was announced in 2016. According to a general equilibrium model, stock prices decrease with changes in government policy and the decrease can intensify when the uncertainty of government policy is big (Pastor and Veronesi, 2013). A higher stock price shows a better future to investors, potentially affecting firm value (Naveen and Ramana, 2004). The decrease in the Financial Times Stock Exchange index reflected the drop in companies' stock prices, which could also influence the companies' value. Except for the evidence that we can perceive, some scholars have proved the potential relationship between EPU and firm value. For example, EPU has a negative effect on company value in the common situation (Jiang et al., 2022); EPU can destroy enterprise value (Yousefi and Yung, 2022); Corporate value decreases because of the increase of EPU (Zhu et al., 2020). However, we find that market value is less used in the previous studies with similar topics. Market value can directly reflect stock price which is an indicator of firm value in the long run, so we use it to measure firm value and conduct the research on Chinese listed companies. We want to see whether the widely accepted conclusion will not change after altering the measurement. Based on the above discussion, we develop the following hypothesis:

H1: An increase in economic policy uncertainty has a downside effect on firm value

2.2 Economic Policy Uncertainty, Firm Value, and Corporate Governance

In terms of corporate governance, we only focus on ownership structure in this paper. The ownership structure refers to the proportion of shares held by shareholders. The different ownership arrangements will have a direct impact on the business performance of enterprises. Mitton (2002) not only found that firm-level changes in variables used to measure corporate governance had a strong influence on firm value during the East Asian financial crisis but also divided ownership structure into two aspects, which were ownership concentration and block holdings held by individuals involved with management. In addition, Xie et al. (2022) concluded that change in company market value is a function of differences in corporate governance measures and they used the percentage of shares held by state and the percentage of the top five shareholders' holdings to measure ownership structure. Mirza and Ahsan (2020) use three variables--- the largest shareholder's holding, board size, and independent directors ratio to measure corporate governance in terms of ownership structure. Considering all the studies we find and the accessible resources we have, we decide to adopt Mirza and Ahsan's way to explain ownership structure and we cheat every variable as a single moderating variable in our hypotheses.

The largest shareholder's holding refers to the ownership concentration of companies. Many scholars have found that changes in ownership concentration can influence firm value. For instance, Kwon et al. (2022) argued that firms with higher ownership concentration performs better in firm value than firms with lower ownership concentration. Also, Novita (2020) concluded that ownership concentration positively influences firm value. Nikolić and Babić (2016) gave their explanation about why ownership concentration enhances firm performance. They thought that ownership dispersion leads to a conflict of interest in the board which can influence the efficiency of the decision-making process. Based on these previous studies, we think that since ownership concentration can influence firm value, firms with a higher ownership concentration may avoid the substantial effect of EPU to some extent.

Board size refers to the number of board members. The board of directors is the decision-making body of the company and is responsible for the command and management of the company or business activities. In the research about board size and corporate financial performance, some studies show clearly the relationship between board size and firm value, but they have different conclusions. For example, Nguyen and Faff (2006) find that firm value declines with increasing board size, but Larmou and Vafeas (2010) believe that board size is positively correlated with an enterprise value. Some studies also illustrate the details about why and how board size can lead to different results in firm performances. For instance, a bigger board size may lead to low efficiency in expressing information and ideas (Lipton and Lorsch, 1992), so the efficiency of making decisions decreases, which can influence the development of companies. However, a bigger board size also means that more directors from diverse backgrounds possessing different skill sets join the decision-making process, which leads to a more beneficial and careful decision (Kalsie and Shrivastav, 2016).

Independent directors refer to directors who are independent of the shareholders of the company and do not hold positions in the company. Besides, the directors must have no important business or professional contact with the company or the company's managers, and make independent judgments on the company's affairs. In terms of studies about the relationship between independent directors and firm value, we find most studies tend to illustrate the positive effect of independent directors on firm value. Bonini et al. (2022) concluded that long-tenured independent directors may indirectly improve firm performance measured by Tobin's Q. And Ren et al. (2020) also argued that the resignation of official independent directors can positively influence firm performance measured by Tobin's Q. They believe that independent directors can bring external resources to increase company value. For instance, independent directors with government resources can help a company receive lighter taxation or get government contracts. In this case, companies with more independent directors are likely to withstand the negative effect of EPU. Based on previous contents, we divide ownership structure into 3 aspects and develop corresponding hypotheses:

H2a: More centralized ownership can mitigate the effect of economic policy uncertainty on firm value.

H2b: An increase in board size can mitigate the effect of economic policy uncertainty on firm value.

H2c: An increase in the number of independent directors can mitigate the effect of economic policy uncertainty on firm value.

3. Methodology

3.1 Model

We construct our model based on the research of Zhu et al. (2020). The Chinese economic policy uncertainty and the corporate value are the main elements in the baseline model. The baseline model is:

$$\mathrm{LMV}_{i,t} = \beta_0 + \beta_1 LEPU_t + \lambda \mathrm{CONTROL}_{i,t} + \varepsilon$$

Where β_0 represents the intercept, β_1 is the coefficient of the natural logarithm of the EPU index value, λ represents the coefficients of all control variables. The control variables include leverage ratio, size of the firm, age of the firm, capital expenditure and fixed assets ratio.

To test for the Hypothesis 2.1, new variables, ownership concentration ($TOP_{i,t}$) and interaction item of EPU and TOP ($LEPUXTOP_{i,t}$), will be added into the model with the new corresponding coefficient β_2 and β_3, while the latter one represents the moderating effect of the ownership concentration. To test for the Hypothesis 2.2, board size ($BOARD_{i,t}$) and the interaction item of EPU and board size ($LEPUXBOARD_{i,t}$) will be added, while independent director ratio ($IDratio_{i,t}$) and the interaction item of EPU and independent director ratio ($LEPUXIDratio_{i,t}$) will be added for testing the Hypothesis 2.3. Use the variables in hypothesis 2.1 as the example, the extended model is as follow:

$$LMV_{i,t} = \beta_0 + \beta_1 LEPU_t + \beta_2 TOP_{i,t} + \beta_3 LEPUXTOP_{i,t} + \lambda \mathrm{CONTROL}_{i,t} + \varepsilon$$

3.2 Variables Explanation

We use the natural logarithm of firms' market value to represent the firm value. For the EPU, we use the economic policy uncertainty index constructed by Davis et al. (2019) which uses the two newspapers, the Renmin Daily and the Guangming Daily for the text mining process. To construct the index, they first find out the number of articles that contain at least one of the terms "Uncertainty", "Economics" and "Policy". Then, they scale the raw EPU data for the number of articles for the same newspaper and month, divide them into three periods, which is from 1949 to 1978, from 1979 to 1999, and from 2000 onwards, which correspond to the central planning era, the reform and opening-up era, and the globalization era of China. Last, they standardize the data and normalize the index value to 100 at the average for each period. In our report, we took the simple algorithm average of the monthly EPU value in the same year to represent the EPU value for each year as the year-fixed effect.

Table 1. Correlation Coefficient

	LEPU	TOP	BOARD	IDratio	LEV	LSIZE	firmage	LCAP	FAR
LEPU									
TOP	-0.108***								
BOARD	-0.046***	0.025***							
IDratio	0.036***	0.044***	-0.457***				-		
LEV	0.007	0.003	0.032***	0.010					
LSIZE	0.188***	0.238***	0.238***	0.062***	0.108***				
firmage	0.373***	-0.128***	0.034***	-0.019**	0.081***	0.177***			
LCAP	0.061***	0.175***	0.219***	0.029***	0.018**	0.701***	-0.060***		
FAR	-0.072***	0.047***	0.137***	-0.029***	0.029***	0.057***	-0.042***	0.326***	

We also aim to analyze the moderating effect of ownership structure. To estimate the firms' concentration degree on its ownership structure, we follow the measurement method of Bentley et al.

(2013) that divides ownership structure into three components, the shareholding ratio of the largest shareholders, the board size, and the independent director's ratio in the board. A larger shareholding ratio of the largest shareholders is related to higher centralization of control, which means that the firm has a more concentrated governance structure. A larger board size is associated with a higher oversight effect. Independent directors within the board affect the governance by giving their own opinions to avoid the firm from being too conservative or too aggressive. However, they may also reduce the efficiency of the firm by affecting the decision-making process. The effect of independent directors may vary due to the firm-specific situations. These three indicators are denoted as TOP, BOARD, and IDRATIO respectively in the later modeling.

Following the previous study about the relationship between EPU and firms' performance (Zhu et al., 2020; Mirza and Ahsan, 2019), we control some related variables to mitigate the firms' specific situations and conditions. First, we control the firm size by taking the natural logarithm of their total asset (LSIZE) since bigger companies may have more complex governance structures and a larger firm value as well. Wang et al. (2013) have found out that the leverage ratio (LEV) and firm age (firmage) will also have a firm-level impact on the corporate's market valuation, especially on Tobin's Q value. Therefore, in our research, we also include these three variables as our control variables. We also control the capital expenditure (LCAP) since the level of capital investment from a firm has a revealing effect on how well the projects of the firm will likely perform and therefore will further affect the firm's market value (Trueman, 1986). Previous research by Gulen and Ion (2016) and Phan et al. (2019) has proven that corporate liquidity has a relationship with the economic policy uncertainty and therefore will further affect the firms' decisions and their values. In terms of corporate liquidity, we add the fixed asset ratio (FAR) following the measurement method by Gulen and Ion (2016) as our control variable. Table 2 presents the statistical summary result. There are 11 variables in total.

Table 2. Presents the correlation matrix.

Variables	Obs	Mean	SD	Min	Median	Max
LEPU	16101	4.963	1.165	2.93117	4.682	6.757
TOP	16101	33.632	15.111	0.290	31.164	89.994
BOARD	16101	8.694	1.738	3.000	9.000	18.000
IDratio	16101	0.383	0.057	0.167	0.353	0.800
LEV	16101	0.472	0.580	0.008	0.460	63.971
LSIZE	16101	22.453	1.401	16.757	22.283	28.636
firmage	16101	18.441	5.935	2.333	18.500	44.751
LCAP	16101	18.752	1.983	7.600	18.821	26.525
FAR	16101	0.213	0.161	0.00003	0.176	0.876

3.3 Sample Selection

Considering the availability and uniformity of data, we choose samples in Chinese listed companies from 2011's year-end to 2020's year-end. We took out the companies which have missing values in one specific variable for more than 4 years from our samples for the consideration of statistical accuracy, and we exclude all the financial firms due to their special corporate financial structure. Finally, we obtain 1749 Chinese listed firms' data for our study. All the annual financial data are retrieved from RESSET and CSMAR databases, and we retrieve the Chinese Economic Policy Uncertainty index data constructed by Davis et al. (2019) from the official website. EPU index

data are converted from monthly-based to yearly-based for the objective of investigating the year-based effect.

4. Empirical Results

4.1 Result of the Baseline Model

Table 3 shows the empirical result of the panel data regression for the baseline model.

Table 3. Regression results of the baseline model

LMV	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LEPU	-0.174	0.004	-41.492	0	-0.182	-0.166	***
LEV	-0.043	0.007	-6.102	0	-0.057	-0.029	***
LSIZE	0.609	0.007	81.484	0	0.594	0.624	***
firmage	0.043	0.002	26.301	0	0.042	0.046	***
LCAP	0.018	0.004	4.403	0	0.013	0.025	***
FAR	-0.452	0.044	-10.254	0	-0.539	-0.366	***
Constant	8.853	0.128	69.033	0	8.601	9.104	***

Mean dependent var	22.670	SD dependent var	1.060
Overall r-squared	0.545	Number of obs	16101
Chi-square	15552.563	Prob > chi2	0.000
R-squared within	0.483	R-squared between	0.581

**** p<.01, ** p<.05, * p<.1*

For our baseline model, the result shows that the natural logarithm of the EPU value is statistically significant, and the coefficient is -0.174, which is negative at the 1% significance level. The result means that if the EPU index increases, corporate's market value will have a corresponding decrease. It seems that when the government initiatives new economic policies, many Chinese companies cannot change their strategy or management to cater the new policy in time, which leads to the decrease in their company's value. This result is consistent with hypothesis H1. It is also consistent with the results of a previous study (Baker et al., 2016) that corporates' market performance will negatively respond to the uncertainty coming from politics and economics.

4.2 Result of the Extended Models

To find out the moderating effect of the ownership structure-related variables, we develop the extended model as described in the previous text. Table 5 shows the regression result of the extended models.

From the result of the panel data regression, we find out that EPU index always remains a statistically significant relationship with the firms' market value, and the coefficients are always negative, indicating that EPU has a negative impact on the firms' market value. This result is consistent with Hypothesis 1, that EPU will restrain the enterprise value.

Table 4. Panel data regression result of extended models

	(1)	(2)	(3)	(4)
	LMV	LMV	LMV	LMV
LEPU	-0.381***	-0.303***	-0.330***	-0.213***
	(-10.852)	(-36.903)	(-20.753)	(-10.304)
TOP	-0.009***	-0.009***		
	(-7.713)	(-7.832)		
BOARD	-0.038***		-0.040***	
	(-3.434)		(-4.123)	
IDratio	0.074			0.565**
	(0.234)			(1.973)
LEPUXTOP	0.002***	0.002***		
	(7.253)	(7.511)		
LEPUXBOARD	0.009***		0.009***	
	(4.423)		(5.105)	
LEPUXIDratio	0.007			-0.103*
	(0.125)			(-1.924)
LEV	-0.032***	-0.032***	-0.032***	-0.031***
	(-4.594)	(-4.584)	(-4.574)	(-4.554)
LSIZE	0.563***	0.563***	0.563***	0.563***
	(60.523)	(60.754)	(60.485)	(60.685)
firmage	0.089***	0.089***	0.089***	0.089***
	(39.082)	(39.593)	(40.023)	(40.364)
LCAP	0.019***	0.019***	0.019***	0.020***
	(4.692)	(4.813)	(4.765)	(4.893)
FAR	-0.488***	-0.490***	-0.478***	-0.480***
	(-9.911)	(-9.952)	(-9.693)	(-9.732)
_cons	10.000***	9.708***	9.721***	9.162***
	(40.812)	(57.373)	(53.905)	(46.421)
N	16101	16101	16101	16101
R^2	0.501	0.500	0.499	0.498

t statistics in parentheses
* p < 0.1, ** p < 0.05, *** p < 0.01

In the second extended model, the variable LEPUXTOP is statistically significant at the 0.01 level, indicating that the shareholding ratio of the largest shareholder has a moderating effect on the relationship between EPU and corporate value. The coefficient is 0.002, which is barely positive, meaning that the negative effect of the EPU on the corporate value is slightly mitigated by an increase in the shareholding ratio of the largest shareholder. This supports Hypothesis 2, and it is consistent with the previous literature review that higher ownership concentration will mitigate the conflict in the board, which improves the efficiency of the decision-making process (Nikolić and Babić, 2016). Also, ownership concentration can reduce the problem generated from the agency problem and thus improve the corporate's performance (Zhuang et al., 2001). Additionally, we can also understand the mitigating effect of ownership concentration through a common example that some companies like insurance companies and banks often buy large stakes because in this way, they can take an active role in monitoring management in corporations and prevent companies from destructive mistakes. (Bhagat and Bolton, 2008).

In the third extended model, the coefficient of the interaction term LEPUXBOARD is significant at the 0.01 level, and the coefficient is 0.009, and thus hypothesis 3 is proved. The results show that a larger board size could also mitigate the negative relationship between EPU and corporate value. This is also consistent with the previous studies that with more directors from diverse backgrounds and different skill sets, decisions will be made with more professional consideration and rationality, which will lead to a more beneficial result for the firm (Kalsie and Shrivastav, 2016). Besides, another

possible explanation is that companies with larger board size are less likely to make extreme decision which may cause huge volatility of firm performance. And this may also explain why the mitigating effect of larger board size is small since larger board size is often a strategy to reduce the big uncertainty of board decisions. (Cheng, 2007)

In the fourth extended model, the coefficient of the interaction term LEPUXIDratio is only significant at the 0.1 level, with a negative coefficient of -0.103. It means that an increase in the independent director ratio can somehow aggravate the negative effect of EPU on the corporate value. According to the empirical result, although the moderating effect of independent director ratio is significant, its effect is contrary to what we assume in hypothesis 4. The possible explanation for this result is that while previous studies show that independent directors may bring ideas to the firm and improve efficiency sometimes, Hu et al. (2019) argue that in China, politically connected independent directors are forced to be added into the board due to the requirement of the law. Yu and Zheng (2014) also argue that most political independent directors somehow do not have professional business backgrounds and thus will not bring much constructive advice to the firm. Hence, the independent director ratio may not have an obvious effect on the relationship between EPU and the corporate value using the data of Chinese listed companies. Besides, Tian Xuan, vice dean of Pudaokou School of Finance, Tsinghua University, once argued in summit forum that independent directors of Chinese companies were not independent because those independent directors were mostly friends or associates of existing directors. In this case, they cannot play their roles in monitoring and most of time, they agree with directors who have close relationship with them.

4.3 Robustness Tests

Table 5. Panel data regression result for Tobin's Q as the corporate's value

	(1) TobinQ	(2) TobinQ	(3) TobinQ	(4) TobinQ
LEPU	-1.089***	-0.773***	-0.769***	-0.437***
	(-6.582)	(-19.973)	(-10.261)	(-4.472)
TOP	-0.049***	-0.049***		
	(-9.291)	(-9.342)		
BOARD	-0.186***		-0.175***	
	(-3.604)		(-3.812)	
IDratio	-0.751			1.266
	(-0.495)			(0.932)
LEPUXTOP	0.008***	0.008***		
	(8.085)	(8.273)		
LEPUXBOARD	0.032***		0.031***	
	(3.374)		(3.663)	
LEPUXIDratio	0.130			-0.189
	(0.453)			(-0.754)
LEV	1.508***	1.509***	1.510***	1.511***
	(45.901)	(45.914)	(45.813)	(45.813)
LSIZE	-1.186***	-1.197***	-1.184***	-1.193***
	(-27.043)	(-27.435)	(-26.933)	(-27.252)
firmage	0.275***	0.279***	0.282***	0.284***
	(25.752)	(26.483)	(26.762)	(27.313)
LCAP	0.024	0.025	0.024	0.025
	(1.243)	(1.283)	(1.231)	(1.303)
FAR	-1.322***	-1.325***	-1.276***	-1.280***
	(-5.704)	(-5.712)	(-5.491)	(-5.504)
_cons	28.863***	27.142***	26.624***	24.774***
	(24.975)	(34.031)	(31.293)	(26.624)
N	16101	16101	16101	16101
R^2	0.208	0.207	0.203	0.202

Examining the robustness of our model, we change the measurement of the dependent variable from market value to Tobin's Q. Table 6 shows the empirical result of the panel data regression.

The results of using Tobin's Q as the dependent variable for regression approximately remain the same compared to the original model. The interaction term of EPU and largest shareholder's holding is statistically significant at the 1%, with the coefficient of 0.008, indicating that higher largest shareholding's holding has a mitigating effect to the negative effect on EPU to Tobin's Q. Board size also has a positive moderating effect as its interaction term with EPU has a coefficient of 0.031, which is statistically significant at the 1% level. The only difference is that the moderating effect of the independent director ratio is not statistically significant, and this can be explained by the same argument that the Chinese government has a mandatory rule on the independent directors within the board of listed companies (Hu et al., 2019).

5. Conclusion

Based on panel data for 1749 Chinese listed companies from 2011 to 2020, we find that Chinese companies' market value decreases when the volatility of economic policy is severe. Additionally, we also conclude that companies with more centralized ownership and larger board size are more capable of withstanding the negative effect of EPU. In the end, we conduct the robustness test and the results reveal that our empirical results are reliable.

Our study can also give governments an enlightenment that the governments should enact economic policy by considering the interests of enterprises. They should not only think about short-term performance and ignore the long-term development. Especially when companies face predicaments like financial crisis and global epidemic, governments should initiative continuous policies on taxation and lending to protect company's value. Besides, local governments should tightly cooperate with corporates to know the details about companies' conditions so that they can help firms reach the sustainable development. For companies, they should construct scientific ownership structure. And when facing the downside effect of changing economic policy, companies should centralize ownership to simplify the decision-making process and expand board size to improve decision quality and external supervision on the management.

6. Limitation

Firstly, we did not consider industry-fixed effect in data analysis because of the limitation of database. Many studies about the relationship between EPU and firm value or corporate governance have industry fixed effects to compare the difference in variables' impact among different industries in China (Yang et al., 2019; Zhu et al., 2020; Wang et al., 2014). We can only gain information about industries that a company engages in and do not have access to the specific industry code in our college database. Therefore, we think it can be added to the future consideration.

Secondly, we do not provide any examples of how ownership structure can help companies reduce the negative effect of EPU in reality. It means that although our empirical results reveal the moderating effect of ownership structure, the actual utility of adjusting ownership structure is unknown. We should collect more information and discuss the concrete implementations for enterprises in our further study.

In our empirical results, we conclude that independent directors do not significantly influence firm value. However, based on previous studies, there should be a relationship between independent directors and enterprise value. Therefore, we decide to look for the reason based on the special situation of China. According to resource-dependent theory and social capital theory, independent directors should bring resources outside companies to help increase enterprise value (Peng, 2004). Especially, in China where the government has a great impact on firm operations, companies need independent directors who have political connections so that they can cultivate and build a relationship with the government to create additional value for themselves (Hu et al., 2020). However,

independent directors with political connections usually do not have professional business backgrounds (Yu and Zheng, 2014), and their existence has no function most of the time. In this case, because there was no significant crisis or economic policy uncertainty from 2011 to 2020, the effect of independent directors cannot be obvious enough.

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