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## Article

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Are government directors a blessing for actual performance or overvalued by the market? Evidence from China

Yu Wang<sup>1</sup>, Xiaoying Chang<sup>2\*</sup> and Shanshan Wang<sup>3</sup>

**Abstract:** The purpose of this study is to deepen our understanding of government directors' impact on firm performance. This study strives to answer whether government directors have different effects on accounting- and market-based performance. To correct for the endogeneity of government directors caused by self-selection bias, Heckman two-stage model was employed in this study. Using a sample of Chinese publicly listed firms on the Shanghai or Shenzhen Stock Exchanges from 2007 to 2016, the results support our predictions. The results show that government directors are associated with better market-based performance but not finance-based performance, which suggests a discrepancy between the public perspective and the realistic condition. Further, their impact on market-based performance is stronger for firms in high state-monopolized industries, but the results don't hold for finance-based performance. These findings call for more attention on the actual role played by government directors. Previous studies generally tested the impact of government directors on the overall firm performance without differentiating this construct into distinct, meaningful components that reflect firm performance in various domains or aspects. To the best of our knowledge, this is the first study to analyze and examine the differences in government directors' effects on accounting- and market-based performance.

**Subjects:** Government; Governance; Business, Management and Accounting; Corporate governance; Strategic management

**Keywords:** government directors; accounting-based performance; market-based performance; industry state monopoly

### 1. Introduction

Recent decades have witnessed a significant increase in the number of government directors, defined as the directors who had current or former political experience as government officials, on public company boards. Resource dependence theory suggests that it is especially helpful to appoint government officials to firm boards because the government presents important external uncertainty and dependency for companies (Hillman, 2005). For example, Zheng et al. (2015, p. 1618) argue "governments and their regulations (which include legislation, policies, guidelines, and rules) influence firms' opportunity sets, how they pursue these opportunities, and the returns they earn."

However, although plenty of studies have examined the performance implications of politically connected boards, the empirical results are mixed (e.g., Hadani & Schuler, 2013; Hillman, 2005; Sun et al., 2016; K. Zhang & Truong, 2019). Although resource dependence perspective, which emphasizes the ability of government directors' resource provision, has been widely used in this research, it largely neglects their willingness of resource provision. Resource dependence theory generally assumes that government directors would dedicate their resources to firms. The question is, however, whether they are really willing to do it. So it seems to be especially helpful to consider multiple theories beyond resource dependence theory to advance this research, such as social identity perspective. Specifically, social identity theory suggests government directors may identify weakly with their firms because they tend to be perceived as less favorable out-group members by other directors due to the prediction that they may hold different beliefs and values, and vice versa. Consequently, they are less likely to be willing to dedicate their resources into the focal firm.

Further, the results of prior research on the impact of politically connected boards on accounting- and market-based performance are mixed (e.g., Hadani & Schuler, 2013; Joni et al., 2020; Okhmatovskiy, 2010). In view of this, there seems to be a necessary to distinguish between market- and accounting-based performance. However, previous studies only treat them as different operation measures of the same theoretical construct (i.e., firm performance) and pay little attention to the inconsistent results. Overall, this study asks: (1) Whether government directors have motivation to dedicate their resources to the focal firms? (2) Are there other theories beyond resource dependence perspective that can help explain the impact of government directors on firm performance? (3) Are there differences in the impact of government directors on finance- and market-based performance?

To fill these gaps, this study investigates the effects of government directors on two different types of firm performance, namely market- and accounting-based performance, based on resource dependence and social identity theories, respectively. Resource dependence theory predicts that government directors can enhance both market- and accounting-based performance due to their rich resources. Based on social identity theory, however, it is predicted that they do not necessarily lead to higher accounting-based performance because they may be viewed as out-group members by dominated business directors, and vice versa, thus unwilling to provide their resources.

Our study contributes to the current literature in several ways. First, this paper adds to the literature on the performance implications of government directors by providing insights into their impact on different firm performance types. Previous studies only tested their effects on the overall firm performance without differentiating this construct into distinct, meaningful components that reflect firm performance in various domains or aspects (e.g., Dinh et al., 2021; Hadani & Schuler, 2013; Hillman, 2005). Consequently, previous studies have showed a complex picture, which suggests that future research should go further than this. To address this issue, the current study differentiates firm performance into accounting- and market-based performance to measure firm performance from different lens with distinct contents. As such, this study advances this research stream by further exploring the diverse effects of government directors on accounting- and market-based performance.

Second, this paper highlights the need to integrate resource dependence and social identity perspectives on boards of directors. The resource dependence perspective, which focuses on the board's ability of resource provision, generally assumes that resource-rich directors are willing to provide resources. However, this study raises the question that whether government directors have motivation to provide resources, which has been largely neglected by the resource dependence perspective. This question can be well addressed by the social identity perspective that concerns about government directors' identification with their firms and their willingness or motivation to provide resources to their firms. So there is a necessary to integrate the two perspectives to focus

on both the ability and incentive of resource provision. Unfortunately, very few studies integrated these two perspectives to understand government directors' performance implications.

Finally, this study helps us gain a more complete understanding of government directors. Conventional wisdom suggests that having former government officials sitting on boards can result in significant benefits, which in turn can enhance firm performance. However, our study indicates that government directors are likely to have weak motivation to dedicate their resources to the focal firms and thus contribute little to actual performance, while being overvalued by the market. These findings provide a crucial caution against the conventional wisdom and allow to gain a more complete understanding of both the benefits and costs of government directors.

The reminder of this study is as following: First, this study introduces theoretical background and develops hypotheses. Second, this paper introduces the methodology, data, measure of variables used in this study. Third, this paper reports the empirical results, such as descriptive statistics, correlations, and regression results. Finally, this study discusses the results, theoretical implications, limitations, and future research.

## **2. Theoretical background and hypotheses**

### **2.1. Resource dependence theory**

Resource dependence theory suggests that firms depend on important external resource providers because they need to obtain critical resources (Hillman et al., 2009). The government presents important external uncertainty and dependency for companies (Hillman, 2005) because it controls critical resources, industrial policies, opportunities, the rules and guidelines of business activities (Wang et al., 2021). Since firms can reduce dependency and uncertainty by establishing linkages with important external resource providers through their boards of directors (Hillman et al., 2009), they seek to have government officials sitting on boards. This helps firms reduce dependency on the government (T. Zhang et al., 2022). As noted by Hillman (2005, p. 465), "boards of directors are a primary method for absorbing critical elements of environmental uncertainty into the firm."

### **2.2. Social identity theory**

Social identity theory indicates individuals always classify themselves into social categories to construct their social identities (Tajfel & Turner, 1986; Turner, 1987). This category process is usually based upon a range of salient social attributes (e.g., race, gender, age, and experience; Westphal & Milton, 2000; Y. Zhang & Qu, 2016). In this process dissimilar others are always perceived as out-group members because they are presumed to hold different beliefs and values due to salient differences in social attributes, whereas similar others tend to be classified into in-group categorization because of the presumed same in values and beliefs (Chattopadhyay et al., 2004). This in-group/out-group categorization often results in automatic stereotype effects such as race- and gender-based stereotypes.

Based on social identity theory, government directors tend to be categorized as out-group members by dominated business directors due to their government working experience, and vice versa. From this perspective, government directors may face potential barriers to exerting influence and may be unwilling to provide resources.

### **2.3. Accounting- and market-based performance**

While firm performance has long been considered a multidimensional construct (Keats, 1988; Richard et al., 2009), scholars still pay little attention to the distinction among its different dimensions. Peng (2004) emphasizes the needs to focus on particular performance measures in future research. This study identified two different types of firm performance (i.e., accounting- and market-based performance), which reflect two most common dimensions of performance. Previous studies on politically connected boards do not distinguish between these performance

indicators and only test the overall firm performance. However, these performance indicators may represent different venues of value creation by government directors.

Accounting- and market-based performance represent two separate but correlated dimensions of performance. The former reflects a firm's level, growth and variability in profit, which is based on historic activities (Keats, 1988). The latter, in theory, reflects the rational present value of expected future cash flows (Fisher & McGowan, 1983), which is based on both current accounting-based performance and forward-looking expectations of performance. However, systematic economic effects can only explain a small proportion of stock price movement (Cutler et al., 1989), which is largely explained by investor sentiment. Therefore, market-based performance primarily reflects the market's reaction compared to accounting-based performance. In the case of government directors, this study argues that compared to market-based performance that largely reflects investors' subjective appraisals of the potential contributions that government directors would make to the firm, accounting-based performance is a better indicator of how well they actually perform. Our assertion is in line with Abdullah et al. (2016).

These discussions above suggest that market-based performance fluctuates around accounting-based performance. That is, high or low accounting-based performance would eventually translate into better or worse market-based performance over time. Nevertheless, sometimes market-based performance may deviate from accounting-based performance because the former is primarily based on investors' expectations about future performance, which, however, may be irrational.

#### **2.4. Government directors and accounting-based performance**

Resource dependence theory suggests that boards of directors are an important mechanism for reducing external dependency and uncertainty through their linkages to important external resource providers (Hillman et al., 2009; Pfeffer, 1972). Thus, firms may minimize external dependency and uncertainty by co-opting resource- and relation-rich directors (e.g., government directors).

Having government officials sitting on a board can help firms establish political connections with the government, in turn, being able to avoid arbitrary intervention from the government (Peng & Luo, 2000), obtain preferential treatments in corporate litigation (Firth et al., 2011), and access government-controlled resources and preferential policies (Claessens et al., 2008; Faccio et al., 2006; Halford & Li, 2020).

Further, appointing government officials to boards can also help firms gain their unique government-related knowledge (e.g., public policy process; Hillman et al., 1999), and their friendships with existing politicians and important decision makers (Agrawal & Knoeber, 2001).

Thus, based on resource dependence theory, this study posits:

*Hypothesis 1a: Government directors are positively related to accounting-based performance.*

Social identity theory, on the other hand, suggests that government directors have a negligible effect on accounting-based performance because they may identify weakly with the focal firm due to their out-group status, and, accordingly, they are reluctant to provide resources. Experience serves as an important basis for social identification and categorization. As Westphal and Milton (2000, p. 372) note that, "as individuals acquire experience in a particular role, they may increasingly recognize that role as a meaningful basis for self-categorization and, thus, as an element of their social identity." Obviously, there are salient differences in working experience between government directors and other directors. So they are likely to be presumed to have different values by other directors. They thus tend to be seen as out-group members, and vice versa.

Drawing on social identity theory, government directors are less likely to be committed to the focal organization due to their out-group status that makes them less attractive and trustworthy. Chattopadhyay (1999) shows that individuals' out-group status reduces their organization-based self-esteem, trust in their peers, and their attraction and subsequently organizational citizenship behavior. Consequently, government directors can hardly be willing to provide resources. Westphal and Milton (2000) point out that minority board members face barriers to contributing to board because of their out-group status.

Thus, based on these arguments, this study posits:

*Hypothesis 1b: Government directors have no effect on accounting-based performance.*

### **2.5. Government directors and market-based performance**

As discussed early, market-based performance largely reflects how the market evaluates them in the case of government directors. Thus, their impact on market-based performance depends on the market's reaction to them. This study uses two perspectives, namely resource dependence and social identity, to account for how government directors impact firm performance. Now the question is which perspective the public is more likely to hold.

This study argues that the market tends to hold the resource dependence perspective rather than the social identity perspective and consequently reacts positively to the government director. The social identity perspective is unlikely to be held by the market because the public knows little about the internal workings of the board. Further, social identity construction is an invisible, psychological process. So government directors' out-group status is less likely to be known by the public. Even for researchers, to the best of our knowledge, till now few have studied the performance implications of government directors through a social identity lens.

Instead, the resource dependence perspective on government directors is widely accepted by the public in China due to their strong relation-orientation. For example, firms in China have been in favor of having government officials sitting on boards (Zhu & Yoshikawa, 2016). It is well believed that *guanxi* is crucial for doing business in China. Government directors are presumed to have rich resources and *guanxi* with the government. Therefore, investors tend to believe that government directors can bring these resources into their firms to promote success (Hu et al., 2020). Therefore, they are more likely to hold the resource dependence perspective that indicates a range of benefits for a firm to nominate government officials to the board but largely neglects that they may be reluctant to provide resources. As a result, the market tends to react positively to having government officials sitting on boards based on resource dependence perspective even though they actually do not provide their resources to the focal firm because which is unknown by the market.

This idea on government directors exists not only in China but also in many other countries. Relation-orientation is also common in other emerging economies, in which specific terminologies are created to describe this value, such as *blat* in Russia, *compadre* in Latin America, which are like *guanxi* in China (Li et al., 2008, p. 384). Even in developed countries with a well-functioning legal system, government directors are valued by the public based on the resource dependence perspective. Goldman et al. (2009), for example, find that in the United States the announcement of appointing former politicians to a board is related to a positive abnormal stock return. Hence, this study proposes the following:

*Hypothesis 2: Government directors are positively related to market-based performance.*



## **2.6. Moderating effect of state monopoly of industry**

*Accounting-based performance.* Previous studies suggest that the value of politically connected boards is contingent on industry characteristics (e.g., Hillman, 2005). Resource dependence perspective suggests that the impact of government directors on accounting-based performance is more pronounced for companies in high state-monopolized industries than those in low state-monopolized industries because firms rely more on the government in the former industries. Baron (1995, p. 49) notes that “nonmarket strategies are more important when the more opportunities are controlled by governments and are less important when opportunities are controlled by markets.” Consequently, this study predicts that government directors can bring better accounting-based performance to firms in high state-monopolized industries where there are more opportunities controlled by the government. One significant channel through which government directors contribute to accounting-based performance is their political connections with the government, which can bring a range of benefits (e.g., government-controlled resources, preferential policies, monopoly power). So the more involved the government is in the industry of a firm, the more important government directors are for that firm. Therefore, government directors contribute more to the accounting-based performance of firms in high state-monopolized industries, where the government is intensively involved. Hence, this study posits:

*Hypothesis 3a: The level of state monopoly of industry positively moderates the relationship between government directors and accounting-based performance.*

Social identity perspective, however, suggests a nonsignificant moderating effect because government directors can hardly be willing to provide resources due to their out-group status. As this study argued early, they tend to be perceived as less favorable out-group members by other directors because of the salient difference in their working background. As a result, they are unlikely to be willing to dedicate their resources to the focal firm. While the importance of the government to business is more salient in high state-monopolized industries than those in low state-monopolized industries, the perceived benefits of government directors in the former industries cannot be obtained if they are reluctant to provide resources. Ultimately, their importance becomes equal for firms in these industries. Hence, based on the social identity perspective, this study posits:

*Hypothesis 3b: There is no significant moderating effect of the level of state monopoly of industry on the relationship between government directors and accounting-based performance.*

*Market-based performance.* As noted early, the public tends to hold the resource dependence perspective rather than the social identity perspective. Thus, this study predicts that state monopoly of industry positively moderates the relationship between government directors and market-based performance. Market-based performance largely reflects how the market evaluates them in the case of government directors. As such, if the market views government directors as more important in some certain industries, the firms with government directors in these industries can obtain better market-based performance. Since the importance of the government to business is predicted to be more pronounced in high state-monopolized industries (J. Zhang et al., 2016), the government directors in these industries tend to be valued more than those in low state-monopolized industries by the market. Therefore, this study anticipates that government directors contribute more to market-based performance of firms in industries with high level of state monopoly than those in low state-monopolized industries. Based on these arguments, this study posits:

*Hypothesis 4: There is a positive moderating effect of the level of state monopoly of industry on the relationship between government directors and market-based performance.*



### 3. Methodology and data

#### 3.1. Sample

This study selected Chinese listed firms on the Shenzhen or Shanghai Stock Exchanges between 2007 and 2016 as the sample. Board directors' biographical sketches are required to be disclosed in the annual reports of Chinese listed firms. Board background and financial data were obtained from the China Stock Market & Accounting Research (CSMAR) database. It is "one of the most reliable sources of information about Chinese listed firms" (Zhu & Yoshikawa, 2016, p. 1795). After excluding missing data, a total of 19,739 observations from 2,850 firms remained in the sample.

#### 3.2. Variables

*Dependent variables.* Two types of firm performance were identified in this study: accounting- and market-based performance. Return on assets (ROA) and return on equity (ROE) were used as the indicators of accounting-based performance because they are, perhaps, the most common measures of accounting-based performance. Market-based performance was operationalized by Tobin's Q, which was measured as the ratio of the sum of market value of equity and total debt to the book value of firm assets (David et al., 2010).

*Independent variable.* This study sets the dummy of government director equal to 1 if at least one nonexecutive director on a firm's board had government working experience, and 0 otherwise. This study chose to use nonexecutive government directors to rule out the effect of the executive. Duality of the director and executive is common in the boardroom. A director who also serves as executive in the firm may exert a mixed effect that contains the effects of his or her role both as a director and executive. For such duality, it would be difficult to identify the pure effect of the government director. Therefore, this study identified government directors among nonexecutive directors on the board. Oehmichen et al. (2017) adopt a similar approach in the context of board industry expertise. The results still hold when including executive government directors.

*Moderating variable.* Level of state monopoly of industry was measured as state-controlled firms' sales divided by sales of total industry for each year (J. Zhang et al., 2016). A larger ratio indicates a higher level of state monopoly of industry.

*Control variables.* Several variables that may affect firm performance were controlled for. This study measured firm size as the natural logarithm of a firm's total assets. This study measured firm age as the number of years since founding. Ownership concentration, following Zheng et al. (2015), was measured as the percentage of shares held by the 10 largest shareholders. State-owned enterprise (SOE) dummy was coded as 1 if a firm's controlling shareholder was the state. This study measured board size as the number of directors. Board independence was measured as the number of outside directors divided by total board members. Duality of chair and CEO was coded as 1 if a CEO also served as board chairperson and 0 otherwise (Wang et al., 2021).

Furthermore, three industry-specific variables were controlled for. Industry dynamism is an indicator of instability or volatility in an industry. According to Boyd (1995) and Wang et al. (2021), this study regressed total industry sales on time, based on five years' data for each given year. The ratio of the standard error of the regression slope coefficient to the mean value of sales was used to measure industry dynamism. Further, the ratio of the regression slope coefficient to the mean value of sales was employed to measure industry munificence. Industry competitiveness was measured as (1-the ratio of sales of the four largest firms to total sales in the firm's industry sector).

#### 3.3. Statistical analysis

Endogeneity may exist in this study. Following Shaver (1998), this study employed the Heckman two-stage model to address the endogeneity issue. Further, this study used a random-effects regression to analyze the data because our independent variable, a binary variable, varied little

within groups (i.e., observations of the independent variable from the same firm varied little over time; Judge et al., 1985). Finally, to avoid biasing performance regressions with outliers, all dependent variables were winsorized at the 0.1% level to remove the most extreme values.

## 4. Results

### 4.1. Descriptive statistics and correlations

Table 1 reports the descriptive statistics and correlations. It shows that the average values of ROA, ROE, and Tobin's Q are 0.03, 0.06, and 2.92, respectively. The proportion of firms with government directors in the sample is 30%, which suggests that a high proportion of Chinese listed firms have government officials sitting on boards. Further, the sample mean of the state monopoly of industry is 0.6, which indicates the level of state monopoly across industries in China is rather high.

### 4.2. Regression results

This study tested the hypotheses using the Heckman two-stage model. The results of accounting-based (i.e., ROA and ROE) and market-based (i.e., Tobin's Q) performance are reported in Tables 2 and 3, respectively. For ROA, Model 1 includes control variables, whereas Model 2 adds the government director and inverse Mills ratio. Model 3 includes the moderating variable and interaction term. This study uses the same procedures for ROE and Tobin's Q.

Hypothesis 1a predicts that government directors positively impact accounting-based performance, whereas Hypothesis 1b indicates a negligible effect. As reported by Models 2 and 5 in Table 2, government directors have no effect on both ROA ( $\beta = 0.01$ ;  $p > 0.1$ ) and ROE ( $\beta = 0.04$ ;  $p > 0.1$ ). Therefore, the results support Hypothesis 1b. Hypothesis 2 predicts that government directors have a positive effect on market-based performance. As anticipated, Model 8 in Table 3 shows a significant and positive relationship between government directors and Tobin's Q ( $\beta = 3.116$ ;  $p < 0.001$ ), which suggests that government directors contribute to market-based performance. Hypothesis 2 is thus supported.

Hypothesis 3a indicates a positive moderating effect of state monopoly of industry on the relation between government directors and accounting-based performance, whereas Hypothesis 3b predicts a nonsignificant moderating effect. Models 3 and 6 in Table 2 demonstrate that the interaction term government director  $\times$  level of state monopoly of industry is nonsignificant in the models using accounting-based measures (ROA and ROE) of firm performance ( $p > 0.1$  for both). Thus, Hypothesis 3b is supported. Hypothesis 4 predicts that the impact of government directors on market-based performance is contingent on the level of state monopoly of industry. Model 9 in Table 3 shows that the interaction term is significant and positive ( $\beta = 0.563$ ;  $p < 0.05$ ) in the model of market-based performance (Tobin's Q), which supports Hypothesis 4.

### 4.3. Robustness tests

This study conducted several robustness checks of the regression results. First, it is usually suggested that ROA and ROE tend to reflect short-term performance, while Tobin's Q reflects long-term prospects. Thus, an alternative explanation for our findings is that government directors can enhance long-term performance, but not short-term performance. To rule out this alternative explanation, this study used future ROA and ROE, defined as subsequent two-year ROA and ROE to our independent variables, as long-term performance to rerun the models. This study found similar results after doing this. Second, this study tested the robustness of our results to alternative measures of accounting-based performance. This study found consistent results when this study retested the hypotheses using net return on sales (ROS) as an alternative measure of accounting-based performance. Finally, this study found similar results when this study reran the models using the fixed-effects regression models.

## 5. Discussion

The purpose of this study is to deepen our understanding of government directors' impact on firm performance by investigating their different effects on accounting- and market-based

Table 1. Descriptive statistics and correlations of variables

VARIABLES	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.ROA	0.03	0.1	1														
2.ROE	0.06	0.58	0.27**	1													
3.Tobin's Q	2.92	3.83	-0.05**	0.08**	1												
4. Government director	0.3	0.46	-0.02†	-0.00	-0.04**	1											
5.State monopoly of industry	0.6	0.24	-0.04**	0.01	-0.07**	0.11**	1										
6.Firm size	21.82	1.45	0.000	-0.00	-0.37**	0.12**	0.24**	1									
7.Firm age	13.56	5.36	-0.06**	-0.01	0.04**	0.03**	-0.01	0.14**	1								
8.Ownership concentration	58.16	16.6	0.14**	0.05**	-0.04**	-0.01	0.04**	0.16**	-0.33**	1							
9.SOE dummy	0.48	0.5	-0.07**	-0.04**	-0.16**	0.15**	0.39**	0.33**	0.14**	-0.07**	1						
10. Board size	8.99	1.92	-0.00	0.01	-0.14**	0.19**	0.23**	0.36**	0.01†	0.04**	0.28**	1					
11. Board independence	0.37	0.05	-0.00	0.01	0.06**	-0.01	-0.06**	0.02**	-0.00	0.04**	-0.08**	-0.36**	1				
12. Duality	0.22	0.42	0.03**	0.01	0.08**	-0.08**	-0.15**	-0.17**	-0.09**	0.06**	-0.29**	-0.17**	0.1**	1			
13. Industry competitiveness	0.52	0.2	0.02**	-0.00	-0.001	-0.05**	-0.18**	-0.1**	0.01†	-0.06**	-0.08**	-0.1**	-0.00	0.07**	1		
14. Industry dynamism	0.17	0.13	-0.01	-0.01	-0.1**	-0.00	0.04**	0.02**	-0.11**	0.05**	-0.01	-0.01	-0.01	0.03**	-0.00	1	
15. Industry munificence	12.21	9.51	0.02†	0.00	-0.03**	-0.05**	-0.17**	-0.05**	0.01	-0.02**	-0.11**	-0.12**	0.05**	0.07**	0.54**	0.34**	1

Notes: N = 19,739, \*\* p < 0.01, \* p < 0.05, † p < 0.1, all tests are two tailed.

**Table 2. Government directors and accounting-based performance**

	ROA <sub>t+1</sub>	ROA <sub>t+1</sub>	ROA <sub>t+1</sub>	ROE <sub>t+1</sub>	ROE <sub>t+1</sub>	ROE <sub>t+1</sub>
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Government director $t$		0.010	0.011		0.040	-0.046
		(0.028)	(0.030)		(0.159)	(0.174)
State monopoly of industry $t$			-0.013**			0.012
			(0.005)			(0.025)
Government director $t$ × State monopoly of industry $t$			-0.002			0.050
			(0.007)			(0.039)
Inverse Mills ratio $t$		-0.007	-0.007		-0.026	0.007
		(0.017)	(0.017)		(0.095)	(0.099)
Firm size $t$	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002
	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.004)
Firm age $t$	0.000	0.000	0.000	0.003**	0.003*	0.003**
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Ownership concentration $t$	0.001***	0.001***	0.001***	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SOE dummy $t$	-0.013***	-0.013***	-0.012***	-0.054***	-0.057***	-0.056***
	(0.002)	(0.003)	(0.003)	(0.010)	(0.013)	(0.014)
Board size $t$	0.001	0.000	0.000	0.003	0.002	0.004
	(0.001)	(0.001)	(0.001)	(0.003)	(0.006)	(0.007)
Board independence $t$	-0.006	-0.011	-0.011	0.076	0.055	0.081
	(0.016)	(0.022)	(0.022)	(0.084)	(0.119)	(0.121)
Duality $t$	0.000	0.000	0.000	0.001	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.011)	(0.011)	(0.011)
Industry competitiveness $t$	0.005	0.005	0.005	0.037	0.036	0.036
	(0.006)	(0.006)	(0.006)	(0.029)	(0.029)	(0.029)
Industry dynamism $t$	-0.016*	-0.016*	-0.014*	-0.087*	-0.086*	-0.091*
	(0.007)	(0.007)	(0.007)	(0.039)	(0.039)	(0.040)
Industry munificence $t$	0.000**	0.000**	0.000**	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Industry dummies	Included	Included	Included	Included	Included	Included
Year dummies	Included	Included	Included	Included	Included	Included
Constant	0.001	0.006	0.007	-0.038	-0.016	-0.038
	(0.017)	(0.023)	(0.023)	(0.084)	(0.120)	(0.121)
Within R <sup>2</sup>	0.014	0.014	0.014	0.003	0.003	0.003
Between R <sup>2</sup>	0.085	0.084	0.088	0.035	0.035	0.035
Overall R <sup>2</sup>	0.033	0.033	0.033	0.008	0.008	0.008
Wald chi <sup>2</sup>	533.11***	534.21***	545***	160.91***	161.06***	164.22***

Notes: Standard errors in parentheses, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , †  $p < 0.1$ , all tests are two tailed.

performance through two different theoretical lenses (i.e., resource dependence and social identity theories). Our research findings support the social identity perspective in explaining the impact of government directors on accounting-based performance and the resource dependence perspective in explaining that on market-based performance. This study reveals the government directors are associated with better market-based performance but not finance-based performance. These

**Table 3. Government directors and market-based performance**

	Tobin's Q <sub>t+1</sub>	Tobin's Q <sub>t+1</sub>	Tobin's Q <sub>t+1</sub>
Variables	Model 7	Model 8	Model 9
Government director <sub>t</sub>		3.116***	2.328*
		(0.858)	(0.945)
State monopoly of industry <sub>t</sub>			0.853***
			(0.200)
Government director <sub>t</sub> × State monopoly of industry <sub>t</sub>			0.563*
			(0.241)
Inverse Mills ratio <sub>t</sub>		−1.758***	−1.496**
		(0.513)	(0.534)
Firm size <sub>t</sub>	−1.431***	−1.480***	−1.484***
	(0.030)	(0.033)	(0.033)
Firm age <sub>t</sub>	0.052***	0.043***	0.045***
	(0.009)	(0.009)	(0.009)
Ownership concentration <sub>t</sub>	0.008***	0.009***	0.009***
	(0.002)	(0.002)	(0.002)
SOE dummy <sub>t</sub>	0.001	−0.166†	−0.228*
	(0.087)	(0.099)	(0.102)
Board size <sub>t</sub>	0.012	−0.099**	−0.088*
	(0.019)	(0.036)	(0.037)
Board independence <sub>t</sub>	2.788***	1.233†	1.417*
	(0.542)	(0.697)	(0.708)
Duality <sub>t</sub>	0.068	0.113†	0.110
	(0.067)	(0.068)	(0.068)
Industry competitiveness <sub>t</sub>	−0.522*	−0.628**	−0.618**
	(0.234)	(0.236)	(0.235)
Industry dynamism <sub>t</sub>	−0.567**	−0.487*	−0.524**
	(0.201)	(0.202)	(0.203)
Industry munificence <sub>t</sub>	0.013**	0.016***	0.016***
	(0.004)	(0.004)	(0.004)
Industry dummies	Included	Included	Included
Year dummies	Included	Included	Included
Constant	31.503**	33.110***	32.745***
	(0.728)	(0.854)	(0.857)
Within R <sup>2</sup>	0.161	0.161	0.161
Between R <sup>2</sup>	0.319	0.322	0.327
Overall R <sup>2</sup>	0.215	0.216	0.221
Wald chi <sup>2</sup>	4326.22***	4354.25***	4400.7***

Notes: Standard errors in parentheses, \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05, † p < 0.1, all tests are two tailed.

findings are alignment with prior research (Peng, 2004), which suggests that different performance measures tap into different underlying dimensions of firm performance.

Further, this study investigates how the relation between government directors and firm performance (accounting- and market-based performance) differs between firms in high and low state-monopolized industries. This study found that, in the industries with high state monopoly, government directors contribute more to market-based performance. These findings are aligned with prior research (J. Zhang et al., 2016), suggesting that political connections are viewed to be more important in state-monopolized industries. However, the results didn't hold in the case of accounting-based performance. It seems that although the government directors in these industries are valued more by the market, they do not contribute more to accounting-based performance.

It is worth noting that one may wonder why the market does not evaluate government directors based on their accounting-based performance implications. As this study argued early, market-based performance is based on both the actual performance and expectations about future performance that may be irrational. In our case, investors generally believe that the focal firm has to take time to convert government directors' resources to firm value and predict that they will enhance future performance. As a result, investors tend to value them even though the current accounting-based performance is low.

### **5.1. Theoretical implications**

First, it provides a deeper understanding of government directors' impact on firm performance than previous studies have suggested. While plenty of studies have investigated the performance implications of government directors, they don't distinguish between accounting- and market-based performance and only test the overall firm performance. This paper differs from these studies by arguing that these performance indicators represent different venues of value creation by government directors. Our study examines the impact of government directors on accounting- and market-based performance and finds inconsistent results. The inconsistent results are caused by the discrepancy between the public perspective and the realistic condition. The public presumes that government directors would provide resources to the focal firm based on the resource dependence perspective. However, in reality they may be reluctant to provide resources due to their out-group status caused by the prediction that they hold different beliefs and values from other directors. As such, our findings help us to gain a deeper understanding of the impact of government directors on different firm performance types.

Second, this paper makes a theoretical contribution by drawing upon the social identity perspective to account for how government directors affect firm performance, which helps gain a more complete understanding. Previous research of this stream is mainly rooted in resource dependence, political embeddedness or transaction cost perspectives (e.g., Hillman, 2005; Okhmatovskiy, 2010) and has produced mixed results. Social identity perspective provides an important alternative explanation for the mixed results by suggesting that government directors may not be willing to provide their resources because they may be perceived as less favorable out-group members due to their salient differences in working experience from other directors. Accordingly, this perspective is particularly insightful in advancing this research. To the best of our knowledge, this study presents one of the first attempts to apply this perspective to analyze government directors' performance implications.

Finally, this study helps us understand how the impact of government directors on different firm performance types is moderated by the level of state monopoly of industry. This study found that state monopoly of industry only positively moderates the relationship between government directors and market-based performance, but not the relationship between government directors and accounting-based performance.

### **5.2. Practical implications**

First, this study presents important practical implications for investors, which calls on investors to pay more attention to the actual role played by government directors. This study finds that government

directors positively affect market-based performance but not accounting-based performance, which suggests that although investors value government directors, they contribute little to firm profitability. The findings indicate that government directors are likely to be reluctant to provide resources because of their out-group status. Therefore, investors should avoid focusing simply on whether a firm appoints government directors but pay more attention to their incentives in resource provision.

Second, this study suggests that a firm should appoint government officials who are more likely to identify with the firm as its board members. Previous studies highlight the ability of government directors to provide resources to firms. However, previous studies do not consider their incentives in resource provision. Our study casts doubts on the conventional wisdom by finding they are not related to accounting-based performance. Government directors may weakly identify with the focal firm and accordingly are reluctant to provide resources due to their out-group status caused by the salient difference in working experience between them and other directors. Thus, it is crucial to strengthen their identification with the focal firm to gain their resources and political ties.

### 5.3. Limitations and future research

Our study has some limitations that present directions for future research. First, there may be other firm performance types that could be considered in future research. To investigate the impact of government directors on different firm performance types, this study identified the two most common firm performance types in this study. Future research can further explore government directors' impact on other firm performance types. Second, since this study lacked detailed information on the ranks and tenures of individual bureaucrats, this study did not consider government directors' heterogeneity in this study. As Lester et al. (2008) argue government directors' human and social capital is heterogeneous; consequently, it would be useful to consider the heterogeneity of government directors in future research.

## 6. Conclusion

In conclusion, this study examines the differences in the impact of government directors on finance- and market-based performance. The results show government directors are associated with better market-based performance but not finance-based performance. Further, the impact of government directors on market-based performance is stronger for firms in high state-monopolized industries, but the results don't hold for finance-based performance. It indicates that although government directors in high state-monopolized industries are more valued by the market, they do not actually contribute more to finance-based performance. Taken together, there is a discrepancy between the public perspective and the realistic condition.

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