

Article

Managerial Myopia and Long-Term Investment: Evidence from China

Qilong Cao ^{1,*} , Meng Ju ², Jinglei Li ² and Changbao Zhong ^{1,*}¹ Wu Jinglian School of Economics, Changzhou University, Changzhou 213164, China² Business School, Changzhou University, Changzhou 213164, China

* Correspondence: cql1086@cczu.edu.cn (Q.C.); zhongchangbao@cczu.edu.cn (C.Z.)

Abstract: A corporation's ability to uphold valuable long-term investments is a critical component of the business's sustainability. Combining the views of the upper echelons theory and agency theory, this study argues that myopic managerial behavior is detrimental to a firm's long-term investment. We construct an indicator assessing managerial myopia based on the textual analysis approach. The moderating effect analysis suggested that the negative impact of managerial myopia on long-term investments is lessened with an increase in institutional investor ownership and analyst coverage. In addition, we found that managerial myopia negatively correlates with capital expenditures and R&D investments. Furthermore, the cross-sectional analysis suggested that the correlation between managerial myopia and long-term investment is stronger among firms with higher industry competition, poor performance levels, and in non-state-owned enterprises.

Keywords: managerial myopia; long-term investment; upper echelons theory; corporate governance

1. Introduction

The concept of sustainability has quickly become one of the most hotly discussed topics in economics, management, sociology, and other fields [1,2]. For businesses, the features of a firm's management teams help us to ascertain, to some extent, the length and breadth of their orientation to sustainable development [3]. Per the upper echelons theory, the experiences, values, cognition, and personalities of management influence strategy choices and outcomes of organizations [4,5]. Managerial myopia, defined as the personal qualities of managers' perceptions of time, is a critical issue in the corporate finance literature, as it challenges the premise of maximizing shareholder interests and influences business conduct [6–8]. While previous studies have examined the economic consequences of managerial myopia, the debate on the impact of managerial short-termism on a firm's long-term investment behavior continues. For example, Lee et al. [9] theoretically demonstrated that managers with a short horizon tend to make decisions that benefit the firm's short-term earnings at the cost of the firm's long-term interests; later, this view was established by several studies [10–12].

Nevertheless, a recent study by Yu et al. [13] presented opposite opinions, demonstrating that short-termism does not affect a firm's investment behavior. Brochet et al. [14] reported that different approaches to measuring managerial myopia could be partly responsible for this debate. Another concern is that although the existing literature suggests that enhanced external governance is crucial for constraining and monitoring managers' adverse behavior, there has been limited research on the correlation between managerial myopia and investment decisions, as well as failure to address the heterogeneity effect derived from industry competition and firm performance [9,15].

Owing to the lack of well-recognized measurements for managerial myopia in the literature, it is challenging to empirically identify the direct effect of corporate managerial myopia on long-term investment decisions. Early studies primarily used intangible asset investments to quantify managerial myopic behaviors [16,17], whereas several recent



Citation: Cao, Q.; Ju, M.; Li, J.; Zhong, C. Managerial Myopia and Long-Term Investment: Evidence from China. *Sustainability* **2023**, *15*, 708. <https://doi.org/10.3390/su15010708>

Academic Editor: David K. Ding

Received: 11 November 2022

Revised: 20 December 2022

Accepted: 28 December 2022

Published: 30 December 2022



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

studies focused on managerial myopic actions that manipulate accounting earnings to fulfill short-term performance [11,18]. Meanwhile, some studies also indicated that the financial disclosure frequency causes firms to focus on short-term performance and thus could be a proxy for managerial myopia [10]. Another stream of studies suggested that a manager's characteristics, such as age and expected tenure, are underlying indicators of managerial myopic preference [5,19,20]. Managerial myopia denotes the propensity for managers' temporal cognition to be focused on the immediate future, as well as their propensity to be subjectively present-oriented and place a high value on the here and now; this tendency is often perceived as an inherent and persistent personal attribute and a subconscious process [21]. Accordingly, the measures used in the existing literature are biased and contentious, for these indicators only capture the results of managers' short-sightedness. Moreover, it is different to separate the effect of managerial myopic behavior from that of other features of firms' institutional and governance environments. Drawing on a recent study [22], this study creates a novel indicator for measuring managerial myopia based on a textual analysis approach, which eliminates subjective bias and serves as a crucial benchmark for quantifying managerial myopia.

Correct and adequate capital and R&D expenditures are essential for the survival and expansion of a company and are crucial to continuing endogenous growth momentum, maximizing value, and attaining sustainable development [6,9]. The manager's horizon is vital to the optimal investment decision of a company. Nevertheless, the level of corporate investment often diverges from the optimal amount of investment needed, such as a decline in investment efficiency owing to under- or overinvestment [23]. The principal-agent theory advocates that management might approve investment projects unfavorable to shareholders and overinvest in short-term initiatives with relatively higher returns to increase the short-term returns, while decreasing long-term investment projects beneficial to business development [24]. High inputs, uncertain outputs, and intermittent benefits typically characterize capital expenditures and R&D expenditures. Investments in fixed, intangible, and other long-term assets not only directly increase the enterprise's current costs but also increase depreciation and amortization expenses, which eventually decrease current earnings [9]. R&D entails substantial, sustained capital investment and has a long duration and high uncertainty of returns, which generally leads to high operational risk. Therefore, short-sighted managers might use the resources and personal power available to them to influence the quantity and manner of company investment, cut corporate capital expenditure and R&D spending, and reap short-term gains.

Owing to the adverse impact of managerial myopia on a firm's performance, a natural question arises whether enhanced external governance could constrain and monitor this behavior. Based on previous studies, we propose that enhanced external governance, such as higher analyst coverage and better institutional shareholdings, mitigate the adverse impact of managerial myopia on long-term investment [25]. First, analysts evaluate the forecasts and assessments about the businesses' worth based on the available information. Moreover, the analysts lower the stock price and market value to confine the managers' opportunistic behaviors, including short-sightedness [26]. Second, institutional investors bring a larger scale of capital and added professional expertise, while having a more significant impact on the management than individual investors. Furthermore, institutional investors focus on collecting long-term value information rather than excessively depending on short-term value information [27]. Hence, institutional investors are often perceived as successfully monitoring management performance and fostering long-term business conduct. Consequently, the management's short-sightedness is limited.

Using data from Chinese listed enterprises from 2007 to 2020, this study assesses managerial short-sightedness and empirically investigates its impact on firms' long-term investment using a textual analysis approach. The findings reveal that managerial myopia constraints firms' long-term investment. More precisely, managerial myopia decreases firms' capital expenditures and R&D expenditures. The effect documented is not only statistically significant but also economically meaningful. We observe that an increase in

managerial myopia by one standard deviation (SD) diminishes firm capital expenditures by 8.45% of the SD. For R&D expenditures, the reduction is approximately 2.37% of the SD. Robustness tests, including addressing endogeneity issues, propensity score matching (PSM) analysis, alternative statistical model regression, and subsample analysis, do not alter the main results. Then, we examine the moderating effects of institutional shareholding and analyst coverage. The results suggest that the negative impact of managerial myopia on long-term investments decreases with an increase in institutional investor ownership and analyst coverage. Furthermore, the cross-sectional analysis indicates that firms with more profitability and from less competitive industries are less affected by managerial myopic behavior.

This study is conducive to the literature in the following aspects. First, we contribute to the research on the correlation between managerial myopia and a firm's investment behavior. Although previous studies have theoretically suggested that myopic managers are less likely to make long-term investments [28], the empirical results remain unreliable. For example, Asker et al. [29] reported that listed firms make less investment because managers of listed companies tend to increase current earnings by forsaking valuable long-term projects. In addition, Asker et al. [29] confirmed a strong correlation between short-termism and investment behavior in the United States. Nevertheless, a recent study by Yu et al. [13], which strongly contradicts Asker et al. [29], demonstrated that short-termism does not affect a firm's investment behavior in the context of China. This study provides new evidence on the impact of managerial myopia on investment decisions using a new indicator of managerial myopia constructed by textual analysis in the Chinese setting.

Second, we extend earlier studies on the subject [12,14,22] by reporting how the external governance mechanism alleviates the negative impact of managerial myopia on investment decisions. Specifically, we add to the literature by documenting the moderation effect of institutional shareholding and analyst coverage that has not been examined previously. Moreover, this study offers valuable insights into practical implications by providing a direction to alleviate managerial short-termism from the governance standpoint.

Third, we extend the study by Hu et al. [22] in three ways. First, we perform additional tests, such as PSM analysis, alternative statistical model regression, and subsample analysis, to assess the robustness of our results. Second, this study addresses the endogeneity issue by using the total welfare lottery spending at the province level and the average value of the managerial myopia of other firms within the same province-industry-year as the instrumental variables. Third, we account for heterogeneity in the view of industry competition, and firm performance results enrich the emerging literature on the economic significance of managerial myopia.

The remainder of this paper is organized as follows: Section 2 presents the literature review and hypotheses construction; Section 3 discusses the data and technique; Section 4 presents the empirical findings; Section 5 concludes the study.

2. Literature Review

2.1. Managerial Myopia

Building upon the early theoretical work, managers can display myopic behavior [17,30,31]. Numerous empirical studies claim that opportunistic managers focus more on short-term growth than the firm's long-term development [32,33]. Narayanan [34] defined managerial myopia as a behavioral decision by managers to obtain short-term benefits at the expense of firm's long-term interests. Reportedly, multiple factors can affect managerial myopia, such as a manager's decision horizon and tenure [6]. Besides, short-term attention from the stock market can increase short-term performance pressure on managers, exacerbating their managerial myopia [30,35,36]. Previous studies adopted different measures of managerial myopia. In Stein's [28] model, the existence of an active takeover market aggravates managerial myopia, making firms threatened with a takeover more likely to decrease long-term investment. Later, Gigler et al. [35] extended Stein's work to prove that increasing the reporting frequency could increase the incentives for

myopic investing behavior. Then, some studies used questionnaire ratings to measure managerial myopia [37]. In addition, some studies used surplus management, managerial characteristics, and R&D expenses as proxies for myopia [18,38]. However, indicators constructed through questionnaires have problems of low response rates to questionnaires and subjective cognitive bias [39]. Likewise, some of the abovementioned proxy variables only reflect ex-post behaviors that can be captured and cannot reflect the managers' subjective perceptions.

Regarding our case, later studies introduced textual analysis methods to examine managerial myopia. Ridge et al. [40] used the amount and intensity of statements in letters to shareholders to assess myopia. Brochet et al. [14] used a lexicographical approach in text analysis to effectively capture managerial myopia by calculating the proportion of word frequencies of managers' statements related to "time horizons" in US surplus conference calls. They constructed a lexicon containing keywords geared toward short and long terms. A recent study analyzed the management discussion and analysis (MD&A) chapter included in the annual financial reports to determine the degree of managerial myopia [41]. Nevertheless, the abovementioned textual analysis methods also have some disadvantages. First, the Chinese language is vast and profound. Adopting Brochet et al.'s [14] approach directly does not apply to our study. Second, the development of domestic performance presentations remains immature, and the relevant texts are usually too short to support the construction of myopia text indicators. MD&A is the managers' appraisal of the business environment during the reporting period and their prediction for future development, which researchers acknowledge as a technique to capture managers' subconscious impressions and qualities. Consequently, we introduce textual analysis to the research of managerial myopia [42]. Based on Brochet et al. [14], we first identify a set of Chinese "short-term horizon" words and then use a lexicographic method to construct a managerial myopia indicator. Of note, our research offers a new perspective on managerial myopia.

2.2. Managerial Myopia and Long-Term Investment

Managers' characteristics, such as perceptions, cognitive abilities, and values, significantly influence a company's investment decisions [43]. Agency problems can arise when a manager's career investment horizon is shorter than the shareholders' investment horizon. Such managers have little incentive to pursue the profits that might be earned after the end of their tenure [36].

Myopic managers might forsake profitable but slow-returning long-term innovation investments for less productive but faster-returning short-term initiatives [41]. Both survey-based and archival research indicates that management myopia could emerge as underinvestment in fixed assets. Graham et al. [17] demonstrated that CEOs lowered capital expenditures and evaded equipment maintenance to fulfill short-term earnings objectives. Furthermore, Asker et al. [29], Edmans et al. [44], and Ladika et al. [45] provide historical evidence that management myopia can cut capital expenditures.

Some studies used agency and catering theories to elucidate management myopia and long-term investments. Separating ownership and control causes manager-shareholder disputes [46]. The agency theory states that managers are motivated to maximize profits at shareholders' cost [33,47]. Moreover, R&D activities involve inherent uncertainty and high risks for a long payback period [48]. Thus, managers are reluctant to allocate resources to R&D activities [49]. Hence, we expect a decline in long-term investment because of managerial myopia. In contrast, the catering theory can also clarify the investment behavior of companies [50]. Short-term investors would seek to pressure firms to maximize short-term earnings growth [51]; this is because owning a stock with long-term benefits is expensive for short-term investors, who try to maximize profits by continually adjusting their portfolios [52]. Therefore, managers will cut back on long-term investments to fulfill the investors' demands, and this catering behavior can boost short-term share prices and bring benefits to managers, such as lower equity financing costs and increased compensa-

tion. Overall, these results indicate that the agency problem and catering behaviors might cause managerial myopia.

Another source of managerial myopia is the information asymmetry between information held by insiders and by outside shareholders [53]. Corporate R&D activities with high-risk characteristics are vital to a firm's long-term growth [6]. Nevertheless, the current and future conditions related to R&D are significantly uncertain [54]. Managers tend to exploit their information advantage to deceive the capital market by misleading signaling [55]. Hence, information asymmetry can cause short-termism.

Accordingly, the following hypothesis is proposed:

Hypothesis 1. *Managerial myopia inhibits long-term investment.*

2.3. The Moderating Effect of Corporate Governance

Reportedly, the two main causes of managerial myopia are managerial incentives and capital market pressure [28,30,56]. Thus, the extent to which managerial myopia affects long-term investment could be related to the level of internal and external monitoring of a firm. Next, we attempt to assess two factors that might moderate the negative impact of myopia.

The first is analyst coverage. The existing literature usually demonstrates that analysts serve as external monitors to managers, have higher forecasting skills, and help eliminate information asymmetry [57]. When the analyst cover is higher, the more information hidden by managers is likely to be exposed, and the more monitoring the firm is likely to receive, thereby mitigating managerial myopia in R&D investments [58]; this indicates that analyst coverage enhances investment efficiency as an external monitoring mechanism.

The second is institutional investor ownership. Institutional investors tend to have larger capital availability, stronger expertise, and added influence over senior managers than individual investors. Generally, institutional investors function as external monitors to lessen agency issues [59,60]. Prior studies demonstrate that institutional investors promote R&D expenditure. For example, Baysinger et al. [49] reported that institutional investor stock concentration increases R&D investments. In addition, institutionally dominant firms tend to curtail R&D investments [31]. Aghion et al. [61] established a correlation between increased institutional ownership and greater innovation. Moreover, there is evidence that institutional investors conduct corporate visits for monitoring purposes [62]. Company visits serve as a conduit for obtaining information [63], which can enhance analysts' prediction accuracy and intensely influence stock prices. Therefore, the information role of company visits is a mechanism for monitoring by institutional investors to inhibit the behaviors of cutting R&D expenditures [62].

Although the studies mentioned above examined the causes of managerial myopia, little empirical evidence is available on its impact on managerial myopic long-term investment behaviors. To the best of our knowledge, this is the first study to provide evidence of the impact of managerial myopia on long-term investments. Therefore, our study fills this gap based on the prior literature.

Accordingly, the following hypothesis is proposed:

Hypothesis 2. *Analyst coverage and institutional investor ownership suppress the impact of managerial myopia on long-term investment.*

3. Research Design

3.1. Sample Selection and Data Sources

In this study, managerial myopia was constructed using companies' annual reports published on the CNINFO website (The China Securities Regulatory Commission has designated CNINFO as the official information disclosure website. Public companies use this website to publish their financial reports, announcements, and other relevant information. The URL is <http://www.cninfo.com.cn>. The accessed date is 30 June 2022).

Managerial and corporate governance characteristics, as well as financial data, were derived from the China Stock Market Accounting Research Database. All listed companies from the financial, insurance, and real-estate industries were removed. Besides, we eliminated companies that might enter special processing (i.e., ST and *ST companies) from the research sample. In addition, we excluded samples with missing values for the variables of interest. Furthermore, all continuous variables were winsorized by 1% and 99% to avoid the influence of extreme values. The final sample comprised 27,513 observations from 2007 to 2020, an unbalanced panel dataset.

3.2. Variable Measurement

3.2.1. Managerial Myopia

As mentioned earlier, it has been challenging to measure managerial myopia. As the proxies used in previous studies merely reflect the consequence of managers' short-termism behavior, we constructed a novel measure of managerial myopia (Myopia) based on textual analysis. The topic of the MD&A is the managers' examination of the company's operational circumstances and the description of the business strategy for the next year, as well as the possibilities, problems, and different risks encountered by the company's future development. The text content can represent a manager's characteristics.

We collected the firms' annual reports from the CNINFO website¹ and extracted the MD&A content. Then, the MD&A texts were segmented into words using a Python Chinese word segmentation module (Jieba). Finally, the frequency of short-term oriented words was divided by the aggregate word frequency of the MD&A text for each firm yearly to develop the measure of managerial myopia using the Chinese vocabulary (In Chinese, the expressions including "within days", "within months", "within years", "as soon as possible", "immediately", "pressure" can indicate short-term horizon.).

This approach was initially applied by Brochet et al. [14] for US firms and further developed by Hu et al. [22] in the context of China, who empirically verified this measure's practical utility. Recent studies have rapidly adopted this metric [64], further confirming its validity.

3.2.2. Long-Term Investment

Consistent with recent research on this subject [5,8,13], we used capital and R&D expenditures to measure firms' long-term investments, respectively.

Capital expenditures: Capital expenditures (Capspend) are the net costs incurred for assets with a lifespan of more than one fiscal year; this includes fixed and intangible assets, as well as other long-term investments. In this study, capital expenditures were compared with total assets.

R&D expenditures: Referring to a previous study [6], we used the ratio of current-year R&D expenditures to operational revenue of firms to assess R&D expenditures; 0 was substituted for the absence of R&D expenditures.

3.2.3. Control Variables

Consistent with recent studies on managerial myopia [14,18,22], a series of variables were incorporated into our model to control for other factors that could potentially affect firms' long-term investment. Precisely, we included firm-specific attributes, board characteristics, interval governance characteristics, and industrial characteristics. Regarding firm-specific attributes, we included the firm's size (Size), leverage (Lev), firm's age (Age), tangible assets to total assets (Fixed), return on total assets (ROA), and the growth rate of business income (Growth). The board characteristics variables were the average age of managers (Avage) and average academic qualifications of managers (Degree). The governance characteristics included the independence of director (Indenp), CEO duality (Dual), the share of ratio of the largest shareholder (Firstrat), and firm's state-ownership (Ifsoe). Furthermore, industrial characteristics were measured using the Herfindahl–Hirschman Index (HHI). Table 1 presents a detailed definition.

Table 1. Variable definitions.

Variable	Definition
Capspend	Capital expenditures scaled by total assets
Rdspen	Research and development expenditure scaled by operating income
Myopia	Frequency of short-term keywords divided by the frequency of all words
Size	Natural logarithm of the total assets
Lev	Total liabilities scaled by total assets
Age	Natural logarithm of the number of years since going public
Fixed	The ratio of tangible assets to total assets
ROA	The ratio of earnings before interests and taxes to average assets
Growth	Change of sales in year t and $t - 1$ scaled by sales in $t - 1$.
Avage	Natural logarithm of the average age of managers.
Degree	If CEO's education background is high school graduate or below, then Degree equals 1; values are 2 for college graduate, 3 for undergraduate, 4 for master, 5 for doctorate
Indenp	The proportion of independent directors to the total number of directors.
Dual	The dummy variable is equal to 1 if the CEO is also the chairperson of the board and 0 otherwise.
Firstrat	Shareholding ratio of the largest shareholder
Ifsoe	Dummy variable that equals one if the firm is state-owned and 0 otherwise
HHI	The sum of the squares of total assets in each industry.

3.3. Empirical Models

The following regression model was constructed to study the relationship between managerial myopia and long-term investment.

$$Long_term_{it} = \beta_0 + \beta_1 Myopia_{it} + \lambda Controls_{it} + Indus_j + Year_t + \varepsilon_{it}$$

where i denotes the firm; j represents the industry; and t denotes the year. Likewise, Long_term connotes two measures of long-term investment, that is, capital expenditures and R&D expenditures. Myopia is the measurement of managerial myopia. Furthermore, Controls denotes the set of firm-level control variables. Finally, the dummy variables of Year and Industry are added to control for the year- and industry-fixed effects, respectively. We clustered standard errors by firm.

4. Empirical Analysis and Results

4.1. Descriptive Statistics

Table 2 presents descriptive statistics. The mean value of capital expenditures was 0.051 (SD 0.092). R&D expenditures ranged from 0 to 0.224, reflecting a large variation across different firms. The mean of managerial myopia was 0.092 (SD 0.081), showing a relatively large variation in terms of the managerial decision horizon among firms. Regarding control variables, the descriptive statistics on these variables generally aligned with previous studies [9,22].

4.2. Baseline Regression Analysis

Table 3 presents the regression results where the independent variable is the text-based measure of managerial myopia and the dependent variable is long-term investment. With the inclusion of industry and year fixed effects, columns (1)–(3) report the results with capital expenditures as the proxy for long-term investment, and columns (4)–(6) report the results with R&D expenditures as the measure of the dependent variable. In particular, columns (1) and (4) show the results without control variables. Firm-specific attributes are incorporated in columns (2) and (5), and the remaining control variables are included in columns (3) and (6). As reported, the coefficient estimate on Myopia was negative and significant at the 1% level in each estimation, signifying that managerial short-termism reduces the firm's capital and R&D expenditures. The results corroborate the upper echelons theory. Regarding the control variables, the coefficients on the control variables generally aligned with the previous studies [22,27,34,38].

Table 2. Descriptive statistics.

VarName	Obs	Mean	SD	Min	Max
Capspend	27,513	0.051	0.092	0.000	0.642
Rdspen	27,513	0.028	0.041	0.000	0.224
Myopia	27,513	0.092	0.081	0.000	0.395
Size	27,513	22.000	1.409	10.842	29.885
Lev	27,513	0.442	0.219	0.007	0.940
Age	27,513	2.858	0.356	0.000	3.497
Fixed	27,513	0.218	0.168	0.001	0.719
ROA	27,513	0.035	0.075	−0.170	0.214
Growth	27,513	0.182	0.544	−0.480	3.888
Avage	27,513	3.829	0.063	3.466	4.248
Degree	27,513	2.372	1.602	1.000	5.000
Indenp	27,513	0.374	0.053	0.308	0.571
Dual	27,513	0.730	0.444	0.000	1.000
Firstrat	27,513	0.347	0.152	0.086	0.748
HHI	27,513	0.078	0.087	0.018	0.695
Ifsoe	27,513	0.387	0.487	0.000	1.000

Table 3. The effect of managerial myopia on long-term investment.

	(1)	(2)	(3)	(4)	(5)	(6)
	Capspend	Capspend	Capspend	Rdspen	Rdspen	Rdspen
Myopia	−0.144 *** (0.012)	−0.115 *** (0.012)	−0.096 *** (0.012)	−0.025 *** (0.004)	−0.014 *** (0.004)	−0.012 *** (0.004)
Size		0.015 *** (0.001)	0.015 *** (0.001)		−0.002 *** (0.000)	−0.001 *** (0.000)
Lev		0.031 *** (0.007)	0.045 *** (0.007)		−0.044 *** (0.003)	−0.041 *** (0.003)
Age		−0.030 *** (0.006)	−0.009 (0.006)		−0.011 *** (0.002)	−0.008 *** (0.002)
Fixed		0.073 *** (0.011)	0.084 *** (0.011)		−0.016 *** (0.003)	−0.014 *** (0.003)
ROA		0.211 *** (0.014)	0.194 *** (0.015)		−0.053 *** (0.007)	−0.049 *** (0.007)
Growth		0.010 *** (0.002)	0.008 *** (0.002)		0.003 *** (0.001)	0.003 *** (0.001)
Avage			−0.083 *** (0.020)			−0.016 *** (0.006)
Degree			0.000 (0.001)			0.002 *** (0.000)
Indenp			−0.007 (0.023)			0.013 * (0.008)
Dual			−0.012 *** (0.003)			−0.004 *** (0.001)
Firstrat			−0.083 *** (0.014)			−0.014 *** (0.004)
HHI			0.113 *** (0.033)			0.012 ** (0.006)
Ifsoe			−0.027 *** (0.003)			−0.000 (0.001)
Cons	0.102 *** (0.002)	0.187 *** (0.033)	0.020 (0.082)	0.044 *** (0.001)	0.128 *** (0.009)	0.169 *** (0.024)

Table 3. Cont.

	(1)	(2)	(3)	(4)	(5)	(6)
	Capspend	Capspend	Capspend	Rdspen	Rdspen	Rdspen
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	27,513	27,513	27,513	27,513	27,513	27,513
Adj-R ²	0.074	0.119	0.250	0.376	0.429	0.438

Note: This table presents the results for the effect of managerial myopia on capital and R&D expenditures. Columns (1)–(3) are the estimation results, with the dependent variable as capital expenditures. Columns (4)–(6) are the estimation results, with the dependent variable as R&D expenditures. Robust standard errors are clustered at the firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

We estimated the economic significance of the impact of managerial myopia on a firm's long-term investment as follows. One SD of managerial myopia is 0.081. The coefficient of managerial myopia on capital expenditures in column (3) is -0.096 . Thus, an increase in managerial myopia by one SD diminishes firm capital expenditures by 0.081 multiplied by 0.096, which is approximately 0.0078. One SD of capital expenditures is 0.092. A decline in capital expenditures by 0.0078 represents a decline of 8.45% of the SD. Likewise, the coefficient of managerial myopia on R&D expenditures in column (6) is -0.012 , and one SD of R&D expenditures is 0.041. A decline in R&D expenditures by 0.0010 (0.081×0.012) represents a decline of 2.37% of the SD. Hence, the documented effect was statistically significant and economically meaningful.

4.3. Robustness Checks

4.3.1. Endogeneity

Although we included firm-specific attributes, board characteristics, and industry characteristics as control variables, our estimation could still experience the detrimental effect of unobservable variables, possibly resulting in endogenous bias. We exploited instrumental variable and two-stage least squares (2SLS) regression to alleviate this bias. Following Sheng et al. [41] and Christensen et al. [65], we used local gambling preference as an instrumental variable for managerial myopia. A local attitude toward gambling influenced a firm manager's incentive to engage in financial misreporting. The district's propensity for gambling resembled the local firms' behavior within the district. Hence, gambling attitudes might partially reveal managerial opportunism. Further evidence highlighted that gambling attitudes partly signaled management opportunism [66]. Thus, this study contends that local gambling preferences correlate with the management of myopia. Corroborating the extant literature, we used the total welfare lottery spending at the province level to measure gambling preference and used 2SLS to estimate the impact of managerial myopia on long-term investment. Of note, causality was found to be unlikely. Table 4 presents the results. Column (1) is the first-stage regression where managerial myopia is the dependent variable. The F -statistic of the weak instrumental variable test is 46.797, and the results of the second-stage regression reported in columns (2) and (3) of Table 4 still hold. We adopted the average value of the managerial myopia of other firms within the same province-industry-year as the alternate instrumental variable. Such an instrumental variable based on geography has been broadly used in the literature. The logic is that managerial myopia of other firms within the same region and industry could not affect a firm's investment decisions directly, but could influence the firms' managerial behavior. The results reported in columns (4)–(6) of Table 4 indicate the robustness of our results.

Table 4. Instrumental variable analysis.

	(1)	(2)	(3)	(4)	(5)	(6)
	Myopia	Capspend	Rdspen	Myopia	Capspend	Rdspen
Ycs	0.009 *** (0.002)					
Indusmyo				0.271 *** (0.008)		
Myopia		−0.026 ** (0.012)	−0.015 *** (0.007)		−0.084 *** (0.019)	−0.008 *** (0.003)
Size	−0.003 *** (0.000)	0.021 *** (0.004)	−0.002 ** (0.001)	−0.001 *** (0.000)	0.015 *** (0.001)	−0.001 *** (0.000)
Lev	0.007 ** (0.003)	0.043 *** (0.011)	−0.045 *** (0.002)	0.003 (0.002)	0.045 *** (0.005)	−0.041 *** (0.001)
Age	0.014 *** (0.002)	−0.052 ** (0.022)	−0.011 *** (0.002)	0.011 *** (0.001)	−0.009 *** (0.003)	−0.009 *** (0.001)
Fixed	0.018 *** (0.004)	0.047 * (0.024)	−0.021 *** (0.005)	0.013 *** (0.003)	0.084 *** (0.007)	−0.014 *** (0.002)
ROA	−0.074 *** (0.008)	0.396 *** (0.096)	−0.032 ** (0.015)	−0.049 *** (0.006)	0.194 *** (0.013)	−0.048 *** (0.004)
Growth	−0.002 ** (0.001)	0.014 *** (0.004)	0.004 *** (0.001)	−0.000 (0.001)	0.008 *** (0.001)	0.003 *** (0.000)
Avage	0.040 *** (0.007)	−0.188 *** (0.055)	−0.024 *** (0.007)	0.018 *** (0.006)	−0.082 *** (0.013)	−0.016 *** (0.003)
Degree	−0.001 *** (0.000)	0.004 ** (0.002)	0.002 *** (0.000)	−0.001 ** (0.000)	0.000 (0.001)	0.002 *** (0.000)
Indenp	0.013 (0.009)	−0.042 (0.035)	0.012 ** (0.005)	0.005 (0.007)	−0.007 (0.016)	0.013 *** (0.004)
Dual	0.006 *** (0.001)	−0.032 *** (0.010)	−0.005 *** (0.001)	0.005 *** (0.001)	−0.012 *** (0.002)	−0.004 *** (0.000)
Firstrat	0.017 *** (0.004)	−0.136 *** (0.027)	−0.018 *** (0.004)	0.011 *** (0.003)	−0.083 *** (0.008)	−0.014 *** (0.002)
HHI	−0.021 * (0.011)	0.135 *** (0.048)	0.017 ** (0.008)	0.000 (0.008)	0.113 *** (0.019)	0.012 ** (0.006)
Ifsoe	0.010 *** (0.001)	−0.055 *** (0.012)	−0.003 (0.002)	0.005 *** (0.001)	−0.027 *** (0.002)	−0.000 (0.001)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	27,513	27,513	27,513	27,513	27,513	27,513
Adj- R^2	0.136	0.151	0.208	0.442	0.290	0.311
F-value	46.797			691.792		

Notes: This table reports the results for endogeneity concerns. The amount of total lottery spending is normalized by the GDP of the province. Columns (1)–(3) are the estimation results, with the instrumental variable as the total welfare lottery spending at the province level. Columns (4)–(6) are the estimation results, with the instrumental variable as the average value of the managerial myopia of other firms within the same province-industry-year. Robust standard errors are clustered at the firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

4.3.2. PSM

One possible criticism of our baseline regression is that the linearity assumption for the correlation between managerial myopia and long-term investment is too rigorous, and firms experiencing severe managerial short-termism could reveal characteristics different from those with less managerial short-termism. To address this concern, PSM was used. First, we divided our sample into two groups based on the value of Myopia. Then, we generated a new variable Dmyopia, and coded Dmyopia as 1 if the observations with the value of Myopia were greater than the averages; else, 0. Next, based on the control variables, we selected the most similar observation from the rest of the sample for each observation in the treatment group. Third, logistic regression for the propensity score-matched sample was conducted, and Table 5 presents the results. Columns (1) and (2) report the estimation

results, with the independent variable as Dmyopia by Ordinary Least Squares (OLS). Columns (3) and (4) present the estimation results of PSM. As expected, the coefficient remained significantly negative.

Table 5. Propensity score matching.

	(1)	(2)	(3)	(4)
	Capspend	Rdspen	Capspend	Rdspen
Dmyopia	−0.008 *** (0.002)	−0.002 ** (0.001)	−0.007 *** (0.002)	−0.004 *** (0.001)
Size	0.002 *** (0.000)	−0.001 (0.000)	0.051 *** (0.009)	0.048 *** (0.012)
Lev	0.003 (0.003)	−0.045 *** (0.004)	0.124 ** (0.050)	−0.025 (0.074)
Age	−0.016 *** (0.002)	−0.007 *** (0.002)	−0.129 *** (0.027)	−0.075 ** (0.035)
Fixed	0.071 *** (0.004)	−0.017 *** (0.004)	0.411 *** (0.060)	0.497 *** (0.086)
ROA	0.069 *** (0.005)	−0.053 *** (0.008)	−0.234 (0.146)	−0.305 (0.213)
Growth	0.002 *** (0.001)	0.004 *** (0.001)	−0.016 (0.014)	−0.011 (0.026)
Avage	−0.016 ** (0.007)	−0.013 * (0.007)	0.341 ** (0.136)	0.522 *** (0.175)
Degree	0.001 ** (0.000)	0.002 *** (0.000)	−0.004 (0.006)	−0.013 * (0.007)
Indenp	0.000 (0.008)	0.016 * (0.009)	−0.299 * (0.170)	−0.412 * (0.215)
Dual	−0.005 *** (0.001)	−0.004 *** (0.001)	0.087 *** (0.021)	0.051 ** (0.025)
Firststrat	−0.025 *** (0.004)	−0.014 *** (0.004)	0.134 * (0.080)	0.209 ** (0.104)
HHI	0.023 *** (0.009)	0.005 (0.007)	0.271 *** (0.093)	0.378 *** (0.137)
Ifsoe	−0.009 *** (0.001)	0.001 (0.001)	0.094 *** (0.022)	0.096 *** (0.031)
Cons	0.092 *** (0.027)	0.155 *** (0.028)	−1.823 *** (0.683)	−1.823 *** (0.683)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	18,662	18,662	18,662	18,662
Adj-R ²	0.149	0.440		

Notes: Columns (1) and (2) present the estimation results, with the independent variable as Dmyopia by OLS. Columns (3) and (4) present the estimation results of propensity score matching. Robust standard errors are clustered at the firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

4.3.3. Alternative Statistical Models

Reverse causality is another concern regarding our baseline results, since lagged investment could influence managers' behavior; hence, we adopted the generalized method of moments (GMM) to address this issue. Specifically, we considered our benchmark regression as a dynamic panel data model with a lagged dependent variable of order one to alleviate the possible reverse causality. Referring to Blundell and Bond [67], we used the GMM using the first-order lags of explanatory variables as instrumental variables. Considering the dependent variable as censored between 0 and 1, we further used a Tobit model to re-examine the correlation between variables of interest. Moreover, we included the squared term of Myopia as a control variable to test the possible nonlinear effect between managerial myopia and a firm's investment decisions. Table 6 presents the results. Columns (1) and (2) present the regression results where the lagged capital expenditures

and lagged R&D expenditures are included, respectively. Columns (3) and (4) present the estimation results of the Tobit model. Columns (5) and (6) display the estimation results of our nonlinear model. As expected, our main results remained unaltered.

Table 6. Alternative statistical model.

	(1)	(2)	(3)	(4)	(5)	(6)
	Capspend	Rdspen	Capspend	Rdspen	Capspend	Rdspen
L.inve	0.393 *** (0.012)					
L.rdspen		0.602 *** (0.020)				
Myopia	−0.067 *** (0.005)	−0.006 ** (0.003)	−0.059 *** (0.010)	−0.008 *** (0.002)	−0.062 *** (0.005)	−0.012 *** (0.004)
Myopia2					−0.001 (0.001)	0.001 (0.001)
Size	−0.005 *** (0.001)	−0.009 *** (0.001)	0.021 *** (0.001)	0.000 (0.000)	0.001 ** (0.000)	−0.001 *** (0.000)
Lev	0.008 (0.006)	−0.011 *** (0.003)	0.046 *** (0.006)	−0.034 *** (0.001)	0.006 ** (0.003)	−0.041 *** (0.003)
Age	−0.037 *** (0.004)	−0.001 (0.003)	−0.090 *** (0.004)	0.025 *** (0.001)	−0.014 *** (0.002)	−0.008 *** (0.002)
Fixed	−0.102 *** (0.010)	−0.015 *** (0.005)	0.009 (0.008)	−0.006 *** (0.002)	0.071 *** (0.004)	−0.014 *** (0.003)
ROA	0.008 (0.006)	−0.051 *** (0.006)	0.209 *** (0.013)	−0.067 *** (0.003)	0.064 *** (0.005)	−0.049 *** (0.007)
Growth	−0.003 *** (0.001)	0.001 ** (0.001)	0.002 (0.001)	0.003 *** (0.000)	0.002 *** (0.001)	0.003 *** (0.001)
Avage	0.015 (0.013)	0.001 (0.008)	−0.124 *** (0.017)	0.024 *** (0.004)	−0.015 ** (0.007)	−0.016 *** (0.006)
Degree	0.000 (0.000)	−0.000 (0.000)	−0.000 (0.001)	0.001 *** (0.000)	0.001 ** (0.000)	0.002 *** (0.000)
Indenp	−0.006 (0.011)	−0.001 (0.006)	−0.034 * (0.020)	0.003 (0.004)	0.002 (0.008)	0.013 * (0.008)
Dual	−0.000 (0.001)	−0.002 *** (0.001)	−0.012 *** (0.002)	−0.002 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)
Firststrat	0.025 ** (0.010)	−0.016 *** (0.006)	−0.060 *** (0.011)	−0.015 *** (0.003)	−0.024 *** (0.004)	−0.014 *** (0.004)
HHI	−0.003 (0.008)	−0.010 (0.008)	0.090 *** (0.011)	−0.021 *** (0.003)	0.021 ** (0.009)	0.012 ** (0.006)
Ifsoe	−0.001 (0.003)	−0.008 ** (0.003)	−0.021 *** (0.003)	−0.011 *** (0.001)	−0.008 *** (0.001)	−0.000 (0.001)
Cons	0.184 *** (0.054)	0.219 *** (0.036)	0.287 *** (0.064)	−0.106 *** (0.016)	0.099 *** (0.027)	0.169 *** (0.024)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	27,513	27,513	27,513	27,513	27,513	27,513
Adj-R ²					0.205	0.438

Notes: This table reports the results for the alternative statistical model. Columns (1) and (2) present the regression results where the lagged capital expenditures and lagged R&D expenditures are included, respectively. Columns (3) and (4) present the estimation results of the Tobit model. Columns (5) and (6) display the estimation results of our nonlinear model. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year fixed effects.

4.3.4. Subsample Analysis

External environment is one of the critical factors influencing the company's behavior. A poor external environment inhibits firms' long-term investment behavior to some extent. Although we controlled year-fixed effects, to alleviate the confounding effects of extreme external environments, we further excluded observations in years with abnormal stock returns, that is, samples with annual stock returns below negative 5%. Columns (1) and

(2) of Table 7 present the results. In addition, based on the enterprise life cycle theory, newly established enterprises face greater capital constraints and operational pressure, and generally do not consider long-term investments more owing to their eagerness to develop markets. Hence, we removed the sample of firms established in the last 3 years. Columns (3) and (4) of Table 7 present the results. In the benchmark regression, we replaced the missing values for R&D with zeros. In this section, we excluded the missing samples. The results are reported in column (5) of Table 7. As reported in Table 7, the results remained robust to the subsample analysis.

Table 7. Subsample analysis.

	(1)	(2)	(3)	(4)	(5)
	Capspend	Rdspen	Capspend	Rdspen	Rdspen
Myopia	−0.090 *** (0.014)	−0.009 ** (0.004)	−0.086 *** (0.012)	−0.010 *** (0.004)	−0.011 ** (0.005)
Size	0.015 *** (0.001)	−0.001 *** (0.000)	0.015 *** (0.001)	−0.001 *** (0.000)	−0.001 *** (0.000)
Lev	0.049 *** (0.008)	−0.042 *** (0.003)	0.045 *** (0.007)	−0.041 *** (0.003)	−0.043 *** (0.003)
Age	−0.010 (0.006)	−0.009 *** (0.002)	−0.009 (0.006)	−0.008 *** (0.002)	−0.006 *** (0.002)
Fixed	0.085 *** (0.012)	−0.016 *** (0.003)	0.084 *** (0.011)	−0.014 *** (0.003)	−0.016 *** (0.004)
ROA	0.188 *** (0.015)	−0.052 *** (0.007)	0.194 *** (0.015)	−0.049 *** (0.007)	−0.057 *** (0.007)
Growth	0.007 *** (0.002)	0.003 *** (0.001)	0.008 *** (0.002)	0.003 *** (0.001)	0.003 *** (0.001)
Avage	−0.088 *** (0.020)	−0.017 *** (0.006)	−0.083 *** (0.020)	−0.016 *** (0.006)	−0.013 ** (0.006)
Degree	0.000 (0.001)	0.002 *** (0.000)	0.000 (0.001)	0.002 *** (0.000)	0.002 *** (0.000)
Indenp	−0.008 (0.025)	0.014 * (0.008)	−0.007 (0.023)	0.013 * (0.008)	0.017 * (0.009)
Dual	−0.013 *** (0.003)	−0.004 *** (0.001)	−0.012 *** (0.003)	−0.004 *** (0.001)	−0.003 *** (0.001)
Firstrat	−0.085 *** (0.015)	−0.015 *** (0.004)	−0.083 *** (0.014)	−0.014 *** (0.004)	−0.012 *** (0.004)
HHI	0.101 *** (0.034)	0.012 * (0.006)	0.113 *** (0.033)	0.012 ** (0.006)	0.010 (0.007)
Ifsoe	−0.028 *** (0.003)	−0.000 (0.001)	−0.027 *** (0.003)	−0.000 (0.001)	0.001 (0.001)
Cons	0.054 (0.084)	0.173 *** (0.024)	0.020 (0.082)	0.169 *** (0.024)	0.160 *** (0.026)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
N	19,936	19,936	23,107	23,107	20,153
Adj-R ²	0.151	0.438	0.150	0.438	0.424

Notes: This table reports the results of the subsample analysis. Columns (1) and (2) present the results, excluding observations in years with abnormal stock returns. Columns (3) and (4) present the results after removing the sample of firms established in the last 3 years. Robust standard errors are clustered at the firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

4.4. The Moderating Effect of External Governance

Next, we explored the moderating effects of two crucial external governance variables on the correlation between managerial myopia and long-term investment: institutional shareholding and analyst coverage.

4.4.1. The Moderation Role of Institutional Shareholding

Institutional investors have professional investment and management abilities and usually pursue a value investment philosophy, with a stronger incentive to focus on and acquire information about the long-term value of a project rather than relying on short-term performance information [68]. Therefore, institutional investors are often considered effective in monitoring managers and can facilitate long-term valuable corporate decisions. We used the ratio of the number of shares held by institutions to the firm's total shares to measure institutional shareholding (prohold) and included the cross-term of managerial myopia and institutional shareholding in the original regression model. The results shown in columns (1) and (2) in Table 8 report a positive and significant coefficient of the cross-term, suggesting that the negative impact of managerial myopia on long-term investments is decreased with an increase in institutional investor ownership.

Table 8. The moderating effect of external governance.

	(1)	(2)	(3)	(4)
	Capspend	Rdspen	Capspend	Rdspen
Myopia	−0.077 *** (0.008)	−0.024 ** (0.011)	−0.056 *** (0.015)	−0.063 ** (0.028)
Prohold	0.010 *** (0.002)	0.005 ** (0.002)		
Prohold × Myopia	0.033 * (0.017)	0.009 * (0.005)		
Analy			0.022 *** (0.003)	0.014 *** (0.003)
Analy × Myopia			0.017 * (0.009)	0.038 ** (0.019)
Size	0.001 *** (0.000)	−0.001 *** (0.000)	0.002 *** (0.000)	−0.001 *** (0.000)
Lev	0.007 *** (0.003)	0.044 *** (0.003)	0.006 ** (0.003)	0.039 *** (0.003)
Age	−0.013 *** (0.002)	−0.009 *** (0.002)	−0.012 *** (0.002)	−0.009 *** (0.002)
Fixed	0.072 *** (0.004)	−0.014 *** (0.003)	0.061 *** (0.004)	−0.010 *** (0.003)
ROA	0.066 *** (0.006)	−0.049 *** (0.007)	0.049 *** (0.005)	−0.049 *** (0.007)
Growth	0.002 *** (0.001)	0.003 *** (0.001)	0.002 *** (0.001)	0.003 *** (0.001)
Avage	−0.013 ** (0.007)	−0.015 ** (0.006)	−0.010 (0.007)	−0.010 * (0.006)
Degree	0.000 * (0.000)	0.002 *** (0.000)	0.001 ** (0.000)	0.002 *** (0.000)
Indenp	0.002 (0.008)	0.015 * (0.008)	−0.002 (0.008)	0.015 * (0.008)
Dual	−0.004 *** (0.001)	−0.003 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)
Firststrat	−0.024 *** (0.004)	−0.015 *** (0.004)	−0.023 *** (0.004)	−0.010 ** (0.004)
HHI	0.019 ** (0.009)	0.010 * (0.006)	0.031 *** (0.011)	0.009 (0.007)
Ifsoe	−0.008 *** (0.001)	−0.000 (0.001)	−0.007 *** (0.001)	−0.001 (0.001)
Cons	0.086 *** (0.028)	0.167 *** (0.024)	0.057 ** (0.029)	0.138 *** (0.025)

Table 8. *Cont.*

	(1)	(2)	(3)	(4)
	Capspend	Rdspen	Capspend	Rdspen
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	27,513	27,513	27,189	27,189
Adj-R ²	0.207	0.444	0.195	0.447

Notes: This table reports the results of the subsample analysis. Columns (1) and (2) present the results with the moderation role of institutional shareholding. Columns (3) and (4) present the results with the moderation role of analyst coverage. Robust standard errors are clustered at the firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

4.4.2. The Moderation Role of Analyst Coverage

Based on the information hypothesis, the greater the analysts' attention, the more probable the information hidden by managers will be revealed to investors, and the more likely the company would be subjected to stakeholders' inspection, which would restrain managers' short-termism behavior. We measured a firm's analyst coverage (Analy) by the number of analysts who released earnings forecasts for the firm in a given year. Then, we interacted Analy with Myopia, as well as included the interaction in the original regression model. The results shown in columns (3) and (4) in Table 8 report a positive and significant coefficient of the interaction, suggesting that the negative impact of managerial myopia on long-term investments is decreased with an increase in analyst coverage.

4.5. Cross-Sectional Analysis

To further support our primary results, we examined some cross-sectional factors (i.e., industry competition, firm performance, and enterprise property rights) that should probably influence the correlation between managerial myopia and long-term investment and the motives of managerial myopic behaviors. First, the degree of industry competitiveness closely correlates with the firms' investment decisions. The stronger the industry competition, the less room for the business to produce profits. Amid heavy market competition, short-sighted managers prefer to minimize long-term investments to boost present surplus returns. Second, previous studies have identified that firm profitability is also a determinant of long-term investment [27]. Poor performers encounter additional financial deficits and operational risks than excellent performers. Hence, short-sighted conduct exerts a larger impact on long-term investments. In addition, Xiong and Jiang (2022) [69] theoretically demonstrated that additional competition results in firms inducing their managers to behave myopically (through contracting more on short-term prices) and, thus, lessening profitability. Thus, more competition and less profitability correlate with more severe myopia-investment association. Third, compared with non-SOEs (state-owned enterprises), managers of SOEs are supervised by higher authorities and have a clear plan for corporate behavior, including investment behavior. In addition, SOEs assume certain social responsibility functions and have state financial backing for long-term investments and R&D. Hence, compared with non-SOEs, SOEs might not be affected by managerial short-sightedness.

4.5.1. Firm Performance

Referring to Ali et al. [5], we used return on assets (ROA) to measure a firm's performance. We introduce a binary variable (Perform) that equals 1 for firms with a ROA above the sample median; for other firms it equals 0. We interacted Perform with Myopia and introduced the interaction in our basic model. Columns (1) and (2) of Table 9 present the results. We found a weakly significant and positive correlation between the interaction (Perform $\times$ Myopia) and the dependent variables, suggesting that firms of more profitability are less affected by managerial myopic behavior.

Table 9. Cross-sectional analysis.

	(1)	(2)	(3)	(4)	(5)	(6)
	Capsend	Rdspen	Capsend	Rdspen	Capsend	Rdspen
Myopia	−0.068 *** (0.006)	−0.016 *** (0.005)	−0.052 *** (0.006)	−0.024 *** (0.009)	−0.079 *** (0.008)	−0.016 *** (0.006)
Perform	0.004 *** (0.001)	0.001 (0.001)				
Perform × Myopia	0.006 * (0.003)	0.012 * (0.007)				
Dhhi			0.006 *** (0.001)	0.010 *** (0.002)		
Dhhi × Myopia			0.022 *** (0.008)	0.041 *** (0.010)		
Ifsoe	−0.008 *** (0.001)	−0.000 (0.001)	−0.008 *** (0.001)	−0.000 (0.001)	−0.011 *** (0.001)	−0.002 (0.002)
Ifsoe × Myopia					0.030 *** (0.008)	0.014 * (0.008)
Size	0.001 ** (0.000)	−0.001 *** (0.000)	0.001 ** (0.000)	−0.001 *** (0.000)	0.001 ** (0.000)	−0.001 *** (0.000)
Lev	0.007 *** (0.003)	−0.042 *** (0.003)	0.007 ** (0.003)	−0.040 *** (0.003)	0.006 ** (0.003)	−0.041 *** (0.003)
Age	−0.014 *** (0.002)	−0.008 *** (0.002)	−0.013 *** (0.002)	−0.008 *** (0.002)	−0.014 *** (0.002)	−0.008 *** (0.002)
Fixed	0.072 *** (0.004)	−0.014 *** (0.003)	0.071 *** (0.004)	−0.014 *** (0.003)	0.072 *** (0.004)	−0.014 *** (0.003)
ROA	0.053 *** (0.006)	−0.047 *** (0.007)	0.062 *** (0.005)	−0.051 *** (0.007)	0.064 *** (0.005)	−0.049 *** (0.007)
Growth	0.002 *** (0.001)	0.003 *** (0.001)	0.002 *** (0.001)	0.003 *** (0.001)	0.002 *** (0.001)	0.003 *** (0.001)
Avage	−0.015 ** (0.007)	−0.016 *** (0.006)	−0.016 ** (0.007)	−0.016 *** (0.006)	−0.015 ** (0.007)	−0.016 *** (0.006)
Degree	0.001 ** (0.000)	0.002 *** (0.000)	0.001 ** (0.000)	0.002 *** (0.000)	0.001 ** (0.000)	0.002 *** (0.000)
Indenp	0.003 (0.008)	0.013 * (0.008)	0.002 (0.008)	0.013 * (0.008)	0.002 (0.008)	0.013 * (0.008)
Dual	−0.004 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)	−0.004 *** (0.001)
Firstrat	−0.023 *** (0.004)	−0.014 *** (0.004)	−0.023 *** (0.004)	−0.014 *** (0.004)	−0.024 *** (0.004)	−0.014 *** (0.004)
HHI	0.021 ** (0.009)	0.012 ** (0.006)	0.021 * (0.010)	0.011 (0.006)	0.021 ** (0.009)	0.012 ** (0.006)
Cons	0.100 *** (0.027)	0.169 *** (0.024)	0.098 *** (0.027)	0.164 *** (0.024)	0.098 *** (0.027)	0.169 *** (0.024)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	29,818	23,107	29,818	23,107	29,818	23,107
Adj-R ²	0.206	0.438	0.206	0.441	0.236	0.419

Notes: This table reports the results of the cross-sectional analysis. Robust standard errors are clustered at firm level and reported in parentheses. ***, ** and * are adopted to denote significance at the 1%, 5%, and 10% level, respectively. Each regression includes industry and year-fixed effects.

4.5.2. Industry Competition

Referring to Jia et al. [25], HHI, classified by a 3-digit industry code, was used to measure the industry competition level. A higher HHI indicates a less competitive environment. We recoded HHI as 1 if a company's HHI value was higher than the median; for other companies the value was 0. Then, we interacted Dhhi with Myopia and introduced the interaction in our basic model to empirically test whether the correlation between managerial myopia and long-term investment in a less competitive industry could be alle-

viated. Columns (3) and (4) of Table 9 present the results. We found that $Dhhi \times Myopia$ significantly and positively correlated with the dependent variables, suggesting that firms in a less competitive industry are less affected by managerial myopic behavior.

4.5.3. Enterprise Property Rights

Based on the nature of enterprise property rights, we added the dummy variable *Ifsoe* (if the enterprise is an SOE, the variable is assigned to 1; otherwise, the variable is assigned to 0). Then, we interacted *Ifsoe* with *Myopia* and introduced the interaction in our basic model to empirically test whether the correlation between managerial myopia and long-term investment in an SOE could be alleviated. Columns (5) and (6) of Table 9 present the results. We found that $Ifsoe \times Myopia$ significantly and positively correlated with the dependent variables, suggesting that firms from SOEs are less affected by managerial myopic behavior.

5. Conclusions

Based on a textual analysis approach, this study examines managerial short-sightedness and empirically analyzes its impact on firms' long-term investment. The results provide empirical evidence that managerial myopia inhibits firms' long-term investment. Precisely, managerial myopia decreases firms' capital expenditures and R&D expenditures. The effect documented in this study is not only statistically significant but also economically meaningful. In addition, robustness tests, including addressing endogeneity issues, PSM analysis, alternative statistical regression model, and subsample analysis, did not alter the main results. Moreover, the moderating effect analysis indicates that the negative impact of managerial myopia on long-term investments is decreased with an increase in institutional investor ownership and analyst coverage. Furthermore, the cross-sectional analysis suggested that the correlation between managerial myopia and long-term investment is stronger among firms with higher industry competition, poor performance levels, and in non-state-owned enterprises.

Our study has two practical implications. First, managers play a vital role in the sustainable development of a firm. A corporation's ability to uphold valuable long-term investments is a critical component to ensure the corporation's sustainable growth. This study provides some evidence relating to the profile of senior managers. The firms must focus on both the demographic characteristics and the time perception of managers. Second, this study demonstrates that the external governance mechanism could alleviate the negative impact of managerial myopia on investment decisions. Corporations should take full advantage of external governance mechanisms, improve internal governance, and comprehensively improve their governance capabilities to help them develop sustainably.

Nevertheless, this study has several limitations that point to possible avenues for future research. First, our sample comprised Chinese A-share companies. Thus, our main findings can provide meaningful incentives for developing countries. In fact, the institutional differences between China and developed countries might limit the generalizability of our conclusions. Future research can extend this study to other economies. Second, we only discussed the impact of managerial myopia on investment decisions. Indeed, the impact of managerial myopia on corporate behavior might not be limited to this aspect but may also include debt behavior and governance behavior. Future studies might extend this research in a different dimension; for example, behavioral finance theory can be introduced to related research to expand the research dimensions of managerial myopia.

Overall, this study contributes to the research on the correlation between managerial myopia and the firm's investment behavior in view of the upper echelons theory. Our results offer practical implications for the firm's sustainable development. A company should focus on identifying valuable long-term projects and increasing investments in projects beneficial to the company's long-term development while evading business risks. The company should focus on not only internal governance but also external supervision to make timely adjustments to the company's investment decisions.

Author Contributions: Formal analysis, M.J.; Investigation, J.L. and C.Z.; Data curation, M.J.; Writing—original draft, M.J.; Writing—review & editing, Q.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Jiangsu Province Social Science Foundation, grant number 22GLB034 and Postgraduate Research & Practice Innovation Program of Jiangsu Province, grant number KYCX22_2984.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are openly available in <http://www.cninfo.com.cn> (accessed on 10 November 2022).

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Aguilera, R.V.; Aragón-Correa, J.A.; Marano, V.; Tashman, P.A. The corporate governance of environmental sustainability: A review and proposal for more integrated research. *J. Manag.* **2021**, *47*, 1468–1497.
2. Kiani Mavi, R.; Gengatharen, D.; Kiani Mavi, N.; Hughes, R.; Campbell, A.; Yates, R. Sustainability in construction projects: A systematic literature review. *Sustainability* **2021**, *13*, 1932. [CrossRef]
3. Wells, K. Who manages the firm matters: The incremental effect of individual managers on accounting quality. *Account. Rev.* **2020**, *95*, 365–384. [CrossRef]
4. Hambrick, D.C. Upper echelons theory: An update. *Acad. Manag. Rev.* **2007**, *32*, 334–343. [CrossRef]
5. Ali, R.; Rehman, R.U.; Suleman, S.; Ntim, C.G. CEO attributes, investment decisions, and firm performance: New insights from upper echelons theory. *Manag. Decis. Econ.* **2022**, *43*, 398–417. [CrossRef]
6. Li, Y.; Xu, X.; Zhu, Y.; Haq, M. CEO decision horizon and corporate R&D investments: An explanation based on managerial myopia and risk aversion. *Account. Financ.* **2021**, *61*, 5141–5175.
7. Gong, Y.; Ho, K.C. Corporate social responsibility and managerial short-termism. *Asia-Pac. J. Account. Econ.* **2021**, *28*, 604–630. [CrossRef]
8. Chen, Y.; Rhee, S.G.; Veeraraghavan, M.; Zolotoy, L. Stock liquidity and managerial short-termism. *J. Bank. Financ.* **2015**, *60*, 44–59. [CrossRef]
9. Lee, J.M.; Park, J.C.; Folta, T.B. CEO career horizon, corporate governance, and real options: The role of economic short-termism. *Strateg. Manag. J.* **2018**, *39*, 2703–2725. [CrossRef]
10. Kraft, A.G.; Vashishtha, R.; Venkatachalam, M. Frequent financial reporting and managerial myopia. *Account. Rev.* **2018**, *93*, 249–275. [CrossRef]
11. Gu, Y.; Zhou, Q.; Ho, K.C. Financial flexibility and managerial short-termism. *Ann. Econ. Financ.* **2020**, *21*, 189–208.
12. Li, C. Informational benefits of managerial myopia. *Econ. Lett.* **2019**, *185*, 108705. [CrossRef]
13. Yu, Z.; Zhang, J.; Li, J. Does going public imply short-termism in investment behavior? Evidence from China. *Emerg. Mark. Rev.* **2020**, *42*, 100672. [CrossRef]
14. Brochet, F.; Loumioti, M.; Serafeim, G. Speaking of the short-term: Disclosure horizon and managerial myopia. *Rev. Account. Stud.* **2015**, *20*, 1122–1163. [CrossRef]
15. Jiang, X.; Xin, B. Financial Reporting Discretion, Managerial Myopia, and Investment Efficiency. *Account. Rev.* **2022**, *97*, 291–316. [CrossRef]
16. Dechow, P.M.; Sloan, R.G. Executive incentives and the horizon problem: An empirical investigation. *J. Account. Econ.* **1991**, *14*, 51–89. [CrossRef]
17. Graham, J.R.; Harvey, C.R.; Rajgopal, S. The economic implications of corporate financial reporting. *J. Account. Econ.* **2005**, *40*, 3–73. [CrossRef]
18. Zhao, Y.; Chen, K.H.; Zhang, Y.; Davis, M. Takeover protection and managerial myopia: Evidence from real earnings management. *J. Account. Public Policy* **2012**, *31*, 109–135. [CrossRef]
19. Cho, S.J.; Chung, C.Y.; Liu, C. Does Institutional Blockholder Short-Termism Lead to Managerial Myopia? Evidence from Income Smoothing. *Int. Rev. Financ.* **2019**, *19*, 693–703. [CrossRef]
20. Nikolov, A.N. Managerial short-termism: An integrative perspective. *J. Mark. Theory Pract.* **2018**, *26*, 260–279. [CrossRef]
21. Goldrich, J.M. A study in time orientation: The relation between memory for past experience and orientation to the future. *J. Personal. Soc. Psychol.* **1967**, *6*, 216. [CrossRef] [PubMed]
22. Hu, N.; Xue, F.J.; Wang, H.N. Does managerial myopia affect long-term investment? Based on text analysis and machine learning. *J. Manag. World* **2021**, *37*, 139–156.
23. Dong, F.; Doukas, J. The effect of corporate investment efficiency on cross-border M&As. *Rev. Corp. Financ.* **2022**, *2*, 235–294.
24. Gibbons, R. Incentives between firms (and within). *Manag. Sci.* **2005**, *51*, 2–17. [CrossRef]
25. Jia, J.; Li, Z. Does external uncertainty matter in corporate sustainability performance? *J. Corp. Financ.* **2020**, *65*, 101743. [CrossRef]

26. Chun, H.M.; Shin, S.Y. Does analyst coverage enhance firms' corporate social performance? Evidence from Korea. *Sustainability* **2018**, *10*, 2561. [\[CrossRef\]](#)
27. Cao, Y.; Dong, Y.; Lu, Y.; Ma, D. Does institutional ownership improve firm investment efficiency? *Emerg. Mark. Financ. Trade* **2020**, *56*, 2772–2792. [\[CrossRef\]](#)
28. Stein, J.C. Takeover threats and managerial myopia. *J. Political Econ.* **1988**, *96*, 61–80. [\[CrossRef\]](#)
29. Asker, J.; Farre-Mensa, J.; Ljungqvist, A. Corporate investment and stock market listing: A puzzle? *Rev. Financ. Stud.* **2015**, *28*, 342–390. [\[CrossRef\]](#)
30. Bhojraj, S.; Libby, R. Capital market pressure, disclosure frequency-induced earnings/cash flow conflict, and managerial myopia (retracted). *Account. Rev.* **2005**, *80*, 1–20. [\[CrossRef\]](#)
31. Bushee, B.J. The influence of institutional investors on myopic R&D investment behavior. *Account. Rev.* **1998**, *73*, 305–333.
32. Mizik, N. The Theory and Practice of Myopic Management. *J. Mar. Res.* **2010**, *47*, 594–611. [\[CrossRef\]](#)
33. Jensen, M.C.; Meckling, W.H. Theory of the firm: Managerial behavior, agency costs and ownership structure. *J. Financ. Econ.* **1976**, *3*, 305–360. [\[CrossRef\]](#)
34. Narayanan, M. Managerial incentives for short-term results. *J. Financ.* **1985**, *40*, 1469–1484. [\[CrossRef\]](#)
35. Gigler, F.; Kanodia, C.; Sapiro, H.; Venugopalan, R. How Frequent Financial Reporting Can Cause Managerial Short-Termism: An Analysis of the Costs and Benefits of Increasing Reporting Frequency. *J. Account. Res.* **2014**, *52*, 357–387. [\[CrossRef\]](#)
36. Schuster, C.L.; Nicolai, A.T.; Covin, J.G. Are Founder-Led Firms Less Susceptible to Managerial Myopia? *Entrep. Theory Pract.* **2018**, *44*, 391–421. [\[CrossRef\]](#)
37. Marginson, D.L. McAulay. Exploring the debate on short-termism: A theoretical and empirical analysis. *Strateg. Manag. J.* **2008**, *29*, 273–292. [\[CrossRef\]](#)
38. Li, Y.; Wang, J.; Wu, X. Distracted institutional shareholders and managerial myopia: Evidence from R&D expenses. *Financ. Res. Lett.* **2019**, *29*, 30–40.
39. Cycyota, C.S.; Harrison, D.A. What (not) to expect when surveying executives: A meta-analysis of top manager response rates and techniques over time. *Organ. Res. Methods* **2006**, *9*, 133–160. [\[CrossRef\]](#)
40. Ridge, J.W.; Kern, D.; White, M.A. The influence of managerial myopia on firm strategy. *Manag. Decis.* **2014**, *52*, 602–623. [\[CrossRef\]](#)
41. Sheng, X.; Guo, S.; Chang, X. Managerial myopia and firm productivity: Evidence from China. *Financ. Res. Lett.* **2022**, *49*, 103083. [\[CrossRef\]](#)
42. Li, F. Textual Analysis of Corporate Disclosures: A Survey of the Literature. *J. Account. Lit.* **2010**, *29*, 143–165.
43. Hambrick, D.C.; Mason, P.A. Upper echelons: The organization as a reflection of its top managers. *Acad. Manag. Rev.* **1984**, *9*, 193–206. [\[CrossRef\]](#)
44. Edmans, A.; Fang, V.W.; Lewellen, K.A. Equity vesting and investment. *Rev. Financ. Stud.* **2017**, *30*, 2229–2271. [\[CrossRef\]](#)
45. Jochem, T.; Ladika, T.; Sautner, Z. The retention effects of unvested equity: Evidence from accelerated option vesting. *Rev. Financ. Stud.* **2018**, *31*, 4142–4186. [\[CrossRef\]](#)
46. Stockhammer, E. Financialisation and the slowdown of accumulation. *Camb. J. Econ.* **2004**, *28*, 719–741. [\[CrossRef\]](#)
47. Jensen, M.C. Agency costs of free cash flow, corporate finance, and takeovers. *Am. Econ. Rev.* **1986**, *76*, 323–329.
48. Brav, A.; Jiang, W.; Ma, S.; Tian, X. How does hedge fund activism reshape corporate innovation? *J. Financ. Econ.* **2018**, *130*, 237–264. [\[CrossRef\]](#)
49. Baysinger, B.D.; Kosnik, R.D.; Turk, T.A. Effects of board and ownership structure on corporate R&D strategy. *Acad. Manag. J.* **1991**, *34*, 205–214.
50. Polk, C.; Sapienza, P. The stock market and corporate investment: A test of catering theory. *Rev. Financ. Stud.* **2008**, *22*, 187–217. [\[CrossRef\]](#)
51. Bolton, P.; Scheinkman, J.; Xiong, W. Executive compensation and short-termist behaviour in speculative markets. *Rev. Econ. Stud.* **2006**, *73*, 577–610. [\[CrossRef\]](#)
52. Shleifer, A.; Vishny, R.W. Equilibrium short horizons of investors and firms. *Am. Econ. Rev.* **1990**, *80*, 148–154.
53. Skaife, H.A.; Veenman, D.; Wangerin, D. Internal control over financial reporting and managerial rent extraction: Evidence from the profitability of insider trading. *J. Account. Econ.* **2013**, *55*, 91–110. [\[CrossRef\]](#)
54. Hillier, D.; Pindado, J.; De Queiroz, V.; De La Torre, C. The impact of country-level corporate governance on research and development. *J. Int. Bus. Stud.* **2011**, *42*, 76–98. [\[CrossRef\]](#)
55. Dallas, L.L. Short-termism, the financial crisis, and corporate governance. *J. Corp. L.* **2011**, *37*, 265.
56. Garel, A. Myopic market pricing and managerial myopia. *J. Bus. Finance Account.* **2017**, *44*, 1194–1213. [\[CrossRef\]](#)
57. Ellul, A.; Panayides, M. Do financial analysts restrain insiders' informational advantage? *J. Financ. Quant. Anal.* **2018**, *53*, 203–241. [\[CrossRef\]](#)
58. Brennan, M.J.; Hughes, P.J. Stock prices and the supply of information. *J. Financ.* **1991**, *46*, 1665–1691. [\[CrossRef\]](#)
59. David, P.; Hitt, M.A.; Gimeno, J. The influence of activism by institutional investors on R&D. *Acad. Manag. J.* **2001**, *44*, 144–157.
60. Yao, Y.; Yang, R.; Liu, Z.; Hasan, I. Government intervention and institutional trading strategy: Evidence from a transition country. *Glob. Financ. J.* **2013**, *24*, 44–68. [\[CrossRef\]](#)
61. Aghion, P.; Van Reenen, J.; Zingales, L. Innovation and institutional ownership. *Am. Econ. Rev.* **2013**, *103*, 277–304. [\[CrossRef\]](#)

62. Luo, Y.; Wu, H.; Ying, S.X.; Peng, Q. Do company visits by institutional investors mitigate managerial myopia in R&D investment? Evidence from China. *Glob. Financ. J.* **2022**, *51*, 100694.
63. Cheng, Q.; Du, F.; Wang, X.; Wang, Y. Seeing is believing: Analysts' corporate site visits. *Rev. Account. Stud.* **2016**, *21*, 1245–1286. [[CrossRef](#)]
64. Liu, X. Managerial Myopia and Firm Green Innovation: Based on Text Analysis and Machine Learning. *Front. Psychol.* **2022**, *13*. [[CrossRef](#)]
65. Christensen, D.M.; Jones, K.L.; Kenchington, D.G. Gambling attitudes and financial misreporting. *Contemp. Account. Res.* **2018**, *35*, 1229–1261. [[CrossRef](#)]
66. Ji, Q.; Quan, X.; Yin, H.; Yuan, Q. Gambling preferences and stock price crash risk: Evidence from China. *J. Bank. Financ.* **2021**, *128*, 106158. [[CrossRef](#)]
67. Blundell, R.; Bond, S. Initial conditions and moment restrictions in dynamic panel data models. *J. Econom.* **1998**, *87*, 115–143. [[CrossRef](#)]
68. Boo, C.; Kim, C. Institutional ownership and marketing myopic management. *Appl. Econ. Lett.* **2021**, *28*, 148–152. [[CrossRef](#)]
69. Xiong, Y.; Jiang, X. Economic consequences of managerial compensation contract disclosure. *J. Account. Econ.* **2022**, *73*, 101489. [[CrossRef](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.