Research Article

Economic Policy Uncertainty, Managerial Ability, and the Peer Effect of Corporate Investment

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How the macro-external environment, i.e., the uncertainty of economic policies, affects the peer effect of corporate investment and whether the ability of managers, as the main decision of corporate investment, affects the peer effect of enterprise investment is worthy of further study. This paper uses Baker's economic policy uncertainty index to obtain China's economic policy uncertainty index and uses the DEA-Tobit two-stage model to measure the ability of managers, combined with the relevant data of China's A-share listed companies from 2010 to 2020, to study the impact of economic policy uncertainty and managers' ability on corporate investment peer effect. We found that China's economic policy uncertainty increases the information acquisition cost of micro-firms and deepens the degree of information asymmetry, and firms are strongly motivated to learn or even imitate the investment decisions of enterprises in the same industry, thus intensifying the peer effect of investment. For enterprises of different nature, the economic policy uncertainty has a more significant impact on the investment peer effect of non-state-owned enterprises than state-owned enterprises. Compared with large enterprises, the impact of economic policy uncertainty on the investment cohort effect of small enterprises is more significant. Then, through group regression according to the median of managerial ability, we found that the investment peer effect is more obvious in enterprises with low management ability and the effect of economic policy uncertainty on investment peer effect is more significant in the sample with low management ability. Based on the empirical research conclusions, this paper puts forward the following suggestions: improve the corporate governance mechanism and the management ability of managers. In issuing economic policies, the government should be cautious and stable to reduce the uncertainty of economic policies.

1. Introduction

Investment decisions not only affect the market value of enterprises but also affect the whole social and economic operation, so it has always been concerned by scholars. Most of the previous studies are based on the logic that investment decisions of enterprises are independent of industrial investment, and the investment behavior of enterprises is regarded as a function of a series of observable characteristics of enterprises, ignoring the influence of investment behavior of enterprises in the same industry on investment decisions. Evidence suggests that it is common for investors to learn from and copy each other [1]. The existing research studies mainly study the existence, mechanism, and influencing factors of peer effect of enterprise investment. How the macro-external environment, i.e., the uncertainty of economic policies, affects the peer effect of corporate investment and whether the ability of managers, as the main decision of corporate investment, affects the peer effect of enterprise investment is worthy of further study.

Economic policy uncertainty refers to the uncertainty caused by the inability of economic subjects to accurately predict whether, when, and how the government will change the existing economic policies during the formulation, introduction, and implementation of national economic policies. It includes both the uncertainty of policy expectations and the possibility of policy implementation or government changing its stance [2]. The uncertainty of

economic policy deepens the degree of opacity and ambiguity of information, so investment is particularly affected by the uncertainty of economic policy [3]. At present, China's economy is under increasing downward pressure, regulation and control policies are frequently issued, information acquisition cost and information asymmetry degree are rising in the business environment of enterprises, and investment decisions need to bear greater risks [4, 5]. It can be expected that with the increase of the uncertainty of economic policy environment, enterprises will have strong motivation to learn and even imitate the investment decisions of other enterprises in the same industry or with the same attributes (namely, peer effect), in order to alleviate the uncertainty brought by economic policy, increase the legitimacy of behavior, and improve decision-making efficiency [6, 7]. It is still worth studying whether the economic policy uncertainty will affect the peer effect of firm investment and then indirectly affect firm investment [8].

The long cycle and high uncertainty of investment mean that enterprises need sufficient market information support when making decisions. By imitating the investment activities of peers, managers can achieve the purpose of reducing the cost of information search and at the same time ensure that the company will not fall behind the peers to maintain its market position [9, 10]. The separation of management rights and ownership of modern enterprises determines that managers are the actual decision makers and executors of enterprise decisions. Therefore, the ability of the decision maker will affect the correctness of the decision. Managers' ability is mainly reflected in decision making, strategy formulation, and implementation. The higher their ability is, the more they have the overall awareness and long-term vision when making decisions, collecting information related to decision making as far as possible, integrating information and carrying out rationalization analysis based on the current situation of the industry market and enterprises, and then dealing with affairs efficiently. Competent managers can make investment decisions conducive to enterprise development and improve investment efficiency as much as possible [11–13]. Therefore, it is believed that high-ability managers will make efficient investments with positive net present value, reduce the influence of peer effect as much as possible, and maximize the value. Therefore, it is worth further exploring whether and how the managerial ability affects the investment decisions of enterprises in the same industry.

To sum up, this paper focuses on the following issues. Is there industry peer effect in firm investment decisions? Under the external environment of economic policy uncertainty in China, does the peer effect of corporate investment intensify? Does managers' ability affect the peer effect of firm investment? Also, does managers' ability affect economic policy uncertainty on the firm investment peer effect? In addition, there are two types of enterprises with very different natures in China, state-owned enterprises and non-state-owned enterprises. Are there differences in the above results among enterprises with different property rights?

This study covers the sample period 2010–2020 for all non-financial firms listed in the Shanghai and Shenzhen exchanges, constructs two enterprise investment variable indicators, calculates the investment level of the same group of enterprises, combined with the Baker economic policy uncertainty index, and analyzes the impact of economic policy uncertainty on corporate investment peer effect. Then, the DEA-Tobit two-stage model is used to measure managers' ability and analyze the effect of managers' ability on corporate investment peer effect. The influence of property rights on the above results is further studied. The contributions of this paper are as follows. First, it has enriched the study of economic policy uncertainty; this paper makes full use of the time-varying characteristics of the economic policy uncertainty index to study the effect of China's economic policy changes on corporate investment peer effect. Second, from the perspective of managers' heterogeneity, we examine how managers' ability affects the investment peer effect of firms, which complements the research on the investment peer effect of firms.

2. Theoretical Analysis and Research Hypothesis

Peer effect refers to the phenomenon that an enterprise imitates the financial decisions of other enterprises affected by the decisions of other enterprises in the same industry [14]. The peer effect results from the uncertainty of decision making, incomplete and asymmetric information, and the bounded rationality of the decision maker [15, 16]. From the perspective of decision makers' motivation, peer effect reflects the blind or intentional imitation behavior of corporate managers when they ignore private information when making investment decisions. When there are externalities in information, decision makers with limited information will deal with the uncertainty of decision by learning and imitating the behaviors of other companies in the same industry, which is the fundamental reason why the same group's decision shows the characteristics of convergence. To some extent, enterprise decision-making is the comprehensive embodiment of the will of the management. Managers, as the key subject of enterprise operation decisions [17], when making high-risk, highly uncertain decisions like investing, will ignore the enterprise-specific value judgment for reasons such as camouflage ability and risk avoidance, and follow and imitate the behavioral decisions of the peer group of enterprises [7, 18].

At present, China is in the transition stage of economic growth and financial development, with low transparency of market information and high cost of information collection. The increase of information noise will make enterprises unable to accurately obtain the information related to the future income of the project. The rising cost of information acquisition and the degree of information asymmetry cause enterprises to take more risks in their investment decisions; in order to alleviate the information asymmetry problem at a lower cost, companies will have a strong incentive to learn from or even imitate the investment decisions of other

companies in the same industry or with the same attributes, and the peer effect of investment is generated.

Therefore, the first hypothesis of this paper is proposed.

Hypothesis 1. The investment behavior of enterprises will be positively influenced by the investment behavior of enterprises in the same group.

Economic policy uncertainty stems from frequent adjustment of macro-economic policies; when economic policy uncertainty increases, external risks rise and noise in information increases. The contradiction of agency and the high cost of information acquisition are prominent. This will further deepen the uncertainty in the process of enterprise investment expectations [19]. In order to reduce the cost of information collection and improve decision-making efficiency, enterprises are more inclined to learn from or imitate the investment behavior of peer enterprises.

Thus, the second hypothesis is proposed.

Hypothesis 2. Economic policy uncertainty will intensify the peer effect of investment.

Hambrick and Mason's upper echelons theory points out that the enterprise's decision and behavior changes are mainly caused by the heterogeneity of enterprise managers. There are differences in enterprise performance and target realization under different managers [20]. Existing studies show that there is a significant correlation between managerial competence and enterprise decision making [21]. Highly competent managers believe in their own decisions and choose to make use of their own abilities to make the decisions, making less imitation. But for less competent managers, who are less confident in their own decisions, they will imitate or learn the behavior of high-ability managers in order to disguise themselves as competent managers [22, 23].

In addition, modern corporate enterprises implement the relative performance evaluation system. The performance evaluation of managers not only depends on their own efforts but also depends on the performance of other enterprises in the same industry. Therefore, compared with competent managers, incompetent managers are more motivated to obtain industry average returns by imitating and following the investment behaviors of their peers, so as to maintain the current salary and reputation [24]. Based on the above analysis, the third hypothesis is proposed.

Hypothesis 3. The weaker the manager's ability is, the stronger the enterprise investment peer effect is.

In addition, in the uncertain environment of economic policies, managers not only need to pay more efforts and costs to make reasonable investment decisions but also need to have professional knowledge and ability to deal with macro-risks. For less competent managers, economic policy uncertainty further weakens their ability to gather information and judge projects [25]. In order to disguise managers' ability and maintain the current salary and reputation, they will have a stronger incentive to imitate the behavior of peers. In addition, Gupta found that CEOs with an educational background in the finance (technical) domain are (not) able to reduce the negative effect of EPU on ICFS of the firm [26].

Based on the above analysis, this paper proposes Hypothesis 4.

Hypothesis 4. The weaker the managers' ability is, the more obvious the effect of economic policy uncertainty on the firm investment peer effect is.

3. Research Design

3.1. Data and Sample. This study covers the sample period 2010–2020 for all non-financial firms listed in the Shanghai and Shenzhen exchanges and filters the data as follows: (1) samples of listed companies with ST and ∗ ST trading status were excluded; (2) the samples of listed companies with incomplete financial data were eliminated; (3) industries with less than 5 companies in the industry should be excluded. In order to avoid the influence of outliers, all continuous variables are Winsor tailed at 1% and 99% quantiles.

The data sources of this paper are as follows: enterprise-level data and manager characteristic data are obtained from the CSMAR database. The economic policy uncertainty index is derived from the Chinese economic policy uncertainty index compiled by Baker et al. [27]. Industry classification affects the division of companies in the same industry. The industry classification in this paper adopts the second-level industry classification standard of the China Securities Regulatory Commission (CSRC). This paper uses Stata as measurement and statistics software.

3.2. Model Setting and Variable Definition. To empirically test the hypothesis of this paper, drawing on the research of other scholars [4, 5, 10, 13, 28], the following regression model is constructed:

$$\text{INT}_{i,t} = \alpha + \beta 1 \text{INV}_{i,j,t}^{\text{peer}} + \beta 2 \text{Controls}_{i,j,t-1} + \sum \text{Industry} + \sum \text{Year} + \varepsilon i, j, t,$$

$$\text{INT}_{i,t} = \alpha + \beta 1 \text{INV}_{i,j,t}^{\text{peer}} + \beta 2 \text{INT}_{i,j,t}^{\text{peer}} \times \text{EPU}_{t-1} + \beta_3 \text{EPU}_{t-1} + \beta_4 \text{Controls}_{i,j,t-1} \sum \text{Industry} + \sum \text{Year} + \varepsilon i, j, t. \tag{1}$$

In the above model, i, j, and t represent sample enterprises, industries, and time, respectively. The dependent variable $\text{INV}_{i,j,t}$ represents enterprise investment; this paper

measures investment according to two methods commonly used in existing literature [7, 29]. Main explanatory variable $\text{IVN}_{i,j,t}^{\text{peer}}$ represents enterprise investment of peer company,

which is the industry-annual mean of investment calculated after excluding the sample firms. EPU_{t-1} represents the index of economic policy uncertainty, taking into account the expected effect and mitigation of endogenous problems, and takes the lag value of one period.Control variables includes State, Size, Tobin Q, Lev, Growth, Ocf, Cash, Roa, Tangible, Duality, and First (see Table 1 for detailed explanation). Industry represents industry dummy variable; Year indicates the year dummy variable.

The test of the existence of the peer effect of enterprise investment (Hypothesis 1) is essentially to test the sensitivity of the investment level of enterprises to the investment level of peer enterprises at the industry level. The coefficient β_1 can be expected to be significantly positive if Hypothesis 1 is true. The regression coefficients of $IVN_i^{peer} \times EPU_{t-1}$ represents the uncertainty of economic policy impact on

business investment with peer effect; if this coefficient is significantly positive, it means that economic policy uncertainty has a strengthening effect on the peer effect of enterprise investment.

When testing the influence of managers' ability, based on models (1) and (2), regression is performed according to the groups of managers' ability, respectively, to verify Hypotheses 3 and 4. This paper adopts the method of Demerjian et al. [22] and uses the DEA-Tobit two-stage model to measure the ability of managers. Based on the idea of efficiency separation, it is calculated by separating the influence of managers from the total efficiency of enterprises [12, 22]. First, data envelopment analysis (DEA) is used to measure the total efficiency of enterprise operation. The calculation formula is as follows:

$$\text{Max Firm Efficiency} = \frac{\text{Sales}}{(CG + SG\&A + PPE + RD + \text{Goodwill} + \text{Intangible})}, \tag{2}$$

where Sales represents main business income of the enterprise; CG represents main business cost; SG & A represents the sum of administrative expenses and sales expenses; PPE represents net fixed assets; RD represents net R&D expenses; Goodwill represents consolidated financial statement goodwill; and Intangible represents intangible assets other than goodwill. Sales, CG, and SG & A are values

of the current period, and PPE, RD, Goodwill, and Intangible are values of the end of the previous period.

Second, the Tobit model is used for regression by year and industry, and the efficiency generated by managers' ability is separated from the total efficiency of enterprise operation, which is calculated as follows:

$$\text{Firm Efficiency} = \alpha + \beta 1\text{Size} + \beta 2 Mk\text{share} + \beta 4\text{Listage} + \beta 5 Bsc + \sum \text{Industry} + \sum \text{Year} + \varepsilon, \tag{3}$$

where Firm Efficiency represents the total operating efficiency of the enterprise obtained in the first step; Size represents enterprise size, measured by the natural logarithm of total assets; Mkshare represents the company's market share, which is the operating income divided by the sum of the operating income of all enterprises in the industry; Fcf represents dummy variable of free cash flow; if free cash flow is non-negative, Fcf = 1; otherwise, it is 0; Listage represents listing years; Bsc represents sales concentration of the company's branches; Industry represents industry dummy variable; and Year represents dummy variable of the year.

4. Empirical Analysis

4.1. Descriptive Statistics of Variables. The descriptive statistics of main variables in this paper are shown in Table 2. The mean value of INV_1 reaches 0.0591, indicating that the ratio of cash of net investment expenditure to total assets at the beginning of the period is 5.91% on average. The mean value of INV_2 is 0.616, indicating that the cash payment of fixed assets, intangible assets, and long-term assets accounts for 6.16% of the total assets at the beginning of the period. The mean value of MA (managers' ability) is −0.007,

the minimum value is −0.500, and the maximum value is 0.501, indicating that there are differences in managers' ability. The mean value of EPU variables is 396.1 (equal to 3.961 ∗ 100), the maximum value is 774.6, and the minimum value is 92, indicating that economic policy uncertainty fluctuates greatly during the sample study period. Figure 1 shows the trend of China's economic policy uncertainty from 1995 to 2021. According to the trend of the index, the higher the EPU index is, the higher the degree of economic policy uncertainty is. Since the financial crisis in 2008, China has introduced a series of policies, including the "four trillion plan," "Industry 4.0," "Internet plus," and "three cuts in exchange rate and interest rate." The uncertainty of China's economic policy has shown a significant increase, and the trend of the index is consistent with the reality.

In the descriptive statistical results of control variables, the mean value of Duality is 0.313, indicating that the division of chairman and general manager is the power allocation structure commonly adopted in the governance of listed companies. The mean value of Roa is 0.0465, indicating that the average profitability of the enterprises is 4.65%, and the profits are relatively good. The mean value of First is 34.3%, and the maximum is 90%, indicating that the

TABLE 1: Variable definition.

Variables	Variable symbol	Calculation
Investment rate	INV_1	The difference between the cash paid for the purchase and construction of fixed assets, intangible assets, and other long-term assets and the net cash recovered from the disposal of fixed assets, intangible assets, and other long-term assets divided by the total assets at the beginning of the period
	INV_2	Cash paid for the acquisition and construction of fixed assets, intangible assets, and other long-term assets divided by the total assets at the beginning of the period
Peer-firm-average investment rate	INV_1^{peerr}	Based on INV1 calculation, industry-annual average of business investment (sample enterprises excluded)
	INV_2^{peerr}	Based on INV2 calculation, industry-annual average of business investment (sample enterprises excluded)
Economic policy uncertainty index	EPU	Based on the calculation method of Gulen and Ion [5], this paper gives the weighted average of 1/84, 2/84, ..., 12/84 for 12 months in a year, obtains the annual uncertainty index of China's economic policy, and then divides it by 100
Managerial ability	MA	Refer to Demerjian et al. [22], using two-stage regression calculation
Enterprise nature	State	Property right nature of the enterprise; if the property right nature is state-owned enterprise, it is recorded as 1; otherwise, it is recorded as 0
Enterprise scale	Size	The natural logarithm of a firm's total assets at the end
Tobin Q	Tobin Q	Enterprise Tobin Q's value
Financial leverage	Lev	Corporate asset-liability ratio, corporate total liabilities/total assets
Growth ability	Growth	Business revenue growth rate
Operating cash flow	Ocf	Net cash flow generated by business activities/total assets
Cash holdings	Cash	Corporate monetary capital holdings, year-end monetary capital/total assets
Profitability	Roa	Return on total assets, net profit/total assets
Proportion of fixed assets	Tangible	Net fixed assets/total
Duality	Duality	If the chairman and general manager of the enterprise are the same person, it is marked as 1; otherwise, it is 0
Shareholding ratio of the largest shareholder	First	Shareholding ratio of the largest shareholder
Industry dummy variable	Industry	Guidelines on Industry Classification of Listed Companies (2012 edition), China Securities Regulatory Commission, as an industry classification standard
Year dummy variable	Year	Set it to 1 if it belongs to the year; otherwise, set it to 0

TABLE 2: Descriptive statistical results.

Variable	N	Mean	SD	P50	Min	Max
INV_1	19,786	0.0591	0.0614	0.0403	−0.0257	0.326
INV_2	20,550	0.0616	0.0612	0.0421	0.00120	0.327
INV_1^{peer}	19,780	0.0529	0.0184	0.0494	0.0172	0.103
INV_2^{peer}	20,544	0.0581	0.0185	0.0535	0.0195	0.109
MA	23,180	−0.00710	0.154	−0.0341	−0.500	0.501
EPU	23,180	3.961	2.404	2.849	0.920	7.746
Tangible	23,180	0.208	0.144	0.180	0.00540	0.650
Growth	20554	0.157	0.349	0.107	−0.498	2.068
Lev	23,180	0.395	0.202	0.383	0.0474	0.890
Size	23,180	22.05	1.247	21.86	19.95	26.03
Ocf	23,180	0.0481	0.0653	0.0470	−0.140	0.230
Cash	23,180	0.198	0.142	0.156	0.0200	0.693
Tobin Q	23,180	2.262	1.412	1.801	0.917	9.064
Roa	23,179	0.0465	0.0659	0.0447	−0.246	0.224
First	23,180	0.343	0.147	0.322	0.0220	0.900
Duality	22,926	0.313	0.464	0	0	1

FIGURE 1: Index chart of economic policy uncertainty in China.

control of major shareholders in listed companies is serious. The proportion of cash holdings to total assets is 19.8% on average, 69.3% on the maximum, and 2% on the minimum, indicating that there is a large gap in cash holdings among different companies. The statistical characteristics of these data are consistent with the basic situation of China.

4.2. Regression Analysis

4.2.1. Economic Policy Uncertainty and Peer Effect of Firm Investment.
Table 3 shows the regression results of economic policy certainty and corporate investment peer effect, mainly examining whether there is investment peer effect and the degree of influence of economic policy uncertainty on corporate investment peer effect. The explained variables

TABLE 3: Economic policy uncertainty and peer effect of firm investment.

Variables	(1) INV$_1$	(2) INV$_1$	(3) INV$_1$	(4) INV$_2$	(5) INV$_2$	(6) INV$_2$
INV$_1^{peer}$	0.754***	0.301***	0.418***			
	(23.57)	(7.70)	(7.04)			
INV$_1^{peer}$ * EPU			−0.044***			
			(−2.84)			
INV$_2^{peer}$				0.727***	0.285***	0.394***
				(23.02)	(7.57)	(7.01)
INV$_2^{peer}$ * EPU						−0.041***
						(−2.79)
EPU			0.002***			0.002***
			(3.06)			(3.17)
Tangible		−0.130***	−0.128***		−0.132***	−0.130***
		(−13.16)	(−13.07)		(−13.83)	(−13.70)
Growth		0.001	0.001		0.001	0.001
		(0.82)	(0.82)		(0.62)	(0.68)
Lev		−0.013*	−0.014*		−0.009	−0.010
		(−1.78)	(−1.86)		(−1.31)	(−1.39)
Size		−0.021***	−0.021***		−0.022***	−0.023***
		(−10.03)	(−9.40)		(−11.31)	(−10.66)
Ocf		0.028***	0.027***		0.026***	0.024***
		(3.25)	(3.10)		(3.15)	(2.92)
Cash		0.016**	0.016**		0.016***	0.017***
		(2.52)	(2.57)		(2.70)	(2.79)
Tobin Q		0.002***	0.002***		0.003***	0.003***
		(4.38)	(4.51)		(4.99)	(5.16)
Roa		0.104***	0.105***		0.086***	0.087***
		(9.71)	(9.83)		(8.35)	(8.52)
First		0.034**	0.035**		0.032**	0.033**
		(2.52)	(2.49)		(2.41)	(2.45)
Duality		0.004**	0.004**		0.004**	0.004**
		(2.27)	(2.25)		(2.30)	(2.30)
Constant	0.019***	0.507***	0.498***	0.019***	0.546***	0.542***
	(11.38)	(10.35)	(9.75)	(10.54)	(11.61)	(10.99)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	19,780	15,941	15,941	20,544	16,523	16,523
R-squared	0.063	0.157	0.158	0.057	0.155	0.156

Note. The values in the table are regression coefficients of variables, and the values in parentheses are *T* values of regression coefficients. *, **, and *** mean significant at the significance level of 10%, 5%, and 1%, respectively.

in regression are two different measures of enterprise investment (INV$_1$ and INV$_2$). The main explanatory variables are the corresponding investment level of peers (INV^{peer}), economic policy uncertainty index (EPU), and the cross-product of the two (INV^{peer} * EPU). (1) and (4) only control the industry virtual variable and the annual virtual variable, (2) and (5) are joined enterprise financial control variables and internal governance control variables, and (3) and (6) are joined variables of INV^{peer} * EPU.

The regression results show that the coefficients of INV^{peer} (including INV$_1^{peer}$ and INV$_2^{peer}$) are all positive in the six regression results and are significant at the significance level of 1%, indicating that the investment of enterprises is affected by the investment level of enterprises in the same industry, and there is a significant peer effect of enterprise investment. For the peer group company investment level and economic policy uncertainty index of delivery (INV^{peer} * EPU) by the regression results, two kinds of investment variable indexes are positive and also reached 1%

significance level, and it indicates that the peer effect of enterprise investment is affected by the uncertainty of economic policy. The larger the uncertainty index of economic policy is, the more significant the coincident effect of enterprise investment is. When economic policy uncertainty is strong, enterprise managers tend to consider the financial decisions of the peer companies when making decisions, in order to avoid the company's investment into greater risks and uncertainties. So, Hypotheses 1 and 2 pass the test.

In terms of the control variables, the better the profitability of the enterprise, the more the cash holdings, the stronger the profitability of the enterprise, the newer the investment opportunities, and the larger the investment scale. It shows that enterprise investment depends on the support of fundamentals. The better the overall characteristics of an enterprise are, the more prominent the investment indicators are. Among corporate governance variables, the coefficient of Duality is significantly positive, which means that corporate investment increases with the

expansion of executive power, which reflects the principal-agent problem in enterprises at a certain level. These conclusions are similar to those in existing literature.

4.2.2. Economic Policy Uncertainty, Managerial Ability, and Peer Effect of Firm Investment.

Managers' ability not only determines the accuracy of decision making and judgment of investment projects but also is closely related to the quality of information obtained by enterprises. The difference in managers' ability may lead to different degrees of dependence on the peer enterprises' behavior. Therefore, this paper first draws molecular samples based on managerial ability. The subsample whose manager ability is less than and equal to the median is defined as the group with weak manager ability. On the contrary, they were divided into groups with higher managerial ability. Then, according to models (1) and (2), regression is performed on the subsamples, respectively. Based on the coefficient values and significance of the main explanatory variables, it is determined whether there is a difference based on managers' ability in the group effect of enterprise investment (Hypotheses 3 and 4).

Table 4 reports the results of peer effect regression based on differences in managerial ability. Among them, (1), (2), (3), and (4) are listed as the test results of the strong subsample of managers' ability, and (5), (6), (7), and (8) are listed as the test results of the weak subsample of managers' ability. In the subsample with strong managerial ability, the regression coefficient of INV_1 was 0.249, and the significance was positive at 1% level. The regression coefficient of INV_2 was 0.232, which was also positive at the 1% level. Among the subsamples with weak managerial ability, the regression coefficient of INV_1 was 0.284 and that of INV_2 was 0.278, and both have positive significance at the 1% level. By comparing the investment sensitivity of sample enterprises to the peer enterprise, it is found that the coefficient value of industry investment level in the subsample with weak managers is higher than that in the subsample with strong managers. Therefore, the weaker the ability of enterprise managers, the more obvious the peer effect of enterprise investment.

In addition, in the sample group with strong managers' ability, the coefficient of cross-product term between investment level and economic policy uncertainty index ($INV^{peer} * EPU$, columns (2) and (4)) is not significant. In the sample group with weak managers, the regression coefficient of the cross-product term is highly significantly positive at the 1% level (columns (6) and (8)). That is, the weaker the enterprise managers' ability is, the more significant the intensification effect of economic policy uncertainty on enterprise investment peer effect is, which supports Hypothesis 4 of this paper. This indicates that the weaker the managers are, the more inclined they are to refer to the decision-making behaviors of other enterprises when the economic policies fluctuate greatly. Also, the company's evaluation of the management ability refers to the average performance of the peer companies, so the manager is more likely to avoid a large deviation between the investment level of the company and the investment level of the peer enterprises.

4.2.3. Further Analysis

(1) Further Analysis Based on Property Rights. The property rights of Chinese enterprises are dualistic, and there are obvious differences between state-owned enterprises and non-state-owned enterprises in information acquisition, internal governance structure, and corporate behavior. The operation goal of state-owned enterprises is not only to simply maximize enterprise value but also to shoulder the mission of promoting economic development and social stability, and their operation activities are vulnerable to the intervention of the state's will [29]. The policy functions undertaken in the business process and the administrative intervention of the government distort the internal governance of the company, and this will weaken the enthusiasm of managers to pursue the efficiency of enterprise investment. Therefore, compared with non-state-owned enterprises, state-owned enterprises are more inclined to imitate the investment decisions of their peers.

Compared with non-state-owned enterprises, state-owned enterprises have the advantages of convenient access to information and good ability of policy prediction and analysis. Moreover, state-owned enterprises shoulder the mission of promoting economic development and social stability, so they are often favored by national policies [28]. Therefore, the operating decisions of state-owned enterprises are less affected by economic policy uncertainty than those of non-state-owned enterprises. It can be expected that when the property rights of enterprises are considered, the effect of economic policy uncertainty on the peer effect of non-state-owned enterprises investment is more obvious.

In order to study the influence of property right nature on the peer effect of enterprise investment, this paper conducts regression analysis after classification according to property rights, and the results are shown in Table 5. Among them, (1), (2), (3), and (4) are listed as regression results of state-owned enterprises, and (5), (6), (7), and (8) are listed as regression results of non-state-owned enterprises. As can be seen from the regression coefficients of main explanatory variables, in the regression of state-owned enterprises and non-state-owned enterprises, the coefficient of peer investment level (INV_{peer1} and INV_{peer2}) is significantly positive at the level of 1%. The regression coefficient value of state-owned enterprises is close to 0.4 (columns (1) and (3)), but the regression coefficient of non-state-owned enterprises is smaller (columns (5) and (7)), only about 0.2. Therefore, compared with non-state-owned enterprises, investment peer effect is more significant in state-owned enterprises.

See (2), (4), (6), and (8) for the regression of whether there is difference in the nature of enterprise property rights in the impact of economic policy uncertainty on investment peer effect. Specifically, in the regression of state-owned enterprises, the regression coefficients of $INV_1^{peer} * EPU$ and $INV_2^{peer} * EPU$ are not significant. In the regression of non-state-owned enterprise group, the regression coefficient is greater than 0.05 and significant at the level of 5% and 1%. This shows that economic policy uncertainty has a significant effect on the intensification of the peer effect of non-state-owned enterprises' investment. This difference may be

TABLE 4: Economic policy uncertainty, managerial ability, and peer effect of firm investment.

Variables	Managers' ability is strong (>median)				Managers' ability is weak (≤median)			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2
INV_1^{peer}	0.249***	0.330***			0.284***	0.417***		
	(4.77)	(3.79)			(5.00)	(4.91)		
$INV_1^{peer}*EPU$		0.012				0.066***		
		(0.53)				(2.77)		
INV_2^{peer}			0.232***	0.339***			0.278***	0.388***
			(4.59)	(4.09)			(5.07)	(4.83)
$INV_2^{peer}*EPU$				0.020				0.062***
				(0.90)				(2.77)
EPU		−0.001		−0.002*		−0.003***		−0.003***
		(−1.45)		(−1.87)		(−2.60)		(−2.73)
Tangible	−0.115***	−0.114***	−0.114***	−0.112***	−0.148***	−0.147***	−0.153***	−0.151***
	(−6.78)	(−6.67)	(−6.99)	(−6.86)	(−12.16)	(−12.09)	(−12.69)	(−12.54)
Growth	−0.002	−0.001	−0.002	−0.001	0.004**	0.004**	0.004*	0.003*
	(−0.78)	(−0.53)	(−0.95)	(−0.64)	(2.15)	(2.02)	(1.96)	(1.87)
Lev	−0.006	−0.005	−0.002	−0.001	−0.016*	−0.017*	−0.013	−0.015
	(−0.50)	(−0.45)	(−0.20)	(−0.13)	(−1.65)	(−1.81)	(−1.43)	(−1.56)
Size	−0.016***	−0.018***	−0.019***	−0.021***	−0.031***	−0.030***	−0.032***	−0.031***
	(−4.84)	(−5.06)	(−5.79)	(−6.00)	(−13.14)	(−12.08)	(−13.62)	(−12.65)
Ocf	0.024**	0.020*	0.022*	0.017	0.014	0.016	0.019	0.020*
	(2.03)	(1.68)	(1.88)	(1.46)	(1.20)	(1.30)	(1.64)	(1.68)
Cash	0.021**	0.022**	0.020**	0.021**	−0.000	−0.001	0.002	0.001
	(2.08)	(2.18)	(2.06)	(2.20)	(−0.05)	(−0.10)	(0.21)	(0.19)
Tobin Q	0.004***	0.004***	0.004***	0.004***	0.001	0.001	0.001*	0.001*
	(4.06)	(4.31)	(4.41)	(4.69)	(0.98)	(0.98)	(1.68)	(1.69)
Roa	0.083***	0.086***	0.069***	0.073***	0.122***	0.120***	0.100***	0.100***
	(5.08)	(5.26)	(4.39)	(4.61)	(8.74)	(8.53)	(7.46)	(7.33)
First	0.061**	0.065***	0.054**	0.058**	0.002	0.001	0.002	0.002
	(2.49)	(2.60)	(2.29)	(2.44)	(0.13)	(0.07)	(0.13)	(0.13)
Duality	0.007**	0.007**	0.006**	0.006**	0.001	0.001	0.001	0.001
	(2.26)	(2.30)	(2.05)	(2.08)	(0.51)	(0.50)	(0.38)	(0.40)
Constant	0.391***	0.421***	0.443***	0.478***	0.758***	0.725***	0.779***	0.753***
	(4.82)	(5.02)	(5.75)	(5.94)	(13.74)	(12.65)	(14.25)	(13.22)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	7,617	7,617	7,951	7,951	8,324	8,324	8,572	8,572
R-squared	0.115	0.117	0.115	0.117	0.211	0.213	0.206	0.207

Note. The values in the table are regression coefficients of variables, and the values in parentheses are *T* values of regression coefficients. *, **, and ***mean significant at the significance level of 10%, 5%, and 1%, respectively.

caused by the fact that when the economy fluctuates greatly, non-state-owned enterprises are constrained by financing constraints, industry restrictions, and other aspects and will choose conservative investment strategies to get closer to the industry average level.

(2) Further Analysis Based on Enterprise Size. Enterprise investment is subject to financing constraints, and enterprises of different sizes have significant differences in their financing capabilities. Gertler and Gilchrest stated that smaller firms have more external finance premium than larger firms, and small companies cannot issue public debt and face a higher level of idiosyncratic risk. Apart from this, smaller firms are usually younger, with a high level of firm-specific risk, and have less collateral, thereby reducing the possibility of attracting external finance [30, 31]. Gupta et al. also documented that small firms are more financially constrained than large firms [32]. The uncertainty of economic policies will

deepen financial frictions. On the one hand, the uncertainty will lead to the increase of financing costs of enterprises in the future. On the other hand, the uncertainty makes the information asymmetry between the two sides prominent, and the enterprise may be required to provide collateral as a guarantee, which will increase the difficulty of enterprise financing [33]. For enterprises with small scale and difficult financing, the uncertainty of economic policies makes their financing situation more difficult [34, 35], which greatly reduces their willingness to take risks. Therefore, it is a more prudent choice to observe and imitate the peer enterprises when making investment decisions. Gupta et al. also found that the effect of EPU on ICFS is more for smaller, younger, and standalone (SA) firms than the larger, matured, and business group affiliated (BGA) firms [36]. Based on the above analysis, it can be expected that the smaller the enterprise size, the more obvious the exacerbation effect of economic policy uncertainty on the group effect of enterprise investment.

TABLE 5: Peer effect of enterprise investment with different property rights.

Variables	State-owned enterprises				Non-state-owned enterprises			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2
INV_1^{peer}	0.389*** (7.15)	0.557*** (6.61)			0.215*** (4.09)	0.287*** (3.50)		
$INV_1^{peer} * EPU$		−0.027 (−1.26)				0.063*** (2.65)		
INV_2^{peer}			0.386*** (7.21)	0.518*** (6.25)			0.194*** (3.90)	0.276*** (3.66)
$INV_2^{peer} * EPU$				0.031 (1.53)				0.051** (2.25)
EPU		−0.001* (−1.75)		−0.002* (−1.84)		−0.004*** (−3.37)		−0.003*** (−2.80)
Tangible	−0.105*** (−6.68)	−0.103*** (−6.59)	−0.114*** (−7.48)	−0.112*** (−7.41)	−0.146*** (−11.50)	−0.145*** (−11.46)	−0.145*** (−11.76)	−0.144*** (−11.66)
Growth	0.003 (1.37)	0.003 (1.50)	0.003 (1.49)	0.003 (1.60)	−0.001 (−0.39)	−0.001 (−0.42)	−0.001 (−0.66)	−0.001 (−0.57)
Lev	−0.030** (−2.57)	−0.029** (−2.55)	−0.030*** (−2.69)	−0.030*** (−2.69)	−0.006 (−0.63)	−0.006 (−0.66)	−0.001 (−0.13)	−0.001 (−0.16)
Size	−0.021*** (−6.72)	−0.023*** (−6.74)	−0.023*** (−7.57)	−0.024*** (−7.35)	−0.022*** (−8.22)	−0.022*** (−7.72)	−0.024*** (−9.13)	−0.024*** (−8.77)
Ocf	0.022* (1.71)	0.018 (1.42)	0.025** (1.99)	0.022* (1.75)	0.032*** (2.85)	0.032*** (2.81)	0.027** (2.53)	0.026** (2.33)
Cash	0.009 (0.82)	0.010 (0.89)	0.008 (0.68)	0.008 (0.72)	0.019** (2.50)	0.019** (2.48)	0.020*** (2.74)	0.020*** (2.82)
Tobin Q	0.003*** (2.74)	0.003*** (2.99)	0.003*** (3.13)	0.003*** (3.30)	0.002*** (3.33)	0.002*** (3.33)	0.002*** (3.80)	0.002*** (3.93)
Roa	0.068*** (3.71)	0.065*** (3.61)	0.044** (2.43)	0.042** (2.35)	0.115*** (8.77)	0.115*** (8.82)	0.099*** (7.99)	0.102*** (8.16)
First	0.047** (2.16)	0.049** (2.20)	0.045** (2.11)	0.047** (2.16)	0.037* (1.89)	0.036* (1.83)	0.033* (1.74)	0.034* (1.79)
Duality	−0.000 (−0.05)	−0.000 (−0.07)	−0.001 (−0.33)	−0.001 (−0.34)	0.005** (2.23)	0.005** (2.23)	0.005** (2.43)	0.005** (2.42)
Constant	0.522*** (7.02)	0.542*** (6.97)	0.568*** (7.94)	0.585*** (7.67)	0.537*** (8.43)	0.526*** (8.00)	0.571*** (9.32)	0.569*** (8.99)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5,308	5,308	5,456	5,456	10,633	10,633	11,067	11,067
R-squared	0.168	0.172	0.173	0.176	0.158	0.158	0.153	0.153

Note. The values in the table are regression coefficients of variables, and the values in parentheses are T values of regression coefficients. *, **, and *** mean significant at the significance level of 10%, 5%, and 1%, respectively.

Therefore, this paper divides the sample into smaller and larger subsamples according to the median enterprise size and performs group regression on the subsamples. The regression coefficient value and significance of the cross-multiplicative term are used to judge the impact of economic policy uncertainty on the peer effect of enterprise investment.

Table 6 reports the regression results based on differences in firm size. Among them, (1), (2), (3), and (4) list the test results of subsample groups with large enterprises, and (5), (6), (7), and (8) list the test results of subsample groups with small enterprises. The results showed that the regression coefficients of INV and EPU ($INV_1^{peer} * EPU$, $INV_2^{peer} * EPU$) were significant at 5% and 10% levels in the two subsample groups. However, the regression coefficients of the cross-multiplicative term of the smaller sample group were larger than those of the larger

sample group (0.048 > 0.040 and 0.045 > 0.041), indicating that the smaller the enterprise size, the more obvious the exacerbation effect of economic policy uncertainty on the peer effect of enterprise investment.

4.3. Robustness Test

4.3.1. Recalculation of Economic Policy Uncertainty Index. The economic uncertainty index variable in this paper is the annual economic policy uncertainty index calculated by geometric mean; we can also use arithmetic mean to recalculate the economic policy uncertainty index and repeat the above process of empirical research. After verification, the influence of explanatory variables and important control variables on the explained variables is consistent with the above. Due to the length of the article, we will not list them here.

TABLE 6: Peer effect of enterprise investment with different enterprise sizes.

Variables	Large enterprises (size > median)				Small enterprises (size ≤ median)			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2
INV_1^{peer}	0.197***	0.315***			0.271***	0.383***		
	(4.12)	(4.13)			(4.67)	(4.00)		
$INV_1^{peer} * EPU$		0.040**				0.048*		
		(2.01)				(1.73)		
INV_2^{peer}			0.187***	0.304***			0.239***	0.350***
			(4.10)	(4.25)			(4.36)	(3.94)
$INV_2^{peer} * EPU$				0.041**				0.045*
				(2.19)				(1.82)
EPU		−0.003***		−0.003***		−0.001*		−0.002*
		(−2.89)		(−3.05)		(−1.83)		(−1.96)
Tangible	−0.137***	−0.135***	−0.136***	−0.134***	−0.160***	−0.161***	−0.169***	−0.169***
	(−9.31)	(−9.26)	(−9.49)	(−9.45)	(−12.16)	(−12.26)	(−13.79)	(−13.77)
Growth	−0.001	−0.001	−0.001	−0.001	0.002	0.001	0.001	0.001
	(−0.69)	(−0.42)	(−0.83)	(−0.53)	(0.76)	(0.59)	(0.57)	(0.45)
Lev	−0.024**	−0.023**	−0.022**	−0.020**	−0.011	−0.011	−0.005	−0.006
	(−2.41)	(−2.30)	(−2.25)	(−2.09)	(−0.91)	(−0.98)	(−0.50)	(−0.59)
Size	−0.030***	−0.032***	−0.031***	−0.033***	−0.034***	−0.033***	−0.037***	−0.036***
	(−11.75)	(−11.09)	(−12.49)	(−11.80)	(−9.10)	(−8.56)	(−10.24)	(−9.78)
Ocf	0.024**	0.018*	0.028***	0.022**	−0.000	0.003	−0.007	−0.005
	(2.24)	(1.72)	(2.71)	(2.17)	(−0.01)	(0.21)	(−0.56)	(−0.41)
Cash	0.005	0.006	0.004	0.006	0.013	0.012	0.014*	0.013
	(0.51)	(0.62)	(0.48)	(0.61)	(1.56)	(1.41)	(1.71)	(1.63)
Tobin Q	0.004***	0.005***	0.004***	0.004***	0.000	0.000	0.001	0.001
	(4.86)	(5.18)	(4.74)	(5.06)	(0.77)	(0.56)	(1.47)	(1.33)
Roa	0.097***	0.101***	0.082***	0.086***	0.091***	0.088***	0.069***	0.067***
	(6.62)	(6.85)	(5.85)	(6.14)	(5.54)	(5.43)	(4.42)	(4.34)
First	0.024	0.028	0.022	0.027	0.011	0.005	0.009	0.005
	(1.28)	(1.45)	(1.20)	(1.40)	(0.51)	(0.21)	(0.45)	(0.24)
Duality	0.002	0.002	0.002	0.002	0.004	0.004	0.004	0.004
	(0.77)	(0.81)	(0.74)	(0.78)	(1.48)	(1.48)	(1.62)	(1.61)
Constant	0.754***	0.778***	0.782***	0.808***	0.785***	0.751***	0.845***	0.816***
	(12.38)	(11.78)	(13.13)	(12.52)	(9.38)	(8.90)	(10.63)	(10.19)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	9,217	9,217	9,412	9,412	6,724	6,724	7,111	7,111
R-squared	0.194	0.196	0.194	0.196	0.172	0.174	0.170	0.171

Note. The values in the table are regression coefficients of variables, and the values in parentheses are *T* values of regression coefficients. *, **, and *** mean significant at the significance level of 10%, 5%, and 1%, respectively.

4.3.2. Addition of the Financial Characteristic Control Variables of the Peer Enterprises.

In order to eliminate the investment convergence phenomenon caused by resource endowment, financial characteristics, and other similar factors among enterprises, this paper adds the control variables of financial characteristics of the peer enterprises, including the proportion of tangible assets, growth capacity, asset-liability ratio, Tobin *Q*, enterprise size, shareholding ratio of the largest shareholder, and cash holding. The regression results above are recalculated and listed in Table 7, and the conclusions are consistent with those above.

4.4. Endogeneity Problem.

The control variables of the regression model are mostly lag variables, which can alleviate endogeneity problems to some extent, based on robustness, in order to further eliminate the interference of endogenous problems such as reverse causality and omitted variables in the regression of peer effect of enterprise investment. This paper adopts the instrumental variable method to further test the above conclusions, and the first-stage lag value (L.INV^{peer}) of the investment level of the same group of enterprises is selected as a tool variable to test, to investigate whether the investment behavior of enterprises will be affected by the investment behavior of peer enterprises. On the one hand, as an endogenous variable, the peer investment level is obviously correlated with the value of lag variables, which meets the correlation requirements of instrumental variables. On the other hand, since lagging in-group investment has occurred, the current investment decision of the enterprise will not affect the existing group investment decision. This meets the requirement of exogeneity of instrumental variables.

Table 7: Addition of the financial characteristic control variables of the peer enterprises.

Variables	Existence test				Managers' ability is strong				Managers' ability is weak			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2	(9) INV_1	(10) INV_1	(11) INV_2	(12) INV_2
INV_1^{Peer}	0.252*** (5.02)	0.254*** (3.59)			0.273*** (3.86)	0.232** (2.32)			0.187*** (2.78)	0.172* (1.72)		
INV_1^{Peer} * EPU		0.015** (2.95)				0.001 (0.05)				0.011* (1.92)		
INV_2^{Peer}			0.243*** (5.29)	0.229*** (3.60)			0.266*** (4.09)	0.224** (2.42)			0.166*** (2.65)	0.170* (1.91)
INV_2^{Peer} * EPU				0.012 (0.80)				0.005 (0.21)				0.008** (2.34)
EPU		-0.002*** (-2.86)		-0.002*** (-2.86)		-0.003** (2.30)		-0.003** (-2.48)		-0.001* (-1.77)		-0.001* (-1.79)
Tangible	-0.131*** (-13.48)	-0.131*** (-13.45)	-0.134*** (-14.18)	-0.133*** (-14.15)	-0.122*** (-7.16)	-0.121*** (-7.13)	-0.120*** (-7.38)	-0.119*** (-7.35)	-0.147*** (-12.13)	-0.147*** (-12.10)	-0.152*** (-12.56)	-0.151*** (-12.52)
Growth	0.000 (0.26)	0.001 (0.41)	0.000 (0.05)	0.000 (0.22)	-0.002 (-1.08)	-0.002 (-0.85)	-0.002 (-1.28)	-0.002 (-1.01)	0.003* (1.74)	0.003* (1.77)	0.003 (1.58)	0.003 (1.61)
Lev	-0.017** (-2.25)	-0.017** (-2.30)	-0.013* (-1.83)	-0.013* (-1.90)	-0.006 (-0.52)	-0.007 (-0.56)	-0.003 (-0.26)	-0.003 (-0.30)	-0.020** (-2.08)	-0.020** (-2.09)	-0.018* (-1.85)	-0.018* (-1.88)
Size	-0.019*** (-8.49)	-0.019*** (-8.66)	-0.020*** (-9.48)	-0.021*** (-9.69)	-0.016*** (-4.60)	-0.018*** (-4.95)	-0.019*** (-5.41)	-0.020*** (-5.80)	-0.028*** (-10.24)	-0.028*** (-10.29)	-0.029*** (-10.56)	-0.029*** (-10.61)
Ocf	0.029*** (3.43)	0.027*** (3.17)	0.027*** (3.26)	0.025*** (2.97)	0.022* (1.86)	0.019 (1.63)	0.020* (1.67)	0.017 (1.43)	0.018 (1.48)	0.017 (1.42)	0.022* (1.85)	0.021* (1.77)
Cash	0.014** (2.23)	0.014** (2.21)	0.014** (2.39)	0.014** (2.36)	0.021** (2.07)	0.020** (2.07)	0.020** (2.11)	0.020** (2.11)	-0.003 (-0.34)	-0.003 (-0.35)	-0.001 (-0.17)	-0.001 (-0.17)
Tobin Q	0.002*** (4.30)	0.003*** (4.52)	0.003*** (4.88)	0.003*** (5.15)	0.004*** (3.77)	0.004*** (3.98)	0.004*** (4.15)	0.004*** (4.38)	0.001 (1.05)	0.001 (1.13)	0.001* (1.72)	0.001* (1.80)
Roa	0.099*** (9.26)	0.101*** (9.44)	0.081*** (7.84)	0.083*** (8.03)	0.081*** (4.89)	0.083*** (5.06)	0.067*** (4.15)	0.069*** (4.31)	0.117*** (8.26)	0.117*** (8.29)	0.096*** (7.02)	0.096*** (7.04)
First	0.031** (2.26)	0.033** (2.37)	0.028** (2.14)	0.030** (2.29)	0.057** (2.35)	0.061** (2.48)	0.050** (2.15)	0.054** (2.29)	0.001 (0.09)	0.002 (0.12)	0.000 (0.02)	0.001 (0.07)
Duality	0.004** (2.30)	0.004** (2.35)	0.004** (2.32)	0.004** (2.38)	0.006** (2.16)	0.007** (2.33)	0.005* (1.94)	0.006** (2.10)	0.001 (0.58)	0.001 (0.56)	0.001 (0.44)	0.001 (0.43)
$Tangible^{Peer}$	0.076*** (2.51)	0.110*** (3.54)	0.081*** (2.77)	0.120*** (3.91)	0.082* (1.85)	0.137*** (3.01)	0.077* (1.83)	0.138*** (3.13)	0.062* (1.67)	0.072* (1.86)	0.083** (2.24)	0.096** (2.42)
$Growth^{Peer}$	0.000 (0.37)	0.001 (0.92)	0.000 (0.21)	0.001 (0.82)	0.003 (1.58)	0.004** (2.08)	0.002 (1.23)	0.003* (1.82)	-0.003* (-1.69)	-0.003 (-1.57)	-0.003 (-1.56)	-0.002 (-1.41)
Lev^{Peer}	-0.024 (-1.27)	-0.018 (-0.94)	-0.020 (-1.10)	-0.014 (-0.75)	-0.042 (-1.56)	-0.034 (-1.27)	-0.032 (-1.26)	-0.026 (-1.01)	-0.046* (-1.67)	-0.042 (-1.51)	-0.052* (-1.88)	-0.048* (-1.72)
$Size^{Peer}$	0.001 (0.01)	-0.004 (-0.69)	0.001 (0.14)	-0.004 (-0.73)	0.005 (0.70)	0.000 (0.01)	0.005 (0.74)	-0.000 (-0.05)	-0.012 (-1.42)	-0.015 (-1.52)	-0.004 (-0.46)	-0.007 (-0.72)
Ocf^{Peer}	-0.090** (-2.14)	-0.206*** (-3.80)	-0.074* (-1.76)	-0.207*** (-3.85)	-0.046 (-0.75)	-0.239*** (-2.94)	-0.031 (-0.52)	-0.244*** (-3.07)	-0.081 (-1.29)	-0.115 (-1.43)	-0.083 (-1.30)	-0.125 (-1.56)

TABLE 7: Continued.

Variables	Existence test				Managers' ability is strong				Managers' ability is weak			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2	(9) INV_1	(10) INV_1	(11) INV_2	(12) INV_2
Cash^{peer}	0.032	0.024	0.036	0.027	0.018	0.017	0.018	0.017	0.021	0.013	0.058	0.047
	(1.11)	(0.82)	(1.30)	(0.98)	(0.45)	(0.44)	(0.46)	(0.45)	(0.48)	(0.29)	(1.38)	(1.08)
Tobin Q^{peer}	−0.001*	−0.000	−0.001**	−0.000	−0.001	0.000	−0.001	0.000	−0.001	−0.001	−0.001*	−0.001
	(−1.82)	(−0.25)	(−2.09)	(−0.25)	(−1.10)	(0.26)	(−1.45)	(0.11)	(−1.32)	(−0.89)	(−1.67)	(−1.06)
Roa^{peer}	−0.052	−0.002	−0.045	0.012	−0.050	0.016	−0.032	0.042	−0.089	−0.071	−0.085	−0.060
	(−1.43)	(−0.05)	(−1.33)	(0.34)	(−0.99)	(0.32)	(−0.69)	(0.90)	(−1.56)	(−1.24)	(−1.54)	(−1.06)
First^{peer}	−0.111***	−0.103***	−0.115***	−0.107***	−0.108***	−0.111***	−0.113***	−0.116***	−0.136***	−0.132***	−0.141***	−0.132***
	(−5.07)	(−4.74)	(−5.44)	(−5.10)	(−3.63)	(−3.71)	(−3.96)	(−4.04)	(−3.73)	(−3.44)	(−3.96)	(−3.52)
Duality^{peer}	−0.008	−0.018	−0.006	−0.018	−0.002	−0.012	−0.003	−0.014	0.003	−0.002	−0.005	−0.013
	(−0.50)	(−1.16)	(−0.41)	(−1.17)	(−0.12)	(−0.57)	(−0.18)	(−0.68)	(0.14)	(−0.08)	(−0.21)	(−0.48)
Constant	0.500***	0.593***	0.518***	0.627***	0.311	0.444**	0.363**	0.505***	1.017***	1.072***	0.852***	0.909***
	(3.52)	(3.98)	(3.88)	(4.50)	(1.59)	(2.22)	(1.98)	(2.69)	(5.46)	(5.11)	(4.58)	(4.49)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,940	15,940	16,522	16,522	7,616	7,616	7,950	7,950	8,324	8,324	8,572	8,572
R-squared	0.163	0.164	0.161	0.162	0.122	0.126	0.123	0.128	0.217	0.217	0.212	0.212

Note. The values in the table are regression coefficients of variables, and the values in parentheses are T values of regression coefficients. *, **, and *** mean significant at the significance level of 10%, 5%, and 1%, respectively.

TABLE 8: Regression results using instrumental variables.

Variables	Existence test				Managers' ability is strong				Managers' ability is weak			
	(1) INV_1	(2) INV_1	(3) INV_2	(4) INV_2	(5) INV_1	(6) INV_1	(7) INV_2	(8) INV_2	(9) INV_1	(10) INV_1	(11) INV_2	(12) INV_2
L.INV_1^{peer}	0.164*** (5.05)	0.418*** (7.04)			0.170*** (3.45)	0.225*** (3.08)			0.101** (2.49)	0.257*** (3.70)		
L.INV_1^{peer} * EPU		0.044*** (2.84)				0.015 (0.78)				0.064*** (3.08)		
L.INV_2^{peer}			0.159*** (5.09)	0.394*** (7.01)			0.172*** (3.78)	0.240*** (3.56)			0.093** (2.32)	0.233*** (3.47)
L.INV_2^{peer} * EPU				0.041*** (2.79)				0.021 (1.20)				0.056*** (2.91)
EPU		-0.002*** (-3.06)		-0.002*** (-3.17)		-0.002* (-1.94)		0.002** (2.37)		-0.003*** (-2.87)		-0.003*** (-2.88)
Tangible	-0.130*** (-12.92)	-0.128*** (-13.07)	-0.132*** (-13.77)	-0.130*** (-13.70)	-0.117*** (-6.68)	-0.115*** (-6.55)	-0.114*** (-6.92)	-0.112*** (-6.79)	-0.147*** (-12.07)	-0.146*** (-12.11)	-0.155*** (-12.94)	-0.154*** (-12.90)
Growth	0.002 (1.54)	0.001 (0.82)	0.002 (1.37)	0.001 (0.68)	-0.001 (-0.53)	-0.000 (-0.21)	-0.001 (-0.49)	-0.000 (-0.16)	0.006*** (2.99)	0.005*** (2.87)	0.004** (2.40)	0.004** (2.35)
Lev	-0.014* (-1.91)	-0.014* (-1.86)	-0.009 (-1.23)	-0.010 (-1.39)	-0.006 (-0.45)	-0.005 (-0.40)	-0.002 (-0.17)	-0.001 (-0.09)	-0.018* (-1.87)	-0.019** (-1.99)	-0.012 (-1.26)	-0.013 (-1.37)
Size	-0.022*** (-10.19)	-0.021*** (-9.40)	-0.024*** (-11.46)	-0.023*** (-10.66)	-0.018*** (-4.95)	-0.020*** (-5.16)	-0.020*** (-5.85)	-0.022*** (-6.03)	-0.033*** (-13.77)	-0.032*** (-12.57)	-0.033*** (-14.10)	-0.033*** (-13.09)
Ocf	0.021** (2.45)	0.027*** (3.10)	0.021*** (2.59)	0.024*** (2.92)	0.019 (1.56)	0.014 (1.17)	0.018 (1.53)	0.013 (1.08)	0.007 (0.62)	0.008 (0.66)	0.014 (1.18)	0.013 (1.11)
Cash	0.018*** (2.86)	0.016** (2.57)	0.020*** (3.34)	0.017*** (2.79)	0.021** (2.00)	0.022** (2.12)	0.023** (2.36)	0.024** (2.54)	0.004 (0.52)	0.004 (0.54)	0.006 (0.76)	0.006 (0.80)
Tobin Q	0.002*** (4.01)	0.002*** (4.51)	0.003*** (4.92)	0.003*** (5.16)	0.004*** (3.91)	0.004*** (4.23)	0.004*** (4.48)	0.004*** (4.85)	0.000 (0.61)	0.000 (0.67)	0.001 (1.53)	0.001* (1.69)
Roa	0.108*** (9.84)	0.105*** (9.83)	0.089*** (8.65)	0.087*** (8.52)	0.087*** (5.29)	0.090*** (5.47)	0.073*** (4.61)	0.077*** (4.81)	0.125*** (8.43)	0.124*** (8.31)	0.104*** (7.66)	0.105*** (7.59)
First	0.039*** (2.82)	0.035** (2.49)	0.032** (2.46)	0.033** (2.45)	0.064** (2.56)	0.068*** (2.67)	0.054** (2.30)	0.058** (2.42)	0.009 (0.57)	0.008 (0.50)	0.004 (0.27)	0.005 (0.29)
Duality	0.004** (2.24)	0.004** (2.25)	0.004** (2.33)	0.004** (2.30)	0.007** (2.36)	0.007** (2.39)	0.006** (2.04)	0.006** (2.07)	0.001 (0.41)	0.001 (0.40)	0.001 (0.43)	0.001 (0.44)
Constant	0.542*** (10.56)	0.498*** (9.75)	0.574*** (11.83)	0.542*** (10.99)	0.423*** (4.95)	0.455*** (5.12)	0.465*** (5.84)	0.498*** (5.98)	0.803*** (14.51)	0.774*** (13.32)	0.819*** (14.87)	0.798*** (13.81)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,541	15,941	16,522	16,523	7,397	7,397	7,950	7,950	8,144	8,144	8,572	8,572
R-squared	0.153	0.158	0.151	0.156	0.111	0.113	0.112	0.114	0.210	0.212	0.203	0.204

Note. The values in the table are regression coefficients of variables, and the values in parentheses are *T* values of regression coefficients. *, **, and *** mean significant at the significance level of 10%, 5%, and 1%, respectively.

Table 8 shows the regression results after using the peer investment level with the lag period as the instrumental variable.

5. Research Conclusions and Policy Recommendations

In order to study whether and how economic policy uncertainty and managers' ability affect the peer effect of enterprise investment, this paper adopts the data of Shanghai and Shenzhen A-share listed companies from 2010 to 2020 to conduct an empirical study and discusses the influence of economic policy uncertainty on the peer effect of enterprise investment under the heterogeneity of enterprise property rights. Firstly, the economic policy uncertainty index constructed by Baker is used to study the influence of economic policy uncertainty on the peer effect of enterprise investment. Then, we refer to the manager capability measured by the DEA-Tobit two-stage model proposed by Demerjian et al. [22] which studies the effect of managerial ability on investment peer effect. The results show the following. (1) The increase of economic policy uncertainty will aggravate the peer effect of firm investment. The uncertainty of economic policy increases the uncertainty of enterprise investment risk and makes enterprise investment close to the general investment level of the peer enterprises. Considering firm heterogeneity, it is found that in non-state-owned enterprises, economic policy uncertainty intensifies the peer effect of firm investment more obviously. (2) The manager performance appraisal is measured relative to the industry performance level, less competent managers tend to mimic the investment decisions of peers in order to appear competent, and investment convergence occurs. When the uncertainty of economic policy is high, enterprise managers have strong motivation to imitate the financial decision-making behavior of peer enterprises under the condition of insufficient risk resistance ability and professional knowledge. In the group with weak management ability, economic policy uncertainty will intensify the peer effect of firm investment.

The peer effect of corporate investment leads to excessive convergence of investment, which will lead to low efficiency of investment and excessive concentration of social resources. This paper puts forward the following suggestions. (1) Improve corporate governance mechanism, management assessment mechanism, etc., improve the level of corporate governance, and improve the management ability of managers. Managers are encouraged to look for investment projects that can bring long-term value to enterprises and reduce inefficient investment from the perspective of shareholders' interests and long-term development of enterprises. (2) The government should take the uncertainty of economic policy into consideration when formulating and issuing various policies, ensure the integrity and consistency of policies, reduce the uncertainty of economic policy, and reduce the impact of economic policy uncertainty on enterprise investment and other business behaviors.

Data Availability

The original data of all listed companies can be obtained from China's CSMA database. This paper only uses Stata software to process the data of listed companies and obtain the final results. The data used to support the findings of this study are included within the article.

Conflicts of Interest

The author declares that there are no conflicts of interest.

References

[1] B. Ye and J. G. Yuan, "Behavioral study on corporate investment: a survey," *Accounting Research*, vol. 15, no. 12, pp. 76–81+97, 2007.
[2] N. Jiang, "Literature review on economic policy uncertainty and firm behavior," *Finance and Accounting Monthly*, vol. 03, pp. 154–160, 2020.
[3] L. Pastor and P. Veronesi, "Political uncertainty and risk premia," *Journal of Financial Economics*, vol. 110, no. 3, pp. 520–545, 2013.
[4] U. Bhattacharya, P. Hsu, X. Tian, and Y. Xu, "What affects innovation more: policy or policy uncertainty?" *Working Papers*, vol. 52, no. 5, pp. 1869–1901, 2014.
[5] H. Gulen and M. Ion, "Policy uncertainty and corporate investment," *Review of Financial Studies*, vol. 29, no. 3, pp. 523–564, 2016.
[6] H. J. Im, J. Liu, and Y. J. Park, "Policy uncertainty and peer effects: evidence from corporate investment in China," *International Review of Financial Analysis*, vol. 77, Article ID 101834, 2021.
[7] B. Julio and Y. Yook, "Political uncertainty and corporate investment cycles," *The Journal of Finance*, vol. 67, no. 1, pp. 45–83, 2012.
[8] F. Allen, J. Qian, and M. Qian, "Law, finance, and economic growth in China," *Journal of Financial Economics*, vol. 77, no. 1, pp. 57–116, 2005.
[9] Y. Gu, S. Ben, and J. Lv, "Peer effect in merger and acquisition activities and its impact on corporate sustainable development: evidence from China," *Sustainability*, vol. 14, no. 7, p. 3891, 2022.
[10] C. Aghamolla and R. T. Thakor, "IPO peer effects," *Journal of Financial Economics*, vol. 144, no. 1, pp. 206–226, 2022.
[11] D. L. Zhang and X. F. Jiang, "Managerial ability and the herd behavior of corporate investment:: considering the moderating effect of compensation fairness," *Accounting Research*, vol. 8, pp. 41–48, 2015.
[12] Y. X. Li, Y. K. Gai, and G. Xue, "Managerial ability and enterprises 'investment efficiency—based on an empirical study of A-share listed companies in China," *Journal of Northeastern University*, vol. 20, no. 2, pp. 131–139, 2018.
[13] J. G. Hua, R. J. Kong, K. Sun, and G. Y. Song, "Research on the cluster effect of firm innovation investment——from the perspective of manager competence," *Soft Science*, vol. 35, no. 09, pp. 131–138, 2021.
[14] M. T. Leary and M. R. Roberts, "Do peer firms affect corporate financial policy?" *The Journal of Finance*, vol. 69, no. 1, pp. 139–178, 2014.

[15] C. Fu, "Does peer effect affect the goodwill: empirical evidence from high-premium M & A on the GEM," *China Soft Science*, vol. 11, pp. 94–108, 2015.

[16] L. Y. W and J. Rao, "Industry peer effect in M&A decisions of China`s listed companies," *Nankai Business Review*, vol. 3, pp. 40–50, 2016.

[17] H. H. Ding and J. L. Zhao, "Peer effects in economic decision-making of China's local governments," *China Industrial Economics*, vol. 4, pp. 59–78, 2018.

[18] Q. Yan and H. Zhu, "Peer influence on dividend policy: evidence from the Chinese stock market," *Economics Letters*, vol. 192, Article ID 109229, 2020.

[19] Y. Z. Wang, C. R. Chen, and Y. S. Huang, "Economic policy uncertainty and corporate investment: evidence from China," *Pacific-Basin Finance Journal*, vol. 26, pp. 227–243, 2014.

[20] D. C. Hambrick, "Upper echelons theory: an update," *Academy of Management Review*, vol. 32, no. 2, pp. 334–343, 2007.

[21] H. L. Chen, "Board capital, CEO power and R&D investment in electronics firms," *Corporate Governance: An International Review*, vol. 22, no. 5, pp. 422–436, 2014.

[22] P. R. Demerjian, B. Lev, M. F. Lewis, and S. E McVay, "Managerial ability and earnings quality," *The Accounting Review*, vol. 88, no. 2, pp. 463–498, 2013.

[23] G. Abatecola, G. Mandarelli, and S. Poggesi, "The personality factor: how top management teams make decisions. A literature review," *Journal of Management & Governance*, vol. 17, no. 4, pp. 1073–1100, 2013.

[24] J. X. Fang, "Corporate investment decision-making convergence in China: herd behavior or wave phenomenon?" *Journal of Finance and Economics*, vol. 11, pp. 92–102, 2012.

[25] H. Seo, "Peer effects in corporate disclosure decisions," *Journal of Accounting and Economics*, vol. 71, no. 1, Article ID 101364, 2021.

[26] G. Gupta, "CEO's educational background, economic policy uncertainty and investment-cash flow sensitivity: evidence from India," *Applied Economics*, vol. 54, no. 5, pp. 568–579, 2022.

[27] S. R. Baker, N. Bloom, and S. J. Davis, "Measuring economic policy uncertainty," *Quarterly Journal of Economics*, vol. 131, no. 4, pp. 1593–1636, 2016.

[28] X. M. Gu, Y. M. Chen, and S. Y. Pan, "Economic policy uncertainty and innovation: evidence from listed companies in China," *Economic Research Journal*, vol. 2, pp. 109–123, 2018.

[29] Z. Chen, B. Ke, and Z. Yang, "Minority shareholders' control rights and the quality of corporate decisions in weak investor protection countries: a natural experiment from China," *The Accounting Review*, vol. 88, no. 4, pp. 1211–1238, 2013.

[30] M. Gertler and S. Gilchrist, "Monetary policy, business cycles, and the behavior of small manufacturing firms," *Quarterly Journal of Economics*, vol. 109, no. 2, pp. 309–340, 1994.

[31] M. Gertler and S. Gilchrist, "The role of credit market imperfections in the monetary transmission mechanism: arguments and evidence," *The Scandinavian Journal of Economics*, vol. 95, no. 1, pp. 43–64, 1993.

[32] G. Gupta, J. Mahakud, and V. Verma, "CEO's education and investment–cash flow sensitivity: an empirical investigation," *International Journal of Managerial Finance*, vol. 17, no. 4, pp. 589–618, 2021.

[33] H. Chen, L. Chen, D. Xie, and J Niu, "Protective effects of transforming growth factor-β1 knockdown in human umbilical cord mesenchymal stem cells against subarachnoid hemorrhage in a rat model," *Cerebrovascular Diseases*, vol. 49, no. 1, pp. 79–87, 2020.

[34] W. F. He, W. Liu, and K. . l. H, "Managerial ability and corporate risk-taking," *China Soft Science*, vol. 5, pp. 107–118, 2016.

[35] D. Q. Chen and Y. S. Chen, "Government governance, ultimate ownership and Co-movement in investment," *Management Review*, vol. 25, no. 1, pp. 139–148, 2013.

[36] G. Gupta, J. Mahakud, and V. K. Singh, "Economic policy uncertainty and investment-cash flow sensitivity: evidence from India," *International Journal of Emerging Markets*, 2022.