



# Major Shareholders' Investment Background and Corporate Investment Behavior — Based on Evidence from China's Private Listed Companies

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**Abstract:** Investment behavior is one of the three major financial decisions of a company. Based on this, this paper takes China's private listed enterprises from 2004 to 2017 as samples, and through literature review and empirical analysis, studies the influence of the major shareholder's investment background on the company's investment behavior. It is found that the investment background of the major shareholder is positively correlated with the cash outflow from the company. At the same time, the major shareholders with investment experience tend to choose the pyramid shareholding structure with financing advantages. After the introduction of shareholding structure, the above positive relationship has a significant change: the internal capital market brought by the pyramid shareholding structure can promote the major shareholder with investment background to find more potential investment opportunities and promote the scale of cash outflow from the company's investment, while the direct shareholding structure can inhibit the promotion effect. To sum up, the investment background provides the major shareholder with subjective motivation and ability to conduct investment, while the pyramid shareholding structure creates objective conditions for him to some extent. The research conclusion of this paper enriches the theoretical research on the high-level echelon theory and the motivation of the existing corporate investment behavior, and provides some reference significance for the investors in the capital market to judge the investment decisions of the company and identify the sustainable development and expansion ability of the company.

**Keywords:** major shareholder, shareholding structure, investment behavior

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## 1. Introduction

The investment decision of a company has long been one of the three major financial decisions. Corporate investment behavior represents an economic behavior in which a company invests a certain amount of capital in a given period to increase or maintain the flow expenditure of capital stock, in pursuit of enterprise value appreciation and expected return proportional to the risk, namely the process of currency conversion into capital. Investment, therefore, is the company's growing and one of the main motivations of expanded reproduction, corporate investment activities cash flow situation, is likely to affect the company's business risk, profit level and the going-concern assumption, also became one of the capital market investors to evaluate the company future development, and the important dimensions of the influence factors of investment behavior and the company has important practical significance.

According to the Hambrick and Mason (1984) proposed by the upper echelon theory, management traits could decisions have a significant impact on the company, the quality is not only including age, level of education, professional experience, but also including executives of recessive elements such as values. Different backgrounds will encourage executives to have different preferences on the risk, sustainability and complexity of corporate decisions, which will further affect the development of the company. Currently, a large amount of literature has discussed the characteristics of corporate executives and corporate financial policy behavior.

However, as the main provider of corporate funds, the major shareholder often plays an important role in the company's investment decision-making and management of major investment decisions subject to the conditions of large shareholders, especially the one third of the private listed companies in China at present is still run by entrepreneurs. Therefore, the entrepreneur's personality, educational background, industry background, investment background and other factors will inevitably have a more direct impact on the behavior pattern of the company. Existing domestic and foreign researches have not considered the background factor of the major shareholder in the analysis of the motivation of the company's investment behavior. With the increasing participation of the major shareholder in the decision-making of the private listed company at present, combined with the theory of high-level echelon, this paper brings the investment background of the major shareholder into the analysis framework of the motivation of the company's investment behavior.

Compared with the company decision, the major shareholder also plays a decisive role in the company's shareholding

structure. At present, China's private listed companies mainly hold shares through two ways: direct shareholding structure and pyramid shareholding structure, and the pyramid shareholding structure, which have always occupied a large proportion in China's private listed companies. Existing literature at home and abroad has confirmed the rationality of pyramid structure. The most important reason is that pyramid structure constructs internal capital market, which helps companies maintain the cash flow needed for investment through internal capital operation in the face of external financing constraints. Can the financing advantage brought by the pyramid shareholding structure provide further objective conditions for the major shareholder's characteristics to influence the investment scale of the company? Therefore, this paper will also study the interaction between the characteristics of major shareholders and the pyramid ownership structure on corporate cash holdings.

Based on the existing literature, it is not difficult to find that: firstly, on the basis of the theory of high-level echelon, the existing literature specifically studies the influence of the background experience of senior executives on the investment behavior of the company, and proves the correlation between the two. However, there are few relevant studies on the investment background of corporate decision makers. Second, the existing literature on the company's decision makers on the company's investment behavior executives to focus on the influence of background, background of major shareholders were not related with the company's investment behavior of related research, and the major shareholder as the main provider of the funds required for the investment company, its background traits necessary into the upper echelon theory research framework. Finally, the existing research on the motivation of shareholding structure focuses on the theory of financing advantage, but the major shareholder enjoys the control right of the company, which can play a decisive role in the design of the ownership structure of the company. Combined with the theory of high-level echelon, this study intends to include the characteristics of the major shareholder into the motivation analysis framework of shareholding structure.

Based on the above background and analysis, this paper will further explore the factors affecting the company's investment behavior on the basis of the existing research. (1) Does the major shareholder's investment background have a significant impact on the company's investment behavior? (2) Does the major shareholder with investment background prefer to choose the pyramid shareholding structure? (3) Does the shareholding structure affect the relationship between the major shareholder's investment background and the company's investment behavior?

The main research contents of this paper are as follows.

First, this paper will improve and supplement the theory and research on the factors influencing corporate investment behavior. Based on the micro and macro perspectives of existing enterprises, it will increase the influence of entrepreneurs' personal traits on corporate behavior and enrich the theoretical research on existing corporate investment behavior.

Secondly, combined with the current situation of China's private listed companies, the major shareholder's experience has a more far-reaching impact on corporate behavior. There are still significant differences in corporate behavior among enterprises of similar size in the same industry, which cannot be explained by traditional financial theory. In this paper, the characteristics of major shareholders are innovatively included into the analytical framework and the theory of upper echelon is supplemented and improved.

Finally, a large number of scholars have conducted sufficient studies on the relationship between management traits and corporate investment behavior, ownership structure and corporate investment behavior, but have neglected the interaction between management traits and ownership structure. This paper will consider the interaction between the investment background of the major shareholder and the pyramid ownership structure on the investment behavior of the company.

## 2. Hypotheses

Most of China's private listed companies have only been established for more than ten years, and more than 30% of them are still managed by entrepreneurs without intergenerational inheritance. Entrepreneurs' personal background and characteristics have a profound impact on corporate behavior, and more than half of the major shareholders participate in corporate operation and management. According to the "high echelon theory" and subsequent studies by scholars (Hambrick & Mason, 1984; Custodio and Metzger, 2014; Dittmar and Duchin, 2016), the characteristics of management will have a significant impact on corporate decision-making, while for private enterprises in China, the characteristics of major shareholders may have a deeper impact on the enterprise.

The major shareholder's past investment experience will directly affect his decision-making behavior, and the major shareholder with investment background will have an impact on the company's financial decision-making due to his personal knowledge, ability, professional quality and other reasons. When the company needs to make investment decisions, on the one hand, the major shareholder with investment background is easier to identify high-quality investment

opportunities based on previous investment experience, and has a stronger ability to deal with potential investment risks. On the other hand, because of the former in securities and investment and financing company, in the financial sector accumulated more external resources, when the company faced with financing constraints in the process of investment, its past experience as the company can bring the corresponding external funding, reduce external financing cost, increase company to resist the ability of the investment funds risk brought by, therefore, the major shareholders have investment background, companies tend to invest more.

Based on the above analysis, Hypothesis 1 is proposed.

H1: The investment background of the major shareholder is positively correlated with the investment scale of the company.

According to the upper echelon theory, the characteristics of major shareholders, including their early experiences, can influence the behavior of the firm, and the shareholding structure of the firm is usually determined by the major shareholders. Therefore, it can be inferred that the experience of major shareholders may affect the company's choice of different shareholding structures.

According to the existing literature, the pyramid shareholding structure not only provides the major shareholders of internal capital market financing is convenient, also provide beforehand "exit mechanism", is advantageous for the shell, sell shell, capital operation, so the pyramid structure of the company may pay more attention to investment and financing operation, rather than the main business entities and business innovation and development. In comparison, direct shareholding loses the financing advantages of the above internal capital market and focuses more on the development of the company's main business.

Due to the "Reinforcement Learning", people's cognition is strengthened by their previous experience, which is more likely to generate path dependence and increase the probability of repeating the same behavior, such as the probability of investors participating in IPO subscription after the initial IPO subscription experience (Chiang et al., 2011), investors' previous pension savings returns affect their subsequent savings behavior. Major shareholders with investment background have ever controlled or participated in investment companies or worked in investment companies, so they may be more inclined to pyramidal shareholding structure with financing convenience, and reject direct shareholding structure facing financing constraints.

Based on the above analysis, Hypothesis 2 is proposed.

H2: Major shareholders with investment background tend to adopt pyramid shareholding structure.

According to the preferential financing theory, when an enterprise identifies an investment opportunity with positive net present value and needs capital, it will give priority to relying on the internal capital of the company. When the internal capital is insufficient to meet the capital needed for investment, the company will consider the external financing with higher cost. When companies have difficulty securing adequate internal funding and face severe external financing constraints, they are likely to abandon investment.

According to the results of the existing literature, the internal capital market formed by the pyramid shareholding structure provides the internal financing convenience for the company, thus relaxing the financing constraints of the external capital market on the company and playing the effect of financing substitution (Almeida and Wolfenzon, 2006), thus providing the objective conditions for the company to grasp high-quality investment opportunities. In contrast, companies with direct shareholding structure do not have the financing advantages brought by internal capital market. Even if the major shareholder with investment background identifies high-quality investment opportunities, it may be forced to give up due to financing constraints, which inhibits the investment behavior of the company.

Based on the above analysis, this paper proposes Hypothesis 3.

H3: Pyramid shareholding structure improves the promotion effect of Major shareholder's investment background on the company's investment scale.

### **3. Research design**

#### **3.1 Variable definitions**

##### **3.1.1 Investment behavior**

According to the existing literature and in this paper, the definition of company investment level, this article selects the company industrial investment level ( $Invest1$ ) = the final construction of fixed assets, intangible assets and other long-term assets to pay cash/final total assets, the company investment scale ( $Invest2$ ) = company investment activities generated cash flow out of the current period/final total assets. In the robustness test, the author considered the effect of

investment activities generated cash flow, the specific formula for the company's net industrial investment levels ( $Invest3$ ) = (the final construction of fixed assets, intangible assets and other long-term assets to pay cash - disposal of fixed assets, intangible assets and other long-term assets withdraw cash net)/final total assets, net company investment scale ( $Invest4$ ) = current period net investment activities generated cash flow/final total assets, but when the investment cash flow to total assets ratio is higher, the net investment levels more easily influenced by outliers.

### 3.1.2 Major shareholders' investment background

In this paper, the characteristics of the major *shareholder* are measured by the selection of *Shareholder\_invest* (investment background) through the statistics of the major shareholder's tenure and foreign investment. If the major shareholder has investment background, it is marked as 1; otherwise, it is marked as 0. Specifically, the major shareholder has an investment background, and the major shareholder shall meet one of the following conditions before the company listed:

- (1) The major shareholder used to work in investment and financing companies such as banks and securities;
- (2) The major shareholder controls an investment company or works in an investment company, except that the company is a group company.

### 3.1.3 Shareholding structure

Based on the measurement indexes of shareholding structure in previous literatures, this paper selected indirect shareholding ratio ( $Pyramid$ ) to measure the shareholding structure, which refers to the ratio of the Major shareholder's indirect shareholding ratio to its total shareholding ratio.

### 3.1.4 Control variables

Referring to the existing studies, this paper controls the variables that affect the investment behavior of enterprises, and selects the total assets of the company ( $Size$ ), the asset-liability ratio ( $Lev$ ), the years of the company's establishment ( $Found\_year$ ), the gender and age of the major shareholder as the control variables.

## 3.2 Sample selection and data sources

The research data are mainly from CSMAR National Tai'an Database, and the financial situation of China's A-share listed companies from 2004 to 2017 is selected as the sample data. At the same time, this study also manually sorted out the database of private listed companies by reading prospectuses and company annual reports to obtain data including ownership structure and investment background of Major shareholders.

As for the investment background variable of the major shareholder, to ensure the feasibility of measurement, we only focus on the first major shareholder of the listed company since its listing and the number of its acting members shall not be more than 5, and exclude the samples of backdoor listing in the listing process or changes in the Major shareholder within 3 years of listing.

After distinguishing the types of investment background, the initial data are processed as follows. (1) samples with missing variables are removed; (2) in order to reduce the influence of individual extreme values, Winsorize was applied to all continuous variables at the level of 1%. The result was 6,760 firm-yearly samples.

## 3.3 Model

In order to verify Hypothesis 1, this paper constructs the following model:

$$Invest_{i,t} = \alpha_0 + \alpha_1 Shareholder\_invest_{i,t} + \delta Con_{i,t} + \varepsilon_{i,t} \quad (1)$$

In order to verify Hypothesis 2, this paper constructs the following model:

$$Pyramid_{i,t} = \alpha_0 + \alpha_1 Shareholder\_invest_{i,t} + \delta Con_{i,t} + \varepsilon_{i,t} \quad (2)$$

In order to verify Hypothesis 3, this paper constructs the following model:

$$Invest_{i,t} = \alpha_0 + \alpha_1 Shareholder\_invest_{i,t} + \alpha_2 Pyramid_{i,t} + \alpha_3 Shareholder\_invest_{i,t} * Pyramid_{i,t} + \delta Con_{i,t} + \varepsilon_{i,t} \quad (3)$$

## 4. Empirical analysis

### 4.1 Descriptive statistics

**Table 1. Descriptive statistics**

VarName	Obs	Mean	SD	Min	Median	Max
<i>Invest1</i>	6760	0.091	0.094	0.000	0.064	1.202
<i>Invest2</i>	6760	0.208	0.303	0.000	0.117	6.827
<i>Shareholder_invest</i>	6760	0.256	0.436	0.000	0.000	1.000
<i>Pyramid1</i>	6760	0.381	0.441	0.000	0.000	1.000
<i>Gender</i>	6760	0.044	0.206	0.000	0.000	1.000
<i>Age</i>	6760	52.306	7.593	30.000	51.000	81.000
<i>Size</i>	6760	21.097	0.928	18.992	21.047	23.563
<i>Lev</i>	6760	0.320	0.177	0.032	0.298	0.764
<i>Found_year</i>	6760	12.046	5.129	0.660	11.819	37.362

Firstly, we conducted overall descriptive statistics on the main variables in the paper, and the results are shown in Table 1. According to the statistical data can be found, first of all, our country small and medium-sized board and gem, private companies, the maximum level of industrial investment is 120.2%, the minimum value is 0.0%, average accounts for about 9.1% of total assets, total investment level of a maximum of 682.7%, the minimum value is 0.0%, average accounts for about 20.8% of total assets, in its occupies the important position in the company's assets, are necessary to study the influencing factors. Secondly, for the investment background of the major shareholders of private listed companies, only about a quarter of the major shareholders have investment background, which shows that most of the major shareholders of private listed companies have no investment and financing related experience. Finally, in the sample of private listed companies in China, the average indirect shareholding ratio of major shareholders is about 38.1%. Pyramid shareholding is still an important form of corporate shareholding structure, and it is of practical significance to study its influence on motivation and investment behavior of companies.

### 4.2 Multiple linear regression

#### 4.2.1 Investment behavior and major shareholder's investment background

**Table 2. Investment behavior and major shareholder's investment background**

	(1) Invest1	(2) Invest2	(3) Invest1	(4) Invest2
<i>Shareholder_invest</i>	0.004** (1.99)	0.012*** (3.41)	0.005** (2.38)	0.016** (2.12)
<i>Controls</i>	No	No	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
N	6760	6760	6760	6760
<i>Adj.R<sup>2</sup></i>	0.04	0.12	0.06	0.08

The regression coefficients of *Shareholder\_invest* are all significant at the level of 5%. Compared with the major shareholders no investment background, major shareholders have investment background level of industrial investment company (*Invest1*) high 0.5%, investment scale (*Invest2*) 1.6% higher, sample mean 5.5% and 7.9% respectively, more remarkable economic significance, shows that the major shareholder's investment background shows more preferences to investment, which consists with the proposed research hypotheses. So Hypothesis 1 is verified.

#### 4.2.2 Shareholding structure and major shareholder investment background

**Table 3. Shareholding structure and major shareholder investment background**

	<i>Pyramid</i>
<i>Shareholder_invest</i>	0.171*** (15.47)
<i>Controls</i>	Yes
<i>Industry</i>	Yes
<i>Year</i>	Yes
N	6760
<i>Adj.R<sup>2</sup></i>	0.16

The investment background of the major shareholder is significantly positively correlated with the pyramid shareholding of the company, which is consistent with the above hypothesis. The actual controller with investment background pays more attention to the investment and financing operation, so it is more inclined to build the internal capital market and choose the pyramid shareholding structure. So Hypothesis 2 is verified.

#### 4.2.3 The cross item of investment behavior on the company's shareholding structure and the major shareholder's investment background

**Table 4. Cross item of investment behavior on shareholding structure and investment background**

	(1) <i>Invest1</i>	(2) <i>Invest2</i>
<i>Shareholder_invest</i>	0.013*** (3.21)	0.022*** (3.15)
<i>Pyramid</i>	0.006 (0.90)	0.009 (0.57)
<i>Shareholder_invest</i> × <i>Pyramid</i>	0.016*** (2.94)	0.009** (2.38)
<i>Controls</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Year</i>	Yes	Yes
N	6760	6760
<i>Adj.R<sup>2</sup></i>	0.09	0.06

The regression coefficients of the interaction terms are all significantly positive at different significance levels, which proves that the higher the indirect shareholding ratio of the actual controller, the stronger the promoting effect of the investment background of the major shareholder on the investment level of the company. The advantages of pyramid shareholding structure provide objective conditions for the company to grasp the potential investment opportunities and help the major shareholder with investment background to grasp the potential investment opportunities more easily. So hypothesis 3 is verified.

#### 4.3 Robustness test

Due to the differences between SME and GEM in the standards of listed companies, in order to eliminate the impact of plate differences, this paper tests SME and GEM respectively, and the results show that the impact of actual controller's investment background on the company's investment behavior is still significantly positive.

**Table 5. SME and GEM**

	SME		GEM	
	(1)	(2)	(3)	(4)
	<i>Invest1</i>	<i>Invest2</i>	<i>Invest1</i>	<i>Invest2</i>
<i>Shareholder_invest</i>	0.003**	0.015*	0.016***	0.017***
	(2.40)	(1.96)	(3.01)	(2.66)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
N	4246	4246	2514	2514
<i>Adj.R<sup>2</sup></i>	0.03	0.04	0.08	0.11

Based on upper echelon theory, company executives (CEO) may behavior have a significant impact on the company, to eliminate the CEO might affect on the original assumption, the author selected the CEO is changed in the past three years (Ceoturnover=1), the sample build contains the major shareholder invest in background and CEO change cross terms (Shareholder\_invest×Ceoturnover) model, and the model regression. The major shareholder's investment background and CEO change cross item (Shareholder\_invest×Ceoturnover) have no significant effect on the company's investment behavior variable (Invest). Moreover, the major shareholder's investment background (Shareholder\_invest×Ceoturnover) is significantly positive at the level of 5%, and the original hypothesis is relatively stable.

**Table 6. Add ceoturnover cross items**

	(1)	(2)
	<i>Invest1</i>	<i>Invest2</i>
<i>Shareholder_invest</i>	0.006**	0.006***
	(1.98)	(3.41)
<i>Ceoturnover</i>	-0.012***	-0.022***
	(-4.02)	(-3.71)
<i>Shareholder_invest × Ceoturnover</i>	-0.001	-0.002
	(-0.13)	(-0.22)
<i>Controls</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Year</i>	Yes	Yes
N	6760	6760
<i>Adj.R<sup>2</sup></i>	0.07	0.10

In this paper, the measures of explained variables in the hypothesis are replaced by the net industrial investment level (Invest3) and the net investment scale (Invest4). The results show that the regression coefficients of the major shareholder's investment background (Shareholder\_invest) are significantly positive at the level of 1% and 10% respectively, and the conclusion of the null hypothesis is relatively robust.

**Table7. Replace the investment behavior variable**

	(1)	(2)
	<i>Invest3</i>	<i>Invest4</i>
<i>Shareholder_invest</i>	0.006*** (2.68)	0.004* (1.71)
<i>Controls</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Year</i>	Yes	Yes
N	6760	6760
<i>Adj.R<sup>2</sup></i>	0.04	0.04

## 5. Conclusion

Private listed companies play an important role in China's capital market, a certain proportion of companies are still managed by entrepreneurs, entrepreneurs' personal background can have a certain impact on corporate behavior. At the same time, the major shareholder decides the company's shareholding structure. Under different corporate governance, the management plays different roles in the company. This paper selects China's private listed companies from 2004 to 2017 as samples, and gets 6760 samples for empirical analysis. The results show that the real controller trait has an impact on the investment behavior of the firm. Major shareholders with investment background are more likely to identify potential investment opportunities due to their past investment experience and successful experience, and are more likely to obtain external financial support and reduce external financing costs. Therefore, they are more inclined to invest in a higher scale and more likely to choose to build a pyramid shareholding structure in the internal capital market. When the pyramid shareholding structure is considered, the positive effect of the major shareholder's investment background on the investment scale will be further amplified, while the direct shareholding structure without financing advantage will restrain the above positive effect.

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