

# Targeted Poverty Alleviation, Political Connections and the Cost of Equity Capital

## -- A Sample of Private Listed Enterprises

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### Abstract

China's "13th Five-Year Plan" has come to an end, and targeted poverty alleviation as an important part of it has received widespread attention from the society. Many private listed enterprises have also participated in it. This article uses the panel data of A-share private listed companies on the Shanghai and Shenzhen Stock Exchanges from 2016 to 2019 as a sample, and uses the PEG model to test the relationship between targeted poverty alleviation, political connections and the cost of equity capital. The study found that both targeted poverty alleviation and political connections can reduce the cost of equity capital, while political connections and targeted poverty alleviation have a substitution effect in reducing the cost of equity capital. Finally, this paper puts forward relevant policy recommendations from the perspective of the government and enterprises based on the research results.

### Keywords

Targeted Poverty Alleviation; Political Connections; Cost of Equity Capital; PEG Model.

### 1. Introduction

In November 2013, Xi Jinping first put forward the important instructions of "seeking truth from facts, adapting measures to local conditions, classified guidance, and precise poverty alleviation" during an inspection tour in Xiangxi, Hunan, and thus put forward the idea of "Targeted poverty alleviation". Since then, targeted poverty alleviation activities have been carried out steadily. All sectors of society were participated enthusiastically, including many private listed enterprises. As of 2019, 270 private listed enterprises have disclosed their targeted poverty alleviation investment in their annual reports. However, enterprises are social organizations with the purpose of making profits, and the sense of social responsibility cannot fully explain the motivation of enterprises to invest funds and materials in targeted poverty alleviation activities. If it is said that the participation of state-owned enterprises in targeted poverty alleviation can be explained from a policy perspective, then why do private listed enterprises participate in targeted poverty alleviation? At the same time, Chinese enterprises have problems of financing difficulties and high financing to varying degrees. Private listed enterprises generally have more obvious financing problems than state-owned enterprises. Is it because private listed enterprises can reduce the cost of corporate equity capital to a certain extent after participating in targeted poverty alleviation? Assuming that the answer is certain, will the extent of the impact of private listed enterprises' participation in targeted poverty alleviation on the cost of equity capital be different due to the political connections of the enterprise? Exploring the relationship between these three can better understand the relationship between national policies and enterprises development, which is of great significance to the future development of society and enterprises.

Compared with the previous literature, the main innovation of this paper lies in the research content. The existing literature mainly focuses on targeted poverty alleviation 's political influence or draws on the experience of successful cases of poverty alleviation when studying targeted poverty alleviation, while there is less research from the perspective of corporate capital markets. This paper combines the operation of private listed enterprises with targeted poverty alleviation, both political and economic social activities, and studies the role of corporate social responsibility, including targeted poverty alleviation, on the cost of corporate equity, which is innovative.

## 2. Journals Reviewed

### 2.1. Research on the Participation of Enterprises in Poverty Alleviation

The research on enterprises' participation in poverty alleviation mostly starts from the perspectives of enterprises' motivation to participate in poverty alleviation and CSR.

In terms of the motivation of enterprises to participate in poverty alleviation. Wang Pengcheng and Li Jianbiao (2015) pointed out that the motivation of enterprises to fulfill CSR is not only to assume social responsibilities, but also to obtain political resources, and use the fulfillment of social responsibilities to "donate money" to politics to maintain a good relationship with the government. Zhang Yuming (2019) pointed out in the research that the participation of enterprises in poverty alleviation can significantly improve the financial performance of enterprises, especially in terms of industrial investment in poverty alleviation. Wang Fan et al. (2020) through research has found that the three major driving forces for enterprises to participate in poverty alleviation were enjoying tax incentives, obtaining government subsidies, and reducing financing constraints. Yang Yidong and Cheng Hongwei (2020) conducted research from the perspectives of industry homogeneity and property rights, then found that political resources is the driving factors for the enterprises take part in the targeted poverty alleviation, and the value of political resources is directly proportional to the driving force.

In terms of CSR, Carroll (1979) created the "corporate social performance model", and believed that charity responsibility, ethical responsibility, legal responsibility and economic responsibility constitute the CSR pyramid. One of the goals of enterprises for poverty alleviation is to establish a good foundation for the public. Ragodoo (2009) found that about 11% of enterprises have participated in social poverty alleviation activities after conducting a research on enterprises in Mauritius. He believes that enterprises should give priority to poverty alleviation in social activities. Chen Feng et al. (2010) linked enterprises' participation in poverty alleviation with CSR, and studied the mechanism of CSR in enterprises poverty alleviation, pointed out the enterprise's poverty alleviation's model, motivation and effect. Wuttke et al. (2014) found that India's private manufacturing enterprises can provide a reference for other enterprises to better fulfill CSR, and by helping the society to take CSR of poverty alleviation. Lukman Raimi et al. (2015) believe that CSR is a way to alleviate social poverty. Zhang Yan (2018) analyzed the case of China Resources Group's establishment of Hope Primary School in Jinzhai, Anhui, and believed that enterprises can achieve a win-win situation for enterprises and society by combining their own advantages with poverty alleviation.

### 2.2. Research on Precision Poverty Alleviation and Cost of Equity Capital

Regarding the relationship between targeted poverty alleviation and the cost of equity capital, most of the existing literature studies how CSR undertaken by enterprises through poverty alleviation affects the cost of equity capital.

Zhu Wenli and Zhang Hua (2011) pointed out in subsequent research that, due to the pressure of equity financing and stock price performance at the same time, the enterprise will work harder to assume CSR and expect to be recognized by the enterprise internally and externally

to improve The influence of the industry and the recognition of investors make investors more confident in the future performance of the enterprise, and to a certain extent reduce the rate of return on investment and risk compensation required by investors. Li Shu (2013) pointed out that CSR has a significant effect on reducing the cost of equity capital, especially for enterprises that disclose social responsibility information for the first time. Qian Ming et al. (2017) believe that CSR such as poverty alleviation can be supported by stakeholders in order to reduce the cost of equity capital. Hu Haozhi et al. (2020) used the implementation of targeted poverty alleviation as a background study and found that listed enterprises can obtain more market and political resources by participating in targeted poverty alleviation, thereby reducing corporate financing costs.

### **2.3. Research on Targeted Poverty Alleviation, Political Connections and the Cost of Equity Capital**

Targeted poverty alleviation is a way of fulfilling CSR. When studying the relationship among the three aspects of targeted poverty alleviation, political connections, and equity capital costs, CSR is often used to replace the impact of targeted poverty alleviation. In the research on the relationship between CSR, political connections and the cost of equity capital, there are the following two viewpoints in academia.

The first view is that there is a synergistic effect between CSR and political connections on the cost of equity capital, that is, political connections will strengthen the negative adjustment effect of social responsibility on the cost of equity capital. Hillman (1999) and Zhong Hongwu (2007) based on the theory of strategic philanthropy believe that the fulfillment of CSR is to achieve a win-win situation between corporate and social interests, and is no longer just a purely self-interested or altruistic behavior. Li Wei'an et al. (2015) pointed out that non-state-owned enterprises can establish an implicit contract with the government through political connections to reduce the inequality and uncertainty in the exchange of resources with the government.

The second view is that there is a substitution effect between the impact of CSR and political connections on the cost of equity capital. Political connections not only bring various resources to enterprises, but also mean that enterprises need to bear greater social pressure and supervision. Some members of the public will think that the motivation of enterprises to establish political connections is impure, which may be to cover up bad information in the process of production and management. Allen (2004) pointed out that the role of political connections in countries with insufficient legal system construction will be amplified, while the role of other formal factors will be weakened. Ge Yongbo (2020) believes that the role of political connections in influencing financing capacity will gradually weaken, while the role of formal institutions such as social responsibility will gradually increase.

To sum up, after reviewing the relevant domestic and foreign literature mentioned in the previous article, we can find that some researches are relatively mature. For example, in terms of the motivation of foreign companies to participate in poverty alleviation, most companies' participation in poverty alleviation is based on their own economic interests and the promotion of their corporate image. By participating in poverty alleviation activities such as charitable donations to fulfill social responsibilities to meet the requirements of multiple stakeholders such as employees, creditors, and the government, market factors are the main motivation for foreign companies to disclose social responsibility information reports. In the study of the cost of equity capital of enterprises, some scholars divide the influencing factors of the cost of equity capital into two parts, the internal and external environment of the enterprise, and analyze the factors that affect the cost of equity capital from different perspectives.

### 3. Research Design

#### 3.1. Research Hypothesis

##### 3.1.1. Targeted Poverty Alleviation and the Cost of Equity Capital

In the equity financing capital market, investors will consider their own risk appetite and the degree of comprehensive grasp of corporate information when determining their own risk estimates, thereby forming the required risk premium rate of return and summarizing all investors' expectations. Then there are the market's risk expectations for the enterprise, that is, the cost of equity capital.

Feng et al. (2015) conducted a study on 25 countries around the world and found that in countries such as Northern Europe, the better the CSR performance, the lower the cost of equity capital. In the theory of institutional economics, the organizational structure and organizational behavior of enterprises will be homogenized because they are consistent with norms, traditions, and social influences. This "isomorphism" is called "institutional homogeneity." Different regions have different regional cultures, and local enterprises will be more or less affected by local culture. The concept of "benevolence and justice" in Confucian culture in our country is deeply rooted in the hearts of the people, and the enterprise's "benevolence and justice" is embodied when participating in targeted poverty alleviation. It is easier for enterprises that undertake social responsibilities to obtain the recognition of equity investors when conducting equity financing. Therefore, fulfilling CSR can reduce the cost of equity capital.

H1: Under the circumstance that other conditions remain unchanged, private listed enterprises participating in targeted poverty alleviation can reduce the cost of equity capital.

##### 3.1.2. Targeted Poverty Alleviation, Political Connections and the Cost of Equity Capital

According to the theory of institutional economics, systems can be divided into formal systems and informal systems. The formal system refers to the clearly stipulated rules, which clearly stipulates people's behavior and provides incentives; the informal system refers to the values, culture, habits, etc. formed in daily life, and its function is intangible. The "Opinions on Giving Full Play to the Role of Capital Markets to Serve the National Poverty Alleviation Strategy" issued by the China Securities Regulatory Commission in September 2016 is a formal system. If enterprises participating in targeted poverty alleviation meet the requirements for listing, they can obtain formal institutional incentives for "review immediately after reporting, and issue immediately after review". The political connections belong to an informal system, which belongs to the implicit contract between the enterprise and the government. It is easier for enterprises with political connection to obtain political, economic and social resources.

On one hand, private listed enterprises with political connections have more political and strategic motives to participate in poverty alleviation, and have a certain political rent-seeking tendency. On the other hand, senior managers of politically connected private listed enterprises have more opportunities to access the latest poverty alleviation information, and plan poverty alleviation plans in advance based on this information and the development of the enterprise and grasp the government's poverty alleviation needs. The higher the political rank of the executives of private listed enterprises, the more abundant resources they bring to the enterprise. To a certain extent, the benefits of political connections to enterprises overlap with the benefits of participating in targeted poverty alleviation. At the same time, maintaining political connections also requires enterprises to pay.

H2: Under the circumstance that other conditions remain unchanged, when companies participate in targeted poverty alleviation and are politically connected, political connections and targeted poverty alleviation have a synergistic effect on the cost of equity capital.

### 3.2. Sample Selection and Data Sources

This paper selects the data of private listed enterprises disclosed on the Shenzhen and Shanghai Stock Exchanges from 2016 to 2019 for empirical research, and screens the samples: (1) Excluding the financial industry samples; (2) Excluding the ST and \*ST samples; (3) Eliminate samples with missing control variables; (4) Eliminate samples with abnormal calculations of equity capital costs; (5) When performing data processing, use upper and lower values for continuous variables 1% shrinking process Winsorize to eliminate the influence of extreme values. Finally, 4768 unbalanced panel observations were obtained. For details, see Table 1.

**Table 1.** Sample Description of Private Listed Enterprises

| Year   | 2016  | 2017   | 2018   | 2019   | Total |
|--|-------|--------|--------|--------|-------|
| Number of enterprise samples   | 1006  | 1063   | 1342   | 1357   | 4768  |
| Number of enterprises participating in targeted poverty alleviation                  | 85    | 149    | 261    | 270    | 765   |
| Percentage of total sample   | 8.45% | 14.02% | 19.45% | 19.84% | -     |
| Number of politically connected enterprises involved in targeted poverty alleviation | 21    | 42     | 56     | 55     | 174   |
| Percentage of total sample   | 2.09% | 3.95%  | 4.17%  | 4.05%  | -     |

The data on targeted poverty alleviation by private listed enterprises and the financial data of each enterprise come from the Guotaian database. At the same time, it manually collected the specific items of "Performance of Social Responsibility for Targeted Poverty Alleviation" disclosed in the annual reports of listed enterprises downloaded by Juchao.com. The supplementary data comes from the China Social Responsibility Network and the official websites of various enterprises. Political related information comes from the "Board of Directors and Managers Information" in the "Stock In-Depth Information" in the Wind database.

### 3.3. Variable Selection and Definition

**Table 2.** Variable Definition

| Variable name                      | Variable identification | Variable definitions  |
|------------------------------------|-------------------------|---|
| Cost of equity capital             | Rpeg                    | Calculated by PEG model   |
| Political connections              | PC                      | The political influence is assigned According to the administrative level of the chairman or general manager at the time of the government department. For details, see Table 3 |
| Participate in poverty alleviation | HTP                     | LN (the sum of poverty alleviation amount and material discount + 1)  |
| Market risk                        | Beta                    | The beta value of the stock for the year  |
| enterprise size                    | Size                    | Natural logarithm of total assets   |
| Stock liquidity                    | Trvr                    | Annual trading shares / total current shares  |
| Operating capacity                 | TAT                     | Operating income/total asset value  |
| Profitability                      | ROE                     | Net profit/net assets   |
| Growth ability                     | Growth                  | Main business income growth rate  |
| Assets and liabilities             | Lev                     | Total liabilities/total assets  |
| Industry                           | Industry                | Industry dummy variables  |
| Year                               | Year                    | Annual dummy variable   |

The explained variable in this paper is the cost of equity capital, and the model used to measure the cost of equity capital is the PEG model:

$$R_{peg} = \sqrt{(Eps_2 - Eps_1) / P_0}$$

Among them, Eps1: predicted earnings per share for the next year; Eps2: predicted earnings per share for the next year; P0: current share price of the enterprise.

The details of the remaining explanatory variables and control variables are shown in Table 2.

**Table 3.** Levels of Political Assignments

| Official rank | National level | Provincial level | Department level | County level | Townshi-p level | No -political experience |
|---------------|----------------|------------------|------------------|--------------|-----------------|--------------------------|
| Assignment    | 5              | 4                | 3                | 2            | 1               | 0                        |

### 3.4. Model Design

In order to verify H1, this paper constructs model (1) to study the relationship between enterprise poverty alleviation and the cost of equity capital. The coefficient  $\alpha_1$  reflects the relationship between the degree of enterprises participating in targeted poverty alleviation and the cost of corporate equity capital. If  $\alpha_1$  is significantly negative, it means that the greater the enterprise's targeted poverty alleviation activities, the smaller the enterprise's cost of equity capital, that is, Hypothesis 1 holds.

$$R_{pegi,t} = \alpha_0 + \alpha_1 HTP_{i,t} + \alpha_2 Beta_{i,t} + \alpha_3 Trv_{i,t} + \alpha_4 TAT_{i,t} + \alpha_5 ROE_{i,t} + \alpha_6 Growth_{i,t} + \alpha_7 Lev_{i,t} + \sum Industry + \sum Year + \varepsilon_{i,t}$$

In order to verify H2, and to explore the relationship and function of the targeted poverty alleviation, political connections and the cost of equity capital, this paper divides the sample into two groups with political connections and non-political connections based on model (1). Regression analysis was carried out. If the regression coefficient  $\alpha_1$  of politically-related enterprises are not as significant as that of non-political-related enterprises, it indicates that political connections and targeted poverty alleviation have a synergistic effect on the cost of equity capital.

## 4. Empirical Evidence and Results and Analysis

### 4.1. Descriptive Statistics

The Table 4 is descriptive statistics, the minimum value of the cost of equity capital (Rpeg) is 0.009, the maximum value is 0.416, the average value is 0.122, and the standard deviation is 0.056. The overall data fluctuates slightly, indicating that the cost of equity capital of private listed enterprises has not occurred. Extreme differentiation. The maximum political score is 8, the minimum is 0, the average is 0.447, and the standard deviation is 1.069, indicating that the proportion of politically connected enterprises in the total sample is still relatively small, and the overall data fluctuates greatly. The minimum value of the natural logarithm of the HTP level is 0, the maximum value is 7.879, the average value is 0.667, and the standard deviation is 1.666, indicating that the level of private listed enterprises participating in targeted poverty alleviation has changed significantly. More than half of the private listed enterprises are not participating in targeted poverty alleviation activities.

**Table 4.** Descriptive Statistics of Main Variables (N=4,768)

| Variable | min    | max    | Mean    | median  | Standard deviation |
|----------|--------|--------|---------|---------|--------------------|
| Rpeg     | 0.009  | 0.416  | 0.122   | 0.112   | 0.056              |
| HTP      | 0      | 7.879  | 0.667   | 0       | 1.668              |
| PC       | 0      | 8      | 0.448   | 0       | 1.07               |
| Beta     | 0.475  | 2.336  | 1.282   | 1.268   | 0.311              |
| Size     | 20.007 | 25.008 | 21.94   | 21.872  | 0.941              |
| Trv      | 1      | 11.304 | 350.397 | 290.687 | 227.711            |
| TAT      | 0.077  | 2.313  | 0.572   | 0.506   | 0.314              |
| ROE      | -0.811 | 0.3    | 0.065   | 0.072   | 0.102              |
| Growth   | -0.157 | 4.054  | 0.231   | 0.163   | 0.329              |
| Lev      | 0.058  | 0.841  | 0.371   | 0.363   | 0.171              |

**4.2. Correlation Analysis**

**Table 5.** Correlation Analysis of Variables

|        | Rpeg                 | HTP                  | PC                   | Beta                 | Size                 | Trv                  | TAT                  | ROE                  | Growth               | Lev                  |
|--------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Rpeg   | 1                    | -0.059***<br>(0.000) | -0.033**<br>(0.023)  | -0.098***<br>(0.000) | 0.049***<br>(0.001)  | -0.079***<br>(0.000) | 0.061***<br>(0.000)  | -0.042**<br>(0.004)  | 0.069***<br>(0.000)  | 0.134***<br>(0.000)  |
| HTP    | -0.086***<br>(0.000) | 1                    | 0.068***<br>(0.000)  | -0.118***<br>(0.000) | 0.121***<br>(0.000)  | -0.057***<br>(0.000) | 0.053***<br>(0.000)  | 0.088***<br>(0.000)  | -0.017<br>(0.238)    | 0.034**<br>(0.020)   |
| PC     | -0.037**<br>(0.0105) | 0.072***<br>(0.000)  | 1                    | -0.089***<br>(0.000) | 0.076***<br>(0.000)  | -0.080***<br>(0.000) | 0.006<br>(0.674)     | -0.002<br>(0.869)    | -0.043**<br>(0.003)  | 0.032**<br>(0.027)   |
| Beta   | -0.077***<br>(0.000) | -0.118***<br>(0.000) | -0.086***<br>(0.000) | 1                    | -0.319***<br>(0.000) | 0.447***<br>(0.000)  | -0.132***<br>(0.000) | -0.145***<br>(0.000) | 0.018<br>(0.205)     | -0.070***<br>(0.000) |
| Size   | 0.022<br>(0.131)     | 0.172***<br>(0.000)  | 0.101***<br>(0.000)  | -0.197***<br>(0.000) | 1                    | -0.319***<br>(0.000) | 0.020<br>(0.163)     | 0.117***<br>(0.000)  | 0.261***<br>(0.000)  | 0.460***<br>(0.000)  |
| Trv    | -0.056***<br>(0.000) | -0.061***<br>(0.000) | -0.058***<br>(0.000) | 0.352***<br>(0.000)  | -0.283***<br>(0.000) | 1                    | -0.075***<br>(0.000) | -0.214***<br>(0.000) | -0.088***<br>(0.000) | -0.018<br>(0.210)    |
| TAT    | 0.011<br>(0.428)     | 0.063***<br>(0.000)  | 0.001<br>(0.9387)    | -0.109***<br>(0.000) | 0.66***<br>(0.000)   | -0.059***<br>(0.000) | 1                    | 0.339***<br>(0.000)  | 0.004<br>(0.781)     | 0.146***<br>(0.000)  |
| ROE    | -0.119***<br>(0.000) | 0.074***<br>(0.000)  | -0.004<br>(0.7917)   | -0.089***<br>(0.000) | 0.105***<br>(0.000)  | -0.166***<br>(0.000) | 0.199***<br>(0.000)  | 1                    | 0.194***<br>(0.000)  | -0.051***<br>(0.000) |
| Growth | 0.020<br>(0.1668)    | 0.032**<br>(0.025)   | -0.026*<br>(0.077)   | -0.015<br>(0.298)    | 0.213***<br>(0.000)  | -0.096***<br>(0.000) | 0.028**<br>(0.050)   | 0.077***<br>(0.000)  | 1                    | 0.151***<br>(0.000)  |
| Lev    | 0.103***<br>(0.000)  | 0.053***<br>(0.000)  | 0.041***<br>(0.004)  | -0.074***<br>(0.000) | 0.481***<br>(0.000)  | -0.015<br>(0.302)    | 0.160***<br>(0.000)  | -0.096***<br>(0.000) | 0.136***<br>(0.000)  | 1                    |

Note: \*, \*\*, \*\*\*, mean significant at the levels of 10%, 5%, and 1%, respectively, and the p-values are in parentheses, the same below.

In order to avoid the problem of multiple collinearities between multiple variables affecting the model test results of this paper, this paper carried out a correlation test on the correlation coefficients between the variables, as shown in Table 5. The diagonally below part of Table 5 is the Pearson test, and the diagonally above part is the Spearman test.

### 4.3. Multiple Regression Results and Analysis

#### 4.3.1. Targeted Poverty Alleviation and the Cost of Equity Capital

Table 6 lists the test results of H1. From Table 6, we can find that the level of targeted poverty alleviation of enterprises (HTP) and the cost of equity capital (Rpeg) of enterprises are significantly negatively correlated at the level of 1%, and the correlation coefficient is -0.003, which shows that enterprises participate in targeted poverty alleviation. Activities can reduce the cost of equity capital of an enterprise to a certain extent, hypothesis 1 is true.

**Table 6.** Regression Results of Targeted Poverty Alleviation and The Cost of Equity Capital

| variable          | Model (1)               |         |         |
|-------------------|-------------------------|---------|---------|
|                   | Regression coefficients | t value | p value |
| HTP               | -0.004***               | -8.45   | 0.000   |
| Beta              | -0.001                  | 0.42    | 0.671   |
| Size              | 0.001                   | 0.92    | 0.359   |
| Trv               | -0.001                  | -2.12   | 0.034   |
| TAT               | -0.001                  | -0.22   | 0.825   |
| ROE               | -0.053***               | -6.62   | 0.000   |
| Growth            | 0.002                   | 1.03    | 0.302   |
| Lev               | 0.027***                | 5.14    | 0.000   |
| Constant term     | 0.071***                | 3.12    | 0.002   |
| Industry          | control                 |         |         |
| Year              | control                 |         |         |
| Number of samples | 4768                    |         |         |
| Adj-R2            | 0.122                   |         |         |
| F value           | 60.94                   |         |         |

#### 4.3.2. Targeted Poverty Alleviation, Political Connections and Equity Capital Costs

Table 7 lists the test results of H2. we can find from Table 7 that when the enterprises has no political connections, the level of targeted poverty alleviation (HTP) and the cost of equity capital (Rpeg) are significantly negatively correlated at the 1% level, and the correlation coefficient is -0.004; When the enterprises has political connections and the interaction item HTP×PC is added, the level of precise poverty alleviation (HTP) and the cost of equity capital (Rpeg) are significantly negatively correlated at the 1% level, and the correlation coefficient is -0.007, which is higher than that without political connections. When there is a correlation, the negative moderating effect is strengthened. At the same time, the interaction term (HTP×PC) is significantly negatively correlated with the cost of equity capital (Rpeg) at the level of 10%, and the correlation coefficient is -0.001, which explains the politics to a certain extent. Political connections and targeted poverty alleviation have a synergistic effect on the cost of equity capital.



**Table 7.** Regression Results of Targeted Poverty Alleviation, Political Connections, and Cost of Equity Capital

| variable          | Model (2)                  |         |         |                                |         |         |
|-------------------|----------------------------|---------|---------|--------------------------------|---------|---------|
|                   | Political-connected groups |         |         | Non-political-connected groups |         |         |
|                   | Regression coefficients    | t value | p value | Regression coefficients        | t value | p value |
| HTP               | -0.007***                  | -2.66   | 0.008   | -0.004***                      | -7.30   | 0.000   |
| PC                | -0.005***                  | -2.76   | 0.006   | -                              | -       | -       |
| HTP×PC            | -0.001*                    | -1.69   | 0.080   | -                              | -       | -       |
| Beta              | -0.005**                   | -0.83   | 0.408   | -0.016***                      | -0.51   | 0.609   |
| Size              | 0.003                      | 1.15    | 0.250   | -0.001                         | -0.70   | 0.483   |
| Trv               | 0.005***                   | 2.90    | 0.004   | -0.002***                      | -2.19   | 0.028   |
| TAT               | -0.001                     | -0.19   | 0.849   | 0.003                          | 0.09    | 0.929   |
| ROE               | -0.014                     | -0.74   | 0.458   | -0.053***                      | -5.98   | 0.000   |
| Growth            | 0.003                      | 0.47    | 0.641   | 0.003                          | 0.95    | 0.343   |
| Lev               | 0.045***                   | 3.60    | 0.000   | 0.021***                       | 3.66    | 0.000   |
| Constant term     | 0.035                      | 0.70    | 0.486   | 0.080***                       | 3.10    | 0.002   |
| Industry          | control                    |         |         |                                |         |         |
| Year              | control                    |         |         |                                |         |         |
| Number of samples | 826                        |         |         | 3942                           |         |         |
| Adj-R2            | 0.147                      |         |         | 0.1208                         |         |         |
| F value           | 11.94                      |         |         | 50.21                          |         |         |

### 5. Robustness Test

In order to ensure the accuracy of the empirical results, this paper replaces the PEG model used to calculate the cost of corporate equity capital with the OJN model. This model was proposed by Ohlson et al. (2005) based on the residual income model and the Gordon model. The basic calculation formula is as follows:

$$R_{peg} = A + \sqrt{A^2 + \frac{Eps_1}{p_0} \left[ \frac{Eps_2 - Eps_1}{Eps_1} - (\gamma - 1) \right]}$$

$$A = \frac{1}{2} \left[ (\gamma - 1) + \frac{\delta * Eps_1}{p_0} \right]$$

Among them, Eps1 represents the predicted earnings per share for next year; Eps2 represents the predicted earnings per share for the next year; P0 represents the enterprise’s current share price per share, representing the dividend payout rate, and -1 represents the long-term earnings growth rate, generally between 3% and 5 %between. Ohlson (2005) believes that the value can be determined with reference to the gross national product (GNP) or industry growth rate. Domestic scholar Shen Hongbo (2007) directly uses 5% as the value of -1. In this paper, based on the existing research of scholars, it is set to 5% in the calculation.

This article first conducts regression analysis on the above model (1), and finds that the enterprise poverty alleviation intensity (HTP) and the cost of equity capital (Rpeg) are

significantly negatively correlated at the level of 5%, and the correlation coefficient is -0.011, indicating that the enterprise poverty alleviation intensity is more the larger the cost of equity capital, the smaller the validity of hypothesis 1. Then, based on model (1), the sample is divided into politically-related groups and non-political-related groups. The regression results show that in the non-political-related groups, the enterprise The poverty alleviation intensity (HTP) and the cost of equity capital (Rpeg) are significantly negatively correlated at the level of 5%, and the correlation coefficient is -0.013. In the politically connected group, the corporate poverty alleviation intensity (HTP) and the equity capital cost (Rpeg) There is a significant negative correlation at the 5% level, and the correlation coefficient is -0.015, and the interaction term (HTP×PC) is significantly negatively correlated with the cost of equity capital (Rpeg) at the 10% level, and the correlation coefficient is -0.002. This shows that political connections and targeted poverty alleviation have a synergistic effect on the cost of equity capital, which verifies the validity of Hypothesis 2.

## 6. Empirical Conclusions and Policy Recommendations

### 6.1. Empirical Conclusion

This paper discusses the cost of equity capital of private listed enterprises from the perspective of targeted poverty alleviation and political connections, and studies the relationship between the three. The empirical conclusions are mainly as follows: First, compared with private listed enterprises that have not participated in targeted poverty alleviation, enterprises that carry out targeted poverty alleviation activities can more effectively reduce the cost of equity capital of enterprises. and to a certain extent, the intensity of targeted poverty alleviation activities the larger the value, the smaller the enterprise's cost of equity capital. Secondly, as a component of the social capital of private listed enterprises, political connections can release positive signals to the society that enterprises are operating well, improve investors' evaluation of the enterprise, and require a lower rate of return, which helps private listed enterprises reduce the cost of equity capital. Finally, when political connections and targeted poverty alleviation have an alternative effect in reducing the cost of equity capital, that is, political connections will weaken the effect of targeted poverty alleviation on the cost of equity capital.

The shortcoming of this paper is that the Shenzhen-Shanghai Stock Exchange began to require listed enterprises to disclose targeted poverty alleviation in their annual reports in 2016. The observation time as of 2019 is only 4 years, which may not be perfect in terms of the endogeneity of lagged variables. Some enterprises did not disclose poverty alleviation plans and poverty alleviation effects, which made the sample unable to fully reflect the reality. At the same time, since the political relevance of senior management is manually collected by checking the resume of senior management, there may be problems such as incomplete disclosure of senior management information or failure to view it if it is not disclosed.

### 6.2. Policy Recommendations

From the government side. First, government should promulgate more preferential policies for enterprises to participate in targeted poverty alleviation policies, such as tax reduction and exemption, bank loans, project bidding, etc., Second, the government should improve relevant laws and regulations for targeted poverty alleviation, establish and improve poverty alleviation policies and related system support for enterprises, ensure the sustainability of enterprises' participation in targeted poverty alleviation. Third, the government should standardize the mode of information disclosure for targeted poverty alleviation by enterprises, urge enterprises to disclose complete and effective poverty alleviation information, reward enterprises that actively undertake social responsibilities, punish enterprises that engage in fraud, and maintain fair competition in the market environment.

From a corporate perspective. First, enterprises should abandon short-sighted behaviors, seize opportunities for targeted poverty alleviation, reorganize the spatial layout of the industrial chain, and actively seek the greatest consistency between corporate and social interests. Second, enterprises should weaken their excessive attention to political resources and focus on their own development capabilities. The higher the enterprise's operating capability and the more complete its financial disclosure, the financing capability will be improved to a certain extent, and the cost of equity capital will be smaller.

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