Retraction

Retracted: Participation in Targeted Poverty Alleviation and Enterprise Innovation Investment: Analysis of the Mediating Effect Test Model Based on Financing Constraints

Journal of Function Spaces

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] T. Gao and H. Wang, "Participation in Targeted Poverty Alleviation and Enterprise Innovation Investment: Analysis of the Mediating Effect Test Model Based on Financing Constraints," *Journal of Function Spaces*, vol. 2022, Article ID 7060462, 16 pages, 2022.

Research Article

Participation in Targeted Poverty Alleviation and Enterprise Innovation Investment: Analysis of the Mediating Effect Test Model Based on Financing Constraints

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In China, enterprises participating in targeted poverty alleviation can be provided with a strategic resource to enhance their ultimate value creation ability and directly win reputation and obtain sustainable competitive advantages, thus enhancing their innovation ability. In this study, the influence and mechanism of the participation in targeted poverty alleviation on enterprise innovation investment are empirically examined based on financing constraints with the data of nonfinancial listed companies in Shanghai and Shenzhen from 2012 to 2019 as the object. The research suggests that enterprises taking the initiative to participate in targeted poverty alleviation can first have increased innovation investment and especially enhanced exploratory innovation ability. Second, enterprises' participation in targeted poverty alleviation can reduce financing constraints of enterprises' innovation, improve their resource allocation efficiency, and stimulate their innovation vitality primarily through the influence of resource, reputation, and information. This study enriches the theoretical research on the economic consequences of targeted poverty alleviation and provides a reference for guiding enterprises in practice to fulfill social responsibilities to promote enterprises' innovation vigor and boost their high-quality development.

1. The Introduction

Poverty has always been a major obstacle hindering the progress of human society. Poverty eradication has been a strategic event in governance since ancient times, a basic mission of the CPC, and an important task for China to build a moderately prosperous society in an all-round way and realize the great rejuvenation of the Chinese nation. "The world of chaos is not in the rise and fall of a surname, but in the people's happiness." In 2013, President Xi Jinping proposed the idea of targeted poverty alleviation and sounded the charge of the battle against poverty. In 2014, the targeted poverty alleviation policy was officially implemented and made aid accessible to all households. In 2015, the policy of targeted poverty alleviation was promoted as a national strategy. In the above context, the whole Party and the people of all ethnic groups in China have taken out the spirit of "dare to teach the sun and the moon to

change the sky," summoned up the momentum of "Our men wouldn't come back till they beat the Loulans," and launched a general attack on poverty. After five years of poverty alleviation and seven years of targeted poverty alleviation, China has achieved accomplishments in extreme poverty eradication and achieved decisive progress in building up a well-off society in an all-round manner, creating another human miracle that will go down in history.

In China, enterprises serve as the critical important market players and the direct undertakers of social production and circulation, showing unique advantages in achieving targeted poverty alleviation. Notably, since the targeted poverty alleviation action of "ten thousand enterprises helping ten thousand villages" was carried out nationwide, numerous enterprises have made an active response to the call of the central government, fulfilled social responsibility, participated in actions relating to poverty alleviation, and contributed to winning the battle against poverty. The participation

in targeted poverty alleviation takes on a strategic significance for enterprises in fully exploiting the advantages of the industrial chain. To be specific, enterprises can leverage and integrate social resources and their capital strength for alleviating poverty [1], assume actively social responsibilities, and return their corporate value [2, 3]. Despite the possible consumption of human, material, and financial resources, enterprises participating in targeted poverty alleviation will also gain strategic resources to optimize their value chain, industrial chain, and supply chain; build a good social image and brand image; and take advantage of the government's tax relief and other support policies, which is considered a win-win strategic project [4, 5]. On the one hand, enterprises in poor areas that participate in targeted poverty alleviation can be directly beneficial to develop industries in the poor areas, expand markets and build brands, and help industrial projects relating to poverty alleviation connect to the market and generate benefits quickly via their sales channels, procurement channels, and ecosystems [6]. As a result, the coordinated development of local economy will be stimulated; the employment of poor people will be promoted; the conditions of education, medical care, and public facilities will be improved; and the living standards of poor areas will be improved through the overall allocation of resources [7]. On the other hand, enterprises taking the initiative to participate in targeted poverty alleviation can convey the spirit of dedication to the outside world, help them build a good social image, improve their corporate reputation, develop solid social relations with stakeholders, and further acquire more strategic resources (e.g., capital, talent, and technology) [8], thus contributing to the profit-making of enterprises and the combination of economic and social benefits [9].

Moreover, innovation continues to be the primary driver of China's economic and social development and strategically supports the building of a modernized economy. With the stress on the need to unswervingly advance supply-side structural reform, foster new growth points, and achieve high-quality development in a down-to-earth manner, the 19th National Congress of the Communist Party of China (CPC) clearly declared that China will become one of the leading innovative countries by 2035. China's science and technology has been leaping forward, the innovation system has been progressively optimized, the innovation environment has been constantly optimized, and the innovation capacity has been significantly enhanced during the 13th Five-Year Plan period. China's innovation governance has formed a novel pattern, whose scientific and technological strength has also reached a new level. China's R&D investment has increased from 1.42 trillion yuan in 2015 to 2.21 trillion yuan in 2019, with the intensity of R&D investment reaching 2.23 percent in 2019. China has moved up the GII ranks consistently and steadily since 2013, as suggested by the Global Innovation Index released by the World Intellectual Property Organization (WIPO), which has led to continuous progress from ranking 14th in 2020 to 12th in 2021. Furthermore, China has been a global innovation leader, knocking at the door of the GII top 10. China has become the world's second largest R&D investment country and second largest knowledge output country.

Innovation has become an enduring research topic in economic management and finance, giving birth to several theoretical and practical achievements on innovation. In the context that China has committed to becoming an innovative country and the system design of innovation has driven its development, innovation has become an enduring research topic in economic management and finance, giving birth to several theoretical and practical achievements on innovation. Moreover, based on the continuous improvement of talent training level and the rapid change of higher education, "enterprise innovation" has served as a solid force at intermediate level to optimize the functions of the capital market and adjust and change the industrial structure, which is also a significant cornerstone for the healthy development and competitiveness improvement of microenterprises. Despite the existing literature, comprehensive studies have been conducted on the factors for enterprise innovation, including industrial policy at the macrolevel [10], such as governance system [11, 12] and financial environment [13], and at the microlevel, corporate governance [14], internal control [15], and accounting conservatism [16, 17]. How to play the role of corporate social responsibility in corporate innovation through targeted poverty alleviation has been rarely investigated.

In China's emerging and transforming market, the main force to facilitate innovation and development in China is R&D; although R&D is of critical significance for enterprises in improving their core competitiveness and achieving sustainable development [18], enterprises' innovation projects are commonly faced with a high degree of information asymmetry and financing constraints due to high risk, substantial capital requirements, and long cycle of innovation, thus restricting enterprises' R&D innovation activities. With the continuous promotion of "the rule of China," China's enterprises have been more extensively involved in social governance activities and play an increasingly vital role in the process of improving national governance capacity. Subsequently, a question is raised whether the participation of enterprises in targeted poverty alleviation will help ease financing constraints and thus affect the innovation input of enterprises.

Under the above policy background and the current enterprises' financing difficulties and lack of innovation, this study is aimed at exploring whether enterprises' participation in industrial targeted poverty alleviation, besides creating value for the society, will reduce their financing constraints, increase their innovation investment, and achieve a win-win situation between social value and enterprise value in terms of corporate social responsibility under the policy guidance. The marginal contribution is embodied in two aspects. First, the innovative behavior of enterprises through poverty governance is investigated in this study based on China's actual situation. Thus, this study enriches the relevant literature on the development of targeted poverty alleviation based on China's social governance while providing more insights for enterprises to play the governance role in consolidating the achievements of poverty alleviation and implementing the Rural Revitalization Strategy. Second, in terms of financing constraints, the theoretical analysis and

empirical test of the influence of targeted poverty alleviation on enterprises' innovation investment, and financing constraints in deep insight into the relationship between the function mechanism, the study can promote the motivation of enterprises to fulfill social responsibility and lead to the economic consequences of a rich China's enterprises to be involved in targeted poverty alleviation. As a result, empirical evidence can be provided for enterprises to carry out targeted poverty alleviation and reduce financing constraints, help enterprises actively launch and disclose targeted poverty alleviation projects, and provide novel ways for enterprises to reduce financing constraints. Third, enterprises' participation in targeted poverty alleviation is a specific behavior to roll out national strategic policies. The study on the economic consequences of enterprises' participation in targeted poverty alleviation is beneficial to provide more insights into the influence of national macropolicies on corporate behavior, and it can guide enterprises to promote their high-quality development by actively engaging in public welfare undertakings, thus helping regulators further optimize the social responsibility disclosure system and regulatory mechanism and actively encouraging enterprises to launch investment projects in underdeveloped areas to contribute to rural revitalization.

2. Theoretical Analysis and Hypothesis

2.1. Participation in Targeted Poverty Alleviation and Innovation Investment of Enterprises. Innovation is a vital factor for an enterprise to enhance its value creation ability and maintain its competitive edge. Innovation largely determines the success or failure of an enterprise, especially in the increasingly competitive international market environment at present [19]. The participation in targeted poverty alleviation is a vital measure for enterprises to assume social responsibility and practice socialist core values, and it takes on a strategic significance for enterprises in enhancing their innovation ability. On the one hand, the participation in targeted poverty alleviation can facilitate product optimization and upgrading of enterprises and increase innovation efforts. Accuracy is essential to the essence of poverty alleviation "accurate," requiring accurate objects for poverty alleviation and placing more emphasis on project scheduling precision and poverty results accuracy. Accordingly, enterprises participating in targeted poverty alleviation are no longer simply making donations for charity, but to "foster" object for poverty alleviation, help poor areas develop characteristic industry, stimulate the endogenous power of poverty alleviation, and fundamentally achieve poverty alleviation and prosperity. In accordance with the poverty area, human resources, environment, and others, an enterprise can combine its development strategy, market position, product process, and others to retrofit existing technologies, develop novel products, optimize the industrial structure, and break through the geographical position, the consumption structure, the limitation of the natural environment, etc. The above process requires the enterprise to enhance its innovation ability and increase the intensity of innovation, so the enterprise can develop emerging industries adapting to poor

areas under local conditions, form novel business models, and design advanced production technologies capable of facilitating the common development of enterprises and poor areas. As a result, the participation of enterprises in poverty alleviation activities refers to a process of continuous innovation and development [20, 21].

On the other hand, the participation in targeted poverty alleviation can improve employees' sense of identity with the organization and stimulate enterprise innovation vitality. Human capital, the carrier of knowledge, is the vital factor of productivity to boost the development of enterprises and the basic unit of enterprise innovation activities, thus taking on a critical significance in enterprise innovation. The enhancement of human capital quality can enhance the ability of enterprises to absorb new knowledge and develop novel products and help enterprises acquire and share knowledge, form innovation culture, and transform innovation achievements [22]. Enterprises participating in targeted poverty alleviation, assuming their social responsibilities with high quality, and gaining considerable government recognition and high social recognition will increase the company's visibility and external governance efficiency. Moreover, employees will enhance their sense of ownership and sense of pride and belonging to the organization through the external honor of the enterprise [23]. In accordance with social exchange theory, the stakeholders of an enterprise allocate resources in the balance between the reward and the cost. If one gets a large reward through the transaction, it will voluntarily repay others through material and emotional behaviors. Employees' sense of identity to the organization will improve their work enthusiasm, strengthen the cohesion of the enterprise, deepen communication and team cooperation, further integrate innovative ideas, stimulate the innovation vitality of the enterprise, and enhance the innovation ability [24]. Furthermore, enterprises can establish a good image, enhance social reputation, transmit favorable signals, make stakeholders have full confidence in the business status and development potential of the enterprise, and improve their investment desire and strength by actively assuming their social responsibilities to reduce the financing constraints of enterprises, increase innovation investment, and contribute to R&D and innovation activities.

Exploratory innovation and exploitative innovation are two types of innovation ways with different logics and tracks. To achieve breakthrough change and high-quality development, enhance the competitive ability, and achieve the transformation and upgrading in accordance with the development of new problems, new economic mode, and new consumption demand, enterprises should investigate novel technologies, develop novel products, create new markets, develop new industry innovation behavior, which is high-risk, large-scale, high-return, and radical exploratory innovation [25]. Exploitative innovation is more related to the updating, transformation, and improvement of products and technologies based on the original and the reuse of original knowledge and resources [26, 27]. Compared with exploitative innovation, exploratory innovation will acquire, integrate, digest, and absorb new knowledge, resources, and

technologies. With participating in targeted poverty alleviation, enterprises often develop emerging industries based on the resource advantages of poor areas and their own development needs, which requires considerable capital to update technology, research, and development of novel products and innovation of business models and stimulate the economic vitality of poor areas. Thus, targeted poverty alleviation itself is an exploratory innovation, and enterprises' participation in targeted poverty alleviation will be more conducive to promoting their investment in exploratory innovation.

Based on the above analysis, this study proposes the following hypotheses:

(i) *H1a*: the participation in targeted poverty alleviation is conducive to promoting enterprise innovation investment

(ii) *H1b*: compared with development innovation, the participation in targeted poverty alleviation is more conducive to increasing investment in exploratory innovation

2.2. Participation in Targeted Poverty Alleviation and Corporate Financing Constraints. In accordance with the MM theory, the market is a perfect market, where there is no difference in the cost of obtaining funds from internal and external sources. However, the information asymmetry theory suggests the existence of agency problems and the fact that there is no perfect world market, causing friction between the supply and demand sides of funds in transactions. Moreover, internal and external financing cannot be completely replaced by each other due to the problems of risk and quantity. As a result, the cost of external financing is significantly higher than the cost of internal financing and finally affects the relevant decisions of investment and financing. Due to the limited self-owned funds, enterprises will always face financing activities from external markets or financial institutions in the process of operation and financial management. The R&D and innovation activities of enterprises require considerable continuous capital investment as support. Internal funds are often difficult to meet the needs of R&D and innovation activities, so enterprises consider external sources. When obtaining funds from the outside, the fund supplier should often spend more costs to acquire the information of the fund demander and prevent moral hazard and other problems. Enterprises should pay the above costs when obtaining funds from the external market, so the cost of external financing is significantly higher than the cost of internal financing, thus limiting the financing channels of listed companies.

The development of enterprises is inseparable from R&D and innovation activities. R&D and innovation require considerable continuous capital investment as a guarantee. The lack of financing and capital support hinders the investment of numerous enterprises in innovation. When constrained by financing, R&D innovation is generally forced to be interrupted or stopped due to insufficient

funds. Due to the imperfection of China's capital market, financing constraints (e.g., financing difficulty and high cost of capital) have been a main factor hindering the development of China's enterprises. If enterprises can assume social responsibility actively, it will reduce financing constraints through the influence of resource, reputation, and information [5].

First, the participation in targeted poverty alleviation can obtain strategic resources and promote resource integration. Resource-based theory holds that an enterprise is an aggregate of various resources, and the enterprise with unique resources has "resource positioning barrier" and can obtain unique competitive advantages. The participation in targeted poverty alleviation can help enterprises improve their social influence and bring positive economic benefits, which are differentiated resources for enterprises to participate in market competition [28]. On the one hand, although poor areas lack social resources, they are often rich in natural and economic resources, thus leading to a good public opinion environment for enterprises. Enterprises participating in targeted poverty alleviation can effectively exploit the resource endowment advantages of poor areas; obtain the support of local land, labor, and other characteristic resource factors; organically combine enterprise capital, technology, and management; and boost the efficient allocation of a variety of resources, industries, and production factors. As a result, a material basis is laid for enterprises to develop local characteristic industries in poor areas; superior brands are built; the added value of products is increased; local characteristic industry chains are established accurately and effectively; the innovation and transformation of the original technology, products, and business model are achieved; and innovation activities are promoted. On the other hand, under the background that philanthropy, a new "soft competitiveness" of enterprises, will play a radiating role in the economy, targeted poverty alleviation is a national strategic deployment, and enterprises' participation in it can help them be more recognized from the government and obtain core technologies and resources required for innovation with the help of the government [1]. The government will provide policy, information, and financing support to encourage and support enterprises to carry out targeted poverty alleviation. Accordingly, the participation in targeted poverty alleviation will ease corporate financing constraints through the acquisition and integration of strategic resources.

Second, the participation in targeted poverty alleviation can respond to stakeholder expectations and improve social reputation. Stakeholder theory suggests that enterprise operation is aimed at maximizing the value of the company on the premise of protecting the interests of stakeholders. Enterprises and society are a type of symbiotic relationship. The development of enterprises should be balanced with economy, environment, and society. Enterprises should assume corresponding social responsibilities and create certain social value by realizing self-value [29]. As a social and economic organization, enterprises should not exist for the purpose of shareholder value, whereas they should effectively assume corresponding social responsibilities to the society, community, relevant individuals, and other

stakeholders. An enterprise refers to a collection of contracts of stakeholders who are the source of creating value for the enterprise. The business activities of the enterprise will have an effect on the interests of stakeholders, and stakeholders also take on a critical significance in the formulation and implementation of the enterprise strategy [30].

Participating in targeted poverty alleviation refers to the natural responsibility of enterprises and the need to create a responsible image. Besides, it is a strategic social responsibility of shared value [31]. Enterprises' participation in targeted poverty alleviation can improve their social image; accumulate good reputation capital; gain recognition, support, and trust from stakeholders; and bring strategic competitive advantages to enterprises. Social reputation is a critical intangible asset for the survival and development of enterprises. It is the basic standard for enterprises to enhance business communication, expand market share, and obtain credit support. First, the enterprise participating in targeted poverty alleviation sets up a good image, which will help the upstream and downstream enterprises of the supply chain develop a stable relation of cooperation and get more market share and investors to attract more capital. The enterprise can also improve the core position in the value chain of enterprises and market share, enhance the value creation ability and profitability of the enterprise, and increase the cash flow and capital accumulation of business activities, so as to reduce its internal financing constraints. Second, in China's current economic system, banks are still the main channel of enterprise financing, and social reputation lays a basis for banks and other financial institutions to measure whether enterprises can obtain credit. The good reputation capital of enterprises makes it easier for them to obtain more loans and credit support, which solves the problem of difficult and expensive financing to some extent. Samet and Jarboui suggested that enterprises that actively fulfill their social responsibilities are more likely to obtain bank loans with lower interest rates and longer terms [32].

Third, participating in targeted poverty alleviation can reduce the degree of internal and external information asymmetry of enterprises and enhance their financing ability. Information asymmetry is the root cause of enterprise financing constraint. The key to reduce the degree of enterprise financing constraint is to decrease the degree of internal and external information asymmetry. Enterprises' participation in targeted poverty alleviation information has incremental information, which may increase the confidence of information demand of capital providers. Enterprises consume considerable resources to participate in targeted poverty alleviation activities and assume the social responsibility of poverty alleviation and prosperity, suggesting that enterprises are in good operating condition and have certain financial capacity to launch public welfare activities. Enterprises that disclose accurate information for poverty alleviation can improve enterprise information transparency; reduce the degree of information asymmetry; make potential investors or creditors more objectively forecast the future of the enterprise to the financial situation, to enhance the accuracy of its assessment of the value of

the company; eliminate the fear of the market; and reduce the transaction costs in the corporate finance activities, thus easing financing constraints [33]. Gao et al. [34] confirmed that CSR fulfillment by enterprises can reduce financing constraints; the higher the quality of CSR information disclosure, the stronger the mitigation effect will be.

Based on the above analysis, this study proposes the following hypothesis:

(i) *H2*: the participation in targeted poverty alleviation will help ease financing constraints of enterprises

2.3. Targeted Poverty Alleviation, Financing Constraints, and Investment in Innovation. An enterprise's innovation project is characterized a long cycle, a great capital demand, and high risks. The research and development of project success are directly related to the increase of enterprise competitiveness, so enterprises will adopt a series of measures to strictly protect an important commercial secret. As a result, the enterprise innovation activities often face serious information asymmetry and high degree of innovative financing constraints, thus threatening the implementation of innovation strategy. Enterprises facing higher financing constraints expect increased operational risks and increased investment difficulty, as well as reduced returns. Thus, enterprises are more inclined to adopt sound investment strategies, reduce innovation input with greater uncertainty, and reduce the possibility of failure of investment projects [35]. When enterprises can raise the funds needed for investment more easily and at a lower cost, they will have higher profitability, and they often have sufficient cash flow and working capital, thus weakening the information asymmetry between enterprises and investors. In addition, the enterprise financing environment can be optimized, which can further alleviate financing constraints, enhance enterprise innovation confidence, and improve enterprise innovation ability. Thus, the participation in targeted poverty alleviation will promote innovation investment by alleviating corporate financing constraints.

In addition, exploratory innovation has a longer return cycle and higher uncertainty than development innovation, which is more related to the improvement of the competitiveness level of enterprises, and its information asymmetry is more serious, and underinvestment is more common. Accordingly, this type of innovation is more restricted by financing constraints. Moreover, participation in targeted poverty alleviation is more conducive to the strategic development of enterprises, exploratory innovation is also more focused on the realization of long-term interests of enterprises, and enterprises often carry out the two activities for the same purpose. Thus, strategic resources brought by participating in targeted poverty alleviation will play a greater role in facilitating exploratory innovation.

Based on the above analysis, this study proposes the following hypotheses:

(i) *H3a*: the participation in targeted poverty alleviation will promote the increase of enterprise innovation input through the alleviation of financing

constraints; that is, financing constraints play a partial intermediary role between the participation in targeted poverty alleviation and innovation input

(ii) *H3b*: compared with developmental innovation, the participation in targeted poverty alleviation can promote the increase of exploratory innovation input by alleviating financing constraints; that is, financing constraints play a greater mediating role between the participation in targeted poverty alleviation and exploratory innovation input than between developmental innovation input

3. Research Design

3.1. Sample Design and Data Sources. Due to the disclosure of the listed company accurate data for poverty alleviation, which began in 2016, to compare the company involved in precise changes before and after the innovation investment for poverty alleviation, the symmetry of guarantee during the study period, the Shanghai and Shenzhen A-share nonfinancial listed companies between 2012 and 2019 are selected as the research samples, and the observation and related variables for ST and ∗ST company samples after missing value are excluded in each year. All continuous variables in 1% and 99% quartile are Winsorized. A total of 15,464 observations of 3084 listed companies are obtained.

Excel 2007 and Stata15 software are adopted to process and verify the data. Targeted poverty alleviation data are collected and classified manually from the annual corporate social responsibility report, and other data are collected from the CSMAR database.

3.2. Model Design and Variable Definition. Listed companies' participation in targeted poverty alleviation is an active charity behavior, and there may be significant differences between participating enterprises and nonparticipating enterprises in advance. In this study, a multiperiod differential model is adopted by referring to the study by Zhang and Dong [8] to test the net impact of participating in targeted poverty alleviation on the level of innovation investment of enterprises, avoid the interference of prior differences, and reduce the estimation error. The model design is expressed as

$$\mathrm{RD}_{i,t} = \beta_0 + \beta_1 \mathrm{TPA}_{i,t} + \mathrm{Controls}_{i,t} + \mathrm{Year} + \mathrm{Industry} + \mathrm{Firm} + \varepsilon_{i,t}. \tag{1}$$

The explained variable RD in model 1 represents the company's innovation investment level, which is measured by the ratio of R&D expenditure to operating income. Furthermore, in accordance with the different nature of innovation, the measurement indexes of exploratory innovation (RD1) and developmental innovation (RD2) are constructed, which are measured by the ratio of expenditure to operating revenue in the research stage and development stage to test hypotheses H1a and H1b.

The explanatory variable TPA is the dummy variable of listed companies' participation in targeted poverty allevia-

tion. Targeted poverty alleviation information disclosed by listed companies comprises general information and itemized input information, whereas the two are inconsistent or lack of information. Considering the information disclosure of listed companies of the inconsistency problem, to increase the accuracy of the measure, this study refers to Deng et al. [5], only to have a combination of the overall situation and the samples as to participate in the precision of the sectional input information samples for poverty alleviation. The TPA value is set to 1; otherwise, it is considered to be not involved in an accurate sample for poverty alleviation, with TPA value of 0. To control other factors that affect enterprise innovation input, this study also selects a series of indicators including financial characteristics and corporate governance characteristics and controls annual, industry, and firm individual fixed effects. Specific variable definitions are listed in Table 1.

To test whether financing constraints play an intermediary role in the relationship between targeted poverty alleviation and innovation input, the following model is constructed to test hypothesis H2 and hypotheses H3a and H3b:

$$\mathrm{KZ}_{i,t} = \beta_0 + \beta_1 \mathrm{TPA}_{i,t} + \mathrm{Controls}_{i,t} + \mathrm{Year} + \mathrm{Industry} + \mathrm{Firm} + \varepsilon_{i,t}, \tag{2}$$

$$\mathrm{RD}_{i,t} = \beta_0 + \beta_1 \mathrm{TPA}_{i,t} + \beta_2 \mathrm{KZ}_{i,t} + \mathrm{Controls}_{i,t} + \mathrm{Year} + \mathrm{Industry} + \mathrm{Firm} + \varepsilon_{i,t}. \tag{3}$$

The explained variable KZ index in model 2 represents the financing constraints of the company. The larger the value of KZ index is, the more serious the financing constraints the company faces. The calculation method refers to Kaplan and Zingales [36] and Wei et al. [37] in accordance with five indicators (including operating cash flow, cash dividends, cash holdings, asset-liability ratio, and Tobin's Q). The KZ index, measuring the financing constraint degree of listed companies, is fitted and estimated. In model 3, the KZ index is introduced into the test model of innovation input and combined with model 2; the mediating effect of enterprises participating in targeted poverty alleviation improving innovation input by alleviating financing constraints is verified.

4. Empirical Analysis

4.1. Descriptive Statistical Results and Analysis. The descriptive statistical results of the main variables are listed in Table 2. To improve the visibility of regression coefficient, the innovation input indicators applied in this study are all percentages. The average value of (RD) is 4.707, suggesting that the average proportion of R&D expenditure to revenue of the sample enterprises is nearly 4.707%, in which the level of exploratory innovation investment (RD1) is about 4.222%, and the level of development innovation investment (RD2) is 0.410%, suggesting that the overall innovation ability of China's enterprises is not high, and most enterprises' innovation is concentrated in the exploratory activities

TABLE 1: Variable definition table.

Variable categories	The variable name	Variable code	Variable definitions
	The innovation	RD	T period R&D expenses/T period operating revenue
Explained variable	Exploratory innovation	RD1	T phase research phase expenditure/T phase operating income
	Development innovation	RD2	T phase development phase expenditure/T phase operating income
Explanatory variables	Targeted poverty alleviation	TPA	Dummy variable: when the company discloses the investment amount of at least one specific targeted poverty alleviation project in the current year, the value is 1; otherwise, the value is 0.
Intervening variable	Financing constraints	KZ	It is estimated by reference to relevant research
	The company size	Size	Ln (total assets in phase T)
	Establishment year of company	Age	Ln (company establishment year of period T)
	Return on assets	ROA	Net profit of period T/total assets at the end of period T
	Company growth	Growth	Growth rate of operating income in period T
	Financial leverage	Lev	Total liabilities at the end of period T/total assets at the end of period T
	Debt paying ability	Pay	Ebit for period T/total liabilities at the end of period T
Control variables	The cash flow	CFO	Net cash flow from operating activities/total assets of the company
	Proportion of fixed assets	PPE	Net fixed assets/total assets of the company
	Ownership concentration	Top1	The shareholding ratio of the largest shareholder
	The joining together of two jobs	Dual	The value is 1 if the chairman and the general manager are concurrent; otherwise, the value is 0
	Board size	Bsize	The number of board members
	Proportion of independent directors	Indep	Ratio of number of independent directors to number of directors
	The annual	Year	Annual dummy variable
	Industry	Ind	Industry dummy variable

TABLE 2: Descriptive statistical results.

Variable	Observations	Mean	Standard	Minimum	The median	Maximum
RD	15464	4.707	4.544	0.030	3.650	26.100
RD1	15464	4.222	3.903	0.014	3.439	22.519
RD2	15464	0.410	1.247	0.000	0.000	7.827
TPA	15464	0.216	0.418	0.000	0.000	1.000
KZ	15464	0.418	2.043	−9.667	0.649	9.167
Size	15464	22.113	1.221	19.847	21.941	25.984
Age	15464	2.835	0.333	1.792	2.890	3.466
ROA	15464	0.040	0.069	−0.290	0.039	0.214
Growth	15464	0.169	0.379	−0.518	0.110	2.445
Lev	15464	0.404	0.200	0.050	0.391	0.907
Pay	15464	0.216	0.349	−0.646	0.129	2.053
CFO	15464	0.046	0.065	−0.148	0.044	0.230
PPE	15464	0.208	0.143	0.004	0.182	0.649
Top1	15464	0.337	0.143	0.088	0.318	0.736
Dual	15464	0.301	0.459	0.000	0.000	1.000
Bsize	15464	8.473	1.598	5.000	9.000	14.000
Indep	15464	0.376	0.053	0.333	0.353	0.571

rather than in the development stage. In the research sample, the proportion of enterprises participating in targeted poverty alleviation (TPA) is nearly 21.6%, suggesting that the intensity of China's enterprises' participation in poverty alleviation needs to be improved. The mean value and standard deviation of financing constraint (KZ) are 0.418 and 2.043, respectively, suggesting that all listed companies have financing constraint to a certain extent, and there are significant differences in financing constraint degree among different enterprises. The descriptive statistics of other control variables are basically consistent with the general statistical results and roughly consistent with the actual situation.

4.2. Correlation Analysis. To preliminarily test the influence of the participation in targeted poverty alleviation on enterprise innovation input and judge whether the proposed research hypothesis is reasonable, this study conducted Pearson correlation test on the participation in targeted poverty alleviation and innovation input, and the results are listed in Table 3. The correlation coefficient between innovation input (RD) and the participation in targeted poverty alleviation (TPA) is 0.09, but is not significant, which cannot verify H1a. The possible reason is that enterprises participating in targeted poverty alleviation have large individual heterogeneity, and the net impact of targeted poverty alleviation on company innovation needs to be observed based on controlling various factors and company characteristics. The correlation between other explanatory variables and innovation input remains significant, suggesting that the explanatory variables selected in this study are reasonable. The correlation coefficients between all variables are less than 0.5, and the VIF test value is far less than 10, suggesting that there is no multidiscipline in the research model.

4.3. Multiple Regression Results and Analysis. Table 4 lists the basic regression results of the influence of targeted poverty alleviation on the company's innovation investment. In column 1, considering the fixed effects in control of the year, the industry, company, and other factors which affect innovation input levels, the regression coefficient of TPA was 0.138, which is significant at the 5% level, suggesting that businesses participate in precision while consuming a certain amount of resources for poverty alleviation, but will ensure accurate poverty alleviation policy implementation to promote the development of the enterprise innovation activities, and will increase investment in innovation by enterprises. Further, to test the heterogeneous influence of the participation in targeted poverty alleviation on enterprise innovation activities, columns 2 and 3 also test the influence of the participation in targeted poverty alleviation on exploratory innovation and developmental innovation. There is a significant positive correlation between TPA and RD1 at the 1% level, but the correlation between TPA and RD1 is not significant. Accordingly, the significant positive influence of the participation in targeted poverty alleviation on innovation input only exists in exploratory innovation, and there is no significant influence on development innovation. This indicates that compared with development-oriented innovation, the participation in targeted poverty alleviation is more

conducive to improving the investment level of exploratory innovation, thus verifying hypothesis 1B.

Because the viscosity of the firm's innovation investment exists for a certain period, the innovation investment may be the heterogeneity of the early decision or individual difference. Thus, if the absolute value of innovation input index is adopted, it is not reliable, objective, and scientific to accurately reflect the influence of poverty alleviation on the real influence of innovation activities. Accordingly, this study further uses the variable increment index of innovation input ($\triangle$RD) to reexamine model 1. The regression results of columns 4 to 6 show that TPA is significantly positive with $\triangle$RD and $\triangle$RD1 at the level of 1% and 5%, respectively, but the correlation coefficient with $\triangle$RD2 is not significant, which verifies H1a and H1b again, suggesting that the participation in targeted poverty alleviation can not only promote the level of innovation input but also improve the growth level of innovation input. Meanwhile, enterprises participating in targeted poverty alleviation pay more attention to long-term development benefits. To deepen industrial transformation and achieve high-quality development, enterprises will actively absorb new knowledge and skills, develop novel products, expand new markets, and carry out exploratory innovation activities according to the needs of market development.

Corporate social responsibility can be considered a strategy to obtain resources required for development, and strategic resources are the vital mechanism to affect corporate financial decisions. Table 5 lists the test results of financing constraint as an influencing mechanism. Columns 1 and 2 represent the regression results for the model. The regression coefficient of the TPA with KZ -0.953, significant at 1% level, suggests that through the integration of resources and superior resources, the poor areas receive recognition and financial support from the government to help enterprises to participate in targeted poverty alleviation. These enterprises can also gain social recognition through reputation effect and improve profitability. In addition, these enterprises can reduce the degree of information asymmetry between investors and bondholders and obtain the required credit resources at a lower cost, thus easing the level of financing constraints of enterprises.

Columns 2–7 represent the regression results of model 3. After joining the financing constraint index, TPA and innovation investment (RD, delta RD) still show a significant positive relationship. TPA and KZ are negatively related at the 1% significance level. Based on model 1, the regression result suggests that as the enterprises participating in targeted poverty alleviation have obtained more funds for poverty alleviation resources, they have reduced the financing constraints on innovation and become more innovative. The level of innovation input has significantly increased. Thus, financing constraints play a partial intermediary role in the relationship between the participation in targeted poverty alleviation and enterprise innovation input. The participation in targeted poverty alleviation can significantly facilitate the R&D and innovation investment intensity of enterprises by alleviating financing constraints, consistent with the theoretical analysis results above and supporting

TABLE 3: Table of phase relation.

	RD	TPA	Size	Age	ROA	Growth	Lev	Pay	CFO	PPE	Top1	Dual	Bsize	Indep
RD	1													
TPA	0.09	1												
Size	-0.27***	0.27***	1											
Age	-0.12***	0.18***	0.19***	1										
ROA	-0.02**	0.04***	-0.01	-0.06***	1									
Growth	-0.03***	0.01	0.04***	-0.06***	0.28***	1								
Lev	-0.29***	0.10***	0.53***	0.16***	-0.37***	0.00	1							
Pay	0.07***	-0.01*	-0.17***	-0.08***	0.33***	0.12***	-0.23***	1						
CFO	-0.04***	0.07***	0.06***	0.03***	0.39***	0.01	-0.17***	0.37***	1					
PPE	-0.24***	0.07***	0.11***	0.04***	-0.10***	-0.10***	0.13***	-0.09***	0.21***	1				
Top1	-0.17***	0.05***	0.17***	-0.06***	0.12***	-0.02***	0.05***	0.06***	0.10***	0.10***	1			
Dual	0.13***	-0.06***	-0.19***	-0.10***	0.04***	0.03***	-0.13***	0.06***	-0.00	-0.08***	-0.02***	1		
Bsize	-0.13***	0.09***	0.29***	0.09***	0.01	-0.02**	0.16***	-0.05***	0.03***	0.14***	0.01	-0.18***	1	
Indep	0.07***	-0.00	-0.01	-0.04***	-0.02**	-0.01	-0.01	-0.00	0.00	-0.04***	0.05***	0.12***	-0.53***	1

Note: ***, **, and * are significant at the level of 1%, 5%, and 10%, respectively.

TABLE 4: Participation in targeted poverty alleviation and company innovation investment.

Variable	(1) RD	(2) RD1	(3) RD2	(4) △RD	(5) △RD1	(6) △RD2
TPA	0.138**	0.158***	0.004	0.211***	0.156**	0.045
	(2.10)	(2.67)	(0.13)	(3.05)	(2.39)	(1.44)
Size	0.046	−0.124**	0.170***	0.367***	0.312***	0.029
	(0.84)	(−2.54)	(7.15)	(6.41)	(5.78)	(1.11)
Age	−2.087***	−1.346***	−0.297*	0.390	0.601	−0.322*
	(−5.48)	(−3.93)	(−1.79)	(0.97)	(1.59)	(−1.78)
ROA	−4.580***	−4.494***	0.239	−3.172***	−3.756***	1.063***
	(−9.72)	(−10.60)	(1.16)	(−6.39)	(−8.03)	(4.74)
Growth	−0.809***	−0.610***	−0.164***	−1.594***	−1.323***	−0.230***
	(−16.67)	(−13.99)	(−7.74)	(−31.21)	(−27.50)	(−9.95)
Lev	−2.500***	−2.271***	−0.262***	−0.805***	−0.821***	−0.037
	(−12.12)	(−12.25)	(−2.91)	(−3.71)	(−4.02)	(−0.37)
Pay	−0.568***	−0.425***	−0.155***	0.150	0.028	0.003
	(−5.28)	(−4.39)	(−3.28)	(1.33)	(0.26)	(0.06)
CFO	−0.226	−0.092	−0.085	0.348	0.454	−0.089
	(−0.67)	(−0.30)	(−0.58)	(0.98)	(1.35)	(−0.55)
PPE	0.375	0.130	0.271**	−0.825***	−0.609**	−0.078
	(1.29)	(0.50)	(2.13)	(−2.69)	(−2.11)	(−0.56)
Top1	−0.157	0.006	−0.260*	0.270	0.204	−0.016
	(−0.45)	(0.02)	(−1.70)	(0.74)	(0.59)	(−0.09)
Dual	0.135**	0.101*	0.048*	0.211***	0.131**	0.047
	(2.21)	(1.84)	(1.78)	(3.28)	(2.16)	(1.62)
Bsize	0.002	−0.034	0.019*	0.022	−0.008	0.017
	(0.07)	(−1.50)	(1.70)	(0.83)	(−0.30)	(1.43)
Indep	−1.079*	−1.409**	0.015	−0.600	−0.660	−0.263
	(−1.70)	(−2.47)	(0.06)	(−0.90)	(−1.05)	(−0.87)
Constant	12.237***	15.589***	−2.100***	−9.140***	−5.955***	0.346
	(6.85)	(9.71)	(−2.69)	(−4.86)	(−3.36)	(0.41)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
N	15464	15464	15464	15464	15464	15464
R^2	0.103	0.098	0.043	0.101	0.093	0.022

Note: ***, **, and * represent significant at the level of 1%, 5%, and 10%, respectively, and are reported as T values in brackets, the same as in the following table.

the hypothesis H3a. Furthermore, TPA has a significant positive relationship to exploratory innovation (RD1, △RD1), while TPA is not significantly related to developmental innovation (RD2, △RD2), suggesting that the participation in targeted poverty alleviation can promote exploratory development investment by alleviating financing constraints, but has little impact on developmental innovation investment. The results also confirmed H3b.

4.4. Endogenous Test. There may be an endogenous problem of reverse causality between targeted poverty alleviation and innovation poverty alleviation, i.e., the innovation ability of listed companies. Listed companies with the innovation abil-

ity may be more competitive, have more ability and resources to undertake social responsibility, or have strong incentives to obtain the required resources for innovation activities. These companies can use targeted poverty alleviation to release positive signals from the capital market and build a positive image of the companies. To alleviate the endogenous problem of reverse causality, the proportion of listed companies participating in targeted poverty alleviation in the same industry and region (IndReg_TPA) is adopted as an instrumental variable to conduct an endogenous test in accordance with the study of Deng et al. [5]. There are significant copies following effects and geographical differences in companies' social responsibility assuming behaviors [38].

TABLE 5: Test of mediating effect based on financing constraints.

Variable	(1) KZ	(2) RD	(3) RD1	(4) RD2	(5) △RD	(6) △RD1	(7) △RD2
TPA	-0.953***	0.136**	0.156***	0.004	0.208***	0.154**	0.044
	(-2.62)	(2.08)	(2.64)	(0.15)	(3.02)	(2.36)	(1.43)
KZ		-0.059***	-0.068***	0.021***	-0.079***	-0.063***	-0.011
		(-3.15)	(-4.06)	(2.59)	(-4.02)	(-3.39)	(-1.20)
Size	-2.946***	0.010	-0.167***	0.183***	0.319***	0.273***	0.022
	(-9.75)	(0.17)	(-3.33)	(7.53)	(5.44)	(4.95)	(0.84)
Age	2.462	-2.083***	-1.341***	-0.299*	0.395	0.605	-0.322*
	(1.17)	(-5.47)	(-3.92)	(-1.80)	(0.99)	(1.60)	(-1.78)
ROA	-7.802***	-4.706***	-4.639***	0.284	-3.341***	-3.890***	1.040***
	(-2.98)	(-9.95)	(-10.92)	(1.37)	(-6.71)	(-8.30)	(4.62)
Growth	-1.459***	-0.841***	-0.648***	-0.153***	-1.637***	-1.358***	-0.236***
	(-5.42)	(-16.96)	(-14.54)	(-7.05)	(-31.39)	(-27.62)	(-9.98)
Lev	9.361***	-2.194***	-1.917***	-0.372***	-0.394	-0.495**	0.018
	(8.18)	(-9.63)	(-9.36)	(-3.73)	(-1.64)	(-2.19)	(0.17)
Pay	-4.510***	-0.571***	-0.428***	-0.154***	0.147	0.025	0.003
	(-7.53)	(-5.31)	(-4.43)	(-3.26)	(1.30)	(0.24)	(0.05)
CFO	-22.834***	-1.036**	-1.030***	0.206	-0.742*	-0.411	-0.235
	(-12.19)	(-2.44)	(-2.70)	(1.11)	(-1.66)	(-0.98)	(-1.16)
PPE	20.016***	0.509*	0.286	0.222*	-0.644**	-0.466	-0.054
	(12.37)	(1.73)	(1.08)	(1.73)	(-2.08)	(-1.60)	(-0.38)
Top1	0.005	-0.170	-0.009	-0.255*	0.252	0.190	-0.018
	(0.00)	(-0.49)	(-0.03)	(-1.67)	(0.69)	(0.55)	(-0.11)
Dual	-0.526	0.132**	0.098*	0.048*	0.208***	0.128**	0.047
	(-1.55)	(2.17)	(1.79)	(1.81)	(3.24)	(2.12)	(1.60)
Bsize	0.048	0.004	-0.031	0.018	0.026	-0.005	0.018
	(0.34)	(0.17)	(-1.37)	(1.62)	(0.95)	(-0.20)	(1.47)
Indep	-1.165	-1.018	-1.339**	-0.007	-0.518	-0.595	-0.252
	(-0.33)	(-1.60)	(-2.34)	(-0.02)	(-0.77)	(-0.94)	(-0.83)
Constant	45.084***	12.914***	16.373***	-2.344***	-8.229***	-5.232***	0.469
	(4.55)	(7.18)	(10.13)	(-2.98)	(-4.35)	(-2.93)	(0.55)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,464	15,464	15,464	15,464	15,464	15,464	15,464
R^2	0.112	0.104	0.099	0.044	0.102	0.094	0.022

Whether a company participates in targeted poverty alleviation may be affected by enterprises in the same industry and region, while the participation of enterprises in targeted poverty alleviation in the same industry and region does not directly affect the company's innovation investment. Accordingly, the two-stage instrumental variable method is adopted in this study to retest the main research questions, and the regression results are listed in Table 6.

The first-stage regression results suggest that the regression coefficient of IndReg_TPA is significantly positive, and the partial F weak instrumental variable test can reject the original hypothesis, consistent with the theoretical expectation. At the second stage, after the endogenous problems are controlled, TPA still shows a significant positive relationship to RD and △RD, thus again verifying the basic conclusion of this study. Thus, it is indicated that the promotion effect of the participation in targeted poverty alleviation on enterprise innovation is not affected by reverse causality problems.

4.5. Robustness Test. The positive relationship between targeted poverty alleviation and innovation input may be the

TABLE 6: Endogeneity test.

Variable	The first stage (1) TPA	The second stage (2) RD	(3) △RD
IndReg_TPA	0.911***		
	(39.81)		
TPA		1.807**	0.211**
		(2.03)	(1.96)
Size	0.053***	-0.180***	0.026
	(19.87)	(-4.75)	(1.56)
Age	0.039***	-1.016***	0.007
	(4.74)	(-10.03)	(0.15)
ROA	0.379***	-7.003***	-2.168***
	(6.66)	(-9.81)	(-3.77)
Growth	-0.010	-0.531***	-1.398***
	(-1.51)	(-6.31)	(-16.14)
Lev	-0.063***	-4.915***	-0.293**
	(-3.62)	(-22.79)	(-2.24)
Pay	-0.040***	0.223	0.231**
	(-3.51)	(1.59)	(2.55)
CFO	0.038	1.452***	0.099
	(0.87)	(2.71)	(0.37)
PPE	0.110***	-3.614***	-0.741***
	(5.38)	(-14.25)	(-5.92)
Top1	0.050***	-2.239***	-0.087
	(2.79)	(-10.21)	(-0.99)
Dual	-0.001	0.505***	0.109***
	(-0.15)	(7.51)	(3.43)
Bsize	0.005**	0.018	0.008
	(2.57)	(0.76)	(0.83)
Indep	0.026	3.438***	0.052
	(0.47)	(5.11)	(0.17)
Constant	-1.483***	12.794***	-0.198
	(-13.56)	(13.36)	(-0.51)
Year	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Firm	Yes	Yes	Yes
N	15,464	15,464	15,464
R^2	0.255	0.340	0.086
Partial F-test of IVs	439.117 [0.000]		

result of mechanical correlation rather than causality. Compared with nonparticipating enterprises, enterprises participating in targeted poverty alleviation may show significant advantages in terms of resource base, business capability, and corporate governance, while having better innovation foundation and stronger innovation capability. As a result, the conclusions of this study are affected by the endogenous influence of the omission of important explanatory variables.

To eliminate the individual differences between the two types of enterprises, this study uses the propensity score matching (PSM) method to match the samples that have participated in targeted poverty alleviation according to the nearest neighbor 1 : 1. The regression results after matching are listed in Table 7. The mediating effect of targeted poverty alleviation on enterprise innovation investment and financing constraint still exists significantly, suggesting that the conclusion of this study is not affected by the omission of important explanatory variables and remains robust after eliminating individual differences of enterprises.

Since there may be measurement bias in the research conclusions of this study, this study builds a new financing constraint measurement index (DKZ) by referring to the research of Wang [39]. Moreover, the SA index is adopted as a substitute variable of financing constraints for the robustness test in accordance with the study by Wu and Huang [40]. Columns 1–4 of Table 8 present the regression results of alternative financing constraint measures. Since the information disclosure of targeted poverty alleviation began in 2016, the test of samples from 2016 to 2019 can be adopted to directly compare the difference in innovation input between enterprises participating in targeted poverty alleviation and those that do not. Regression results of replacement samples are shown in columns 5–7 of Table 8. Robustness test results also support the hypothesis of this study.

5. Research Conclusions and Implications

The participation in targeted poverty alleviation is the main performance of enterprises in rolling out national poverty alleviation policies, feeding back poverty, actively assuming social responsibilities, and realizing corporate value regression. It is also a strategy for enterprises to obtain social and economic resources and improve social identity. In the context of "mass entrepreneurship and innovation" and targeted poverty alleviation, the influence of the participation in targeted poverty alleviation on enterprise innovation is discussed with China's Shenzhen and Shanghai A-share listed companies from 2016 to 2019 as the research sample. The KZ index is constructed to measure financing constraints, and it is suggested that the promotion of targeted poverty alleviation on the R&D investment intensity of enterprises is through the channel of alleviating financing constraints.

This study suggests that first enterprises' participation in targeted poverty alleviation can increase the efficiency of social resource allocation, achieve Pareto optimization, reduce the financing constraints of enterprises, and thus increase the investment in innovation of enterprises and especially enhance exploratory innovation ability of the enterprise. Compared with development innovation, exploratory innovation is characterized by greater uncertainty, greater exploitation, and higher returns. It requires acquiring, integrating, digesting, and absorbing new knowledge, new resources, and new technologies, and it is more dependent on the integration of strategic resources. Thus, the participation in targeted poverty alleviation more significantly

TABLE 7: Robustness test of model transformation.

Variable	(1) RD	(2) RD1	(3) RD2	(4) RD	(5) RD1	(6) RD2
TPA	0.166***	0.147***	0.029	0.165**	0.146***	0.029
	(2.58)	(2.70)	(0.99)	(2.57)	(2.68)	(1.00)
KZ				-0.065***	-0.081***	0.023**
				(-2.67)	(-3.93)	(2.04)
Size	0.036	0.000	0.126***	-0.000	-0.045	0.138***
	(0.50)	(0.00)	(3.81)	(-0.00)	(-0.73)	(4.12)
Age	-1.438***	-0.992**	-0.087	-1.459***	-1.018**	-0.080
	(-2.83)	(-2.31)	(-0.37)	(-2.88)	(-2.37)	(-0.34)
ROA	-4.818***	-4.464***	0.055	-5.015***	-4.709***	0.124
	(-6.97)	(-7.62)	(0.17)	(-7.21)	(-8.00)	(0.39)
Growth	-0.638***	-0.477***	-0.141***	-0.680***	-0.529***	-0.126***
	(-10.31)	(-9.10)	(-4.95)	(-10.66)	(-9.79)	(-4.30)
Lev	-2.871***	-2.803***	-0.284**	-2.537***	-2.386***	-0.401***
	(-10.34)	(-11.91)	(-2.22)	(-8.33)	(-9.26)	(-2.87)
Pay	-0.640***	-0.467***	-0.267***	-0.648***	-0.477***	-0.264***
	(-4.05)	(-3.49)	(-3.69)	(-4.11)	(-3.57)	(-3.65)
CFO	-0.073	0.161	-0.182	-0.954*	-0.937**	0.127
	(-0.17)	(0.43)	(-0.90)	(-1.73)	(-2.01)	(0.50)
PPE	1.143***	0.604*	0.470***	1.284***	0.780**	0.420**
	(3.04)	(1.90)	(2.72)	(3.38)	(2.43)	(2.41)
Top1	0.432	0.588	-0.150	0.415	0.567	-0.144
	(1.00)	(1.60)	(-0.75)	(0.96)	(1.55)	(-0.72)
Dual	0.074	0.070	0.018	0.072	0.067	0.019
	(0.91)	(1.01)	(0.49)	(0.88)	(0.97)	(0.51)
Bsize	-0.047	-0.076***	0.024*	-0.044	-0.073***	0.023*
	(-1.56)	(-3.00)	(1.77)	(-1.46)	(-2.85)	(1.69)
Indep	-1.379*	-1.706***	0.076	-1.305*	-1.614**	0.050
	(-1.80)	(-2.63)	(0.21)	(-1.70)	(-2.49)	(0.14)
Constant	10.032***	9.310***	-2.210**	10.743***	10.197***	-2.460**
	(4.25)	(4.66)	(-2.04)	(4.53)	(5.07)	(-2.26)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
N	8500	8500	8500	8500	8500	8500
R^2	0.110	0.112	0.043	0.111	0.115	0.044

affects exploratory innovation. Second, the participation in targeted poverty alleviation can reduce financing constraints of innovation, improve resource allocation efficiency, and stimulate innovation vitality of enterprises mainly through resource effect, reputation effect, and information effect. Accordingly, the participation in targeted poverty alleviation more significantly affects exploratory innovation. The above analysis suggests that enterprises' participation in targeted poverty alleviation is not a simple social welfare payment but a mutually beneficial behavior that facilitates high-quality development of enterprises while assuming their social responsibilities.

Based on the above conclusions, this study draws the following points of enlightenment:

First, from the perspective of the Chinese government, the goals of the Party and the country consist of targeted poverty alleviation, building a moderately prosperous society in all respects, and fulfilling the "Chinese Dream" of the great rejuvenation of the Chinese nation, which requires the joint efforts of the people of all ethnic groups in China. Enterprises as the backbone of the development of high-quality fuel economy in the market, technology, information organization, capital, human resources, and management show a unique advantage and a strong ability of resource

Table 8: Robustness test of substitution variables.

Variable	Substitution variables				Replace the sample		
	(1) DKZ	(2) SA	(3) RD	(4) RD	(5) △RD	(6) △RD1	(7) △RD2
TPA	-0.162**	-0.019***	0.139**	0.140**	0.205**	0.158*	0.027
	(-2.00)	(-14.61)	(2.12)	(2.11)	(2.13)	(1.84)	(0.75)
DKZ				-0.026**			
				(-2.46)			
SA				-0.098**			
				(-2.21)			
Size	-0.420***	0.019***	0.048	0.044	0.628***	0.552***	0.054
	(-14.22)	(17.90)	(0.88)	(0.80)	(5.61)	(5.50)	(1.26)
Age	-0.034	0.007	-2.086***	-2.088***	0.974	0.039	1.014***
	(-0.39)	(0.97)	(-5.48)	(-5.48)	(0.95)	(0.04)	(2.61)
ROA	-17.186***	0.056***	-4.549***	-4.586***	-2.843***	-4.170***	1.279***
	(-18.09)	(6.11)	(-9.55)	(-9.71)	(-4.06)	(-6.64)	(4.80)
Growth	-0.328***	0.004***	-0.807***	-0.809***	-1.671***	-1.450***	-0.190***
	(-4.29)	(3.83)	(-16.60)	(-16.66)	(-23.62)	(-22.89)	(-7.05)
Lev	7.497***	0.021***	-2.521***	-2.502***	-0.746**	-0.944***	0.188
	(35.16)	(5.17)	(-11.93)	(-12.11)	(-2.03)	(-2.88)	(1.35)
Pay	0.616**	-0.018***	-0.571***	-0.567***	-0.332*	-0.256	-0.040
	(2.48)	(-8.62)	(-5.30)	(-5.25)	(-1.77)	(-1.52)	(-0.56)
CFO	-14.693***	0.016**	-0.195	-0.228	0.651	0.535	-0.027
	(-28.08)	(2.48)	(-0.57)	(-0.67)	(1.31)	(1.21)	(-0.14)
PPE	11.579***	-0.024***	0.353	0.377	-0.205	-0.374	0.195
	(44.07)	(-4.20)	(1.20)	(1.29)	(-0.39)	(-0.79)	(0.97)
Top1	-0.202	-0.083***	-0.157	-0.149	0.790	0.704	0.287
	(-1.06)	(-12.19)	(-0.45)	(-0.42)	(1.10)	(1.10)	(1.06)
Dual	-0.073	-0.002	0.135**	0.135**	0.231**	0.153*	0.019
	(-1.22)	(-1.51)	(2.21)	(2.21)	(2.34)	(1.73)	(0.49)
Bsize	-0.044**	0.002***	0.002	0.002	0.025	-0.001	0.035**
	(-2.13)	(3.09)	(0.07)	(0.06)	(0.56)	(-0.03)	(2.05)
Indep	0.045	0.006	-1.080*	-1.079*	0.648	0.189	0.413
	(0.08)	(0.50)	(-1.70)	(-1.70)	(0.59)	(0.19)	(1.00)
Constant	4.455***	3.437***	12.189***	11.899***	-17.720***	-11.960***	-4.820***
	(5.91)	(98.29)	(6.81)	(4.99)	(-4.37)	(-3.29)	(-3.13)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,462	15,464	15,464	15,464	9725	9725	9725
R^2	0.490	0.869	0.103	0.103	0.115	0.122	0.019

integration, which can be consistent with the specific environment in poor areas, adjust measures to local conditions, and vary from person to person to create production and employment opportunities for poor people. Thus, to guide enterprises to actively participate in targeted poverty alleviation, the government should give targeted support to enterprises participating in industrial poverty alleviation. First, the position of enterprises in targeted poverty alleviation

should be clarified, and the huge role of enterprises in targeted poverty alleviation should be confirmed. Second, the government should fully exploit the advantages of the platform, formulate preferential policies for enterprise poverty alleviation, provide more financial support for poverty alleviation enterprises, do a good job in supporting services for poverty alleviation enterprises, and call on enterprises to think about the source of wealth, think about progress when

becoming rich, and assume social responsibilities on their initiative. Lastly, an enterprise incentive mechanism for poverty alleviation should be established, to give enterprise resource, technology, and human help, and to promote the integration of enterprises and take advantage of all aspects of the resources and scientific strengths for the reasonable selection and implementation of poverty alleviation projects, stimulating entrepreneurs as a crucial contributor to targeted poverty alleviation of practitioners and the leader of the social fashion, so as to win the battle against poverty for the enthusiasm of enterprises to mobilize the great potential of targeted poverty alleviation.

Second, enterprises, an important force in the capital market, should actively participate in targeted poverty alleviation projects and fulfill their social responsibilities under the call of the state. Targeted poverty alleviation exhibits a unique policy nature. Enterprises' participation in targeted poverty alleviation can obtain corresponding preferential and favorable development conditions, while improving their social image, establishing and maintaining ties with the government, and conveying confidence to the outside world. It needs multilateral cooperation and complementary advantages to win the battle against poverty. Enterprises should be aware of their important role in people's livelihood projects, and their participation in targeted poverty alleviation will bring economic and social benefits to them. Therefore, enterprises should seize the opportunity and use their own advantages. To be specific, they should set up poverty alleviation projects in poor areas, develop resources, cultivate industries, and revitalize local natural and human resources. Enterprises should optimize their own industrial chain, strengthen the construction of enterprise brands, enhance the visibility and competitiveness of enterprise products, and achieve sustainable development of enterprises and society.

Third, the financing environment of enterprises should be improved in depth. The trend of China's economic development has been very good over the past few years, and the mixed system reform is also in full swing. However, the state-owned economy still takes on a critical significance, and the development space for private enterprises remains insufficient. As revealed by the existing data statistics and research, private enterprises have a higher level of innovation investment and innovation power, thus contributing to the improvement of the innovation ability of the whole society, and the performance of social responsibility by private enterprises is more conducive to enterprise innovation than state-owned enterprises. However, affected by the policy system and financing capacity, the private economy and development lag behind the state-owned economy, which indirectly has an adverse effect on the technological innovation and development of the whole society. To vigorously facilitate R&D innovation in China and fully use the positive role of enterprises, it is particularly important to improve the financing environment of enterprises, not only the operation of enterprises but also the competitiveness and long-term development. To solve the above problem, the assessment and supervision of financial institutions should be improved, a multilevel capital market should be developed, and a favorable environment should be created.

This study also has some limitations. Impacted by the single form of data disclosure on R&D innovation, only quantitative indicators of R&D investment and patent volume, and the short observation year of targeted poverty alleviation data, this study only selects R&D investment to measure enterprise innovation in a single manner, which is insufficiently comprehensive to reflect the reality. It is expected that future research can have increasingly appropriate ways to measure innovation. Moreover, this study only studies the influence of the participation in targeted poverty alleviation on enterprise innovation and does not involve other aspects of corporate governance and enterprise development. Furthermore, a question is raised whether there is any way other than financing constraints for the influence of the participation in targeted poverty alleviation on enterprise investment activities, which will be investigated in depth in the future.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this study.

Acknowledgments

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