



# Targeted poverty alleviation initiatives and corporate sustainable value creation: Determining the role of corporate internal governance control in China

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## ABSTRACT

This study examines the impact of firms' targeted poverty alleviation activities on corporate value and how corporate internal governance regulates this relationship. This study uses Fixed Effects and System GMM estimations to test hypotheses by analyzing data from Chinese non-financial listed firms from 2016 to 2021. The results demonstrate that corporate targeted poverty alleviation and internal corporate governance control affect company value and governance. Corporate value increases as a result of effective internal governance. Internal governance control enhances the positive relationship between the firm's targeted poverty reduction and value creation. This study's findings are robust to alternative measures of poverty alleviation initiatives. Furthermore, heterogeneity analysis reveals that non-SOE firms, small and low-leverage firms engaging in anti-poverty activities are in a better position to achieve value creation. This study adds to the literature on poverty reduction, sustainable corporate value creation, and corporate internal governance control. Study results may help policymakers and managers in evaluating their business strategies by focusing more on fulfilling social responsibilities to eradicate poverty from the region by improving governance policies to generate sustainable value for the firm.

## 1. Introduction

Poverty is a pervasive global problem that has long impeded many people's pursuit of a better life by creating various hardships, such as hunger, disease, and violence. Thus, poverty eradication has been a persistent goal throughout history [1,2]. China is the world's largest developing country with 1.4 billion people. Despite its robust economic growth, China suffered from uneven development and, in some instances, extreme poverty. Hence, the task of reducing poverty in China seemed formidable. However, in 2013, China initiated customized poverty alleviation programs that aimed to deliver tailored services to diverse regions and populations. The programs engaged a coalition of government agencies, charities, public groups, and businesses [3]. Consequently, the country's remarkable success in eliminating severe poverty ten years before the UN 2030 Agenda for Sustainable Development's deadline is an extraordinary achievement in both Chinese and human history and a significant contribution to global poverty reduction [4].

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As the world's most vibrant economy, China is making concerted efforts to combat poverty. Given China's substantial agricultural population and uneven economic growth, poverty persists in many areas, making poverty alleviation a crucial issue, with enterprises serving as key drivers of China's economic development. In response, the "13th Five-Year Plan for Poverty Alleviation," issued by China in 2015, advocates for state-owned and private organizations to assume a greater role in poverty alleviation, recognizing it as an expression of social value for firms [1]. Since 2016, the Shenzhen and Shanghai stock exchanges have mandated that listed companies disclose refined information on targeted poverty alleviation in their reports to advance the country's objective of eradicating poverty by 2020. Consequently, the role of China's top-tier companies in poverty reduction has grown gradually [4]. The aim of poverty alleviation is to lift all impoverished individuals in China above the "poverty line" by 2020, as promised by President Xi Jinping during a grand CPCC gathering on February 25, 2021, where he lauded and reiterated the private sector's ongoing efforts to combat poverty in China.<sup>2</sup> According to a state media report published in September 2, 2020,<sup>3</sup> China has eliminated absolute and regional poverty. In this endeavor, the government and commercial sectors collaborated to lift approximately 100 million underprivileged individuals out of poverty. As of June 2020, the Chinese private sector, comprising over 109,000 private companies, had invested nearly 107 billion yuan (approximately 15.6 billion US dollars) in supporting 15.6 million impoverished individuals, creating 199,000 jobs, and providing professional training to 1.2 million individuals to alleviate poverty.<sup>4</sup> Nonetheless, it is crucial to focus on adopting specific strategies to ensure the sustainability and effectiveness of enterprises' efforts in lifting individuals out of poverty.

Targeted poverty alleviation initiatives (TPAIs) are a key component of corporate social responsibility (CSR) in China, where the government has made poverty reduction a top priority [3]. The question of whether a company's fulfillment of social responsibilities has a significant impact on its corporate value has been an area of concern for scholars and researchers both domestically and internationally [5]. The creation of corporate value is the principal objective of any social engagement undertaken by a company, which can include financial, governance, and sustainability responsibilities, as well as social responsibilities (CSR) [6]. By implementing TPAIs, companies can contribute to creating jobs, improving labor standards, and fostering sustainable development in impoverished areas. According to the resource-based theory, CSR can enhance a company's value by providing access to tangible and intangible resources that can serve as a source of sustainable competitive advantage over the long term [7,8]. However, based on signaling theory [3], prior studies have identified various drivers for companies to adopt TPAIs. First, it can be profitable. Kramer and Pfizer [9] suggest that companies can address socioeconomic challenges by investing in infrastructure, waste reduction, and skills development. Second, TPAIs can enhance a company's reputation as a socially responsible entity. Third, TPAIs can help companies access new markets. Poverty is not only a lack of income; it also involves powerlessness, alienation, isolation, illiteracy, and disease. TPAIs can tackle these problems by providing economic, social, moral, and financial support to disadvantaged groups such as malnourished women or refugees [3].

Previous studies have mainly explored how different types of corporate social responsibility (CSR) affect firm value [6,10], but have neglected the importance of corporate anti-poverty efforts, which are crucial for long-term social development [11]. Companies are increasingly expected to adopt socially responsible and sustainable policies and practices, such as fair labor, ethical sourcing, and environmental sustainability. These can reduce the negative impact of business on society and the environment, and support poverty alleviation [12]. Furthermore, effective internal governance controls can ensure that these social initiatives are well designed, executed, and evaluated to achieve their goals. This may involve setting clear objectives and metrics, reporting and assessing regularly, and engaging with stakeholders continuously. Also, strong internal governance controls can prevent corruption and ensure that poverty alleviation funds are used properly and efficiently. This can build trust with local communities and enhance the reputation of companies in China [13]. However, the effectiveness of internal governance controls in poverty reduction in China depends on various factors, such as the specific policies and practices of companies, the level of collaboration and engagement with local actors and stakeholders, and the broader social and economic context [1,12].

Scholars have recently examined how firms can achieve sustainability in poverty reduction-related operations in emerging economies such as China. Zhou et al. [13] showed that TPAIs can help firms to create value by improving environmental, social, and economic performance. The study emphasized the need for collaboration among the government, NGOs, and businesses to ensure the effectiveness of TPAIs. However, some studies have identified potential drawbacks of TPAIs. Kramer and Pfizer [9] have claimed that targeted poverty reduction activities may not be sustainable in the long run. Poverty reduction initiatives can be costly and require significant investment, and there is a risk that companies may stop their efforts if they do not see immediate returns. Furthermore, there is a risk that poverty reduction initiatives may not be consistent with a company's core business strategy and may not generate sustainable value over the long term. Additionally, a study by Yeh [14] highlights the risk of "greenwashing" by companies that use TPAIs to enhance their image without actually implementing sustainable practices. The study suggested the development of a transparent and standardized evaluation system to ensure the authenticity of TPAIs. Another potential drawback of TPAIs is the limited scope of impact. Liu [15] found that TPAIs mainly benefit the targeted individuals and communities, but may not have a significant impact on the wider social and environmental issues faced by developing countries. Therefore, while TPAIs have demonstrated potential in driving corporate sustainable value creation, there are still potential drawbacks that need to be addressed to ensure their effectiveness and authenticity.

Firms can support the fight against poverty by providing employment opportunities, technical training, and medical subsidies to the target population, with the government's encouragement and support [1,2,16,17]. In the country's unique institutional context, it

<sup>2</sup> <http://pk.china-embassy.gov.cn/eng/zt/2356800/202104/P020210911658013307874.pdf>.

<sup>3</sup> <http://www.xinhuanet.com/english/download/2021-4-6/FullText.pdf>.

<sup>4</sup> <https://news.cgtn.com/news/2020-09-13/How-do-companies-help-alleviate-poverty-in-China-TKAtKzLUJ2/index.html>.

is important to examine the effect of governance strategy in targeted poverty reduction and their influence of firm participation in targeted poverty reduction on corporate value in China [13]. Therefore, this study contributes significantly to the literature by highlighting the multi-dimensional impact of corporate targeted poverty reduction initiatives. By engaging in poverty reduction initiatives that are consistent with their core business activities, firms can create shared value that tackles social and economic challenges while generating sustainable value for themselves and their communities [11]. This study emphasizes the importance of effective corporate governance control in poverty reduction efforts, as well as the need for firms to carefully assess their resources and capacity before undertaking such initiatives. Ultimately, this research illuminates the potential for anti-poverty initiatives to create shared value for firms and their communities, underscoring the vital role of corporate social responsibility in reducing poverty and promoting sustainable development.

The aim of the paper is to examine the relationship between corporate poverty reduction efforts and financial performance and value creation. The data is based on Chinese listed companies from 2016 to 2021. This study uses fixed effects estimation and the generalized method of moments (System-GMM) to investigate reverse causality and control for endogeneity problems. It also examines the regulatory impact of corporate governance control on the relationship between corporate poverty reduction initiatives and firm value. Empirical evidence suggests that corporate targeted poverty alleviation and internal corporate governance control has a significant impact on business value and governance. Governance structure contributes to increased business value. The positive association between the corporation's targeted poverty alleviation and corporate value is significantly supported by corporate internal governance control. Study findings are robust to alternative proxy of poverty alleviation initiatives. This study adds to the poverty alleviation, corporate sustainable value creation and corporate internal governance control literature. Study findings can be helpful for policymakers and practitioners to analyze their business strategies by focusing more on fulfilling social responsibilities to eradicate poverty from the region by optimizing their governance policies to create sustainable value for the firm.

The rest of the study is organized as follows: after the introduction, part 2 includes a thorough literature review and hypothesis development, and section 3 outlines the research methods. Section 4 depicts study analysis and debate, while Section 5 offers conclusions and suggestions. References are given at the end.

## 2. Literature review and hypothesis development

### 2.1. Corporations' social contribution in targeted poverty alleviation and firm value

Poverty is a challenge to humanity, and poverty eradication is becoming a critical requirement for achieving global sustainable development. As a result, every sector of society, particularly businesses, is expected to play a role in alleviating poverty by accepting a certain amount of responsibility [18]. It is consistent with the United Nations 2030 Agenda for Sustainable Development. Firms' contributions to poverty reduction are increasingly being debated, particularly in emerging markets such as China. Studies on companies' contributions to poverty reduction are infrequent [15]. However, although empirical evidence on the financial implications of a firm's CSR activities is extensive, there is little literature on the ramifications for intended beneficiaries, particularly in nations with pro-poor CSR programs [19]. Furthermore, studies have found vagueness in the approaches for quantifying enterprises' social impact to poverty alleviation, since it has not been sufficiently addressed by CSR activities and sustainable management practices [20].

Several anti-poverty ideas have been proposed by scholars from distinct economic development perspectives (E.g., Vicious Circle of poverty [21], the low-level equilibrium trap [22], and multidimensional poverty [16]). These views, however, contend that low capital investment is the primary cause of poverty, which may be addressed by large-scale investments. In contrast, institutional economics (Poverty Right Theory [23], Economic Growth Theory [24]) believes that systems or institutions are the drivers of economic success. As a result, an effective system may help reduce poverty by supporting economic growth in the region. However, academics have also followed Dualistic Economics [25], Malthusian Population Growth [26], and Human Capital [27] theories, which demonstrate that anti-poverty activities may be decided by the region's population. Their quantity and quality of life can affect the region's poverty status. Based on these assumptions, researchers began investigating the population's multidimensional features, such as environment, income, geography, health, nutrition, resources, education, and so on [28,29].

Social responsibilities have been approached from two different economic perspectives. 1) risk reduction and 2) overinvestment. The risk reduction perspective advocates for lower business risk and higher corporate value. According to studies, firms with superior social activities increase shareholder value and returns by bringing in ethical capital [10,30]. Several studies have also found that social performance enhances company governance and lessens information asymmetry [31,32]. Specifically, Zolotoy, O'Sullivan [32] illustrate how corporations that make philanthropic donations might help to mitigate agency concerns and boost investor confidence. Social practices disclosure, according to researchers, promotes information openness and helps stakeholders to understand company activities, easing budgetary limitations for the firm [33]. However, the over-investment perspective illustrates that poverty alleviation practices reduce a firm's overall investment efficiency as it consumes a handful of resources needed for various projects, which ultimately increases agency costs [34]. According to some studies, corporations use poverty alleviation spending to disguise their bad/unethical actions [35].

According to resource-based theory, social activities like poverty alleviation initiatives helps corporations gain a long-term competitive edge by collecting certain nonreplicable tangible and intangible resources, thereby strengthening the firm's future value and lowering corporate risk [7]. Researchers have discovered that organizations that disclose their alleviation practices foster a sense of identity and belonging, empower employee identification in society, and encourage openness in corporate activities, attracting high-quality human capital as a competitive advantage [8,36]. Therefore, as a vital component of CSR, the firm's engagement in targeted poverty alleviation builds goodwill and investor confidence. So, based on the preceding literature, it can be

assumed that.

**H1.** Firms' participation in targeted poverty alleviation initiatives is positively associated with corporate sustainable value creation.

## 2.2. Corporate governance and corporate value

Social responsibilities and corporate governance are inextricably intertwined in determining firm value. Most studies have attempted to evaluate the influence of either poverty alleviation initiatives involvement or corporate governance on company value, but relatively few have attempted to assess their combined impact on firm value. The over-investment theory states that when a firm's value rises as a result of social participation, the CEO and board are more likely to over-invest in social activities [37], it will have a negative impact on the firm's worth. However, the conflict-resolution theory suggests that enterprises with an effective monitoring system combined with social participation resolve stakeholder issues and favorably enhance firm value [31].

In contrast to traditional internal management of firms, present corporate governance is tied to numerous stakeholders rather than just shareholders and agents. An optimal internal governance structure can better manage controlling shareholders' and agents' operational conduct. It addresses the entire interests of the company from an overall perspective, which is highly beneficial in increasing the company's worth. Given the external determinants of company development, such as the firm's external competitive environment and the harsh external financing environment, the operator will feel the pressure of the operation, forcing the controlling shareholder or enterprise operator to focus on the overall interests of the enterprise and devote themselves to increasing corporate value. The following assumption is made in this article.

**H2.** Higher internal corporate governance structure supports firms to attain corporate sustainable value creation.

## 2.3. Corporate internal governance structure, targeted poverty alleviation behavior, and corporate value

Participation in targeted poverty reduction represents an enterprise's social worth and a manner of meeting social duties. Whether the organization performs well socially will have a big influence on its development. Many researchers, both domestic and international, have failed to establish a consensus on the relationship between corporate social responsibility and specific benefits. Windsor [38] argues that actively fulfilling social responsibilities imposes a significant financial burden on the corporation, with a negative and significant impact on cash flow. However, the company's active participation in CSR may help to develop a favorable image and strengthen relationships with key stakeholders. These impacts make it difficult to grow the company's cash flow in the short term. Mackey, Mackey [39] also believe that the firm's active fulfillment of social obligations will consume a lot of cash flow, and cash flow is a vital assurance for the company to sustain regular operations, which may lead the company into difficulties owing to cash flow shortages. Masulis and Reza [40] explain that philanthropic actions carried out in the name of the company may benefit the firm's top management the most, with larger donations having a stronger influence on the company's success. According to Peloza and Shang [41], it is not preferable for businesses to actively fulfill their social obligations. To some extent, the higher the extent to which businesses execute their obligations, the larger the beneficial influence on the business. However, according to Seifert, Morris [42], the link between the two is not obvious. Yu and Zheng [43] argue that the two have no considerable impact since China's economic climate, as well as relevant rules and regulations, have weakened the influence of corporate philanthropic offerings.

However, Lev, Petrovits [44] discover that business engagement in charity donations has a significant influence on company performance. Furthermore, this positive influence benefits the company's exterior environment as well as its internal environment. Muller-Kahle, Wang [45] demonstrate that for publicly listed companies, positive responses to natural calamities are communicated in the form of announcements, which has a beneficial influence on investors. Clacher and Hagendorff [46] describe three forms of social responsibility announcements: announcements, socially responsible announcements, and yearly reports. The study's findings indicate that companies who actively participate in social construction increase their disclosure quality, which has a major impact on their performance. According to Xie, Jia [47], in the process of fulfilling social obligations, the firm will be known and appreciated by more people, which may help to deal with the company's positive image and win a good development environment for the company. They also stated that corporate enthusiasm and initiative to fulfill social responsibilities is directly proportional to corporate benefits.

The equity structure factors and management incentives in the internal governance structure have a strong correlation with corporate social responsibility. By enhancing the firm's internal governance structure, it may increase the company's internal operational efficiency while reducing the unlawful activities of some stakeholders, allowing the particular poverty alleviation behaviors in which the company engages to deliver greater outcomes. The external environment may also encourage businesses to actively fulfill their social responsibilities in order to gain the attention and recognition of various stakeholders, and this, in conjunction with the internal governance structure, can encourage businesses to implement targeted poverty alleviation behaviors. So, based on the above discussion, it can be assumed that.

**H3.** Higher internal corporate governance structure strengthens the positive association between corporate targeted poverty alleviation initiatives and corporate sustainable value creation.

### 3. Research methodology

#### 3.1. Sample selection and data sources

This study examines how corporate targeted poverty alleviation affects corporate sustainable value creation, and how this effect is moderated by corporate internal governance structure. To do so, we use data from Chinese A-share non-financial listed corporations obtained from the Chinese Stock Market and Accounting Research (CSMAR)<sup>5</sup> database for the period 2016–2021. We exclude firms that: 1) adopt different accounting standards; 2) have missing data for the research period; and 3) are labeled as PT, ST or ST\*,<sup>6</sup> Following Kettaneh et al. [48], we winsorize the values at 1 % and 99% levels, resulting in a final sample of 6865 firm-year observations from 2177 firms. We have employed fixed effects<sup>7</sup> and two-stage system Generalized Method of Moments (GMM)<sup>8</sup>[49] estimator to address potential reverse causality and endogeneity issues [50]. Moreover, we use robust standard errors to deal with heteroskedasticity [51]. All the regression analyses are performed on STATA 15.1.

#### 3.2. Variables and measurements

##### 3.2.1. Corporate sustainable value creation (CV)

Unlike ROA and Tobin Q, which only capture the value within the firm, following [52] we use a more operational value measurement method based on the Dupont Model: (Net Profit/Average Balance of Total Owners' Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]. The Dupont Model is a flexible and widely applied tool that can reveal a firm's financial performance and growth potential. The formula above indicates how the firm's net profit, dividends, and capital structure influence its ROE and, in turn, its value creation. Firms with higher ROE are generally regarded as more effective at generating profits from their equity base, which can lead to a higher valuation in the financial markets. We obtain the index values from the CSMAR database.

##### 3.2.2. Corporate targeted poverty alleviation

There is no consensus in the literature on how to quantify corporate poverty alleviation. However, following Chang, He [17], we measure targeted poverty reduction as the natural logarithm of the ratio of the total amount invested in anti-poverty-based projects funding to the firm's operating income. We calculate the total amount of the firm's targeted poverty alleviation investment based on the total cash reported in the financial statements.

##### 3.2.3. Corporate internal governance

Internal control refers to the systems, rules, and procedures that a firm uses to ensure the reliability of financial and accounting data, promote accountability, and prevent fraud [53]. Hoitash, Hoitash [54] suggest that internal control adoption enhances firm performance. At the same time, CSR fulfillment has become a key factor for investors to assess firm risk, and firms with better quality internal controls often adopt voluntary CSR initiatives as a strategic way to attract investors' goodwill [53], implying the effect of internal controls on CSR. The literature has explored various aspects of the corporate internal governance structure in relation to corporate value [41–43,55]. However, no work has been done based on the COSO framework1992<sup>9</sup> [56] to address the corporate value creation and social responsibility. Therefore, this study investigates the moderating role of internal control on corporate poverty alleviation initiatives and corporate sustainable value creation using the Committee of Sponsoring Organizations (COSO) framework on a sample of Chinese non-financial firms.

##### 3.2.4. Control variable

Based on the existing research, the control variables in this article include firm size, leverage ratio, Investment opportunities, Business performance, Corporate Liquidity, Shareholding of the largest shareholder, Corporate Financialization Level, Board size, Average age of directors, Female Board of Directors Ratio, Market Power of a firm and Firm Nature [6,31,57,58]. Detailed variable descriptions are shown in Table 1.

#### 3.3. Modeling

The empirical research in this paper is mainly divided into the following four steps:

First, Model 1 tests Hypothesis 1, which examines the impact of corporate poverty alleviation initiatives on corporate value. Model 1 is shown as:

<sup>5</sup> <https://www.gtadata.com>.

<sup>6</sup> Particular Transfer (PT), Special Treatment (ST).

<sup>7</sup> Following command is used: `xtreg Y X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 ID* YD* INDS*, fe vce(robust)`.

<sup>8</sup> We have used 2-step GMM as 2 step GMM is more robust than 1-step GMM. Following command is used: `xtabond2 Y L.Y X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 ID* YD* INDS* PV*, gmmstyle(L.Y L.(X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11)) ivstyle(Z1 Z2 ID* YD*) twostep robust small`.

<sup>9</sup> <https://www.coso.org/sitepages/internal-control.aspx?web=1>.

**Table 1**  
Variable description.

Category of variables	Variable name	Variable symbol	Description	Unit	Source
Explained variable	Enterprises' investment in fulfilling their social responsibility for targeted poverty alleviation	PVAI <sub>it</sub>	The logarithm of the scale of enterprises' targeted poverty alleviation investment plus one	Log	CSMAR
	Effectiveness of enterprises in fulfilling their social responsibility for targeted poverty alleviation	PVAI <sub>it</sub> *	The logarithm of helping building file cards of the number of poor people lifted out of poverty plus one	Log	CSMAR
Explanatory variables	Corporate Sustainable Value Creation	CV <sub>it</sub>	(Net Profit/Average Balance of Total Owners' Equity) * [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]	Percent	CSMAR
Moderating Variable	Corporate Internal Governance Control	IGC <sub>it</sub>	Logarithm of Corporate Internal Control index based on COSO Framework (1994)	Log	CSMAR
Control variables	Investment opportunities	Tobinsq <sub>it</sub>	Tobin'Q value	Percent	CSMAR
	Financial leverage	Lev <sub>it</sub>	Asset-liability ratio	Percent	CSMAR
	Firm size	Size <sub>it</sub>	Natural logarithm of total assets	Ln	CSMAR
	Business performance	PER <sub>it</sub>	Price earnings ratio	Percent	CSMAR
	Corporate Liquidity	Liquidity <sub>it</sub>	Yearly Turnover (Total Shares)	Percent	CSMAR
	Shareholding of the largest shareholder	OWN <sub>it</sub>	Shareholding of the largest shareholder	Percent	CSMAR
	Corporate Financialization Level	FZN <sub>it</sub>	(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets	Percent	CSMAR
	Board size	BS <sub>it</sub>	Total number of directors	People	CSMAR
	Average age of directors	ABDA <sub>it</sub>	Average age of board of directors.	Age	CSMAR
	Female Board of Directors Ratio	FBD <sub>it</sub>	Ratio of female directors to total number of board of directors.	Percent	CSMAR
	Market Power of a firm	Lerner <sub>it</sub>	Logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost)	Percent	CSMAR
	Firm Nature	Fnature	Dummy variable if stat-owned firms = 1, 0 otherwise.	Binary	CSMAR
	Industry fixed effect	Ind <sub>i</sub>	Dummy variable for an industry	Binary	
	Firm fixed effect	μ <sub>i</sub>	Dummy variable for a firm	Binary	
	Year fixed effect	Y <sub>t</sub>	Annual Dummy Variable	Binary	
	Province fixed effect	η <sub>i</sub>	Dummy variable for a province	Binary	

$$CV_{it} = \alpha_0 + \alpha_1 PVAI_{it} + \alpha_2 Size_{it} + \alpha_3 PER_{it} + \alpha_4 Lev_{it} + \alpha_5 FZN_{it} + \alpha_6 OWN_{it} + \alpha_7 Tobinsq_{it} + \alpha_8 Lerner_{it} + \alpha_9 Volatility_{it} + \alpha_{10} FBD_{it} + \alpha_{11} ABDA_{it} + \alpha_{12} BS_{it} + \alpha_{13} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \varepsilon_{it} \dots (1)$$

However, for robustness, we have used the following model (1\*) to apply system GMM estimation.

$$CV_{it} = \alpha_0 + \alpha_1 CV_{it-1} + \alpha_2 PVAI_{it} + \alpha_3 Size_{it} + \alpha_4 PER_{it} + \alpha_5 Lev_{it} + \alpha_6 FZN_{it} + \alpha_7 OWN_{it} + \alpha_8 Tobinsq_{it} + \alpha_9 Lerner_{it} + \alpha_{10} Volatility_{it} + \alpha_{11} FBD_{it} + \alpha_{12} ABDA_{it} + \alpha_{13} BS_{it} + \alpha_{14} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \xi_i + \varepsilon_{it} \dots (1^*)$$

To test Hypothesis 2, the impact of internal corporate governance on the corporate value, a model 2 is established, which is shown as:

$$CV_{it} = \alpha_0 + \alpha_1 IGC_{it} + \alpha_2 Size_{it} + \alpha_3 PER_{it} + \alpha_4 Lev_{it} + \alpha_5 FZN_{it} + \alpha_6 OWN_{it} + \alpha_7 Tobinsq_{it} + \alpha_8 Lerner_{it} + \alpha_9 Volatility_{it} + \alpha_{10} FBD_{it} + \alpha_{11} ABDA_{it} + \alpha_{12} BS_{it} + \alpha_{13} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \varepsilon_{it} \dots (2)$$

However, for robustness, we have used the following model (2\*) to apply system GMM estimation.

$$CV_{it} = \alpha_0 + \alpha_1 CV_{it-1} + \alpha_2 IGC_{it} + \alpha_3 Size_{it} + \alpha_4 PER_{it} + \alpha_5 Lev_{it} + \alpha_6 FZN_{it} + \alpha_7 OWN_{it} + \alpha_8 Tobinsq_{it} + \alpha_9 Lerner_{it} + \alpha_{10} Volatility_{it} + \alpha_{11} FBD_{it} + \alpha_{12} ABDA_{it} + \alpha_{13} BS_{it} + \alpha_{14} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \xi_i + \varepsilon_{it} \dots (2^*)$$

Further, to test Hypothesis 3, model 3 is formulated to examine the regulatory impact of corporate internal governance on corporates' targeted poverty alleviation and the firm value, which is shown as:

$$CV_{it} = \alpha_0 + \alpha_1 PVI_{it} * IGC_{it} + \alpha_2 PVI_{it} + \alpha_3 IGC_{it} + \alpha_4 Size_{it} + \alpha_5 PER_{it} + \alpha_6 Lev_{it} + \alpha_7 FZN_{it} + \alpha_8 OWN_{it} + \alpha_9 Tobinsq_{it} + \alpha_{10} Lerner_{it} + \alpha_{11} Volatility_{it} + \alpha_{12} FBD_{it} + \alpha_{13} ABDA_{it} + \alpha_{14} BS_{it} + \alpha_{15} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \varepsilon_{it} \dots (3)$$

However, for robustness, we have used the following model (3\*) to apply system GMM estimation.

$$CV_{it} = \alpha_0 + \alpha_1 CV_{it-1} + \alpha_2 PVI_{it} * IGC_{it} + \alpha_3 PVI_{it} + \alpha_4 IGC_{it} + \alpha_5 Size_{it} + \alpha_6 PER_{it} + \alpha_7 Lev_{it} + \alpha_8 FZN_{it} + \alpha_9 OWN_{it} + \alpha_{10} Tobinsq_{it} + \alpha_{11} Lerner_{it} + \alpha_{12} Volatility_{it} + \alpha_{13} FBD_{it} + \alpha_{14} ABDA_{it} + \alpha_{15} BS_{it} + \alpha_{16} FNature_{it} + Ind_i + Y_r + \mu_i + \eta_i + \xi_i + \varepsilon_{it} \dots (3^*)$$

Where CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners' Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)] and CV<sub>it-1</sub> represents the one-lagged variable of CV<sub>it</sub>;



$PVI_{it} * IGC_{it}$  is the interaction of enterprises' targeted poverty alleviation investment plus one and Corporate internal governance control;  $PVAI_{it}$  is measured as the logarithm of the scale of enterprises' targeted poverty alleviation investment plus one;  $IGC_{it}$  is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994);  $Tobinsq_{it}$  is measured by Tobin'Q values;  $Size_{it}$  Natural logarithm of total assets;  $PER_{it}$  is measured as Price earnings ratio;  $Liquidity_{it}$  is measured as Yearly Turnover (Total Shares);  $OWN_{it}$  is measured as the shareholding of the largest shareholder;  $FZN_{it}$  is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets];  $BS_{it}$  is measured as Total number of directors;  $ABDA_{it}$  is measured as Average age of board of directors;  $FBD_{it}$  is measured as Ratio of female directors to total number of board of directors;  $Lerner_{it}$  is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost);  $FNature_{it}$  is a dummy variable represents the ownership nature of firm where state-owned firms = 1 and 0 otherwise;  $Ind_i$  represents industry fixed effect;  $Yr_t$  represents time fixed effect;  $\mu_i$  is the firm-specific fixed effect;  $\eta_i$  represents province fixed effect;  $\xi_i$  represents industry fixed effects;  $\varepsilon_{it}$  is the error term where i represents for firm and t represents time.

### 4. Empirical analysis and discussion

#### 4.1. Descriptive statistics

Table 2 reports the descriptive statistics for the study sample. The descriptive data show that corporate sustainable growth value (CV) ranges from 0.001 to 0.104, with a mean of 0.024 and a standard deviation of 0.018. This indicates that the values used to measure firm value have a wide distribution, but the average value is low, suggesting a low overall value for the firms. Targeted poverty alleviation (PVAI) varies from 0.457 to 11.004, with a mean of 4.606 and a standard deviation of 1.928. This reflects a significant variation in the sample firms' investments on targeted poverty alleviation activities. Moreover, the mean value of corporate internal governance control (IGC) is 625.211, with a minimum of 0.00 and a maximum of 825.240, implying that most firms have good internal governance control over their organizations.

The control variables are summarized as follows. The mean value of firm size (Size) is 23.1, with a minimum of 20.2 and a maximum of 28.6, indicating that the firms are of moderate size. The mean value of price earnings ratio (PER) is 54.228, with a range of 4.559–524.792, suggesting that firms participating in poverty alleviation initiatives have a reasonable range of PER values. The leverage ratio (Lev) has a mean of 0.627, with a minimum of 0.000 and a maximum of 13.693, implying that there are significant differences in leverage ratios of Chinese firms taking poverty alleviation initiatives. Financialization (FZN) values also show similar trends as leverage ratio. The liquidity ratio (Liquidity) has a mean of 337.543, with a minimum of 22.138 and a maximum of 1380.932, indicating significant disparities in corporate liquidity. The Lerner index values (average:0.131; minimum: -0.415; maximum: 0.560) show that Chinese firms have strong market power in different industries. The ownership concentration (OWN) has a mean of 33.5, with a minimum of 10% and a maximum of 70%, showing that the largest shareholders own more than one-third of the shares in enterprises with a focus on poverty reduction. This finding also confirms that firms with targeted poverty alleviation practices have a highly concentrated ownership structure, with an average board size of 8.896 members, implying that most firms have a fairly moderate board size of 8–9 members with 1 female on average in the board of directors where the average age of directors is 50–51 years.

#### 4.2. Correlation analysis

Table 3 reports the Pearson correlation coefficients. The results show that CV is positively correlated with PVAI and IGC at the 1% level. Among the control variables, CV is positively related to Size, OWN, BS, Tobinsq and Lerner variables. However, it is negatively linked to PER, Lev, and Liquidity variables. Whereas, it has no association with FZN, FBD and ABDA. All the correlation coefficient

**Table 2**  
Descriptive statistics.

Variables	Observations	Mean	Median	SD	Min	Max
CV <sub>it</sub>	6865	0.024	0.021	0.018	0.001	0.104
PVAI <sub>it</sub>	6865	4.696	4.550	1.928	0.457	11.004
IGC <sub>it</sub>	6865	6.467	638.220	0.149	4.830	6.839
Size <sub>it</sub>	6865	23.086	22.825	1.720	20.208	28.607
PER <sub>it</sub>	6865	54.228	34.175	73.454	4.559	524.792
Lev <sub>it</sub>	6865	0.627	0.031	1.847	0.000	13.693
FZN <sub>it</sub>	6865	0.079	0.035	0.110	0.000	0.609
OWN <sub>it</sub>	6865	33.460	31.614	12.041	10.050	70.320
Tobinsq <sub>it</sub>	6865	1.794	1.431	1.126	0.826	7.715
Lerner <sub>it</sub>	6865	0.131	0.120	0.163	-0.415	0.560
Liquidity <sub>it</sub>	6865	337.543	259.652	269.267	22.138	1380.932
FBD <sub>it</sub>	6865	0.184	0.171	0.108	0.000	0.500
ABDA <sub>it</sub>	6865	50.506	50.615	3.058	42.571	57.310
BS <sub>it</sub>	6865	8.896	9.000	1.980	5.000	15.000

Source: CSMAR and own calculations.

**Table 3**  
Correlation analysis.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	VIF
(1) CV <sub>it</sub>	1.000														
(2) PVAI <sub>it</sub>	0.116***	1.000													1.36
(3) IGC <sub>it</sub>	0.056***	0.123***	1.000												1.05
(4) Size <sub>it</sub>	0.083***	0.554***	0.136***	1.000											2.09
(5) PER <sub>it</sub>	-0.185***	-0.157***	-0.079***	-0.259***	1.000										1.04
(6) Lev <sub>it</sub>	-0.026**	-0.138***	-0.058***	-0.281***	0.081***	1.000									1.18
(7) FZN <sub>it</sub>	0.004	0.068***	0.013	0.074***	-0.018	0.194***	1.000								1.08
(8) OWN <sub>it</sub>	0.067***	0.018	0.087***	0.100***	-0.081***	-0.058***	-0.057***	1.000							1.25
(9) Tobinsq <sub>it</sub>	0.218***	-0.174***	-0.023*	-0.387***	0.252***	0.184***	0.024*	-0.060***	1.000						1.38
(10) Lerner <sub>it</sub>	0.257***	0.017	0.148***	-0.025**	-0.167***	0.008	-0.149***	0.073***	0.155***	1.000					1.14
(11) Liquidity <sub>it</sub>	-0.046***	-0.191***	-0.022*	-0.344***	0.183***	0.115***	0.004	-0.238***	0.144***	-0.082***	1.000				1.27
(12) FBD <sub>it</sub>	0.012	-0.104***	-0.023*	-0.215***	0.080***	0.080***	0.077***	-0.085***	0.132***	0.017	0.046***	1.000			1.13
(13) ABDA <sub>it</sub>	-0.002	0.224***	0.110***	0.415***	-0.126***	-0.078***	0.013	0.140***	-0.183***	-0.014	-0.168***	-0.281***	1.000		1.24
(14) BS <sub>it</sub>	0.021*	0.252***	0.041***	0.402***	-0.095***	-0.102***	0.054***	-0.039***	-0.161***	0.021*	-0.179***	-0.148***	0.247***	1.000	1.14

**Notes:** CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners' Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]; PVAI<sub>it</sub> is measured as the logarithm of the scale of enterprises' targeted poverty alleviation investment plus one; IGC<sub>it</sub> is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994); Tobinsq<sub>it</sub> is measured by Tobin'Q values; Size<sub>it</sub> Natural logarithm of total assets; PER<sub>it</sub> is measured as Price earnings ratio; Liquidity<sub>it</sub> is measured as Yearly Turnover (Total Shares); OWN<sub>it</sub> is measured as the shareholding of the largest shareholder; FZN<sub>it</sub> is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets]; BS<sub>it</sub> is measured as Total number of directors; ABDA<sub>it</sub> is measured as Average age of board of directors; FBD<sub>it</sub> is measured as Ratio of female directors to total number of board of directors; Lerner<sub>it</sub> is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost).

\*\*\*p < .01, \*\*p < .05, \*p < .1.



values are less than 0.5 and VIF values are less than 2, indicating that the study variables do not suffer from multicollinearity problem [59].

### 4.3. Regression analysis

#### 4.3.1. Corporate's targeted poverty alleviation behavior and firm value

Table 4 presents the fixed effects regression analysis of the relationship between targeted poverty alleviation investment and on corporate sustainable value creation. Column 1 (without control variables) and column 2 (with control variables) show that firms' targeted poverty alleviation investment has a positive and significant effect on corporate sustainable value creation at the 1% level. This implies that the firms that increase their investment in targeted poverty alleviation programs by 1% can increase their firm value by 0.0015 points (for instance from the mean CV value 0.024 to 0.0255) and 0.0007-unit points (with control variables). The results

**Table 4**  
Corporate Sustainable value creation, Poverty alleviation Initiatives, and Corporate Internal Governance Control.

	(1)	(2)	(3)	(4)
	CV <sub>it</sub>	CV <sub>it</sub>	CV <sub>it</sub>	CV <sub>it</sub>
PVAI <sub>it</sub>	.002*** (9.52)	.001*** (4.97)		-.009* (-1.77)
IGC <sub>it</sub>			.004** (2.35)	-.003 (-.75)
PVAI <sub>it</sub> × IGC <sub>it</sub>				.0015** (2.01)
Size <sub>it</sub>		.002*** (8.84)	.002*** (12.27)	.001*** (5.97)
PER <sub>it</sub>		-.008*** (-12.63)	-.007*** (-11.90)	-.007*** (-9.77)
Lev <sub>it</sub>		-.003** (-2.55)	-.004*** (-3.11)	-.001*** (-4.95)
FZN <sub>it</sub>		.003 (1.63)	.004* (1.71)	.007** (2.72)
OWN <sub>it</sub>		.001*** (5.24)	.001*** (5.41)	.001*** (3.84)
Tobinsq <sub>it</sub>		.005*** (16.17)	.005*** (16.44)	.005*** (13.24)
Lerner <sub>it</sub>		.021*** (12.59)	.023*** (12.59)	.024*** (11.54)
Liquidity <sub>it</sub>		.002 (1.36)	.017*** (2.64)	.018** (2.19)
FBD <sub>it</sub>		-.004 (-.001)	.003 (.16)	-.018 (-.73)
ABDA <sub>it</sub>		-.001 (-1.54)	-.001 (-1.60)	-.002** (-2.09)
BS <sub>it</sub>		.001 (.98)	.002 (1.40)	.001 (.71)
FNature <sub>it</sub>		-.034*** (-6.57)	-.039*** (-7.35)	-.003*** (-4.78)
Constant	.022*** (38.61)	-.039*** (-5.61)	-.067*** (-5.74)	.064*** (4.22)
Observations	6859	6477	6200	4491
R-squared	.018	.177	.188	.193
Adj R <sup>2</sup>	.017	.175	.186	.189
F-stat	58.099	31.332	34.981	29.398
Industry FE effects	Yes	Yes	Yes	Yes
Year FE effects	Yes	Yes	Yes	Yes
Firm FE effects	Yes	Yes	Yes	Yes

Notes: CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners' Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]; PVAI<sub>it</sub> is measured as the logarithm of the scale of enterprises' targeted poverty alleviation investment plus one; IGC<sub>it</sub> is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994); Tobinsq<sub>it</sub> is measured by Tobin'Q values; Size<sub>it</sub> Natural logarithm of total assets; PER<sub>it</sub> is measured as Price earnings ratio; Liquidity<sub>it</sub> is measured as Yearly Turnover (Total Shares); OWN<sub>it</sub> is measured as the shareholding of the largest shareholder; FZN<sub>it</sub> is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets]; BS<sub>it</sub> is measured as Total number of directors; ABDA<sub>it</sub> is measured as Average age of board of directors; FBD<sub>it</sub> is measured as Ratio of female directors to total number of board of directors; Lerner<sub>it</sub> is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost); PVI<sub>it</sub>\*IGC<sub>it</sub> is the interaction of enterprises' targeted poverty alleviation investment plus one and Corporate internal governance control; FNature<sub>it</sub> is a dummy variable represents the ownership nature of firm where state-owned firms = 1 and 0 otherwise. t-values are in parentheses.

\*\*\*p < .01, \*\*p < .05, \*p < .1.

support our hypothesis H1. These results suggest that firms participating in targeted poverty alleviation initiatives gain more trust from stakeholders, especially investors, to have external sources of funding for their projects, which also corroborates the study findings of Chen and Li [60]. The possible reason behind this trust is the government policy support for the firms taking anti-poverty initiatives.

Column 2 of Table 4 also shows that the firm’s PER and FNature have a significant negative relationship with the firm value at the 1% level, suggesting that firm size, price earnings ratio and older board are not favorable for enhancing the firm value for those firms who pursue poverty alleviation initiatives. Consequently, Size, OWN, Tobinsq, Lerner and Liquidity have a significant positive relationship with firm value. It indicates that big firms, firms with higher ownership concentration by individual shareholder and higher market competitiveness and liquidity ratio have higher firm value for those who are actively involved in poverty alleviation initiatives.

Table 4, column 3 reports the regression results of the relationship between corporate internal governance control (IGC) and corporate sustainable value creation (CV). It shows that IGC has a positive and significant effect on CV at the 5% level, which supports our hypothesis H2. These results imply that firms with higher internal governance control can increase the sustainable value creation by 0.0038 points. These findings are in line with the literature [2,31,61].

Table 4, column 4 reports the moderating role of IGC on the relationship between CV and PVAI. The results show that higher internal governance control enhances the positive association between CV and PVAI by 0.0015 points, supporting our hypothesis H3. These results indicate that China’s poverty alleviation efforts have evolved from their initial goal of meeting the basic needs of the poor to the current stage of building on this success by accelerating poverty reduction, improving environmental sustainability, expanding

**Table 5**  
Robustness 1: Corporate Sustainable value creation, Poverty alleviation Initiatives, and Corporate Internal Governance Control: System Generalized Method of Moments Estimation (GMM) Approach.

Variables	1		2		3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
CV <sub>it</sub>						
CV <sub>it-1</sub>	0.695***	5.36	0.489***	4.63	0.691***	4.49
PVAI <sub>it</sub>	0.048*	1.93			-0.140*	-1.79
IGC <sub>it</sub>			0.022**	2.37	-0.468	-1.03
PVAI <sub>it</sub> * IGC <sub>it</sub>					0.026*	1.89
Size <sub>it</sub>	-0.146***	-3.30	-0.114***	-3.46	-0.127***	-3.31
PER <sub>it</sub>	-0.005***	-3.71	-0.006***	-4.68	-0.053***	-3.39
Lev <sub>it</sub>	-0.075	-0.55	0.027	0.25	0.094	0.68
FZN <sub>it</sub>	-0.283	-1.62	-0.184	-1.45	-0.269	-1.57
OWN <sub>it</sub>	0.006***	2.96	0.007**	2.39	0.011	0.51
Tobinsq <sub>it</sub>	0.056***	4.06	0.054***	4.66	0.056***	4.09
Lerner <sub>it</sub>	0.445***	4.19	0.688***	5.77	0.459***	4.05
Liquidity <sub>it</sub>	0.009**	2.48	0.006*	1.92	0.008**	1.98
FBD <sub>it</sub>	0.215	1.23	0.261*	1.80	0.239	1.36
ABDA <sub>it</sub>	-0.015*	-1.90	-0.016***	-2.53	-0.011	-1.49
BS <sub>it</sub>	-0.003	-0.26	0.004	0.46	-0.349	0.34
FNature	0.77	0.63	-0.061	-0.85	-0.011	-0.10
Constant	0.354***	3.39	0.187*	1.77	0.628**	1.96
Observations	4459		4250		3257	
Firms	1464		1436		1194	
Endog (p)	1.541 (0.514)		7.545 (0.604)		1.564 (0.470)	
Sargan J Test (p)	9.443 (0.408)		7.15 (0.350)		0.204 (0.652)	
Hansen J Test (p)	4.816 (0.103)		5.448 (0.440)		0.816 (0.232)	
AR1(p)	-3.567 (0.000)		-3.867 (0.000)		-3.602 (0.000)	
AR2(p)	-1.711 (0.187)		-2.085 (0.137)		-1.748 (0.180)	
Year Fixed effects	Yes		Yes		Yes	
Firm Fixed effects	Yes		Yes		Yes	
Industry Fixed effects	Yes		Yes		Yes	
Province Fixed effects	Yes		Yes		Yes	

Notes: CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners’ Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]; PVAI<sub>it</sub> is measured as the logarithm of the scale of enterprises’ targeted poverty alleviation investment plus one; IGC<sub>it</sub> is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994); Tobinsq<sub>it</sub> is measured by Tobin’Q values; Size<sub>it</sub> Natural logarithm of total assets; PER<sub>it</sub> is measured as Price earnings ratio; Liquidity<sub>it</sub> is measured as Yearly Turnover (Total Shares); OWN<sub>it</sub> is measured as the shareholding of the largest shareholder; FZN<sub>it</sub> is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets]; BS<sub>it</sub> is measured as Total number of directors; ABDA<sub>it</sub> is measured as Average age of board of directors; FBD<sub>it</sub> is measured as Ratio of female directors to total number of board of directors; Lerner<sub>it</sub> is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost); PVI<sub>it</sub>\*IGC<sub>it</sub> is the interaction of enterprises’ targeted poverty alleviation investment plus one and Corporate internal governance control; FNature<sub>it</sub> is a dummy variable represents the ownership nature of firm where state-owned firms = 1 and 0 otherwise. t-values are in parentheses.

Industry median of ROA and CV are used as the instrumental variables.

\*\*\*p < .01, \*\*p < .05, \*p < .1.

economic growth, and narrowing the development gap [1]. Based on the control variables findings, the possible motivations for firms to participate in anti-poverty initiatives are manifold. Chinese firms are operating in a highly competitive environment where gaining stakeholder’s trust is very important. Therefore, participating in anti-poverty initiatives not only helps them to improve their market image (signaling perspective) and gain market confidence, but also government financial support. Thus, management is willing to explore innovative ways to actively engage in anti-poverty activities to attract long-term investors to increase their stakes in long-term investment projects and create sustainable value for the firm. Moreover, from the governance perspective, higher management members are more experienced. Studies have shown that older board members are more inclined to make charitable donations [3,12].

4.3.2. Robustness

This study has adopted dual robustness to check the robustness of our findings, we have approach; firstly, we have replaced the Fixed Effects model with 2-stage system-GMM estimation to address endogeneity and reverse causality. Secondly, we repeated our analysis by using an alternate proxy of corporate poverty alleviation initiatives to investigate the validity of our primary findings. Following [62], this study replaces  $PVAI_{it}$  with  $PVAI_{it}^*$  which is measured as the logarithm of “helping building file cards of the number of poor people lifted out of poverty” plus one. Results shown in Tables 5 and 6 confirm our primary findings.

We have conducted various diagnostic tests to validate our findings. First, we have tested multicollinearity by calculating VIF [59]. Moreover, we have used robust standard errors to deal with heteroskedasticity [63]. Second, we have tested endogeneity using Durbin and Wu-Hausman test which confirms that there is no endogeneity issue in the specified model and Sargen J [64] tests to validate our model specifications. Moreover, AR1 and AR2 tests for serial autocorrelation show no evidence of model misspecification [65] for both

**Table 6**  
Robustness 2: Corporate Sustainable value creation, Poverty alleviation Initiatives, and Corporate Internal Governance Control: Using Alternative Poverty Alleviation Initiatives Measure and System GMM.

Variables	1		2		3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
CV <sub>it</sub>						
CV <sub>it-1</sub>	0.746***	4.38	0.489***	4.63	0.647***	4.17
PVAI <sub>it</sub> *	0.068**	2.44			-0.132**	-2.11
IGC <sub>it</sub>			0.022**	2.37	-0.421**	-2.15
PVAI <sub>it</sub> ** IGC <sub>it</sub>					0.021**	2.21
Size <sub>it</sub>	-0.132***	-3.00	-0.114***	-3.46	-0.8917***	-2.96
PER <sub>it</sub>	-0.005***	-2.98	-0.006***	-4.68	-0.005***	-3.37
Lev <sub>it</sub>	0.076	0.52	0.027	0.25	0.080	0.64
FZN <sub>it</sub>	-0.284	-1.53	-0.184	-1.45	-0.265	-1.57
OWN <sub>it</sub>	0.069***	2.89	0.007**	2.39	0.013	0.53
Tobinsq <sub>it</sub>	0.064***	4.19	0.054***	4.66	.062***	4.41
Lerner <sub>it</sub>	0.325***	3.31	0.688***	5.77	0.436***	3.94
Liquidity <sub>it</sub>	0.001**	2.39	0.006*	1.92	0.008**	2.01
FBD <sub>it</sub>	0.325*	1.77	0.261*	1.80	0.297*	1.79
ABDA <sub>it</sub>	-0.014*	1.76	-0.016***	-2.53	-0.011	-1.38
BS <sub>it</sub>	-0.072	-0.58	0.004	0.46	0.042	0.38
FNature	0.097	0.85	-0.061	-0.85	.036	0.34
Constant	35.677***	-2.97	0.187*	1.87	0.552***	3.68
Observations	4459		4250		3171	
Firms	1464		1436		1171	
Endog (p)	1.953 (0.622)		7.545 (0.604)		1.611 (0.254)	
Sargan J Test (p)	0.712 (0.434)		7.15 (0.350)		5.020 (0.342)	
Hansen J Test (p)	2.816 (0.310)		3.420 (0.541)		1.288 (0.434)	
AR1(p)	-3.490 (0.000)		-3.867 (0.000)		-3.566 (0.000)	
AR2(p)	-1.792 (0.173)		-2.085 (0.137)		-1.835 (0.167)	
Year Fixed effects	Yes		Yes		Yes	
Firm Fixed effects	Yes		Yes		Yes	
Industry Fixed effects	Yes		Yes		Yes	
Province Fixed effects	Yes		Yes		Yes	

Notes: CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners’ Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]; PVAI<sub>it</sub> is measured as the logarithm of the scale of enterprises’ targeted poverty alleviation investment plus one; IGC<sub>it</sub> is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994); Tobinsq<sub>it</sub> is measured by Tobin’Q values; Size<sub>it</sub> Natural logarithm of total assets; PER<sub>it</sub> is measured as Price earnings ratio; Liquidity<sub>it</sub> is measured as Yearly Turnover (Total Shares); OWN<sub>it</sub> is measured as the shareholding of the largest shareholder; FZN<sub>it</sub> is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets]; BS<sub>it</sub> is measured as Total number of directors; ABDA<sub>it</sub> is measured as Average age of board of directors; FBD<sub>it</sub> is measured as Ratio of female directors to total number of board of directors; Lerner<sub>it</sub> is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost); PVAI<sub>it</sub>\*IGC<sub>it</sub> is the interaction of enterprises’ targeted poverty alleviation investment plus one and Corporate internal governance control; FNature<sub>it</sub> is a dummy variable represents the ownership nature of firm where state-owned firms = 1 and 0 otherwise. t-values are in parentheses. t-values are in parentheses. Industry median of ROA and CV are used as the instrumental variables. \*\*\*p < .01, \*\*p < .05, \*p < .1.

robustness approaches (see Table 5 and 6).

#### 4.4. Heterogeneity analysis

Further, to examine the behaviors of firms regarding the relationship between corporate poverty alleviation initiatives and corporate value creation, we split the data into sub samples based on their ownership nature, size and leverage ratio. Table 7, columns 1&2 report the findings of SOE and non-SOE firms. The results show that the relationship between corporate poverty alleviation initiatives and corporate value creation is stronger among non-SOE firms. The possible reason could be that firms send a positive image of the company to their stakeholders to gain their trust, which can be further verified by analyzing the results based on firm size and leverage ratio. Table 7, columns 3&4 present the results based on large firms and small firms, respectively. The findings show that small firms are more active in poverty alleviation activities and achieving value creation. However, columns 5&6 (see Table 7) show that firms pursuing poverty alleviation activities with low leverage ratio create more value than highly leveraged firms.

**Table 7**  
Heterogeneity analysis based on firm nature, firm size and firm leverage.

	CV <sub>it</sub>					
	(1)	(2)	(3)	(4)	(5)	(6)
	SOE	NSOE	Big Firms	Small Firms	High-Lev	Low-Lev
PVAI <sub>it</sub>	.004** (2.01)	.007*** (3.40)	.009*** (5.60)	.010*** (4.75)	.006*** (3.41)	.005* (1.89)
Size <sub>it</sub>	.016*** (5.95)	.021*** (6.76)			.022*** (7.61)	.016*** (4.25)
PER <sub>it</sub>	-.006*** (-7.75)	-.008*** (-10.44)	-.009*** (-8.70)	-.005*** (-8.67)	-.004*** (-10.13)	-.001*** (-6.37)
Lev <sub>it</sub>	-.004* (-1.84)	-.002 (-1.54)	-.007*** (-2.70)	-.002 (-1.25)		
FZN <sub>it</sub>	.059** (2.07)	.014 (.48)	.064** (2.18)	.001 (.35)	.007 (.30)	.006 (1.42)
OWN <sub>it</sub>	.001*** (2.97)	.001*** (4.54)	.001*** (3.59)	.001*** (2.68)	.001*** (4.88)	.001*** (2.52)
Tobinsq <sub>it</sub>	.053*** (11.32)	.046*** (11.73)	.083*** (14.49)	.027*** (8.84)	.004*** (13.00)	.087*** (11.13)
Lerner <sub>it</sub>	.022*** (9.31)	.023*** (8.68)	.017*** (8.86)	.027*** (8.96)	.025*** (10.65)	.015*** (5.94)
Liquidity <sub>it</sub>	.003*** (2.57)	.004* (1.75)	.003*** (2.58)	.007 (.43)	.004** (2.17)	-.003** (-2.14)
FBD <sub>it</sub>	.016 (.50)	-.008 (-.27)	.034 (1.02)	.007 (.23)	.006 (.247)	.007 (.16)
ABDA <sub>it</sub>	.001 (.77)	-.002** (-2.17)	.001 (.84)	-.003** (-2.38)	-.001 (-1.44)	.000 (-1.10)
BS <sub>it</sub>	.001 (.35)	.002 (1.07)	.002 (1.61)	-.003 (-1.34)	.001 (.77)	.002 (1.04)
FNature <sub>it</sub>			-.033** (-2.48)	-.002* (-1.85)	-.034*** (-5.82)	-.031*** (-2.94)
Constant	-.037*** (-4.44)	-.047*** (-2.99)	-.016** (-2.49)	.023*** (4.10)	-.041*** (-5.08)	-.037*** (-2.96)
Observations	3272	3120	3402	3344	4489	1988
R-squared	.166	.293	.245	.123	.167	.239
Adj R <sup>2</sup>	.162	.286	.241	.119	.163	.232
F-stat	20.427	25.201	22.671	13.928	25.322	12.384
Industry FE effects	Yes	Yes	Yes	Yes	Yes	Yes
Year FE effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE effects	Yes	Yes	Yes	Yes	Yes	Yes

**Notes:** CV<sub>it</sub> is measured by the logarithm of (Net Profit/Average Balance of Total Owners' Equity) \* [1 - Dividend per Share Before Taxes/(Net Profit in Current Period/Average Balance of Paid-in Capital)]; PVAI<sub>it</sub> is measured as the logarithm of the scale of enterprises' targeted poverty alleviation investment plus one; IGC<sub>it</sub> is measured as the natural logarithm of corporate internal control index based on COSO Framework (1994); Tobinsq<sub>it</sub> is measured by Tobin'Q values; Size<sub>it</sub> Natural logarithm of total assets; PER<sub>it</sub> is measured as Price earnings ratio; Liquidity<sub>it</sub> is measured as Yearly Turnover (Total Shares); OWN<sub>it</sub> is measured as the shareholding of the largest shareholder; FZN<sub>it</sub> is measured by [(Trading financial assets + derivative financial assets + long-term equity investment + investment real estate + held-to-maturity investment)/total assets]; BS<sub>it</sub> is measured as Total number of directors; ABDA<sub>it</sub> is measured as Average age of board of directors; FBD<sub>it</sub> is measured as Ratio of female directors to total number of board of directors; Lerner<sub>it</sub> is measured as the logarithm of Lerner Index of an Individual Stock (percentage markup of price above marginal cost); FNature<sub>it</sub> is a dummy variable represents the ownership nature of firm where state-owned firms = 1 and 0 otherwise. t-values are in parentheses. t-values are in parentheses.

\*\*\*p < .01, \*\*p < .05, \*p < .1.

#### 4.5. Discussion

This study highlights the significance of corporate social responsibilities in reducing poverty through proper corporate governance control. China, as the world's most populous country, faces severe challenges of poverty and its related problems, such as hunger, diseases, and social conflicts, which impede people's pursuit of a better life. Therefore, targeted poverty alleviation activities can be seen as an example of creating shared value, as they can help to solve a major social issue while also generating economic value for the firm. By investing in poverty alleviation initiatives that is aligned with their core business activities, firms can create sustainable value for themselves and the communities they serve [5]. Thus, this study makes several contributions to the literature. Based on resource-based, signaling and social capital perspectives, this study investigates the impact of corporate anti-poverty initiatives as a signal to the community to gain investors' trust and with optimal internal governance control, using available resources efficiently to create sustainable value [3,7,8]. Corporate targeted poverty alleviation activities can play a vital role in creating sustainable value for both firms and the communities they serve. By investing in poverty alleviation initiatives that are aligned with their core business activities, firms can create shared value that addresses both social and economic challenges [3,5]. However, it is important for firms to carefully consider their core business strategy and capacity before engaging in poverty alleviation initiatives, to ensure that they create sustainable value over the long term.

This study shows that firms that are actively involved in anti-poverty activities in China can achieve a favorable value creation. In these firms, internal governance control plays a significant role in pursuing such anti-poverty activities and positively moderates the positive relationship between anti-poverty initiatives taken by the firm and its sustainable value creation. Furthermore, heterogeneity analysis shows that non-SOE firms, small and low-leverage firms pursuing anti-poverty activities are in a better position to achieve value creation. These findings are unique as previous studies have looked at governance from structural perspectives but not from policy perspectives. The findings confirm Masulis and Reza [40], Pelozo [66], Pelozo and Shang [41], Xie and Fukumoto [67] and Xie, Jia [47]. Moreover, this study has used system GMM estimation to address reverse causality and endogeneity issues. These results can be very useful for policy makers and practitioners to encourage firms to fulfil their social responsibilities in an effective way to eradicate poverty from the region as an optimal solution.

#### 5. Conclusions and recommendations

This study examines how firm value is affected by targeted poverty alleviation behavior of firms from 2016 to 2021 and how this relationship is moderated by corporate internal governance control. This study uses fixed effects and system GMM methods to test the hypotheses empirically. The results show that both corporate internal governance and targeted poverty alleviation practices have a positive impact on firm value and governance. Firm value can be improved by enhancing both structural and social performance. The results also indicate that corporate internal governance moderates the relationship between targeted poverty alleviation behavior and firm value. A further analysis of corporate governance factors reveals that corporate internal governance control strengthens the positive effect of targeted poverty alleviation behavior on firm value. Moreover, the heterogeneity analysis shows that non-SOE, small and low-leverage firms that engage in anti-poverty activities have more value creation potential than other firms. This study has implications for regulators and policy makers on the role of internal control in corporate governance and the effectiveness of establishing norms and guidelines on internal control in public enterprises. The findings are robust to alternative measures of poverty alleviation initiatives.

This study demonstrates that firms can increase their social value by improving internal governance and poverty alleviation initiatives. Based on the empirical findings, we would like to offer some suggestions for effectively enhancing firm value.

1. Firms should actively participate in poverty alleviation initiatives and establish and maintain relationships with key stakeholders to create a favorable internal and external environment for the firm. Firms should also consider long-term growth by improving operational capabilities to increase investment returns. Firms could also improve human capital development and retention by paying fair wages and protecting creditors' rights.
2. Firms should keep all stakeholders within the system and follow the rules. If firms want to maintain an effective internal power balance, they should ensure that major owners have the authority to exercise controlling powers within their scope and that shareholder responsibilities are distributed fairly. Firms should involve creditors, customers, and other relevant parties in their internal systems. The board of directors is responsible for ensuring that the internal governance control framework is comprehensive. Taking into account everyone's needs and interests is the only way to ensure that the firm's decisions are sound and efficient.
3. The government should encourage firms to implement poverty alleviation initiatives and enforce relevant laws and regulations vigorously. Moreover, it should create policies that facilitate a strong governmental oversight mechanism. In China, where the economy is transitioning and the market is underdeveloped, frequent social monitoring and feedback systems help the socialist economy develop. There is a lack of poverty alleviation initiatives in China's firms, and the country's social structure needs to be strengthened. The information disclosure system needs to be improved as there is no consistent standard for reporting and guidance on poverty alleviation. Firms often make selective disclosures to create a positive and responsible image. Therefore, the Chinese government should start with the oversight and feedback system to improve the management system and then encourage and support firms to engage in poverty alleviation activities.

This research has some limitations. This study investigates corporate governance, corporate value, and targeted poverty alleviation

behavior. As the disclosure of anti-poverty alleviation activities is new to the Chinese capital market, a longer period might be chosen for a deeper analysis.

### Author contribution statement

Bin Feng Chai, PhD: Conceived and designed the experiments; Wrote the paper.

Zhe Li, PhD: Conceived and designed the experiments; Contributed reagents, materials, analysis tools or data.

Sultan Sikandar Mirza: Performed the experiments; Wrote the paper.

Safdar Raheel, PhD: Analyzed and interpreted the data; Wrote the paper.

### Data availability statement

Data will be made available on request.

### Declaration of competing 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 paper.

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