

Enterprise Poverty Alleviation and Disagreements between Chinese and Foreign ESG Ratings

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Abstract. Corporate poverty alleviation is an important manifestation of corporate social responsibility. However, there is currently a lack of research on the impact of corporate poverty alleviation on the disagreements between Chinese and foreign ESG ratings. Through empirical analysis, this paper finds that corporate which participate in poverty alleviation will reduce the differences in ESG ratings between domestic and international agencies. Further research reveals that corporate involvement in poverty alleviation can significantly improve information transparency and reduce financing constraints, thereby reducing the divergence of ESG ratings. In addition, state-owned enterprises and enterprises with high-quality information disclosure that participate in poverty alleviation will more significantly reduce the disagreements. The study offers compelling evidence that China should support the globalization of disclosure regulations and develop an ESG assessment framework that considers both globalization and regional differences.

Keywords: Poverty Alleviation, ESG Rating, Rating Disagreements.

1. Introduction

Nowadays, the ESG investment concept has been widely disseminated globally, and the scale of ESG investments has expanded rapidly. Data from the United Nations Principles for Responsible Investment shows that the number of institutions engaged in responsible investment has been growing. Since its launch in 2006 to June 2023, the number of PRI signatories has reached more than 5,300, with the total managed assets exceeding \$120 trillion. In mainland China, there are 133 PRI signatory institutions, and the main responsible investment market size is about 31.59 trillion yuan. This indicates that ESG investment is gradually becoming a part of mainstream investment practices, reflecting investors' increasing concern for sustainable and responsible investment.

Since China introduced its poverty alleviation strategy, research on corporate poverty alleviation has emerged continuously. These studies cover various poverty alleviation fields such as rural areas, education, and technology. Yi Xuan found that the method and continuity of poverty alleviation have a significant impact on the market's response to corporate precise poverty alleviation information disclosure [1]. Liu Liya pointed out that corporate participation in poverty development can increase the per capita income of countryside inhabitants, especially in underdeveloped areas [2]. Corporate poverty alleviation is also an essential element of Corporate Social Responsibility (CSR), showing the company's determination to undertake social responsibilities and profoundly affecting the company's sustainable development and brand image.

What impact does corporate participation in poverty alleviation have on the ESG ratings of domestic enterprises by domestic and foreign ESG rating agencies? What is the mechanism of this impact? How to build an ESG evaluation system that balances internationalization and Chinese characteristics? These questions have not been deeply studied in existing literature. Existing research finds that Chatterji and Berg both found significant differences in ESG scores for individual companies by different rating agencies [3-4]. Berg found that the mean rating correlation coefficient among the six global ESG rating agencies stands at a mere 0.54. [4]. The rating differences between agencies may affect investors' decisions, especially when the differences are large. Kotsantonis showed that ESG rating differences are one of the main obstacles to ESG investment and may reduce investors' willingness to invest [5]. Abhayawansa and Avramov also showed that ESG rating differences significantly reduce the reference value of ESG information for investors and its risk-

avoidance function [6-7]. Some scholars have explored the specific reasons for ESG rating differences. Dimson and Billio pointed out that the different weight allocations of ESG rating indicators by rating agencies are the reasons for the rating differences [8-9]. Abhayawansa believe that the opacity of the rating process also accounts for the variance observed among ESG rating agencies [6].

Currently, there is a lack of empirical analysis comparing domestic and international ESG rating agencies. Ma Wenjie analyzed the evaluation differences and causes between domestic and foreign ESG rating agencies from the view of corporate ownership attributes, but there is no empirical paper on the influence of corporate poverty alleviation on the differences in domestic and international ESG ratings [10]. The possible marginal contribution of this paper is as follows: This paper will use the perspective of corporate poverty alleviation, employing a panel linear regression model to systematically analyze the evaluation differences between domestic and international ESG rating agencies. This paper found that corporate which participate in poverty alleviation significantly reduces the asymmetry of the divergence of ESG ratings. Companies reduce the divergence by enhancing information transparency and weakening financing constraints. The research in this paper provides strong evidence for China to promote the internationalization of disclosure rules and to build an ESG evaluation system that takes into account internationalization and local characteristics.

Drawing from the preceding analysis, this paper proposes following three hypotheses:

Hypothesis H_1 : Corporate participation in poverty alleviation will significantly reduce the differences in ESG ratings between China and foreign countries.

Hypothesis H_2 : Corporate participation in poverty alleviation reduces the differences in ESG ratings between China and foreign countries by enhancing information transparency and reducing financing constraints.

Hypothesis H_3 : State-owned enterprises and enterprises with high-quality information disclosure that participate in poverty alleviation will more significantly reduce the differences in ESG ratings between China and foreign countries.

The rest of the paper is structured as follows: Section 2 describes the data and model construction, analyzes the variables, and clarifies the data sources, constructing an empirical model of corporate poverty alleviation and ESG rating differences. Section 3 presents the basic regression. Section 4 analyzes the mechanism, examining through information transparency and financing constraints. Section 5 conducts heterogeneity analysis from the perspectives of corporate property rights and the quality of ESG information disclosure. Section 6 performs robustness tests. Section 7 concludes.

2. Data description and model construction

2.1. Model setting

To explore the influence of corporate participation in poverty alleviation on the differences in ESG ratings between China and foreign countries, this paper establishes a panel linear regression model as follows:

$$D_{it} = \beta_0 + \beta_1 PA_{it} + \beta_n Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it} \quad (1)$$

Where i denotes the sample number, t represents time, the dependent variable D_{it} indicates the ESG rating difference of the i sample company in year t , specifically calculated as the standardized Z-score of the difference between the Bloomberg and Huazheng ESG scores. The explanatory variable PA_{it} is a dummy variable indicating whether the i sample company has invested in poverty alleviation funds in year t . $Controls_{it}$ represents a series of control variables, $Industry$ and $Year$ denote industry and year dummy variables, respectively. The coefficient β_1 is used to reflect the impact of corporate participation in poverty alleviation on the ESG rating differences.

2.2. Variable Selection

Dependent Variable: Upon observing the sample data, it was found that Huazheng ESG scores are generally higher than Bloomberg's ESG scores. Therefore, this paper focuses on the rating divergence where foreign agency ratings are lower than domestic agency ratings. The paper follows Berg and standardizes the ESG scores from both Bloomberg and Huazheng using Z-scores to make them comparable [4]. The difference between Huazheng and Bloomberg ESG scores, after Z-score standardization, is used to measure the rating divergence between domestic and foreign ESG rating agencies. In addition, H_{it} and B_{it} are the Huazheng and Bloomberg ESG scores for the i sample company in year t , respectively, after the same Z-score standardization.

Explanatory Variable : The key explanatory variable introduced is the company's involvement in poverty alleviation. This variable aims to measure whether the company has made investments or undertaken activities related to poverty alleviation during a specific period. Specifically, if company i has records showing that it has invested in poverty alleviation funds in year t , then the variable is set to 1, indicating that the company has indeed participated in poverty alleviation work in that year. Conversely, if company ii has not invested any funds in poverty alleviation in year t , then the variable is set to 0, meaning that the company did not participate in poverty alleviation activities in that year.

Control Variable: $Controls_{it}$ is a series of control variables. This work regulates the parameters at the firm level and makes reference to Cai's and others' studies when choosing control variables [11]. To guarantee the consistency of the empirical findings, the following control variables were chosen: business Size (Size): the total assets' natural logarithm; Total assets at the end of the year divided by total liabilities is the asset-liability ratio (Lev); ROA, or net profit margin on total assets, is calculated by dividing net profit by average total assets. Establishment years (FirmAge): $\ln$ (current year - establishment year + 1); listed years of the business (ListAge): $\ln$ (year of the current year - listed year + 1); Net cash flow from operating activities divided by total assets is known as the cash flow ratio (Opcf); The ratio of management expenses to operational revenue is known as the management expense ratio (Mfee); The natural logarithm of the number of board members is the number of directors (Board); Operating income growth rate (Growth) is calculated by dividing operating income for the current year by operating income for the previous year, and the result is -1. Top 10 shareholders' shareholdings (Top10): the ratio of the top 10 shareholders' shares to the total number of shares; Book value divided by total market value is known as the book-to-market ratio (BM); The average monthly turnover rate of stocks in the current year less the average monthly turnover rate of stocks in the prior year is known as the average monthly excess turnover rate (Dturn).

Table.1. shows the descriptive statistics of the key variables. The observations are large enough to enhance the reliability of the conclusions. Corporation poverty alleviation is less than half, with an average of 0.228.

Table 1. Descriptive statistics

Symbols	Sample size	Maximum	Minimum	Average
D	8654	2.785	-3.409	0
H	8654	3.078	-4.05	0
B	8654	4.614	-2.692	0
PA	8654	1	0	0.228
Size	8654	28.607	16.161	23.189
Lev	8654	2.471	-0.195	0.476
ROA	8654	7.109	-1.683	0.046
ListAge	8653	0.6	-10.216	0.058
FirmAge	8653	1878.372	-0.991	0.556
Opcf	8654	2.89	1.099	2.163
Mfee	8654	0.975	0.133	0.581
Board	8654	143.803	0.005	1.434
Growth	8654	3.497	0	2.605
Top10	8654	3.989	1.609	3
BM	8653	18.191	0.001	0.084
Dturn	8588	3.476	-3.561	-0.005

2.3. Data Sources

This study selects A-share listed companies in China that rated by both Huazheng Index and Bloomberg from 2013 to 2022 as the research subjects, and the data is screened in the following steps:

- (1) ST or*ST companies in special treatment status are excluded;
- (2) excluding the data of listed companies in the financial industry;
- (3) excluding the data with incomplete information on key variables;
- (4) excluding companies with ESG score records of less than two years.

After screening, 1127 Chinese A-share listed companies were finally selected as the research sample. The ESG rating data of enterprises used in this study come from China Securities Index and Bloomberg ESG database, while the basic information and financial data of corporations come from CSMAR database.

3. Basic Regression

The basic regression results presented in Table 1 demonstrate the impact of corporate participation in poverty alleviation on ESG rating differences, as well as the individual effects on the ESG scores provided by Huazheng and Bloomberg, with all regressions controlling for industry and year fixed effects.

According to the Table.2., corporate participation in poverty alleviation (PA) has a significantly negative influence on ESG rating differences at the 1% level, and this result remains significant at the 5% level even after the introduction of control variables. This confirms our hypothesis that corporate involvement in poverty alleviation significantly affects ESG rating differences, with participation leading to a notable reduction in the asymmetry of Chinese and foreign ESG rating differences. The variable PA also has a positive impact on Huazheng's ESG scores, although this is not statistically significant. In contrast, the positive impact of PA on Bloomberg's ESG scores is significant at the 1% level. This suggests that foreign rating agencies attribute greater importance to corporate involvement in poverty alleviation in enhancing ESG ratings compared to domestic rating agencies.

Table 2. Basic regression results

	D		H		B	
PA	-0.055** (-2.421)	-0.074*** (-2.894)	0.033 (1.269)	0.026 (1.577)	0.082*** (3.834)	0.107*** (4.221)
Controls	YES	NO	YES	NO	YES	NO
Industry	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	8654	8654	8654	8654	8654	8654
R ²	0.197	0.001	0.004	0.001	0.282	0.002

Note: ***, ** and* represent significance at 1%, 5% and 10%, respectively

4. Analysis of mechanism

4.1. Corporate information transparency

In order to explore the impact of poverty alleviation on enterprise information transparency, this paper establishes a mechanistic regression model as follows:

$$CO_{it} = \beta_0 + \beta_1 PA_{it} + \beta_n Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it} \quad (2)$$

Where i is the sample number, t is the time, the explained variable CO_{it} represents the transparency of the i sample company in year t. β_1 is the coefficient of PA_{it} , which is used to reflect the impact of whether an enterprise participates in poverty alleviation on the information transparency of the enterprise.

According to the regression results in Table.3. The participation of enterprises in poverty alleviation will significantly improve the information transparency of enterprises, reduce the degree of information asymmetry of Chinese and foreign ESG rating agencies, and then reduce the difference of ESG rating, which verifies the hypothesis H_2 . When companies take the initiative to participate in poverty alleviation projects, they usually increase their information disclosure level to demonstrate their social responsibility. The improvement of corporate information transparency can help disclose more information about ESG and reduce the information asymmetry between Chinese and foreign ESG rating agencies.

4.2. Corporate financing constraints

Hu Haozhi found that listed companies obtained more market resources through poverty alleviation activities, eased financing constraints [12]. This study further explores the enterprise participation in poverty reduction impact on corporate financing constraints, which influence on the ESG rating differences. This paper chooses the SA index as a proxy variable, financing constraints calculation formula is:

$$SA_{it} = -0.737Size_{it} + 0.043Size_{it}^2 - 0.04ListAge_{it} \quad (3)$$

This paper establishes a panel linear regression model as follows:

$$SA_{it} = \beta_0 + \beta_1 PA_{it} + \beta_n Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it} \quad (4)$$

Table.3. show that the influence coefficient β_1 is significant, indicating that enterprises' participation in poverty alleviation will reduce financial constraints, which verifies the hypothesis H_2 . When firms' financial constraints decline, they may be more inclined to invest in projects that can improve their ESG performance, such as environmental protection technology or social responsibility projects. This can not only improve the long-term sustainability of enterprises, but also improve their ESG ratings and reduce their ESG rating differences.

Table 3. The regression results of mechanism analysis

	CO		SA		D	
PA	0.319*** (8.852)	0.345*** (9.192)	-0.025*** (-3.858)	-0.025*** (-3.706)	-0.055** (-2.421)	-0.074*** (-2.894)
Controls	YES	NO	YES	NO	YES	NO
Industry	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	8654	8654	8654	8654	8654	8654
R ²	0.09	0.01	0.081	0.002	0.197	0.001

Note: ***, ** and* represent significance at 1%, 5% and 10%, respectively

5. Heterogeneity analysis

5.1. Heterogeneity analysis based on enterprise property rights

Ma Wenjie study found that, compared with the rating agencies abroad, domestic rating agencies are aimed at state-owned enterprises on the high side, and in view of the non-state-owned enterprises rating is low [10].

This paper introduces two dummy variables, when SOE is 1, the enterprise is state-owned; When SOE is 0, the enterprise is a non-state-owned enterprise. The Table.4. shows that compared to the non-state enterprises, enterprise whether to participate in the poverty alleviation of ESG rating differences influence is more pronounced in the state-owned enterprises, verify the hypothesis H_3 . The participation of state-owned enterprise in poverty alleviation activities is more likely to attract the attention of the public and rating agencies, and the information is more transparent, thus reducing the difference between Chinese and foreign ESG ratings.

5.2. Heterogeneity analysis based on the quality of ESG information disclosure

This paper constructs the dummy variable GRI to measure the quality of ESG information disclosure based on whether the ESG disclosure of enterprises conforms to the internationally accepted GRI sustainable development reporting framework. Conform to the GRI reporting framework of sustainable development is 1, otherwise is 0. Table.4. shows that Compared with enterprises that GRI=0, the impact of enterprises' participation in poverty alleviation on ESG rating differences is more significant in enterprises that GRI=1, verify the hypothesis H_3 . Follow the principle of GRI can provide more standardized corporate ESG information for overseas ESG rating agencies, and reduce the subjectivity of their ratings, thus reducing the possibility of Chinese and foreign ESG rating differences.

Table 4. The regression results of heterogeneity analysis

SOE=1	D		GIR=1	D	
PA	-0.081** (-2.504)	-0.102*** (-2.774)	PA	-0.101* (-1.659)	-0.115* (-1.69)
Controls	YES	NO	Controls	YES	NO
Industry	YES	YES	Industry	YES	YES
Year	YES	YES	Year	YES	YES
N	4235	4235	N	1316	1316
R ²	0.207	0.001	R ²	0.183	0.002
SOE=0	D		GIR=0	D	
PA	-0.029 (-0.93)	-0.055 (-1.567)	PA	-0.035 (-1.517)	-0.051** (-2.024)
Controls	YES	NO	Controls	YES	NO
Industry	YES	YES	Industry	YES	YES
Year	YES	YES	Year	YES	YES
N	4419	4419	N	7338	7338
R ²	0.207	0.001	R ²	0.143	0.01

Note: ***, ** and* represent significance at 1%, 5% and 10%, respectively

6. Robustness testing

6.1. Change the sample size

The year 2016 marks the decisive stage of China's battle against poverty, based on this, this paper use 6205 observations from 2016 to 2022. The Table.5. shows that after excluding some samples, enterprise poverty alleviation will significantly reduce ESG rating differences, which verifies the robustness.

Table 5. The result of robustness testing

	D		H		B	
PA	-0.065*** (-2.597)	-0.08*** (-2.994)	0.044 (1.412)	0.053 (1.708)	0.1*** (4.388)	0.026*** (4.754)
Controls	YES	NO	YES	NO	YES	NO
Industry	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	6205	6205	6205	6205	6205	6205
R ²	0.117	0.001	0.006	0.001	0.198	0.003

Note: ***, ** and* represent significance at 1%, 5% and 10%, respectively

6.2. Change the criteria for independent variable

As the highest form of corporate social responsibility, charitable donation can show support for public welfare undertakings to the society, improve corporate image, and convey the information of participating in ESG governance [13].

This paper measures the situation of corporate charitable donation by using Dona_{it} (which equal to $\ln(1 + \text{Dona}_{it})$), it is the total social donation of enterprise i in year t . Based on this, this paper establishes the panel linear regression model as follows:

$$D_{it} = \beta_0 + \beta_1 \text{Dona}_{it} + \beta_n \text{Controls}_{it} + \sum \text{Year} + \sum \text{Industry} + \varepsilon_{it} \quad (5)$$

According to Table 6, corporate donation has a significant impact on ESG rating differences. Due to its openness and transparency, charitable donation needs to be disclosed in corporate announcements and annual reports, so it is easier for foreign ESG rating agencies to obtain and increase the basis for their accurate assessment of corporate ESG.

Table 6. The result of robustness testing

	D		H		B	
Dona	-0.051*** (-12.557)	-0.088*** (-20.355)	0.001 (0.246)	0.005 (1.197)	0.058*** (15.282)	0.101*** (23.827)
Controls	YES	NO	YES	NO	YES	NO
Industry	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	8649	8649	8649	8649	8649	8649
R ²	0.211	0.046	0.004	0.001	0.3	0.062

Note: ***, ** and * represent significance at 1%, 5% and 10%, respectively

7. Conclusions and Recommendations

The research sample for this paper spans a decade from 2013 to 2022, focusing on A-share companies that have been rated by both Huazheng and Bloomberg. The following conclusions are drawn:

(1) Corporate participation in poverty alleviation significantly reduces the asymmetry in ESG rating differences between China and foreign countries.

(2) In state-owned enterprises with state ownership rights and in enterprises with high-quality information disclosure, participation in poverty alleviation more significantly reduces the differences in ESG ratings between China and other nations.

(3) Improved corporate information transparency and reduced financing constraints can decrease the disparity in ESG ratings between China and other nations.

Based on the findings, the following policy recommendations are proposed:

(1) Motivate businesses to actively carry out their social obligations and improve the completeness and authenticity of information disclosure.

(2) Create an ESG grading system that strikes a balance between local peculiarities and international regulations.

(3) Develop ESG disclosure standards that align with international standards and reflect the responsibilities of Chinese enterprises.

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