



# Do corporate green commitments promote green investments?

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**Abstract.** With the development of the international green commitment movement, an increasing number of companies have begun to respond to the green commitment trend. However, a crucial concern arises: corporate green commitments might become "greenwashing," lacking real implementation. The mismatch between commitments and actions delays the opportunity for environmental governance and hinders the realization of global carbon targets. Based on the CDP disclosure questionnaire data, we construct the green commitments database of China's listed enterprises, use China's A-share listed enterprises from 2009 to 2021 as research samples, divide corporate green commitments into the quality and quantity of commitments, study their impact on green investments, and further study the moderating effect of the external environmental pressure and enterprises' internal environmental awareness. The results show that the quality of green commitments is positively correlated with green investments, while the quantity of these commitments has no positive effect on such investments. Further analysis shows that enterprises' internal environmental awareness has a positive moderating effect on the relationship between green commitments and green investments. External environmental pressure from government regulations and public concern promotes the relationship between green commitment quality and green investments; however, the degree of market competition negatively moderates the relationship between green commitments and green investments. Our findings not only respond to substantive debates over corporate green commitments but also discover a theoretical basis for enterprises to engage in sustainable management.

**Keywords:** Corporate green commitments; Corporate greenwashing; Voluntary environmental regulation; Green investments

## 1 Introduction

"We urgently need every business, investor, city, state and region to walk the talk on their net zero promises. We cannot afford slow movers, fake movers or any form of greenwashing ", UN Secretary-General Antonio Guterres stressed in "Integrity Matters" released at COP27. Corporate green commitments refer to the guarantees

made by enterprises that results will be achieved through future environmental protection behaviors. Such guarantees can guide and motivate organizations to take actions to realize commitments and represent a tool to help realize global carbon targets. However, due to the lack of normative disclosure management and institutional regulatory pressure on corporate green commitments, there are substantial differences in the green commitments proposed by enterprises (Post et al. 2015; Hussain et al. 2018)<sup>[13][16]</sup>. Companies perform impression management by symbolically complying with rules and putting forward green commitments under pressure from stakeholders (Aragon-Correa et al. 2016; Luo and Smith 2017)<sup>[2][15]</sup>. The mismatch between commitment and action makes green commitments a "greenwashing" tool that undoubtedly reduces the efficiency of resource allocation and hinders the realization of global carbon targets.

In recent years, research on commitments and actions has become increasingly abundant. However, no consensus has been reached. On the one hand, the increasing awareness of environmental protection promotes the emergence of a gap in legitimacy recognition (Wartick and Mahon 1994)<sup>[19]</sup>. Green commitments have become the key for enterprises to compete for green competitive advantages, and corporate green commitments serve as a bridge for enterprises to communicate with external stakeholders. Through actions that match the commitment, its credibility can be strengthened, and the good reputation of the enterprise can be established. Therefore, the economic motivation brought by reputation impact and competitive advantage encourages enterprises to actively fulfill their commitments (Frederik Dahlmann et al., 2017; Littlewood et al., 2018)<sup>[9][14]</sup>. On the other hand, some scholars have noted that corporate green commitments are only a manifestation of corporate virtue. Enterprises want to obtain the positive impact on their reputations brought by green commitments but do not want to fulfill the commitments to increase their costs. Corporate green commitments are empty promises (Haque and Ntim 2018; Bolton and Kacperczyk 2022)<sup>[5][12]</sup>.

In fact, the disparity in research conclusions regarding corporate green commitments stems from varying perceptions of their substance. These commitments prompt companies to provide environmental public goods voluntarily (Prakash and Potoski 2012)<sup>[17]</sup>. However, the "rational man" hypothesis and opportunism raise suspicions of "greenwashing" among those who comply voluntarily. Companies may participate in voluntary regulatory projects but do not take substantive actions, resulting in negative externalities. This dilemma of corporate green commitments embodies the contradiction between greenwashing and green promotion. Studying the direct link between commitments and environmental performance masks the true impact due to the diverse effects from different commitment categories. However, discerning substantive from symbolic green commitments is both the focal point of literature and a pressing practical concern. Dahlmann et al. (2019) believed that absolute corporate green commitments are substantive, while narrower emission goals and short-term intensive climate targets are symbolic (Frederik Dahlmann et al. 2017)<sup>[9]</sup>. However, this classification overlooks a broader framework: quality versus quantity. In fact, we have observed an increasing number of green pledges in recent years with so little improvement in actual environmental performance that

international conferences are constantly calling on companies to meet their commitments.

Based on the above analysis, the possible marginal contributions in this paper are as follows. 1. A rational classification: Unlike prior research, we offer a more logical categorization by examining corporate green commitments' quality and quantity. This analysis assesses the impact of such commitments on green investments from both these angles. 2. Our research establishes a theoretical foundation for sustainable enterprise management, with green commitments offering an avenue for such practices. Evaluating the substantive aspect of these commitments also serves as a measure of sustainability management efficiency. Thus, our study provides a theoretical basis for businesses to adopt sustainable management approaches. 3. Illuminating commitment-action gaps: Our findings underscore the need to standardize green commitments. By integrating external pressure and internal awareness, we establish a framework to understand the impact of both on genuine green commitments, enhancing the ability to identify substantive corporate commitments empirically.

The structure of this paper is as follows. In the second section, a literature review and theoretical analysis are carried out and the research hypothesis is proposed. The third section presents the model setting and data selection. The fourth section presents the analysis of the empirical results. In the fifth section, further analysis is provided. The sixth section presents the research conclusions and prospects.

## **2 Literature review and theoretical analysis**

### **2.1 The quality of corporate green commitments and green investments**

Suggesting international carbon targets heightens concerns and expectations for sustainable development, amplifying the recognition gap regarding legitimacy (Wartick and Mahon 1994) <sup>[19]</sup>. High-pollution enterprises adopt corporate green commitments to avert stakeholder sanctions (Bebbington et al. 2008)<sup>[4]</sup>. Similarly, low-pollution companies engage in such commitments to align with market preferences and enhance competitiveness (Littlewood et al. 2018)<sup>[14]</sup>. The motivation to gain a competitive advantage drives companies to make and deliver on green commitments. The Royal Dutch Shell ruling further illustrates the need for companies to be held accountable for not only past environmental performance but also future green commitments. The motivation to gain a competitive advantage drives companies to not only propose green commitments but also make them live up to them. Additionally, corporate green commitments proposed based on stakeholder and regulator pressure can limit management's discretionary power and manipulation (Green and Zhou 2013) <sup>[11]</sup> and send a credible signal to investors and stakeholders about the environmental strategic planning actions disclosed in the report (Vanstraelen et al. 2009) <sup>[18]</sup>. Therefore, the economic motivation to obtain a competitive advantage and reputation influence urges enterprises to fulfill commitments (Frederik Dahlmann et al. 2017; Littlewood et al. 2018) <sup>[9][14]</sup>. However, the substance of the commitment varies with its quality. Green commitments serve as

both catalysts for emissions reduction actions and instruments for impression management. The more explicit the enterprise's green commitments are, the more they can show the enterprise's determination to improve the environment. Moreover, the clarity of the enterprise's green commitments is also convenient for stakeholder supervision, increasing the pressure of standardization and enterprise environmental protection. Therefore, Hence, we contend that commitment quality variably influences green investments, with higher quality commitments exerting greater impact.

Based on the above analysis, we propose the following hypotheses:

H1: There is a positive correlation between the quality of corporate green commitments and corporate green investments.

## 2.2 The quantity of corporate green commitments and green investments

As corporate green commitments become a target for gaining green competitive advantages, competition over the amount of corporate green commitments is gradually being put on the agenda. However, does more talk mean more action? Many studies have questioned the substantive nature of corporate green commitments. They have noted that enterprises first develop more radical corporate green commitments to cater to stakeholders and then constantly revise these commitments to meet their actual emissions reduction results (Callery and Kim 2021)<sup>[6]</sup>. Large leeway exists for enterprises' green commitments without normative supervision (Comello et al. 2021)<sup>[8]</sup>, and corporate green commitments are a means of "greenwashing" for enterprises to comply with trends in green development (Aragon -Correa et al. 2016)<sup>[2]</sup>. However, the "greenwashing" question does not apply to the number of green commitments, especially for countries with corporate green commitments in the early stage of development. There are two reasons for this. First, for countries with corporate green commitments in the early stage of development, the corporate green commitment movement has just started, and its effect is too weak to be observed. Second, the number of corporate green commitments is too small to make a difference. When the amount of corporate green commitment increases to match the financial goals, the role of corporate green commitment on green investment is self-evident. According to the CDP data collected by us, the overall number of commitments showed a sharp increasing trend after China put forward the national "double carbon" commitment in 2020. But, the number of corporate green commitments varies greatly, and the current green commitments of China are in early stages of development. Therefore, we believe that there is no significant relationship between the quantity of corporate green commitments and green investments.

Based on the above analysis, we propose the following hypothesis:

H2: There is no significant relationship between the total number of corporate green commitments and green investments.

### 3 Research design

#### 3.1 Sample selection and data sources

Compared to the non-uniform disclosure standards of "Sustainability Report" and "Climate Action Report", the CDP, as the global authority on carbon emissions, operates the global carbon disclosure system for investors, companies, cities, states and regions. Therefore, the research sample is selected as enterprises that have responded to and disclosed the CDP questionnaire. Given that CDP data can be traced back to 2009 at the earliest, the time window in this paper is determined as 2009-2021. We use a Python crawler to obtain the questionnaire data from 2010 to 2022 disclosed on the CDP official website, obtain a total of 12329 observed values of enterprises, and perform the following processing: (1) excluding non-mainland China A-share market entities; (2) excluding ST and \*ST labeled samples; and (3) removing observations with listing dates postdating questionnaire disclosures. Ultimately, we obtain 435 observations from 175 Chinese listed companies spanning 2009 to 2021.

The data in this paper are obtained through the following channels: (1) green investment data are collected and sorted manually from relevant reports, such as the "Annual Report of Enterprises"; (2) enterprise green commitment data come from the manual collection and collation of enterprise questionnaire responses disclosed by the CDP; and (3) additional data sourced from the CSMAR database.

#### 3.2 Description of variables

##### 3.2.1 Green Investment (*EPI*)

In this paper, green investment (*EPI*) is measured using enterprises' current green investment data. Green investments include expensified and capitalized expenditures. Expensified expenditures are manually collected by searching using green keywords in the details of the "Administrative expenses" and "Business taxes and surcharges" disclosed in the annual report of the enterprise, and capitalized expenditures are manually collected by searching for green keywords in "Projects under construction" and "Development expenditure".<sup>1</sup>

##### 3.2.2 The quality of corporate green commitments (*Commitments\_Quality*)

Based on the research of Frederik Dahlmann et al. (2019), we measure green commitment quality by the types of corporate green commitments. By collecting and collating enterprise questionnaire responses disclosed by the CDP, we assign scores to the types of corporate green commitments. No commitment is assigned 0, only text commitment is assigned 1, only strength value is assigned 2, only absolute commitment is assigned 3, and strength and absolute commitment is assigned 4. In

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<sup>1</sup> Due to space constraints, green keywords are omitted. For inquiries, please contact the corresponding author at [d\\_ongdr@163.com](mailto:d_ongdr@163.com).

addition, although the enterprise includes commitment type information in the questionnaire's reply, because such information is different from the enterprise's actual type of commitments, we sort out the information content of the corporate green commitments disclosed in the questionnaire and readjust the type of corporate green commitments.

### 3.2.3 The number of corporate green commitments (*Commitments\_Number*)

The questionnaires disclosed in the CDP include climate questionnaires, water questionnaires, supply chain questionnaires and biodiversity questionnaires. Considering the completeness and accuracy of green commitments, we add up the number of green commitments of all questionnaire types disclosed in the CDP to measure the number of corporate green commitments.

### 3.2.4 Control variables

Referring to existing studies, the control variables in this paper are as follows: company size (*Size*), return on equity (*ROE*), operating revenue growth rate (*Growth*), management expense ratio (*RME*), cash ratio (*Cash*), current assets ratio (*Liquidity*), intangible assets ratio (*Intangible assets*), fixed assets ratio (*Fix*), net profit growth rate (*Profit*), corporate value (*TobinQ*), nature of the enterprise (*State*), size of the board of supervisors (*Supervisor*), proportion of top 10 shareholders (*Own\_con10*), proportion of controlling shareholders (*Shareholder*), proportion of independent directors (*Director*), and proportion of managers (*Own\_manage*). All variables are defined and measured as shown in Table 1

**Table 1.** Variable definitions and handling methods

Variable type	Variable	Variable interpretation
Dependent variable	<i>EPI</i>	Corporate green investment, $\ln(\text{cost of environmental governance} + \text{green capital investment} + 1)$
	<i>Commitments_Quality</i>	Type of corporate green commitments, in which no commitment is assigned 0, only text commitment is assigned 1, only strength commitment is assigned 2, only absolute commitment is assigned 3, and strength and absolute commitment is assigned 4
Independent variable	<i>Commitments_Number</i>	Total number of corporate green commitments, the total number of commitments disclosed by the CDP climate questionnaire, water security questionnaire, forest questionnaire and biodiversity questionnaire
	<i>Size</i>	Business size, $\ln(\text{total assets} + 1)$
Control variable	<i>ROE</i>	Roe, $\text{ROE}/\text{total assets}$
	<i>Growth</i>	Revenue growth rate
	<i>Cash</i>	Cash ratio, $\text{money funds}/\text{total assets}$
	<i>Liquidity</i>	Current assets ratio, $\text{current assets}/\text{total assets}$

<i>Intangible</i>	Intangible assets ratio, intangible assets/total assets
<i>Profit</i>	Net profit growth rate
<i>TobinQ</i>	Enterprise value
<i>Supervisor</i>	Size of the Board of Supervisors, ln(Number of supervisors +1)
<i>Own_con10</i>	Proportion of shares held by the top 10 shareholders
<i>Shareholder</i>	Shareholding ratio of controlling shareholders
<i>Own_manage</i>	Manager shareholding ratio
<i>Diretor</i>	Proportion of independent directors, number of independent directors/total directors
<i>Fix</i>	Proportion of fixed assets, fixed assets/total assets
<i>RME</i>	Overhead rate, overhead/total overhead

### 3.3 Model setting

Based on the above analysis, we use the quality and quantity of corporate green commitments as independent variables and corporate green investments as dependent variables. In addition, considering the impact of environmental regulations on corporate green investments, we construct a fixed effect model of time and region. Corporate green commitment and green investment models are constructed as follows:

$$EPI_{i,t} = C + \alpha_1 CommitmentS_{i,t} + \alpha_2 Control_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

$CommitmentS_{i,t}$  is the set index of enterprise green commitments, including  $Commitments\_Quality_{i,t}$ , the quality of enterprise's green commitments in year t, and  $Commitments\_Number_{i,t}$ , the quantity of enterprise's green commitments in year t.  $Control_{i,t}$  is the control variable,  $\mu_i$  is the region fixed effect,  $\lambda_t$  is the time fixed effect, and  $\varepsilon_{i,t}$  is the random interference term.

## 4 Empirical results and analysis

### 4.1 Descriptive statistics

Table 2 presents descriptive statistics for the main variables. Sample green investments exhibit a mean of 5.72 and a standard deviation of 7.92, indicating varied distribution linked to industry disparities. High-pollution sectors invest more in pollution control, while eco-friendly industries invest in green capital expenditures. Corporate green commitment quality ranges from 0 to 4, with a sample mean of 2.59. This suggests most enterprises employ relative types of commitments. The standard deviation (1.72) highlights present uneven commitment quality. Quality is pivotal in identifying substantive commitments. Sample enterprises show an average of 4.09 green commitments, with a standard deviation of 5.45, ranging from 0 to 45.

Individual differences stem from evolving green commitment stages, diverse environmental awareness, and commitment importance. Recognizing green commitments' significance can foster competitive advantages.

**Table 2.** All sample descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>EPI</i>	435.00	5.72	7.92	0.00	22.57
<i>Commitments_Quality</i>	435.00	2.59	1.72	0.00	4.00
<i>Commitments_Number</i>	435.00	4.09	5.45	0.00	45.00
<i>Size</i>	435.00	23.04	1.64	20.07	28.64
<i>Liquidity</i>	435.00	0.57	0.17	0.09	0.98
<i>Cash</i>	435.00	0.15	0.10	0.01	0.63
<i>Fix</i>	435.00	0.23	0.13	0.00	0.72
<i>Intangible</i>	435.00	0.04	0.03	0.00	0.22
<i>Profit</i>	435.00	0.00	3.75	-41.52	22.57
<i>ROE</i>	435.00	0.08	0.22	-3.15	0.50
<i>Growth</i>	435.00	0.16	0.67	-1.55	12.04
<i>RME</i>	435.00	0.06	0.04	0.01	0.31
<i>TobinQ</i>	435.00	2.60	1.92	0.00	14.90
<i>shareholder</i>	435.00	33.29	17.79	0.00	86.35
<i>Own_con10</i>	435.00	58.37	17.42	0.00	98.58
<i>Own_manage</i>	435.00	12.98	19.15	0.00	72.38
<i>Supervisor</i>	435.00	1.47	0.25	0.00	2.40
<i>Director</i>	435.00	37.84	6.81	0.00	60.00

## 4.2 Empirical regression results

Based on the assumptions of H1 and H2 and according to the setting of Model (1), the time and region bidirectional fixed effect test is conducted on the panel data of the quality and quantity of enterprises' green commitments and green investments, as shown in columns (1) and (2) in Table 3. Column (1) shows the relationship between the quality of corporate green commitments and green investments. The coefficient, *Commitments\_Quality*, is 0.411 at the 10% level, indicating that each level increase in the quality of corporate green commitments increases corporate green investments by approximately 1.51 units. Column (2) shows no significant relationship between the total number of corporate green commitments and green investments, which means that the total number of corporate green commitments does not have a positive impact on corporate green investments<sup>2</sup>. There are two possible explanations for this result. First, the number of green commitments made by

<sup>2</sup> For result robustness, we replaced variables, adjusted the dependent variable, and conducted endogeneity tests. The consistent conclusions with Table 3 confirm the robust findings. Due to space constraints, further details aren't provided here. For more information, kindly reach out to the corresponding author at [d\\_ongdr@163.com](mailto:d_ongdr@163.com).



enterprises may be suspected of "greenwashing". Enterprises propose more green commitments; however, in fact, this number does not promote green investments. Second, the number of enterprises' green commitments is in the accumulation stage and has not yet reached the stage where the quantitative change is sufficient to cause a qualitative change.

**Table 3.** The quality and quantity of green commitments and green investments

Variable	EPI	
	(1)	(2)
<i>Commitments_Quality</i>	0.411* (0.233)	
<i>Commitments_Number</i>		0.0539 (0.0707)
<i>Constant</i>	-11.69 (11.30)	-9.789 (11.29)
<i>Control</i>		YES
Year FE		YES
Province FE		YES
Observations	435	435
R-squared	0.196	0.190
F	2.16***	2.09***

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 5 Further analysis

Enterprises' drive for green development originates from internal and external environmental protection incentives. The former arises from the company's eco-consciousness, evident through disclosed environmental management systems (1 indicating presence, 0 absence). External impetuses are government, market, and public pressures. We investigate these roles in the relationship between green commitments and investments, focusing on government, market, and public perspectives. Environmental regulations, a governmental lever for green investments, are assessed via environment-related term frequency in the province's government work report, scaled by the heavy industry's GDP share. Market competition's intensity leverages the Herfindahl index (HHI), higher values indicating weaker competition. Public attention, mirrored in institutional investor shareholding, signifies attention and impact. Informed by this analysis, the model is structured as follows:

$$EPI_{i,t} = C + \beta_1 Commitments\_Quality_{i,t} + \beta_2 RVS_{i,t} + \beta_3 RVS_{i,t} \times Commitments\_Quality_{i,t} + \beta_4 Control_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (2)$$

$RVS_{i,t}$  is a set of regulating variables, including  $EA_{i,t}$ , which represents the environmental protection awareness of enterprise  $i$  in year  $t$ ;  $ER_{i,t}$  represents the intensity of regional environmental regulations in year  $t$  of enterprise  $i$ ;  $HHI_{i,t}$

represents the degree of market competition in the industry in year  $t$  of enterprise  $i$ ; and  $Institutional_{i,t}$  represents the shareholding ratio of institutional investors in year  $t$  of enterprise  $i$ .  $Control_{i,t}$  is the control variable,  $\mu_i$  is the region fixed effect,  $\lambda_t$  is the time fixed effect, and  $\varepsilon_{i,t}$  is the random interference term.

## 5.1 Moderating effect of corporate environmental awareness

Stakeholder theory emphasizes wider societal obligations of businesses, with employees' and managers' eco-consciousness driving higher green investments. A company's internal environmental consciousness molds its stance, influencing its green strategy (Bansal and Roth 2000)<sup>[3]</sup>. Gadenne et al. (2009) showed how internal awareness shapes the impact of external institutional pressure on green investments<sup>[10]</sup>. Senior executives' eco-awareness bridges stakeholders and shareholders. High-quality green commitments align with internal awareness. These commitments, in turn, bolster internal awareness, affecting green investments. Table 4, column (4), confirms this in the significant interaction coefficient (0.806), validated at the 10% level. Internal awareness reinforces the positive connection between green commitment quality and investments.

## 5.2 Analysis of the influence of external environmental pressure

### 5.2.1 Moderating effect of environmental regulation

In the context of the Chinese system, a series of punitive environmental regulations and incentivized environmental regulations function simultaneously, synergistically promoting enterprises' green transformation (Carpentier and Suret 2015)<sup>[7]</sup>. The impact of corporate green commitments is also developed under existing environmental regulation tools. In the absence of the normative disclosure management of green commitment, existing environmental regulations can be used as a supplement to the quality supervision system of enterprise green commitments and promote improvements in their quality. The regression results of the regulatory effect of environmental regulations are shown in Table 4 column (1), and the interaction coefficient of 1.922 is significant at the 10% level, indicating that current environmental regulations can promote positive effects of commitment quality on green investments.

### 5.2.2 The moderating effect of market competition

Employing a green differentiation strategy allows firms to attract environmentally conscious stakeholders, gain a competitive edge (Alt et al. 2014)<sup>[11]</sup>. Competitive advantage drives commitment-making, but not necessarily substantive ones. Intensified market competition fosters deceptive green prosperity by emphasizing commitment quantity over quality, potentially leading to suboptimal outcomes. As market competition rises, the positive link between green commitment quality and investments weakens. This is evident in Column (2) of Table 4, showing the moderating role of market competition, where the significant interaction term

coefficient (4.215) indicates this effect at the 10% level. The Herfindahl index gauges industry concentration, with lower values indicating stronger market competition. High competition may lead to negative dynamics, reducing green commitment impact on investments.

### 5.2.3 The moderating effect of public attention

The "deterrent effect" of environmental information indicates that the public changes its investment expectations due to adverse environmental information (Carpentier and Suret 2015) [7]. Therefore, investors' attention represents the environmental pressure that urges enterprises to engage in green actions. Column (3) of Table 4 shows the moderating effect of public attention. The interaction coefficient of 0.0162 is significant at the 10% level, indicating that with the increase in investor attention, the positive correlation between corporate green commitments and green investments becomes stronger. The environmental awareness of public impact enterprises through portfolio adjustments.

**Table 4.** The moderating effects of corporate environmental awareness, environmental regulations, market competition and public concern

Variable	<i>EPI</i>			
	(1)	(2)	(3)	(4)
<i>Commitments_Quality</i>	-0.287 (0.471)	-0.006 (0.307)	-0.258 (0.417)	0.046 (0.300)
<i>ER</i>	-5.124 (5.542)			
<i>ER × Commitments_Quality</i>	1.922* (1.125)			
<i>HHI</i>		-25.24*** (7.099)		
<i>HHI × Commitments_Quality</i>		4.215* (2.249)		
<i>Institutional</i>			-0.0172 (0.0435)	
<i>Institutiona</i> <i>× Commitments_Quality</i>			0.0162* (0.00844)	
<i>EA</i>				-1.199 (1.529)
<i>EA × Commitments_Quality</i>				0.806* (0.461)
<i>Constant</i>	-8.179 (11.71)	-21.94* (11.50)	-10.21 (11.67)	-9.807 (11.714)
<i>Control</i>			Yes	
Year FE			Yes	
Province FE			Yes	
Observations	435	435	435	435

R-squared	0.202	0.224	0.204	0.205
F	2.13***	2.43***	2.17***	2.174***

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 6 Conclusion

Utilizing CDP disclosure data, we establish a green commitment database for China's listed firms, focusing on China's A-share listed companies from 2009 to 2021. We categorize corporate green commitments into commitment quality and quantity, investigating their impact on green investments. Additionally, we explore the regulatory influence of external environmental pressure and internal environmental awareness. Results indicate a positive correlation between corporate green commitment quality and green investments, while commitment quantity lacks significant correlation. Two potential explanations for the absent relationship between commitment quantity and green investments emerge: 1. The quantity of commitments may be linked to "greenwashing," lacking substantive action. 2. Qualitative transformation of commitment quantity might not have occurred. Chinese enterprises' green commitments predominantly lie within the manufacturing sector, with nonmanufacturing industries having limited commitments. Chinese enterprises' green commitment stage is early. Further analysis reveals a positive moderation effect of enterprise environmental awareness on the link between commitment quality and green investments. External environmental pressure, driven by government regulations and public concern, enhances the relationship between commitment quality and green investments, while market competition negatively moderates this connection.

The research conclusion of this paper has certain practical significance. Firstly, for governments and regulatory bodies, the current findings underscore that the total number of corporate green commitments lacks significant impact on promoting green investments. However, commitment quality genuinely drives increased green investments. Thus, there's an urgent need to standardize the disclosure and oversight of enterprise commitments. Policies should incentivize higher-quality commitments and encourage quantitative shifts toward qualitative advancements. Secondly, businesses should be aware that as regulations and research evolve, instances of "greenwashing" will be exposed. High-quality commitments have the potential to genuinely propel more green investments, urging companies to actively create and uphold such commitments. Lastly, for the market, heightened market competition weakens the influence of green commitments in driving green investments. As market competition intensifies, it's crucial for the market to identify insubstantial commitments and guide enterprises toward fulfilling them, preventing dilution of meaningful commitments

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