

Symbolic or Substantial: Firms' Adaptive CSR Compliance Strategies in Developing Institutional Contexts

By Wooyoung Yang¹, Jiyeon Kim²

ABSTRACT:

This study examines how institutional development and pressure influence corporate social responsibility (CSR) compliance strategies among firms in developing country contexts. The research uses CSR report data from Chinese A-market companies across 31 provinces over nine years to investigate the relationships between institutional development, pressure on CSR compliance, and firms' strategic responses. The study employs institutional theory to analyze how firms adjust their CSR compliance behaviors as institutional environments evolve. It explores whether companies engage in symbolic compliance (superficial adoption) or substantial compliance (meaningful integration) of CSR practices. Key findings reveal a significant link between institutional development and pressure levels influencing CSR compliance. The combined effect of development and pressure surpasses the influence of pressure alone. Evidence of symbolic and substantial CSR compliance suggests that firms strategically adjust their efforts based on the institutional environment. This research provides valuable insights for policymakers and stakeholders seeking to encourage meaningful CSR practices. Understanding how firms respond to institutional pressures across different development levels can inform the design of more effective regulatory frameworks and drive impactful CSR initiatives in emerging markets.

Keywords: CSR, institutional development, institutional pressure, institutional theory, symbolic, substantial

1. Introduction

Businesses operate in dynamic environments shaped by institutional development, societal expectations, and economic conditions. Thus, institutional differences create global and local management challenges (Kostova et al., 2008; Rathert, 2016). Business environments continually evolve as institutions develop, increasing pressures on firms to align with changing expectations (DiMaggio & Powell, 1983; Scott, 2013). These institutional circumstances pose challenges for firms and local supply chain members (Chan et al., 2008; Henisz, 2004; Kogut et al., 2002; Kostova & Roth, 2002). Despite these challenges, foreign investments and entrepreneurial activities in developing countries continue to grow. The interplay between institutional development and corporate behavior presents both challenges and opportunities. Organizations must balance the need for conformity with institutional pressures while maintaining autonomy and competitiveness. Firms face increasing stakeholder expectations—governments, consumers, investors, and civil society—to uphold responsible and ethical business practices. Various strategies have been adopted to navigate these changes while maximizing profits (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Institutional theory suggests that firms respond to external pressures to secure legitimacy, as their survival depends on resource access (Pfeffer &

¹Wooyoung Yang, Ph.D., Department of International Trade, Kunsan National University, S. Korea

²Jiyeon Kim, Ph. D., Department of Retailing, University of South Carolina, U.S.A.

Salancik, 2003). Whether symbolic or substantive, compliance behaviors are strategic actions aimed at securing resources (Lamin & Zaheer, 2012; Oliver, 1991; Tian et al., 2015). The degree of institutional development influences the pressure exerted on firms, which affects management decisions (DiMaggio & Powell, 1983). Firms have adopted CSR initiatives, sustainable business practices, and ethical governance in response to institutional pressures. CSR refers to firms' efforts to allocate resources for social and environmental welfare. Research suggests that institutional pressures strategically influence firms' CSR adoption as stakeholders determine whether compliance grants legitimacy (Lamin & Zaheer, 2012). Consequently, firms engage in CSR activities to gain legitimacy (Aguinis & Glavas, 2012). As institutions evolve, corporate strategic decisions adapt accordingly, reflecting changes in institutional logic and legitimacy expectations (Maguire & Hardy, 2009; Sine & David, 2003).

Then, a key question arises - How do firms adjust their CSR compliance strategies as institutional environments change? Understanding corporate strategic responses requires analyzing firms' behavioral patterns under increasing institutional pressures. In regions with low institutional development, institutional standards, and enforcement mechanisms are weak. Consequently, firms may adopt symbolic compliance strategies—appearing to comply without making substantial changes—to avoid costs associated with full compliance. This "decoupling" strategy helps firms maintain a favorable image while retaining operational flexibility. However, reliance on symbolic compliance risks reputational damage as stakeholders demand substantive action. As institutions mature, compliance expectations rise, and penalties for unethical behavior become stricter. Enhanced regulatory frameworks and stronger social surveillance mechanisms increase the likelihood of detecting symbolic compliance, leading to reputational risks (Truong et al., 2021). At this stage, firms may shift from symbolic to substantive compliance, as ensuring legitimacy outweighs the costs of compliance. It is essential that businesses must navigate evolving institutional landscapes, balancing compliance with strategic autonomy.

It is important to note that symbolic and substantive compliance are not dichotomous responses; firms may adopt hybrid or evolving strategies contingent on institutional risks, incentives, and resource constraints. The institutional theory acknowledges that norm adoption occurs along a spectrum, influenced by regulatory enforcement, media scrutiny, and regional stakeholder expectations (Jacqueminet, 2020; Kostova & Roth, 2002)¹. For instance, firms in moderately developed institutional environments might blend selective substantive initiatives (e.g., targeted environmental investments) with symbolic reporting to balance legitimacy demands and operational flexibility. Media exposure amplifies reputational stakes, incentivizing firms to progressively internalize CSR norms as surveillance intensifies (Marquis & Qian, 2014; Zhang & Yang, 2021)¹. Similarly, regional variations in bureaucratic efficiency and anti-corruption measures—captured in our provincial-level institutional development index—create divergent cost-benefit calculations, enabling firms to calibrate compliance efforts (Khanna & Palepu, 2000; Oliver, 1991)

CSR compliance serves as a key mechanism through which firms respond to institutional pressures. The level of institutional development significantly influences compliance behaviors, with firms initially adopting symbolic compliance but shifting toward substantive compliance as pressures increase. Understanding these dynamics is

crucial for policymakers seeking to design regulations that encourage meaningful CSR practices. The findings of this study will add to the expanding literature on corporate compliance, institutional development, and strategic management decisions within emerging market contexts. The evolving relationship between institutional development and corporate responses remains a crucial research area. Understanding CSR compliance from a public management perspective highlights the role of institutions and external pressures in shaping corporate behavior. Despite ongoing discussions, empirical evidence on firms' changing compliance behaviors remains scarce. Existing studies often analyze corporate compliance from a static perspective, focusing on specific time frames or single regions, limiting generalizability.

In China, the government mandates CSR in areas like welfare, distribution, and environmental protection (Lin, 2010; Wang & Juslin, 2009). Since institutionalizing CSR in 2006, industry-wide adoption of CSR has increased, driven by government mandates, peer influence, and consumer awareness. As a result, firms comply with CSR to enhance reputation and secure legitimacy. Historically, Chinese firms prioritized financial performance over CSR, leading to the government's introduction of mandatory CSR reporting in 2006. However, early monitoring efforts faced criticism for their ineffectiveness. Speculation remains regarding the extent of the Chinese government's influence and the impact of corruption on CSR compliance. Investigating whether firms engage in substantive or symbolic CSR compliance can provide insights into corporate behavior amid institutional development in emerging markets. Previous research explored how institutional quality affects the internationalization of Chinese SMEs but focused solely on regulatory aspects, neglecting normative and cognitive pressures (Deng & Zhang, 2018). Similarly, Wu and Deng (2020) examined institutional escapism among Chinese SMEs but limited their analysis to a single sector. Other studies compare CSR compliance between developed and developing countries (Delmas & Montes-Sancho, 2010; Marquis & Qian, 2014; Meyer & Rowan, 1977), yet fail to account for intra-country variations. In developing nations, regional institutional differences significantly affect corporate behavior, as local governments' political, social, and economic environments vary (Oliver, 1991; Knetter, 1989).

Grounded in Institutional Theory, this study seeks to provide empirical insights into corporate compliance strategies by exploring how institutional pressures influence firms' CSR compliance, distinguishing between symbolic and substantive compliance. The research investigates the following relationships: 1) institutional development and institutional pressure; 2) institutional pressure and corporate CSR compliance; 3) the interaction between institutional pressure and development on CSR compliance; and 4) Corporate CSR compliance behavior patterns (substantial vs. symbolic) arising from institutional development and pressure. Using nine years of CSR report data from firms listed on the Chinese A-share market across five industries, the study examines institutional development trends across 31 regions. Findings will offer valuable insights into how firms adapt to shifting institutional environments over time.

2. Theoretical Background

2.1. Institutional Theory and Firms' CSR Compliance Behaviors

Institutions shape political, economic, and social interactions because institutionalization follows a process (habitualization-objectification-sedimentation) where evolving beliefs, norms, and values integrate into organizations and society (North, 1990, 1991; Tolbert & Zucker, 1999). Technological advances, legislation, and market-driven innovation can trigger institutionalization (North, 1991; Scott, 2013). Once institutional norms gain legitimacy, regulatory transparency, shared societal values, and social monitoring increase, pressuring firms to conform (Scott, 2013). These pressures—regulatory, normative, and cultural-cognitive—can create both opportunities and conflicts for firms (Kostova et al., 2008; Crane & Glozer, 2016). Media plays a crucial role in shaping public awareness, amplifying CSR concerns, and holding firms accountable (Ditlev-Simonsen & Wenstop, 2013). Media exposure increases public scrutiny, compelling firms to enhance transparency and socially responsible practices (Branco & Rodrigues, 2008; Marquis & Qian, 2014; Sharma, 2019). CSR-related media coverage significantly impacts a firm's reputation, influencing compliance with societal expectations (Brammer & Pavelin, 2006; Zhang & Yang, 2021).

Firms adopt institutional norms at varying levels (Jacqueminet, 2020; Kostova & Roth, 2002). CSR compliance can be either substantial or symbolic. **Substantial compliance** means when firms fully integrate CSR into their operations, investing in sustainability and social programs to meet stakeholder expectations and avoid negative repercussions (Marquis & Qian, 2014). Substantial CSR efforts, such as sustainable supply chains and environmental programs, are common in highly institutionalized environments where strong pressures demand genuine commitment (Pfeffer & Salancik, 2003). **Symbolic compliance** is when firms superficially adopt CSR to gain legitimacy while minimizing costs (Delmas & Montes-Sancho, 2010). Symbolic compliance involves publicizing selective CSR efforts without meaningful action (Meyer & Rowan, 1977). Such strategies help firms maintain legitimacy and stakeholder trust without fully integrating CSR principles (Scott, 2013). The institutional theory identifies symbolic compliance as a decoupling strategy, where firms create an illusion of CSR engagement to satisfy external pressures while maintaining operational flexibility (DiMaggio & Powell, 1983). Decoupling allows firms to comply with institutional expectations without substantive changes in their practices. This strategy is especially prevalent in weak institutional environments with minimal consequences for non-compliance (Meyer & Rowan, 1977). Firms adopt CSR primarily to secure resources and legitimacy (Oliver, 1991; Tian et al., 2015). Positive media exposure reinforces CSR behavior, while negative media coverage amplifies reputational risks (McDonnell & King, 2013; Rathert, 2016; Marquis & Qian, 2014). Thus, media attention intensifies institutional pressures, compelling firms to comply with CSR norms. Ultimately, firms weigh the costs and benefits of compliance versus decoupling (Meyer & Rowan, 1977; Russo & Fouts, 1997). Even in developed institutional environments, firms may still opt for decoupling if weak regulatory enforcement allows them to circumvent established norms (Oliver, 1991; Scott, 2013). Profit-driven firms are more inclined to adopt this strategy when enforcement is lax (Henisz & Zelner, 2005).

Although symbolic CSR compliance begins as a strategy to gain legitimacy, multiple mechanisms allow companies to maintain these practices without provoking stakeholder opposition. For example, information asymmetry between organizations and their stakeholders creates a lack of transparency that protects symbolic practices from scrutiny

(Meyer & Rowan, 1977; Marquis & Qian, 2014). In developing institutional contexts like China's varied provinces, stakeholders often lack access to reliable verification mechanisms or comparative benchmarks to evaluate CSR claims substantively. Also, institutional voids in enforcement create "protected spaces" where symbolic compliance can persist unchallenged (Khanna & Palepu, 2000; North, 1990). Cultural factors such as guanxi (relationship networks) in the Chinese context may buffer firms from criticism through political connections that mitigate enforcement pressures (Wang & Juslin, 2009). Also, The time delay between firms' symbolic CSR actions and stakeholders' ability to identify decoupling may create a "legitimacy window," allowing companies to incrementally modify their practices as detection risks rise (Tolbert & Zucker, 1999).

3. Literature Review

3.1. Institutional Development and Institutional Pressure

Institutional development occurs when societal norms are established through theorization, which involves identifying institutional deficiencies and proposing solutions with moral legitimacy (Tolbert & Zucker, 1999; Greenwood et al., 2002). Once institutions gain legitimacy, they become social norms, shaping organizational behavior through regulatory, normative, and cultural-cognitive pressures (DiMaggio & Powell, 1983; Scott, 2013). Institutional development is evaluated by considering transaction costs, legal and institutional transparency, and agency concerns (Dahms et al., 2022; North, 1990). Research highlights regional differences in transaction costs, legal clarity, and agency costs, leading to varying levels of institutional development (Kogut & Singh, 1988; Kogut et al., 2002; Kostova & Roth, 2002). In developing countries, lower institutional development is associated with weak regulatory enforcement, unstable surveillance systems, and a lack of established norms (Khanna & Palepu, 2000; North, 1990). Such environments require improvements in market information reliability, arbitration mechanisms, administrative transparency, and bureaucratic efficiency (Chan et al., 2008; Khanna & Palepu, 2000). Consequently, institutional pressure remains relatively low in these contexts. As institutions mature, policy enforcement becomes more transparent, social norms solidify, and legitimacy is reinforced through public recognition and compliance (Greenwood et al., 2002; Tolbert & Zucker, 1999). Transparent institutional frameworks and reliable market information facilitate more efficient corporate management (North, 1990; Khanna & Palepu, 1997). Lower transaction costs further enhance efficiency, while continuous surveillance and supervision impose greater institutional pressure on firms. Regional disparities in institutional pressure correspond to varying degrees of institutional development (Arslan, 2012; Oliver, 1991; Scott, 2013). Thus, this study hypothesizes that higher institutional development levels will increase institutional pressure.

H1: Institutional development positively affects institutional pressure.

3.2. Institutional Pressure and Firms' CSR Compliance

Institutional pressure comprises regulatory, normative, and cultural-cognitive forces (Scott, 2013). Regulatory pressure stems from government enforcement of laws, increasing with institutional development, leading to stricter regulations and transparency (Oliver, 1991). Normative pressure arises from professional and social organizations,

influencing firms beyond legal mandates by reinforcing societal expectations (DiMaggio & Powell, 1983; Scott, 2013). As institutions mature, normative pressure intensifies, promoting standardization and stronger governance. Cultural-cognitive pressure compels firms to align with societal values, customs, and ethics. Non-compliance can result in public criticism and loss of legitimacy (DiMaggio & Powell, 1983; Scott, 2013). As consumer awareness grows, stakeholders hold firms accountable through boycotts and activism. In weak institutional environments, uncertainty raises operational costs (North, 1990; Pfeffer & Salancik, 2003). However, as institutions stabilize, firms benefit from greater predictability and efficiency, enhancing their performance (Pfeffer & Salancik, 2003). Media exposure amplifies institutional pressure, shaping public perception and prompting regulatory action (Ditlev-Simonsen & Wenstop, 2013; Branco & Rodrigues, 2008). It reinforces normative expectations by promoting responsible business conduct (Marquis & Qian, 2014; Sharma, 2019). Positive media attention positions firms as CSR leaders, while negative coverage increases reputational risks, pressuring firms toward compliance (Brammer & Pavelin, 2006). Additionally, the media highlights CSR violations, triggering regulatory consequences and strengthening compliance incentives (Zhang & Yang, 2021; Lee & Raschke, 2023). Many studies assume firms passively conform to institutions through isomorphism and peer effects (Berrone et al., 2013; Kostova et al., 2008). However, institutional pressure alone does not ensure compliance. Firms internalize and adapt at varying levels (Greenwood et al., 2002; Tolbert & Zucker, 1999). Weak enforcement may lead to symbolic compliance, where firms maintain legitimacy without real change (Meyer & Rowan, 1977). Since adaptation incurs costs (Bowen, 2014; Delmas & Montes-Sancho, 2010), firms weigh institutional pressure against resource constraints. Thus, institutional pressure is expected to positively impact CSR compliance.

H2: Institutional pressure positively affects firms' CSR compliance.

3.3. Interaction Between Institutional Development and Institutional Pressure on CSR Compliance

Institutional development and CSR compliance levels can vary based on external legitimacy pressures (Marquis & Qian, 2014). Identifying how the combined effect of institutional development and pressure influences CSR compliance behaviors is important. Testing interaction effects reveals hidden relationships that may not be apparent when examining direct or mediating effects alone. While institutional pressure may explain part of the relationship between institutional development and CSR performance, investigating interaction effects clarifies the mechanisms behind substantial vs. symbolic CSR compliance. A deeper analysis helps understand how different combinations of institutional development and pressure levels influence CSR adoption. When institutional pressure aligns with institutional development, firms may engage in meaningful CSR compliance. Conversely, weak pressure relative to institutional development may let firms attempt to free-ride on institutional legitimacy without fully committing to CSR practices. In such cases, symbolic compliance—where firms outwardly appear to follow CSR norms without actual implementation—may become prevalent. When institutional pressure is appropriately balanced with institutional development, firms are guided toward desirable CSR behavior, reducing the likelihood of opportunistic behavior. This balance ensures that

institutions achieve their objectives, reinforcing sustainable business practices (Chan et al., 2008). This study hypothesizes that the relationship between institutional pressure and firms' CSR compliance is strengthened in highly developed institutional environments and weakened in underdeveloped contexts. The interaction between institutional development and pressure levels influences whether firms engage in genuine or symbolic CSR compliance.

H3: Institutional development interacts with institutional pressure, affecting firms' CSR compliance levels.

4. Methods

This study analyzed data from 783 firms in the Chinese A market, categorized into six sectors: finance, public business, real estate, general, manufacturing, and commerce. The data span 31 provinces and cities from 2008 to 2016. In 2008, China mandated CSR disclosure for large firms. A-market firms, typically larger and more established, are regulated by the China Securities Regulatory Commission (CSRC), which oversees their listing, trading, and compliance.

4.1. Variables and Measurements

This study examines the interplay between institutional development, institutional pressure, and CSR compliance, using NERIM, media exposure, and CSR ratings as key proxy variables (Table 1). By incorporating multiple economic, corporate, financial, and industry-related control factors, the analysis comprehensively evaluates CSR compliance behaviors in China. By considering regional differences, time-based fluctuations, and firm-specific attributes, this study provides insights into how institutional development and pressure influence corporate CSR strategies. Understanding these dynamics is crucial for regulators, policymakers, and business leaders seeking to design effective CSR policies and institutional frameworks. The analysis considered several control variables to ensure a robust analysis. These variables provide a more comprehensive understanding of corporate behavior by considering economic, corporate, financial, and industry-specific influences.

Table 1. Variables, Measurements, and Data Sources

	Variable	Measurement	Data Source
Main Variable	Institutional Development ¹	MKT	NERIM
	Institutional Pressure ²	PRESS	Baidu(http://www.baidu.com/)
	Compliance Level ³	CSR	RKS(Rankins CSR Ratings)
Control Variables ⁴	GDP per capita	GDP	NBSC
	Foreign Firms Ratio	FOREIGN	NBSC
	Firm Age	FIRMAGE	CSMAR
	Firm Size	FIRMSIZE	CSMAR

Asset-debt Ratio	DEBIT	CSMAR
100 Listed Firms	INDEX100	CSMAR
Industry Type	D1~D5	CSMAR

Notes: 1. Institutional development level(Index of Marketization): National Economic Research Institute Index of Marketization (NERIM) of Beijing National Economic Research Institute

2. Institutional pressure(the frequency of CSR news): by province and city in China was measured from 2008 to 2016 using the Chinese website search engine "Baidu (<http://www.baidu.com/>)."

3. Compliance level (CSR performance): CSR data, RKS (Rankins CSR Ratings)'s China A-market CSR index

4. Control Variables: China's National Bureau of Statistics of China (NBSC) and The China Stock Market and Accounting Research(CSMAR)

4.2. Analysis Models and Methods

This study employed Random Effect GLS Regression to analyze time-series panel data (Makino et al., 2004; Delmas & Montes-Sancho, 2010; Tashman et al., 2019; Yang & Han, 2020). The dependent variable used data from year t of firm i , while the independent variables used data from year $t-1$ of firm i . The Random Effects Model was chosen as it preserves degrees of freedom for dummy variables and enhances coefficient estimation accuracy in panel data analysis. It accounts for unobserved heterogeneity among individual firms, reducing bias in coefficient estimates (Green, 2000). Additionally, it captures unobserved factors correlated with independent and dependent variables, mitigating potential endogeneity issues and leveraging the longitudinal nature of the data. As a Fisher-type unit-root test, the Dickey-Fuller test was conducted in STATA to confirm the absence of spurious regression, confirming stationarity. The first-differenced data were used in subsequent empirical analysis to maintain reliability and validity. Test models are specified below:

Test Model 1: Institutional Development and Institutional Pressure

$PRESS = f(MKT)$

$$Y_{i,t} = \alpha + \beta_1 MKT_{i,t-1} + \sum \beta_2 Control_{i,t-1} + \epsilon_{i,t-1}$$

Test Model 2: Institutional Pressure and CSR Compliance

$CSR = f(PRESS)$

$$Y_{i,t} = \alpha + \beta_1 PRESS_{i,t-1} + \sum \beta_2 Control_{i,t-1} + \epsilon_{i,t-1}$$

Test Model 3: Interaction Between Institutional Development and Pressure on CSR Compliance

$CSR = f(MKT, PRESS, MKT \times PRESS)$

$$Y_{i,t} = \alpha + \beta_1 MKT_{i,t-1} + \beta_2 PRESS_{i,t-1} + \beta_3 (MKT \times PRESS)_{i,t-1} + \sum \beta_4 Control_{i,t-1} + \epsilon_{i,t-1}$$

5. Results and Findings

All analyses were conducted using STATA to ensure robustness and accuracy. The marketization index (MKT) averaged 7.49 (SD = 1.75), ranging from -0.30 to 9.95. Correlation analysis showed acceptable coefficients among variables, except for a relatively high correlation between GDP per capita (GDP), institutional development (MKT), and CSR news reports (PRESS). A Variance Inflation Factor (VIF) test assessed

multicollinearity. A VIF exceeding 4 indicates multicollinearity concerns (Jacqueminet, 2020; Studenmund, 2001). The VIF for GDP per capita was 2.55, below the threshold. MKT and other variables had VIF values between 1.10 and 2.21, suggesting no significant multicollinearity. Despite the correlation between MKT and PRESS (0.564), the VIF of 1.83 confirmed that multicollinearity was not a significant issue (Studenmund, 2001).

As for hypotheses testing from panel regression analysis, model 1 tested H1, examining the impact of institutional development (MKT) on institutional pressure (PRESS). Results showed a significant positive effect ($p < 0.01$), supporting H1. This finding aligns with DiMaggio and Powell (1983) and Scott (2013), who argue that institutional development creates societal expectations that pressure firms to align with norms. As institutions develop, institutional pressure intensifies. The analysis also found that higher GDP levels correlate with increased institutional pressure, likely due to greater consumer purchasing power and education levels (Kassinis, 2012). Additionally, a higher ratio of foreign firms increased institutional pressure, as foreign companies from developed markets tend to encourage local CSR adoption (Lin, 2010; Wang & Juslin, 2009). Model 2 tested H2, assessing the effect of institutional pressure (PRESS) on CSR compliance (CSR). The analysis revealed a positive relationship ($p < 0.01$), supporting H2. This finding aligns with Jacqueminet (2020), Raynard (2016), and Tian et al. (2015), who argue that institutional pressure drives CSR compliance, helping firms secure resources and legitimacy. Model 3 tested H3, exploring the interaction between institutional development (MKT) and institutional pressure (PRESS) on CSR compliance (CSR). Results showed a significant interaction effect ($p < 0.1$), confirming that the impact of institutional pressure on CSR compliance varies based on institutional development levels. Table 2 presents coefficients and significance levels, while hypothesis testing results are summarized in Table 3.

Table 2. Coefficients from Random Effects GLS Regression Analysis

	PRESS	CSP		
	Model 1		Model 2	Model 3
MKT	0.138*** (0.015)	0.040 (0.028)	0.010 (0.029)	0.012 (0.029)
PRESS			0.080*** (0.014)	0.054*** (0.020)
MKT×PRESS				0.026* (0.029)
GDP	0.269*** (0.015)	0.167*** (0.027)	0.159*** (0.027)	0.183*** (0.030)
FOREIGN	0.520*** (0.013)	0.106*** (0.024)	0.067*** (0.026)	0.056** (0.026)
FIRIMAGE	0.168*** (0.012)	0.097*** (0.024)	0.077*** (0.025)	0.076*** (0.025)
FIRMSIZE	0.009 (0.011)	0.283*** (0.021)	0.280*** (0.021)	0.282*** (0.021)

EQDEB	0.002 (0.011)	0.062*** (0.011)	0.061*** (0.011)	0.061*** (0.011)
INDEX100	-0.004 (0.017)	0.181*** (0.020)	0.178*** (0.020)	0.169*** (0.020)
Constants	0.077 (0.057)	-0.087 (0.127)	-0.080 (0.126)	-0.089 (0.126)
D1~D5	Industry Dummy Variable Included			
sigma_u	0.581	0.677	0.675	0.675
sigma_e	0.416	0.353	0.353	0.353
rho	0.662	0.786	0.785	0.786
Prob>chi ²	0.000	0.000	0.000	0.000
F(Wald Chi ²)	7158.11	1756.91	1802.09	1806.95
Observation	12,660	3,428	3,428	3,428

Notes: 1. () denotes standard deviation.

2. ***, **, * indicate significance level at 1%, 5%, 10%.

Table 3. Hypothesis Testing Results

Hypotheses	Model	Independent Variable	Dependent Variable	Institutional Level
H1	Model 1	MKT	PRESS	Supported(+)
H2	Model 2	PRESS	CSR	Supported(+)
H3	Model 3	MKT×PRESS	CSR	Supported(+)

Given that regression analysis alone may not fully capture interaction effects. To examine patterns, we conducted Aiken and West's Approach (Aiken et al., 1991), widely used for analyzing interactions between variables (Deng & Zhang, 2018; Marquis & Qian, 2013; Tian et al., 2015; Yang & Han, 2020). This method helped identify CSR compliance trends driven by institutional development and pressure interplay. Figure 1 illustrates interaction effects using Aiken and West's approach (Aiken et al., 1991), showing distinct compliance patterns under varying institutional conditions. As shown in Figure 1, CSR compliance gradually increases from -0.04 to 0.16 (observed slope = 0.028) as institutional pressure rises, suggesting symbolic compliance to gain legitimacy with minimal effort.

Meanwhile, CSR compliance rises steeply from -0.068 to 0.092 (observed slope = 0.080) as institutional pressure increases, indicating substantial compliance in response to stronger enforcement and stakeholder scrutiny. These findings confirm that firms adjust their compliance behavior strategically depending on institutional pressure and development levels (Meyer & Rowan, 1977; Marquis & Qian, 2014; Goodrick & Salancik, 1991; Oliver, 1990). In less-developed institutional environments, firms tend to engage in symbolic CSR, whereas in highly developed institutions, firms adopt substantive CSR measures. The findings highlight the dynamic nature of CSR compliance, revealing how firms navigate institutional pressures to maintain legitimacy and profitability across different regulatory contexts.

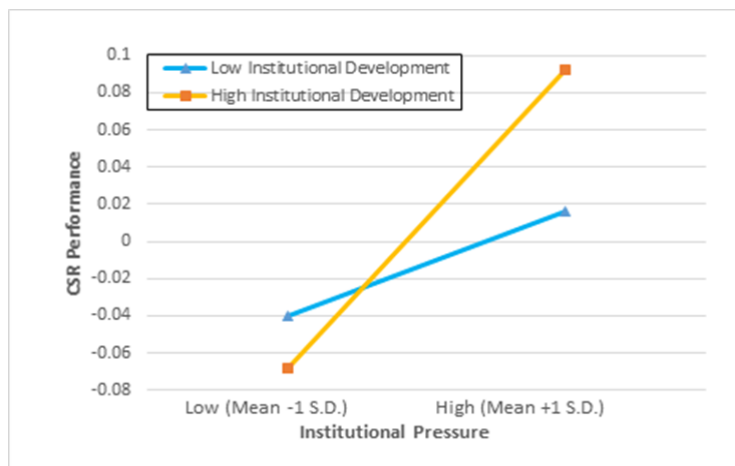


Figure 1. Interaction Effect Between Institutional Development and Institutional Pressure on CSR Performance

6. Conclusions and Implications

This study examined firms' CSR compliance in response to institutional pressure amid institutional development. Using nine years of time-series panel data from firms in the Chinese A market across 31 regions with varying institutional development levels, the results revealed that institutional development significantly influences institutional pressure, which, in turn, affects CSR compliance. The findings also indicate that institutional development and pressure impact CSR compliance more than pressure alone. This study empirically distinguishes between symbolic and substantial compliance behaviors by analyzing interaction effects. Despite extensive research on firms' adoption of organizational practices (Jacqueminet, 2020; Raynard, 2016; Tian et al., 2015; Kostova & Zaheer, 1999; Lawrence et al., 2002; Levy & Egan, 2003), limited studies have identified compliance behavior patterns linked to institutional development. Our findings confirm that firms engage more in CSR activities as institutional development progresses, driven by increased institutional pressure.

Additionally, firms strategically determine their level of compliance when facing institutional pressures. The results, analyzed using Aiken and West's Approach (Aiken et al., 1991), indicate that when institutional development is low, CSR compliance increases gradually, suggesting symbolic compliance aimed at gaining legitimacy with minimal effort. However, in a highly developed institutional environment, CSR compliance rises sharply with increasing institutional pressure, indicating firms' preference for substantial compliance. Our longitudinal analysis of 31 Chinese provinces reveals temporal shifts in compliance patterns, where firms initially decouple CSR practices but incrementally align operations with institutional expectations as monitoring capabilities mature (Tolbert & Zucker, 1999; DiMaggio & Powell, 1983). This perspective aligns with the study's empirical evidence of interaction effects between institutional pressure and development, underscoring the need for dynamic CSR models that account for phased institutional transitions and regional heterogeneities.

These findings provide valuable insights for public management, public administration, and organizational behavior. Policymakers and regulators can use this knowledge to design targeted policies that encourage meaningful CSR engagement. Understanding how firms respond to institutional pressures at different development stages is crucial for crafting effective regulatory frameworks. This study highlights firms' strategic decision-making in response to external pressures, emphasizing the influence of institutional development on corporate behavior. Furthermore, it underscores that an institution's quality depends on its establishment and effective management, enforcement, and monitoring. A well-functioning institutional system enhances corporate and societal outcomes. Simply creating institutional frameworks is insufficient—active promotion, enforcement, and management are necessary for success. A fair and consistent enforcement system is also crucial. Institutions that maintain strong regulatory oversight and penalties for non-compliance can influence corporate behavior more effectively. Institutions can deter symbolic compliance by ensuring fair punishment for violations and encouraging firms to substantively integrate CSR into their operations.

In conclusion, this study highlights the strategic interplay between institutional dynamics and corporate CSR behavior. Future research should delve deeper into the nuances of decoupling and enforcement models to further advance institutional and CSR theory. A more granular analysis of decoupling strategies, considering the different forms and underlying mechanisms, could reveal how firms navigate competing institutional pressures. Additionally, exploring diverse enforcement models, including regulatory, market-based, and self-regulatory approaches, would provide valuable insights into the conditions that foster effective CSR compliance. By integrating these perspectives, future studies can offer a more comprehensive understanding of the dynamic relationships between institutions, enforcement, and corporate social responsibility.

7. Theoretical Contributions

This study advances institutional theory by providing empirical evidence on firms' strategic responses to institutional pressures. It identifies two distinct CSR compliance behaviors—symbolic and substantial compliance—offering insights into how firms navigate institutional development in emerging markets like China. Although the theory has extensively addressed decoupling and compliance behaviors in developing countries (Goodrick & Salancik, 1991; Oliver, 1990), empirical support is limited. This study bridges that gap by analyzing how CSR compliance evolves with institutional development and pressure levels, which vary across regions and over time. By examining CSR compliance across 31 regions over nine years, this study provides a dynamic perspective on firms' CSR behavior within the same country. The relationships between institutional development, pressure, and compliance have been widely discussed (Jacqueminet, 2020; Kostova & Roth, 2002; Scott, 2013; DiMaggio & Powell, 1983). However, few studies simultaneously confirm these relationships across different regions and timeframes.

This study adds empirical depth to the literature by leveraging time-series data, reinforcing the argument that institutional development significantly shapes CSR behavior. Understanding the distinction between symbolic and substantial CSR is critical for assessing firms' motivations and the actual impact of their CSR initiatives. The extent of

firms' engagement in meaningful CSR practices is influenced by institutional development and pressure levels. Recognizing these dynamics can help firms develop effective CSR strategies and help stakeholders promote more impactful CSR initiatives. Media exposure to CSR-related issues is crucial in shaping regulatory actions, public opinion, and corporate behavior. Digital platforms amplify both CSR enforcement and greenwashing risks in several ways. For instance, social media accelerates information dissemination, enabling stakeholders to quickly detect and publicize instances of corporate misconduct or unsubstantiated CSR claims, leading to rapid reputational damage. In addition, digital platforms facilitate direct engagement between firms and stakeholders, creating opportunities for dialogue and feedback and amplifying criticisms and demands for accountability. The interactive nature of digital media also enables potential crowdsourced monitoring and verification of CSR initiatives, increasing transparency and reducing information asymmetry. Governments can strengthen institutional pressures for substantive CSR through regulations requiring transparent CSR disclosures and promoting stakeholder engagement. Rigorous reporting and monitoring systems enable stakeholders to assess CSR impact and hold firms accountable. Stakeholders can leverage advocacy campaigns, shareholder resolutions, and public protests to pressure firms into meaningful CSR compliance. Firms that align CSR with institutional expectations can enhance their reputation, legitimacy, and competitive advantage.

Effective CSR requires collaboration between firms, governments, and civil society organizations. Promoting substantial CSR practices necessitates partnerships that leverage the expertise and resources of various stakeholders. Institutional development can also create opportunities for firms to innovate and implement new CSR practices with tangible social and environmental benefits. This study provides empirical insights into how firms adapt their CSR compliance behaviors in response to institutional development and pressure. As institutional frameworks evolve, firms transition from symbolic to substantial CSR compliance, reinforcing the need for strong governance and enforcement mechanisms. Policymakers can encourage meaningful CSR practices that generate lasting societal benefits by fostering institutional transparency, fair regulatory enforcement, and stakeholder engagement. Encouraging firms to go beyond symbolic compliance will require continued institutional development, rigorous monitoring, and collaborative efforts among businesses, governments, and stakeholders.

8. Limitations and Suggestions for Future Research

A limitation of this study is that while it recognizes firms' CSR compliance as existing along a spectrum between symbolic and substantial behaviors, the operationalization and measurement of this continuum remain constrained by available data and methodology. The study primarily categorizes compliance into symbolic or substantive types based on CSR reports, which may oversimplify firms' nuanced and dynamic behavioral patterns in response to evolving institutional pressures. Additionally, the regional and temporal variations in institutional development and media scrutiny captured in the data may not fully account for firm-specific strategic considerations or sectoral differences that influence CSR approaches. Future research could benefit from more granular, qualitative insights

and longitudinal case studies to better capture the fluidity and complexity of firms' adaptive CSR strategies across diverse institutional contexts.

This study used the Random Effects GLS model, which controls for time-invariant firm-level heterogeneity. However, it is important to acknowledge the potential limitation that this model assumes no correlation between unobserved effects and the regressors. If this assumption is violated, it could lead to biased results due to potential endogeneity issues. Future research could explore alternative econometric approaches such as Fixed Effects models, which allow for correlation between unobserved effects and regressors, or hybrid models like the Hausman-Taylor estimator, to better address endogeneity concerns and strengthen causal inferences regarding the relationships between institutional dimensions and CSR compliance.

While our study shows that media exposure strengthens institutional pressure, the role of digital platforms merits exploration. These platforms can rapidly amplify CSR enforcement and greenwashing risks through faster spread of information and crowdsourced monitoring. Future research should investigate how firms adapt CSR strategies to these dynamics and how digital platforms affect CSR effectiveness. Understanding this interplay is crucial for the future of corporate social responsibility in the digital age.

While we emphasize that institutional quality depends on effective enforcement, the notion of "fair" enforcement in fragmented regulatory systems requires further consideration. Fairness can be operationalized in such systems through stakeholder engagement metrics and adaptive regulatory models. Stakeholder engagement ensures that enforcement mechanisms reflect diverse interests and societal values, while adaptive models allow for regulatory adjustments based on feedback and evolving circumstances. It is recommended that future research should empirically explore these approaches to determine how they can promote fair enforcement and drive more sustainable CSR compliance systems. Such an approach would involve developing metrics to assess stakeholder satisfaction with enforcement processes and evaluating the effectiveness of regulatory models in adapting to changing institutional environments.

While this study offers insights into CSR patterns within the Chinese A-share market, the focus on a single country limits the generalizability of findings. Future research should consider comparative multi-country studies to examine how diverse institutional settings across developing nations influence CSR strategies. Such studies could explore how varied levels of institutional maturity, regulatory enforcement, and media surveillance shape firms' approaches to CSR, thereby strengthening the external validity of institutional theory in the context of developing economies. Additionally, comparative research could identify distinct pathways of CSR evolution in different institutional environments, providing practical implications for policy reforms and corporate governance.

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