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Use of sustainability management control systems in Indian firms: Institutional factors and their effects on firm performance

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Abstract

The purpose of this study is to analyze which institutional factors influence firms' use of SMCS and to examine the mechanism by which SMCS use improves firm performance. A questionnaire survey was conducted to empirically analyze the relationship between institutional factors, SMCS utilization, and corporate performance. Since the purpose of this study is the use of SMCS in corporate CSR management, 1,325 companies listed on the different stock exchanges of the country were selected as the target companies for the questionnaire survey. Exploratory and confirmatory factor analyses were performed to confirm the reliability and validity of the measured variables. First, the reliability of the measured variables is evaluated by Cronbach's α. The validity of the measured variables is evaluated by AVE (Average Variance Extracted) and C.R. (Construct Reliability). The results of the questionnaire survey revealed that mandatory factors such as CSR-related laws, regulations, and international standards, as well as normative factors such as the influence of CSR-related experts and stakeholders outside the company, affect SMCS utilization and that SMCS utilization improves corporate CSR performance, which in turn indirectly affects financial performance.

Keywords: Corporate performance, CSR management, Institutional factors, Management control system, Sustainability management control system.

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1. Introduction

Management control system (MCS) research has shown that managers utilize multiple control measures, such as budgeting, performance appraisal, and compensation systems, to align employee behavior with the achievement of organizational goals. Since each control measure is not independent but interrelated, how to integrate individual control measures has been recognized as an important issue. Similarly, in the implementation of CSR[1] management, employee participation in CSR activities is indispensable, so the use of MCS may be useful. In this regard, the multiple control measures utilized in prior studies to encourage employee behavior in CSR activities are defined as "sustainability management control systems (hereafter, SMCS)," and the actual utilization of SMCS[2], factors influencing SMCS utilization, and the impact of SMCS utilization on companies are analyzed. Many studies have been conducted on SMCS as a subject of analysis, such as the actual utilization of SMCS, the factors that influence the utilization of SMCS, and the impact of SMCS utilization on companies [1].

To utilize SMCS and successfully implement CSR management, managers first need to understand the corporate environment surrounding the firm. The factors that have been analyzed in SMCS studies include environmental uncertainty, stakeholder influence, top management commitment to CSR management, firm size, and industry. However, it can be pointed out that although corporate CSR management and activities are strongly influenced by institutional factors such as regulations and norms, few studies have analyzed the impact of institutional factors on SMCS utilization[3]. Therefore, based on the institutional theory by DiMaggio and Powell [2] this study analyzes what institutional factors influence firms' SMCS utilization and examines the mechanism by which SMCS utilization improves firm performance.

The structure of this study is as follows. In the next section, we review previous studies and formulate hypotheses regarding the relationship among institutional factors, SMCS, and firm performance. Section three describes the research design and variable measurement. Section four presents the empirical analysis using the data obtained from the questionnaire survey, and Section five presents the contributions of this study and future research questions.

2. Prior Research and Hypothesis Formulation

2.1. Theoretical Background

2.1.1. Sustainability Management Control System (SMCS)

MCS studies have pointed out the extension of MCS to CSR research, and many studies have been conducted using SMCS as the subject of analysis. Since promoting employee participation in CSR activities and managing CSR activities are essential for successful CSR management, it is necessary to use SMCS as a package consisting of multiple control measures in the implementation of CSR management as well as in the discussion of MCS.

In particular, among the MCS frameworks as a package, Simons [3] LOC (Levers of Control) framework, which consists of belief, boundary, diagnostic, and interactive control systems, is the most frequently cited in MCS research because it simultaneously emphasizes the role of each control instrument as well as the interrelationships among the control instruments that make up the MCS. Therefore, based on Simons [3] this study defines SMCS as "information-based procedures that managers use to maintain or change the modalities of CSR activities," and SMCS as a package, consisting of the above four control instruments, is the subject of analysis.

First, the "belief system in SMCS" is a system that is utilized to instill values related to CSR management in organizational members, such as CSR vision, CSR philosophy, and CSR policy. On the other hand, the "boundary system in SMCS" is a system that is used to prevent members of the organization from acting contrary to CSR management, such as rules, prohibitions, codes of conduct, and action guidelines related to CSR management. Next, the "diagnostic control system in SMCS" is a system used to achieve important goals of CSR management, such as setting KPIs related to CSR management, measuring and reporting performance, etc. [4]. Finally, the "interactive control system in SMCS" is a system used to explore new CSR activities through communication such as meetings, internal education, and training sessions related to CSR management.

2.1.2. Essentials of the System

The new institutionalist organization theory researched why organizations take the same form and pointed out that institutional isomorphism is a phenomenon in which organizational structures become similar depending on the institutional environment [5]. This is because, in response to the institutional environment surrounding the organization, the organization constructs and implements similar organizational structures and practices to gain legitimacy for being accepted by society, even if not for rational reasons Su, et al. [6]. DiMaggio and Powell [2] who emphasize the cultural and social conformity of organizations, define institutional isomorphism as "a coercive process that makes one unit in a population resemble another unit facing the same environmental conditions [2]" and they identify three types of institutional isomorphism: coercive isomorphism, mimetic isomorphism, and normative isomorphism.

First, "coercive isomorphism" is an isomorphism caused by the cultural expectations of society and by formal and informal factors exercised by other organizations on which they are dependent [2]. For example, under the influence of coercive factors such as government policies and legal regulations, organizations will develop similar organizational structures, organizational strategies, and organizational systems. Also, when a parent company forces its subsidiaries to follow the policies and institutions of the parent company, the parent company and its subsidiaries will adopt similar forms.

Second, "mimetic isomorphism" is an isomorphism that occurs when organizations imitate the models of other organizations to avoid uncertainty [2]. In particular, organizations that have declining skills, ambiguous organizational goals, or high perceptions of environmental uncertainty may be able to emulate other organizations to gain an advantage in

competition with them [7] or to ensure their legitimacy [5] they will imitate the systems and practices of other successful organizations [8].

Finally, "normative isomorphism" is an isomorphism that arises primarily from professionalization [2]. Professionalization is a collective effort by those engaged in a profession to establish a basis for defining the conditions and methods of their work, to control their professional development, and to legitimize their professional autonomy. Normative isomorphism occurs when an organization attempts to acquire norms from a network of professionals beyond the organization, just as an organization acquires knowledge, norms, etc. shared by a group of professionals through educational institutions, professionals outside the organization, etc. Normative isomorphism occurs due to the social obligations required of organizations, as organizations deploy social norms, values, etc. outside the organization and make their members aware of them inside the organization [9] to obtain legitimacy for organizational activities [6].

2.2. Hypothesis setting

2.2.1. Institutional Factors and SMCS

First, forced isomorphism is created by factors such as the legal environment, regulations, international standards, and public opinion toward firms in their environmental and CSR management. Administrative penalties and punishments for violations of laws and regulations related to environmental and social issues are recognized as important factors affecting corporate strategy and management activities [6]. In addition, CSR-related laws, regulations, and international standards affect not only firms but also their executives and managers [9]. For example, coercive factors imposed by governments and regulatory agencies, such as the introduction of environmental management to comply with environmental laws and regulations, or the strengthening of corporate compliance with regulations on human rights and labor issues, affect the establishment of corporate systems related to environmental and CSR management [10]. Therefore, firms that are more aware of mandatory factors such as laws, regulations, policies, and international standards related to CSR are likely to be more proactive in using SMCS for successful CSR management.

Second, when implementing CSR management, firms may be influenced by other firms' CSR-related technologies and knowledge, etc. Panjaitan, et al. [11] argued that mimetic factors enable firms to reduce energy use and waste emissions in their environmental management. Kalbouneh, et al. [12] argued that mimetic factors are important in the implementation and development process of a system to evaluate a company's sustainability activities due to the tendency of companies to build their systems by referring to the superior systems of their competitors. To ensure competitive advantage and legitimacy, companies that are more aware of imitative factors such as CSR-related best practices, advanced technologies, and knowledge of other companies are more likely to actively utilize SMCS in their CSR management practices.

Finally, normative isomorphism occurs in corporate CSR management through the education of CSR-related experience and knowledge by external experts, the sharing of CSR-related activities in the firm's external network, and the internal development of social norms and values. For example, to justify their autonomous CSR activities, firms try to implement CSR management and activities appropriately to their situation, and they try to develop the latest CSR-related issues internally through advice from external experts and external seminars [9]. Therefore, the normative factors by those expert groups influence firms' CSR activities and SMCS. In addition to expert groups, influence by stakeholders outside the firm, such as customers, media, and communities, has also been shown to be a factor of normative isomorphism [9]. For example, public interest in environmental issues influences the implementation of a firm's environmental management system Arocena, et al. [13]. Fagioli, et al. [14] found that normative factors such as customers, suppliers, employees, media, and communities influence firms' environmental activities, integration of environmental integration of environmental issues into corporate strategy, and environmental management systems such as environmental assessment indicators.

Thus, firms that are more aware of coercive, mimetic, and normative factors will be more proactive in using SMCS as they seek to secure competitive advantage and legitimacy in response to CSR-related laws, regulations, and societal expectations. Based on the above, we formulate the following hypotheses.

Hypothesis 1: Firms that are more strongly aware of (1) coercive, (2) imitative, and (3) normative factors will utilize the SMCS more actively.

2.2.2. SMCS and Corporate Performance

Since SMCS considers environmental and social aspects at the same time, the use of SMCS will affect the environmental and social performance of firms; studies extending MCS to environmental management have focused on environmental management control systems (hereafter referred to as EMCS) and eco-controls to study and verified that the use of these systems improves the environmental performance of firms [15-18].

First, the use of EMCS and eco-controls has been shown to have a direct impact on the environmental performance of firms. For example, Gustafsson, et al. [15] and Wijesinghe, et al. [1] showed that integrating environmental management into the strategic planning process improves firms' environmental performance. Shen and Zhang [18] also verified that the use of environmental performance indicators in corporate environmental management improves the environmental performance of firms.

In contrast to EMCS and eco-control studies, which only consider environmental aspects, SMCS studies, which also target social aspects, have shown that SMCS can influence the improvement of social performance [19, 20]. For example, Corsi and Arru [19] using the case of P&G's Italian branch, showed that formal SMCS and informal SMCS function mutually in the case study company, and that this enables the company to improve its CSR performance. Similarly, Beusch, et al. [20] who investigated the actual utilization of SMCS in Swedish firms, showed that formal SMCS and informal

SMCS each play a role and that their mutual functioning improves corporate CSR performance. Based on the results of previous studies that the utilization of SMCS, which consists of multiple control measures, improves the environmental and social performance of firms, the following hypothesis is formulated.

Hypothesis 2: SMCS utilization will improve corporate CSR performance.

Prior studies have shown that the use of EMCS and eco-controls further improves financial performance through improved environmental performance of firms. Although firms initially incur higher investment costs when they implement environmental management, improved environmental performance through sustained environmental activities affects financial performance in the long run [21]. In addition, the implementation of environmental management also affects corporate reputation, which is a source of competitive advantage and value creation, so improved environmental performance is also linked to financial performance [22].

In this regard, Daromes and Ng [17] analyzed the impact of eco-controls on firms' environmental and financial performance and verified that eco-controls do not directly affect financial performance, but that eco-controls indirectly improve financial performance through the mediation of environmental performance. Similarly, Ong, et al. [16] also found that eco-controls as a package improve financial performance indirectly through environmental performance. These empirical studies show that EMCS and eco-controls for implementing firms' environmental management improve firms' environmental performance, and they affect firms' financial performance.

Other studies have analyzed the impact of SMCS use on improving financial performance. For example, Dharmayanti, et al. [23] showed that the use (controlling use) of SMCS by boundary systems and diagnostic control systems that inhibit organizational members' behavior contrary to corporate CSR management does not affect the improvement of corporate financial performance, while the enabling use of SMCS by a belief system and an interactive control system that encourages voluntary participation of organizational members in CSR management improves financial performance of firms.

Based on the results of previous studies, this study sets the following hypotheses with the aim of simultaneously examining the indirect effects of SMCS utilization on financial performance, mediated by CSR performance, in addition to the direct effects of SMCS utilization on firms' financial performance.

Hypothesis 3-1 SMCS utilization will improve the financial performance of firms.

Hypothesis 3-2 SMCS utilization will improve financial performance mediated by firms' CSR performance.

3. Research Design and Variable Measurement

3.1. Data Collection

In this study, a questionnaire survey was conducted to empirically analyze the relationship among institutional factors, SMCS utilization, and corporate performance. Since this study focuses on the use of SMCS in corporate CSR management, 1,325 Indian firms were selected randomly from the 25,000 CSR companies (CSR Company Directory) listed on the different stock exchanges of the country as the target firms for the questionnaire survey. The questionnaire was administered to "the person in charge of the CSR promotion department or its equivalent," who is considered to be familiar with the current state of CSR management in the company, and one copy of the questionnaire was collected from each surveyed company.

To increase the collection rate, the questionnaires could be returned by mail or by e-mail, and respondents were asked to respond by either method. The questionnaires were sent out on April 4, 2023, with an initial deadline of April 29. As a result, 138 companies responded by April 29. To further improve the collection rate, the survey cooperation was re-solicited by postcard on May 19, and the deadline was extended to June 16. As a result, additional responses were collected from 37 firms. The sample of 24 companies, including those that did not respond to the questionnaire and those whose financial evaluation items and CSR evaluation items were not included in the CSR Company Directory, was excluded, bringing the final sample size for analysis to 151.

A test of independence for the industry distribution of the population of 1,325 mailing recipient firms and 151 sample firms revealed no non-response bias due to industry distribution (χ^2=27.505, df=32, p=0.694). In addition, a test of independence using the firm size variable, such as the number of employees, did not detect any non-response bias due to firm size (Z= -1.373, p=0.170).

3.2. Characteristics of Sample Firms

We confirmed the characteristics of the sample firms and respondents by using the distribution by industry, firm size, and respondents' job positions. First, of the total 151 sample firms, 89 (58.94%) were in the manufacturing industry and 62 (41.06%) were in the non-manufacturing industry, 27 more than in the manufacturing industry. Among the non-manufacturing firms, 23 (15.23%) were in the wholesale and retail trade, 15 (9.93%) in transportation and communications, 13 (8.61%) in services, 7 (4.64%) and 3 (1.99%) in construction and finance, insurance and real estate, respectively, and 1 (0.66%) in agriculture and fishery. The construction and finance/insurance/real estate industries accounted for 7 (4.64%) and 3 (1.99%), respectively.

The number of employees of the sample firms shows that 41 (27.15%) of the firms had between 1,001 and 2,500 employees, 28 (18.54%) had between 101 and 500 employees, 26 (17.22%) had between 2,501 and 5,000 employees, 20 (13.25%) had between 501 and 1,000 employees, 13 (8.61%) had between 0 and 100 employees, and 10 (6.62%) had between 5,001 and 10,000 employees or more. The sample firms with 100 and 5,001 to 10,000 employees accounted for 13 (8.61%) and 10 (6.62%), respectively, while those with more than 10,001 employees accounted for 10 (6.62%).

Next, in the 132 samples, excluding the 19 samples that did not respond to the "Respondent's position column" from the overall 151 samples, 59 (39.07%) of the respondents in this survey were at the section manager level, 25 (11.92%) were at the department manager and section manager level, 18 (11.92%) were at the general employee level, and 5 (3.31%) were at the president and director level. The number of employees at the president/director level was 5 (3.31%), in that order.

Table 1.
Confirmatory factor analysis of institutional factors.

Questionnaire		Standard coefficient	R^2
[Institutional Factors] To what extent do the following factors influence your CSR management efforts? (1 = not at all influential, 7 = very influential)			
Coercive factor	CSR Laws and Regulations	0.797	0.442
	International standards related to CSR (e.g., ISO)	0.797	0.635
	Monitoring of CSR activities by regulators	0.785	0.635
Mimetic factor	Competitors' CSR Strategies and Activities	0.929	0.616
	Competitor Best Practices	0.873	0.863
Normative factor	CSR-related issues at external seminars	0.831	0.763
	Expert Advice	0.863	0.691
	CSR Ranking Trends	0.671	0.745
	Requests for CSR activities from external organizations	0.665	0.450
χ^2/df =1.999 (p=0.005); RMSEA=0.082; IFI=0.974; TLI=0.957; CFI=0.974			

3.3. Measurement of Variables

Institutional factors were measured as coercive, mimetic, and normative factors using the concept of institutional homomorphism presented by DiMaggio and Powell [2]. For the questionnaire items related to institutional factors, a total of 12 items were created with reference to the studies by Gunarathne, et al. [9], Panjaitan, et al. [11] and Arocena, et al. [13] with support from DiMaggio and Powell [2] but one item with a ceiling effect and two items from the exploratory factor analysis were excluded, and finally, nine items were used in the confirmatory factor analysis. Table 1 shows the results of the confirmatory factor analysis of the institutional factors. Based on the LOC framework by Simons [3] SMCS was measured in four categories: creed systems, boundary systems, diagnostic control systems, and interactive control systems. A total of 21 items were created with reference to DiMaggio and Powell [2]; Laguir, et al. [24] ; Adib, et al. [25] and Su [26] but four items for which ceiling effects were observed were excluded, and a confirmatory factor analysis was finally conducted using 17 items. In particular, since this study focuses on the SMCS as a package, in which the four control measures relate to each other, a second-order confirmatory factor analysis (Second-Order Factor Analysis) was conducted on the SMCS after the four control measures were measured and created into a single variable [27]. Table 2 shows the results of the confirmatory factor analysis of the SMCS. In this study, using firm data measured by objective methods with the same criteria, we measured firm performance in two categories: CSR performance and financial performance. The CSR performance was measured in three categories: human resource utilization, environment, and social, each of which scored 100 points out of 100[4] in the data provided by the CSR Company Directory. To analyze the causal relationship between CSR performance and financial performance, financial performance was measured not using data from the same year as CSR performance, but using data provided by the CSR Company Handbook, using three items such as growth potential, profitability, and stability, each with a score of 100 points[5].

Table 2.
Confirmatory factor analysis of SMCS.

Questionnaire	Standard coefficient	R^2
[Creed System] To what extent do the following items apply to your sense of values regarding CSR (e.g., basic CSR principles)? (1 = totally different, 7= totally correct)		
Management communicates CSR values to employees.	0.890	0.792
Communicate CSR values to employees through internal training and education.	0.822	0.676
Communicating CSR values to employees through an internal information system such as an intranet	0.658	0.432
Employees understand our CSR values.	0.853	0.728
[Boundary System] Regarding the code of conduct for CSR (e.g., CSR action guidelines, etc.), to what extent do the following items apply to you? (1 = totally different, 7= totally correct)		
The company uses the CSR Code of Conduct to encourage employees to engage in CSR activities.	0.870	0.757
CSR Code of Conduct provides employees with information on undesirable behavior	0.702	0.493
Employees understand our CSR Code of Conduct	0.891	0.793
[Diagnostic Control System] To what extent do the following items apply to your evaluation of CSR activities? (1 = totally different, 7 = totally correct)		
Diverse goals are set to implement CSR activities.	0.879	0.773

Questionnaire	Standard coefficient	R^2
KPIs (Key Performance Indicators) for CSR activities have been established.	0.870	0.758
Measuring and monitoring the results of CSR activities	0.915	0.838
Evaluation of CSR activities influences the next year's CSR activity plan.	0.857	0.735
Performance evaluation and compensation systems include CSR-related indicators	0.600	0.360
[Interactive Control System] To what extent do the following items apply to your response to CSR-related issues? (1 = totally different, 7 = totally correct)		
Seminars and lectures are held to address CSR issues.	0.628	0.394
Communication among departments to address CSR issues	0.946	0.895
Communicating with external stakeholders to address CSR issues	0.847	0.718
Communication between supervisors and subordinates to address CSR issues	0.891	0.794
Sharing best practices of CSR activities within the company	0.857	0.735
χ^2/df =1.860 ($p<0.001$); RMSEA=0.076; IFI=0.956; TLI=0.946; CFI=0.955		

Finally, firm size and industry variables were used as control variables. The number of employees was used as a proxy variable for firm size, while the industry was analyzed using dummy variables for manufacturing and non-manufacturing industries.

4. Empirical Analysis

4.1. Data Analysis

Exploratory and confirmatory factor analyses were conducted to confirm the reliability and validity of the measurement variables. First, the reliability of the measurement variables is assessed by Cronbach's alpha. This indicator can be interpreted as reliable if the value exceeds 0.8, while a higher value indicates higher reliability. The validity of the measurement variable is evaluated by AVE (Average Variance Extracted) and C.R. (Construct Reliability). In general, if the AVE is 0.5 or higher and the C.R. is 0.7 or higher, it is considered to be valid.

Table 3 shows the descriptive statistics and correlations of the measured variables. Other than firm performance, all variables measured using data obtained from the questionnaire survey exceeded their respective reference values, thus ensuring their reliability and validity. In addition, although not listed in Table 3, the SMCS variables also met the criterion values for reliability and validity since the Cronbach's alpha, AVE, and C.R. of the SMCS, which consisted of four control measures as one variable, were 0.952, 0.728, and 0.914, respectively.

Table 3.
Descriptive statistics and correlations of measurement variables.

Descriptive statistics	Institutional factors			SMCS				Performance	
	Coercive factor	Mimetic factor	Normative factor	Belief	Boundary	Diagnostic case	Interactive	CSR performance	Financial Performance
Number of questions	3	2	4	4	3	5	5	3	3
Minimum value	1.0	1.0	1.0	1.5	1.0	1.0	1.0	106.50	177.80
Maximum value	7.0	7.0	7.0	7.0	7.0	7.0	7.0	286.20	279.70
Average	5.28	4.51	4.59	5.35	5.26	4.45	4.40	210.75	237.17
Standard deviation	1.29	1.26	1.19	1.21	1.51	1.63	1.48	48.65	13.57
Cronbach's alpha	0.832	0.890	0.843	0.875	0.846	0.913	0.908	.	.
AVE	0.629	0.813	0.582	0.546	0.513	0.517	0.573	.	.
C.R.	0.836	0.897	0.846	0.827	0.759	0.810	0.843	.	.
Correlation (Pearson)									
Coercive factor	1								
Mimetic factor	0.632***	1							
Normative factor	0.716***	0.649***	1						
Belief	0.561***	0.441***	0.463***	1					
Boundary	0.479***	0.369***	0.390***	0.698***	1				
Diagnostic case	0.605***	0.449***	0.573***	0.636***	0.681***	1			
Interactive	0.616***	0.539***	0.658***	0.674***	0.622***	0.712***	1		
CSR performance	0.601***	0.443***	0.555***	0.441***	0.474***	0.580***	0.528***	1	
Financial Performance	0.254***	0.044	0.232***	0.139**	0.077	0.191***	0.164**	0.261***	1

Note: * p<0.1, ** p<0.05, *** p<0.01.

4.2. Analysis Results

In this study, which simultaneously analyzes the impact of institutional factors on SMCS utilization and the impact of SMCS utilization on firm performance, each hypothesis was tested using structural equation modeling with Amos 23.0. The goodness of fit to the analytical model was tested using indicators such as $\chi 2/df$, IFI, TLI, CFI, and RMSEA. The results showed that the criterion values for each of the indices were met, and thus the analytical model of this study can be judged to be a good fit overall. Table 4 and Table 5 show the results of the analysis.

Table 4.
Analysis results and hypothesis testing.

Hypothesis	Causal relationship	Standard coefficient	SE	t-value
Hypothesis 1-1	Forcing factor ⇒ SMCS	0.477	0.130	2.521**
Hypothesis 1-2	Imitative factors ⇒ SMCS	-0.026	0.079	-0.238
Hypothesis 1-3	Normative factors ⇒ SMCS	0.321	0.157	1.811*
Hypothesis 2	SMCS ⇒ CSR performance	0.671	1.483	7.324***
Hypothesis 3-1	SMCS ⇒ Financial performance	0.089	1.360	0.802
Hypothesis 3-2	CSR Performance ⇒ Financial performance	0.329	0.083	2.970***
.	Company size ⇒ SMCS	0.214	0.035	3.330***
.	Industry ⇒ SMCS	0.028	0.106	0.460

Note: * p<0.1, ** p<0.05, *** p<0.01.

First, a positive relationship between coercive factors and SMCS utilization was found in Hypothesis 1.1, supporting Hypothesis 1.1 that firms with a strong awareness of coercive factors such as CSR-related laws, regulations, and international standards will utilize SMCS more proactively to implement CSR management. Second, since there were no significant results for the relationship between imitative factors and SMCS utilization, hypothesis 1.2, that firms with a strong perception of imitative factors, such as learning competitors' CSR-related technologies and knowledge, would utilize SMCS more actively, was not supported. Finally, the relationship between normative factors and SMCS utilization is significant at the 10% level, but the relationship is positive as per hypothesis 1.3, and hypothesis 1.3 that firms with a strong awareness of normative factors, such as the internal development of CSR values through external experts and networks outside the firm, will utilize SMCS more proactively, is supported.

Unlike the previous studies, this study focused on SMCS, which simultaneously considers not only environmental but also social activities of firms, and the analysis confirmed that mandatory and normative factors positively influence firms' use of SMCS in this study. The result of hypothesis 1 indicates that Indian firms utilize SMCS more strongly based on their awareness of mandatory factors such as CSR-related laws, regulations, and international standards, and normative factors such as the influence of CSR-related experts and stakeholders outside the firm than on imitative factors such as the influence of competitors.

Next, a positive relationship between firms' SMCS utilization and CSR performance was found in Hypothesis 2, supporting Hypothesis 2 that simultaneous utilization of the individual control instruments that comprise the SMCS improves CSR performance. In contrast, since the direct effect of SMCS utilization on financial performance was not found to be significant, hypothesis 3.1, which states that firms' utilization of SMCS improves financial performance, was not supported. However, the indirect effect of firms' SMCS utilization on financial performance mediated by CSR performance was significant as in Hypothesis 3.2[6], thus Hypothesis 3.2 that firms' SMCS utilization improves firms' financial performance indirectly through CSR performance was supported. Therefore, Hypothesis 3.2 that corporate use of SMCS indirectly improves corporate financial performance through CSR performance is supported.

Table 5.
Indirect Impact of SMCS on Financial Performance.

Hypothesis	Causal relationship	Direct effect	Indirect effect	Total effect	Significant probability
Hypothesis 3-2	SMCS ⇒ CSR Performance ⇒ Financial Performance	0.089	0.221	0.310	0.039

In this study, SMCS utilized to implement CSR management was the subject of the research. As in the previous studies, the direct impact of SMCS utilized for CSR management on CSR performance and the indirect impact of SMCS on financial performance mediated by the improvement of CSR performance was verified. This is shown in Table 3. This indicates that the individual control measures that comprise the SMCS are interrelated and that the SMCS as a package influences the improvement of CSR performance, as shown in Table 3.

Finally, the results of the analysis using the control variables of firm size and industry showed that larger firms tended to utilize SMCS more actively, but as for industry, it was confirmed that SMCS was utilized regardless of whether the firm was in the manufacturing or non-manufacturing industry. This result suggests that SMCS is utilized in many industries, not only in one particular industry, as CSR management is required today.

5. Conclusion

The purpose of this study is to clarify the relationship among institutional factors, SMCS utilization, and corporate performance, using [3] LOC framework as the analytical perspective, to determine what institutional factors affect SMCS utilization, and how SMCS utilization affects corporate performance.

To obtain legitimacy for their activities, firms are aware of external social norms, values, and social regulations that require them to fulfill their social responsibilities. Firms' responses to institutional factors are not primarily aimed at improving firm performance, but rather at meeting society's expectations of firms. However, the results of this study indicate that while institutional factors are not directly related to improving corporate performance, responses to mandatory and normative factors such as CSR-related laws, regulations, and norms can improve corporate performance through the use of SMCS. In addition, this study also shows that the use of SMCS not only affects firms' CSR performance but also indirectly improves their financial performance.

The contributions of this study are as follows. First, this study has contributed to research on MCS, research on institutional theory, and research on CSR. Similar to the existing MCS research, the result of this study that SMCS as a package consisting of multiple control measures improves firm performance is considered to have further strengthened the theory of MCS. In addition, by using the concept of institutional isomorphism by DiMaggio and Powell [2] to examine the impact of institutional factors on the utilization of SMCS, this study provided new insights into research on institutional theory in addition to research on MCS.

Second, in the analysis data, this study simultaneously used data provided by the CSR Company Directory along with the data obtained from the questionnaire survey. While many MCS studies measured corporate performance such as financial performance and environmental performance using questionnaire surveys, this study used data obtained from the Comprehensive Directory of CSR Companies for its analysis, which can be presumed to have yielded more objective results.

Third, this study clarified the mechanism by which the use of SMCS promotes corporate performance, and thus made it possible for executives and managers who are reluctant to promote CSR management to understand the use of SMCS, and gave them strong motivation to practice CSR management. Although various factors other than the use of the SMCS are considered to contribute to successful CSR management, the research results showing that the use of the SMCS improves CSR performance and also improves financial performance have made executives and managers realize the importance of CSR management and implementation as a source of competitive advantage in the market.

Finally, we list the remaining research issues in this study and discuss future research. First, this study focused on the SMCS as a package but did not analyze the impact of the relationship among the control instruments that constitute the SMCS on firm performance. Therefore, in future studies, we will focus on the relationships among control instruments that constitute the SMCS and analyze their impact on corporate performance. Second, although the SMCS was the subject of analysis in this study, future research on the integration of the MCS with the SMCS and research analyzing the relationship between the MCS and the SMCS is also needed. Firms utilize not only SMCS but also MCS to achieve the goals of their core business at the same time. Empirical analysis of the integration and relationship between MCS and SMCS would also be necessary to establish the use of SMCS within firms and to ensure the long-term success of CSR management. Third, since the questionnaire survey was conducted in 2023, we can only discuss CSR management and SMCS utilization in a single year. However, a sustained analysis of the relationship among institutional factors, SMCS utilization, and firm performance would allow a more precise elucidation of these relationships. Since there are still many aspects of SMCS that are not well known, sustained research in this area would be highly significant.

Notes:

1 The European Commission (2001) defines CSR as "the voluntary incorporation of environmental and social aspects into a company's business activities" (European Commission, 2001). Based on this definition, this study defines "CSR activities" as corporate activities that pursue environmental and social aspects in business activities, and "CSR management" as the management of these activities.

2 King and Clarkson (2015) described eight patterns of integration of MCS to execute business activities and SMCS to execute CSR activities and presented complete integration of MCS and SMCS as an ideal form of integration. If business activities are completely consistent with CSR activities, CSR activities can be handled by MCS instead of SMCS, but since many companies still do not match their business activities with CSR activities, SMCS studies often discuss MCS and SMCS separately [1]. Similarly, in this study, SMCS for executing CSR activities is discussed as a separate system from regular MCS.

3 Previous studies have analyzed the relationship between institutional factors and environmental management systems, but they consider only environmental aspects [13]. In contrast, this study analyzes the relationship between a wide range of SMCS and institutional factors, taking into account social aspects in addition to environmental aspects.

4 In the CSR Company Directory's CSR evaluation, 42 items were used for human resource utilization, including female employees, non-Indian employees, and employment rate of handicapped persons; 28 items were used for environment, including ISO14001 acquisition rate, green procurement of raw materials, and reduction of CO_2 emissions; and 29 items were used for social aspects, including consumer complaints, performance in community participation activities, and CSR-related awards, to evaluate the company overall.

5 In CSR Company Directory's financial evaluation, growth potential was evaluated comprehensively using the following ratios: sales growth rate, operating income growth rate, operating cash flow growth rate, total assets growth rate, and retained earnings growth rate; profitability was evaluated using ROE, ROA, operating income to sales ratio, net income

to sales ratio, and operating cash flow; and safety was evaluated using current ratio, D/E ratio, fixed ratio, total assets to retained earnings ratio, and retained earnings.

6 The bootstrap method is a method of estimating standard errors by generating subsampling on data drawn from a population. Therefore, the bootstrap method was used in this study to test the significance of the indirect effects of SMCS utilization on financial performance.

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