

Effect of Management Control Systems and Corporate Social Responsibility Practices on Corporate Performance of Manufacturing Companies in Nigeria

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Abstract

Original Research Article

This research investigates the relationships among management control systems (MCS), corporate social responsibility (CSR) practices, and corporate performance (CP) in Nigerian manufacturing enterprises. Concurrently to this purpose, the research paper evaluates the direct impact that MCS have on the financial and non-financial performance measures among manufacturing companies in Nigeria. The conceptual foundation rests on the resource-based view (RBV) and shareholder theory (ST). Using a cross-sectional design, the study followed a random sampling route and thus 280 valid survey questionnaires were obtained and subjected to the process of quantitative analysis. Data examination was performed using partial least squares structural equation modelling (PLS-SEM) in SmartPLS 3.2.9, enabling a rigorous empirical test of the hypothesised associations. The results show that MCS and CSR practices have a significant impact and, therefore, support the focus of the RBV on intangible resource and also meet the assumptions of the ST with regard to shareholder value created when integrating CSR into MCS. In totality, the research has brought in empirical knowledge to the theoretical device and provided operational knowledge to Nigerian manufacturing firms that are hopeful of improvement in performance using synergistic control of management and sustainable practices. The key findings indicate that, MCS have both direct and significant relationship with CSR, and have a direct relationship with financial and non-financial performance. In addition, CSR affect CP (both financial performance and non-financial performance). These empirical findings are explained with the framework of relations between RBV and a stakeholder theory implies further theoretical discussion. The study provides also a number of recommendations that are to be applied to the managerial practice but are limited by the context of Nigeria. Longitudinal studies combining mixed methods could be an asset to future studies in order to get more fine-grained qualitative and quantitative results extending the empirical and theoretical boundaries of the discipline.

Keywords: management control systems, corporate social responsibility, financial performance, nonfinancial performance, Nigeria, structural equation modelling.

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Introduction

Corporate social responsibility (CSR) practices, management control systems (MCS) conceptually are addressed in this study to evaluate their impact they have on corporate performance in terms of financial and non-financial performance. The corporate social responsibility practices have seen an increasing interest in different business situations all over the globe and are now a prominent recognized role in either the large or small quit enterprises because, it influences significantly all business performance matters to a large extent (Abbasi, Aghakhani, Azizi, Peikanpour and Mehralian, 2023; Jamali and Karam, 2018; Sekhon and Kathuria, 2019). Through corporate social responsibility, all corporations have been in need of doing what is best to accommodate the complexities of the global economy (Gharbi & Jarboui, 2024). In the attempts to understand the concept of corporate social responsibility (CSR), researchers have discovered that CSR involves the assembly of economic, social, and environmental considerations within the survival and operational agenda of the corporations that must meet the demanding changing business environment (Ikram et al., 2019; Svensson et al., 2018). Corporate social responsibility (CSR) has been taken as a moral anchor that compels organizations to pursue sustainable and socially responsible activity that will provide an indication of the impact that an organization's operations and behaviors will have on the different interested parties (Madanaguli et al., 2022). In addition, how the CSR policy influences the performance of the firm is also an identity issue among managers, policymakers, stakeholders, and investors (Giannopoulos et al., 2024). Although Porter and Kraemer (2011) accept that profitability remains a core preoccupation in the company operation, the authors indicate that companies can serve the greater social good when the strategic goals of companies are aligned with the social needs of the societies where they are doing business. As it is, there have been instances where inclusion in activities pertaining to corporate social responsibility (CSR) provides an organization with a competitive advantage that results in additional profits and returns on invested resources (Barauskaite &

Streimikiene, 2020). Although legally CSR is not much mandatory in most countries, it has already gone deep into the heart of many companies around the world (Singh et al, 2023). During the recent past, there has been a lot of international knowledge on the nature of social and environmental responsibility, particularly in influential countries such as the United States of America and the United Kingdom (Kemper & Martin, 2010; Saeed et al., 2022). The reverse is the same in the event of emerging economies such as China, whose corporate social responsibility research was conducted by Carroll & Buchholtz (2017), Chen et al. (2019), Desender & Epure (2021), Nguyen et al. (2020), and Parsa et al. (2021). According to Cho et al. (2019), a proactive involvement in CSR leads to a better relationship with all the stakeholders. Nevertheless, though CSR has been an issue of high concern in the economic and academic circles, there has always been some form of confusion in what to expect CSR to entail and how this aspect and its respective priorities can be measured (Rodriguez-Gomez et al., 2020). Carroll (2008) The concept of CSR implies the corporate responsibility to strategize, decide, and undertake activities that are according to the expectations and values of society. The discrepancies that are measured also step in and speak about the differences that arise in the CSR-FP nexus (Lemana et al. 2025). It is also because organizations are very eager to maximize their profits, but must, as put forward by corporate social responsibility, be able to make considered provisions towards the overall well-being of society (Barauskaite & Streimikiene, 2020). The fact that Corporate Social Responsibility CSR has a positive impact on the sustainability of companies in the long run is recorded by Fernandes et al (2023). The production industry is among the key points in determining the economic status of any nation. That is, the dilemma would be how to achieve long-term sustainability and competitive advantage to avoid all kinds of damage to either the natural environment or society and still produce the same amount of production (Goyal et al., 2019). The statistics, as provided by the USA and the UK, show that CSR programmes amount to \$15.2 billion in the annual expenses of the Fortune 500 corporations (Sharma, 2019). Coincidentally, demand in the industrial

sector concerning the high quality of goods has increased over 20-plus years (Abbas, 2020). Thus, the rise in production will negatively affect the ecosystem (Rajeev et al., 2017).

The international rivalry between organisations remains at high levels, and companies are currently developing and undertaking new mechanisms that will enable them to effectively meet competition, organisational survival, and practice their mandate (Alastal et al., 2023). The existing literature places insufficient importance on the permeating nature and dynamics of the management accounting and control practices, which can be considered through the prism of CSR. Even though the interest in CSR had been growing during the past some years among the states of the emerging line, the investigation of CSR agenda and tendencies in the developing economies, Nigeria taken as the largest economy in Africa included, is also quite scarce obeying to the fact that the perception and realization of CSR practices depend on the country-specific curiosities that are observed throughout the world (Jamali and Karam, 2018; Mohy-ud-Din and Raza, 2023). In line with

that, context-localized investigation becomes imperative in corporate survival explanation (Aguinis and Glavas, 2019). Research on the contextual-specificity of CSR practices need be situated especially in emerging environment. The CSR adoption and implementation determinants in Nigeria can be described on the basis of the study undertaken in Nigeria, as the practice is situational. The manufacturing sector is a pathfinder which through it Nigeria will become a major world economy. This aspect formed the basis on which the United Nations Agenda, 2030 is preset; it will boost consumer spending further to utilize approximately US\$2.2 trillion by 2030. The view of Nigeria having the leadership of the world is reflected even in the African Union Agenda 2063. Nigeria is among countries estimated to achieve a significant GDP growth as projected by 2030. The data is described in the graph shown in Figure 1. The United States Department of Agriculture estimates that Nigeria will make up its GDP with US\$1 trillion by 2030 because it possesses non-oil resources, which are yet to be exploited by the year 2030.

World's 20 Largest Economies in 2030

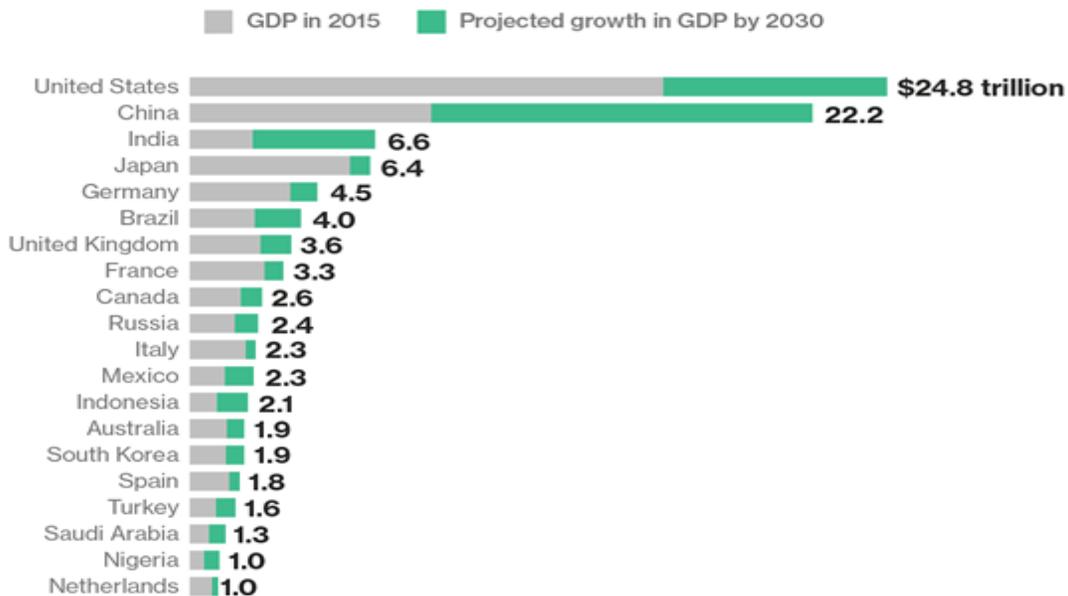


Figure 1. World's 20 Largest Economies in 2030

(Source: USA Department of Agriculture 2020)

1.1 COVID-19 Pandemic and Disruption of Industrial Activities

One of the sets of problems that manufacturers encountered in the past decades is the matter of profitability and liquidity. Previously, systematic damage in manufacturing has been threatened numerous times by large-scale disturbances, including natural disasters, trade confrontations, geopolitical uncertainties, and other infectious diseases (Okorie et al., 2020). COVID-19 makes the producers quite vulnerable to economic shocks as well (Juergensen et al., 2020). They are forced to contend with lapsed orders, plunging revenues, and collapsing equity revaluations in this turbulent environment (Handfield et al., 2020; Tian et al., 2021; Wuest et al., 2020). These instabilities and the dynamics in the business environments (Linton & Vakil, 2020) create uncertainty on an industry level, expressed in anomalies of the market and distorted supply and demand patterns (Khoo & Hock, 2020). This way, the industries exposed themselves to fluctuation in their output, jobs, and financial sustainability, hence leaving most firms strained (Linton & Vakil, 2020; Paul & Chowdhury, 2020). The latter phenomenon has been exacerbated by the pandemic that caused significant employment losses, the collapse of large enterprises, global recession, and increased morbidity (IMF, 2020). In reaction, an increased number of studies explore the factors of production interruptions and create methods of recuperation (Belhadi et al., 2021). The high proficiency of the industry in achieving macroeconomic stability means that the sector is being considered as a subject of research at the right moment and despite the disturbance (COVID-19). The role of CSR as the central concept of crisis resilience, as well as the social responsibility, has also been the matter of more scholarly interest due to the emergence of COVID-19 (Fatima & Elbanna, 2023). In such regard, companies have been assessed based on their ability to create shareholder value and contribute to sustainability (Fatima & Elbanna, 2023; Ren et al., 2023). To this extent, the study concerned herein examines MCS and CP nexus, particularly the mediating role of CSR practices in the association of MCS and CP (financial and non-financial

performance) of manufacturing entities within Nigeria.

1.2 Statement of the problems

A lot of organizations are into CSR business, and such participation in CSR activities relieves most problems in society. Moreover, the rising rate of pollution of the environment and the depletion rates of the natural resources have compelled organizations to implement radical measures to how the ecosystem (Aftab et al., 2022). The negative impacts on the production of nature can be addressed with the help of the CSR processes (Javeed and Lefen, 2019). That way, the CSR practices enable the provision of support to minimize environmental harm by helping to remove industrial waste, recycle, and reduce the cost of manufacturing (Wang, Dou & Jia, 2016). This is also based on the devastating consequences of company failure, whose massive financial implication is noted by the loss of GDP and jobs and the deterioration of the whole quality of life as far as living standards are concerned. The fact that corporate organizations fail to conduct corporate social responsibility (CSR) bears huge setbacks in situations where the community in is they operate shows stiff resistance to their activities, which leads to higher costs of operations. Such costs comprise damages of the lost output, spending in line with the repair of destroyed property, theft, breaking of work, vandalism, targeted attacks, kidnapping of individuals, taking hostage, and other extortionists (Awa et al, 2024). The industries generate various quantities of rubbish that contaminate the environment and waste more resources than was the case in the past (Shahzad et al., 2019).

2 Literature review

2.1 The Concept of Management Control Systems (MCS)

Levers of Control by Simons (1995): It is the most universally applicable framework of the studies that relate to CSR-related accounting issues. Successful control, according to Simons, is a trade-off which exploits four leverages: Beliefs Systems: Communicate core values and mission, motivating

employees to pledge their commitment to the purpose of the organization (e.g., a "sustainability vision").

Boundary Systems: Establish a legitimate realm of operation and lay down boundaries as well as define the prohibited behaviors (Ex, ethical codes of conduct, environmental compliance standards).

Diagnostic Control Systems: Measure performance variables of high importance and compare the results with pre-defined standards. They are the typical thermostat controls.

Interactive Control Systems: Facilitate the organizational learning process and guide the development of the new strategies by means of the related focus of attention on the strategies' uncertainties. As the present literature endorses, there is a rising trend of employing the control mechanism to influence the organization's customers/stakeholders with the aim of managing the information of CSR even up to day-to-day running despite the topmost level of management. In spite of such academic interest, there is not much empirical evidence regarding the prevalence or effectiveness of those control mechanisms, and thus academics and practitioners are at a loss in terms of their scope and the effectiveness of deployment (Cheffi et al., 2021).

The Basis of CSR is Beliefs and Boundary Systems. Belief systems motivate and authorize CSR efforts since they connect them with the Institute. Supplier codes of conduct or lists of prohibited chemicals are types of boundary systems trying to make unethical behaviour impossible and enforce ethical behaviour, thereby making downside risk (Mouritsen, 1994). The most important input can be identified as the diagnostic use of control and the interactive use of control. During the periods of use, certain diagnostic uses of CSR controls must be regularly checked to a certain level. This is required to bring about efficiency and accountability, though this is subject to a reactive and compliance-driven position. Interactive application of CSR controls is characterized by the use of performance information to generate a discourse and arrive at assumptions related to the social mission of the firm. The critics say there is not enough evidence of the performance effects of the management control systems employed to support the CSR programmes in the literature base (Arjaliès and Mundy, 2013; Lueg and Radlach, 2016).

2.2 Corporate Social Responsibility (CSR)

Historically interpreted using Carroll's (1991) hierarchical model of economic, legal, ethical, and philanthropic duties, the notion of corporate social responsibility (CSR) has undergone substantial refinement. This analysis frames CSR as the deployment of tangible interventions and protocols directed at environmental stewardship, employee well-being, community engagement, and related domains. Within the present sociocultural context, CSR has secured its position as a globally recognised philosophical framework that is both acknowledged and substantively enacted (Akhand et al., 2024). The principal objective is to negotiate the tension between profit maximisation and the commitment to social obligations (Akpa & Odo, 2024). Recent years have witnessed organisations elevating CSR to a strategic priority, evidencing a shift from a narrowly profit-driven model to the deliberate integration of social and ecological imperatives throughout operational activities (Li & Xu, 2024). The principal inference is that management control systems constitute an indispensable mechanism for translating abstract CSR directives into effective organisational praxis.

In the absence of supporting control systems, corporate social responsibility (CSR) commitments frequently remain "decoupled" from the quotidian operations of firms, manifesting solely in polished sustainability reports but lacking actual impact (Larrinaga-González, 2007). By contrast, the integration of CSR key performance indicators (KPIs) into formal diagnostic control systems—for instance, monitoring water consumption per unit of output or tracking employee turnover rates—renders the social and environmental performance of firms both measurable and manageable (Gond et al., 2012). This process compels managers to weigh the long-term ramifications of CSR alongside immediate financial gains, thereby embedding sustainability considerations within fundamental resource-allocation choices (Bebbington et al., 2009). The extant body of literature suggests that minimal formal regulation of corporate conduct is insufficient, and may, at times, yield counterproductive consequences. An effective CSR governance regime, therefore, must harmoniously

integrate both formal and informal control mechanisms. Formal controls supply the necessary architecture of accountability and responsibility, yet scholars widely recognize that the measurement challenge persists due to the multifaceted and intangible nature of CSR.

Many enterprises credited with driving economic and technological progress have recently faced criticism for generating social costs (Marsudi and Soetanto, 2020). Concerns have intensified regarding air and water pollution, hazardous waste, depletion of natural resources, the adequacy of occupational safety, the protection of labour rights, the concentration of corporate power, and the overall social impact of corporate scale (Gray et al., 2001). Corporate Social Responsibility can be framed as a set of voluntary corporate strategies by which organisations integrate social and environmental considerations into core operational and stakeholder-engagement practices (Commission of the European Communities, 2001). At its core, CSR embodies a corporate pledge to pursue economic vitality alongside social equity and environmental protection, achieved through continuous dialogue and partnership with employees, trade unions, families, local communities, and the broader public. The commitment aims to raise the overall quality of life while ensuring that both corporate growth and societal progress are mutually reinforced (World Business Council for Sustainable Development). Sustained engagement in CSR initiatives is expected to translate into enduring positive reputational capital among stakeholders. Thus, CSR serves as a managerial framework capable of sharpening corporate performance by fostering stakeholder trust, ensuring responsible interactions with society and the natural environment, and institutionalising ethical corporate conduct (De Roeck and Farooq, 2018). As a globally recognised ethical orientation, CSR is progressively defined and operationalised within contemporary industrial society.

The corporate aim now resides in reconciling profit maximization with a commitment to social accountability. Consequently, corporate social responsibility (CSR) has ascended to a position of organizational prominence, compelling firms to transcend a narrow profit-maximization lens and to

integrate social and ecological considerations into everyday operations. Modern corporations face mounting external demands to implement environmentally sound practices (Al Frijat et al., 2024) and to advance societal welfare in significant ways (Aguinis et al., 2024). Many adaptive organizations are aligning their strategies with the United Nations' sustainable development agenda, whose foundation lies in CSR and whose fulfilment is essential to their enduring viability. CSR itself encompasses the intertwined realms of economy, society, and environment (Abbas, 2024), thus highlighting the simultaneous pursuit of corporate prosperity and long-term sustainability (Fu et al., 2023).

2.3 Corporate performance (financial and non-financial performance)

Scholarship has long distinguished the characterization of organizational performance in terms of its objectivity or subjectivity (Bedford, 2015). In sustaining this discourse, Chenhall (2003) compiles evidence demonstrating a robust correlation between objective and subjective performance indicators, yet Venkatraman and Ramanujam (1987) contend that the methodological choice between the two yields no statistically meaningful variance in the validity or reliability of the metrics (Bedford, 2015). Franco-Santos, Lucianetti, and Bourne (2012) extend this inquiry by cataloguing the diverse operationalizations of performance employed by researchers investigating the influence of management control systems (MCS). The authors conclude that the link between MCS and reported performance remains obscured, generating a pattern of inconclusive findings. A notable segment of the quantitative literature, however, converges on the premise that MCS exerts a beneficial influence on organizational judgments of managerial, financial, and non-financial performance (Chenhall, 2005; Chenhall & Langfield-Smith, 1998; 2004; Grafton et al., 2010; Henri, 2006; Hoque, 2004; Hyvonen, 2007; Van der Stede et al., 2006; De Waal et al., 2009). Within organizational studies, both theoretical speculation and empirical inquiry are largely oriented toward performance as the key dependent variable. For a

firm to secure its ongoing viability, its revenue stream must consistently exceed its operational outlays (Fabamise, 2019).

Relying exclusively on financial metrics for assessing organizational performance carries multiple drawbacks. First, such metrics are prone to variability due to accounting conventions and may be distorted by broader industry trends, making them difficult to interpret. Second, because financial figures can be intentionally adjusted, they often fail to provide an accurate representation of organizational health. Third, financial data primarily capture prior outcomes and may mislead when extrapolated to forecast future capabilities. Fourth, financial performance indicators tend to remain static, lacking the dynamism needed to account for evolving organizational goals and the new challenges they entail. Finally, the absence of strategic context in financial reporting, coupled with a short-term orientation, frequently widens the rift between strategic formulation and operational execution. In light of these considerations, the present inquiry embraces a multidimensional approach to performance measurement that incorporates both financial indicators and non-financial performance. Accordingly, the study will draw on financial data as well as perceptual metrics to gauge organizational effectiveness.

2.4 Resource-based view

The resource-based view of the firm, whose contemporary articulation bears the hallmark of Barney (1991) after Wernerfelt's (1984) earlier formulation, posits that firm resources are unevenly distributed across firms, possess imperfect mobility, and thus generate sustained diversity over time (Barney, 1991). The literature argues that firms in possession of resources which are, simultaneously, valuable, rare, imperfectly imitable and non-substitutable (VRIN) are enabled to secure a durable competitive advantage by orchestrating distinctive, value-creating processes that competitors find difficult to replicate (Baia et al., 2020; Barney, 1991; Fakhreddin & Foroudi, 2022; Lin & Wu, 2014; Nani & Safitri, 2021; Wernerfelt, 1984). Hence, the accumulation and refinement of such singular resources has become a pivotal concern of both

empirical researchers and practitioners concerned with long-term strategic advantage (Wu, 2010). Arend and Lévesque (2010) further clarify that RBV emphasises the contingent combination of tangible and intangible attributes that firms must cultivate within a competitive environment in order to translate capacity into performance outcomes that exceed industry norms. The RBV thus encourages executives to shift analytical focus toward internally configured assets as the wellspring from which proactive organisational transformation, rather than purely reactive adaptation, can spring. Developing proprietary resources enables a firm to maintain competitive excellence over the long term. Consequently, the theory clarifies when resource-specific capabilities convert into sustained advantage and performance enhancement. Different categories of resources and activities confer different types of competitive edge, with the resource-based view (RBV) remaining the prevailing explanatory framework for managerial choices and organizational results (Barney et al., 2011; Henri, 2006). A resource is deemed valuable if it either raises customers' willingness to pay or reduces the cost of obtaining it. Rareness or uniqueness is essential for a resource to confer enduring advantage. The RBV thus asserts that an organization must identify, protect, and deploy its resources—whether tangible or intangible—so as to fulfil its objectives, thereby increasing enterprise value; in this process the objectives of top decision-makers become congruent with the organization's goal hierarchy.

2.5 Stakeholder theory

Freeman (1984) articulated stakeholder theory, asserting that an organization's paramount objective is catering for those parties that have stake on the business) stakeholders) people whose well-being is influenced by the enterprise's decisions. Gray et al. (1995) expanded this perspective, arguing that an enterprise's enduring viability is contingent upon the maintenance of stakeholder allegiance, which must be actively cultivated. Thus, any investigation seeking to correlate corporate social responsibility (CSR) initiatives with organizational performance must begin with an appreciation of stakeholder theory (Perrini et al. 2011). Stakeholder theory (ST)

recommends tactics for managing the diverse constituencies of an organization, thereby forecasting whether it will prosper (Martinez-Conesa, Soto-Acosta & Palacios-Manzano, 2017). The theory asserts that stakeholders increasingly demand that firms operate sustainably, with the board of directors positioned as a pivotal stakeholder whose role is to align the expectations of various constituencies with the strategic aims of management (Ali et al., 2022). Mu et al. (2024) maintain that stakeholder theory provides corporations with an innovative lens through which to evaluate their societal commitments.

Recent scholarly inquiry has increasingly foregrounded stakeholder theory within studies of corporate social responsibility (CSR), yielding a nuanced typology of stakeholder groups (Mu et al., 2024). In this formulation, firms are seen as capable of securing both financial returns and reputational benefits by discharging economic, social, legal, and environmental duties that resonate with stakeholder expectations (Farooq et al., 2017). Hence, a precise mapping of stakeholders, coupled with a granular assessment of their discrete expectations, becomes imperative to ensure that corporate strategies are both inclusive and effective. In this vein, Freeman et al. (2020) argue that stakeholder theory posits a reciprocal relationship: corporate outcomes affect stakeholder well-being, while the evolving interests of these groups, in turn, recalibrate the contours of CSR engagement. Freeman (2001) elaborates that CSR thereby transforms into a generative process through which firms can deliver value simultaneously to customers, employees, investors, suppliers, and the broader community, in addition to shareholders. Empirical support for this linkage is found in Zhu et al. (2016), who demonstrate that thoughtfully calibrated CSR initiatives can enhance organizational performance, manifesting in both growth and profitability. Freeman et al. (2020) strengthen this argument by underscoring the feedback loop: corporate actions that positively alter stakeholder welfare tend to forge more rigorous and adaptive CSR policies, illustrating the dynamic interplay at the heart of stakeholder theory.

2.6 Management control systems link with corporate performance

Management control systems (MCS) can be referred to as a coherent collection of the instruments that are being implemented by organisational leaders to manage how the staff acts in a way that leads to rationalisation of all decisions, and subsequent actions taken in the direction of shared increase of the stakes of the firm. According to the canonical framework of MCS (Simons 1995), it has four interlocked dimensions: a system of belief, a boundary system, a diagnostic control system, and an interactive control system usually known as a lever of control (LOC). This structure is a synopsis of positive controls that are belief system and interactive control system and negative controls that are, boundary system and diagnostic control system (Adi & Sukmawati, 2020). The case in Nigeria is appealing to the context of the study setting due to the reason that it may be utilized in the analysis of MCS that may be better supported by the LOC framework. As per the cultural orientation of the country, which has been focusing on the realization of the balance of two complementary yet opposite forces. To define the various roles that are epitomized in MCS, Simons (1995) presented the LOC classification. Belief system is a control system that it uses in order to defend the fundamental values of the firm in order to have a situation whereby the managers are in a position to evaluate skills and create performance. Boundary systems are effective in that boundaries are given, which encircle the activities that are prone to errors, in order to minimize their impact on the results produced by the company. Diagnostic control systems assist managers in analyzing influences that determine performance with the objective of recognizing contributors to optimal performance. Lastly, interactive control mechanisms would also enable the managers to interrogate the opportunities and problems in order to develop new ideas and creativity. Any firm is only effective when all these four dimensions of LOC are in harmony with each other (Ferreira & Otley, 2009). Studies in relation to the pursuit of a sufficient setup of MCS have been an intellectual point of discussion, but it has been

established that it has a connection with it. As a way of maintaining competitive plausibility, the firms need to always keep track of both the internal and external contingencies to identify any opportunities and threats (Henri, 2006). In this respect, MCS is expected to improve performance in developing a shared sense of commitment and coordinated action (Adler & Chen, 2011), which will lead to increased efficiency in problem-solving in the areas connected to performance and evaluation (Dur, nd; Erez et al., 2016; McGrath, 2001).

Simons (1995) contended in mentioning that the corporate control should be organized through the amalgamation of the levers of control (beliefs, boundaries, interactive and diagnostic control systems), filling in the regard that the two pairs are not unfit (p.153). The simultaneous use of such levers in the context of the resource-based view of the firm leads to the production of the organizational environment in which exploitation and monitoring of capabilities are possible, and as a result, this leads to performance. Most precedent surveys support the opinion that management control system (MCS) practices relate to the performance of firms. According to Cosenz and Noto (2015), MCS enhance planning, budgeting, analysis, measurement, and review, all of which are supportive of sound managerial decision-making. MCS specifically aims the organizational activity based on the targeted outcomes through the coordination of the activities and enhanced common commitment. Empirically, one has concentrated on the correlation between the MCS and the business performance. According to such research results as Lee and Yang (2011) and Su, Baird, and Schoch (2015), strong correlations are proven to emerge between MCS and firm results. Modern control systems facilitate organizational performance better than those that were usually adopted in the past (Akankunda et al., 2023). In addition, they can collect both non-financial and financial data on MCS, which enables manufacturers to fulfill the requests of the stakeholders and leave a good socio-environmental footprint (Adib et al., 2021; Anzilago et al., 2022). The qualitative form of recording such connections has been represented to a great extent in the literature that exists today. Simons and Davila

(2021) and Baird et al. (2019) point out considerable relationships between MCS and the performance of firms. This means that specialized and unique MCS can satisfy non-financial and fiscal objectives and aspire to the sustainability of the environment and the social flourishing of the business. Lodhia et al. (2021) review highlights the need for MCS as a post-pandemic source of non-financial benefits. Lastly, MCS, according to Adler and Chen (2011), organizes group effort and action in the direction of wanted outcomes, once the objectives and progress in an organization are made visible. All these bits of evidence, when combined give backing when the statement is made: that the existence of a positive relationship between management control systems and performance of an organization.

Management control systems (MCS) constitute an integrated ensemble of instruments deployed by executives to govern employee behaviour, thereby ensuring that every decision and subsequent action converges upon the jointly advantageous growth of the firm's value. Rooted in the seminal formulation of MCS by Simons (1995), the framework identifies four interdependent dimensions: the belief system, the boundary system, the diagnostic control system, and the interactive control system, collectively termed the levers of control (LOC). The architecture delineates positive controls—namely the belief and interactive systems—alongside negative controls represented by the boundary and diagnostic systems (Adi & Sukmawati, 2020). The Nigerian context commands attention in the present inquiry, as it facilitates the exploration of MCS potentially illuminated by the LOC architecture, particularly within a cultural milieu that aspires to harmonise ostensibly antithetical yet complementary forces. In order to elucidate the multiplicity of roles embodied within MCS, Simons (1995) advanced the LOC taxonomy as a guiding heuristic.

A belief system can be understood as a governance mechanism that safeguards a corporation's core values, thereby empowering managers to assess competencies and foster high performance. Boundary systems serve a complementary function by establishing explicit limits that constrain high-risk activities, thereby reducing the likelihood that such activities will unduly compromise the firm's

outcomes. Diagnostic control systems further assist managers by systematically isolating the driving factors of performance, with the aim of pinpointing those elements that contribute to the attainment of superior results. Finally, interactive control mechanisms allow managers to systematically probe emerging opportunities and emerging challenges, thereby nurturing innovation and creative problem-solving. The effectiveness of any organization hinges on the coherent alignment of these four dimensions of the Levers of Control framework (Ferreira & Otley, 2009). Debate over the optimal design of management control systems (MCS) remains a vibrant area of scholarly inquiry, yet a consensus has emerged that the interplay of these control dimensions is pivotal to organizational success.

To preserve competitive plausibility, organizations must continuously monitor both internal and external contingencies in order to discern opportunities and threats (Henri, 2006). Within this framework, management control systems (MCS) are posited to enhance performance by fostering a collective commitment and coordinated action (Adler & Chen, 2011), thereby improving the efficiency of problem-solving in performance-related and evaluative domains (Dur, nd; Erez et al., 2016; McGrath, 2001). Research on MCS implementation has produced complex results, yielding the tentative proposition that:

This proposition accords with Simon's (1995) assertion that corporate control should be engineered through the synthesis of beliefs control and boundaries control, together with diagnostic control and interactive control, with the understanding that the respective pairs are not mutually exclusive (p. 153). When employed concurrently and examined from a resource-based perspective, these levers cultivate an organizational context conducive to both the exploitation and monitoring of capabilities, which in turn facilitates performance. A substantial body of prior empirical studies lends credence to the contention that MCS practices are positively correlated with organizational performance.

Cosenz and Noto (2015) posit that management control systems (MCS) strengthen those dimensions of planning, budgeting, analysis, measurement, and performance review that undergird robust

managerial choice. Conceived to realign organizational effort toward specified objectives, MCS do so by harmonizing tasks and fostering shared organizational commitment. Empirical inquiry has, preponderantly, charted the relation of MCS to corporate performance. Lee and Yang (2011) and Su, Baird, and Schoch (2015) document significant, positive associations between the design and deployment of MCS and tangible corporate outcomes. Contemporary control systems demonstrably outperform their historical counterparts in enhancing organizational results (Akankunda et al., 2023). They are also capable of measuring, accumulating, and integrating both financial and non-financial indicators, thereby enabling manufacturing firms to satisfy stakeholder exigencies while also cultivating a responsible socio-environmental legacy (Adib et al., 2021; Anzilago et al., 2022). Predominantly, the literature has articulated these linkages in a qualitative register. Nevertheless, Simons and Davila (2021) together with Baird et al. (2019) document robust, quantitative associations that reiterate the contribution of MCS to corporate performance.

A tailored and distinctive management control system can thus fulfill non-financial requirements and regulatory aims while also fostering environmental viability and the social flourishing of the firm. Lodhia et al. (2021) document the enhanced role of management control systems as essential post-pandemic instruments for generating non-financial payoffs. Adler and Chen (2011) further argue that such systems render both organisational aims and performance trajectories transparent, enabling coordinated collective effort toward desired results. Collectively, these strands of evidence substantiate the assertion that, in general, management control systems and organisational performance are positively correlated.

Management control systems (MCS) consist of a coordinated array of mechanisms through which executives guide individual behaviour so that collectively their decisions and actions enhance the organisation's objectives. The seminal structure articulated by Simons (1995) differentiates four interrelated dimensions: a belief system, a boundary system, a diagnostic control system, and an

interactive control system—designated together as Levers of Control. This arrangement distinguishes between positive controls—the belief and interactive systems—aimed at fostering growth and innovation, and negative controls—the boundary and diagnostic systems—intended to mitigate risk and ensure compliance (Adi & Sukmawati, 2020). The present investigation adopts Nigeria as the empirical context to explore the LOC framework, premised on the nation’s prevailing cultural logic of settling complementary yet antithetical forces in a hybrid equilibrium. Within that cultural matrix, Simons’s (1995) taxonomy foregrounds the variety of functions that MCS must fulfil. The belief system safeguards the organisation’s guiding principles, enabling executives to assess competencies and to formulate performance objectives. The boundary system, conversely, delineates limits around error-prone domains, thereby containing potential deviations that might compromise organisational results.

Diagnostic control systems assist managers in assessing performance variables to pinpoint factors that drive superior results. Concurrently, interactive control systems empower managers to probe problems and opportunities, energizing innovation and creative thinking. The effectiveness of any company hinges on the simultaneous alignment of all four levers of control (LOC) dimensions (Ferreira & Otley, 2009).

To retain competitive sustainability, organizations must perpetually scan both internal processes and external shifts in order to differentiate between emerging opportunities and potential threats (Henri, 2006). MCS, in this framework, are theorized to elevate performance by cultivating shared commitment and orchestrated activity (Adler & Chen, 2011), which in turn enhances problem-solving proficiency across performance evaluation and assessment processes (Duréndez et al., 2016; McGrath, 2001). Such reasoning coincides with Simons’ (1995) argument that corporate strategy is enacted via the synergistic use of beliefs, boundary, diagnostic, and interactive controls, with the critical observation that these levers must function as an interdependent ensemble (p. 153). Viewed through the lens of the resource-based theory, the concurrent

activation of these controls engenders the organizational context in which both the cultivation and surveillance of dynamic capabilities can occur, culminating in enhanced performance.

Available evidence directs attention towards the central role of MCS in not merely supporting economic viability but in propelling the broader societal mission of the firm. Thus, while the statistical link between MCS implementation and superior performance is well-established, the specificity of these mechanisms and the mediating and moderating contexts remain comparatively under-explored. Quantitative analyses have illuminated the strength of the association, yet mechanisms by which MCS creates value—through behavioural alignment, resource allocation, or feedback loops—warrant deeper qualitative inspection. Such scholarly trajectories not only deepen theory but also assist practitioners in designing MCS that are responsive to a constellation of performance dimensions central to the contemporary entities. The arguments presented by Ferreira and Otley (2009) illuminate how contemporary management control systems (MCS) have shifted towards creating significant non-financial outcomes alongside traditional measures. This view is further reinforced by the findings of Adi and Chen (2011) that transparency regarding organizational ends and the means to achieve them allows MCS to synchronize individual and group actions toward shared goals. Collectively, these contributions lead to a unified inference regarding the constructive link stemming from MCS to overall corporate performance. Accordingly, this paper formulates the following propositions:

Hypothesis 1a: MCS that integrates belief, boundary, interactive and diagnostic control systems will positively affect financial performance of manufacturing companies in Nigeria.

Hypothesis 1b: MCS that integrates belief, boundary, interactive and diagnostic control systems will positively affect non-financial performance of manufacturing companies in Nigeria

2.7 Management control systems and CSR practices

The resource-based view (RBV) posits that an organization must continually adapt its internal structure to shifting circumstances in order to pursue its objectives. The intentional construction of a distinctive strategy generates internal resources that align with the market environment. RBV elucidates which organisational levers should be employed for the identification, nurturing, and monitoring of capabilities that subsequently enhance performance. The dominant literature on management control systems (MCSs) is still notably qualitative and case-study-driven, emphasizing the capacity of these systems to delineate and safeguard the boundaries of corporate social responsibility (CSR). However, there remains an empirical gap concerning the direct relationship between formal control mechanisms and the delineation of CSR practices. Several studies have employed the levers of control (LOC) framework articulated by Simons to bridge this gap. For example, Durden (2008) forwards a RBV argument that reaffirms management's pivotal role, contending that any MCS should be congruent with the espoused principles and objectives of stakeholder groups. Arjaliès and Mundy (2013) unravel the functioning of the four levers in the orchestration of CSR strategy, while Laguir et al. (2019) extend the inquiry by analysing the same levers in the actualisation of CSR practices. Given the interrelated nature of the four levers of control, managers may deploy all simultaneously to attain diverse objectives (Simons, 1995b). The concurrent employment of the levers produces a common variance across each dimension, a phenomenon encapsulated by the LOCom combined application (Bellora-Bienengraber et al., 2022). Consistent with this observation, Bellora-Bienengraber et al. (2022, p. 7) assert: that the combined use of the beliefs, boundary, interactive and diagnostic control systems produce beneficial outcome to the entities.

Although Simons (1995) explicitly advocates for the synchronous use of the four levers, empirical inquiry into their aggregate impact remains scant, with even fewer investigations quantifying the organizational ramifications of LOC as a cohesive framework (Martyn, Sweeney, and Curtis, 2016). Emerging

evidence suggests that organizational learning and the development of novel capabilities emerge most robustly when the levers are operating in concert (Bellora-Bienengraber et al., 2022; Kruis et al., 2016; Mundy, 2010; Widener, 2007). Specifically, Bellora-Bienengraber et al. (2022) demonstrate that LOC functioning in conjunction with the formulation of new organizational competencies yields enhancements in corporate performance. Scholars advocate for an integrated perspective on levers of control (LOC) that situates their combined employment within a second-order construct, thereby probing how LOC interrelates with a spectrum of organisational determinants. Evidence converges on the proposition that concurrent deployment of control levers correlates with salutary organisational results, nurturing not only creativity (Spekle' et al., 2017) but also organisational competence (Mundy, 2010) and a culture of learning (Widener, 2007). Gond, Grubnic, Hering and Moon (2012) examined the role of MCS in orienting organisational plan toward the integration of corporate social responsibility (CSR) practices divisible for sustainability. Their analysis underlines a widely accepted postulate that MCS provide the scaffolding for embedding CSR within corporate routines, permitting the rigorous appraisal and oversight of CSR initiatives. Hosoda (2018) substantiated the instrumental value of interactivity in formal controls, evidencing their efficacy in transmuting stakeholder expectations into concrete CSR interventions. Consistent with these insights, Laguir et al. (2019) report that MCS furnish the dual function of propagating CSR principles across corporate strata and of auditing the adherence to CSR protocols. The design and evaluation of corporate social responsibility initiatives ought to involve management control systems as mechanisms for steering the CSR agenda, enabling firms to attain differentiated CSR outcomes. Prior research suggests that the breadth of CSR engagement will be enhanced by each of the four loci of control (Laguir et al., 2019). Accordingly, we posit the following:

H2: The combined application of management control systems—integrating belief systems, boundary systems, diagnostic control systems, and interactive control systems—will influence a

positive relation to the range of CSR practices across environmental, employee, consumer, and community dimensions.

2.8 Relationship between Corporate social responsibility practices and corporate performance

Within Corporate Social Responsibility scholarship, stakeholder theory identifies particular groups as predominant agents whose expectations critically steer corporate strategy (Freeman 1984; Crane & Glozer 2016). The theory argues that firms can generate and preserve wealth only by acknowledging and redressing the rights, interests, and needs of these actors. Asiaei et al. (2021) further assert that productive dialogue between management and a diverse stakeholder constituency is a prerequisite for corporate prosperity and the generation of stakeholder value. A substantial body of literature affirms a positive correlation between CSR initiatives and performance across both financial and non-financial metrics. Increasingly, empirical investigations suggest that a corporation's value can be sustained only through an explicit, integrative approach that encompasses economic, social, and environmental dimensions (Purbawangsa et al. 2019). Notwithstanding this convergent evidence, diverse evidence in the CSR practices and corporate performance continues to generate scholarly debate. The academic discourse surrounding the financial implications of corporate social responsibility (CSR) remains fragmented, with certain investigations indicating that CSR bolsters economic performance, while others document either negligible or adverse outcomes (Cochran & Wood, 1984; Griffin & Mahon, 1997; Harrison & Freeman, 1999; McWilliams & Siegel, 2000; Reverte et al., 2016). Recent analyses that correlate CSR initiatives with performance outcomes—spanning financial measures, sales growth, productivity, customer satisfaction, and employee engagement—have, moreover, produced mixed and often contradictory evidence (Lu et al., 2020). Since variations in methodology are likely contributors to these divergent conclusions, further inquiry that integrates plural research designs is warranted (Le, 2022). Existing studies exhibit a pronounced preference for

net profit margin as the principal indicator of corporate profitability, interpreting the metric as the proportion of net income to total sales. This emphasis on margin suggests that the fundamental objective of CSR interventions is the rationalization of operational processes that in turn elevate the definitive financial metric of the firm. Contrary to the uneven results that characterize the broader CSR-performance literature, a subset of more recent investigations consistently reports that initiatives aimed at integrating social responsibility into corporate governance are positively associated with improved financial results and profitability (Marietza et al. 2021; Barbosa et al. 2021; Metzker et al. 2021; Wang et al. 2021).

CSR initiatives predominantly expand in scale as enterprises respond to tightening environmental regulations (Bryman & Bell, 2011; Orji et al., 2021). Quantitative surveys confirm that firms are increasingly mobilizing resources to promote biodiversity, reduce carbon footprints, and limit the overall ecological impact of production processes (Cancino et al. 2018; Latif et al. 2022; Metzker et al. 2021). Environmental issues stand out as a central concern for stakeholders interested in CSR. Several studies show evidence that rigorous environmental CSR not only fosters corporate competitiveness but also aids conservation efforts. In developing countries, environmental CSR initiatives yield positive returns in both financial and ecological performance. Earlier research has tended to emphasize CSR's economic ramifications over its environmental dimensions, a trend evidenced in studies such as Adams et al. (2022), Cheng et al. (2021), and Siregar et al. (2021). Employees, as key internal stakeholders, critically influence the enduring viability of organizations. A moderated literature review indicates a statistically negative association between the prevalence of market-driven rhetoric and the active engagement of the workforce. Conversely, when employees are systematically consulted in the genesis of CSR programmes, both productivity and competitive advantage experience marked improvement (Okafor et al. 2021; Bruna et al. 2022; Chien et al. 2021). Additional studies contend that institutional codes of conduct and structured training sessions nurture environmentally

responsible conduct in the workplace. Concurrently, initiatives directly targeting employees are shown to enhance performance metrics, aspirational goals, outlook, and ecological stewardship (Zhao et al. 2022; Bolourian et al. 2021; Cohen 1988; Nguyen et al. 2022; Mtapuri et al. 2022). Support for surrounding communities remains indispensable to corporate prosperity (Effrosynidis et al. 2022; Boiral et al. 2019; Orji et al. 2021). Through CSR, firms can reflect upon their social footprint while purposefully contributing to societal well-being (Ma et al. 2023). Contingent upon local needs, CSR manifestations such as education, healthcare, clean-water, and clean-air initiatives have frequently been championed by charities originating in the Global South (Peng et al. 2022; Bian et al. 2021; Schiessl et al. 2022; Fallah et al. 2022). Such endeavours consolidate social bonds and bolster the resilience of communities. Recent scholarship further links community-oriented CSR to dual gains in social and environmental performance (Beyeler and Salas 2022; Eng et al. 2022). Charitable donations and philanthropic initiatives, in turn, bolster the firm's reputation, align corporate and societal goals, and thus yield enduring competitive advantages (Ma et al. 2023).

CSR, Consumer Engagement and Financial Results: Organizational effectiveness rests increasingly on customer satisfaction, prompting firms to nurture relationships that endure and resonate (Hongxin et al. 2022). Through transparent CSR initiatives, companies seek to strengthen emotional and rational ties with consumers, positioning themselves as socially responsible actors within the marketplace. Enhanced customer identification with corporate values has shown to translate into loyalty, repeated purchase behaviour, and ultimately, superior revenue outcomes. Simultaneously, socially responsible branding lowers customer price sensitivity, expands market share, and improves overall financial performance, thereby reinforcing the virtuous cycle between corporate social engagement and economic prosperity.

Existing research illustrates two converging points regarding consumer-centric corporate social responsibility (CSR). First, carefully tested evidence shows that CSR, when framed as a consumer benefit,

strengthens purchase intent, while negative consumer evaluations swiftly erode that same intent (Feder & Weißenberger, 2021; Rasyid & Nasution, 2021; Reiss, 2021). A representative U.S. poll corroborates this effect, reporting that eighty percent of respondents believe they ought to allocate financial resources to sustain CSR initiatives (Ahmad et al., 2021; Fornell & Larcker, 1981). Concurrently, as ecological priorities gain urgency, socially responsible firms are reorienting production to satisfy consumer demand without harming environmental integrity (Rehman et al., 2021; Marteb-Landroguez et al., 2018). From this vantage, consumer-driven CSR is positioned as a vital instrument for ecological stewardship (Raszkowski & Bartniczak, 2019; Ross et al., 2021).

Turning to corporate outcomes, the principal analytical question is the extent to which CSR influences both financial and non-financial performance. A sizeable and growing body of scholarship has documented negative or neutral correlations between CSR and corporate performance (Li et al., 2023; Adamkaite et al., 2023; AlAjmi et al., 2023; Al-Sfan, 2023; Madugba & Okafor, 2016; Sameer, 2021). Nonetheless, the prevailing interpretive frame insists that CSR exerts a net positive influence on corporate performance, moderating the impression that the empirical signal is unequivocal. The body of literature supports the assertion that robust corporate social responsibility (CSR) initiatives correlate positively with the enhancement of various financial performance indicators (Barauskaite & Streimikiene, 2021; Reisinger, 2023; Chen, 2023; Chen et al., 2023; Franco et al., 2020; Huang et al., 2020; Saeidi et al., 2015; Tien et al., 2020; Arian et al., 2023; Lin, 2024; Li & Xu, 2024). Consequent upon this accumulated evidence, we hypothesised thus:

H3a: The implementation of CSR practices—incorporating environmental, employee, consumer, and community dimensions will positively affect the financial performance of manufacturing enterprises operating within Nigeria.

H3b: The implementation of CSR practices—incorporating environmental, employee, consumer, and community dimensions will positively affect the

non-financial performance of manufacturing enterprises operating within Nigeria.

Figure 1 depicts the relationship between the research variables- MCS, CSR, and CP.

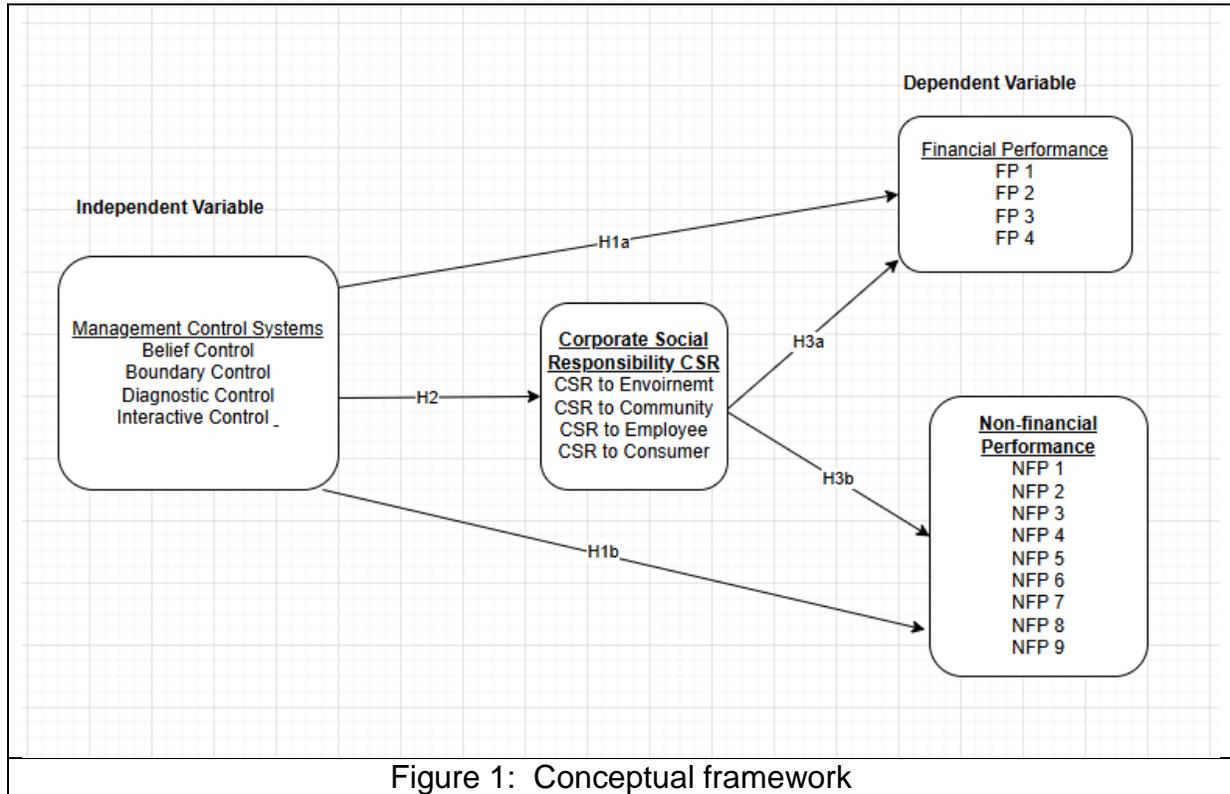


Figure 1: Conceptual framework

3.0 Methodology

This study seeks to elucidate the mediating influence that the practice of corporate social responsibility (CSR) exercises within the causal chain linking management control systems (MCS) to corporate performance. We gathered data via structured survey instrument distributed among manufacturing companies operating in Nigeria. The MCS instrument comprised eighteen distinctive items; of these, four were dedicated to belief control systems, four to boundary control systems, four to diagnostic control systems, and six to interactive control systems. The scales were drawn from the foundational works of Simon (1995), Widener (2007), and Baird et al. (2005). The CSR construct

was operationalized through sixteen items, partitioned into four relating to the firm’s environmental stewardship, six concerning the treatment of employees, three addressing community contributions, and three focusing on consumer relations; the items were adapted from the scales of Farooq, Farooq, and Jasimuddin (2014) and Turker (2009). Corporate performance was analysed through a dual lens, with four items representing financial performance and nine representing non-financial performance, according to the scales formulated by Henri (2006), Asiaei and Jusoh (2017), Mia and Clarke (1999), and Kallunki et al. (2011). The analytical framework positioned MCS as an independent variable, CSR practices as a

mediating variable, and corporate performance as the dependent variable.

Measurement of constructs/

Variables	Description	Previous studies
Management control systems	Belief control Boundary control Interactive control Diagnostic control	Simon (1995), Widener (2007), and Baird et al. (2005).
CSR practices	CSR to environment CSR to employee CSR to community CSR to consumer	Farooq, Farooq, and Jasimuddin (2014) and Turker (2009)
Corporate Performance	Financial performance Non-financial performance	Henri (2006), Asiaei and Jusoh (2017), Mia and Clarke (1999), and Kallunki et al. (2011).

This research utilizes a random sampling method, deploying a self-administered questionnaire facilitated by an email survey protocol. The sampling frame was drawn from the Manufacturers Association of Nigeria Directory, 2020. The directory listed a total of 3,000 enterprises categorized as the largest in the country based on employee headcount, and these firms were subsequently incorporated into the study. The study issued 1,000 questionnaires, a figure that exceeds the minimum sample size of 350 derived from the Krejcie and Morgan (1970) table for a population of 3,000. To enhance the sample, the researcher increased the original figure by 30 per cent, yielding 1,050 instruments for distribution. This adjusted total aligns with Nulty’s (2008) guideline for surveys targeting readily accessible populations. Ultimately, of the 1,000 questionnaires sent, 311 were returned, which translates into 280 usable responses. The intended population consists of manufacturing companies. The instrument contained four principal sections: Part A gathered demographic data; Part B assessed respondents’ evaluations of the companies’ management control systems; Part C examined corporate social responsibility initiatives; and Part D collected data on perceived corporate performance.

Out of this 311 filled in questionnaires were received but 31 were recorded to be invalid inappropriate because of lack of responses. This resulted into a sample of 280 that was finally analysed with a response rate of 26%. Response rates in the management accounting and control literature vary between 10% Pondeville et al., (2013) and 30% (Lisi, 2015).

The survey instrument for this study captured a five-point Likert scale ranging from “strongly agree to strongly disagree”. The empirical data were analysed using structural equation modelling (SEM) based on partial least squares (PLS) estimation. The hypothesised structural relationships were evaluated through structural equation modelling operationalised within SMART-PLS.

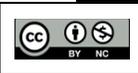
Demographic characteristics of the respondent sample are summarised in Table 1. The survey targeted the management tier, with recorded job titles distributed as follows: Chief Executive Officer or General Manager (CEO/GM) 1.79%, Chief Financial Officer (CFO) 10.36%, Internal Auditor or Finance Manager (IA/FM) 48.21%, and Controller or Operation Manager (CM/OM) 39.64%. Regarding ownership, the sample comprised local firms

69.28%, foreign-owned 11.43%, foreign-local 15.00%, and companies listed on the Nigerian Stock Exchange 4.29%. Data were obtained from the ten key industrial sectors of the country identified as predominant contributors to environmental impact.

Educational attainment reveals that 1.79% of respondents hold a PhD, 10.36% a Master’s degree, 60.35% a university degree, 33.93% professional certification, and 3.93% another level of education.

Table 1: Data from demographic survey responses.

Demographic Profile	Particulars	Frequency	Percent
Type of Industry	Food, beverages, and tobacco	51	18.21
	Chemicals and pharmaceutical products	64	22.86
	Domestic and industrial plastic, rubber and foam	37	13.21
	Basic metal, iron and steel and fabricated products	30	10.71
	Pulp, paper and paper products, printing and publishing	33	11.79
	Electrical and Electronics	16	5.71
	Textile, wearing apparel, carpet, leather/footwear	18	6.43
	Wood and wood products including furniture	8	2.86
	Non-metallic mineral products	14	5.00
	Motor vehicle and miscellaneous assembly	9	3.21
Job Title	CEO/GM and above	5	1.79
	Chief Financial Officer	29	10.36
	Internal Auditor/Finance Manager	135	48.21
	Controller /Operation Manger	111	39.64
Educational Qualification	PhD	5	1.79
	MBA/MSC/MA	169	60.35
	BSC/HND/BA	95	33.93
	Professional	11	3.93
Ownership Structure	Local firm	194	69.29
	Foreign-owned	32	11.43
	Foreign-local firm	42	15.00
	Listed in the Nigerian Stock Exchange	12	4.29
Number of employee	201-300	21	7.50
	301-400	52	18.57
	401-500	66	23.57
	501 - 1000	73	26.07
	1001 and above	68	24.29
Firm age	1-5 years	36	12.86



	6-10 years	31	11.07
	11-20 years	71	25.36
	21-30 years	68	24.29
	31 or more	74	26.43
Annual Revenue	11-100 million	158	56.43
	101- 999 million	89	31.79
	1-30 billion	33	11.79
Annual Cost	11-100 million	226	80.71
	101-999 million	54	19.29

3.1 Analysis and Findings

Our analysis procedures utilised Smart-PLS 3.2.9 and SPSS 23 (Ringle, Wende & Becker, 2015). It is revealed that the demographic variables were analysed using descriptive studies of SPSS. This followed the two-step approach adopted for assessment of proposed relations; in the first step the measurement model was construct validity, reliability, and convergent validity check and in the second step the hypothesis was tested using a structural model (Anderson & Gerbing, 1988; Hair, Hult, Ringle, & Sarstedt, 2017).

3.2 Common Method Bias

This research applied Harman's One-Factor Test to identify common method bias (Podsakoff et al., 2003). However, the analysis suggested no severe common method variance issues for this research. Where the variance attributed to a single factor is less than 50%, it indicates that CMV does not influence the data. For this research, the total variance was 21.752%, which is less than 50%, confirming that no CMV exists in the study data (Podsakoff et al., 2003).

3.3 Results and analysis of data

For the purposes of this analysis, the software SPSS version 23 and Smart-PLS 3.2.9 were utilized. Data analysis was divided into two phases, with the first consisting of a measurement model assessing construct validity, reliability, convergent validity, and discriminant validity, and the second involving hypothesized structural model testing. (Hair, Hult, Ringle, & Sarstedt, 2017).

3.4 Measurement model assessment

In this study, internal consistency is assessed by composite reliability (CR) and Cronbach's Alpha (CA) which ranged from (0.703 to 0.960) and (0.818 to 0.968) respectively, exceeding the threshold in all cases (Hair et al., 2017). The assessment of convergent validity, average variance extracted (AVE) and factor loadings (FL) were computed from the data. Convergent validity was confirmed as all items had loadings exceeding the 0.6 mark (Hulland, 1996) and the AVE for all the constructs were over the 0.5 mark (Hair et al., 2017). All of these results are consolidated in Table 2 and illustrated in Figure 2.

Table 2: Constructs validity and reliability

Constructs	Items	F.L.	CA	CR	AVE
Belief_C	BELF1	0.794	0.841	0.893	0.677
	BELF2	0.825			

	BELF3	0.847			
	BELF4	0.824			
Boundary_C	BOUDC1	0.833			
	BOUDC2	0.829	0.855	0.902	0.696
	BOUDC3	0.837			
	BOUDC4	0.839			
CSR_Com	CSRCm1	0.894			
	CSRCm2	0.896	0.875	0.923	0.799
	CSRCm3	0.893			
CSR_Con	CSRCs1	0.792			
	CSRCs2	0.881	0.814	0.890	0.731
	CSRCs3	0.888			
CSR_Emp	CSREm1	0.694			
	CSREm2	0.781			
	CSREm3	0.884	0.858	0.895	0.591
	CSREm4	0.856			
	CSREm5	0.695			
	CSREm6	0.675			
CSR_En	CSREn1	0.735			
	CSREn2	0.849	0.753	0.843	0.575
	CSREn3	0.777			
	CSREn4	0.661			
Diagnostic_C	DGSTC1	0.685			
	DGSTC2	0.750	0.703	0.818	0.530
	DGSTC3	0.802			
	DGSTC4	0.667			
Financial_P	FINP1	0.911			
	FINP2	0.914	0.913	0.939	0.795
	FINP3	0.909			
	FINP4	0.830			
Interactive_C	INTERC1	0.921			
	INTERC2	0.931			
	INTERC3	0.933	0.960	0.968	0.834
	INTERC4	0.935			
	INTERC5	0.905			
	INTERC6	0.853			
Non-Finan_P	NFP1	0.643			
	NFP2	0.635			
	NFP3	0.767			
	NFP4	0.786	0.877	0.902	0.507
	NFP5	0.805			
	NFP6	0.747			
	NFP7	0.713			

NFP8 0.728
 NFP9 0.548

Notes: CR: Composite Reliability; AVE: Average Variance Extracted; CA: Cronbach's Alpha

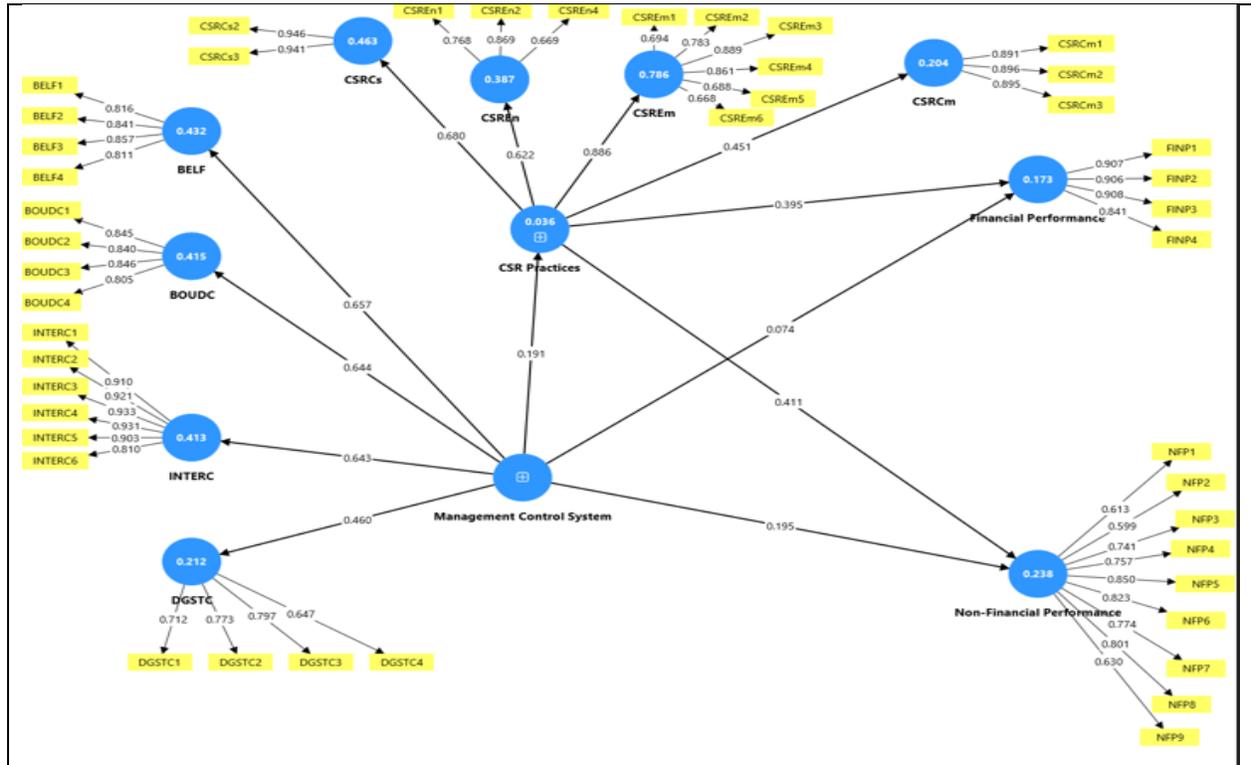


Figure 2: Measurement model with outer loadings and AVE values from PLS-Algorithm

The Heterotrait-Monotrait Ratio (HTMT) is used to assess discriminant validity. Henseler et al. (2015) proposed the HTMT method which confirms discriminant validity between two variables if their

correlational values fall below 0.90. As shown in table 3 below, the HTMT values remain below the 0.90 threshold.

Table 3: Discriminant validity- HTMT

Constructs	Belief_C	Boun._C	CSR_Com	CSR_Con	CSR_Emp	CSR_En	Diag._C	Fin._P	Inter._C	N-Fin_P
Belief_C										
Boundary_C	0.236									
CSR_Com	0.154	0.062								

CSR_Con	0.052	0.094	0.097							
CSR_Emp	0.071	0.086	0.198	0.789						
CSR_En	0.100	0.190	0.617	0.246	0.357					
Diagnostic_C	0.149	0.209	0.063	0.142	0.186	0.126				
Financial_P	0.250	0.103	0.589	0.106	0.285	0.515	0.075			
Inter_C	0.097	0.090	0.038	0.219	0.248	0.074	0.098	0.144		
Non-Finan_P	0.145	0.154	0.202	0.553	0.481	0.322	0.249	0.519	0.270	

Criteria: HTMT (HTMT <1)

Note: A--Belief Control; B- Boundary Control; C- Corporate Social Responsibility to Community; D- Corporate Social Responsibility to Consumer; E- Corporate Social Responsibility to Employee; F - Corporate Social Responsibility to Environment; G- Diagnostic Control; H- Financial Performance; I- Interactive Control; J- Non-Financial Performance

3.5 Assessment of the Structural Model

In their 2017 work, Hair et al. outline a six-step procedure for evaluating Structural Model solutions generated by Partial Least Squares-Structural Equation Modelling (PLS-SEM). Step 1 prioritizes the detection and mitigation of latent collinearity, the second addresses the significance and relevance of structural relationships through the evaluation of the explained variance (R^2), effect size (f^2), and predictive relevance (Q^2), the third requires the inspection of the corresponding t-values of the path coefficients via bootstrapping with 5,000 resamples,

and the fourth and fifth stages involve interpreting the results for R-square, effect size (f-square), collinearity (inner VIF), and predictive relevance (Q-square). According to the results provided in Table 5, the R^2 of organization performance is quite high whereas the R^2 of CSR practice is moderately high, the f^2 outcome of CSR practice as an exogenous variable is medium, and the f^2 outcome of MCS is low. Collinearity was kept below 5 for all exogenous variables, and predictive relevance (Q^2) for each endogenous variable exceeded 0, indicating adequate predictive relevance.

Table 4: Assessment of the structural model

	Endogenous Variables	R Square	R Square Adjusted	
R-Square	CSR Practice	0.030	0.027	0.26: Substantial,
	Org. Performance	0.351	0.342	0.13: Moderate,
Effect Size (F-Square)				0.02: Weak (Cohen, 1988)
	Exogenous Variables	CSR Practice	Org. Performance	0.35: Substantial,
	CSR Practice		0.282	0.15: Medium effect,
	MCS	0.031	0.047	0.02: Weak effect

				(Cohen, 1988)		
Collinearity (Inner VIF)	Exogenous Variables			VIF <= 5.0 (Hair et al., 2017)		
	CSR Practice		1.125			
	MCS	1.000	1.075			
Predictive Relevance (Q-Square)	Endogenous Variables			Value larger than 0 indicates Predictive Relevance (Hair et al., 2017)		
	CSR Practice	CCR	0.208		CCC	0.256
	Org. Performance	0.149	0.372			

CCC=Construct Cross-validated Community, CCR=Construct Cross-validated Redundancy

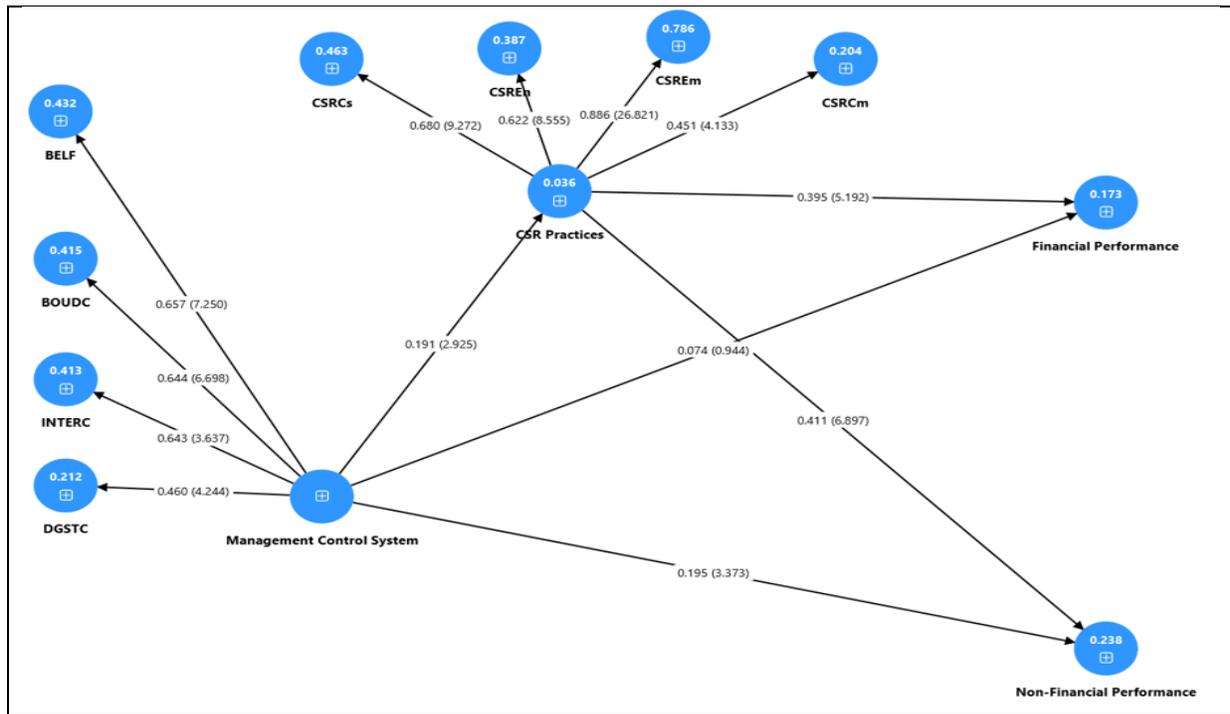


Figure 3: Structural model with inner model t-values

3.6 Direct effect (path coefficient) analysis

The standardized β in the multiple regression analysis corresponds to the path coefficient in Smart-PLS. As summarized by Chin (1998), the bootstrapping method was computed to derive the t statistics and confidence intervals, because PLS-SEM does not have any assumptions about distributions, which is a requirement in most SEM

techniques. The path estimation or hypothetical relations analysis was conducted to test the significant relationships in the inner path model. All the hypothetical relationships and paths within the framework were tested using the regression coefficient (β) derived from the model. The β values, and thus the proposed hypothesis in this study used a structural modelling framework to determine

interrelations between sub-constructs. The path coefficients and significance of the structural model was estimated using multi-sample PLS bootstrapping. Prior studies suggested that the path coefficient value must not be less than 0.1 to be deemed relevant in the model (Wetzels et al., 2009; Hair et al., 2011). In Table 6, the direct path coefficient results were presented and all five hypotheses were supported and confirmed positive correlation and significance at the very least 0.05 level. This is a path coefficient value (β) ranging from 0.149 to 0.411. As shown in Table 5 these five direct relationships were significant as they all held p-values less than 0.05 and t-values exceeding 1.96.

As seen in Table 5, all direct relationships fully captured in the model are significant, particularly the influences of MCS on financial performance (with $t=2.837$, $\beta=0.149$ or 14.9%), and of MCS on non-financial performance, which also shows a significant path ($t=4.186$, $\beta=0.274$ or 27.4%). The interplay between MCS and CSR Practices in Hypothesis 2 MCS has ($\beta=0.191$ or 19.1%) and ($t=2.080$) in support which suggests moderate to strong support. Simultaneously, CSR practices and both financial performance and non-financial performance have significant path coefficients. CSR practices and financial performance show ($\beta=0.395$ or 39.5%, $t=5.617$), while CSR practices and non-financial performance have ($\beta=0.411$ or 41%, $t=5.332$).

Table 5: Path coefficient result

Hypotheses	OS/Beta	LL	UL	T	P	Decision
H1a: MCS -> Fin. Performance	0.149	0.035	0.255	2.837	0.005	Significant
H1b: MCS -> Non-Fin. Performance	0.274	0.089	0.304	4.186	0.000	Significant
H2: MCS -> CSR Practice	0.191	0.047	0.250	2.080	0.038	Significant
H3a: CSR Practices -> Fin Performance	0.395	0.239	0.508	5.617	0.000	Significant
H3b: CSR Practices -> Non-Fin Performance	0.411	0.203	0.434	5.332	0.000	Significant

OS=Original Sample/LL=Confidence Internal Limit/Confidence Upper Limit, * $p < 0.05$

4.0 Discussion and Recommendation

This study examines how management control systems correlate with corporate performance in Nigeria-based manufacturing enterprises. A robust relationship between the two constructs is affirmed: reported in Table 5, the coefficient of determination (β) between management control systems (MCS) and financial performance (FP) is 0.149, indicating that MCS accounts for 14.9 percent of the variance in FP, accompanied by a t statistic of 2.837. A similar

significant pathway emerges with non-financial performance, for which β is 0.274 (27.4 percent) and the t value is 2.080. For many Nigerian manufacturers, the presence of a formal management control structure is deemed essential for sustaining global relevance and for balancing the diverse interests of stakeholders. These latest empirical findings reinforce that MCS enhances organizational control by integrating monitoring mechanisms with value-generating capacities that are intimately

fringed with business success. Consequently, MCS is conceptualized here not merely as a regulatory instrument but as a catalytic device enabling firms to secure competitive advantages that manifest in the expedited development of innovative products, extensive market penetration, and heightened employee satisfaction. The results suggest that Nigerian manufacturing firms integrate multiple MCS elements to foster and regulate operational activities. In this context, executives' interactive engagement with MCS enables them to pinpoint employee requirements that, when addressed, enhance productivity, facilitate skills development, and calibrate reward systems—each of which contributes directly to revenue and profitability. Customers respond positively to domestically manufactured goods, sustaining elevated sales levels that, in turn, bolster profit margins. Additionally, the present investigation illustrates that the benefits of MCS accrue in an additive manner, yet exert a modest aggregate effect on both financial and non-financial corporate performance. These findings corroborate the conclusions reached by Akankunda et al. 2023; Cheffi et al. 2021; Crutzen et al. 2017; Duréndez Gómez-Guillamón et al., 2016; Heggen & Sridharan, 2021), all of which identify a constructive role for MCS in the Nigerian environment. The second hypothesis, asserting a positive association between MCS and CSR practices, produced a parameter estimate of $\beta=0.191$, signifying an explanatory power of 19.1%, with an accompanying t-value of 2.080, thereby lending empirical support to the proposition.

The present research corroborates the increasing literature indicating that MCS facilitate the adoption of corporate social responsibility (CSR) practices (Bellora-Bienengraber et al., 2022; Kruis et al., 2016; Mundy, 2010; Widener, 2007). The quantitative evidence reveals that formal management systems, within the particular milieu of Nigerian manufacturing, reinforce CSR-related behaviours and thus deepen the scholarly understanding of this relationship. MCS furnish instruments for the vigilant appraisal of risks, threats, and opportunities that perturb various stakeholders, most notably local communities and the environment. As a corollary, a substantial cohort of Nigerian manufacturing firms

has incorporated explicit pledges to ameliorate ambient air quality into their official mission statements. The systems in question also mediate corporate philanthropy, a pattern that gained particular visibility during the COVID-19 pandemic, when manufacturing personnel in Nigeria mobilised resources for local health initiatives and illness-prevention campaigns. Protection of consumer rights, elevated levels of customer satisfaction, and the provision of complete and accurate product information represent ancillary benefits that the evidence associates with management control. Internally, MCS encourage CSR by facilitating staff participation in volunteer programmes, enhancing skill acquisition, and advancing career development initiatives. These outcomes collectively signal that manufacturing firms assign substantial value to employee welfare and motivation, while simultaneously repudiating nepotistic practices and sustaining sponsorship for educational programmes. The analysis demonstrates that the path coefficients linking corporate social responsibility (CSR) practices to both financial and non-financial performance are statistically significant. Specifically, the coefficient for CSR practices and financial performance is $\beta = 0.395$ (39.5%) with a t-value of 5.617, while the corresponding coefficient for CSR practices and non-financial performance is $\beta = 0.411$ (41%) and a t-value of 5.332. These results are consistent with earlier research by Barauskaite and Streimikiene (2021), Reisinger (2023), Chen et al. (2023), Franco et al. (2020), and Huang et al. (2020). Furthermore, the integration of CSR into the chain linking management control systems (MCS) and corporate performance, particularly with respect to non-financial indicators, produces a similarly positive outcome. Consequently, CSR practices should be firmly embraced by Nigerian manufacturing firms as a strategic lever to advance corporate objectives. The firms are thus positioned to enhance profitability, return on investment, cost control, and sales growth alongside metrics of customer and employee satisfaction, market share, and overall productivity. The significance of the mediation effect is underscored by a p-value of 0.043, which is below the conventional threshold of 0.05, and a positive beta value of 0.078. Since both

direct and indirect paths remain significant, the mediation is categorised as partial.

On contribution to theories, according to the resource-based view, the main factor that determines the sustained competitive advantage lies in the capability of the enterprise to mobilise resources. Modern empirical research also shows that there is often confusion as to how particular CSR dimensions correlate with the corporate performance. The moderate effects of management control systems (MCS) on CSR practices and corporate performance suggest that, although certain MCS components exert a significant influence on organisational outcomes, the impact is dependent on intervening variables: some activities lack discernible effects, and others require additional mediating factors to become salient. Stakeholder theory remains a central analytical instrument for appraising the nexus between CSR practices and corporate performance; this research domain has attracted persistent scholarly attention, with large-scale literatures exploring—with mixed findings—how CSR can enhance (or erode) firm-level advantages. In particular, existing literature proposes the conclusion that well-represented entities using CSR agenda on average enjoy better financial results as compared to organisations that fail to give attention to the concept of CSR. Within this framework, organisational performance is contingent upon the proficiency with which stakeholder relationships are managed, as stakeholder satisfaction is integral to the pursuit of future performance improvement (Bahta et al., 2020). Consequently, CSR is associated with heightened efficiency in value creation and the optimisation of routine organisational processes (Javed et al., 2020). The study therefore recommends as follow:

Managers need a thorough knowledge about CSR revenues and the ability to evaluate by means of strategic approach. In this respect, cost benefit analysis will be of value in determining the economic worth of a CSR programme, and in assisting managerial decisions.

Also, the managerial role entails investigating how corporate social responsibility fosters CSR-driven innovation. Accordingly, businesses must ascertain

the value of their Corporate Social Responsibility (CSR) initiatives.

A comprehensive practical evaluation may inadvertently omit contextual factors and exogenous variables capable of modulating the nexus among corporate social responsibility (CSR), firm financial performance, and market valuation. Adding to that, the possible limitations are as follows: the current business cycle, the evolving statutory environments, the industry peculiarities and the external factors.

Policymakers and regulators must therefore keep checking on the industrial practices that are detrimental to both the environment and the overall welfare of the citizenry and therefore encourage reduction in such practices.

5.0 Limitations and future research opportunity.

The study at hand failed to keep control variables in mind which makes the further research justified. In order to broaden the scope of management control system (MCS) discourse, subsequent investigations should scrutinize the effect of cultural variables on the relation between MCS, corporate social responsibility (CSR) practices, and firm performance. Although the COVID-19 pandemic had increased the global concerns in this issue, the interdisciplinary socio-managerial framework plays a major part in understanding CSR under the changing social contexts. Interdisciplinary socio-managerial approach will not only be able to supplement the academic knowledge about a broader scope of social contextual environment to manage CSR in the post-pandemic reality, but also make the global issues, which have also become evident through the COVID-19 pandemic, visible. Longitudinal studies are one of the approaches that have not been explored such approach is the only way of explaining the dynamics of MCS, CSR, nexus changes and thus has an implication on corporate performance. It is also important to check regional models within less-explored African countries as they would contribute to the field and uncover cultural and economic peculiarities determining CSR and performance. Future research in the area of under-researched domains will explain peculiarities of corporate social responsibility and its influence in

various cultural and economic settings especially in countries in which the pressure to conform to institutional pressures, cultural-norms, as well as the regulatory requirements are extremely different. Lastly, mediating and moderating factors deserve an empirical focus which will provide a more detailed account of the association between CSR and financial performance as well as non-financial performance.

References

- Abbas, J. (2024). Does the nexus of corporate social responsibility and green dynamic capabilities drive firms toward green technological innovation? The moderating role of green transformational leadership. *Technological Forecasting and Social Change*, 208, 123698.
- Abbas, J. (2025). From Corporate Social Responsibility to Human Social Responsibility: A Pathway for a Sustainable Society. *Journal of Cleaner Production*, 144979.
- Abbas, J., 2020. Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production*. 242, 118458.
- Abbasi, S., Aghakhani, H., Azizi, S., Peikanpour, M., & Mehralian, G. (2023). Corporate social responsibility and customer loyalty during the Covid-19 pandemic: Evidence from pharmacy practice. *Social Responsibility Journal*, 19(2), 249-263.
- Adamkaite, J., Streimikiene, D., & Rudzioniene, K. (2023). The impact of social responsibility on corporate financial performance in the energy sector: Evidence from Lithuania. *Corporate Social Responsibility and Environmental Management*, 30(1), 91–104.
- Adams, D., Adams, K., Attah-Boakye, R., Ullah, S., Rodgers, W., & Kimani, D. (2022). Social and environmental practices and corporate financial performance of multinational corporations in emerging markets: Evidence from 20 oil-rich African countries. *Resources Policy*, 78, 102756.
- Adi, M. P. H., & Sukmawati, A. (2020). The effect of levers of control and leadership style on creativity. *Journal of Indonesian Economy and Business: JIEB.*, 35(3), 236-256.
- Adib, M., Zhang, X., Zaid, M. A., & Sahyouni, A. (2020). Management control system for corporate social responsibility implementation—a stakeholder perspective. *Corporate Governance: The International Journal of Business in Society*.
- Adler, P. S., & Chen, C. X. (2011). Combining creativity and control: Understanding individual motivation in large-scale collaborative creativity. *Accounting, organizations and society*, 36(2), 63-85.
- Aftab, J., Abid, N., Sarwar, H., Amin, A., Abedini, M., & Veneziani, M. (2024). Does corporate social responsibility drive financial performance? Exploring the significance of green innovation, green dynamic capabilities, and perceived environmental volatility. *Corporate Social Responsibility and Environmental Management*, 31(3), 1634–1653.
- Afzali, H., Kim, S.S., 2022. Consumers’ responses to corporate social responsibility: the mediating role of CSR authenticity. *Sustainability* 13 (4), 2224.
- Aguinis, H., & Glavas, A. (2019). On corporate social responsibility, sensemaking, and the search for meaningfulness through work. *Journal of Management*, 45(3), 1057-1086.
- Aguinis, H., Rupp, D. E., & Glavas, A. (2024). Corporate social responsibility and individual behaviour. *Nature Human Behaviour*, 8(2), 219-227.

- Ahmad, N., Scholz, M., Ullah, Z., Arshad, M. Z., Sabir, R. I., & Khan, W. A. (2021). *The nexus of CSR and co-creation: A roadmap towards consumer loyalty. Sustainability* 2021, 13, 523.
- Alastal, A. Y. M., Jamil, C. Z. M., & Abd-Mutalib, H. (2023). Management control system: A literature review. From Industry 4.0 to Industry 5.0: Mapping the Transitions, 475-483.
- Al Frijat, Y. S., Albawwat, I. E., & Elamer, A. A. (2024). Exploring the mediating role of corporate social responsibility in the connection between board competence and corporate financial performance amidst global uncertainties. *Corporate Social Responsibility and Environmental Management*, 31(2), 1079-1095.
- Ali, I., Arslan, A., Chowdhury, M., Khan, Z., & Tarba, S. Y. (2022). Reimagining global food value chains through effective resilience to COVID-19 shocks and similar future events: A dynamic capability perspective. *Journal of business research*, 141, 1-12.
- Akankunda, B., Nkundabanyanga, S. K., Kaawaase, T. K., Adaramola, M. S., Nkurunziza, G., & Tumwine, S. (2024). The mediating effect of management control systems on human capital and sustainable performance among Ugandan power companies. *Cogent Business & Management*, 11(1), 2324369.
- Akhand, M. I., Hamid, M. A., Islam, M. N., & Akter, S. (2024). Influence of corporate social responsibility on financial performance of listed private commercial banks in Bangladesh: An econometric analysis. *EPH - International Journal of Humanities and Social Science*, 9(1), 8–19.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Anthony, R. N. (1965). *Planning and control systems: A framework for analysis*. Harvard University Graduate School of Business Administration.
- Anzilago, M., & Beuren, I. M. (2022). Relational norms and satisfaction with interorganizational cooperation. *RAUSP Management Journal*, 57(3), 298-315.
- Arjaliès, D. L., & Hounnou, G. (2016). A new-institutionalist perspective on the links between management control systems and corporate social responsibility. *Journal of Business Ethics*, 138(1), 1-19.
- Arjaliès D.L., Mundy J. (2013), The use of management control systems to manage CSR strategy: A lever of control perspective, *Management Accounting Research*, 24, 4, pp. 284-300.
- Arend, R. J., & Lévesque, M. (2010). Is the resource-based view a practical organizational theory? *Organization Science*, 21(4), 913-930.
- Asiaei, K., Bontis, N., Barani, O., Moghaddam, M., & Sidhu, J. (2021). The role of sustainability control systems in translating CSR into performance in Iran. *Management Decision*.
- Awa, H. O., Etim, W., & Ogbonda, E. (2024). Stakeholders, stakeholder theory and Corporate Social Responsibility (CSR). *International Journal of Corporate Social Responsibility*, 9(1), 11.
- Baird, K., Su, S. and Munir, R. (2019), “Levers of control, management innovation and organisational performance”, *Pacific Accounting Review*, Vol. 31 No. 3, pp. 358-375.
- Barauskaite, G. and Streimikiene, D. (2021), “Corporate social responsibility and financial performance of companies: the puzzle of concepts, definitions and assessment methods”, *Corporate Social Responsibility and Environmental Management*, Vol. 28 No. 1, pp. 278-287.

- Barbosa, M. W., & de Oliveira, V. M. (2021). The Corporate Social Responsibility professional: A content analysis of job advertisements. *Journal of Cleaner Production*, 279, 123665.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Bebbington, J., Larrinaga, C., & Moneva, J. M. (2009). Corporate social reporting and reputation risk management. *Accounting, Auditing & Accountability Journal*.
- Bedford, D. S. (2015). Management control systems across different modes of innovation: Implications for firm performance. *Management Accounting Research*, 28, 12-30.
- Belhadi, A., Kamble, S., Jabbour, C. J. C., Gunasekaran, A., Ndubisi, N. O., & Venkatesh, M. (2021). Manufacturing and service supply chain resilience to the COVID-19 outbreak: Lessons learned from the automobile and airline industries. *Technological Forecasting and Social Change*, 163, 120447.
- Bellora-Bienengräber, L., Radtke, R. R., & Widener, S. K. (2022). Counterproductive work behaviours and work climate: The role of an ethically focused management control system and peers' self-focused behaviour. *Accounting, Organizations and Society*, 96, 101275.
- Bellora-Bienengräber, L., Derfuss, K., & Endrikat, J. (2023). Taking stock of research on the levers of control with meta-analytic methods: Stylized facts and boundary conditions. *Accounting, Organizations and Society*, 106, 101414.
- Beyeler, N., & Salas, R. N. (2022). An unequivocal call to climate action for the health sector. *bmj*, 376.
- Bezuidenhout, S., de Villiers, C., & Dimes, R. (2023). How management control systems can enable, constrain, and embed integrated reporting. *Accounting & Finance*, 63(4), 4251-4273.
- Bian, J., Liao, Y., Wang, Y. Y., & Tao, F. (2021). Analysis of firm CSR strategies. *European journal of operational research*, 290(3), 914-926.
- Boiral, O., Heras-Saizarbitoria, I., & Brotherton, M. C. (2019). Assessing and improving the quality of sustainability reports: The auditors' perspective. *Journal of business ethics*, 155(3), 703-721.
- Bolourian, S., Angus, A., & Alinaghian, L. (2021). The impact of corporate governance on corporate social responsibility at the board-level: A critical assessment. *Journal of Cleaner Production*, 291, 125752.
- Bhuiyan, F., Baird, K., & Munir, R. (2020). The association between organisational culture, CSR practices and organisational performance in an emerging economy. *Meditari Accountancy Research*.
- Bruna, M. G., & Lahouel, B. B. (2022). CSR & financial performance: Facing methodological and modeling issues commentary paper to the eponymous FRL article collection. *Finance Research Letters*, 44, 102036.
- Bryman, A., Bell, E., 2011. *Business Research Methods, Social Research*, third edition. Oxford University Press, New York
- Cancino, C. A., La Paz, A. I., Ramaprasad, A., & Syn, T. (2018). Technological innovation for sustainable growth: An ontological perspective. *Journal of Cleaner Production*, 179, 31-41.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39-48.

- Cheffi, W., Abdel-Maksoud, A. and Farooq, M.O. (2021), “CSR initiatives, organizational performance and the mediating role of integrating CSR into management control systems: testing an inclusive model within SMEs in an emerging economy”, *Journal of Management Control*, Vol. 32 No. 3, pp.
- Chen, X., Liang, X., & Wu, H. (2023). Cross-border mergers and acquisitions and CSR performance: Evidence from China. *Journal of Business Ethics*, 183(1), 255-288.
- Cheng, H., & Ding, H. (2021). Dynamic game of corporate social responsibility in a supply chain with competition. *Journal of Cleaner Production*, 317, 128398.
- Chenhall R.H. (2003), Management control systems design within its organizational context: findings from contingency-based research and directions for the future, *Accounting Organization Society*, 28, 2-3, pp. 127-168.
- Chenhall, R. H., & Langfield-Smith, K. (1998). The relationship between strategic priorities, management techniques and management accounting: an empirical investigation using a systems approach. *Accounting, organizations and society*, 23(3), 243-264.
- Coelho, R., Jayantilal, S., & Ferreira, J. J. (2023). The impact of social responsibility on corporate financial performance: A systematic literature review. *Corporate Social Responsibility and Environmental Management*, 30(4), 1535–1560.
- Cho, S. J., Chung, C. Y., & Young, J. (2019). Study on the relationship between CSR and financial performance. *Sustainability*, 11(2), 343.
- Chien, F., Sadiq, M., Nawaz, M. A., Hussain, M. S., Tran, T. D., & Le Thanh, T. (2021). A step toward reducing air pollution in top Asian economies: The role of green energy, eco-innovation, and environmental taxes. *Journal of environmental management*, 297, 113420.
- Cohen, J. (1988) *Statistical Power Analysis for the Behavioural Science* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Contrafatto, M., & Burns, J. (2013). The dynamics of management accounting and control systems in a multinational enterprise: A case study. *Management Accounting Research*, 24(1), 3-25.
- Crane, A., & Glozer, S. (2016). Researching corporate social responsibility communication: Themes, opportunities and challenges. *Journal of Management Studies*, 53(7), 1223–1252
- Crifo, P. and Forget, V.D. (2015), “The economics of corporate social responsibility: a firm-level perspective survey”, *Journal of Economic Surveys*, Vol. 29 No. 1, pp. 112-130.
- Crutzen N., Zvezdov D., Schaltegger S. (2017), Sustainability and management control. Exploring and theorizing control patterns in large European firms, *Journal of Cleaner Production*, 143, pp. 1291-1301.
- De Roeck, K., & Farooq, O. (2018). Corporate social responsibility and ethical leadership: Investigating their interactive effect on employees’ socially responsible behaviors. *Journal of Business Ethics*, 151(4), 923-939.
- Desender, K., & Epure, M. (2021). The pressure behind corporate social performance: Ownership and institutional configurations. *Global Strategy Journal*, 11(2), 210–244’.
- de Waal, A. A., & Counet, H. (2009). Lessons learned from performance management systems implementations. *International Journal of Productivity and Performance Management*, 58(4), 367-390.
- Duréndez Gómez-Guillamón, A., Ruíz-Palomo, D., García-Pérez-de-Lema, D., & Diéguez-Soto, J. (2016). “Management control systems and performance in small and medium family firms”, *European Journal of Family Business*,

Vol. 6 No. 1, pp. 10-20.

- Effrosynidis, D., Karasakalidis, A. I., Sylaios, G., & Arampatzis, A. (2022). The climate change Twitter dataset. *Expert Systems with Applications*, 204, 117541.
- Eng, N., Buckley, C., & Peng, R. X. (2022). Tracking the path of the green consumer: surveying the decision-making process from self-transcendent values to supportive CSR intentions. *Sustainability*, 14(3), 1106.
- Epure, M. (2022). Corporate social responsibility as a signaling technology. *Review of Managerial Science*, 16(3), 907–930.
- Esposito, P., Ahmad, Z., Riso, V., & Mustafa, N. (2024). Beyond the business case? Retracing the walk of corporate social responsibility and financial performance relationship in the Oil and Gas sector. *Corporate Social Responsibility and Environmental Management*, 31(3), 2211–2224.
- Fabamise, O. (2019). Assessing efforts to revive Nigeria’s textile industry. Retrieved from <https://leadership.ng/2019/01/08/assessing-efforts-to-revive-nigerias-textile-industry/>.
- Fakhreddin, F., & Foroudi, P. (2022). The impact of market orientation on new product performance through product launch quality: A resource-based view. *Cogent Business & Management*, 9(1), 2108220.
- Fallah Shayan, N., Mohabbati-Kalejahi, N., Alavi, S., & Zahed, M. A. (2022). Sustainable development goals (SDGs) as a framework for corporate social responsibility (CSR). *Sustainability*, 14(3), 1222.
- Fatima, T., & Elbanna, S. (2023). Corporate social responsibility (CSR) implementation: A review and a research agenda towards an integrative framework. *Journal of Business Ethics*, 183(1), 105-121.
- Farooq, O., Rupp, D. E., & Farooq, M. (2017). The multiple pathways through which internal and external corporate social responsibility influence organizational identification and multifocus outcomes: The moderating role of cultural and social orientations. *Academy of Management Journal*, 60(3), 954–985.
- Feder, M., & Weißenberger, B. E. (2021). Towards a holistic view of CSR-related management control systems in German companies: Determinants and corporate performance effects. *Journal of Cleaner Production*, 294, 126084.
- Fernandes, F. D. S., Sermpinis, G., Stasinakis, C., & Zhao, Y. (2023). Corporate social responsibility and firm survival: Evidence from Chinese listed firms. *British Journal of Management*, 35(2), 1014-1039.
- Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: an extended framework for analysis. *Management Accounting Research*.
- Figge, F., Hahn, T., Schaltegger, S., & Wagner, M. (2002). The sustainability balanced scorecard—linking sustainability management to business strategy. *Business Strategy and the Environment*, 11(5), 269-284.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance measurement systems: a review of their consequences and a framework for research. *Management Accounting Research*, 23(2), 79–119.
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pittman, Boston, MA.
- Freeman, R. E., Phillips, R., & Sisodia, R. (2020). Tensions in stakeholder theory. *Business and Society*, 59(2), 213–231

- Fu, Q., Abbas, J., Alarif, G. B., Sial, M. S., Brugni, T. V., & Adamwal, N. (2023). I act in an environmentally responsible fashion since my firm is socially responsible: A pathway for transition to a responsible society. *Journal of Cleaner Production*, 414, 137523.
- Gharbi, M., & Jarboui, A. (2024). The impact of corporate social responsibility on firm financial performance: does corporate governance matter? *International Journal of Law and Management*, 66(6), 681-693.
- Giannopoulos, G., Pilcher, N., & Salmon, I. (2024). What is the relationship between corporate social responsibility and financial performance in the UK banking sector? *Journal of Risk and Financial Management*, 17(5), 187.
- Gond, J. P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23(3), 205-223.
- Grafton, J., Lillis, A. M., & Widener, S. K. (2010). The role of performance measurement and evaluation in building organizational capabilities and performance. *Accounting, Organizations and Society*, 35(7), 689-706.
- Gray, R. (2001). Thirty years of social accounting, reporting and auditing: what (if anything) have we learnt? *Business ethics: A European review*, 10(1), 9-15.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632.
- Handfield, R. B., Graham, G., & Burns, L. (2020). Coronavirus, tariffs, trade wars and supply chain evolutionary design. *International Journal of Operations & Production Management*, 40(10), 1649–1660.
- Harris, J., Sunley, P., Evenhuis, E., Martin, R., Pike, A., & Harris, R. (2020). The COVID-19 crisis and manufacturing: How should national and local industrial strategies respond? *Local Economy*, 35(4), 403–415.
- Heggen, C., & Sridharan, V. G. (2021). The effects of an enabling approach to eco-control on firms' environmental performance: a research note. *Management Accounting Research*, 50, 100724.
- Henri, J. F. (2006). Management control systems and strategy: A Resource-based Perspective. *Accounting, Organizations and Society*, 31(6), 529-558.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Hoque, Z. (2004). A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance. *International business review*, 13(4), 485-502.
- Hongxin, W., Khan, M. A., Zhenqiang, J., Cismaş, L. M., Ali, M. A., Saleem, U., & Negruţ, L. (2022). Unleashing the role of CSR and employees' pro-environmental behavior for organizational success: the role of connectedness to nature. *Sustainability*, 14(6), 3191.
- Hosoda, M. (2018). Management control systems and corporate social responsibility: perspectives from a Japanese small company. *Corporate Governance. The International Journal of Business in Society* 18. 68-80.
- Huang, K., Sim, N. and Zhao, H. (2020), "Corporate social responsibility, corporate financial performance and the confounding effects of economic fluctuations: a meta-analysis", *International Review of Financial Analysis*,

Vol. 70, p. 101504.

Accounting Information Systems, 12(1), 20-39.

- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195-204.
- Jamali, D. and Karam, C. (2018), “Corporate social responsibility in developing countries as an emerging field of study”, *International Journal of Management Reviews*, 20, 32-61.
- Javaid, M., Haleem, A., Vaish, A., Vaishya, R., & Iyengar, K. P. (2020). Robotics applications in COVID-19: A review. *Journal of Industrial Integration and Management*.
- Javed, M., Rashid, M.A., Hussain, G. and Ali, H.Y. (2020), “The effects of corporate social responsibility on corporate reputation and firm financial performance: moderating role of responsible leadership”, *Corporate Social Responsibility and Environmental Management*, Vol. 27 No. 3, pp. 1395-1409.
- Javeed, S. A., Latief, R., Jiang, T., San Ong, T., & Tang, Y. (2021). How environmental regulations and corporate social responsibility affect the firm innovation with the moderating role of Chief executive officer (CEO) power and ownership concentration? *Journal of Cleaner Production*, 308, 127212.
- Jermias, J. (2008). The relative influence of competitive strategy and business-unit-autonomy on the use of management control systems. *The British Accounting Review*, 40(2), 108-128.
- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: Assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47(3), 499–510.
- Kallunki, J. P., Laitinen, E. K., & Silvola, H. (2011). Impact of enterprise resource planning systems on management control systems and firm performance. *International Journal of*
- Khoo, T. L., & Hock, O. Y. (2020). Configure-to-Order (CTO) production through lean initiatives: Manufacturing delivery in COVID-19 pandemic milieu. *European Journal of Molecular & Clinical Medicine*, 7(03), 494–505.
- Krejcie, R.V. and Morgan, D.W. (1970), “Determining sample size for research activities”, *Educational and Psychological Measurement*, Vol. 30, pp. 601-610.
- Kruis, A. M., Speklé, R. F., & Widener, S. K. (2016). The levers of control framework: An exploratory analysis of balance. *Management Accounting Research*, 32, 27–44.
- Latif, B., Ong, T. S., Meero, A., Abdul Rahman, A. A., & Ali, M. (2022). Employee-perceived corporate social responsibility (CSR) and employee pro-environmental behaviour (PEB): The moderating role of CSR skepticism and CSR authenticity. *Sustainability*, 14(3), 1380.
- Laguir, L., Laguir, I., & Tchemeni, E. (2019). Implementing CSR activities through management control systems: A formal and informal control perspective, *Accounting, Auditing & Accountability Journal*, 32(2), 531-555.
- Larrinaga-González, C. (2007). Sustainability accounting and accountability: The elephant in the room. *Accounting and the Public Interest*, 7(1), 1-15.
- Le, T.T. (2022), “Corporate social responsibility and SMEs’ performance: mediating role of corporate image, corporate reputation and customer loyalty”, *International Journal of Emerging Markets*, Vol. 18 No. 10, pp. 4565-4590.
- Lee, C. L., & Yang, H. J. (2011). Organization structure, competition and performance measurement systems and their joint effects on performance. *Management Accounting*

Research, 22(2), 84-104.

Lemana, P., Matemane, R., & Mokabane, M. (2025). The evolution of research on corporate social responsibility and financial performance: a bibliometric analysis. *Cogent Business & Management*, 12(1), 2507230.

Li, J., & Xu, X. (2024). The relationship between corporate social responsibility and financial performance. *Highlights in Business, Economics and Management*, 35(1), 116–122.

Lin, Y., & Wu, L. Y. (2014). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research*, 67(3), 407-413.

Linton, T., & Vakil, B. (2020). Coronavirus is proving we need more resilient supply chains. *Harvard Business Review*, March 5, 2020. In: <https://hbr.org/2020/03/coronavirus-is-proving-that-we-need-more-resilientsupply-chains>. Retrieved on: 11 June 2021.

Lodhia, S., Sharma, U. and Low, M. (2021), “Creating value: sustainability and accounting for nonfinancial matters in the pre- and post-corona environment”, *Meditari Accountancy Research*, Vol. 29 No. 2, pp. 185-196.

Lu, J., Ren, L., Yao, S., Qiao, J., Mikalauskiene, A. and Streimikis, J. (2020), “Exploring the relationship between corporate social responsibility and firm competitiveness”, *Economic Research-Ekonomska Istrazivanja*, Vol. 33 No. 1, pp. 1621-1646.

Lueg, R., & Radlach, R. (2016). The role of management control systems in the management of corporate social responsibility. *Journal of Management Control*, 27(2-3), 213-241.

MacKinnon, D.P., Cox, S. and Baraldi, A.N. (2012), “Guidelines for the investigation of mediating variables in business research”, *Journal of Business and Psychology*, Vol. 27 No. 1, pp. 1-14.

Madanaguli, A., Srivastava, S., Ferraris, A., & Dhir, A. (2022). Corporate social responsibility and sustainability in the tourism sector: A systematic literature review and future outlook. *Sustainable Development*, 30(3), 447-461.

Marietza, F., & Nadia, M. (2021). The influence of green innovation and CSR on sustainable development mediated by green performance. *Global Financial Accounting Journal*, 5(1), 24-36.

Marsudi, A. S., & Soetanto, G. P. (2020, September). The effect of good corporate governance [GCG] on disclosure of corporate social responsibility [CSR] and its implications on firm value. In *International Conference on Management, Accounting, and Economy (ICMAE 2020)* (pp. 95-98). Atlantis Press.

Martelo-Landroguez, S., Albort-Morant, G., Leal-Rodríguez, A. L., & Ribeiro-Soriano, B. (2018). The effect of absorptive capacity on green customer capital under an organizational unlearning context. *Sustainability*, 10(1), 265.

Martinez-Conesa, I., Soto-Acosta, P. and Palacios-Manzano, M. (2016), “Corporate social responsibility and its effect on innovation and firm performance: empirical research in SMEs”, *Journal of Cleaner Production*, Vol. 142 No. 4, pp. 2374-2383.

Martyn, P., Sweeney, B., & Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons’ levers of control framework. *Journal of Accounting & Organizational Change*, 12(3), 281-324.

Masongweni, V. V., & Simo-Kengne, B. D. (2024). The impact of sustainable investment on firm performance in South-Africa. *South African Journal of Accounting Research*, 38(2), 146–173.

Malmi, T., & Brown, D. A. (2008). Management control systems as a package—Opportunities, challenges and research directions. *Management Accounting Research*, 19(4), 287-

- 300.
- McGrath, R. G. (2001). Exploratory learning, innovative capacity, and managerial oversight. *Academy of management journal*, 44(1), 118-131.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- Merchant, K. A., & Van der Stede, W. A. (2017). *Management control systems: Performance measurement, evaluation and incentives*. Pearson Education.
- Metzker, Z., & Zvarikova, K. (2021). The perception of company employees by SMEs with CSR concept implementation. *International Journal of Entrepreneurial Knowledge*, 9(1), 81-96.
- Mia, L., & Clarke, B. (1999). Market competition, management accounting systems and business unit performance. *Management Accounting Research*, 10(2), 137-158.
- Mohy-ud-Din, K., & Raza, S. (2023). Role of board indexes on corporate social responsibility (CSR) and shareholders' wealth author links open overlay panel. *Journal of Cleaner Production*, 400, 136521.
- Mouritsen, J. (1994). Rationality, institutions and decision making: reflections on March and Olsen's rediscovering institutions. *Accounting, Organizations and Society*, 19(2), 193-211.
- Mtapuri, O., Camilleri, M. A., & Dłużewska, A. (2022). Advancing community-based tourism approaches for the sustainable development of destinations. *Sustainable Development*, 30(3), 423-432.
- Mu, H.-L., Xu, J., & Chen, S. (2024). The impact of corporate social responsibility types on happiness management: A stakeholder theory perspective. *Management Decision*, 62(2), 591–613.
- Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society*, 35(5), 499-523.
- Nguyen, P. A., Kecskés, A., & Mansi, S. (2020). Does corporate social responsibility create shareholder value? The importance of long-term investors. *Journal of Banking & Finance*, 112, 105217
- Nguyen, V. H., Agbola, F. W., & Choi, B. (2022). Does corporate social responsibility enhance financial performance? Evidence from Australia. *Australian Accounting Review*, 32(1), 5-18.
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & evaluation in higher education*, 33(3), 301-314.
- Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US tech firms. *Journal of cleaner production*, 292, 126078.
- Okorie, O., Subramoniam, R., Charnley, F., Patsavellas, J., Widdifield, D., & Salonitis, K. (2020). Manufacturing in the time of COVID-19: An assessment of barriers and enablers. *IEEE Engineering Management Review*, 48(3), 167–175.
- Opoku Marfo, E. (2024). Mechanisms and initiatives of corporate social responsibility behaviours in Ghana: a co-integration approach. *Cogent Business & Management*, 11(1), 2312580.
- Orij, R. P., Rehman, S., Khan, H., & Khan, F. (2021). Is CSR the new competitive environment for CEOs? The association between CEO turnover, corporate social responsibility and board gender diversity:

- Asian evidence. *Corporate Social Responsibility and environmental management*, 28(2), 731-747.
- Oware, K. M., & Mallikarjunappa, T. (2022). CSR expenditure, mandatory CSR reporting and financial performance of listed firms in India: an institutional theory perspective. *Meditari Accountancy Research*, 30(1), 1-21.
- Parsa, S., Dai, N., Belal, A., Li, T., & Tang, G. (2021). Corporate social responsibility reporting in China: Political, social and corporate influences. *Accounting and Business Research*, 51(1), 36–64.
- Paul, S. K., & Chowdhury, P. (2020a). A production recovery plan in manufacturing supply chains for a high-demand item during COVID-19. *International Journal of Physical Distribution & Logistics Management.*, 51(2), 104–125.
- Paul, S. K., & Chowdhury, P. (2020b). Strategies for managing the impacts of disruptions during COVID-19: An example of toilet paper. *Global Journal of Flexible Systems Management*, 21(3), 283–293.
- Peng, Y., Zhang, X., van Donk, D. P., & Wang, C. (2022). How can suppliers increase their buyers' CSR engagement: the role of internal and relational factors. *International Journal of Operations & Production Management*, 42(2), 206-229.
- Perrini, F., Russo, A., Tencati, A., & Vurro, C. (2011). Deconstructing the relationship between corporate social and financial performance. *Journal of Business Ethics*, 102(1), 59–76.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Porter, M. E., & Kramer, M. R. (2006). Strategy & society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78-92.
- Purbawangsa, I. B. A., Solimun, S., Fernandes, A. A. R., & Mangesti Rahayu, S. (2020). Corporate governance, corporate profitability toward corporate social responsibility disclosure and corporate value (comparative study in Indonesia, China and India stock exchange in 2013-2016). *Social Responsibility Journal*, 16(7), 983-999.
- Qiao, F., & Williams, J. (2022). Topic modelling and sentiment analysis of global warming tweets: evidence from big data analysis. *Journal of Organizational and End User Computing (JOEUC)*, 34(3), 1-18.
- Rahi, A. F., Johansson, J., Blomkvist, M., & Hartwig, F. (2024). Corporate sustainability and financial performance: A hybrid literature review. *Corporate Social Responsibility and Environmental Management*, 31(2), 801–815.
- Rajeev, A., Pati, R. K., Padhi, S. S., & Govindan, K. (2017). Evolution of sustainability in supply chain management: A literature review. *Journal of Cleaner Production*, 162, 299-314.
- Rasyid, A., & Nasution, B. (2021). Effects of corporate social responsibility communications on community empowerment in Pekanbaru. *Linguistics and Culture Review*, 6(on), 12-23.
- Raszkowski, A., & Bartniczak, B. (2019). On the road to sustainability: Implementation of the 2030 Agenda sustainable development goals (SDG) in Poland. *Sustainability*, 11(2), 366.
- Rehman, S. U., Kraus, S., Shah, S. A., Khanin, D., & Mahto, R. V. (2021). Analyzing the relationship between green innovation and environmental performance in large manufacturing firms. *Technological forecasting and social change*, 163, 120481.
- Reisinger, A. (2023). Challenges in the CSR–

- Competitiveness Relationship Based on the Literature. *Financial and Economic Review*, 104.
- Reiss, M. J. (2022). Reclaiming: 0 C as a target for global warming. *Journal of Biological Education*, 56(1), 1-2.
- Reverte, C., Gomez-Melero, E., & Cegarra-Navarro, J. G. (2016). The influence of corporate social responsibility practices on organizational performance: Evidence from Eco-Responsible Spanish firms. *Journal of Cleaner Production*, 112, 2870–2884.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. SmartPLS GmbH, Boenningstedt. *Journal of Service Science and Management*, 10(3), 32-49.
- Rodrigues da Costa, L., & Maria Correia Loureiro, S. (2019). The importance of employees' engagement on organizational success. *Journal of Promotion Management*, 25(3), 328-336.
- Rossi, M., Chouaibi, J., Chouaibi, S., Jilani, W., & Chouaibi, Y. (2021). Does a board characteristic moderate the relationship between CSR practices and financial performance? Evidence from European ESG firms. *Journal of Risk and Financial Management*, 14(8), 354.
- Saeed, A., Gull, A. A., Rind, A. A., Mubarik, M. S., & Shahbaz, M. (2022). Do socially responsible firms demand high-quality audits? International evidence. *International Journal of Finance and Economics*, 27(2), 2235–2255.
- Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, 68(2), 341–350.
- Schiessl, D., Korelo, J. C., & Mussi Szabo Cherobim, A. P. (2022). Corporate social responsibility and the impact on economic value added: the role of environmental innovation. *European Business Review*, 34(3), 396-410.
- Sekhon, A. K., & Kathuria, L. M. (2019). Analyzing the corporate social responsibility disclosures of selected companies in India. *Corporate Communications: An International Journal*, 24(4), 686-701.
- Shahzad, M., Ying, Q., Ur Rehman, S., Zafar, A., Ding, X., Abbas, J., 2019. Impact of knowledge absorptive capacity on corporate sustainability with mediating role of CSR: analysis from the Asian context. *Journal of Environment Planning and Management*. 1-27.
- Sharma, E. (2019). A review of corporate social responsibility in developed and developing nations. *Corporate Social Responsibility and Environmental Management*, 26(4), 712-720.
- Simons, R. (1995). Levers of control: How managers use innovative control systems to drive strategic renewal. Harvard Business School Press.
- Simons, R. and Davila, A. (2021), "How top managers use the entrepreneurial gap to drive strategic change", *The European Accounting Review*, Vol. 30 No. 4, pp. 583-609.
- Siregar, I. (2021). CSR-based corporate environmental policy implementation. *British Journal of Environmental Studies*, 1(1), 51-57.
- Speklé, R. F., van Elten, H. J., & Widener, S. K. (2017). Creativity and control: A paradox—Evidence from the levers of control framework. *Behavioural Research in Accounting*, 29(2), 73-96.
- Su, S., Baird, K., & Schoch, H. (2015). The moderating effect of organizational life cycle stages on the association between the interactive and diagnostic approaches to using controls with organizational performance. *Management Accounting Research*, 26, 40–53.

- Svensson, G., Ferro, C., Høgevoid, N., Padin, C., Carlos Sosa Varela, J., Sarstedt, M., (2018). Framing the triple bottom line approach: direct and mediation effects between economic, social and environmental elements. *Journal of Cleaner Production*, 197, 972-991
- Teng, X., Chang, B. G., & Wu, K. S. (2021). The Role of financial flexibility on enterprise sustainable development during the COVID-19 crisis—A consideration of tangible assets. *Sustainability*, 13(3),1245.
- Tian, J., Coreynen, W., Matthyssens, P., & Shen, L. (2021). Platform-based servitization and business model adaptation by established manufacturers. *Technovation*.
- Tien, N.H., Anh, D.B.H. and Ngoc, N.M. (2020), “Corporate financial performance due to sustainable development in Vietnam”, *Corporate Social Responsibility and Environmental Management*, Vol. 27 No. 2, pp. 694-705.
- Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85(4), 411-427.
- Van der Stede, W. A., Young, S. M., & Chen, C. X. (2005). Assessing the quality of evidence in empirical management accounting research: The case of survey studies. *Accounting, Organizations and Society*, 30(7-8), 655-684.
- Venkatraman, N., & Ramanujam, V. (1987). Measurement of business economic performance: An examination of method convergence. *Journal of Management*, 13(1), 109-122.
- Wang, Q., Dou, J. and Jai, S. (2016) ‘A meta-analytic review of CSR and CFP: The moderating effect of contextual factors’, *Business & Society*, 55 (8), pp. 1083-1121
- Wang, Y., Lu, T., & Qiao, Y. (2021). The effect of air pollution on corporate social responsibility performance in high energy-consumption industry: Evidence from Chinese listed companies. *Journal of Cleaner Production*, 280, 124345.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.
- Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, 32(7-8), 757-788.
- Wuest, T., Romero, D., Cavuoto, L. A., & Megahed, F. M. (2020). Empowering the workforce in post-COVID19 smart manufacturing systems.
- Xie, X., Jia, Y., Meng, X. and Li, C. (2017), “Corporate social responsibility, customer satisfaction, and financial performance: the moderating effect of the institutional environment in two transition economies”, *Journal of Cleaner Production*, Vol. 150, pp. 26-39.
- Yang, L., Yaacob, Z. and Teh, T. (2017), “Does reputation mediate the relationship between corporate social responsibility and performance of SMEs in China”, *International Journal of Economics & Management*, Vol. 11 No. 2, pp. 335-354.
- Zhao, X., Wu, C., Chen, C. C., & Zhou, Z. (2022). The influence of corporate social responsibility on incumbent employees: A meta-analytic investigation of the mediating and moderating mechanisms. *Journal of Management*, 48(1), 114-146.
- Zhu, Q., Liu, J., & Lai, K. H. (2016). Corporate social responsibility practices and performance improvement among Chinese national state-owned enterprises. *International Journal of*

Production Economics, 171, 417–426.