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CSR, Risk Management Quality and Corporate Sustainable Performance: A Mediated Moderation of Corporate Performance and Environmental Uncertainty

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Abstract

This study explores the complex interactions that exist between corporate social responsibility (CSR), risk management quality, corporate sustainable performance (CSP), and the moderating role of environmental uncertainty. Grounded in resource-based view theory, a cross-sectional field survey was conducted based on a sample of 291 managers working in Indonesian state-owned enterprises (SOEs). The data set was analyzed through partial least square based structural equation modeling using SmartPLS software. The results show that CSR and risk management quality have a significant impact on CSP. Moreover, results revealed that corporate performance (CP) significantly mediates these relations. Environmental uncertainty was found a significant moderator between CP and CSP. The study adds to the corporate sustainability literature by clarifying the complex relationships between CSR, risk management, and sustainable performance in the context of Indonesian SOEs.

Keywords: State-owned enterprises, corporate social responsibility, corporate sustainable performance, risk management quality, environmental uncertainty, Indonesia.

1. Introduction

State-owned enterprises (SOEs) serve a variety of strategic purposes, including public services, balancing the capabilities of the huge private sector, and fostering the growth of startup companies and organizations (Jung & Yoo, 2023). The place of business of SOEs had to play a significant strategic role in the Indonesian economic system. Additionally, SOEs are an important source of state revenue in the form of various fees, taxes, profits, and privatization proceeds (Harun et al., 2023). Corporate sustainability has many definitions, but generally speaking, the idea entails a company's commitment to supporting sustainable economic growth while collaborating with workers, their relatives, neighbors, and society at large to improve people's quality of life for all stakeholders (Alsehaimi, 2022; Novitasari & Tarigan, 2022).

Nowadays, stakeholders and governments are putting more pressure on enterprises to take action on sustainability-related concerns (Pailodze et al., 2020; Sang et al., 2022). An enterprise must manage its operations ethically and environmentally friendly manner while pursuing an activity to gain a competitive edge in the age of globalized industry 4.0. This calls for an enterprise to be financially, socially, and environmentally sustainable. Success becomes dependent on effective communication. Managers can execute sustainability plans with suppliers, customers, and employees in addition to within the company by having an open dialogue with the board and communicating with diverse stakeholders (Beridze et al., 2020; Shahzad et al., 2020; Yilmaz et al., 2022).

The concept of sustainability has developed over time as a result of the triple-bottom-line analysis of economic viability, social duty, and environmental responsibility (Naeem et al., 2022). According to Indriastuti and Chariri (2021), sustainability performance (CSP) assesses how much a company incorporates economic, environmental, social, and governance factors into its operations and, ultimately, the effects these elements have on the company and society. Participation in initiatives that support sustainable development is being examined more and more as a source of competitive advantage for the company (Jung & Yoo, 2023). An important area of research examines whether companies that are seen as sustainable outperform or underperform companies that are seen differently. However, deeply rooted theoretically grounded research attempts are scarce in literature and current study attempts to bridge this research gap.

Corporate social responsibility has received a lot of attention recently from both the management and academic communities. Corporate social responsibility affects how businesses interact with their stakeholders and can boost business performance by influencing customer behavior (Malik et al., 2021). The relevance of corporate sustainability continues to rise. Although the term corporate sustainability has been defined in a variety of ways, it is generally understood to refer to an organization's commitment to sustainable economic development, as well as its cooperation with employees, their families, the local community, and society at large to enhance the quality of life for all stakeholders in an inclusive societal approach (Dewi & Edward Narayana, 2020; Lu et al., 2022).

Risk management quality was created in reaction to the rapid changes brought on by globalization and the regulatory pressure on firms to manage risk holistically. Due to a string of financial scandals, corporate fraud, rising risk complexity, and pressure from regulatory agencies, its significance has substantially expanded recently (Sang et al., 2022). An efficient risk management system is thought to improve financial reporting, assist the organization in achieving its business objectives, and as maintain its reputation. Risk management quality is essential to the management and success of any organization. Risk management quality is defined as "the process, effected by an entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives", according to Shahzad et al. (2020), the foremost authority on risk management quality. Yilmaz et al. (2022) state that the goal of implementing risk management quality in an organization is to increase business value by assisting senior management and the risk manager in identifying, monitoring, and managing the company's whole risk portfolio. Studies linking risk management quality with sustainable performance are scarce and require more attention from research scholars in this area due to its significance for the corporate sustainable performance of an enterprise.

According to Chabowski et al. (2019), environmental uncertainty refers to a situation that cannot be anticipated (such as changes in the climate or catastrophic weather) or the rate change that occurs in the marketplace (such as customer demands, competition, and technological advancements). This modification brought up fresh environmental uncertainties, or perceived environmental uncertainties (Gunarathne et al., 2021). The lack of knowledge about sustainable accounting and the swiftness of data on the environment as an issue limiting an action are challenges that every firm faces nowadays (Chowdhury et al., 2023).

The current study proposed moderation of environmental uncertainty in a complex theoretical framework. determines that CSR, risk management quality, and corporate performance and a mediated moderation model of companies in State-Owned Enterprises (SOEs) in Indonesia. Current research is novel to advance the field in literature as it is among the earliest studies on sustainable performance phenomenon. The present study is established and grounded on resource-based view theory. It is defined as "a company's unique combination of tangible and intangible resources, such as physical assets, intellectual property, human capital, and organizational capabilities, determine its ability to achieve sustainable competitive advantage and superior performance" (Herbohn et al., 2014). It holds that the absorption of specialized knowledge that is present in each individual and each firm's members, which forms the foundation of firms' capacities, serves as the primary function of an organization. The study aims to achieve the following objectives:1) Investigate the influence of CSR and RMQ and sustainable performance mediation link in the given framework. 2) Investigate the moderation of environmental uncertainty between corporate performance and sustainable corporate performance.

This research is based on the resource-based view (RBV) paradigm, which holds that an organization's distinctive resources and competencies sustain its competitive edge. Risk management and CSR are strategic assets that may boost an organization's success and sustainability. CSR activities meet ethical and social norms and boost reputation and stakeholder trust, which may provide a company with a competitive edge. Effective risk management rules reduce vulnerabilities and risks, protecting the organization's assets and operations. The RBV shows that CSR and risk management quality improve Corporate Sustainable Performance. Aligning CSR with values may boost long-term sustainability, attract top personnel, and drive innovation. Organizations can identify, analyze, and respond to risks with strong risk management systems, improving operational sustainability and resilience. The study also studies corporate performance CP as a mediator between CSR, risk management, and CSP. Financial, social, and environmental performance metrics help CSR and risk management projects succeed. This mediation path stresses integrating risk management and CSR into performance management and company strategy. The study also examines whether environmental uncertainty moderates the CP-CSP connection. Environmental uncertainty, or corporate complexity and unpredictability, may impair CSR and risk management efforts. To reduce rising risks and grasp new possibilities, firms may need to change their CSR and risk management strategies in uncertain times. This shows how sustainable management evolves.

The consequences of this study are substantial for business academics, practitioners, and SME management. First, it provides Indonesian state-owned firms with actionable data to improve risk management and corporate social responsibility, resulting in greater sustainability. The research helps SOE management create strategic initiatives that meet organizational goals and boost competitiveness by identifying CSP triggers and business performance as a mediating factor. The study offers practical advice for SMEs in similar situations to improve efficiency and effectiveness. Due to resource constraints and environmental uncertainties, SMEs must prioritize sustainable and resilient CSR and risk management efforts. The study also increases theoretical understanding of the complicated link between CSR, risk management, and sustainable performance. Experimentally verifying the resource-based standpoint theory framework promotes corporate sustainability rhetoric.

2. Literature Review

The resource-based viewpoint hypothesis underlies CSR, risk management, and company success. A Indonesian SOE-specific mediated moderation model is also examined. Resources and capabilities define an organization under the resource-based approach (Braam & Peeters, 2018). In this view, a company's unique assets determine its competitive advantage (Herbohn et al., 2014; Latan, 2018; Utami, 2019). The assets, capacities, people, processes, expertise, and other features of a firm that allow it to design and implement plans to increase its effectiveness and efficiency are called organizational resources, according to Sun and Price (2016). The factors of business resources to create sustained performance were also offered by Yilmaz et al. (2022). These resources are priceless, unique, uncommon, and incomparable. The strategy and corporate objectives are significantly impacted by these resources. External acquisition of these rare and special resources can help organizations perform better (Rachman, 2018; Younis & Sundarakani, 2020). Environmental experts have claimed that increases an organization's competitiveness and enhances its sustainable performance by adopting a resource-based view strategy. It does, however, also rely on pertinent and important organizational resources.

CSR efforts' effects on corporate performance have been extensively studied (Nirino et al., 2022; Safitri & Nani, 2021; Saira et al., 2021). CSR activities have been linked to firm profitability, return on investment, and market value. Many factors affect this favorable association (Walters et al., 2020). Corporations may boost their reputation and brand image through CSR. Through consistent ethical behavior, ecological sustainability, and social responsibility, organizations may build stakeholder trust. Employees are more engaged and dedicated when they believe their business cares about social and environmental concerns. Operational efficiency, innovation, and performance may improve (Naeem et al., 2022; Sun et al., 2016). CSR also facilitates investment and financial availability. Financial institutions and investors are increasingly considering ESG aspects. Companies with strong corporate social responsibility (CSR) are seen as safer and more attractive, which leads to better investment prospects and lower capital expenditures (Muhmad & Muhamad, 2021). Jung and Yoo (2023) examined how productivity affects financial performance and corporate social responsibility. CSR efforts boosted corporate efficiency and financial performance. Adu (2022) and Chowdhury et al. (2023) found that CSR actions boost financial performance. Their research showed that CSR-focused companies did not have higher stock market returns or financial stability. Malik et al. (2021) and Jung and Yoo (2023) examined customer behavior and corporate social responsibility (CSR) in addition to financial measures. Additionally, this study emphasizes how important corporate social responsibility (CSR) is in drawing and keeping top talent, promoting employee happiness, and ultimately enhancing overall business success. Thus, the following hypothesis is suggested:

> H_1: Corporate social responsibility significantly impacts on corporate performance.

According to Lu et al. (2022), there are numerous ways in which a strong risk management framework improves organizational performance. There is uncertainty regarding potential future events and/or their results that may materially affect the organization's objectives (Jha & Rangarajan, 2020). Risk management is a crucial component of ethical corporate conduct. Many organizations have engaged in it on a continuing, informal basis. Risk management has historically evolved as a professional and technical discipline in several important fields, including finance, health, security, medical, and scientific fields (Fitriana, 2022; Harun et al., 2023; Indriastuti & Chariri, 2021). Providers, creditors, workers, and other participants, in addition to the board of directors and shareholders, are interested in learning about an organization's risk. Since it reveals the consistency of the organization's operations and anticipated outcomes, the information is helpful to management and shareholders. Aigbedo's study used traded corporations to examine the connection between risk management practices and firm performance. Yilmaz et al. (2022) suggested that how risk management techniques affected financial results and disclosures related to corporate governance in Indonesia. Lu et al. (2022); Nirino et al. (2022) have examined the connection between the insurance industry's financial success and risk management strategies. Their conclusions show that long-term stability and higher profitability are correlated with efficient risk management. Beyond the insurance industry, research by Lu et al. (2022); Nirino et al. (2022) examines how risk management affects a company's market performance and valuation, emphasizing the relevance of strong risk reduction techniques in raising corporate value. Furthermore, this study investigates how risk management affects a company's overall governance structure. Thus, based on literature and theory support following hypothesis is suggested:

> H_2: Risk management quality significantly impacts corporate performance.

In financial, operational, and market terms, corporate performance measures how well a company has met its goals. The phrase "corporate social responsibility" refers to a company's voluntary efforts to incorporate social and environmental concerns into its operations and stakeholder relations. In addition to financial measures, corporate sustainability performance considers economic, environmental, and social impacts. Sustainable performance indicators include return on investment, profitability, carbon footprint, resource conservation, and employee well-being and community development (Muhmad & Muhamad, 2021; Nikolaou et al., 2019). CSR and business value were examined by Yilmaz et al. (2022) utilizing consumer transparency. CSR efforts enhanced shareholder value, with consumer awareness being a crucial factor. The meta-analysis investigated CSR and financial performance studies. Corporate social responsibility (CSR) was strongly correlated with financial performance, indicating that socially conscious corporations fared better. Naeem et al. (2022) found CSR improves competitiveness and long-term performance. Other research (Walters et al., 2020; Gunarathne et al., 2021; Naeem, 2022) have linked CSR policies to corporate performance. Social responsibility improves financial success and stakeholder interactions. In contrast, Lu et al. (2022), Herbohn et al. (2014), and Jha and Rangarajan (2020) examined risk management quality and business performance. This study found that risk management improves financial stability and market value. Hence, the following hypothesis is suggested:

> H_3: Corporate performance mediates the relationship between corporate social responsibility and corporate sustainable performance.

> H_4: Corporate performance mediates the relationship between risk management quality and corporate sustainable performance.

Corporate sustainable performance is built on the foundation of corporate performance. A business can create the funds required to engage in sustainable practices and projects by performing exceptional financial gains (Nirino et al., 2022). As demonstrated by Yilmaz et al. (2022), a company's financial performance has an impact on its long-term performance. This indicates that the company's financial performance, as determined by the return on assets, will improve if the adoption of green investment and CSR investment is successful. Companies may reduce possible disruptions, improve their reputation, and seize new market possibilities by managing environmental and social risks, enhancing resource efficiency, and cultivating constructive stakeholder relationships. Previous studies concluded that the secret to effective performance was the combination of sustainability with business procedures (Lu et al., 2022; Sang et al., 2022). According to Yilmaz et al. (2022), production businesses need to incorporate a range of capabilities, including human resources that improve the capability for variety. Major obstacles forced businesses to reevaluate and modernize their management strategies for sustainability. Sustainability considers factors like as the environment, the general health of employees, society, consumers, and other parties in addition to numbers and money (Altassan, 2023; Indriastuti & Chariri, 2021; Nirino et al., 2022). As a result, organizations are starting to focus more on people and adopting green practices. Therefore, sustainability entails the development and application of strategies to address societal and environmental problems. Sustainability initiatives are driven by the strategic integration of business performance measures, as highlighted by Yilmaz et al. (2022). These works promote a symbiotic link where greater corporate performance positively promotes sustainable practices, arguing that a company's financial success and sustainability are connected. Some of the recent studies (i.e. Shahzad et al. (2020); Yilmaz et al. (2022); Yusrizal (2021) explored the beneficial relationship between a company's capacity to adopt and sustain sustainable practices and its superior financial performance. Thus, based on literature support following hypothesis is suggested:

> H_5: Corporate performance has a significant impact on corporate sustainable performance.

According to Yilmaz et al. (2022), environmental uncertainty refers to a situation that cannot be anticipated (such as warming temperatures or catastrophes caused by nature) or the rate of change in the market (such as customer demands, competition, and technological advancements). These circumstances bring fresh environmental uncertainties. The lack of knowledge about green accounting and the speed of environmental information as a factor that limits an action are challenges that every firm faces today. Because it offers some options and solutions, complex data can assist managers in making better decisions while minimizing the impact on the environment. Further study (Shahzad et al., 2020; Yilmaz et al., 2022; Yusrizal, 2021) has studied how external environmental elements affect business sustainability programs. According to these research, corporate performance may affect long-term results differently in unpredictable and dynamic contexts. According to studies on the contextual nature of environmental uncertainty (Chabowski et al. (2019); Jung and Yoo (2023); Sun and Price (2016)), organizations facing greater uncertainty may need to consciously change their sustainability strategies to remain resilient. The following studies

(Lu et al., 2022; Herbohn et al., 2014; Jha and Rangarajan, 2020) examined the need for environmentally volatile organizations to rethink their corporate performance plans to incorporate sustainable practices. Thus, environmental uncertainty factors can dramatically impact the logical association between corporate sustainability performance and commercial success. Hence, the following hypothesis is suggested:

> H_6: Environmental uncertainty moderates the relationship between corporate performance and corporate sustainable performance.

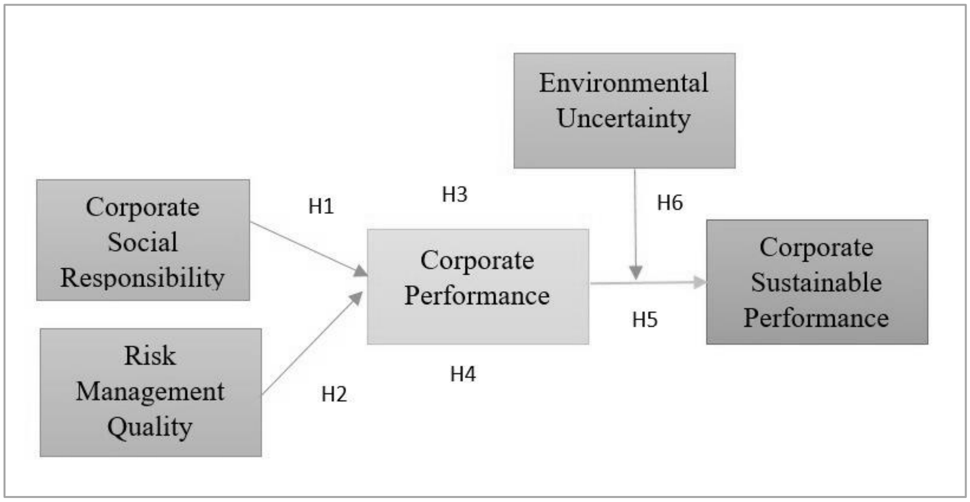

Figure 1: Conceptual Framework

3. Research Methodology

This study's main goal is to assess the factors that affect the corporate sustainable performance of Indonesia's State-owned enterprises (SOEs), with a particular emphasis on the functions that risk management effectiveness and corporate social responsibility as presented in Figure 1. The study sought to fill a knowledge gap and increase relationship coverage by integrating environmental uncertainty as a moderating variable and company success as a mediating variable. Quantitative research was utilized to validate theories with actual data. Using a cross-sectional survey-based approach, modified questionnaires were distributed to Indonesian SOE management personnel, with a focus on quantitative data. The managers employed by Indonesian State-Owned Enterprises companies made up the study's target population. A solid response rate was ensured by distributing 350 questionnaires to the selected sample size of 291 participants. The SOEs operating in Bandung and Jakarta were contacted to seek their willingness to participate in this study. For this objective, an official letter of endorsement from the author's university was attached to the requested email. Those who voluntarily expressed their consent to join were visited at different intervals and access to their managerial staff was obtained to fill up the survey. Convenience sampling was utilized to choose participants according to their availability and accessibility within the target group. With customized questionnaires intended to assess factors about risk management quality, corporate social responsibility, corporate performance, and corporate sustainable performance, the main source of data was the participants themselves. A predetermined 5-point Likert scale, spanning from strongly agree to strongly disagree, was asked of the participants to receive their responses. Physical surveys allowed participants to complete them at their convenience. The data was analyzed using SMART PLS (Partial Least Squares), a structural equation modeling statistical program. SMART PLS assessed the measurement model, predictor variables' impacts on mediator and dependent variables, and data reliability. The investigation sought to demonstrate how risk management, corporate social responsibility, commercial performance, and company sustainability are linked. Smart PLS outperforms covariance-based SEM in many ways. Smart PLS is suitable for experimental or sophisticated theoretical frameworks because to its reduced sample size sensitivity and lack of distributional assumptions. This approach may examine data from certain sectors or domains like Indonesian SOEs when variable correlations are unknown or sample size is minimal. Latent component and linkage researchers benefit from Smart PLS's simultaneous measurement and structural model estimation. Smart PLS helps researchers understand Indonesian SOEs' complex CSR, risk management, and sustainable performance relationships.

3.1 Measurements

The study's data has been collected through a questionnaire. The questionnaire included demographics, variables, and instructions. The recommended study paradigm was reviewed and hypotheses tested utilizing respondents' perspectives and experiences on CSR, risk management quality, firm performance, environmental uncertainty, and sustainable work performance. The questionnaire begins with background and instructions. The eight questions measure independent CSR (Devie et al. 2020). The second independent variable is risk management quality. It is measured using a modified Disemadi 4-item scale (Disemadi, 2019). Four factors assessed corporate moderating efficacy (Awanis and Nasih, 2020). Moderators rated environmental uncertainty using seven questions (Chabowski et al. 2019). Finally, corporate sustainability was measured using a scale based on seven items (Wijethilake, 2017). All measurements were made on a 5-point Likert scale with 1 strongly opposing and 5 strongly agreeing.

4. Data Analysis

4.1 Measurement Model

A measurement model in PLS-SEM is measured through confirmatory factor analysis (CFA) model. We follow Hair et al. (2019) measurement model methodology to examine the relationship between observable variables and latent components.

4.1.1 Composite Reliability / Cronbach's Alpha

The validity and reliability of scales were examined using PLS-SEM. The measuring model can show how visible variables relate to their underlying elements. Cronbach's alpha and composite reliability are used to evaluate internal measure consistency. Examples include comparing and contrasting quantifiable variables. Psychometrics uses it to assess measuring instrument validity and consistency. Both have the same aims, but their computation and interpretation methodologies differ. Table 2 shows composite reliability, Cronbach's alpha, and AVE.

Table 1: Composite reliability, Cronbach's Alpha and AVE values

Constructs/Items	CA	Rho-A	CR	AVE
Corporate Performance	0.759	0.760	0.862	0.675
Corporate Sustainable Performance	0.876	0.886	0.906	0.619
Corporate Social Responsibility	0.928	0.931	0.940	0.664
Environmental Uncertainty	0.887	0.888	0.912	0.596
Risk Management Quality	0.842	0.843	0.895	0.680

Note: CR = Composite Reliability; AVE = Average Variance Extracted; CA = Cronbach's Alpha"

4.1.2 Discriminant Validity (HTMT)

The term "discriminant validity" in statistical methods describes the ability of a measurement tool, such as a scale or questionnaire, to measure numerous constructs or components that are theoretically intended to be distinct from one another. It looks at whether certain latent constructs associated with the observed variables in a measurement model are more strongly correlated with those constructs than with other constructs in the model. Discriminant validity, in particular, examines the existence of relationships between variables that, on paper, shouldn't be related to one another (Cepeda-Carrión et al., 2022). Research was done for structural route analysis when it was determined that all criteria for the variables' validity and reliability had been satisfied. The fact that the HTMT scores were under 1 served to further demonstrate the discriminant validity. Table 2 shows how useful HTMT is.

Table 2: Discriminant Validity

	CP	CSP	CSR	EU	RMQ
Corporate Performance	0.822				
Corporate Sustainable Performance	0.726	0.787			
Corporate Social Responsibility	-0.620	-0.672	0.815		
Environmental Uncertainty	0.717	0.695	-0.683	0.772	
Risk Management Quality	0.587	0.682	-0.545	0.720	0.825

4.3 Structural Equation Model

As explained in Figure 3 below, the structural model route coefficients supporting the hypothesized relationships were statistically determined using the PLS-SEM bootstrapping approach. A structural equation model (SEM), a statistical modeling technique, is used to analyze complex relationships between independent variables and dependent variables. It is an effective technique that simultaneously examines measurement models and structural models using components of route analysis, regression analysis, and component analysis (Becker et al., 2023).

4.3.1 R Square

R-squared (R^2) measures how much variance in a regression model's dependent variable is explained by the independent variables (Hair et al., 2019). It's often used to evaluate a regression model's fit and independent variable prediction. A regression analysis predicts the dependent variable using one or more independent variables. As seen in Table 4, the R-square statistic illustrates how well independent factors explain dependent variable variability. Zero indicates no explanatory power for the independent variables, and 1 indicates entire explanatory power for the independent factors' influence on the dependent variable's variability. The corporate performance value of R square was 0.473, and the corporate sustainable performance value of R square was 0.818 respectively.

Table 3: Assessment of R Square

	R^2
Corporate Performance	0.473
Corporate Sustainable Performance	0.818

4.3.2 Direct Relation

Direct analysis is "a technique used in structural equation modeling (SEM) to look at the direct correlations between variables in a theoretical model" (Legate et al., 2023). It focuses on the direct impact of independent variables on dependent variables rather than mediating or indirect effects through intermediary factors. The results show that the relationship between corporate social responsibility and corporate performance is significant and negative (β = -0.426, t = 6.964, p = 0.000). CP reduces when CSR efforts rise. Given the common link of CSR with positive organizational results, this study may seem contradictory. This might indicate that corporate social responsibility (CSR) activities may slow performance in other areas or that CSR-focused organizations may favor long-term sustainability above short-term profits. The results show that the relationship between risk management quality and corporate performance is significant (β = 0.355, t = 5.556, p = 0.000). The observed result aligns with expectations, as effective risk management protocols are expected to enhance corporate performance by mitigating potential losses and optimizing operational efficiency. The relationship between corporate performance and corporate sustainable performance has a significant impact on each other (β = 0.170, t = 2.281, p = 0.023). This suggests that corporate performance increases the chance of long-term success. Given that financially successful organizations may have the means and desire to engage in sustainability projects, outstanding corporate performance is a catalyst for sustainable business practices. Hence all direct hypotheses were accepted as presented in Table 4 below.

Table 4: Direct Relations

	Original Sample	**T Statistic**	**P Values**	**Decision**
CSR -> CP	-0.426	6.964	0.000	Supported
RMQ -> CP	0.355	5.556	0.000	Supported
CP -> CSP	0.170	2.281	0.023	Supported

CP = Corporate performance, CSP = Corporate Sustainable Performance,

CSR= Corporate Social Responsibility, RMQ= Risk Management Quality

4.3.3 Mediating Effect

A mediating effect, also known as an indirect impact, occurs when a mediator or intermediary variable influences or mediates the link between an independent variable and a dependent variable. In other words, the mediating variable helps explain how or why the independent variable affects the dependent variable (Hair Jr et al., 2021). Table 6 shows that corporate performance as a mediating variable, the association between corporate social responsibility and corporate sustainable performance remained significant (β = -0. 073, t = 0.046, p = 0.041, respectively). CP connects CSR with CSP as an intermediate. This suggests that while corporate social responsibility (CSR) initiatives may initially hurt financial performance, efficient financial resources, and operation management can lead to long-term success. Table 5 shows that corporate performance as a mediating variable, the association between corporate social responsibility and corporate sustainable performance remained significant (β = 0. 060, t = 2.111, p = 0.035). This indicates that companies with strong risk management methods are more likely to succeed financially. The results indicate that CP mediates the links between CSR, RMQ, and CSP, emphasizing the relevance of corporate performance in encouraging environmentally responsible business activity. Hence both mediation hypotheses were accepted.

Table 5: Mediating Effect

	Original Sample (O)	t-Statistic	P-Values
CSR -> CP -> CSP	-0.073	2.046	0.041
RMQ -> CP -> CSP	0.060	2.111	0.035

CP= Corporate performance, CSP= Corporate Sustainable Performance

CSR= Corporate Social Responsibility, RMQ= Risk Management Quality

4.3.4 Moderating Effect

According to Legate et al. (2023), a moderator variable is usually used "when there is an inconsistent or weak link between the independent and dependent variables". There are more methods for measuring moderating effects, such as the three-phase hegemonic regression approach, which suffers from the need to manually generate interaction terms utilizing features, converts, and calculates. The information in the table below offers support for the notion. A moderator third variable alters the link between an independent variable and a dependent variable, which is known as a moderation effect or an interaction effect. In other words, the degree or presence of the moderator variable dictates the direction of the relationship between the independent and dependent variables. Table 7 shows that the moderating role of environmental uncertainty between corporate performance and corporate sustainable performance is significant (β = -0.058, t = 2.007, p = 0.045). Hence H4 is accepted. Increased environmental uncertainty reduces the CSP effect with a negative B-value. Simply put, amid volatile external environments, firms may struggle to maintain or improve long-term success. This study emphasizes the importance of environmental elements in sustainability program evaluation. It also suggests that companies in more unpredictable situations may need to change their strategies to survive.

Table 6: Moderating Effect

	B-value	St. Dev	t-value	P-value
Moderating Effect -> CSP	-0.058	0.029	2.007	0.045

CSP = Corporate Sustainable Performance

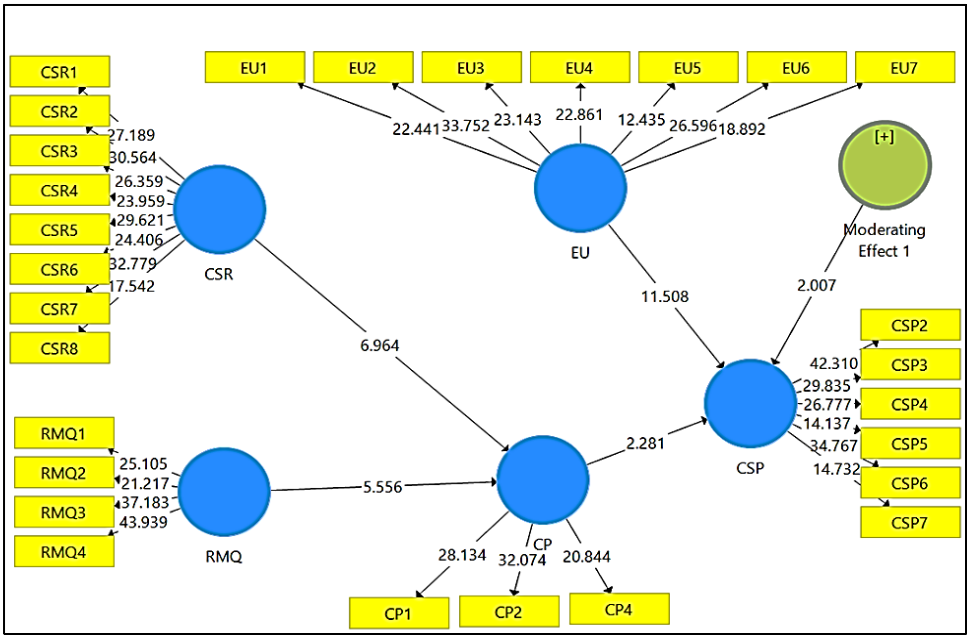

Figure 2: Assessment of Bootstrapping

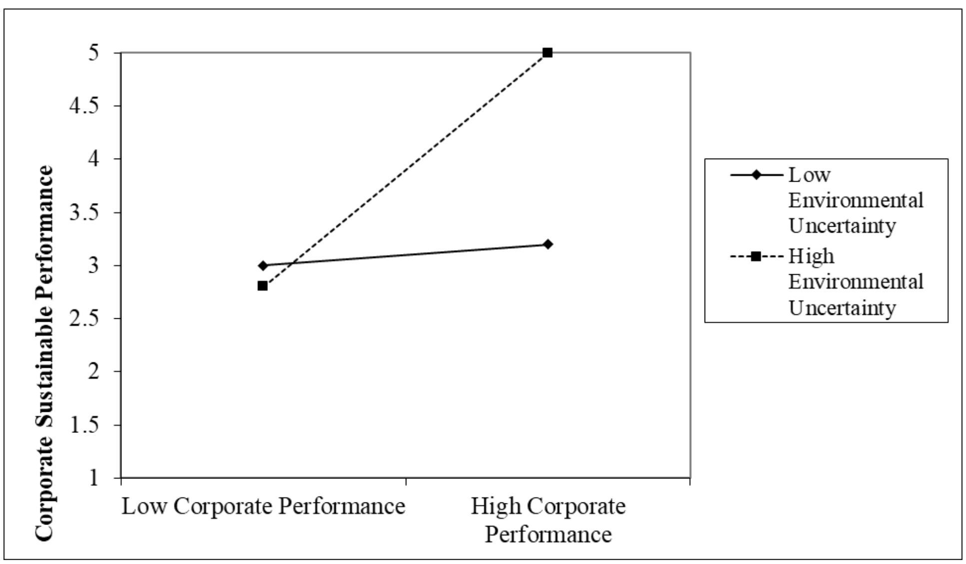

Figure 2: Moderation Graph

Although the slopes of the correlations are influenced by the moderation effect, the slopes in Figure 3 mentioned in Graph show significance for low, moderate, and high levels of findings (Dash & Paul, 2021). In other words, environmental uncertainty is low when low corporate performance and corporate sustainable performance. On the other side, environmental uncertainty is high when high corporate performance and corporate sustainable performance. The graph shows that more improvement in the association between corporate performance and corporate sustainable performance through environmental uncertainty.

5. Discussion

State-owned enterprises are subject to obligations that go beyond those that are based solely on financial performance and must also take their environmental and social responsibilities into account. The results show that corporate social responsibility significant but negative impact on corporate performance (β = -0.426, t = 6.964, p = 0.000). Corporate social responsibility is one area associated with sustainability that branding experts pay particular attention to since it can create a strong connection between business performance and risk management. Even though corporate social responsibility is typically thought to have good benefits on company performance and reputation, it is feasible that it could have adverse implications in some situations (Nausheen et al., 2022; Jung & Yoo, 2023). Financial investments are frequently required to carry out corporate social responsibility objectives, such as supporting charity organizations, implementing sustainable practices, or funding community projects. These costs may have an immediate negative effect on a company's profitability and financial performance, which may hurt shareholder value and overall corporate success.

Risk management quality significant and positive impact on corporate performance (β = 0.355, t = 5.556, p = 0.000). By identifying, evaluating, and mitigating potential risks, businesses are better positioned to protect their operations and make informed decisions. Organizations can foresee and respond to financial risks including market crashes, financial default, fluctuations in currencies, or operational interruptions with the use of effective risk management practices (Holzner & Wagner, 2022). Businesses can safeguard their financial resources, preserve stability, and eventually improve their performance by putting risk reduction techniques into practice.

In addition to this, findings of H4 show that corporate performance mediates the relationship between corporate social responsibility, risk management quality, and corporate sustainable performance. CSR programs address social and environmental challenges through a variety of methods. Corporate social responsibility efforts demonstrate ethical behaviour, environmental sustainability, and stakeholder protection. These techniques may help a firm succeed by improving stakeholder relationships, reputation, consumer loyalty, and hiring and keeping top talent. Strong performance drives long-term value generation and development, ensuring a company's prosperity. Risk management efficacy determines an organization's ability to handle uncertainty and risk (Latan et al., 2018). An effective risk management framework helps firms identify, analyze, and manage risks. Proactive risk management protects brands, finances, and regulatory compliance. Risk management improves decision-making, reduces costs, and boosts efficiency, which boosts business success. This helps achieve long-term performance goals.

Current performance greatly affects organizations' long-term performance. Performance affects a company's longevity. A company's profitability, liquidity, and shareholder value must be consistent and finance long-term projects. Sustainable efforts like employee health programs, green technologies, and renewable energy require upfront expenditures. A financially stable firm may enhance sustainable performance and maintain long-term existence by boosting resource allocation to these efforts. Additionally, operational performance is crucial to long-term success. Sustainability requires efficient resource management, waste minimization, supply chain optimization, and environmentally friendly production. Effective operational management boosts production, cuts expenses, and lessens the company's environmental impact. By improving operational efficiency, companies may boost their sustainability and environmental impact.

Environmental uncertainty considerably influences the corporate performance-sustainable corporate performance link. Long-term corporate performance may suffer in environments with high external uncertainty, such as fluctuating markets, changing regulatory frameworks, or unexpected sociopolitical variables. Businesses in unpredictable contexts may struggle to succeed due to external expectations and dynamics (Chabowski et al., 2019). The importance of a company's environmental adaptability in measuring its long-term performance has grown. Strong corporate performance helps companies adapt and thrive in volatile environments. They have the competence, financial stability, operational efficacy, and strategic agility to overcome obstacles and capitalize on opportunities. These companies may fund sustainable practices, innovation, and R&D. This helps companies stay competitive and sustainable during volatility.

Overall performance affects corporate sustainability. Performance greatly affects an organization's sustainability. A company's profitability, liquidity, and shareholder value must be stable and provide the necessary funds for sustainable efforts. Green technology, employee health programs, and renewable energy sources sometimes need early investments. Financial stability allows a corporation to allocate resources to these efforts, ensuring their long-term viability and success. Sustainable performance requires operational performance (Dewi & Edward Narayana, 2020). Sustainability requires resource management, waste reduction, supply chain optimization, and green production. Improved operational management cuts costs, enhances productivity, and decreases the company's environmental effect. Businesses must continuously improve operational performance to benefit sustainability and the environment.

Environmental uncertainty considerably moderates the association between sustainable corporate performance and corporate performance. Corporate success may have less impact on sustained performance under uncertain external environments such rapidly changing regulatory frameworks, variable market circumstances, or unexpected sociopolitical events. Businesses in high-uncertainty contexts struggle to achieve sustained success due to external expectations and dynamics (Chabowski et al., 2019). A company's capacity to solve environmental issues is increasingly determining its sustainable success. Outstanding corporate performance helps companies manage and capitalize on opportunities in uncertain times. Their financial stability, effective operations, and strategic agility allow them to overcome obstacles and exploit opportunities. These companies can fund sustainability, innovation, and R&D. This endowment gives them an edge and allows them to function sustainably during unpredictable times.

5.1 Implications of Study

This research stresses the importance of environmental and social factors in company strategy. It suggests that corporations, especially state-owned ones, should participate in CSR activities to improve performance. Effective risk management and corporate success are examined in this study. This shows that effective risk management might boost an organization's performance. According to this research, companies, especially SOEs, should emphasize excellent risk management systems and procedures to reduce risks and improve performance. It suggests that risk management and CSR can regulate the link between state-owned firms and business performance. Given these mediating effects, politicians and business leaders may use CSR and risk management to boost company performance. Indonesian SOEs are the focus of the research. The findings affect these businesses' management and regulation. It recommends SOEs to focus risk management and CSR initiatives to improve performance and social responsibility. These findings may help policymakers create ethical state-owned enterprise policies.

This study examines CSR, risk management quality, CP, and CSP in Indonesian state-owned firms to support the resource-based view (RBV) hypothesis. Through the efficient use of rare, precious, and unique resources, RBV claims that businesses improve performance and gain a competitive edge. The study supports the RBV by showing that CSR and RMQ are strategic resources that affect organization performance and long-term results. These efforts improve the RBV's reputation, stakeholder relations, and operational resilience, along with its focus on unique resources as a competitive advantage. As a link between CSR/RMQ and CSP, CP supports RBV's assertions. RBV believes that resources improve corporate success, enabling sustainability and long-term effects. The research showed that financially successful firms may dedicate more resources to sustainability, emphasizing the importance of resources. This study explores environmental uncertainty as a CP-CSP mediating factor to expand RBV's results. RBV acknowledges that external influences affect an organization's resources and competitiveness. The findings imply environmental unpredictability affects financial performance and long-term effects. This shows how organizations struggle in unexpected situations and supports the resource-based advantage framework's focus on external variables. Theory shows how the research advances RBV theory and informs strategic resource management studies that promote sustainable business practices. Using empirical data from Indonesian state-owned firms, we can understand how CSR, RMQ, CP, and CSP interact to improve competitiveness and commercial success.

5.2 Limitations of Study

Study limitations should be considered. The study's limited sample size may limit its relevance and generalizability outside Indonesian SOEs. Sample size and variety may increase external validity and reliability. The study's focus on Indonesian SOEs may limit its applicability to other privately held companies or SOEs. Further study on a larger range of nations and enterprises may help us understand the link between corporate risk management, CSR, and business performance. Exclusive SOE involvement in the probe may skew the sample. Customer, investor, and government views may have been disregarded. This limitation may limit the study's comprehensiveness. Quantitative methodologies may hinder knowledge, notably in risk management, corporate social responsibility, and economic performance motives, experiences, and attitudes. Qualitative approaches like interviews and focus groups can help you comprehend people's viewpoints. The cross-sectional research approach limits causal links when data is collected at one time. Longitudinal or experimental methods can help explain the complex relationships between corporate social responsibility, risk management, and commercial performance. Questionnaires may also introduce response biases and make it difficult to properly understand some aspects. Interviews or observations may enhance survey results and help explain the topic. Future study may use more advanced data analysis methods and add concepts to better understand CSP, risk management quality, CSR, and CP. Future study may use LCA or LPA to identify organizational subgroups by CSR, RMQ, CP, and CSP. Heterogeneity patterns in variable interactions can help academics understand industry sustainability and strategic risk management. Dynamic panel data analysis, especially the Arellano-Bond estimator, can study CSR, RMQ, CP, and CSP interactions' temporal dynamics by reducing endogeneity. This method may yield more reliable causal dynamics and linkages evidence. Scholars may also explore sophisticated moderation and mediation models with many mediators and moderators. Stakeholder involvement, organizational culture, and creativity affect CSR, RMQ, CP, and CSP. Understanding the foundations of long-term success may improve. Bayesian structural equation modeling (BSEM) can handle complex networks and parameter estimation uncertainty. Bayesian approaches address latent concept ambiguity, model misspecification, and measurement error, making findings more reliable and resilient. To understand sustainable performance, future research should include governance, social, and environmental (ESG) issues. Multidimensional data can be analyzed using advanced statistical methods or composite indices.

5.3 Conclusion

A mediated moderation model and resource-based perspective theory were used to study CSR, risk management effectiveness, and corporate performance in Indonesian SOEs. The study sheds light on SOE interactions in this environmental case. CSR initiatives may increase business performance, highlighting the relevance of social and environmental factors in firm strategy, especially for state-owned enterprises. Research shows that excellent risk management practices improve company performance, highlighting the necessity for robust risk management systems and processes. The paper also develops a unique mediated moderation model that shows how CSR and risk management might moderate the SOE-company success link. The study shows that CSR and risk management may improve business performance and competitiveness by adopting the resource-based worldview philosophy. These views on Indonesian SOE management and administration emphasize the need of risk management and CSR to meet social commitments and improve performance.

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REFERENCES

Adu, D. A. (2022). Sustainable banking initiatives, environmental disclosure, and financial performance: The moderating impact of corporate governance mechanisms. *Business Strategy and the Environment*, 31(5), 2365-2399.

Alsehaimi, A. (2022). The role of the discipline of social work in protecting the environment from pollution in Saudi Arabia. *Pakistan Journal of Life & Social Sciences*, 20(2), 294-312.

Altassan, M. A. (2023). Understanding the Role of Green Organization Culture and Innovation between Green HRM Practices and Environmental Performance of SMEs in Saudi Arabia. *Pakistan Journal of Life & Social Sciences*, 21(2), 698-715.

Awanis, G., & Nasih, M. (2020). Corporate performance, political connection, family firms and CEO turnover in Indonesia. *Journal of Security and Sustainability Issues*, 9, 171-185.

Becker, J.-M., Cheah, J.-H., Gholamzade, R., Ringle, C. M., & Sarstedt, M. (2023). PLS-SEM's most wanted guidance. *International Journal of Contemporary Hospitality Management*, 35(1), 321-346.

Beridze, N., & Janelidze, G. (2020). Organizing Decision-Making Support System Based Multi-Dimensional Analysis of the Educational Process Data. *Journal of ICT, Design, Engineering and Technological Science*, 4(1), 1-5.

Braam, G., & Peeters, R. (2018). Corporate sustainability performance and assurance on sustainability reports: Diffusion of accounting practices in the realm of sustainable development. *Corporate Social Responsibility and Environmental Management*, 25(2), 164-181.

Cepeda-Carrión, G., Hair, J. F., Ringle, C. M., Roldán, J. L., & García-Fernández, J. (2022). Guest editorial: Sports management research using partial least squares structural equation modeling (PLS-SEM). *International Journal of Sports Marketing and Sponsorship*, 23(2), 229-240.

Chabowski, B., Huang, S. X., & Sun, L. (2019). Environmental uncertainty and corporate social responsibility. *International Journal of Business and Systems Research*, 13(3), 364-389.

Chowdhury, S. B., DasGupta, R., Choudhury, B. K., & Sen, N. (2023). Evolving alliance between corporate environmental performance and financial performance: A bibliometric analysis and systematic literature review. *Business and Society Review*, 128(1), 95-131.

Dash, G., & Paul, J. (2021). CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting. *Technological Forecasting and Social Change*, 173, 121092.

Devie, D., Liman, L. P., Tarigan, J., & Jie, F. (2020). Corporate social responsibility, financial performance and risk in Indonesian natural resources industry. *Social Responsibility Journal*, 16(1), 73-90.

Dewi, P. P., & Edward Narayana, I. (2020). Implementasi Green Accounting, Profitabilitas dan Corporate Social Responsibility pada Nilai Perusahaan. *E-Jurnal Akuntansi*, 30(12), 3252.

Disemadi, H. S. (2019). Risk Management In The Provision Of People's Business Credit As Implementation Of Prudential Principles. *Diponegoro Law Review*, 4(2), 194-208.

Fitriana, R. (2022). Impact of tax avoidance and resource & development outlay on financial performance of the firms from non-financial sector of Pakistan. *Journal of Administrative and Business Studies*, 8(1), 15-28.

Gunarathne, A. N., Lee, K. H., & Hitigala Kaluarachchilage, P. K. (2021). Institutional pressures, environmental management strategy, and organizational performance: The role of environmental management accounting. *Business Strategy and the Environment*, 30(2), 825-839.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. In. Switzerland Springer Nature.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.

Harun, M. D., Hogset, H., & Mwesiumo, D. (2023). Dynamic capabilities and sustainability performance: Exploring the moderating role of environmental dynamism in the Norwegian fishing industry. Sustainable Development, 31(2), 2636-2655. https://doi.org/10.1002/sd.2536

Herbohn, K., Walker, J., & Loo, H. Y. M. (2014). Corporate social responsibility: The link between sustainability disclosure and sustainability performance. *Abacus: A Journal of Accounting, Finance and Business Studies*, 50(4), 422-459.

Holzner, B., & Wagner, M. (2022). Linking levels of green innovation with profitability under environmental uncertainty: An empirical study. *Journal of Cleaner Production*, 378, 134438.

Indriastuti, M., & Chariri, A. (2021). The role of green investment and corporate social responsibility investment on sustainable performance. *Cogent Business & Management*, 8(1), 1960120.

Jha, M. K., & Rangarajan, K. (2020). Analysis of corporate sustainability performance and corporate financial performance causal linkage in the Indian context. *Asian Journal of Sustainability and Social Responsibility*, 5(1), 1-30.

Jung, Y. L., & Yoo, H. S. (2023). Environmental, social, and governance activities and firm performance: Global evidence and the moderating effect of market competition. *Corporate Social Responsibility and Environmental Management*, 30(6), 2830-2839.

Latan, H., Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Wamba, S. F., & Shahbaz, M. (2018). Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. *Journal of Cleaner Production*, 180, 297-306.

Legate, A. E., Hair Jr, J. F., Chretien, J. L., & Risher, J. J. (2023). PLS-SEM: Prediction-oriented solutions for HRD researchers. *Human Resource Development Quarterly*, 34(1), 91-109.

Lu, H., Liu, X., & Falkenberg, L. (2022). Investigating the impact of corporate social responsibility (CSR) on risk management practices. *Business & Society*, 61(2), 496-534.

Malik, S., Mughal, Y., Azam, T., Cao, Y., Wan, Z., & Zhu, H. (2021). Corporate social responsibility, green human resources management, and sustainable performance: is organizational citizenship behavior towards environment the missing link? *Sustainability* 13(3), 1044.

Muhmad, S. N., & Muhamad, R. (2021). Sustainable business practices and financial performance during pre-and post-SDG adoption periods: A systematic review. *Journal of Sustainable Finance & Investment*, 11(4), 291-309.

Naeem, M. A., Karim, S., Mohd Nor, S., & Ismail, R. (2022). Sustainable corporate governance and gender diversity on corporate boards: evidence from COVID-19. Economic research-*Ekonomska istraživanja*, 35(1), 5824-5842.

Nausheen, H., Mahmood, Y., Imran, M., & Ahmad, Z. (2022). Impact of Corporate Social Responsibility on Value Creation: The Mediating Role of Innovative Performance. Journal of Management Practices, *Humanities and Social Sciences*, 6(4), 92-103.

Nikolaou, E., Papavasileiou, V., Andreadakis, N., Xanthacou, Y., Matzanos, D., Stefoudi, F., & Kaila, M. (2019). The contribution of women in local sustainable development. *Journal of Advances in Humanities and Social Sciences*, 5(2), 97-105.

Nirino, N., Battisti, E., Ferraris, A., Dell'Atti, S., & Briamonte, M. F. (2022). How and when corporate social performance reduces firm risk? The moderating role of corporate governance. *Corporate Social Responsibility and Environmental Management*, 29(6), 1995-2005.

Novitasari, M., & Tarigan, Z. J. H. (2022). The role of green innovation in the effect of corporate social responsibility on firm performance. *Economies*, 10(5), 117.

Pailodze, N., Kutateladze, R., & Dzagnidze, T. (2020). Formation of organizational forms of internal control and audit. Journal of Management Practices, *Humanities and Social Sciences*, 4(2), 50-54.

Rachman, L. M. (2018). Technical development to assess soil health using soil health index in Indonesia. *Journal of Applied and Physical Sciences,* 4(3), 79-85.

Safitri, V. A. D., & Nani, D. A. (2021). Does Good Corporate Governance and Eco–Efficiency Really Contribute To Firm Value? an Empirical Study in Indonesian State-Owned Enterprises (Soes). *Akuntabilitas*, 15(1), 73-88.

Saira, S., Tayyab, M., Hafeez, M., & Cheema, K. R. (2021). The influence of ant fragility and cross-cultural adapt-ability on employee engagement: The moderated medi-ation role of perceived insider status. *Journal of Administrative and Business Studies*, 7(1), 24-42.

Sang, M., Zhang, Y., Ye, K., & Jiang, W. (2022). Moderating effects of internationalization between corporate social responsibility and financial performance: The case of construction firms. *Buildings,* 12(2), 185.

Shahzad, M., Qu, Y., Zafar, A. U., Rehman, S. U., & Islam, T. (2020). Exploring the influence of knowledge management process on corporate sustainable performance through green innovation. *Journal of Knowledge Management,* 24(9), 2079-2106.

Sun, W., & Price, J. M. (2016). The impact of environmental uncertainty on increasing customer satisfaction through corporate social responsibility. *European Journal of Marketing*, 50(7/8), 1209-1238.

Sun, W., & Price, J. M. (2016). The impact of environmental uncertainty on increasing customer satisfaction through corporate social responsibility. *European Journal of Marketing*, 50(7/8), 1209-1238.

Utami, C. F. (2019). The innovation of 5G in on-the-go FMCG's food sector: Manufacturing's sustained competitive advantage. *Journal of Advances in Technology and Engineering Research*, 5(4), 159-173.

Walters, B., Muriithi, S., & Gilley, O. (2020). Corporate social responsibility engagement, economic policy uncertainty, and firm financial performance. *Journal of Business Strategies*, 37(2), 1-21.

Wijethilake, C. (2017). Proactive sustainability strategy and corporate sustainability performance: The mediating effect of sustainability control systems. *Journal of Environmental Management*, 196, 569-582.

Yilmaz, M. K., Aksoy, M., & Khan, A. (2022). Moderating role of corporate governance and ownership structure on the relationship of corporate sustainability performance and dividend policy. *Journal of Sustainable Finance & Investment*, 1-30, [Published online: 19 Jul 2022].

Younis, H., & Sundarakani, B. (2020). The impact of firm size, firm age and environmental management certification on the relationship between green supply chain practices and corporate performance. *Benchmarking: An International Journal*, 27(1), 319-346.

Yusrizal, M. (2021). State-Owned Enterprise Partnership Program As A Form Of Corporate Social Responsibility To Small And Medium Enterprises. *Randwick International of Social Science Journal*, 2(4), 535-545.