# DOES GREEN CORPORATE SOCIAL RESPONSIBILITY STIMULATE INNOVATION IN SMALL AND MEDIUM-SIZED ENTERPRISES? THE IMPACT OF STAKEHOLDER ENGAGEMENT AND FIRM SIZE

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The growing global trend towards sustainable development has prompted businesses to adopt sustainable business strategies that prioritize environmental responsibility. The integration of green CSR practices into business strategies is a crucial move toward sustainability, which theoretically fosters innovation by encouraging adaptation to environmental challenges. Given the limited research available on how green CSR effectively drives innovation, this study aims to explore the role of stakeholder engagement and firm size in this phenomenon. The SMEs in the Anuradhapura District of Sri Lanka are chosen for the study since the unique economic, social, cultural and environmental characteristics of the Anuradhapura District necessitate businesses to adopt green CSR practices to a greater extent. A sample of 382 SMEs were surveyed for data collection by distributing a self-administered questionnaire to their owners. The analysis was conducted using the partial least square structural equation modeling technique. The empirical results show that green CSR has a direct positive influence on innovation performance with a smaller effect size. However, the mediation analysis reveals that SMEs' stakeholder engagement positively mediates the positive association between their green CSR initiatives and innovative performance with a moderate to larger effect size. Accordingly, the SMEs engaged in green CSR practices tend to be more innovative through their engagement with stakeholders. Therefore, consistent with the stakeholder theory, it can be inferred that the innovative performance of SMEs is mainly enhanced when green CSR initiatives lead to a greater stakeholder engagement. In addition, the findings of the moderation analysis suggest that the firm size strengthens the positive relationship between green CSR and stakeholder engagement leading to the increase in innovation performance. Therefore, consistent with the resource-based view, the availability of resources and competencies is a key determinant for strengthening the association between green CSR and stakeholder engagement which subsequently enhances the innovation performance of the SMEs. These insights facilitate SMEs to develop effective green CSR initiatives and align them with the Sustainable Development Goals, particularly those related to SDG 9 (industry, innovation, and infrastructure), SDG 12 (responsible consumption and production), and SDG 13 (climate action).

Keywords: green CSR, innovation, stakeholder engagement, SMEs, sustainable development goals

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## INTRODUCTION

The concept of double materiality highlights the importance of ensuring that development is economically viable, environmentally sustainable and socially equitable for achieving United Nations' Sustainable Development Goals (SDGs) (European Commission, 2019). It encourages organizations to take responsibility for their social and environmental impacts. In the business context, stakeholders generally respond positively to responsible business conduct, leading to competitive advantages and market sustainability. Hence, adopting a sustainable business approach not only benefits society but also enhances business performance (Stoain & Gilman, 2017). As a result, businesses are placing greater emphasis on Corporate Social Responsibility (CSR).

The extant literature conceptualizes CSR initiatives based on the triple-bottom line approach – profit, people and planet (Oduro et al., 2022). Accordingly, CSR initiatives are categorized into three types, namely economic-oriented CSR, social-oriented CSR and environment-oriented CSR, respectively representing profit, people and planet in the triple-bottom line framework. When the environment-oriented CSR, also known as “green CSR”, is concerned, it represents organizational initiatives for the betterment of the environment, beyond simply complying with the related laws and regulations (Trumpp et al., 2015). With the rise of environmental awareness among stakeholders, organizations have increasingly been necessary to be concerned on environmental protection by addressing environmental issues (Flammer, 2013). Consequently, they make active efforts to incorporate environmental concerns into their strategic decision-making processes.

It is well-established that green CSR can drive firm performance by creating competitive advantages such as enhanced reputation, brand loyalty and stakeholder engagement, which ultimately improve financial outcomes (Ambec & Lanoie, 2008; Chițimiea et al., 2021; Bintara et al., 2023). This link between green CSR initiatives and firm performance can be expected from such initiatives’ potential to stimulate innovation (Bintara et al., 2023; Rodrigues & Franco, 2023). A firm’s efforts towards the betterment of the environment often necessitate the development or adoption of new technologies. This is particularly relevant for small and medium-sized enterprises (SMEs) which often face limited resources and intense competition when compared to larger firms. Thus, knowledge about the factors that effectively stimulate innovation through green CSR can help SMEs to allocate their resources more efficiently and strategically leverage their green CSR efforts to differentiate themselves from competitors. The diffusion of innovation theory suggests that the adoption of innovation depends on contextual factors related to the organization and its external environment. However, the role of the contextual factors in the green CSR-innovation link has been relatively unexplored (Rodrigues & Franco, 2023). Therefore, this study aims to explore the role of two such contextual factors - stakeholder engagement and firm size in enhancing the association between green CSR and the innovation of SMEs. Gaining insight into this phenomenon can help SMEs develop effective green CSR initiatives and align them with the SDGs.

## METHODOLOGY

### *Conceptualization*

The stakeholder theory claims that a firm’s success depends on its capacity to engage with their interest groups when formulating their business strategies (Bridoux & Stoelhorst, 2014). Previous studies highlight two key stakeholder groups influencing firms to initiate green CSR activities: community stakeholders and regulatory stakeholders (Kassinis & Vafeas, 2006). Firms engaged in green CSR initiatives not only get the opportunities to engage with a broader community stakeholder group but also to obtain knowledge and information about their needs, preferences and values (Rodrigue et al., 2013). Such knowledge and information can help firms to innovate, for example, improving product features and developing environmentally friendly products (Rexhepi et al., 2013). In addition, green CSR-oriented firms get opportunities to obtain financial support and political support from regulatory stakeholders to implement their research and development projects, which can also consequently stimulate their innovation activities (Wei et al., 2017). Accordingly, it can be expected that a firm's green CSR stimulates its innovation as indicated by the hypothesis H1.

H1: Green CSR positively impacts innovation performance of SMEs.

Based on the stakeholder theory and the empirical results discussed above, it can be further inferred that firms can enhance their stakeholder engagement through their green oriented CSR initiatives, thereby improving their innovative capacity. It means that green CSR positively affects stakeholder engagement which in turn increases the innovation performance. Accordingly, green CSR is expected to enhance innovation performance through the mediation effect of stakeholder engagement as given by the hypothesis H2.

H2: Stakeholder engagement mediates the positive relationship between green CSR and innovation performance of SMEs.

The resource-based view suggests that a firm's success primarily depends on its internal resources and capabilities (McWilliams & Siegel, 2011). Thus, engaging in green CSR activities requires investments in resources and capabilities. From this perspective, smaller firms may struggle to invest in green CSR programmes due to their resource and capacity limitations. Such resource constraints also reduce their capacity to engage with a wider stakeholder base. Hence, it can be argued that the positive relationship between green CSR and stakeholder engagement is strengthened by the firm's size. Accordingly, the size of the firm acts as a moderator on the relationship between green CSR and stakeholder engagement as given by the hypothesis H3.

H3: Firm size moderates the positive relationship between green CSR and stakeholder engagement of SMEs.

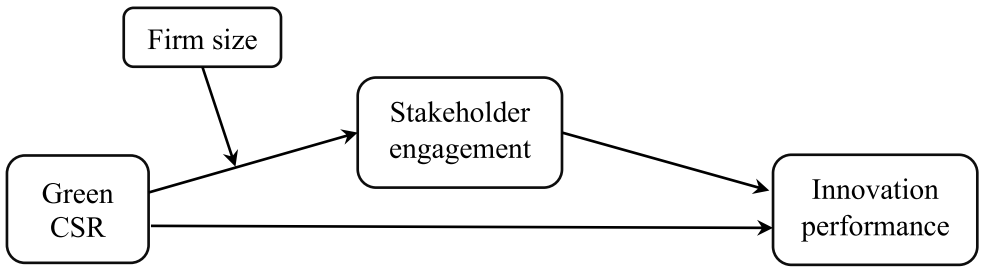


*Figure 1: Conceptual framework of the study*

***Data collection and analysis***

This study adopts an exploratory research design with a quantitative approach. Data was collected by distributing a self-administered questionnaire to a sample of 382 SME owners in Anuradhapura District of Sri Lanka, selected through convenience sampling. Anuradhapura District was chosen due to its high concentration of SMEs and its distinctive economic, social, cultural and environmental characteristics, requiring businesses to adopt green CSR behaviour. The questionnaire consists of 8 items to obtain information on the respondents' demography and characteristics the SMEs in which they are employed, and 10 items to measure four constructs, namely green CSR (GRCSR), stakeholder engagement (SHENG), innovation performance (INNOP) and firm size (FSIZE). Except for the firm size, multiple items were used for measuring the constructs by employing a five-point Likert scale: 1 for strongly agree and 5 for strongly disagree. The question items are adapted from prior literature to ensure content validity. The content validity was further ensured by a pilot study with a sample of 20 respondents. In the data analysis, first, it was ensured that the data exhibits an acceptable level of reliability and validity.

Then, the analysis was conducted using the structural equation modeling (SEM) technique. The variance inflation factor (VIF) and $Q^2$ values were used to check the multicollinearity issues and predictive accuracy of the research model, respectively.

## RESULTS AND DISCUSSION

***Respondents' demography***

When concerning the characteristics of the respondents to the questionnaire, most of the respondents (57.1%) were men. The respondents' age was distributed as 21.0% at 18–25 years old, 51.2% at 26–35 years old, 14.1% at 36–45 years old, 8.6% at 46–55 years old, and 5.1% at higher than 56 years old. The highest percentage of respondents (46.3%) had completed secondary education, and the diploma and degree holders were respectively 27.8% and 8.6%. In terms of the type of business, 62.8% of respondents were in sole proprietorships, 26.7% in private companies, and the balance in partnership businesses. In addition, 31.9% of respondents were in manufacturing businesses, 39.8% in trading businesses, and the rest of the respondents were in service businesses. Further, the highest proportion (41.9%) of respondents were in SMEs earning a monthly revenue of less than Rs 250,000, while 16.8%, 25.7% and 14.7% were employed in SMEs earning a monthly revenue of Rs 250,000-Rs 1,000,000, Rs 1,000,000-Rs 2,000,000 and more than Rs 2,000,000 respectively.

***Assessment of measurement model and structural model***

The measurement model was assessed in terms of their reliability and validity. The indicator items of all the constructs exhibited a satisfactory level of reliability since all the indicators used for measuring the model's constructs loaded well above 0.7. The internal consistency reliability of the constructs was confirmed since the Cronbach's Alpha and composite reliability values were well above the minimum value of 0.7. The convergent validity of all the constructs were also confirmed with their AVEs above 0.5 (Hair et al., 2013). The Fornell and Larcker criterion and Heterotrait-monotrait (HTMT) criterion were satisfied suggesting the discriminant validity of the constructs (Henseler et al., 2015). In addition, the multicollinearity issues were not evident in the model since the VIF values were lower than five (Hair et al., 2011). The variance explained ($R^2$) in the stakeholder engagement and innovative performance constructs were 0.785 and 0.649, respectively. $Q^2$ values of the stakeholder engagement and innovative performance constructs were larger than zero, which meant an acceptable level of predictive accuracy of these constructs (Sarstedt et al., 2017).

***Empirical results and discussion***

As given in part A of Table 1, the results show that green CSR has a significant positive impact on innovation performance with a small effect size ($\beta = 0.357$, $p<0.01$, $f^2 =0.093$), which supports the hypothesis H1. It was further found that green CSR positively influence stakeholder engagement, with a large effect size ($\beta = 0.748$, $p<0.01$, $f^2 = 0.539$). This explains that green CSR initiatives by SMEs substantially enhance their stakeholder engagement. The findings also show that stakeholder engagement positively influences innovative performance, with a medium effect size ($\beta = 0.291$, $p<0.01$, $f^2 =0.239$), which suggests that SMEs' engagement with their stakeholders moderately improves their innovative performance. In addition, the path coefficient from green CSR to innovative performance through stakeholder engagement (GRCSR→SHENG→INNOP) was significantly positive ($\beta = 0.218$, $p < 0.01$). Thus, the findings support the hypothesis H2, indicating that SMEs' stakeholder engagement positively mediates the positive association between their green CSR initiatives and innovative performance. It means that SMEs' green CSR initiatives enhance their innovation performance through their engagement with stakeholders. Since the direct effect of green CSR on innovation performance is also significant ($\beta$=0.357, $p<0.01$, $f^2$ = 0,093), the mediation effect of stakeholder engagement is a partial mediation. Accordingly, consistent with the stakeholder theory, it can be inferred that the innovative performance of SMEs is mainly enhanced when green CSR initiatives lead to a greater stakeholder engagement.

When the moderating effect of the firm size (as indicated by the hypothesis H3) is concerned, the results presented in part B of Table 1 reveal that the firm size positively moderates the association between green CSR and innovation performance ($\beta = 0.048$, $p<0.01$), which leads to an increase in innovative performance (β = 0.014, p<0.05). Accordingly, the firm size strengthens the positive effect of green CSR initiatives on innovation performance of SMEs. It implies that when compared to smaller SMEs, larger SMEs have more resources and capabilities to effectively implement green CSR programmes which enhance their engagement with stakeholders, thereby improving their innovation performance. Further, the $f^2$ value indicates that the size of this moderating effect is medium, suggesting a moderate increase in the positive influence of green CSR on stakeholder engagement as the firm size increases. Therefore, consistent with the resource-based view, the results imply that as SMEs grow larger, the synergy between green CSR and stakeholder engagement becomes more pronounced, thereby enhancing their innovation performance.

**Table 1: Empirical results**

| | Coefficient | t-statistic | p-value | $f^2$ |
|---|---|---|---|---|
| **Part A: Effect of green CSR on innovation performance** | | | | |
| GRCSR→SHENG | 0.748 | 13.982 | 0.000** | 0.539 |
| SHENG→INNOP | 0.291 | 3.709 | 0.000** | 0.239 |
| GRCSR→INNOP | 0.357 | 7.476 | 0.000** | 0.093 |
| GRCSR→SHENG→INNOP | 0.218 | 3.524 | 0.000** | |
| **Part B: Moderating effect of firm size** | | | | |
| FSIZE × GRCSR→SHENG | 0.048 | 2.377 | 0.009** | 0.017 |
| FSIZE × GRCSR→SHENG→INNOP | 0.014 | 2.077 | 0.019* | |

Note: The significance at 1 percent and 5 percent levels are denoted by ** and * respectively. $f^2$ represents the effect-size of the path's predictor variable on its endogenous variable. As a rule of thumb, $f^2$ values greater than 0.02, 0.15, and 0.35 respectively indicate for small, medium and large effects for direct paths (Cohen, 1988). $f^2$ values greater than 0.005, 0.01, and 0.025 respectively for small, medium and large effects of moderation (Kenny, 2018).

## CONCLUSIONS AND RECOMMENDATIONS

This study aimed to explore the role of stakeholder engagement and firm size in enhancing the association between green CSR and the innovation of SMEs. The empirical results show that green CSR has a direct positive influence on innovation performance, with a smaller effect size. However, the mediation analysis reveals that SMEs' stakeholder engagement positively mediates the positive association between their green CSR initiatives and innovative performance with a moderate to larger effect size. Accordingly, it is concluded that SMEs engaged in green CSR tend to be more innovative through their engagement with stakeholders. Therefore, consistent with the stakeholder theory, green CSR practices of SMEs primarily drive their innovation performance through enhanced stakeholder engagement. In addition, the findings from the moderation analysis suggest that the firm size strengthens the positive relationship between green CSR and stakeholder engagement leading to the increase in innovative performance. Thus, consistent with the resource-based view, the availability of resources and competencies is a key determinant for strengthening the association between green CSR and stakeholder engagement which subsequently enhances the innovation performance of the SMEs.

The findings of this study provide significant insights into both theory and practice. Theoretically, this study contributes to the literature by integrating stakeholder theory and the resource-based view to explain how green CSR drives innovation performance. It highlights the importance of stakeholder engagement as a mediator and firm size as a moderator, offering insights about the contextual factors under which green CSR can drive innovation. Future research could explore these relationships in other contexts or industries and adopt a longitudinal approach to examine the causal links and long-term effects of green CSR and stakeholder engagement on innovation performance.

For practice, the findings suggest that while adopting environmentally friendly practices contribute to fostering innovation, the effect is relatively limited when green CSR is considered alone. Thus, merely implementing green initiatives is not enough to significantly enhance innovation in SMEs. Since the mediation analysis demonstrates that stakeholder engagement can substantially improve the effect of green CSR on innovation performance, SMEs should be concerned on actively involving with stakeholders such as customers, employees, suppliers and the broader community in their CSR initiatives. Through such engagement, SMEs can gather valuable feedback from their stakeholders which enhances the understanding of their needs and expectations. By aligning green CSR initiatives with stakeholder needs and expectations, SMEs can foster effective stakeholder engagement which subsequently enhances their innovation performance. Such innovations enable SMEs to build stronger stakeholder relationships, enhance their reputation, mitigate risks and improve their overall performance. Further, policymakers and industry bodies should play a supportive role by providing resources, training and incentives to help SMEs, especially smaller ones, to overcome resource constraints. Accordingly, by enabling to develop effective green CSR initiatives, these insights help SMEs to support the achievement of the SDGs, particularly those related to industry, innovation and infrastructure (SDG 9), responsible consumption and production (SDG 12) and climate action (SDG 13).

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