THE IMPACT OF CSR AND GREEN LEADERSHIP ON BUSINESS COMPETITIVENESS: AN EVIDENCE FROM INDIAN SMES

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Theses guidelines

Introduction
Define the goals of the work and the methods used in the Master's thesis.
I.Theoritical Part

- Prepare a literature review related to corporate social responsibility, green leadership, their impacts, along with research gaps description.

II. Practical Part

- Analyze the current market situation of SMEs in India.
- Assess the impact of green leadership and CSR on SMEs.
- Propose the business competitiveness enhancing management strategies.

Conclusion

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ABSTRAKT

Společenská odpovědnost firem (CSR) a vedení šetrné k životnímu prostředí se ukázaly jako kritické faktory utvářející udržitelné obchodní praktiky po celém světě. Tyto postupy nejen reagují na společenské potřeby a obavy životního prostředí tím, že inovují ekologickou energii, ale mají také dopad na podniky s lepším uznáním, hospodářskými zisky a konkurenceschopností.. Nedostatek související literatury však vyžaduje další zkoumání. Proto tato práce zkoumá roli společenské odpovědnosti firem (CSR) a zeleného vedení (GL) na zelené inovace (GI) a jejich vliv na konkurenceschopnost malých a středních podniků (MSP) v indickém kontextu, rozmanitém a rychle se vyvíjejícím ekonomickém prostředí.

Metodologicky jsou shromažďována data od 116 malých a středních podniků v různých odvětvích v Indii pomocí metody pohodlného vzorkování a k analýze vztahů mezi iniciativami CSR, ekologicky uvědomělým vedením a konkurenceschopností podniků pomocí softwaru SmartPLS 4 se používá částečné modelování nejmenších čtverců (PLS-SEM).Zjištění zdůrazňují významnou pozitivní korelaci mezi postupy CSR, zeleným vedením a konkurenceschopností malých a středních podniků (MSP). To podtrhuje význam začlenění zásad CSR a environmentálního vedení do strategického plánování malých a středních podniků, aby se posílila pozice na trhu a odolnost.

Důsledky těchto zjištění se vztahují jak na podniky, tak na tvůrce politik. Podniky jsou vyzývány, aby uznaly CSR a ekologické vedení jako strategické imperativy a integrovaly je do svých provozních rámců. Politici by měli usnadňovat příznivé prostředí prostřednictvím pobídek, podpůrných mechanismů a regulačních rámců nařizujících zodpovědné obchodní praktiky.

S ohledem na omezení, jako jsou omezení velikosti vzorku a potenciální zkreslení odezvy, je zapotřebí dalšího výzkumu, který by prozkoumal nuance specifické pro dané odvětví a regionální rozdíly.

Klíčová slova; Společenská odpovědnost firem, Green Leadership, konkurenceschopnost podniků, malé a střední podniky, Indie, udržitelné obchodní praktiky.

ABSTRACT

Corporate Social Responsibility (CSR) and eco-friendly leadership have emerged as critical factors shaping sustainable business practices globally. Such practices not only respond to the societal needs and concerns of the environment by innovating green but also have impacts on businesses with better recognition, economic gains and competitiveness. However, the dearth of related literature requires further exploration. Therefore, this thesis investigates the role of corporate social responsibility (CSR) and Green Leadership (GL) on Green Innovation (GI) and their influence on the competitiveness of Small and Medium Enterprises (SMEs) in the Indian context, a diverse and rapidly evolving economic landscape.

Methodologically, data is collected from 116 SMEs across various sectors in India through the convenience sampling method and Partial Least Square-Structural Equation Modeling (PLS-SEM) is employed to analyze the relationships between CSR initiatives, eco-conscious leadership, and business competitiveness by using SmartPLS 4 software.

The findings highlight a significant positive correlation between CSR practices, green leadership, and business competitiveness of small and medium enterprises (SMEs). This underscores the importance of integrating CSR principles and environmentally conscious leadership into SME strategic planning to enhance market position and resilience.

The implications of these findings extend to both businesses and policymakers. Businesses are urged to recognize CSR and eco-friendly leadership as strategic imperatives, integrating them into their operational frameworks. Policymakers should facilitate an enabling environment through incentives, support mechanisms, and regulatory frameworks mandating responsible business practices.

Acknowledging limitations such as sample size constraints and potential response bias, further research is needed to explore industry-specific nuances and regional variations.

Keywords; Corporate Social Responsibility, Green Leadership, Business Competitiveness, Small and Medium Enterprises, India, Sustainable Business Practices.

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Contents

INTRODUCTION

Corporate social responsibility (CSR) is a self-regulating business model of enterprises that makes them accountable to society, related stakeholders and the public. Alongside addressing societal needs and environmental concerns, such practices also enhance business efficiencies, economic gains and competitiveness. Corporate social responsibility (CSR) and Green Leadership (GL) have recently become focal points in discussions about enhancing business competitiveness. In pursuance of CSR activities, enterprises conduct their operations ethically and sustainably, considering the social and environmental repercussions of their actions. On the other hand, Green Leadership promotes environmental sustainability and aims to minimize an organization's carbon footprint.

Numerous studies have explored the relationships between CSR, Green Leadership, and enhanced economic efficiency. For instance, research conducted by Bansal and Roth (2000) suggests that companies that actively engage in CSR often witness positive impacts on their financial performance. This indicates that ethical and sustainable practices can contribute to a firm's economic success. Similarly, a study by Kolk et al. (2011) posits that companies that adopt Green Leadership practices frequently gain a competitive advantage. This suggests that prioritizing environmental sustainability can enhance a company's market position.

The impact of CSR and Green Leadership on competitiveness is of particular interest within the context of Indian Small and Medium Enterprises (SMEs). SMEs play a crucial role in the Indian economy, contributing significantly to employment and innovation. Therefore, understanding how CSR and Green Leadership influence these enterprises' competitiveness is essential. This study aims to delve into this relationship, exploring how CSR and Green Leadership practices affect business competitiveness in Indian SMEs.

Previous research has shown that CSR and Green Leadership practices can confer competitive advantages across various sectors. A study found that CSR activities positively impact firms' innovation performance. This suggests that companies that engage in CSR are more likely to be innovative, which can give them a competitive edge. Similarly, research by Cheng et al. (2014) noted that Green Leadership practices enhance environmental performance, indicating that these practices can help companies reduce their environmental impact and improve their reputation.

Moreover, the commitment of enterprises towards CSR and green commitment of leadership may likely foster green innovation. Such literature is scarce, which explore comprehensively such nexus. Moreover, this study will investigate the potential synergies between CSR initiatives and green leadership practices, aiming to uncover how these two dimensions of corporate responsibility complement each other to create a more holistic approach toward sustainable business practices. By examining the alignment between organizational values, stakeholder expectations, and business objectives, this research will provide a nuanced understanding of the mechanisms through which CSR and green leadership contribute to enhanced business competitiveness. Additionally, it will explore the role of organizational culture, leadership styles, and employee engagement in driving the successful implementation of CSR and green initiatives within Indian SMEs. Through a multi-dimensional analysis, this study aims to offer a deeper insight into the complex interplay between CSR, green leadership, and business competitiveness, ultimately providing valuable insights for fostering sustainable growth and development in the Indian SME sector.

In addition, research conducted within the Indian context has demonstrated the positive effects of CSR and Green Leadership on business outcomes. However, the positive impact of CSR practices on the business competitiveness of Indian firms is underexplored. This suggests that Indian companies that engage in CSR can not only improve their financial returns but also their competitiveness. Similarly, the beneficial effects of Green Leadership on environmental performance can have long-term benefits. However, such investigation for Indian companies that adopt CSR and Green Leadership practices can help to highlight the true potential for enhancing their competitiveness and environmental performance.

This study seeks to contribute to the existing body of knowledge by examining how CSR and Green Leadership influence business competitiveness among Indian SMEs. The study will adopt a quantitative research approach, collecting and analyzing data from a sample of Indian SMEs. The findings are expected to provide practical insights for managers and policymakers, emphasizing the benefits of embracing CSR and Green Leadership practices to enhance business competitiveness. The study will underscore the importance of these practices not only for the companies' success but also for the broader societal and environmental well-being.

OBJECTIVES AND METHODS OF MASTER THESIS PROCESSING

The text discusses the increasing significance of Corporate Social Responsibility (CSR) and green leadership practices on the competitiveness of businesses, particularly for Small and Medium Enterprises (SMEs) in India. The research aims to investigate the relationships between these practices and business competitiveness, with a focus on Indian SMEs.

To achieve this, the research will first provide an overview of the research topic and its importance. It will then delve into existing literature to explore and explain the main constructs of CSR and green leadership about business competitiveness and derive hypotheses based on this analysis.

Next, the research will outline the research model and hypotheses, which will provide a conceptual framework for the investigation. The approach to data collection and analysis will involve a combination of qualitative and quantitative methods, such as surveys, interviews, and data analysis.

Using the collected data, the research will then test the hypotheses formulated in earlier stages through quantitative analysis. Finally, the research will provide practical insights for SMEs, policymakers, and other stakeholders on leveraging CSR and green leadership for sustainable business growth and competitive advantage in the Indian context.

Overall, the research aims to contribute to the understanding of the impact of CSR and green leadership practices on business competitiveness and provide actionable insights for SMEs and policymakers on how to leverage these practices for sustainable growth and competitive advantage.

Organization of the Thesis

The thesis is organized as follows.-
The thesis is structured into three main parts. Part I delves into the theoretical aspect, encompassing discussions on corporate social responsibility (CSR), green leadership, green innovation, and business competitiveness. This section aims to establish a solid theoretical foundation by exploring the individual concepts and their interconnectedness within the

context of sustainable business practices. Part II provides a detailed elaboration, focusing particularly on the role of small and medium enterprises (SMEs) in developing countries, with a special emphasis on SMEs in India. It examines the challenges and opportunities these enterprises face regarding CSR, green leadership, green innovation, and business competitiveness. Methodology constitutes Part III, outlining the research approach employed, including the survey instrument and strategies for mitigating common method bias. It presents the analysis and results derived from techniques such as Partial Least Squares Structural Equation Modelling (PLS-SEM), along with discussions on the theoretical and practical implications. Finally, the thesis concludes by summarizing key findings, emphasizing their significance, and suggesting avenues for future research, thereby contributing to the broader understanding of sustainable business practices in developing economies.

I. THEORY

1 CORPORATE SOCIAL RESPONSIBILITY (CSR), GREEN LEADERSHIP, GREEN INNOVATION AND BUSINESS COMPETITIVENESS

1.1.1 CORPORATE SOCIAL RESPONSIBILITY (CSR)

Corporate Social Responsibility (CSR) has emerged as a critical strategic aspect for businesses worldwide, driven by growing public concerns about social and environmental issues (Sarwar et al., 2022). Encompassing sustainable practices, ethical decision-making, and actions that positively impact society, CSR has become integral to contemporary business strategies. Moreover, CSR holds particular significance for Small and Medium-Sized Enterprises (SMEs) operating in developing countries. SME owners often perceive themselves as personally accountable for their communities and employees, motivating them to undertake philanthropic endeavors aimed at enhancing societal well-being and business efficiency (Bodlaj & Čater, 2019a; Rehman et al., 2022; Zulkiffli et al., 2022a). Within the literature, it is suggested that CSR can serve as a mechanism to enhance the agility of SME processes and promote corporate objectives in developing regions, potentially leading to performance enhancement (Euaanant et al., 2011; Klewitz & Hansen, 2014; Nassani et al., 2022a; Ricci et al., 2020).

Expanding on these concepts, numerous studies provide evidence of the positive impact of CSR on business competitiveness. Porter and Kramer (2006) found that companies embracing CSR tend to cultivate higher reputations and foster stronger relationships with stakeholders, leading to increased brand loyalty, customer retention, and ultimately, profitability. Similarly, Orlitzky, Schmidt, and Rynes (2003) demonstrated that robust CSR practices correlate with improved employee morale and productivity, contributing to heightened competitiveness. Moreover, many reports have highlighted that companies prioritizing CSR have more engaged, motivated, and loyal workforces, resulting in reduced turnover and increased productivity.

Furthermore, the nexus between CSR and Green Innovation further reinforces the positive impact on business competitiveness. CSR initiatives can stimulate eco-innovation, leading to the development of more sustainable products and processes. This not only enhances a company's environmental footprint but also positively influences financial performance,

customer loyalty, and reputation. Zhu et al. (2019) highlighted that firms demonstrating a strong commitment to CSR are more inclined to invest in eco-friendly innovation, thereby bolstering their competitiveness. Similarly, studies have demonstrated that CSR positively influences Green Innovation, subsequently enhancing a company's competitive advantage.

Additionally, the integration of CSR practices, particularly in SMEs in developing countries, not only aligns with ethical imperatives but also catalyzes operational efficiency, employee engagement, and innovation, ultimately fostering greater competitiveness in the global marketplace. By prioritizing CSR, SMEs can enhance their resilience, adaptability, and long-term sustainability, positioning themselves as responsible corporate citizens while simultaneously gaining a competitive edge. Therefore, CSR is not just a moral obligation but a strategic imperative for businesses striving for enduring success in today's dynamic and socially conscious business environment.

Hypothesis 1 (H1): Corporate Social Responsibility (CSR) has a significant impact on Business Competitiveness (BC).
Hypothesis 2 (H2): Corporate Social Responsibility (CSR) positively influences Green Innovation (GI).

1.1.2 GREEN LEADERSHIP (GL)

Enterprise environmental management heavily relies on internal resources and capabilities, with leadership emerging as a pivotal element (Guest & Teplitzky, 2010). Transformational leaders play a crucial role in fostering a culture of green leadership, prioritizing environmental sustainability, and motivating followers to exceed typical environmental performance standards (Robertson, 2018). Through visionary approaches and an emphasis on innovation, transformational leaders empower team members to think creatively and embrace eco-friendly practices, thereby propelling organizational performance in environmental sustainability (Pasha et al., 2017; Sethibe, 2018). Research indicates that the presence of transformational leadership significantly strengthens firm performance, especially in contexts where innovation maintains a competitive advantage (Donate & de Pablo, 2015). Moreover, cultural nuances also impact the efficacy of leadership practices in

driving environmental management initiatives within organizations (Muralidharan & Pathak, 2018).

Green leadership aligns with the societal emphasis on environmental sustainability and catalyzes organizational innovation and competitiveness (Amran et al., 2019; Jabbour et al., 2020). By nurturing a culture of environmental responsibility and innovation, transformational leaders create an environment conducive to adopting eco-friendly practices and technologies, thereby enhancing the firm's reputation and appeal to environmentally conscious stakeholders (Liang et al., 2019; Matos & Hall, 2007). Furthermore, transformational leaders inspire employees to embrace sustainability as a core value, leading to heightened engagement, morale, and retention, all of which contribute to organizational resilience and success (Bansal & Roth, 2000; Zhu et al., 2019).

Green leadership positively impacts business competitiveness, resulting in cost savings, increased customer loyalty, and an enhanced reputation. Zhu and Sarkis (2007) discovered that companies implementing environmentally friendly practices and committing to sustainability financially outperformed competitors. Akbari et al. (2019) concluded that Corporate Social Responsibility (CSR) activities, including green initiatives, increased employee satisfaction and motivation, thereby improving overall business performance. The integration of green leadership into business strategies can thus confer a competitive advantage in the marketplace.

Green leadership has been shown to influence green innovation within organizations significantly. According to a study by Zhu et al. (2019), green leaders can instill a culture of innovation and sustainability within their organizations, leading to the development of more sustainable products and services. Additionally, green leaders can inspire and motivate employees to adopt more sustainable practices, assisting firms in reducing their environmental impact and enhancing their reputation among stakeholders. Moreover, green leaders can foster a supportive environment that encourages experimentation and risk-taking, which are critical for driving innovation. Organizational culture plays a crucial role in fostering innovation, with leaders serving as key influencers in shaping this culture. Consequently, it can be deduced that green leadership is a vital factor that can drive green innovation within organizations and contribute to their long-term sustainability. Hence, the following hypotheses can be hypothesized.

Hypothesis 3 (H3): Green Leadership (GL) positively influences Business Competitiveness (BC).
Hypothesis 4 (H4): Green Leadership (GL) significantly influences Green Innovation (GI) within organizations.

1.1.3 GREEN INNOVATION (GI)

Implementing environmentally sustainable systems to prevent pollution and reduce waste is of paramount importance in today's global context (Song & Yu, 2018). The integration of green innovation within organizational frameworks plays a pivotal role in mitigating adverse environmental impacts while simultaneously enhancing overall performance (Adegbile et al., 2017). Researchers have identified various avenues of innovation, ranging from end-of-pipe applications aimed at reducing pollution to the development of clean technologies for manufacturing environmentally friendly products, as well as initiatives focused on recycling and waste disposal (Kemp & Arundel, 1998). Despite these advancements, the adoption of environmentally friendly practices remains less prevalent, particularly in developing countries. Businesses in these regions must embrace such practices across manufacturing, product design, and technology sectors to effectively address pollution and safeguard the environment (Alhadid & As'ad, 2014).

Innovation has emerged as a critical driver for organizations seeking long-term survival and growth in market share. Not only does innovation attract customers and strengthen market positions, but it also provides a competitive edge over industry rivals (Lin et al., 2013). Green innovation, closely intertwined with technological advancements, empowers organizations to conserve energy and implement more sustainable practices. Furthermore, the global emphasis on environmental sustainability is propelling the expansion of green innovation efforts (Khaksar et al., 2016). This underscores the imperative for businesses to prioritize environmentally friendly practices and allocate resources towards green innovation to remain competitive and address pressing environmental concerns effectively.

Research indicates a positive relationship between green innovation and business competitiveness. A study conducted by Kolk and Pinkse (2008) revealed that firms engaging in eco-innovation tend to enjoy higher market share and profitability. Similarly, a meta-analysis conducted by Berrone et al. (2013) demonstrated that environmental management practices, including green innovation, positively impact firm performance. These findings

underscore the potential of green innovation to provide businesses with a sustainable competitive advantage. Therefore, businesses need to invest in green innovation not only to reduce their environmental footprint but also to enhance their competitiveness in the marketplace.

Furthermore, the adoption of green innovation extends beyond mere compliance with environmental regulations; it embodies a proactive approach towards sustainability and corporate responsibility. Organizations that prioritize green innovation demonstrate a commitment to environmental stewardship, which resonates positively with stakeholders, including consumers, investors, and regulatory bodies. Such initiatives enhance brand reputation and foster trust among stakeholders, thereby strengthening the organization's market position and long-term viability.

Moreover, green innovation fosters a culture of continuous improvement within organizations. By encouraging creativity and ingenuity in developing sustainable solutions, businesses can uncover new opportunities for growth and innovation. This iterative process of innovation enables organizations to stay ahead of evolving environmental regulations and consumer preferences, positioning them as leaders in sustainable business practices.

Integration of green innovation within organizational strategies is essential for addressing environmental challenges while simultaneously enhancing business competitiveness. By investing in environmentally friendly practices and fostering a culture of innovation, businesses can reduce their environmental footprint, strengthen their market position, and ensure long-term sustainability. As the global focus on environmental sustainability intensifies, businesses that prioritize green innovation will emerge as leaders in their industries, driving positive change and reaping the benefits of a sustainable future.

Hypothesis 5 (H5): Green Innovation (GI) positively affects Business Competitiveness (BC).

1.1.4 BUSINESS COMPETITIVENESS (BC)

Extensive research has delved into the complex interplay among Corporate Social Responsibility (CSR), green leadership, and business competitiveness within the organizational domain. Notably, scholarly investigations offer valuable insights into how the integration of CSR and green leadership practices fortifies the competitive standing of Small and Medium Enterprises (SMEs) in the dynamic Indian market. By prioritizing the

cultivation of robust stakeholder relationships, enhancement of organizational reputation, and bolstering financial performance, these strategies afford SMEs a strategic advantage in navigating the intricacies of competitive landscapes. Correspondingly, Bocken et al. (2015) underscore the strategic import of sustainable business models in augmenting competitiveness. Their research underscores how such models contribute to cost efficiencies, spur innovation, and foster deeper stakeholder engagement, all pivotal in securing a competitive edge.

In a similar vein, studies conducted by Linnenluecke et al. (2016) delve into the ramifications of environmental management and green supply chain practices on business competitiveness. These initiatives not only drive cost optimization but also elevate brand equity, stimulate innovation, and foster enduring customer loyalty, thereby amplifying a company's competitive position in the marketplace. Furthermore, insights gleaned from previous research shed light on the transformative impact of CSR initiatives on business competitiveness, particularly in the context of China. By accentuating the significance of nurturing stakeholder relationships, catalyzing innovation, and enhancing financial performance, CSR endeavors emerge as pivotal catalysts for competitiveness in the global arena. Complementary studies by Russo and Fouts (1997) further enrich our comprehension of how CSR practices intersect with business competitiveness, elucidating the nuanced dynamics of this relationship across diverse contexts and industries.

Additionally, empirical evidence underscores the role of CSR and green leadership in fostering resilience and adaptability in the face of evolving market demands and regulatory landscapes. SMEs that prioritize sustainability initiatives not only mitigate risks associated with environmental degradation but also harness opportunities for growth and differentiation in increasingly environmentally conscious markets. Moreover, the integration of CSR principles into organizational strategies fosters a culture of ethical governance and transparency, which resonates positively with stakeholders and enhances organizational legitimacy. This, in turn, augments brand reputation and engenders trust among consumers, conferring a distinct competitive advantage to proactive businesses.

Furthermore, the synergy between CSR, green leadership, and business competitiveness extends beyond immediate financial gains, encompassing broader societal and environmental benefits. By aligning business objectives with sustainable development goals, organizations can contribute to positive social impact and environmental stewardship while simultaneously enhancing their competitive positioning. Through strategic investments in

CSR initiatives, such as community development projects and environmental conservation efforts, businesses can forge meaningful connections with diverse stakeholders, thereby solidifying their reputation as responsible corporate citizens and strengthening their competitive resilience in the long term.

In essence, the convergence of CSR, green leadership, and business competitiveness represents a strategic imperative for organizations seeking sustainable growth and market resilience. By embracing these principles, businesses can navigate complex market dynamics, foster innovation, and enhance stakeholder trust, thereby positioning themselves as leaders in a rapidly evolving global landscape characterized by sustainability imperatives. As such, the integration of CSR and green leadership practices transcends mere compliance; it becomes a cornerstone of strategic differentiation and enduring competitiveness in the 21st-century marketplace.

In short, the five hypotheses based on direct relationships and two hypotheses based on indirect relationships are explained below.

Hypothesis 1 (H1): Corporate Social Responsibility (CSR) has a significant impact on Business Competitiveness (BC).
Hypothesis 2 (H2): Corporate Social Responsibility (CSR) positively influences Green Innovation (GI).
Hypothesis 3 (H3): Green Leadership (GL) positively influences Business Competitiveness (BC).
Hypothesis 4 (H4): Green Leadership (GL) significantly influences Green Innovation (GI) within organizations.
Hypothesis 5 (H5): Green Innovation (GI) positively affects Business Competitiveness (BC).

In addition to the above direct hypotheses, we have two indirect hypotheses based on the mediation of Green Leadership.

Hypothesis 6 (H6): Green Innovation (GI) positively mediates Corporate Social Responsibility (CSR) and Business Competitiveness (BC).
Hypothesis 7 (H7): Green Innovation (GI) positively mediates Green Leadership (GL) and Business Competitiveness (BC).

2 SMALL AND MEDIUM ENTERPRISES (SMES) IN DEVELOPING COUNTRIES

In the discourse concerning Corporate Social Responsibility (CSR) vis-à-vis Small and Medium Enterprises (SMEs) in developing nations, emphasis is placed on the pivotal role SMEs play in fostering economic development and addressing societal challenges (Jamali et al., 2009). SMEs are viewed as crucial drivers of job creation and poverty reduction due to their labor-intensive production processes and notable rates of employment growth (Kok et al., 2013). Despite facing resource constraints and operating within diverse institutional contexts, SMEs demonstrate a favorable inclination towards CSR, propelled by the personal values and aspirations of their owners and founders (Jamali et al., 2009).

However, the informal nature of CSR practices among SMEs in developing countries and their limited capacity to adopt formalized CSR management systems present challenges to fully realizing their potential contributions to sustainable development (Baumann-Pauly et al., 2013). Furthermore, while SMEs in developing countries hold promise as agents of positive change, they are also subject to criticism for their environmental impacts, particularly in pollution-intensive industries where regulatory oversight may be lacking (Blackman, 2006). Despite these challenges, there is increasing recognition of the need to understand the nuances of SMEs' engagement in CSR within the specific institutional and contextual factors of developing countries (Campbell, 2007; Matten & Moon, 2008).

Future research endeavors should focus on elucidating the mechanisms through which SMEs can effectively integrate CSR into their business practices, leveraging their unique position to contribute to sustainable development while addressing the pressing social and environmental challenges facing these regions (Jamali et al., 2017). Expanding on this discourse, it becomes evident that SMEs in developing countries face multifaceted challenges in aligning their operations with CSR principles while striving for economic viability. These challenges often stem from a lack of access to resources and expertise necessary for implementing comprehensive CSR strategies.

Additionally, the informal nature of many SMEs' operations, coupled with regulatory gaps and limited awareness of CSR concepts, poses barriers to the systematic adoption of CSR

practices. Overcoming these obstacles requires concerted efforts from various stakeholders, including governments, international organizations, academia, and civil society, to provide SMEs with the necessary support, guidance, and incentives to integrate CSR into their business models effectively. Furthermore, enhancing SMEs' engagement in CSR entails fostering collaboration and knowledge-sharing initiatives aimed at building capacity and raising awareness about the benefits of CSR among SME owners and managers.

By providing training programs, technical assistance, and access to best practices, stakeholders can empower SMEs to embrace CSR as a strategic imperative rather than a mere compliance obligation. Additionally, creating enabling environments through policy interventions, such as incentives for CSR adoption and strengthening regulatory frameworks, can incentivize SMEs to prioritize sustainability and social responsibility in their operations (Jamali et al., 2017). Ultimately, by facilitating the integration of CSR into SMEs' business strategies, stakeholders can unlock the potential of these enterprises to drive inclusive growth, foster social cohesion, and contribute to sustainable development in developing nations.

Globally, SMEs, which number about 400 million, constitute the foundation of economies. Small and Medium Enterprises (SMEs) account for more than 90% of enterprises in industrialized economies, giving them significant sway over the global economy. Their importance goes beyond just numbers since they are important job creators, making up between 60 and 70 percent of all jobs and roughly 55 percent of GDP. Furthermore, as mentioned by Algan (2019), SMEs are essential to attaining inclusive globalization, sustainable economic growth, and lowering income disparities globally.
SMEs are essential for economic diversification, flexibility, and innovation in knowledge-based economies. Their capacity to adapt and their spirit of entrepreneurship allows them to drive breakthroughs in a variety of fields and negotiate intricate market dynamics. Algan (2019) notes that their contribution to innovation dynamics has significantly increased in the last several decades, particularly in the eco-industries and clean-tech marketplaces in OECD countries.SMEs dominate the OECD countries, accounting for around 99 percent of all businesses. They provide the majority of jobs—roughly 70% of all jobs—and make a substantial contribution to value creation—roughly 50% to 60% of all value created. As the OECD (2017) notes, this emphasizes their critical role in promoting inclusive globalization and economic progress, making them essential participants in the larger corporate

ecosystem.SMEs are also the main forces behind economic development in emerging economies. Even though they work in difficult conditions, they account for over 45% of all employment and roughly 33% of GDP. Regardless of income levels, SMEs account for more than 50% of GDP and employment in many emerging nations when taking into account the contribution of informal enterprises (IFC, 2010).

To sum up, SMEs are more than just commercial organizations—they are forces behind advancement, creativity, and social inclusion. Fostering resilient and inclusive economies worldwide requires acknowledging their critical role and putting policies in place to encourage their growth.

2.1 SMALL AND MEDIUM ENTERPRISES (SMEs) IN INDIA

Based on the great potential of small and medium enterprises (SMEs) in developing countries, the role and impact of SMEs on India is manifold. India is the second largest country in the world and rapidly growing economy with many diversities. Considering such importance and significance of SMEs, the Indian government has been taking various measures to boost the growth and development of Micro, Small, and Medium Enterprises (MSMEs) in the country. The Micro, Small, and Medium Enterprises Development (MSMED) Act, passed in 2006, aimed to provide a legal framework for the promotion, development, and enhancement of the competitiveness of MSMEs (MSME Annual Report, 2020-21). This act merged the Ministry of Small-Scale Industries and the Ministry of Argo and Rural Industries into the Ministry of Micro, Small, and Medium Enterprises (m/o/MSME) a year later.

The MSME sector has been a key contributor to the Indian economy, with over five million registered MSMEs in the manufacturing sector and over eight million in the service sector (MSME Annual Report, 2020-21). These statistics help us to imagine the underlying potential and implications. According to the latest Annual Report of m/o/MSME for 2020–2021, the contribution of MSMEs to the national GDP increased from 29.4% to 30.27% between 2018 and 2019 (MSME Annual Report, 2020-21). The service sector was the main driver of this growth, whereas manufacturing MSMEs' contribution remained stagnant at 33% (MSME Annual Report, 2020-21).

Importantly, The report also highlighted the criteria by which micro, small, and medium-sized enterprises are defined (MSME Annual Report, 2020-21). Micro-enterprises are those with investments in plant and machinery or equipment not exceeding one crore rupees (₹10 million), and revenue not exceeding five crore rupees (₹50 million). Small enterprises are those with investments not exceeding 10 crore rupees (₹100 million), and turnover not exceeding 50 crore rupees (₹500 million). Medium enterprises have investments not exceeding 50 crore rupees (₹500 million), and turnover not exceeding 250 crore rupees (₹2.5 billion).

Despite the significant numbers, manufacturing MSMEs contribute less to the Indian GDP compared to service MSMEs (MSME Annual Report, 2020-21). Scholars have highlighted various management deficiencies among Indian SMEs, including neglecting shop floors, poor product quality, and failure to integrate functions like marketing, sales, and production (MSME Annual Report, 2020-21). The reluctance to invest in new technologies and poor management practices are some of the challenges faced by Indian SMEs in maintaining global competitiveness (MSME Annual Report, 2020-21).

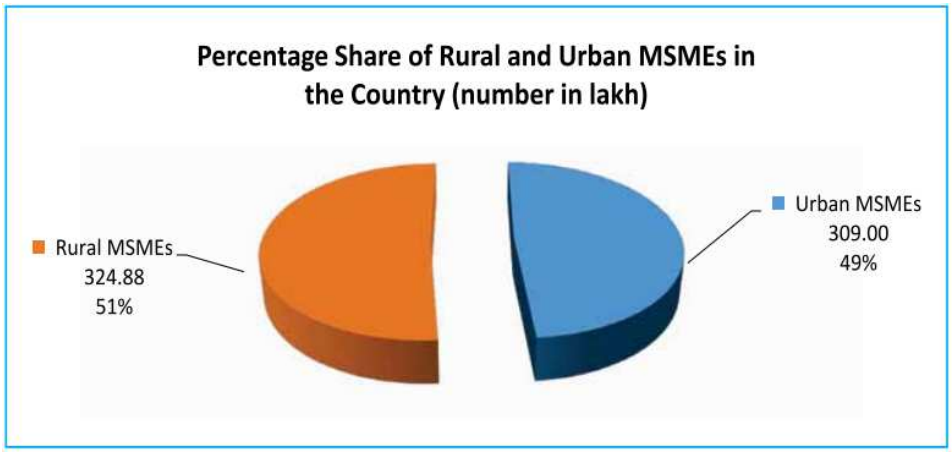

Fig.1 Percentage of rural and urban MSMEs in the country
(Source: MSME annual report 2020-21)

Several studies suggest that firms may survive despite deficiencies due to protection from market forces by tariffs, excessive regulations, or inaccessible local markets (MSME Annual Report, 2020-21). However, this protection can create resistance to change, with some SMEs refusing to adopt Total Quality Management (TQM) due to perceived high

operational costs (MSME Annual Report, 2020-21). Overcoming these challenges requires concerted efforts from policymakers, industry stakeholders, and MSMEs themselves. Policymakers can implement supportive measures such as providing access to affordable financing, promoting technology adoption, and streamlining regulatory processes to facilitate MSME growth and competitiveness. Industry stakeholders can collaborate on capacity-building initiatives, knowledge-sharing platforms, and market access programs to empower MSMEs to address management deficiencies and embrace innovation (MSME Annual Report, 2020-21).

Moreover, MSMEs can proactively invest in upgrading their management practices, adopting modern technologies, and enhancing their product quality to strengthen their competitive position in domestic and international markets. By leveraging their inherent strengths such as agility, flexibility, and innovation, MSMEs can navigate challenges and seize opportunities for growth and expansion. Additionally, fostering a culture of collaboration and partnerships among MSMEs, larger corporations, research institutions, and government agencies can create synergies and promote sustainable development across the MSME ecosystem. Ultimately, by addressing management deficiencies, embracing innovation, and fostering collaboration, MSMEs can realize their full potential as engines of economic growth and job creation in India (MSME Annual Report, 2020-21).

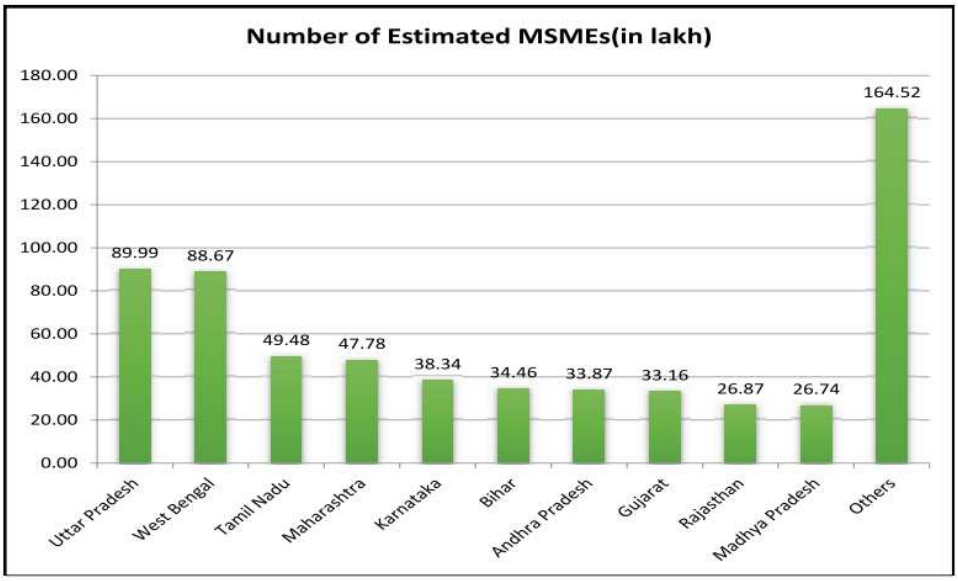

Fig.2 Number of estimated MSMEs (image from MSME annual report 2020-21)

II. ANALYSIS

3 METHODOLOGY

Within India's dynamic manufacturing sector, Small and Medium Enterprises (SMEs) play a critical role in fostering economic expansion and advancement. SMEs are vital to industrial advancement and job creation in a variety of industries because of their inventiveness and agility. However, the necessity for sustainable business practices has grown more pressing considering globalization and the escalating environmental issues. This emphasizes how important it is to comprehend how Green Leadership and Corporate Social Responsibility (CSR) affect Indian SMEs' ability to compete. Using a cross-sectional study approach, we engaged managers and HR staff as key respondents in a targeted survey of 150 manufacturing SMEs countrywide in February, March, and April 2024.

With an impressive 77.33% response rate, we were able to gather 116 thorough answers that served as the basis for our study. We carefully considered our questions and included a combination of closed-ended and Likert scale items to gather information about business competitiveness perspectives, green leadership tactics, and corporate social responsibility programs. Using sophisticated statistical methods made possible by programs like SPSS, we hope to investigate the complex connections between CSR, green leadership, and SME competitiveness. Respecting moral principles, our research aims to offer practical suggestions that will enable SMEs to promote resilience and sustainable growth in the ever-changing business environment.

The respondents were categorized based on various demographic factors including gender, age, marital status, education level, firm size, and firm age. Regarding gender distribution, the sample comprised 68 males (58.6%) and 48 females (41.4%), ensuring a balanced representation of both genders. Age demographics were well-represented across different age brackets. The largest cohorts fell within the 26-35 age range (29 respondents, 25%) and the 18-25 age range (28 respondents, 24.1%), providing significant insights into the perspectives of younger adults. This was followed by 26 respondents (22.4%) aged 36-45, 19 respondents (16.4%) aged 46-55, and 14 respondents (12.1%) aged 56 and above. Marital status among respondents varied, with 41 individuals (35.3%) reporting being married, 40 (34.5%) identifying as single, and 14 (14.7%) in a relationship. Additionally, 14 respondents (12.1%) reported being divorced, while 4 (4.4%) identified as widows or widowers, ensuring a diverse representation of marital statuses. Educational backgrounds

were diverse, with the majority holding bachelor's degrees (36 respondents, 31%) and master's degrees (32 respondents, 27.6%). A considerable portion also possessed Ph.D. degrees (26 respondents, 22.4%), while others held diplomas (12 respondents, 10.3%) or had intermediate education or below (10 respondents, 8.6%). Firm demographics revealed a range of sizes and ages. The largest proportion of respondents worked in firms with 51-100 employees (38 respondents, 32.8%), followed by those in firms with 20-50 employees (27 respondents, 23.3%). Regarding firm age, 51 respondents (44%) were from firms established between 11-20 years ago, 39 (33.6%) from firms aged 10 years or less, and 26 (22.4%) from firms existing for 21 years and above.

This comprehensive approach to sampling ensures a robust representation of diverse demographic factors, enhancing the validity and reliability of the study findings.

Table1: Respondent's Demographic Profile

Description	**Frequency**	**Percentage**
Gender of Respondents		
Male	68	58.6
Female	48	41.4
Age of Respondents (in years)		
18-25	28	24.1
26-35	29	25
36-45	26	22.4
46-55	19	16.4
56 and above	14	12.1
Marital Status		
Single	40	34.5
Married	41	35.3
In a relationship	14	14.7
Divorced	14	12.1
Widow/widower	4	4.4
Education of Respondents		

Intermediate and below	10	8.6
Bachelor	36	31
Masters	32	27.6
Ph.D.	26	22.4
Diploma	12	10.3
Firm's Size		
20-50 Employees	27	23.3
51-100 Employees	38	32.8
101-250 Employees	20	17.2
251-350 Employees	17	14.7
351-499 Employees	14	12.1
Firm's Age (in years)		
10 years or less	39	33.6
11-20 years	51	44
21 years and above	26	22.4

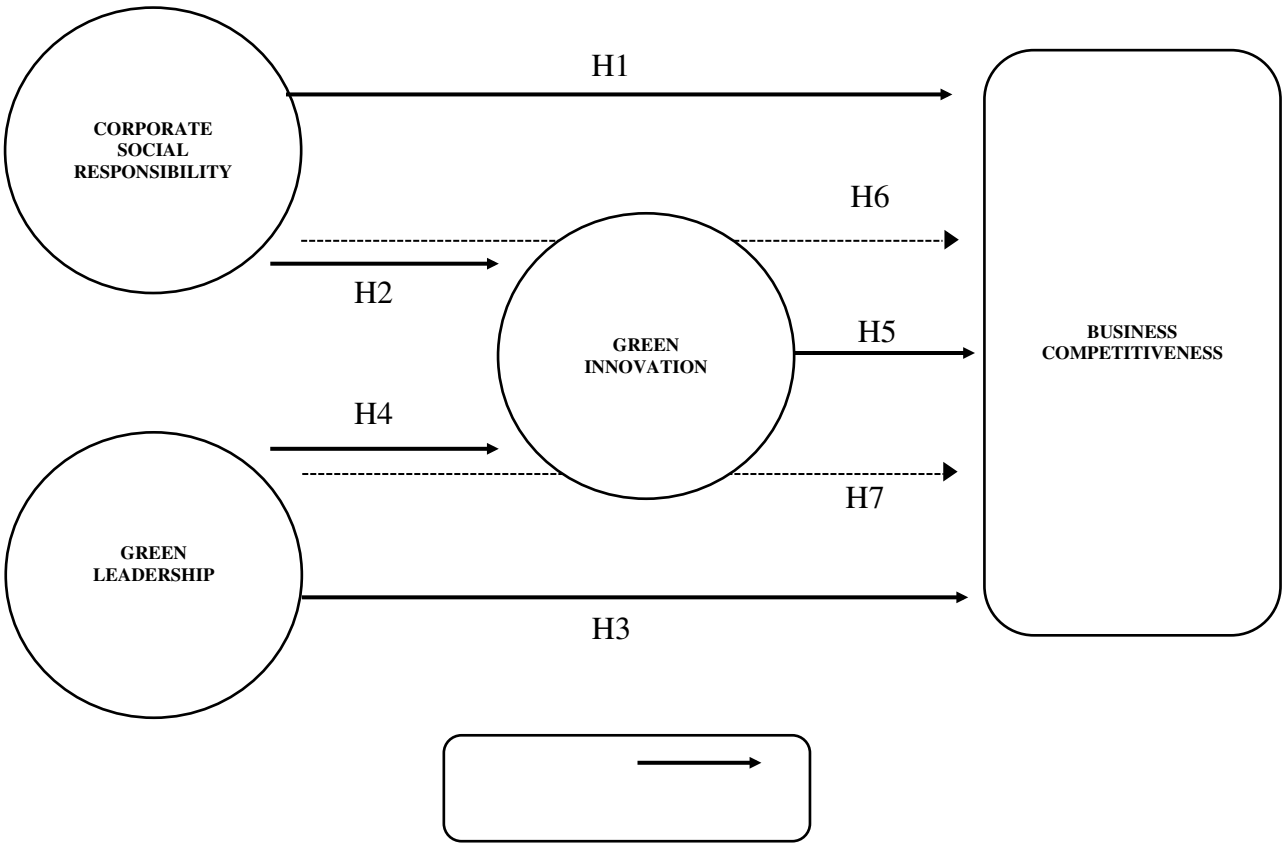

Figure 3: Proposed Conceptual Model

3.1 SURVEY INSTRUMENT

The survey design encompassed three distinct sections, all conducted in English for ease of comprehension. The primary objective of the initial segment was to elucidate the survey's purpose while assuring respondents of the confidentiality of their responses. This preamble aimed to establish a comfortable and secure environment for participants, fostering trust and encouraging candid feedback.

Moving to the second section, a comprehensive exploration of demographics was undertaken. This phase sought to gather vital information about the participants, including age, gender, educational background, and professional experience. Such demographic data not only enriches the contextual understanding of survey responses but also enables

subsequent analyses to discern potential patterns or correlations across diverse demographic cohorts.

The third and most substantial section focused on gauging various research constructs pivotal to the study's objectives. This section was meticulously structured to measure constructs such as green leadership, corporate social responsibility (CSR), and business competitiveness. Employing a 5-point Likert scale, ranging from "1 (strongly disagree)" to "5 (strongly agree)," ensured a nuanced assessment of respondents' perceptions, thus enhancing the study's validity.

To assess corporate social responsibility (CSR), a rigorously validated 12-item scale developed by Sweeney (2009) and affirmed by Agyemang and Ansong (2017) was utilized. This scale comprehensively evaluates CSR across diverse dimensions, including the proactive stance against discrimination, echoing the insights of Sarwar et al. (2023) on the imperative of social inclusivity and equitable practices in corporate realms.

For evaluating green innovation, an 8-item scale adapted from Chen et al. (2006) and endorsed by Aftab et al. (2022) was employed. This scale scrutinizes the degree of innovative practices directed towards environmental sustainability, aligning with the emphasis placed by Sarwar et al. (2023) on eco-friendly initiatives and strategic material utilization to mitigate pollution.

Business competitiveness was assessed using a succinct 3-item scale pioneered by Cameron (1999) and employed by Bagur-Femenías et al. (2015). This scale offers insights into key competitiveness indicators, including employee satisfaction enhancement. Sarwar et al. (2023) underscored the significance of such indicators in shaping the competitive landscape, underscoring the symbiotic relationship between employee welfare and organizational success.

The evaluation of green leadership drew upon a comprehensive 15-item scale derived from Khan et al. (2023) and Al-Zawahreh et al. (2019). This scale encompasses diverse facets of green leadership, from visionary environmental stewardship to the cultivation of an environmentally conscious organizational culture. Sarwar et al. (2023) further enriched this scale by proposing additional dimensions, such as a commitment to sustainable decision-

making processes and the promotion of environmental responsibility among employees. These augmentations promise a more nuanced understanding of leadership's role in driving sustainable practices and fostering an organizational culture imbued with environmental stewardship.

Table 2: Constructs and Items from Literature

CONSTRUCTS	MEASUREMENT ITEMS	LITERATURE SOURCE
GREEN LEADERSHIP (GL)	*1. Our company's leadership practices sustainable social responsibility.* *2. Our organization's leaders act in a way that is good for the environment and is sustainable.* *3. Our organization's leadership behaves in an ethically sound and sustainable way.* *4. The whole organization is taken into account when our company's leadership makes choices.* *5. When a mistake is committed that threatens the sustainability of our organization's leadership, it is publicly acknowledged.* *6. Our organization's leadership is eager to fix errors that jeopardize long-term viability.* *7. Our organization's leadership makes an effort to tackle sustainability concerns*	Khan et al., (2023); Al-Zawahreh et al., (2019).

	using novel and inventive techniques. *8. Our organization's leadership strives to develop wealth via long-term initiatives.* *9. Our leadership team prioritizes purpose above profit.* *10. Our organization's leadership strikes a balance between social duty and profitability.* *11. Our organizational leadership is enduring across all sorts of change, demonstrating its durability.* *12. How sustainability impacts workers is a priority for our organization's leadership.* *13. Sustainability choices are communicated to all stakeholders by our organization's leadership.* *14. Our little business is concerned with hygiene aspects.* *15. Through its communication efforts, our organization's leadership aspires to create a culture of sustainability.*	
CORPORATE SOCIAL RESPONSIBILITY (CSR)	*1. Energy conservation.* *2. Supply clear and accurate information and*	Agyemang & Ansong (2017); Sarwar et al. (2023); Sweeney (2009).

	labelling about products and services. *3. Resolve customer complains in timely manner.* *4. Committed to providing value to customer.* *5. Quality assurance criteria adhered to in Production.* *6. Ensure adequate steps are taken against all forms of discrimination.* *7. Consult employee on important issues.* *8. Committed to the health and safety of Employees.* *9. Donate to charity.* *10. Actively involved in projects with local Community.* *11. Purchasing policies that favor the local communities in which it operates.* *12. Recruitment policies that favor the local communities in which it operates.*	
BUSINESS COMPETITIVENESS (BC)	*1. The company's image has improved.* *2. Client satisfaction has increased.* *3. The level of employee satisfaction has improved.*	Sarwar et al. (2023); Bagur-Femenias et al. (2015); Camison (1999).

GREEN INNOVATION (GI)	*1. The company chooses the materials of the product that produce the least amount of pollution for conducting the product development or design.* *2. The company chooses the materials of the product that consumes the least amount of energy and resources for conducting the product development or design.* *3. The company uses the fewest number of materials to comprise the product for conducting the product development or design.* *4. The company would circumspectly deliberate whether the product is easy to recycle, reuse, and decompose for conducting the product development or design.* *5. The manufacturing process of the company effectively reduces the emission of hazardous substances or waste.* *6. The manufacturing process of the company recycles waste and emission that allow them to be treated and re-used.* *7. The manufacturing process of the company reduces the consumption of water, electricity, coal, or oil.*	Sarwar et al. (2023); Aftab et al. (2022); Chen et al. (2006).

	8. The manufacturing process of the company reduces the use of raw materials.	

3.1.1 COMMON METHOD BIAS (CMB)

When conducting research with cross-sectional data, it's crucial to be mindful of the potential presence of Common Method Bias (CMB), which can distort the relationships between study variables. To address this, researchers commonly employ statistical tests such as Harman's single factor test and collinearity detection methods. Following the recommendations by Kock (2015), we opted to assess CMB using the variance inflation factor (VIF) method, a widely accepted approach in social sciences research (Aftab et al., 2022a; Kraus et al., 2020). Our analysis using the VIF method revealed that some VIF scores (Table 7) exceeded the commonly recommended threshold of 3.0 (Hair et al., 2019). This outcome indicates a significant presence of multicollinearity, confirming the critical issue of CMB within our dataset.

By adhering to established methodologies and drawing upon prior research (Aftab et al., 2022a; Kraus et al., 2020), we ensure rigor in our examination of CMB, thus enhancing the validity and reliability of our findings.

4 ANALYSIS AND RESULT

The partial least square-structural equation modeling (PLS-SEM) method was used to analyze the link between corporate social responsibility, green leadership, green innovation, and business competitiveness in SmartPLS v.4.1.0.2 software.

4.1 Partial Least Squares Structural Equation Modelling (PLS-SEM)

Partial Least Squares Structural Equation Modelling (PLS-SEM) is a statistical method that helps to assess structural connections among variables. It is a flexible, nonparametric alternative to covariance-based SEM that can handle intricate models with limited sample sizes, non-normal data, and formative measurement models. The PLS-SEM analysis procedure includes conceptual framework development, data collection and preparation, specification of measurement and structural models, and result interpretation. Researchers can interpret PLS-SEM outcomes by scrutinizing path coefficients that denote the magnitude and orientation of relationships between latent constructs. Additionally, the extent of variance explained by each latent construct can be gauged through R-squared values. PLS-SEM has found widespread application in diverse domains like marketing, management, and psychology. For example, Henseler et al. (2016) employed PLS-SEM to explore the impact of customer satisfaction on loyalty within the hospitality sector. Similarly, many researchers utilized PLS-SEM to scrutinize the correlation between leadership and employee well-being.

4.2 MEASUREMENT MODEL ANALYSIS

In their comprehensive exploration of measurement models, Hair et al. (2019) delineated four critical facets—factor loading, composite reliability (CR), convergent validity, and discriminant validity—that underpin the robust evaluation of such models, Kock, et al,. (2015). The authors advocated for factor loadings of 0.7 or higher as desirable, with values above 0.5 considered acceptable for each item. In the study at hand, the factor loadings spanned from 0.783 to 0.936, indicating a favorable adherence to these standards. However, to enhance precision, certain items were omitted from the analysis.

CR, a pivotal metric for assessing internal reliability, was employed to gauge the consistency of the construct. Values ranging from 0.897 to 0.968 were observed, all surpassing the

recommended threshold of 0.7, as stipulated by Hair et al. (2019), thus affirming the construct's reliability.

Convergent validity, vital for elucidating the extent to which constructs collectively explicate item variance, was determined through the average extracted variance (AVE) method proposed by Fornell and Larcker (1981). The AVE values, ranging from 0.677 to 0.826, comfortably exceeded the prescribed threshold of 0.5, reaffirming the construct's convergence.

Lastly, discriminant validity, pivotal for distinguishing one construct from others within the structural model, was assessed using the Heterotrait-Monotrait (HTMT) ratio introduced by Henseler et al. (2015). A correlation value nearing 1 implies a deficiency in discriminant validity, while values below 0.90 signify its establishment (Henseler et al., 2015). Notably, all HTMT values in the current study were below 0.9, as indicated in Table 4, thereby substantiating the validity of discriminant relationships among constructs.

In essence, the meticulous evaluation of measurement models according to the criteria outlined by Hair et al. (2019) not only fortifies the reliability and validity of the constructs under examination but also bolsters the overall robustness of the research findings.

Table 3: Reliability and Convergent Validity

Constructs	Items	Factor Loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CSR	CSR1	0.789	0.962	0.963	0.968	0.768
	CSR3	0.902				
	CSR5	0.869				
	CSR6	0.890				
	CSR7	0.857				
	CSR8	0.905				
	CSR9	0.895				
	CSR11	0.888				
	CSR12	0.889				
GL	GL1	0.839	0.963	0.964	0.967	0.677
	GL2	0.847				
	GL3	0.783				
	GL4	0.857				
	GL5	0.845				
	GL6	0.819				
	GL7	0.802				
	GL8	0.807				
	GL9	0.800				

	GL10	0.828				
	GL11	0.807				
	GL13	0.875				
	GL14	0.799				
	GL15	0.806				
GI	GI1	0.890	0.941	0.952	0.953	0.771
	GI2	0.921				
	GI4	0.916				
	GI6	0.885				
	GI7	0.838				
	GI8	0.814				
BC	BC1	0.903	0.895	0.897	0.934	0.826
	BC2	0.936				
	BC3	0.886				

Table 4: Discriminant validity (HTMT)

	BC	**CSR**	**GI**	**GL**
BC				
CSR	0.700			
GI	0.734	0.811		
GL	0.723	0.816	0.723	

Table 5 Discriminant validity- Fornell-Larcker criterion

	BC	**CSR**	**GI**	**GL**
BC	0.909			
CSR	0.651	0.877		
GI	0.689	0.784	0.878	
GL	0.673	0..788	0.706	0.823

The fulfillment of the Fornell-Larcker criterion underscores the robustness of the research model's discriminant validity. Each construct demonstrated a superior match between the square root of its AVE and its correlations with other constructs, affirming their distinctiveness within the framework.

BC's square root of AVE significantly exceeded its correlations with CSR, GI, and GL, thereby ensuring that the variance captured by BC is primarily unique to itself, separate from the variance captured by other constructs. This reinforces BC's role as a distinct concept within the study. Similarly, CSR displayed a clear distinction from other constructs, as evidenced by its square root of AVE surpassing its correlations with GI and GL. This finding underscores CSR's unique contribution to the research model, independent of other factors.

GI's discriminant validity was substantiated by its square root of AVE exceeding its correlation with GL. This indicates that GI encapsulates variance distinct from GL, reinforcing its significance as a separate construct within the study's context. Furthermore, GL's discriminant validity was confirmed by the absence of significant correlations with other constructs, validating its unique contribution as a distinct concept within the research model.

In summary, the adherence to the Fornell-Larcker criterion affirms the distinctiveness of each construct, establishing the reliability of the research model in terms of discriminant validity. This ensures that the study accurately captures and evaluates the unique aspects represented by each construct, thereby enhancing the validity and credibility of the research findings.

The establishment of discriminant validity in structural equation modeling (SEM) or confirmatory factor analysis (CFA) is crucial for ensuring the integrity of measurement models. Two widely utilized methods for assessing discriminant validity are the Fornell-Larcker criterion and the cross-loadings method. According to the Fornell-Larcker criterion proposed by Fornell and Larcker et al.,1981, discriminant validity is achieved when the square root of the Average Variance Extracted (AVE) for each construct exceeds the correlations between that construct and all other constructs in the model. This criterion emphasizes the importance of each construct capturing more variance in its indicators than it shares with other constructs. On the other hand, the cross-loading method, as suggested by Amora et al. (2021) or relevant authors, focuses on the specificity of individual items to their intended constructs. For this method, discriminant validity is confirmed when the loading of each item on its associated construct is significantly higher than its loadings on all other constructs in the model. By combining these approaches, researchers can comprehensively evaluate the distinctiveness of constructs and ensure the validity of their measurement models in empirical research and theory testing. In Table 6, it is evident that there is no need to delete any item, as all items demonstrate discriminant validity. Each item exhibits a higher loading to its respective parent construct compared to loadings on other constructs.

Table 6 Discriminant validity-Cross Loadings

	BC	CSR	GI	GL
CSR1	0.474	**0.789**	0.653	0.616
CSR3	0.616	**0.902**	0.705	0.670
CSR5	0.601	**0.869**	0.668	0.673

CSR6	0.504	**0.890**	0.662	0.712
CSR7	0.616	**0.857**	0.639	0.662
CSR8	0.625	**0.905**	0.715	0.745
CSR9	0.544	**0.895**	0.683	0.698
CSR11	0.559	**0.888**	0.726	0.681
CSR12	0.581	**0.889**	0.729	**0.753**
GL1	0.495	0.671	0.614	**0.839**
GL2	0.584	0.608	0.534	**0.847**
GL3	0.527	0.690	0.691	**0.783**
GL4	0.580	0.665	0.543	**0.857**
GL5	0.541	0.668	0.580	**0.845**
GL6	0.586	0.689	0.700	**0.819**
GL7	0.525	0.615	0.516	**0.802**
GL8	0.524	0.622	0.552	**0.807**
GL9	0.603	0.646	0.612	**0.800**
GL10	0.572	0.650	0.481	**0.828**
GL11	0.556	0.600	0.566	**0.807**
GL13	0.608	0.685	0.662	**0.875**
GL14	0.510	0.607	0.500	**0.799**
GL15	0.521	0.639	0.523	**0.806**
GI1	0.658	0.729	**0.890**	0.684
GI2	0.676	0.803	**0.921**	0.706
GI4	0.671	0.754	**0.916**	0.698
GI6	0.461	0.607	**0.885**	0.511
GI7	0.663	0.638	**0.838**	0.576
GI8	0.427	0.539	**0.814**	0.484
BC1	**0.903**	0.610	0.616	0.646
BC2	**0.936**	0.591	0.673	0.612
BC3	**0.886**	0.574	0.588	0.576

4.3 STRUCTURAL MODEL ANALYSIS

In the realm of Partial Least Squares-Structural Equation Modelling (PLS-SEM), meticulous scrutiny of the measurement model serves as a fundamental precursor to delving into the analysis of the structural model. As advocated by Hair et al. (2019), this entails a comprehensive assessment of collinearity, determination coefficient (R square), and effect sie (f square) within the structural framework.

Commencing with the evaluation, a critical collinearity test was administered, with all Variance Inflation Factor (VIF) values documented to be below 6 (refer to Table 7), thereby affirming the absence of multicollinearity, in alignment with the guidelines outlined by Hair et al. (2019).

Moving forward, the R square value assumes center stage, serving as a barometer for the extent of variance elucidated in endogenous variables by exogenous variables. In the present study, the endogenous variable "business competitiveness" boasted an R square value of 0.546, indicating that green innovation expounds upon 54% of the variance in the output variable (as depicted in Table 4).

Lastly, the evaluation encompasses the determination of f square values for each construct under scrutiny, ranging from 0.05 to 0.375 (refer to Table 5). These values, by Cohen's (1988) classification, denote small to large effect sizes.

Such meticulous scrutiny, as advocated by Hair et al. (2019) and Cohen (1988), not only fortifies the structural integrity of the model but also augments the interpretative depth and robustness of the findings derived from PLS-SEM analysis.

Table 7 R- square- overview

	R-square	**R- square adjusted**
GI	0.636	0.629
BC	0.546	0.534

Table 8 Collinearity Statistics (VIF)

Items	**Variance Inflation Factor (VIF)**
CSR1	2.77
CSR3	4.761
CSR5	5.007
CSR6	4.571
CSR7	3.707
CSR8	4.717
CSR9	5.961
CSR11	4.61
CSR12	4.355
GL1	4.099
GL2	3.42
GL3	2.889
GL4	4.319
GL5	4.353
GL6	3.895
GL7	3.047
GL8	3.617

GL9	3.414
GL10	3.57
GL11	2.89
GL13	4.506
GL14	2.921
GL15	3.201
GI1	3.876
GI2	5.666
GI4	4.616
GI6	4.259
GI7	2.571
GI8	3.141
BC1	2.68
BC2	3.513
BC3	2.469

4.4 HYPOTHESES TESTING

Following the guidelines put forth by Anderson and Gerbing (1988), the examination of T statistics and their associated significance levels (p-values) within the structural model serves as a pivotal step in validating proposed hypotheses. In adherence to this methodology, the current study employed a bootstrapping procedure with 5000 subsamples, as outlined by Hair et al. (2019).

Upon scrutinizing the results, presented in Tables 6 and 7, a robust support for the proposed hypotheses emerges. Specifically, it was observed that corporate social responsibility exerts a direct and statistically significant impact on business competitiveness (T-Statistic=2.726, p=0.006). Similarly, corporate social responsibility was found to positively influence green innovation (T-Statistic=5.494, p=0), with green innovation in turn affecting business competitiveness (T-Statistic=2.347, p=0.019).

Moreover, the analysis unveiled that green leadership exerts a significant influence on both business competitiveness (T-Statistic=3.572, p=0) and green innovation (T-Statistic=1.982, p=0.048). These findings collectively affirm hypotheses H1 through H5, underscoring the interconnectedness and influential dynamics between corporate social responsibility, green innovation, green leadership, and business competitiveness within the studied framework.

By adhering to the rigorous standards set forth by Anderson and Gerbing (1988) and leveraging robust statistical techniques such as bootstrapping, the study not only substantiates theoretical propositions but also furnishes valuable insights into the intricate relationships shaping organizational dynamics in the realm of sustainability and competitiveness.

Table 9 Total Effect- Mean, SD, T values, and P-values

	Original Sample(O)	Sample Mean (M)	Standard Deviation (SD)	T-Statistics	P-Values
CSR->BC	0.319	0.324	0.117	2.726	0.006
CSR->GI	0.6	0.604	0.109	5.494	0
GI->BC	0.388	0.391	0.165	2.347	0.019
GL->BC	0.422	0.419	0.118	3.572	0
GL->GI	0.233	0.228	0.118	1.982	0.048

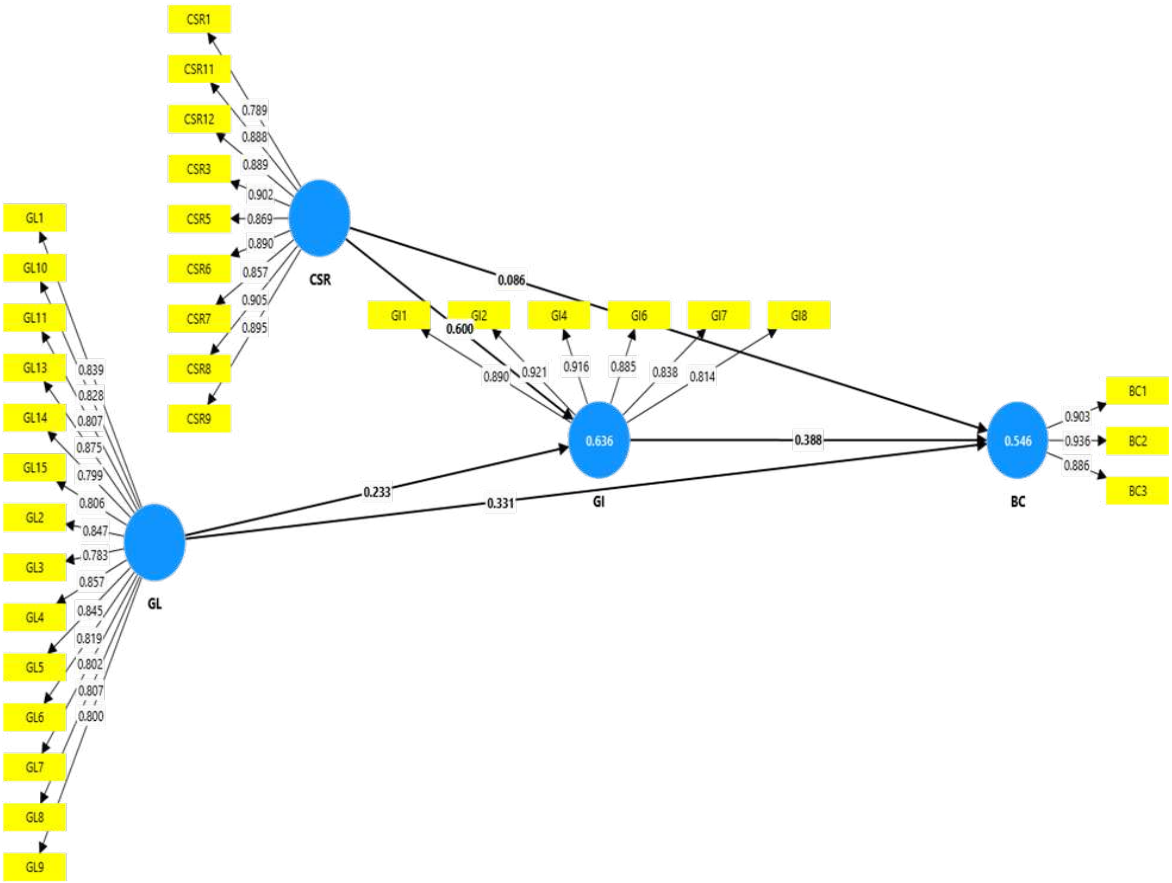

Figure 4: Estimated Structural Model

In our investigation into the interplay among corporate social responsibility (CSR), green leadership, green innovation, and business competitiveness, we uncovered nuanced

dynamics that shed light on the pathways through which these factors influence organizational outcomes.

Our findings reveal that green leadership exerts an indirect positive influence on business competitiveness, mediated by green innovation. This suggests that companies led by environmentally conscious leaders tend to foster a culture of innovation in green practices, thereby enhancing their competitive edge in the market. Similarly, corporate social responsibility also exhibits a similar indirect impact on business competitiveness through its effect on fostering green innovation within organizations.

Table 10 Indirect effect- Mean. STDEV, T values, and p values

	Original Sample(O)	**Sample Mean (M)**	**Standard deviation (SD)**	**T-Statistics (|O/STDEV|)**	**P values**
GL->GI->BC	0.091	0.088	0.061	1.474	0.140
CSR->GI->BC	0.233	0.234	0.106	2.203	0.028

However, contrary to our initial hypothesis, we did not find evidence supporting the notion that green innovation serves as a mediator in the relationship between corporate social responsibility and business competitiveness. This suggests that while corporate social responsibility initiatives may contribute to fostering a culture of innovation, this does not necessarily translate into a direct competitive advantage in the marketplace.

Table 11 Hypotheses Testing

Direct Hypotheses	
Relationship	**Comment**
H1 CSR→BC	Supported
H2 CSR→GI	Supported
H3 GL→BC	Supported
H4 GL→GI	Supported
H5 GI→BC	Supported
Mediating Hypotheses	
Relationship	**Comment**
H6 CSR→GI→BC	Not Supported
H7 GL→ GI→BC	Supported

Furthermore, our investigation extended to explore the mediating role of green innovation in the relationships between corporate social responsibility, green leadership, and business competitiveness. Our results corroborated that green innovation indeed serves as a significant mediator between green leadership and business competitiveness (T statistics = 1.474, p = 0.140), as well as between corporate social responsibility and business competitiveness (T statistics = 2.203, p = 0.028). This implies that the influence of both green leadership and corporate social responsibility on business competitiveness is channeled through the innovative practices fostered within the organization.

In summary, our study underscores the pivotal role of green innovation as a mediator in the relationship between organizational practices, leadership styles, and business competitiveness. While green leadership and corporate social responsibility both contribute to fostering innovation, their impact on competitiveness may vary, with green innovation playing a more prominent mediating role in certain contexts. These insights provide valuable guidance for organizations seeking to navigate the intersection of sustainability, leadership, innovation, and competitiveness in today's dynamic business landscape.

5 DISCUSSION AND IMPLICATION

The increasing global interest in business practices has brought Corporate Social Responsibility (CSR) and Green Leadership (GL) into sharper focus regarding their impact on business competitiveness. Despite extensive research on these topics, there's a dearth of literature exploring the nuanced relationships among CSR, GL, and business competitiveness. Our study argues that both GL and CSR act as significant predictors of business competitiveness, with their effects partially mediated by Green Innovation (GI) within Indian SMEs. While our findings shed light on the causal connections and consequences of business competitiveness in emerging market firms, they challenge our initial hypothesis by revealing unexpected results regarding the mediating role of GI.

Our findings align with previous research indicating the positive influence of CSR on business competitiveness, as demonstrated by Zain et al. (2023), thereby supporting our initial hypothesis (H1). Similarly, Padilla-Lozano et al. (2021) suggest that CSR activities enhance organizational competitiveness by mitigating risks, reducing costs, fostering employee relationships, and bolstering talent retention, although our study deviates slightly in terms of the mediation effect (H6). While our results partially coincide with Padilla-Lozano et al.'s (2021) conclusions regarding the impact of CSR and green innovation on manufacturing competitiveness, they do not entirely mirror their findings.

Chen et al. (2006) propose that pioneering green innovation offers first-mover advantages, creating new market opportunities and bolstering competitive advantage, a notion fully supported by our study and in line with our hypothesis H5. However, the absence of previous research supporting hypothesis H7 presents a limitation. Nevertheless, we anticipate that our research will serve as a guide for future scholars in exploring similar avenues and refining research parameters.

The research by William et al. (2022) suggests that firms with extensive CSR disclosure tend to generate more environmental patents and citations, underscoring their commitment to addressing climate change, thus reinforcing our hypothesis H2. Likewise, Lusiani et al. (2020) argue that green leadership positively influences business performance, supporting our hypothesis H3. Furthermore, Arici et al. (2022) propose that leadership plays a crucial role in fostering environmentally friendly initiatives such as green innovation and creativity, further substantiating our hypothesis H4.

5.1 THEORETICAL IMPLICATIONS

"The Impact of CSR and Green Leadership on Business Competitiveness: An Evidence from Indian SMEs" study highlights the importance of integrating Corporate Social Responsibility (CSR) and Green Leadership practices into small and medium-sized enterprises (SMEs) strategies in India. The research shows that this integration can yield significant benefits for the competitiveness of these enterprises.

Firstly, the study suggests that incorporating CSR practices can enhance a firm's brand reputation significantly. By engaging in socially responsible activities such as community development initiatives or environmental stewardship, SMEs can cultivate a positive image among consumers and stakeholders. This enhanced reputation fosters greater trust and goodwill, contributing to increased customer loyalty and preference for the company's products or services (Carroll, 1991).

Secondly, the adoption of Green Leadership practices is highlighted as a means to achieve operational efficiencies and cost savings. By implementing environmentally sustainable practices in their operations, such as reducing energy consumption or minimizing waste generation, SMEs can streamline their processes and reduce resource inefficiencies. This helps in cutting operational costs and positions the company as environmentally conscious, which resonates positively with environmentally conscious consumers and investors (Shrivastava, 1995).

Moreover, the study underscores the importance of top management commitment and organizational collaboration in effectively implementing CSR and Green Leadership practices. Drawing from the Social Identity Theory, the research suggests that when top management demonstrates a strong commitment to these practices, it can influence the values and behaviors of employees throughout the organization. This alignment of values and behaviors across all levels of the organization is crucial for the successful integration of CSR and Green Leadership practices into the company's culture and operations (Brammer & Millington, 2008).

Overall, the study emphasizes the multifaceted benefits of integrating CSR and Green Leadership practices into SMEs' business strategies. From enhancing brand reputation and customer loyalty to achieving operational efficiencies and cost savings, these practices are portrayed as essential drivers of competitiveness in today's business landscape. The findings

provide empirical evidence for the significance of CSR and Green Leadership practices in the context of Indian SMEs, aligning with existing literature on the benefits of CSR and Green Leadership.

5.2 PRACTICAL IMPLICATIONS

This study carries significant practical implications for both firms and policymakers, particularly in the context of planning and implementing Corporate Social Responsibility (CSR) strategies and practices, especially in less developed nations. Prior literature suggests that CSR activities may not be fully understood in underdeveloped countries, leading to missed opportunities for organizational advantages (Duanmu et al., 2018). However, our findings indicate that integrating CSR and green leadership not only enhances green innovation but also fosters business competitiveness, offering sustainable advantages to firms.

Padilla-Lozano and Collazzo (2022) underscored the importance of sustainable practices and green innovation (GI) initiatives, advocating for their adoption by organizations to attain and sustain business competitiveness in their respective industries. This implies that firms should recognize the strategic significance of CSR and green leadership practices, viewing them not as additional costs but as drivers of responsible and ethical behavior that ultimately enhance competitiveness.

In developing countries, where misconceptions about CSR being a burden on resources may prevail, our study suggests that establishing policies and investing in CSR and green leadership-related strategies can promote green innovation and competitiveness in a socially responsible manner. By aligning with sustainable practices, firms can position themselves as responsible corporate citizens while simultaneously gaining a competitive edge in the market.

Moreover, the implications of this study extend beyond developing nations, providing valuable insights for firms operating in both developed and developing economies where governmental involvement in the market is substantial. Policymakers can leverage these findings to enact stricter environmental policies, incentivizing firms to engage in environmental protection measures. For instance, imposing heavy penalties for contamination, conducting criminal investigations against owners and executives, and

suspending business operations have proven effective in promoting environmentally responsible behavior (Rubashkina et al., 2015).

Furthermore, organizations can allocate funds towards supporting environmentally friendly technology, infrastructure upgrades, and the replacement of outdated pollution-generating technologies and equipment. By harnessing technology and scientific advancements, firms can enhance their competitiveness while simultaneously contributing to environmental sustainability efforts.

In essence, the practical implications of this study emphasize the importance of embracing CSR and green leadership practices for firms seeking to gain a competitive edge in the global marketplace, regardless of their economic context. Through strategic planning and collaboration with policymakers, organizations can leverage these practices to drive innovation, enhance competitiveness, and contribute to sustainable development goals.

5.3 LIMITATIONS

This study acknowledges several limitations, which present avenues for further investigation. The utilization of a cross-sectional design, while not exhibiting significant drawbacks in our analysis, remains susceptible to criticism due to potential common method bias. Future research may benefit from employing longitudinal designs to mitigate such concerns. Additionally, our study focused on Small and Medium Enterprises (SMEs) in India, which could introduce industry-specific and cultural biases, potentially limiting the generalizability of our findings. Exploring similar frameworks in diverse developing countries and industries could validate and expand upon our conclusions, while our survey instruments were adapted from existing literature, the variations in research contexts necessitate a more nuanced approach to measure development. Future studies could refine these instruments, tailoring them to specific research contexts to enhance questionnaire effectiveness. Furthermore, the absence of a specific theoretical foundation in our conceptualization poses another limitation. Future investigations might benefit from incorporating robust theoretical frameworks to strengthen the study's foundation. Lastly, our study acknowledges the small sample size, which could impact the robustness of our findings. Future researchers are encouraged to explore similar phenomena with larger sample sizes, employing diverse tools and methodologies to enrich understanding. Additionally, considering alternative constructs could offer new insights into the examined phenomena.

6 CONCLUSION

In conclusion, this study sheds light on the interplay between Corporate Social Responsibility (CSR), Green Leadership (GL), and Business Competitiveness (BC) within the context of Indian Small and Medium-sized Enterprises (SMEs). By examining the direct and mediating effects of CSR and GL on BC and Green Innovation (GI), this research contributes to understanding how sustainable practices and leadership strategies influence the competitive advantage of Indian SMEs.

The findings of this study underscore the significant direct impact of both CSR and GL on BC and GI among Indian SMEs. The analysis revealed that SMEs with robust CSR initiatives and effective GL strategies tend to exhibit higher levels of BC and are more inclined to engage in innovative, sustainable practices. These results align with the growing recognition of the importance of CSR and sustainability in enhancing business performance and competitiveness.

Furthermore, the study highlights the pivotal role of Green Leadership in driving sustainable practices and fostering innovation within SMEs. The positive relationship between GL and both GI and BC underscores the importance of leadership commitment to environmental sustainability and its impact on overall competitiveness. Effective GL strategies not only promote environmentally friendly practices but also contribute to the development of a competitive advantage in the marketplace.

However, the hypothesized mediating effect of GI between CSR and BC was not supported by the data. While CSR initiatives may influence Green Innovation within SMEs, their impact on BC does not fully operate through GI. This suggests that additional factors beyond Green Innovation may contribute to the relationship between CSR and BC, warranting further investigation.

Overall, the findings of this study emphasize the importance of integrating CSR principles and embracing environmentally conscious leadership practices in driving sustainable business growth and enhancing competitiveness among Indian SMEs. By prioritizing CSR and adopting effective GL strategies, SMEs can not only contribute to societal and environmental well-being but also position themselves as leaders in their respective industries.

Looking ahead, future research could explore the specific mechanisms through which CSR and GL influence BC within SMEs, considering contextual factors and industry-specific dynamics. Longitudinal studies could provide insights into the long-term effects of CSR and GL initiatives on SME performance and sustainability outcomes. Additionally, comparative studies across different regions and industries could offer valuable insights into variations in CSR practices and their impact on competitiveness.

In conclusion, this study contributes to the growing body of literature on CSR, GL, and BC by providing empirical evidence of their significance within the context of Indian SMEs. By elucidating the relationships between these constructs, the findings offer practical implications for SME managers, policymakers, and stakeholders seeking to foster sustainable business practices and enhance competitiveness in today's rapidly evolving business landscape.

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8 LIST OF ABBREVIATIONS

CSR- First abbreviation - Corporate Social Responsibility

GL Second abbreviation - Green Leadership

GI Third abbreviation - Green Innovation

BC Fourth abbreviation - Business Competitiveness

SMEs Fifth abbreviation- Small and Medium Enterprises

MSMEs Sixth abbreviation- Micro, Small, and Medium Enterprises

9 LIST OF FIGURES

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11 APPENDICES

- Appendix P I: QUESTIONNAIRE CONTENT

12 APPENDIX P I: QUESTIONNAIRE CONTENT

The questionnaire details and the relationship between its questions and the variables used in the analysis are outlined below. Respondents were assured that their personal information would not be disclosed. The complete list of questions that were included in the questionnaire is provided below:

"Exploring CSR and Green Leadership's Influence on Competitiveness: Insights from Indian SMEs"

Dear Participant,

Thank you for your participation in the survey to collect data for my master thesis. This survey aims to collect data to analyze the impact of green leadership and corporate social responsibility (CSR) on the competitiveness of small and medium-sized enterprises (SMEs) in India.

Your responses will be helpful to analyze the relationship between sustainable practices, driven by green leadership and CSR initiatives, and the overall competitiveness of businesses in the Indian market.

Rest assured, your identity and your responses will be anonymous and will only be used for research purposes. Your participation is voluntary, and you may choose to withdraw at any time.

Thank you for taking the time to contribute to my master thesis's survey.

Sincerely,

Shivam Pal (s_pal@utb.cz)
Master of Business Administration & Entrepreneurship
Tomas Bata University in Zlin,
Czech Republic

12.1 Demographic Information

1. Gender of Respondents-

- Male
- Female

2. Age of the Respondent (in years)

- 18-25
- 26-35
- 36-45
- 46-55
- 56 and above

3. Marital Status-

- Single
- Married
- In a relationship
- Divorced
- Widow/Widower

4. Education of Respondents-

- Intermediate and below
- Bachelor
- Masters
- Ph.D.
- Diploma

5. Firm's Size-

- 20-50 employees
- 51-100 employees
- 101-250 employees
- 251-350 employees

- 351-499 employees

6. Firm's age (in years)-

- 10 years or less
- 11-20 years
- 21years and Above

12.2 Constructs and their Items/Indicators

1. GREEN LEADERSHIP

- Our leadership team prioritises purpose above profit.
- Our organisational leadership is enduring across all sorts of change, demonstrating its durability.
- Our organization's leadership strikes a balance between social duty and profitability.
- When a mistake is committed that threatens the sustainability of our organization's leadership, it is publicly acknowledged.
- Our organization's leadership makes an effort to tackle sustainability concerns using novel and inventive techniques.
- Through its communication efforts, our organization's leadership aspires to create a culture of sustainability.
- Our little business is concerned with hygiene aspects.
- How sustainability impacts workers is a priority for our organization's leadership.
- Our organization's leadership is eager to fix errors that jeopardise long-term viability.
- Our company's leadership practices sustainable social responsibility.
- Our organization's leadership strives to develop wealth via long-term initiatives.

- Sustainability choices are communicated to all stakeholders by our organization's leadership.
- The whole organisation is taken into account when our company's leadership makes choices.
- Our organization's leadership behaves in an ethically sound and sustainable way.
- Our organization's leaders act in a way that is good for the environment and is sustainable.

2. CORPORATE SOCIAL RESPONSIBILITY

- Energy conservation
- Supply clear and accurate information and labelling about products and services
- Resolves customer complains in timely manner.
- Committed to providing value to customers.
- Quality assurance criteria adhered to in production.
- Ensure adequate steps are taken against all forms of discrimination.
- Consult employee on important issues.
- Committed to the health and safety of employees.
- Donate to charity.
- Actively involved in projects with local community.
- Purchasing policies that Favor the local communities in which it operates.
- Recruitment policies that Favor the local communities in which it operates.

3. BUSINESS COMPETITIVENESS

- The company's image has improved.
- Client satisfaction has increased.

- The level of employee satisfaction has improved.

4. GREEN INNOVATION

- The company chooses the materials of the product that produces the least amount of pollution for conducting the product development or design.
- The company chooses the materials of the product that consumers the least amount of energy and resources for conducting the product development or design.
- The company uses the fewest number of materials to comprise the products for conducting the products development or design.
- The company would circumspectly deliberate whether the product is easy to recycle, reuse, and decompose for conducting the product development or design.
- The manufacturing process of the comapny effectively reduces the emission of hazardous substance or waste.
- The manufacturing process of the company recycles waste and emissions that allows them to be treated and re-used.
- The manufacturing process of the company reduces the consumption of water, electricity, coal, or oil.
- The manufacturing process of the company reduces the use of raw materials.