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Exploring the Relationship between Sustainability Performance, Sustainable Competitive Advantages, and Firm Performance in Small and Medium-sized Enterprises of Pakistan

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Abstract

Small and medium-sized firms (SMEs) play a critical role in every economy, contributing significantly to gross domestic product (GDP) and employment creation. However, tackling the negative environmental effect of SMEs is critical to their overall performance. Achieving sustained success necessitates a mix of elements that create a competitive advantage and assist the accomplishment of triple-bottom-line objectives. While previous research has explored business performance and sustainability individually, there is minimal understanding of how sustainability performance impacts firm performance, with sustainable competitive advantages serving as a mediator. Our continuing research aims to fill this knowledge gap by investigating the influence of sustainability performance on firm performance, particularly in SMEs businesses, and by investigating the possible mediating role of sustainable competitive advantages. We assess sustainability performance across three dimensions: economic, environmental, and social. Financial and market performance, quality performance, and innovation performance are used to evaluate firm performance. We use partial least squares structural equation modeling (PLS-SEM) to analyze data from 370 SMEs firms in Pakistan. Our findings give empirical support for the Resource-Based Theory stressing dynamic capacities and provide useful insights for SMEs on effective resource allocation and the implementation of sustainable practices. However, this study has limitations, including its focus on SMEs in Pakistan, which may limit the generalizability of the findings to other regions and sectors. Future research should consider broader geographic and industry contexts to validate these results. This work makes a theoretical and managerial contribution to improving corporate performance.

Keywords: Sustainability Performance, Firm Performance, Competitive Advantages, Small and Medium-sized Enterprises, Pakistan

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1. INTRODUCTION

SMEs are of paramount significance in global economies, constituting around ninety percent of all businesses worldwide and generating approximately sixty percent of the global workforce (Moursellas et al. 2023; Khan et al. 2023). In Pakistan, SMEs account for over five million entities, contributing about forty percent of the country's GDP and providing employment to roughly seventy percent of the workforce

(SMEDA 2022). In the context of Pakistan, a developing nation, SMEs represent a substantial economic force, accounting for over five million entities, contributing to about forty percent of the country's GDP, providing employment to roughly seventy percent of the workforce, and accounting for a quarter of the nation's total exports (SMEDA, 2022). These SMEs in Pakistan are projected to make a substantial economic impact, contributing 3,407 billion Pakistani rupees (PKR) by 2030, marking a remarkable twenty-two percent increase from their current contributions (SMEDA, 2021). Despite these significant economic contributions, SMEs in Pakistan fall short in their contribution to the nation's sustainable development goals (Li et al. 2022). This study aims to address this gap by investigating the impact of sustainability performance on firm performance, with sustainable competitive advantages serving as a mediator.

On a worldwide basis, SMEs frequently use natural resources without considering the environmental effects (Rehman et al., 2022). SMEs are thought to be responsible for seventy percent of global pollution (Dey et al., 2020; Purwandani and Michaud, 2021). Surprisingly, virtually all of these SMEs in developing countries, namely ninety-nine percent fail to integrate environmental management methods into their company operations (Austin and Rahman, 2022; Dey et al., 2022). These SMEs' failure to include sustainability measures has serious implications, including contributing to global warming and creating natural catastrophes such as droughts, floods, heatwaves, tsunamis, and tornadoes (Caldera and Wirasinghe, 2022; Eggers et al., 2020). These environmental concerns cause significant financial burden for developing-country firms, resulting in significant economic losses (Sakai and Yao, 2022). As a result, companies must adopt sustainable practices and actively contribute to social responsibility in order to safeguard both their communities and the environment (Zhao and He, 2022).

Tackling climate change requires a shared understanding and collaborative efforts where organizations assume a pivotal role as catalysts for enacting solutions (Khan et al. 2022). Numerous studies have explored the relationship between sustainability performance and firm performance, highlighting the potential for sustainable practices to drive financial success and competitive advantages (Elkington, 1997; Schaltegger & Burritt, 2018; Wagner et al., 2019). For instance, Schaltegger and Burritt (2018) found that integrating environmental management into business operations can enhance competitive positioning. One strategic approach put forward to encourage sustainable business practices that give priority to social and environmental concerns and reduce adverse effects is the concept of sustainability performance (SP) (Le, 2022). Sustainability encompasses social, environmental, and economic dimensions with the aim of achieving a harmonious balance between profit generation, environmental stewardship, and social responsibility (Elkington, 1997). Sustainability performance (SP) is defined as the integration of these three dimensions into business practices to achieve long-term success and competitive advantage (Schaltegger & Burritt, 2018). SMEs

that actively embrace sustainability practices not only respond to increasing stakeholder expectations but also open doors to competitive advantages (CA) that can foster financial prosperity (Schaltegger & Burritt, 2018; Wagner et al., 2019; Elkington, 1997). Sustainability initiatives can reduce costs, enhance brand reputation, attract socially conscious consumers, and facilitate access to financing and partnerships (Wagner et al., 2019). Therefore, examining the relationship between SP and FP in the context of Pakistani SMEs becomes essential to unlock the potential benefits that sustainability can offer to these enterprises. Previous studies measure SP through its disclosure in statements which founds a contradictory result (Hussain et al., 2018). So, there is need to conduct study on this specially on Pakistani SMEs who are facing more issues related with dimensions of SP and FP. So, this is focusing on it.

While SP is crucial, it alone is inadequate for FP. CA is another approach for having a beneficial influence on the environment and achieving sustainability (Chaudhary, 2020). So, CA serves as a critical mediator in elucidating the complex interplay between SP and FP within the context of SMEs. While the direct influence of sustainability practices on financial outcomes has been acknowledged (Dangelico & Pujari, 2010), the mediation effect of CA holds a pivotal role in determining the extent to which sustainability initiatives translate into enhanced financial performance for SMEs (Kumar & Vashisth, 2018). Sustainable practices, such as eco-efficiency and responsible sourcing, can differentiate SMEs from competitors, fostering a unique market position (Hart, 1995). CA, whether achieved through cost leadership or product differentiation, enables SMEs to capture market share, command premium prices, and secure long-term profitability (Porter, 2011). Therefore, investigating the mediating role of CA in the relationship between SP and FP not only unravels the mechanism through which sustainability contributes to economic success but also provides SMEs with actionable insights to strategize effectively for a sustainable and financially prosperous future. Previous studies ignore CA as a mediator but SMEs when SMEs have resources those are difficult to replicate it become competitive as compared with their competitor. So, in this study CA is adopted as a mediator.

The theoretical foundation of this study is rooted in the Resource-Based View (RBV) and the Dynamic Capabilities Theory (DCT). The RBV posits that a firm's CA and FP are driven by the unique resources and capabilities it possesses (Barney, 1991). SP, by enhancing an SME's resource base through practices like sustainable supply chain management and innovation in green technologies, can be seen as a resource that potentially contributes to financial performance (Barney & Hesterly, 2006). The DCT emphasizes a firm's ability to adapt and reconfigure its resources in response to changing environmental conditions (Teece et al., 1997). CA, as a dynamic capability, mediates the relationship between SP and FP by enabling SMEs to exploit sustainability-related opportunities and mitigate risks (Helfat & Winter, 2011). This study integrates these theories to explore how sustainability practices contribute to

FP through the mediating role of CA in the unique context of SMEs in Pakistan.

The significance of this study for Pakistan cannot be overstated. Pakistan's economy heavily relies on SMEs, which constitute a substantial portion of the business landscape. However, these SMEs face various challenges, including resource constraints, market competition, and environmental pressures. The country grapples with environmental issues, such as water scarcity and pollution, which necessitate sustainable business practices. Furthermore, Pakistan faces socio-economic challenges, including unemployment and income inequality. By investigating how SP influences the FP of SMEs and the role of CA as a mediator, this research offers a roadmap for Pakistani SMEs to not only thrive economically but also contribute to environmental and societal well-being. As Pakistan seeks to enhance its global competitiveness and address pressing environmental and social concerns, this study provides actionable insights for policymakers, business leaders, and stakeholders to foster sustainable growth and economic resilience in the country.

While the significance of these concepts is indisputable, there exists a research gap in understanding their interconnections. More specifically, there is a pressing need to explore how SP and CA interact to influence FP. The driving force behind this study is the recognition that contemporary businesses confront unprecedented levels of uncertainty and disruption. Consequently, comprehending the factors that empower SMEs to adapt and respond effectively to shifting conditions is of paramount importance. This study draws its foundation from two fundamental theories, namely the resource-based view (RBV) and the dynamic capabilities view (DCV). It constructs a research model aimed at investigating whether SP initiatives play a determining role in how SMEs leverage their resources and whether CA serves as a mediating factor in this relationship. Moreover, this research underscores the critical importance of investing in SP initiatives to enhance organizational resilience and FP.

Our research endeavors to illuminate the profound influence of these variables and their implications for businesses navigating the Pakistani market. The empirical results, based on data collected from a sample of 370 employees within SMEs, gathered through a meticulously designed questionnaire, and analyzed using Smart PLS, unequivocally establish a significant and positive relationship between these pivotal variables. Furthermore, this research bridges theory and practice by grounding these findings within the RBV and the DCT, offering a comprehensive understanding of how sustainable practices, when effectively leveraged, contribute to enhanced financial performance, with competitive advantages playing a central mediating role. Our study not only extends the academic discourse but also provides actionable insights for business leaders and policymakers, equipping them with valuable knowledge for fostering sustainable growth and competitive excellence in the distinctive landscape of Pakistani SMEs.

2. LITERATURE REVIEW

2.1 Theoretical Background

RBV and the DCT are foundational frameworks that inform our exploration of the intricate relationship between SP, FP, and the mediating function of CA. The RBV, pioneered by Jay Barney (1991), posits that a firm's competitive advantage is contingent upon its ability to identify, acquire, and effectively deploy unique and valuable resources and capabilities. Sustainable practices can be regarded as strategic resources that enhance competitive positioning by nurturing valuable intangible assets, including brand reputation and innovation capabilities. DCT, introduced by David Teece and his colleagues (Teece et al., 1997), centers on a firm's capacity to adapt and reconfigure its resources and capabilities in response to dynamic external environments. In the context of sustainability, DCT suggests that organizations adept at dynamically adjusting their sustainability initiatives are better equipped to exploit emerging opportunities and manage risks, ultimately influencing their financial performance positively. Prior research, such as Barney (1991) and Teece et al. (1997), has demonstrated the applicability of RBV and DCT in understanding the relationships between sustainability practices, financial outcomes, and competitive advantages. These theories offer a robust theoretical foundation for our study, within the unique context of SMEs in Pakistan.

2.2 Hypotheses Development

2.2.1 Sustainability Performance

Elkington's (1997) concept of sustainability combines a holistic approach to business success by including Economic, Environmental, and social goals into a firm's plan execution. Fundamentally, sustainability attempts to protect and improve the environment and society while also increasing commercial value. According to experts such as Masud et al. (2019), sustainability entails balancing economic growth with social and environmental goals, with a focus on creating value for both the enterprise and society. According to Kamble et al. (2020), sustainability practices are the purposeful implementation of policies that strike a sensible balance between promoting social well-being, protecting the environment, and stimulating economic progress. Helleno et al. (2017) describe SP as a set of firm actions aiming at meeting present demands without endangering the requirements of future generations. Industries that adopt SP, according to Moktadir et al. (2018), adjust their corporate strategy and operations to account for the economic, environmental, and social implications. Recent studies have further explored the role of sustainability in enhancing firm performance. For example, Wagner et al. (2019) demonstrated that sustainability initiatives could reduce costs, enhance brand reputation, attract socially conscious consumers, and facilitate access to financing and partnerships.

The notion of sustainability correlates with the Brundtland Commission's core premise, which defines sustainable development as the pursuit of goals that "meet the needs of the present without jeopardizing future generations' ability to meet their own needs." While the terms sustainability and Corporate Social Responsibility (CSR) are sometimes used interchangeably in strategic contexts, it is worth noting that the term

'sustainability' has acquired greater importance over time than CSR (Strand et al., 2015). The incorporation of sustainability into business structures and practices has complicated matters. Beyond social and environmental elements, corporate sustainability has been promoted for economic sustainability as well, as demonstrated by notions such as the 'Triple Bottom Line' or 'TBL' (Elkington, 2018). However, Elkington's new viewpoint (Elkington, 2018) stresses quantifying the success or failure of sustainability goals by evaluating people's and the planet's total well-being, giving social and environmental results precedence over economic ones. Significantly, long-term financial performance is inextricably linked to these social and environmental results (Sjafjell, 2015). As a result, we use the term 'sustainability' to refer to environmental, social, and governance results.

2.2.2 Sustainability Performance and Firm Performance

In studies, the relationship between SP and FP has shown contradictory results. While some studies identified positive relationships between SP and FP, others found negative or no correlations. These ambiguities have been mentioned by Revelli and Viviani (2015), Rowley and Berman (2000), and Van Beurden and Gössling (2008). Friede et al. (2015) did a comprehensive evaluation of 2,000 research and discovered that most of them showed a favorable relationship between SP and FP. According to Albuquerque et al. (2012), SP is often seen as a strategic metric that may boost a company's profitability. As Alsayegh et al. (2020), Brown et al. (2009), Buallay (2019), and Steyn (2014) emphasize, it is also considered as a metric of firm accountability, reputation, and customer trust.

As evidenced by Lourenço et al. (2012) and Albuquerque et al. (2019), adopting sustainable practices is considered to provide organizations a competitive advantage within their sector, leading to higher productivity and decreased systemic risk exposure. According to Busch et al. (2019) and Eliwa et al. (2021), SP practices can even minimize a company's downside risk, with high SP scores suggesting reduced business risk and lower loan costs. Furthermore, as highlighted by Broadstock et al. (2020), shareholders frequently view a company's SP performance as an indication of its future stock success and capacity to handle risks. Nonetheless, there is contradictory research that shows a negative link between SP and risk management, such as those by Duque-Grisales and Aguilera-Caracuel (2021) and Lee et al. (2009).

Previous research on the relationships between distinct SP and FP traits yielded inconsistent results. Some studies suggest a positive association between environmental practices and FP, underlining the need to address the concerns of environmental stakeholders (Salama, 2005; Friede et al., 2015). Ignoring these stakeholders, as demonstrated by Fauzi et al. (2007) and Arvidsson (2022), can lead to conflicts, increased expenditures, and lower FP. According to another study, raising SP may result in greater costs and a drop in marginal net benefits (Horvathova, 2010). Furthermore, the conclusions made from these relationships may differ depending on the individual context, with confirmed differences among nations and legal systems (Di Vita, 2022).

Scholars emphasize the need to investigate various organizational environments (Theyel, 2000). The outcomes of research on the link between SP and FP provide a mixed picture. While some research show that SP has a positive influence on FP (Chien and Peng, 2012; Servaes and Tamayo, 2013), others, such as McWilliams and Siegel (2000), imply that SP has the potential to be lucrative, providing the firm with a sustainable competitive edge. Socially responsible investments have also been shown to increase financial performance (Shahzad and Sharfman, 2017). Nonetheless, other research indicates negative results, such as the idea that corporate expenditures on sustainability policies divert revenues that could otherwise be devoted to profitable investments (Peng and Yang, 2014). Furthermore, another research has found no apparent link between SP and FP (Fauzi et al., 2007; Weston and Nnadi, 2023). Furthermore, some research shows that a larger board size is associated with lower FP (Cheng, 2020), while others demonstrate that a larger board size promotes information acquisition and hence increases FP (Puni and Anlesinya, 2020). In conclusion, past research has yielded inconsistent findings when studying the relationship between SP and FP, both when analyzing SP holistically and when addressing SP components (Rowley and Berman, 2000; Revelli and Viviani, 2015; Friede et al., 2015). Because these data are confusing and inconclusive, we offer the following non-directional hypothesis:

H1a. There is a significant relationship between Social Sustainability Performance and Firm Performance.

H1b. There is a significant relationship between Economic Sustainability Performance and Firm Performance.

H1c. There is a significant relationship between Environmental Sustainability Performance and Firm Performance.

2.2.3 Sustainability Performance, Sustainable Competitive Advantage and Firm Performance

According to Barney (1991), a firm acquires a competitive advantage when it implements a value-creating strategy that is not being used by any present or future competitors at the same time. Competitive advantage has always been associated with value generation, which is linked to financial success. As advocated by Porter (1985), this advantage can be obtained through cost-effective or differentiating tactics. However, as stated by Porter and Kramer (2006), more recent research has emphasized that competitiveness is closely tied to corporate resources and competencies that are fostered through Corporate Social Responsibility (CSR) practices. Furthermore, as defined by Chang (2011), environmental management practices could bring innovation, such as the creation of environmentally friendly goods and processes, which may pave the way for a CA.

Since the beginning of the industrial revolution, industrial operations have resulted in enormous environmental consequences, transforming this into a growing worldwide issue. Various remedial measures have been developed and implemented in recent decades to mitigate environmental harm caused by industrial operations, population growth, and consumption habits. Preserving the Earth necessitates the

implementation of methods that anticipate environmental decline, ensuring future generations' capacity to flourish on our planet.

Following that, numerous conceptions evolved to reduce the environmental implications of industrial operations, which were then considered as the principal drivers of environmental deterioration. Green management, green marketing, green production, green innovation, and other topics were included. According to Chen et al. (2016), the increased importance of global environmental rules such as the Montreal Convention and the Kyoto Protocol, as well as rising consumer environmental consciousness, has significant ramifications for businesses globally.

Previously, a huge majority of managers believed that investments in environmental protection practices were damaging to business rather than beneficial. As a result, as observed by Chen et al. (2016), environmental investments were small and mostly driven by legislative obligations or as part of corporate social responsibility activities. However, strict international environmental norms and treaties, as well as the growth of a more environmentally concerned consumer base, drove firms to adopt a new attitude. This changing need necessitated the incorporation of environmental protection practices into the organizational management agenda. This included incorporating green innovation as a characteristic that may provide a competitive advantage, particularly in businesses with high pollution levels. Innovation, according to Porter and Van der Linde (1995), is a driving factor that may increase a company's competitive edge. As a result of the above discussion, the following hypotheses emerge.

H2. There is a significant relationship between Sustainability Performance and Competitive Advantage.

H3. There is a significant relationship between Competitive Advantage and Firm Performance.

H4. Competitive Advantage significantly mediates the relationship between Sustainability Performance and Firm Performance.

3. METHODOLOGY

3.1. Sample and Data Collection Procedure

In the data collection process, a well-structured closed-ended questionnaire was distributed among employees of SMEs located in Karachi, a prominent port city where many companies are based. The choice of SMEs for this study is driven by the dearth of previous research on the interplay between SP and FP, with the mediating role of CA, especially in the context of a developing nation like Pakistan. SMEs hold a pivotal role in Pakistan's economy, making it imperative to grasp how SP can enhance the FP of these enterprises and whether CA acts as a mediator in this relationship. This study aims to bridge this gap in the existing literature and provide insights into the dynamics between these variables within SMEs. The research endeavors to identify best practices for enhancing SP to ultimately bolster FP through the intermediary role of CA in SMEs situated in Pakistan. It also serves as a foundation for future study and guides policymakers in this area. A total of 470 questionnaires were distributed using random stratified sampling, with 385 returned.

After removing partial replies, a total of 370 full and valid responses were retained for further analysis, producing a response rate of 78.72%. According to the research literature, for investigations including three or more indicators per component, a sample size of 150 is often judged enough for obtaining convergence and an accurate solution (Anderson et al., 1984).

3.2 Measures

The SP is built on three core constructs: the ECSP, ENSP, and SSP. ECSP is measured using four items (Bansal, 2005; Paulraj 2011; Elhuni and Ahmad, 2017; Zhu and Sarkis 2004), ENSP measured through nine items (Frank et al. 2016; Paulraj, 2011; Zhu and Sarkis 2004; Elhuni and Ahmad, 2017) while SSP through four items (Elhuni and Ahmad, 2017; Frank et al. 2016; Bansal 2005; Infante et al. 2013). We examined the CA factor using three items (Chen et al. 2016). FP also consists of three constructs financial and market-based performance, quality performance and innovation performance. Financial and market-based performance is measured through four items, quality performance is also measured through three items while innovation performance using 3 items (Maletič et al., 2014). Each survey question is scored on a Likert scale with the options "strongly agree=1; agree=2; neutral=3; disagree=4; and strongly disagree=5".

3.3 Data Analysis Tools

PLS-SEM was used in the study to investigate the hypothesized correlations. PLS-SEM was chosen for this model because of its capacity to estimate complicated structural relationships among variables and investigate mediating effects. We use partial least squares structural equation modeling (PLS-SEM) to analyze data from 370 SMEs firms in Pakistan. The measurement model includes constructs for sustainability performance, competitive advantages, and firm performance. Detailed descriptions of each construct and their indicators are provided in Appendix A. The tables and figures follow the journal's guidelines to ensure clarity and consistency. Van et al. (2017) have shown that PLS-SEM may produce valid findings even with a small sample size. The analysis was carried out using Smart PLS software, and the model was built from a causal standpoint, as described by Hair et al. (2021). Several statistical approaches, including measurement and structural models, were used to decipher the complex relationships between predictor factors and dependent variables. According to Tan et al. (2023), the structural model researched linkages between latent variables, whereas the measurement model evaluated interactions between observable and latent variables.

Cronbach's Alpha (CA), Average Variance Extracted (AVE), and Composite dependability (CR) coefficients were calculated to examine data consistency and dependability. In addition, the Fornell-Larcker test was used to assess component uniqueness. Researchers also looked at Heterotrait-Monotrait (HTMT) correlations to see whether there were any internal relationships between variables and if there were any issues about multicollinearity. Finally, the significance of the anticipated associations was evaluated using Structural Equation Modeling (SEM).

4. ANALYSIS AND FINDINGS

4.1 Demographic Result

The final dataset comprised responses from 370 SMEs managers and employees in Pakistan. The majority of responders (65%) have been with their company for at least three years. The majority of managers and employees (74%) were between the ages of (25 to 50) and had finished some type of bachelor level education (74%). Firm age groups were separated into four categories: 0-5 years (15%), 5-10 years (45%), 10-15 years (25%), and >15 years (15%). Apart from these features, 45% of the businesses had fewer than 30 employees, 25% had between 31 and 50 employees, and 30% had more than 50 employees.

Table 1: Demographic Statistics

Variable	Description	Frequency	Percentage
Experience in this firm	0-3 Years	240	65
	3-5 Years	44	12
	5-10 Years	48	13
	10 Years and above	38	10
Employee Age	18-25	274	74
	25-35	40	11
	35-45	37	10
	45 and above	19	5
Employee Education	Matriculation	26	7
	Intermediate	37	10
	Bachelor	277	75
	Master	30	8
	PhD	0	0
Firm Age	0-5	55	15
	05-10	166	45
	10-15	93	25
	15 and above	56	15
Firm Employees	1-30	166	45
	31-50	93	25
	50 and above	111	30

Source: Author's own work

Table 2: Construct Reliability and Validity Test

	Items	Factor Loading	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Economic Sustainability	ECSP1	0.879	0.886	0.922	0.746
	ECSP2	0.896			
	ECSP3	0.855			
	ECSP4	0.822			
Environmental Sustainability	ENSP1	0.645	0.649	0.727	0.572
	ENSP2	0.770			
	ENSP3	0.639			
Social Sustainability	SSP1	0.880	0.886	0.922	0.746
	SSP2	0.896			
	SSP3	0.855			
	SSP3	0.823			
Financial and Market Performance	PERF1	0.745	0.638	0.782	0.574
	PERF2	0.630			
	PERF3	0.688			
	PERF4	0.686			
Quality Performance	PERQ1	0.717	0.673	0.822	0.607
	PERQ2	0.830			
	PERQ3	0.785			
Innovation Performance	PERI1	0.879	0.703	0.827	0.617
	PERI2	0.762			
	PERI3	0.704			
Competitive Advantages	CA1	0.740	0.657	0.730	0.575
	CA2	0.676			
	CA3	0.647			

Source: Author's own work

Table 3: Fornell-Larcker Criterion

	ECSP	ENSP	SSP	PERF	PERQ	PERI	CA
ECSP	0.864						
ENSP	0.199	0.687					
SSP	0.123	0.474	0.688				
PERF	0.138	0.216	0.460	0.785			
PERQ	0.204	0.263	0.466	0.652	0.779		
PERI	1.000	0.199	0.124	0.138	0.204	0.864	
CA	0.096	0.490	0.8	0.896	0.425	0.394	0.689

Source: Author's own work

Table 4: HTMT Ratios

	ECSP	ENSP	SSP	PERF	PERQ	PERI	CA
ECSP							
ENSP	0.314						
SSP	0.186	0.834					
PERF	0.201	0.381	0.645				
PERQ	0.266	0.497	0.690	0.776			
PERI	0.128	0.314	0.186	0.201	0.266		
CA	0.199	0.185	0.571	0.603	0.759	0.199	

Source: Author's own work

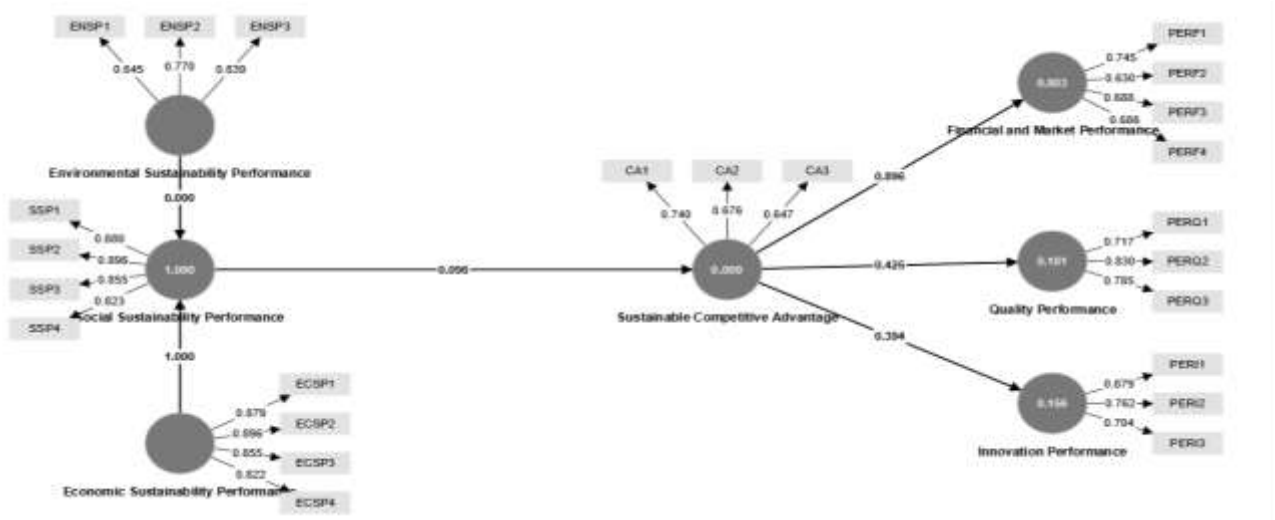

Figure 1: Mediation Effect of Competitive Advantage

4.2 Measurement Result

Our findings show that sustainable competitive advantages significantly mediate the relationship between sustainability performance and firm performance. This indicates that SMEs with strong sustainability practices are more likely to achieve better financial and market performance through enhanced competitive advantages. Figure 1 (titled "Mediation Effect of Competitive Advantages") illustrates these relationships. We analyzed the constructs' reliability and validity to evaluate the measurement model, and Table 2 summarizes our findings. To assess the items' dependability, we used standardized factor loadings and adhered to the frequently suggested criterion of 0.6 (Fornell & Larcker, 1981; Gao et al., 2023), which all items satisfied. Cronbach's alpha, composite reliability, and average variance extracted (AVE) were also used to test construct reliability, and all constructs indicated adequate levels of reliability, with values more than 0.7. A similar finding was found in terms of convergent validity (Rehman et al., 2019), with AVE values over 0.5 in all variables (Hair et al., 2016).

We used both the Fornell-Larcker criteria and the HTMT to determine discriminant validity. The correlations between each pair of constructs were smaller than the square root of their AVE, according to our findings. According to Roldán and Sánchez-Franco (2012), for adequate discriminant validity, the diagonal elements in the related rows and columns should be significantly larger than the off-diagonal ones. As demonstrated in Table 4, this criterion was met by all measurement constructs that met the Fornell-Larcker criterion (Henseler et al., 2016). The HTMT values between each pair of constructs ranged from 0.128 to 0.834, never exceeding the 0.85 maximum threshold. As a result, our findings verified the discriminant validity of the measurement model (Table 4).

Table 5: Direct effect of variables on Business Performance

	Standard deviation (STDEV)	T statistics (|O/STDEV|)	p values
ECSP -> PERF	0.019	2.107	0.030
ECSP -> PERQ	0.044	2.173	0.037
ECSP -> PERI	0.018	2.081	0.035
ENSP -> PERF	0.000	0.346	0.030
ENSP -> PERQ	0.018	2.081	0.000
ENSP -> PERI	0.019	2.107	0.000
SSP -> PERF	0.000	0.351	0.000
SSP -> PERQ	0.040	2.175	0.030
SSP -> PERI	0.000	0.357	0.037
CA -> PERF	0.000	0.356	0.035
CA -> PERQ	0.040	2.175	0.000
CA -> PERI	0.000	0.352	0.030

Source: Author's own work

Table 6: Mediation Result

	Standard deviation (STDEV)	T statistics (|O/STDEV|)	p values
ECSP -> CA -> PERF	0.047	3.069	0.002
ECSP -> CA -> PERQ	0.047	3.069	0.002
ECSP -> CA -> PERI	0.022	2.954	0.003
ENSP -> CA -> PERF	0.047	3.069	0.002
ENSP -> CA -> PERQ	0.047	3.069	0.002
ENSP -> CA -> PERI	0.022	2.954	0.003
SSP -> CA -> PERF	0.022	2.889	0.004
SSP -> CA -> PERQ	0.041	2.263	0.000
SSP -> CA -> PERI	0.017	52.318	0.000

Source: Author's own work

4.3 Hypotheses Result

Two models were conducted to test the hypothesis. Model 1 had SP which measured through ECSP, ENSP, and SSP impact on FP which is measured through PERF, PERQ and PERI as we as CA on FP also; and Model 2 was the entire model with CA functioning as a mediating variable in the link between SP constructs and FP. H1a, H1b, H1c, and H2 suggest that SP components and CA have a favorable and substantial influence on FP components. To put H3a, H3b, and H3c to the test in terms of the serial mediating effects of CA between SP components on FP components. The findings demonstrate that the indirect impact was also statistically significant. So, these hypotheses are also accepted.

5. DISCUSSION

The results indicate that sustainable competitive advantages play a crucial role in mediating the relationship between sustainability performance and firm performance. This finding aligns with previous studies (e.g., Dangelico & Pujari, 2010; Kumar & Vashisth, 2018) and highlights the importance of strategic resource management in achieving sustainability goals. Additionally, our study contributes to the literature by providing empirical evidence from Pakistani SMEs, emphasizing the unique challenges and opportunities in this context. The practical implications for SMEs include adopting sustainability practices to enhance market positioning and long-term profitability. Our analysis aimed to delve into the relationship between SP and FP, considering the mediating role of CA. Our findings offer a fresh perspective, shedding deeper insight into the discrepancies observed in prior research (Brammer et al., 2006;

Trumpp & Guenther, 2015; Hoepner et al., 2016). Our initial model (Model 1), as presented in Table 5, replicates earlier analyses (Nollet et al., 2016), revealing a positive impact of SP dimensions on FP. In the second model, we introduced the mediation effect of CA between SP and FP. This study marks a pioneering effort in this domain. SMEs, through their pursuit of SP, foster positive relationships with various stakeholders and cultivate a favorable image among them. Subsequently, by effectively leveraging their resources through CA, SMEs enhance their FP. The inclusion of CA as a mediating variable has been largely overlooked in existing literature, resulting in a significant knowledge gap. Our research addresses this gap by presenting empirical findings.

We provide a fresh set of metrics designed to better capture organizations' sustainability activities across all SP aspects. Our models predict that these data will validate our theory. When examined in terms of performance, the SP dimensions do have a substantial effect on FP, while other research that measure SP in terms of disclosure have revealed conflicting results (Hussain et al., 2018). Notably, our research shows that including our variables significantly improves the overall explanatory power of the models, and the coefficients vary significantly depending on the specific sustainability factor studied. Considering these facts, we urge for continued SP framework refinement.

6. CONCLUSION

The primary objective of this research is to enhance our understanding of the relationship between SP and FP by introducing CA as a mediator. A thorough review of the existing literature underscores a significant divergence in the available evidence (Endrikat et al., 2014; Wang et al., 2016). This divergence served as a motivating factor for our study, leading us to explore the interplay between SP and FP with CA as a mediating factor. We conclude that the method of measuring SP is of paramount importance and can offer more conclusive insights into the nature of the relationship between sustainability engagement and FP, with CA playing a mediating role. Our research also underscores the need for a reevaluation and realignment of the dimensions within SP.

Our findings highlight that, regardless of the level of transparency, the full impact of significant commitment to sustainability goals can only be realized through a focused emphasis on sustainable development objectives. These findings are consistent with the ideas of the resource-based approach. Furthermore, our findings corroborate the Porter hypothesis by indicating that sincere commitment to SP results in beneficial consequences. In line with the findings of Pätäri et al. (2012) and GómezBezares et al. (2017), we argue that enterprises should include sustainability into their strategic planning and raise their investments in social and environmental performance to achieve a variety of performance goals. Furthermore, we infer that organizations that make larger expenditures in sustainability, particularly those with high visibility, outperform their competitors.

Our findings have important policy implications, especially in calling for more aligned criteria within overall sustainability reporting requirements. Specific recommendations include

developing standardized sustainability reporting frameworks that SMEs can easily adopt, incorporating clear guidelines on environmental, social, and governance (ESG) metrics. Additionally, mandatory sustainability reporting supported by government incentives or subsidies could enhance transparency and accountability. Future research should conduct comparative studies across different regions and industries to identify universal sustainability practices and challenges, providing tailored solutions for enhancing sustainability performance globally. Furthermore, based on our observations of the linkages between various SP dimensions and sub-dimensions, we recommend further worldwide study as well as further inquiry in less developed or emerging economies. We believe that a more extensive examination of SP sub-dimensions can give significant insights to both managers and policymakers.

REFERENCES

Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society*, *20*(7), 1409-1428.

Albuquerque, R., Durnev, A., & Koskinen, Y. (2012). Corporate social responsibility and asset pricing in industry equilibrium. *Available at SSRN*, *1961971*.

Albuquerque, R., Koskinen, Y., & Zhang, C. (2019). Corporate social responsibility and firm risk: Theory and empirical evidence. *Management Science*, *65*(10), 4451-4469.

Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, *12*(9), 3910.

Arvidsson, S., & Dumay, J. (2022). Corporate ESG reporting quantity, quality and performance: Where to now for environmental policy and practice?. *Business Strategy and the Environment*, *31*(3), 1091-1110.

Austin, A., & Rahman, I. U. (2022). A triple helix of market failures: Financing the 3Rs of the circular economy in European SMEs. *Journal of Cleaner Production*, *361*, 132284.

Badu, E. A., & Appiah, K. O. (2017). The effects of board experience and independence on mitigating agency conflict. *Journal of Accounting in Emerging Economies*, *7*(4), 445-467.

Bansal, P. (2005). Evolving sustainably: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, *26*(3), 197-218.

Barclay, D., Higgins, C., & Thompson, R. (1995). *The partial least squares (PLS) approach to casual modeling: personal computer adoption and use as an Illustration*.

Barney, J. (1991). Competitive advantage. *Journal of Management*, *17*(1), 99-120.

Barney, J. B., & Hesterly, W. (2006). Organizational economics: Understanding the relationship between

organizations and economic analysis. *The SAGE Handbook of Organization Studies*, 111-148.

Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, *35*(3), 97-116.

Broadstock, D. C., Matousek, R., Meyer, M., & Tzeremes, N. G. (2020). Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *Journal of Business Research*, *119*, 99-110.

Brown, D. L., Guidry, R. P., & Patten, D. M. (2009). Sustainability reporting and perceptions of corporate reputation: An analysis using fortune. In *Sustainability, Environmental Performance and Disclosures*, *4*, 83-104.

Buallay, A. (2019). Between cost and value: Investigating the effects of sustainability reporting on a firm's performance. *Journal of Applied Accounting Research*, *20*(4), 481-496.

Busch, T., Cho, C. H., Hoepner, A. G., Michelon, G., & Rogelj, J. (2023). Corporate Greenhouse Gas Emissions' Data and the Urgent Need for a Science-Led Just Transition: Introduction to a Thematic Symposium. *Journal of Business Ethics*, *182*(4), 897-901.

Caldera, H. J., & Wirasinghe, S. C. (2022). A universal severity classification for natural disasters. *Natural Hazards*, *111*(2), 1533-1573.

Chang, C. H. (2011). The influence of corporate environmental ethics on competitive advantage: The mediation role of green innovation. *Journal of Business Ethics*, *104*, 361-370.

Chen, P. H., Ong, C. F., & Hsu, S. C. (2016). Understanding the relationships between environmental management practices and financial performances of multinational construction firms. *Journal of Cleaner Production*, *139*, 750-760.

Cheng, C. C. (2020). Sustainability orientation, green supplier involvement, and green innovation performance: Evidence from diversifying green entrants. *Journal of Business Ethics*, *161*, 393-414.

Chien, C. C., & Peng, C. W. (2012). Does going green pay off in the long run? *Journal of Business Research*, *65*(11), 1636-1642.

Dangelico, R. M., & Pujari, D. (2010). Mainstreaming green product innovation: Why and how companies integrate environmental sustainability. *Journal of Business Ethics*, *95*, 471-486.

De Vita, M., Panunzi, S., Fabbrocino, G., & Mannella, A. (2022). A Discussion on the Conceptual Design of Multifunctional Exoskeletons for Sustainable Regeneration of Buildings in Urban Areas. *Buildings*, *12*(8), 1100.

Dey, P. K., Malesios, C., De, D., Budhwar, P., Chowdhury, S., & Cheffi, W. (2022). Circular economy to enhance sustainability of small and medium sized enterprises. In *Supply Chain*

Sustainability in Small and Medium Sized Enterprises 10-45.

Dey, P. K., Malesios, C., De, D., Chowdhury, S., & Abdelaziz, F. B. (2020). The impact of lean management practices and sustainably-oriented innovation on sustainability performance of small and medium-sized enterprises: empirical evidence from the UK. *British Journal of Management*, *31*(1), 141-161.

Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, social and governance (ESG) scores and financial performance of multilatinas: Moderating effects of geographic international diversification and financial slack. *Journal of Business Ethics*, *168*(2), 315-334.

Eggers, J., Melin, Y., Lundström, J., Bergström, D., & Öhman, K. (2020). Management strategies for wood fuel harvesting—Trade-offs with biodiversity and forest ecosystem services. *Sustainability*, *12*(10), 4089.

Elhuni, R. M., & Ahmad, M. M. (2017). Key performance indicators for sustainable production evaluation in oil and gas sector. *Procedia Manufacturing*, *11*, 718-724.

Eliwa, Y., Aboud, A., & Saleh, A. (2021). ESG practices and the cost of debt: Evidence from EU countries. *Critical Perspectives on Accounting*, *79*, 102097.

Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business, Capstone.

Endrikat, J., Guenther, E., & Hoppe, H. (2014). Making sense of conflicting empirical findings: A meta-analytic review of the relationship between corporate environmental and financial performance. *European Management Journal*, *32*(5), 735-751.

Fauzi, H., Mahoney, L. S., & Abdul Rahman, A. (2007). The link between corporate social performance and financial performance: evidence from Indonesian companies. *Issues in Social and Environmental Accounting*, *1*(1), 149-159.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50.

Frank, A. G., Dalle Molle, N., Gerstlberger, W., Bernardi, J. A. B., & Pedrini, D. C. (2016). An integrative environmental performance index for benchmarking in oil and gas industry. *Journal of Cleaner Production*, *133*, 1190-1203.

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, *5*(4), 210-233.

Gómez-Bezares, F., Przychodzen, W., & Przychodzen, J. (2017). Bridging the gap: How sustainable development can help companies create shareholder value and improve financial performance. *Business Ethics: A European Review*, *26*(1), 1-17.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., ... & Ray, S. (2021). An introduction to structural equation modeling. *Partial least squares structural equation modeling (PLS-SEM) using R: a workbook*, 1-29.

Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, *20*(4), 986-1014.

Helfat, C. E., & Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (N) ever-changing world. *Strategic Management Journal*, *32*(11), 1243-1250.

Helleno, A. L., de Moraes, A. J. I., & Simon, A. T. (2017). Integrating sustainability indicators and Lean Manufacturing to assess manufacturing processes: Application case studies in Brazilian industry. *Journal of Cleaner Production*, *153*, 405-416.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). Testing measurement invariance of composites using partial least squares. *International Marketing Review*, *33*(3), 405-431.

Hoepner, A., Oikonomou, I., Scholtens, B., & Schröder, M. (2016). The effects of corporate and country sustainability characteristics on the cost of debt: An international investigation. *Journal of Business Finance & Accounting*, *43*(1-2), 158-190.

Horváthová, E. (2010). Does environmental performance affect financial performance? A meta-analysis. *Ecological Economics*, *70*(1), 52-59.

Hussain, N., Rigoni, U., & Cavezzali, E. (2018). Does it pay to be sustainable? Looking inside the black box of the relationship between sustainability performance and financial performance. *Corporate Social Responsibility and Environmental Management*, *25*(6), 1198-1211.

Infante, C. E. D. D. C., de Mendonça, F. M., Purcidonio, P. M., & Valle, R. (2013). Triple bottom line analysis of oil and gas industry with multicriteria decision making. *Journal of Cleaner Production*, *52*, 289-300.

Kamble, S., Gunasekaran, A., & Dhone, N. C. (2020). Industry 4.0 and lean manufacturing practices for sustainable organisational performance in Indian manufacturing companies. *International Journal of Production Research*, *58*(5), 1319-1337.

Khan, R. U., Arif, H., Sahar, N. E., Ali, A., & Abbasi, M. A. (2022). The role of financial resources in SMEs' financial and environmental performance; the mediating role of green innovation. *Green Finance*, *4*(1), 36-53.

Khan, S. A. R., Sheikh, A. A., & Ahmad, Z. (2023). Developing the interconnection between green employee behavior, tax avoidance, green capability, and sustainable performance of SMEs through corporate social responsibility. *Journal of Cleaner Production*, *419*, 138236.

Le, T. T. (2022). Corporate social responsibility and SMEs' performance: mediating role of corporate image, corporate reputation and customer loyalty. *International Journal of Emerging Markets*.

Lee, D. D., & Faff, R. W. (2009). Corporate sustainability performance and idiosyncratic risk: A global perspective. *Financial Review*, *44*(2), 213-237.

Li, W., Liu, Z., Xia, S., Yan, J., Xiong, Y., Sakka, G., & Li, R. Y. (2022). How can emerging-market SMEs domestically benefit from their performance in developed countries? Empirical evidence from China. *Journal of Business Research*, *142*, 200-210.

Lourenço, I. C., Branco, M. C., Curto, J. D., & Eugénio, T. (2012). How does the market value corporate sustainability performance?. *Journal of Business Ethics*, *108*, 417-428.

Maletič, M., Maletič, D., Dahlgaard, J. J., Dahlgaard-Park, S. M., & Gomišček, B. (2014). The relationship between sustainability–oriented innovation practices and organizational performance: Empirical evidence from Slovenian organizations. *Organizacija*, *47*(1), 3-13.

Masud, M. A. K., Rashid, M. H. U., Khan, T., Bae, S. M., & Kim, J. D. (2019). Organizational strategy and corporate social responsibility: The mediating effect of triple bottom line. *International Journal of Environmental Research and Public Health*, *16*(22), 4559.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification?. *Strategic Management Journal*, *21*(5), 603-609.

Moktadir, M. A., Ali, S. M., Rajesh, R., & Paul, S. K. (2018). Modeling the interrelationships among barriers to sustainable supply chain management in leather industry. *Journal of Cleaner Production*, *181*, 631-651.

Moursellas, A., De, D., Wurzer, T., Skouloudis, A., Reiner, G., Chaudhuri, A., & Dey, P. K. (2023). Sustainability practices and performance in European small-and-medium enterprises: insights from multiple case studies. *Circular Economy and Sustainability*, *3*(2), 835-860.

Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. *Economic Modelling*, *52*, 400-407.

Orlitzky, M. (2005). Social responsibility and financial performance: Trade-off or virtuous circle. *University of Auckland Business Review*, *7*(1), 37-43.

Pätäri, S., Jantunen, A., Kyläheiko, K., & Sandström, J. (2012). Does sustainable development foster value creation? Empirical evidence from the global energy industry. *Corporate Social Responsibility and Environmental Management*, *19*(6), 317-326.

Paulraj, A. (2011). Understanding the relationships between internal resources and capabilities, sustainable supply

management and organizational sustainability. *Journal of Supply Chain Management*, *47*(1), 19-37.

Peng, C. W., & Yang, M. L. (2014). The effect of corporate social performance on financial performance: The moderating effect of ownership concentration. *Journal of Business Ethics*, *123*, 171-182.

Porter, M. E. (2011). *Competitive advantage of nations: creating and sustaining superior performance*. Simon and Schuster.

Porter, M. E., & Linde, C. V. D. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives*, *9*(4), 97-118.

Puni, A., & Anlesinya, A. (2020). Corporate governance mechanisms and firm performance in a developing country. *International Journal of Law and Management*, *62*(2), 147-169.

Purwandani, J. A., & Michaud, G. (2021). What are the drivers and barriers for green business practice adoption for SMEs? *Environment Systems and Decisions*, *41*(4), 577-593.

Rahman, M. N., & Samiha, N. N. R. H. Z. (2019). An Evaluation of the Factors Influencing Customers' Experience in Supermarkets of Bangladesh. *Agora*, *13*, 22.

Rehman, S. U., Bresciani, S., Yahiaoui, D., & Giacosa, E. (2022). Environmental sustainability orientation and corporate social responsibility influence on environmental performance of small and medium enterprises: The mediating effect of green capability. *Corporate Social Responsibility and Environmental Management*, *29*(6), 1954-1967.

Revelli, C., & Viviani, J. L. (2015). Financial performance of socially responsible investing (SRI): what have we learned? A meta-analysis. *Business Ethics: A European Review*, *24*(2), 158-185.

Roldán, J. L., & Sánchez-Franco, M. J. (2012). Variance-based structural equation modeling: Guidelines for using partial least squares in information systems research. *Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems,* 193-221.

Rowley, T., & Berman, S. (2000). A brand new brand of corporate social performance. *Business & Society*, *39*(4), 397-418.

Sakai, P., & Yao, Z. (2023). Financial losses and flood damages experienced by SMEs: Who are the biggest losers across sectors and sizes?. *International Journal of Disaster Risk Reduction*, *91*, 103677.

Salama, A. M. (2005). PLADEW: a tool for teachers awareness of school building sustainability. *Global Built Environment Review*, *5*(1), 45-56.

Schaltegger, S., & Burritt, R. (2018). Business cases and corporate engagement with sustainability: Differentiating ethical motivations. *Journal of Business Ethics*, *147*, 241-259.

Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer

awareness. *Management Science*, *59*(5), 1045-1061.

Shahzad, A. M., & Sharfman, M. P. (2017). Corporate social performance and financial performance: Sample-selection issues. *Business & Society*, *56*(6), 889-918.

Simpson, W. G., & Kohers, T. (2002). The link between corporate social and financial performance: Evidence from the banking industry. *Journal of Business Ethics*, *35*, 97-109.

Sjåfjell, B., Johnston, A., Anker-Sørensen, L., & Millon, D. (2015). Shareholder primacy: the main barrier to sustainable companies.

Steyn, M. (2014). Organisational benefits and implementation challenges of mandatory integrated reporting: Perspectives of senior executives at South African listed companies. *Sustainability Accounting, Management and Policy Journal*, *5*(4), 476-503.

Strand, R., Freeman, R. E., & Hockerts, K. (2015). Corporate social responsibility and sustainability in Scandinavia: An overview. *Journal of Business Ethics*, *127*, 1-15.

Tan, C. Y., Rahman, R. A., & Lee, Y. S. (2023). Modelling the WELL building concepts for office environments: PLS-SEM approach. *Journal of Engineering, Design and Technology*.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509-533.

Theyel, G. (2000). Management practices for environmental innovation and performance. *International Journal of Operations & Production Management*, *20*(2), 249-266.

Trumpp, C., Endrikat, J., Zopf, C., & Guenther, E. (2015). Definition, conceptualization, and measurement of corporate environmental performance: A critical examination of a multidimensional construct. *Journal of Business Ethics*, *126*, 185-204.

Van Berkel, N., Ferreira, D., & Kostakos, V. (2017). The experience sampling method on mobile devices. *ACM Computing Surveys (CSUR)*, *50*(6), 1-40.

Van Beurden, P., & Gössling, T. (2008). The worth of values–a literature review on the relation between corporate social and financial performance. *Journal of Business Ethics*, *82*, 407-424.

Vashisth, A., & Kumar, R. (2018). Review on Effect of Pavement Characteristics on Fuel Consumption. *International Journal of Engineering and Advanced Technology (IJEAT)*, 1-5.

Wagner, N., Strulak-Wójcikiewicz, R., & Landowska, A. (2019). Trust in sharing economy business models from the perspective of customers in Szczecin, Poland. *Sustainability*, *11*(23), 6838.

Wang, H., Lu, W., Ye, M., Chau, K. W., & Zhang, X. (2016). The curvilinear relationship between corporate social performance and corporate financial performance: Evidence from the international

construction industry. *Journal of cleaner production*, *137*, 1313-1322.

Weston, P., & Nnadi, M. (2023). Evaluation of strategic and financial variables of corporate sustainability and ESG policies on corporate finance performance. *Journal of Sustainable Finance & Investment*, *13*(2), 1058-1074.

Zhao, L., & He, Q. (2022). Explicating the microfoundation of SME pro-environmental operations: the role of top managers. *International Journal of Operations & Production Management*, *42*(4), 500-525.

Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of operations management*, *22*(3), 265-289.