# Impact of Sustainability Performance on Financial Performance of Small and Medium enterprises (SMEs) in Pakistan

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## Abstract

*Purpose:* The relationship between sustainability performance and financial performance has been the subject of extensive research over the past few decades. Although a variety of approaches and strategies have been used by researchers to look into this relationship, the findings are still unclear. Since small and medium-sized businesses in Pakistan are dealing with some sustainability-related challenges, we examine the relationship between sustainability performance and financial performance in this article.

*Methods:* We used a basic random sampling technique to gather data from 385 employees of small and medium-sized businesses and analysis performed through Smart PLS.

*Findings:* According to our findings, financial performance is significantly impacted positively by sustainability performance and resource-based view also support these findings.

*Novelty:* According to researchers' knowledge this is the pioneer study conducted on Pakistani small and medium enterprises. The findings contribute significantly to the policy implications for the creation of sustainability to improve their financial performance.

**Keywords:** Sustainability Performance, Financial Performance, Small Medium Enterprises, Random Sampling, Pakistan

## 1. Introduction

Does Pakistani small and medium-sized businesses' (SMEs') financial performance (FP) benefit from sustainability performance (SP)? Numerous research over the past few decades have attempted to answer this question, but the outcomes are inconsistent (Hussain et al., 2018; Jyoti & Khanna, 2021). SMEs are highly significant to the world's economy because they account for almost 90% of all enterprises globally and produce 60% of the labor force (Khan et al., 2023). Within the framework of Pakistan, a developing country, small and medium-sized enterprises (SMEs) constitute a significant economic force, with over five million entities, about forty percent of the GDP, approximately seventy percent of the workforce employed, and a quarter of all exports coming from the country (SMEDA, 2022). According to SMEDA's 2021 report, these SMEs in Pakistan are expected to have a significant economic impact, with an estimated contribution of 3,407 billion Pakistani rupees (PKR) by 2030 a notable twenty-two percent rise from their current contributions. Pakistan's SMEs do not fully contribute to the country's sustainable development goals, despite their considerable economic contributions (Li et al., 2022).

SMEs commonly use natural resources without taking into account the effects on the environment on a global scale (Rehman et al., 2022). Seventy percent of global pollution is attributed to SMEs (Purwandani and Michaud, 2021). Remarkably, ninety-nine percent of these SMEs in developing

nations, or nearly all of them, neglect to include environmental management techniques in their business operations (Dey et al., 2022). Serious repercussions result from these SMEs' omission of sustainability measures, including their contribution to global warming and the production of natural disasters such heat waves, tsunamis, tornadoes, droughts, and floods (Caldera and Wirasinghe, 2022). According to Sakai and Yao (2022), environmental concerns pose a substantial financial burden on enterprises operating in developing countries, leading to substantial economic losses. Therefore, in order to protect their communities and the environment, businesses need to implement sustainable practices and actively participate in social responsibility (Zhao and He, 2022).

Addressing climate change necessitates cooperation and a common understanding, with organizations playing a crucial role as enablers of solutions (Khan et al., 2022). The idea of SP has been proposed as a strategic method to promote sustainable business practices that prioritize social and environmental considerations and lessen negative effects (Le, 2022). The goal of sustainability is to strike a healthy balance between the pursuit of profit, environmental stewardship, and social responsibility. Sustainability includes social, environmental, and economic aspects (Elkington, 1997). SMEs that actively adopt sustainable practices can gain competitive advantages that can promote financial prosperity in addition to meeting the expectations of stakeholders, which are becoming more and more important (Schaltegger & Burritt, 2018). Sustainability programs can lower expenses, improve a brand's reputation, draw more socially concerned customers, and make it easier to get funding and form alliances (Wagner et al., 2019). To fully realise the potential advantages that sustainability can provide for Pakistani SMEs, it is imperative to investigate the interplay between SP and FP. Earlier research measured SP by having participants disclose it in comments, and the results were inconsistent (Hussain et al., 2018). Thus, research is required, with a focus on Pakistani SMEs in particular, as they face a greater number of problems pertaining to the SP and FP dimensions. Thus, this attention to it.

The Resource-Based View (RBV) serves as the study's theoretical cornerstone. According to the RBV, a company's FP are determined by the special resources and talents it has (Barney, 1991). SP can be considered a resource that possibly helps to FP by strengthening a SME's resource base through techniques like sustainable supply chain management and innovation in green technology (Barney & Hesterly, 2006). The capacity of a company to adjust and reorganize its assets in reaction to shifting external circumstances (Teece et al., 1997). In order to investigate how sustainable practices support FP in the particular setting of SMEs in Pakistan, this study integrates this theory.

One cannot stress the importance of this study for Pakistan. Pakistan's economy is largely dependent on SMEs, which make up a sizable share of the country's business community. These SMEs do, however, confront a number of difficulties, such as limited resources, competitive markets, and environmental demands. The nation faces environmental challenges like pollution and water scarcity, which make sustainable business methods necessary. Pakistan also has to deal with socioeconomic issues including income disparity and unemployment. This study provides a roadmap for Pakistani SMEs to prosper economically and make positive contributions to the environment and society at large by examining how SP affects FP of SMEs. This report offers practical insights for policymakers, corporate leaders, and stakeholders to support sustainable growth and economic resilience in Pakistan as it works to improve its global competitiveness and address urgent environmental and social challenges.

Although there is no denying the importance of these ideas, there is still a knowledge vacuum on how they are related to one another. More precisely, it is imperative to investigate the relationship

between SP and FP. The realization that modern firms face never-before-seen levels of uncertainty and disruption is what motivated this study. Therefore, it is crucial to understand the elements that enable SMEs to adjust and react to changing circumstances. The RBV is one of two key hypotheses that form the basis of this work. It builds a research model with the intention of establishing whether or not SP efforts influence how SMEs allocate their resources. Furthermore, this study emphasizes how crucial it is to fund SP projects in order to improve organizational resilience and FP.

Our study aims to shed light on these factors' significant influence and the consequences they have for companies operating in Pakistan. The empirical findings clearly demonstrate a significant and positive link between these key variables. The data were gathered from a sample of 385 employees inside SMEs using a well-crafted questionnaire, and the data was then analyzed using Smart PLS. Additionally, by firmly establishing these results within the RBV, this study unites theory and practice and provides a thorough grasp of how sustainable practices, when properly used, lead to improved FP. Our research adds to the body of knowledge in academia while also giving business executives and policymakers useful information for promoting competitive excellence and sustainable growth in the unique environment of Pakistani SMEs. The remaining sections of the document are arranged as follows: The theoretical underpinning, creation of hypotheses, and conceptual framework are covered in part two. Our methodology is explained in Section 3. The results are presented in Section Four. The debate, findings, ramifications, and future directions for research are covered in Section 5.

## 2. Literature Review

### 2.1 Theoretical Background

The fundamental foundations of RBV guide our investigation of the complex interrelationship between SP and FP. The RBV, first introduced by Barney in 1991, asserts that a company's potential to gain a competitive edge depends on its capacity to recognize, obtain, and efficiently utilize important and distinctive resources and skills. By fostering priceless intangible assets like brand reputation and innovative capabilities, sustainable practices can be seen as strategic resources that improve competitive posture. It implies that firms that are skilled at adapting their sustainability programs quickly are better able to take advantage of new opportunities and control risks, which in turn improves their FP. Previous studies, like those by Barney (1991) and Teece et al. (1997), have shown that RBV is applicable to comprehending the connections between competitive advantages, sustainability practices, and financial results. These theories provide a strong theoretical framework for our research, specifically in the context of Pakistani SMEs.

### 2.2 Hypotheses Development

### 2.2.1 Sustainability Performance

Elkington (1997) introduced the notion of sustainability, which integrates economic, environmental, and social objectives into a company's plan execution, thereby offering a comprehensive approach to corporate success. Sustainability is essentially an effort to preserve and enhance society and the environment while simultaneously generating more economic value. Sustainability, according to specialists like Masud et al. (2019), is striking a balance between social and environmental objectives and economic growth, with an emphasis on generating value for the business as well as society. Sustainability practices, according to Kamble et al. (2020), are the deliberate application of laws that achieve a reasonable balance between advancing social progress, environmental preservation, and economic growth. Helleno et al. (2017) define SP as a series of decisive steps intended to satisfy current needs without jeopardizing those of future generations. According to Moktadir et al. (2018), industries that use SP modify their corporate

strategy and operations to take the social, environmental, and economic ramifications into consideration.

According to the Brundtland Commission, sustainable development is the pursuit of objectives that "meet the needs of the present without jeopardizing future generations' ability to meet their own needs." This idea of sustainability is consistent with this definition. In strategic contexts, the terms sustainability and corporate social responsibility (CSR) might be used interchangeably, but it's important to remember that sustainability has grown in significance over time relative to CSR (Strand et al., 2015). Complicating matters is the integration of sustainability into company practices and organizations. Concepts such as the 'Triple Bottom Line' or 'TBL' illustrate how corporate sustainability has been advocated for economic sustainability in addition to social and environmental aspects (Elkington, 2018). However, Elkington's new perspective (Elkington, 2018) emphasizes assessing the overall well-being of people and the planet in order to evaluate the success or failure of sustainability goals, giving social and environmental outcomes precedence over economic ones. Notably, these social and environmental outcomes are intrinsically connected to long-term financial performance (Sjafjell, 2015). Consequently, we refer to environmental, social, and governance outcomes as "sustainability."

**2.2.2 Sustainability Performance and Firm Performance**

Research on the link between SP and FP has produced inconsistent findings. Studies on the link between SP and FP have found positive correlations, negative correlations, or no correlation at all. Van Beurden and Gössling (2008), Rowley and Berman (2000), and Revelli and Viviani (2015) have all brought up these ambiguities. After conducting a thorough analysis of 2,000 studies, Friede et al. (2015) found that most of them demonstrated a positive correlation between SP and FP. SP is frequently viewed as a strategic statistic that could increase a company's profitability, according to Albuquerque et al. (2012). According to Alsayegh et al. (2020), Brown et al. (2009), Buallay (2019), and Steyn (2014), it is also taken into account as a measure of the responsibility of the company, its reputation, and patron confidence.

Adopting sustainable practices is thought to provide firms with a competitive edge within their sector, resulting to increased production and less systemic risk exposure, as demonstrated by Lourenço et al. (2012) and Albuquerque et al. (2019). Busch et al. (2019) and Eliwa et al. (2021) claim that SP practices can even lessen the downside risk that a corporation faces, with high SP scores indicating lower borrowing costs and less business risk. Moreover, as noted by Broadstock et al. (2020), investors often interpret a company's SP performance as a predictor of future stock performance and risk-taking ability. However, there are conflicting studies, such those by Duque-Grisales and Aguilera-Caracuel (2021) and Lee et al. (2009), that demonstrate a negative relationship between SP and risk management.

Results from earlier studies on the connections between unique SP and FP features were not consistently obtained. According to some research, there is a correlation between environmental practices and financial performance, which emphasizes the importance of attending to environmental stakeholders' concerns (Salama, 2005; Friede et al., 2015). As shown by Fauzi et al. (2007) and Arvidsson (2022), neglecting these stakeholders might result in disagreements, higher costs, and reduced FP. Another study suggests that increasing SP could lead to higher expenses and a decrease in marginal net benefits (Horvathova, 2010). Moreover, given the acknowledged variations across countries and legal systems, the conclusions drawn from these connections may vary based on the particular environment (Di Vita, 2022).

Academics underscore the importance of examining diverse organizational settings (Theyel, 2000). The results of studies on the relationship between FP and SP paint a conflicting image.

While some studies (Chien and Peng, 2012; Servaes and Tamayo, 2013) demonstrate that SP positively affects FP, others (McWilliams and Siegel, 2000) suggest that SP may be profitable and give the company a long-term competitive advantage. It has also been demonstrated that making socially conscious investments improves financial success (Shahzad and Sharfman, 2017). However, other studies show contradictory findings, such as the notion that business spending on sustainability initiatives wastes money that could be allocated to other lucrative ventures (Peng and Yang, 2014). Moreover, additional studies have not discovered any connection between SP and FP (Fauzi et al., 2007; Weston and Nnadi, 2023). Moreover, a larger board size has been linked to reduce FP in some studies (Cheng, 2020), although a larger board size has been linked to higher FP in other studies (Puni and Anlesinya, 2020) because it facilitates information acquisition. To sum up, previous studies on the association between SP and FP have shown contradictory results when looking at specific SP components as well as looking at SP holistically (Rowley and Berman, 2000; Friede et al., 2015). We propose the following non-directional hypotheses in light of the ambiguous and inconclusive nature of the data:

***Hypothesis 1: Social Sustainability Performance has significant effect on Firm Performance.***
***Hypothesis 2: Economic Sustainability Performance significantly affects Firm Performance.***
***Hypothesis 3: Environmental Sustainability Performance has significant effects on Firm Performance.***

**2.3 Conceptual Fretwork**
Conceptual framework of this study is given below in in figure which is created on the basis of literature.

**Sustainability Performance**                    **Financial Performance**

1. Social Sustainability Performance
2. Economic Sustainability Performance
3. Environmental Sustainability Performance

1. Financial & Market Performance
2. Quality Performance
3. Innovation Performance
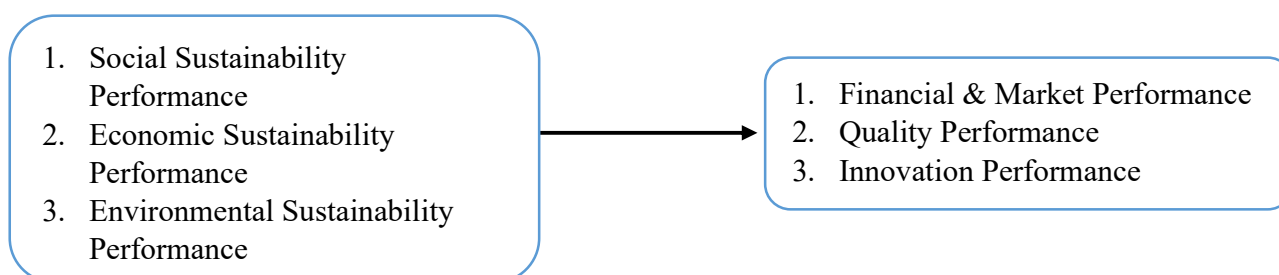
**3.  Methodology**
The technique is divided into four sections. The population and sample are covered first, then the questionnaire design is covered. But it also covers the requirements for gathering data, and finally, it talks about statistical analysis.

**3.1.Population and Sample**

The people of Pakistan are the target audience for this study, which focuses specifically on SMEs in Karachi, Sindh. Because the basic random sampling technique can eliminate biases, it was adopted in this investigation. Each employee is equally eligible to be chosen for this study project. Although the population is unknown, a sample size of 385 people with a 95% confidence interval and a 5% margin of error is available. The following formula is used to determine sample size:

$$n = N \times \frac{\frac{Z^2 x\, p\, x\, (1-p)}{e^2}}{[N - 1 + \frac{Z^2 x\, p\, x\, (1-p)}{e^2}]}$$

**Where,**

N = Size of Population

Z = Normal Distribution Critical Value at a Required Confidence Level

p = Proportion of Sample

e = Margin of Error

## 3.2. Questionnaire Design

Three fundamental concepts form the foundation of the SP: environmental performance, economic sustainability, and social sustainability. FP is comprised of three distinct constructs, namely quality performance, innovation performance, and financial and market-based performance. (Bansal, 2005; Paulraj 2011; Elhuni and Ahmad, 2017; Zhu and Sarkis 2004; Frank et al. 2016; Maletič et al., 2014) is where the questionnaire was taken from. There are two sections to the questionnaire: a section based on demographics, which includes gender, age, qualifications and experience. Second, nevertheless, is predicated on ambiguous inquiries about risk management and artificial intelligence. The questionnaire uses a 5-point Likert scale, with 1 denoting strongly disagree and 5 denoting strongly agree. Thus, the responses are gathered through questionnaire.

## 3.3. Data Collection

The employees of SMEs were asked to respond to the questionnaire. There were 412 responses in all from the staff, which included the production officer, management of the company, and workers. 385 were chosen for analysis, nevertheless. Incomplete and inaccurate responses result in the removal of other responses.

## 3.4. Statistical Analysis

The study employs the Structural Equation Modeling (SEM) technique to determine the impact between the variables. The analysis is conducted using the PLS prediction, PLS algorithm, and bootstrapping test. The software Smart PLS 4.0.9 is specifically utilized for analyzing the relationship among the construct with a high degree of multicollinearity and is also capable of handling the data without going against the CB-SEM assumptions.

## 4. Results

The structural equation modeling technique is used to analyze the relationship between the variables.

### 4.1 Descriptive Result

According to Table I, 40.52% are male and 59.48% are female, while age group wise 22% are 18-25 years, 26.23% are 25-35 years, 33.77% are 35-45 years, 17.92% are 45 and above years. However, educational background these are matriculation are 23.64%, intermediate are 17.92, bachelor degree holders are 38.96%, master and PhD degree holders are 14.54% and 4.93% respectively. Furthermore, experience these employees are 0-3 years are 26.23%, 3-5 years are 31.95%, 5-10 years are 28.57% while 10 years and above experience holders are 13.25%.

**Table I Demographic Statistics**

| Variable | Description | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 156 | 40.52 |
| | Female | 229 | 59.48 |
| Age | 18-25 | 85 | 22.00 |
| | 25-35 | 101 | 26.23 |
| | 35-45 | 130 | 33.77 |
| | 45 and above | 69 | 17.92 |
| Education | Matriculation | 91 | 23.64 |

|  | Intermediate | 69 | 17.92 |
|---|---|---|---|
|  | Bachelor | 150 | 38.96 |
|  | Master | 56 | 14.54 |
|  | PhD | 19 | 4.93 |
| **Experience** | 0-3 Years | 101 | 26.23 |
|  | 3-5 Years | 123 | 31.95 |
|  | 5-10 Years | 110 | 28.57 |
|  | 10 Years and above | 51 | 13.25 |

### 4.2 Measurement of Model

The reliability and validity of the model were tested with the PLS algorithm test. The model reliability and validity measure with the discriminant validity, and internal consistency However, a value greater than 0.7 indicates the model's reliability and validity.

Some items are dropped to reach the level threshold at the time of the 16-item analysis. However, a value of 0.7 or higher is considered more satisfactory (Chin, 1998; Henseler et al., 2009) but a value above 0.5 is also acceptable, and a value less than 0.5 should be considered non-reliability and non-validity (Götz et al., 2009). To identify the reliability and validity of the questions the composite reliability and validity are used. The value is greater than 0.7 of composite reliability indicating the reliability and to find the validity of the questions average variance extracted is used and the value greater than 0.5 is acceptable. The result is shown in Table II. Furthermore, to find the discriminant validity of the questions the Fornell Larcker Criterion and HTMT ratio are used. The results are shown in Table III and Table IV.

**Table II Construct Reliability and Validity Test**

|  | Items | Factor Loading | Cronbach's alpha | Composite reliability | Average variance extracted (AVE) |
|---|---|---|---|---|---|
| Social Sustainability Performance | SSP1 | 0.709 | 0.727 | 0.767 | 0.695 |
|  | SSP2 | 0.739 |  |  |  |
|  | SSP3 | 0.662 |  |  |  |
|  | SSP4 | 0.807 |  |  |  |
|  | SSP5 | 0.620 |  |  |  |
|  | SSP6 | 0.791 |  |  |  |
|  | SSP7 | 0.785 |  |  |  |
| Economic Sustainability Performance | ESP1 | 0.928 | 0.716 | 0.723 | 0.514 |
|  | ESP2 | 0.714 |  |  |  |
|  | ESP3 | 0.697 |  |  |  |
|  | ESP4 | 0.687 |  |  |  |

| | | | | | |
|---|---|---|---|---|---|
| | ESP5 | 0.795 | | | |
| Environmental Sustainability Performance | ENSP1 | 0.723 | 0.772 | 0.850 | 0.522 |
| | ENSP2 | 0.667 | | | |
| | ENSP3 | 0.731 | | | |
| | ENSP4 | 0.737 | | | |
| | ENSP5 | 0.855 | | | |
| | ENSP6 | 0.749 | | | |
| | ENSP7 | 0.602 | | | |
| Financial and Market Performance | FMP1 | 0.690 | 0.793 | 0.779 | 0.557 |
| | FMP2 | 0.732 | | | |
| | FMP3 | 0.750 | | | |
| | FMP4 | 0.697 | | | |
| | FMP5 | 0.666 | | | |
| | FMP6 | 0.780 | | | |
| | FMP7 | 0.601 | | | |
| Quality Performance | QP1 | 0.826 | 0.815 | 0.715 | 0.549 |
| | QP2 | 0.794 | | | |
| | QP3 | 0.762 | | | |
| | QP4 | 0.728 | | | |
| | QP5 | 0.804 | | | |
| Innovation Performance | IP1 | 0.701 | 0.700 | 0.705 | 0.541 |
| | IP2 | 0.648 | | | |
| | IP3 | 0.654 | | | |
| | IP4 | 0.782 | | | |
| | IP5 | 0.703 | | | |

**Table III Fornell-Larcker Criterion**

| | SSP | ESP | ENSP | FMP | QP | IP |
|---|---|---|---|---|---|---|
| **SSP** | 0.507 | | | | | |
| **ESP** | 0.501 | 0.567 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **ENSP** | 0.467 | 0.922 | 0.386 | | | |
| **FMP** | 0.125 | 0.419 | 0.622 | 0.447 | | |
| **QP** | 0.335 | 0.029 | 0.573 | 0.434 | 0.735 | |
| **IP** | 0.682 | 0.595 | 0.555 | 0.573 | 0.704 | 0.560 |

**Table IV HTMT Ratios**

| | **SSP** | **ESP** | **ENSP** | **FMP** | **QP** | **IP** |
|---|---|---|---|---|---|---|
| **SSP** | | | | | | |
| **ESP** | 0.873 | | | | | |
| **ENSP** | 0.256 | 0.419 | | | | |
| **FMP** | 0.187 | 0.162 | 0.776 | | | |
| **QP** | 0.141 | 0.116 | 0.725 | 0.619 | | |
| **IP** | 0.721 | 0.830 | 0.292 | 0.190 | 0.089 | |

## 4.4 Direct Effect

One model is conducted to test the hypotheses. Model indicate that SP which measured through SSP, ESP, and ENSP impact on FP which is measured through FMP, QP and IP. H1, H2, and H3 suggest that SP components has a favorable and substantial influence on FP components. So these hypotheses are also accepted.

**Table V Direct effect**

| | **Standard deviation (STDEV)** | **T statistics (\|O/STDEV\|)** | **P values** |
|---|---|---|---|
| **SSP -> FMP** | 0.047 | 0.028 | 0.008 |
| **SSP -> QP** | 0.193 | 0.786 | 0.000 |
| **SSP -> IP** | 0.112 | 0.701 | 0.013 |
| **ESP -> FMP** | 0.176 | 5.193 | 0.000 |
| **ESP -> QP** | 0.100 | 0.597 | 0.051 |
| **ESP -> IP** | 0.101 | 0.520 | 0.003 |
| **ENSP -> FMP** | 0.042 | 0.223 | 0.024 |
| **ENSP -> QP** | 0.142 | 0.033 | 0.044 |
| **ENSP -> IP** | 0.123 | 0.210 | 0.033 |

## 5. Discussion and Conclusion

The purpose of our analysis was to examine how SP affects FP. Our results provide new context and a deeper understanding of the differences found in previous studies (Trumpp & Guenther, 2015; Hoepner et al., 2016). As shown in Table 5, our results confirm previous findings (Nollet et al., 2016) and show that SP dimensions have a favorable effect on FP. Our study closes this gap by providing empirical data. We offer a new set of measures intended to more accurately reflect the sustainability efforts of enterprises in all SP dimensions. These data, according to our models, will support our theory. While other studies that evaluate SP in terms of transparency have shown contradictory results, the SP characteristics do have a significant impact on FP when examined in terms of performance (Hussain et al., 2018). Notably, our research demonstrates that the inclusion of our variables greatly increases the models' overall explanatory power, and the coefficients differ significantly based on the particular sustainability aspect under investigation. We call for further development of the SP framework in light of these facts. We draw the conclusion that the methodology used to measure SP is crucial and can provide more definitive information on the nature of the connection between FP and sustainability engagement. Our findings further highlight the necessity of reassessing and realigning the SP dimensions.

Our findings demonstrate that a concentrated concentration on sustainable development goals is the only way to fully realize the impact of a major commitment to sustainability goals, irrespective of the degree of transparency. The RBV's concepts are supported by these results. Moreover, our data support the Porter hypothesis by showing that real dedication to SP has positive outcomes. We contend that in order to accomplish a range of performance goals, businesses should incorporate sustainability into their strategic planning and increase their investments in social and environmental performance, in keeping with the findings of Pätäri et al. (2012) and Gómez-Bezares et al. (2017). Moreover, we deduce that companies that invest more in sustainability, especially those with a high profile, perform better than their rivals.

Our research has significant policy ramifications, particularly when it comes to advocating for more uniform standards across all sustainability reporting obligations. Moreover, given our discoveries on the connections among different SP dimensions and sub-dimensions, we suggest conducting additional research both globally and in developing or rising economies. We think that managers and policymakers can get important insights from a more thorough analysis of SP sub-dimensions.

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