

# **USING AN SEM-BASED PATH ANALYSIS TO EXAMINE THE IMPACT OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT PRACTICES ON A COMPANY'S ECONOMIC PERFORMANCE: A CASE STUDY OF A DEVELOPING ECONOMY**

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## **ABSTRACT**

*This research aims to provide a sizable empirical contribution to the growing body of literature on the effect of SSCM on the financial success of businesses in Karachi, Pakistan. An in-depth model of SSCM performance and best practices is presented and validated through data analysis. Internal and external management and their effects on the business sustainability performance are now part of the framework. Research shows that when companies adopt SSCM methods, it benefits the environment, society, and the businesses themselves. Also, the outcome of environmental performance improvement and social performance improvement is directly tied to economic performance. Economic performance and socially responsible management are impacted indirectly by corporate social responsibility. We conceptualize and empirically evaluate a complete SSCM practices performance model for businesses in Karachi, Pakistan. The study's findings corroborate the postulates that SSCM techniques are sustainable from an ecological, financial, and social point of view for running a firm.*

**Keywords:** Firm performance, Sustainable supply chain management, sustainable operations, Economic sustainability, social responsibility.

## **1.INTRODUCTION**

Sustainable supply chains meet the needs of the present without compromising those of future generations (Varsei, 2019). The social, environmental, and economic issues highlighted in this definition are the lynchpins of a sustainable supply chain. Integrating sustainability into global supply-chain management is difficult for stakeholders. According to Yang, S., Yu, Z., Umar, M., and Shah, A. (2022), corporations worldwide have been pushed to reorganize their operations because of the rapid shift toward green practices and renewable resources. Supply chain management (SCM) research is currently dominated by sustainability (Morana, 2013; Sembiring & Sembiring, 2019; Nazir & Yu, 2023;). Green technology is a prime illustration since it has increased commodity prices and opened new ways to lessen environmental damage. Also, some non-governmental organizations have been compelled to decrease their use of Palm oil in product production because it is not a sustainable resource (Yu, Z., Shah, A., Rehman, SA., 2022). The influence of social, environmental, and economic developments on SCM is making it harder for businesses to maintain their current methods of SCM implementation, which is already a significant problem.

Sustainability's social implications for the supply chain are frequently overlooked. Yet, prior literature evaluations have shown that the social effect is not given the same weight as the environmental and economic impacts. However, realities are somewhat different (Nazir, S., Ali, M., Shah, A., 2023). There are countless real-world instances, but COVID-19 stands out as particularly exceptional. Because of the blockade in various nations, imports and export have been severely impacted, leading to a shortage of consumer necessities (Yang, Lee, & Chang, 2023). Businesses in the area have stepped up production to meet customer demand in the face of a lack of imported goods. People are less interested in the brands because they have to buy something that meets their wants and that something can be available at a lower price. Consumers would acquire accustomed to the goods available at the local market once the pandemic threat has passed.

### **1.1. Sustainable Supply Chain**

It's a way of making a living that supports the present generation without compromising the standard of living of the next (Shah, A., Rose, C., Ibrahim, A., Khan, SAR., Tanveer, M., 2023). The processes inside companies and the products and services they rely on from external suppliers are often at the root of such enterprises' environmental, social, and economic impacts (Khan, S., Rasheed, R., & Muhammad, G., 2022). During the past few decades, sustainable supply chain management (SSCM) has evolved as the research methodologies for enterprises to construct a sustainable (i.e., environmental, social, and economic) outcome in their supply networks (Jamil, S., Shah, FM., Khan, S., & Imran, I., 2022). The article dissects the social, ecological, and economic factors contributing to a successful supply chain. Incorporating sustainability into international supply chain management requires considerable obstacles that stakeholders must overcome. It has been reported by Jamil, S., Khan, S., & Zafar, S. (2022) that the fast changes in the availability of natural resources and the appeal of eco-friendly products and services have driven multinational firms to restructure their operations. Recently, sustainability has emerged as a central focus in supply chain management studies (SCM). One excellent example is green technology, which has led to higher commodity prices and the discovery of novel approaches to reducing environmental damage. In another example, some non-governmental organizations (NGOs) have successfully persuaded a company to reduce the quantity of sustainable palm oil used in product manufacture (Zafar, D., Khan, S., Khan, MI., Parachi, S., & Saleem, A., 2022).

Due to the influence of social, environmental, and economic changes on SCM, safeguarding this process has become difficult for many businesses. Most of the time, the social effects of sustainability on the supply chain are ignored. Environmental and economic effects have been given more priority than their social counterparts. Yet, there have been some developments in recent years. There are several real-world examples, with COVID-19 being an exceptional case. Because of the blockade in various nations, imports and export have been severely impacted, leading to a shortage of consumer necessities (Yang, Lee, & Chang, 2023). Businesses in the area have stepped up production to meet customer demand in the face of a lack of imported goods. Consumers are less interested in the brands since they must have a product that meets their needs and may be available elsewhere at a lower cost. After the epidemic, shoppers will be more comfortable with the goods available in their local markets (Rashid, A., Rasheed, R., Amirah, N.A., Yusof, Y., Khan, S., & Agha, A. A., 2021).

There is a widespread belief that SSCM has improved the response of entities and administrations to environmental protection and social responsibility issues. Environmentalism and social responsibility are two areas in which administrators must represent societal values. With brisk business development, sustainable supply chain management may be recognized as one of the company's inventive processes. It's connected to the company's continued existence and upbeat growth. In addition, Khan, S., Rashid, A., Rasheed, R. and Amirah, N.A. (2022) contended that supply chain firms routinely push forward with the duty to produce unfavorable outcomes for all of their companions in the sphere of supply chain competition.

## **1.2. Triple Bottom Line Theory**

To strike a near-ideal balance between social, environmental, and economic issues, Elkington (1998) proposed the triple bottom line (TBL) theory, which is currently followed by a growing number of businesses (Elkington, 1998). According to the TBL model, for a business to succeed, it must demonstrate success in three key areas: social responsibility, economic development, and environmental sustainability. One of the main aims of sustainable supply chain management is to have supply network companies improve their environmental and social performance. A sustainable supply chain considers environmental, operational, and social factors, which Wittstruck and Teuteberg acknowledged (Piprani, AZ., Jaafar, NI., Ali, SM., Mubarik, MS., Shahbaz, M., 2022). The resource-based strategy, which places a premium on connections to advance the triple bottom line, explains why valuation does not inevitably lead to higher performance (Azmat, M., Ahmed, S., Mubarik, MS., 2022). Customers and companies collaborating to boost social and performance indicators provide an outcome that is one-of-a-kind and difficult to repeat (Carter & Rogers, 2008). Customers who care about the environment now expect multinational firms to present a unified face to the world. An indicator of the global economy, society, and environment is the growing popularity of "Triple Bottom-line" philosophies among corporations (Alzarooni, AM., Khan, SA., Gunasekaran, A., Mubarik, MS., 2022).

## **1.3. Objective of the Study**

This study examines the influence of sustainable SCM practices on a company's financial performance. The influence of external and internal sustainable management on the firm's economic performance will also be discussed. This research will assist businesses in analyzing their economic performance in light of the internal and external elements that influence them.

## **1.4. Justification**

This research is done to develop a sustainable supply-chain management plan for Pakistan, particularly in its restricted sectors. Pakistan is one of the emerging nations, and the Pakistani industrial sector must benefit from TBL's sustainability engagement. It analyzes the extent to which Pakistani enterprises and organizations' supply chain management must practice sustainability. It promotes Pakistani businesses to use sustainable practices on a big scale. The absence of research on this subject in Pakistan will inspire instructors and students to introduce new learning and innovative concepts to the market. Sustainability in the supply chain will increase the profitability of businesses and encourage them to pass on the advantages to customers in the form of lower pricing and more market competition.

## **1.5. Scope of the Study**

This study will explore the supply chain field in Karachi; a specific industry will be chosen for further investigation. It will assist investors in viewing the Pakistani market as sustainable. This can further assist Pakistani businesses in formulating plans for implementing sustainability to realize its numerous benefits. Incorporating social concerns into the supply chains of businesses would also enhance the ecology and economics of the nation

## 1.6. Academic Contribution of the Study

1. This study aimed to determine the accountability of Karachi's industry's sustainability management, and its conclusions may be applied to the existing market for improved future outcomes.
2. This study focuses on the industrial sustainability practices of Karachi's supply-chain management systems.
3. The objective of identifying environmental factors and their impact on economic and social factors is to address the significance of climate change for local industrial techniques.
4. The link between the TBL variables might assist industries in adopting diverse strategies to attain their objectives and improve their business's sustainability. The function of corporate sustainability as a mediator for a company's economic success is discussed. The link between socio-environmental factors can assist businesses in developing more sustainable options.

## 1.7. Problem Statement

Due to their impact on macroeconomic, ecological, and societal developments, most multinational corporations find implementing sustainable supply chain management challenging. Business's and suppliers' internal activities affect sociological, ecological, and economic domains. Sustainability has proven difficult for both people and global supply networks. The problem of child labor at Nike's suppliers was handled in the 1990s, and Apple was surprised to learn of supplier employee suicides in the 2000s (Qader, G., Muhammad, J., Qamar, A., Mubarik, MS., 2022). Khan, SA., Gupta, H., Gunasekaran, A., Mubarik, MS., Lawal, J. (2023) routinely studied social and environmental aspects at the production end with economic ones to address sustainability concerns. Zaman, SI., Mubarak, MS., Hasnain, S., and Kazmi, A. (2021) then proposed nine definitions of CSR in response to these concerns. Hamid, Ijab, Sulaiman, Md. Anwar & Norman (2017) presented the subsequent model for social effects, actions, and performances. Sustainability professors are responsible for examining the intimate link between environmental and economic events. Lester Brown, who founded both world watch and the Environmental Policy Institute, has significantly contributed to bridging the gap between the two areas. In addition to environmental immigration, failed governments, alleviating poverty, and stabilizing populations, Lester Brown's "World on the Edge tour de force" features chapters on groundwater table, soil degradation, and climate manipulation.

A popular trifurcation of sustainability techniques is "economic," "social," and "environmental" (the so-called TBL, or, for short-term solutions, "the 3-Ps" or "people," "planet," and "profit") (Khan, SA., Mubarik, MS., Kusi-Sarpong, S., Zaman, SI., Kazmi, S., 2021). The best way to comprehend the theoretical and authentic connections between these variables is to recognize that humans are entwined with them all, being both the measure and component of the real-world context (Mubarik, MS., Naghavi, N., Mubarik, M., Kusi-Sarpong, S., Zaman, SI., 2021), in addition to, of course, creating "societies" and exchanging value in "economies". The most current examination of sustainability theses revealed that few authors used all supply chain sustainability measures in their research. In contrast, while numerous types of research examine the influence of external and internal variables on the financial performance of firms, studies examining the effects of social and economic aspects or environmental issues

are significantly more prevalent. Comparable factors govern the relationship between internal and external administration.

### **1.8. Research Questions:**

This research answers the below questions after analysis:

1. Does internal environmental management have a good effect on the economic success of a company?
2. Internal socially responsible management techniques have a favorable effect on a company's financial success.
3. Does Supplier monitoring and evaluation have an excellent effect on a company's economic performance?
4. Does Supplier cooperation have an excellent effect on the economic success of a company?
5. Does the implementation of proactive socio-environmental measures correlate favorably with the economic success of a company?
6. Does Corporate sustainability performance influence the favorable association between intelligent technology and the economic sustainability of the firm?

## **2. LITERATURE REVIEW**

SSCM is a new area of academic study, and much work is needed on this issue. One of the issues a few scholars confront is the variety of sustainability and SCM notions (Qader, G., Muhammad, J., Qamar, A., Mubarik, MS., 2022). Rapidly expanding organizations are increasingly embracing sustainable supply chain management. It has compelled scholars and interested parties to concentrate on its predictions. The primary objective is to assess the elements influencing sustainable supply chain management and global economies.

The organizations implementing sustainability in supply-chain management received less attention to place them in the spotlight, regardless of how their income is impacted (Mubarik, MS., Naghavi, N., Mubarik, M., Kusi-Sarpong, S., Zaman, SI., 2021). Most researchers and analysts have taken a qualitative approach to determine the feedback on Sustainable supply-chain management strategies. There are few quantitative research papers on this topic to draw statistically-based conclusions (Khan, S., Rashid, A., Rasheed, R., and Amirah, N.A. 2022). Environmental, social, and economic aspects, which are the primary determinants of Sustainable supply chain management, are agreed upon by both writers and researchers. Before 2008, academics mainly examined green technology, recycling technologies, and the procedures of supply chain management's integration with the earth's environment and population-related issues. However, they did not discuss the social consequences of Sustainable supply-chain management (Kouty, 2021). A recent study on the sustainability of supply chain management may be divided into three categories: general research, quantitative models, and empirical research. Existing empirical research is based on contributions to someone's real-time observations and experiences. Brandenburg, Govindan, Sarkis, & Seuring (2014) claimed through a literature study that there is less quantitative literature on this subject and more empirical research investigations.

Piprani, AZ., Jaafar, NI., Ali, SM., Mubarik, MS., and Shahbaz, M. (2022) stated that empirical literature validates the effects of three components on sustainable supply chain management. This further undermines the credibility of this study's lack of statistical methods. In contrast, the credibility of the writers and publishers who contributed to the research is sufficient to establish its conceptual framework. According to researchers, this issue requires no explanation for its veracity. They believe that the veracity of sustainability will compel stakeholders of the future to apply it in supply chain management. Carter and Easton (2011) asserted that it is impossible to ignore the fact that the topic of this article has inspired firms to invent and use such tools, which have allowed them to improve their performance in terms of social, environmental, and economic sustainability. Stakeholders and managers increasingly demanded it from their vendors, including their organization Yu, Z., Shah, A., Rehman, SA., Nazir, S., Tanveer, S., (2022), outline the first theoretical foundation of the supply chain depicted in Figure 1 and provide a literature review on the topic.

It illustrates the emphasis of contemporary studies on environmental and economic factors, followed by their outputs and the material supply chain. This study model was constructed on several prior supply chain management ideas. There were several excellent recommended materials and methods for determining the TBL factor's connection, but their structural presentation to the industry stakeholders is incomplete (Elkington, 1998). In addition, the previous models and techniques failed to reveal the entire extent of the TBL regarding sustainability. A focus on ecological concerns launches the motivation for sustainability. In addition, various research on green supply chain management (GSCM). It was well mentioned by other authors that environmental philosophy and supply chain management should be combined (SCM) (Morana, 2013). The inclusion of a "green" module to SCM, as described by Srivastava. According to Zhu and Sarkis, GSCM encompasses all phases of an item's life cycle, including planning, manufacturing, distribution, and end-user use and disposal. Rusmawati & Soewarno (2021) stated that SSCM integrates GSCM and CSR into SCM to maximize performance across the board. This study will examine the link between internal and external management and its impact on the organization's economic performance

### **2.1. Sustainable Supply Chain Practices**

According to Yu, Z., Shah, A., Rehman, SA., Nazir, S., and Tanveer, S. (2022), ecological considerations must be included in business philosophy and corporate development at each stage of the proposal, engineering, circulation, and removal. Many articles in the study examined the effect of each step (project, engineering, distribution, and reprocessing) on environmental routine. King and Lenox (2001) determined the relationship between lean advantages and eco-friendly presentation using engineering methods. Azzone and Noci (1998) developed a system for measuring the environmental performance of new products. Quariguasi Frota Neto et al. (2009) expanded this study to develop a methodology for evaluating sustainable logistics networks, demonstrating that logistical effectiveness and environmental effects are well-balanced.



prevents businesses from implementing sustainable practices. Due to a heightened awareness of justice, healthiness, protection, education, combined labor, and moral behaviors that social sustainability factors in the supply chain area entail, reactions have risen in recent years (Eriksson & Svensson, 2016). Adopting social sustainability in the supply chain has emphasized government and health & safety concerns more than conventional and ethical concerns. Each business decides the social sustainability of a company's supply chain. A supply chain consists of several individuals, including manufacturers and suppliers. It will assist a company in achieving remarkable benefits, which may be unfairly overstated by insufficient social responsibility management. The finding will inspire Pakistani businesses to implement widespread sustainable practices. The dearth of research in this subject in Pakistan will motivate instructors and students to contribute to this study and advance the industry with new data. The sustainability of the supply chain will increase the profitability of businesses, incentivizing them to pass this advantage on to customers in the form of lower pricing and more market competitiveness.

## **2.2. Research Variables**

The company's economic performance will be the DV of this study. This study will have three independent variables, i.e., Supplier Collaboration, Socially Responsible Management, and Supplier monitoring and assessment. This study will have a mediating variable, i.e., CSR, whose role is between Social Responsible Management and Company's economic performance will be analyzed.

### **2.2.1. Environmental Management Practices**

The view which shows the relationship between environmental performance and environmental practices is described as the Resource-Based View (RBV). Empirical research found that eco-friendly activities include waste material management, systems that manage the environment, good quality management, and product structure (Zhu & Sarkis, 2004; Beske, Land, & Seuring, 2014). These activities could show a way to more convincing environmental enactment. The focus of Social sustainability is clearly on in-house and outside entities of the company. The practices designed for better Environmental management might show a constructive impact on both external & internal entities. We explain it via example, an eco-friendly manufacturing streak cannot only reduce the emissions of pollution, but it can also address the operational circumstances of the company's employees and their civil environment.

Additionally, it improves organizational social status. Few of the authors stated that more investment in environmental safety activities could result in the substandard economic performance of the company Rao & Holt, 2005; Molina-Azorín, Claver-Cortés, López-Gamero, & Tari, 2009). More works of literature, like strategic research studies, highlight the corporate strategy with environmental accountability and its impact on the economic strategy of the firm. It also shows that it can decrease the usage of funds, improving shareholder relationships and the product image. This practice can grow the revenues of the firms.



Furthermore, based on some research, environmental management practices will positively impact economic performance (Zhu & Sarkis, 2004; Rao & Holt, 2005). The usage of more ecologically pleasant resources and the procedures make the efficiency of production better. It will indeed reduce the usage of extra resources resulting in the ultimate reduction in manufacturing costs of the companies. The above discussion forms the below hypothesis.

***Hypothesis 1:** Internal environmental management practices positively impact a firm's economic performance.*

### **2.2.2. Supplier Collaboration**

The collaborative supply chain includes, but is not limited to, operations and information strategy, among others (Lamming and Hampson, 1996). It emphasizes long-term mutual relationships rather than short-term objectives. The company's limited resources and capacity offer it an edge over its rivals and also provide it with an intangible advantage (Hart, 1995). According to Carter and Rogers (2008), intangible competitiveness, such as cooperative learning and consumer behavior knowledge, can improve environmental indicators. Furthermore, more collaboration will boost the trust between the firm and the supplier, leading to a better knowledge of social concerns and, as a result, sustainability in the supply chain. By collaborating with their suppliers and regularly checking them, businesses might increase efficiency and reduce waste (Abdul & Tolouei, 2012).

With a holistic, optimistic, and synergized collaborative strategy, businesses may achieve an active feature of supplier collaboration (Forkmann, Henneberg, Naudé, & Mitrega, 2016). Consequently, collaboration is the essential ingredient for sustained organizational growth (Bianchi, 2012). Innovation may be brought about through industry groups, technological intermediaries, and venture capital corporations, which impact the partnership between international suppliers and local businesses (Abbas et al., 2020). These variables can positively affect innovation rate, frequency, and degree. Those companies with a solid absorptive capability foundation have greater learning capacity. With the aid of absorptive capacity, it is easier to translate external information into collaborative creation (Leiponen & Helfat, 2009). Templalexis, Pilidis, Pachidis, & Kotsiopoulos (2010) reported that absorption capacity is proportional to external knowledge influx. Mutual trust, transparency, risk-sharing, and benefit-sharing are the fundamental foundations of collaborative innovation. The goal of collaborative innovation is to build long-term, strategic connections with consumers and suppliers. By sharing information in each supply chain domain, enterprises gain a competitive edge and minimize total supply chain costs. This debate builds the study's hypothesis, which is presented below.

***Hypothesis 2:** Suppliers' collaboration positively impacts a firm's economic performance.*

### 2.2.3. Social Responsible Management

Social and Socio-economic Impact Valuation (SEIA) is a unified method used to identify and accomplish the social and economic issues related to decent rehearses concerning the homegrown procurement project (Foglia et al., 2021). SEIA was established to increase the investment outcome of events developed in transport, mining, oil, and set-up divisions. It accommodates the observations, benefits, and needs of the objective communities and other involved shareholders (D'Eusanio, Zamagni, & Petti, 2019) in a directive to improve the awareness of local procurement development. Esteves and Barclay (2011) applied SEIA within the quarrying sector to develop the social reimbursements that exaggerated the projects, including the local public. This tactic can be joined with the sourcing approach considering the native community and the small to medium business enterprises into supply chains of international companies. The other sources identified by Esteves et al. (2012) analyze state of the art concerning the Social Control Assessment, which they express as a procedural tactic to analyze, validate and achieve the social concerns of planned mediations or projects' actions diagonal to the life cycle. Using CSR management, worker engagement, and proactive planning are related to ecological improvement (Kucharska & Kowalczyk, 2018).

According to Kolk (2016), increasing CSR oversight through internal staff and external organizations could raise environmental awareness among the general public and improve a company's environmental practices. Following the conclusions of (Kucharska & Kowalczyk (2018). Marshall et al. (1996). We assume that as of 2005, firm social responsibility has resulted in an improvement in environmental performance. Internal staff and external communities are both included in CSR management practices. Internal (for employee wellbeing and working conditions) and external (for the network or the client) practices can enhance a company's reputation for social performance.

Walker & Jones (2012) argued that organizations should enhance employee security and working conditions to improve representative fulfillment, prevent accidents, increase efficiency, and decrease loss. We anticipate that businesses will follow this strategy to increase their capacity for socially responsible management. Papagiannakis, Voudouris, Lioukas, & Kassinis (2019) observed that the high speculation associated with ecological insurance activities would result in subpar financial performance. The writing of critical examination emphasizes corporations and harmonizes ecological responsibility with the financial strategy, which can reduce the utilization of assets, enhance partner relations, and enhance brand image, increasing income. Internal socially responsible management is a second-order variable that includes philanthropy and human rights, according to Zhu and Sarkis (2004). A six-item scale endorsed by Carter and Jennings (2002) and Emmelhainz and Adams (1999) can elevate social rights. An orientation by Carter and Jennings (2002) four-item scale can be used to calculate philanthropy. Here, we develop a new theory.

**Hypothesis 3:** *internal socially responsible management practices positively impact a firm's economic performance.*

#### 2.2.4. Supplier Monitor and Assessment

Worker involvement, proactive planning, and CSR management are related to ecological improvement. Kolk (2016) asserted that increasing CSR oversight through internal staff and external organizations could raise environmental awareness among the general public and improve a company's environmental practices. On the findings of Marshall et al. (1996), respectively. In 2005, we assumed that increased corporate social responsibility had improved environmental performance. Internal staff and external communities are both included in CSR management practices. Walker & Jones (2012) argued that organizations should improve worker security and working conditions to increase representative fulfillment, prevent accidents, increase efficiency, and decrease misfortune. Internal (for employee wellbeing and working conditions) and external (for network or the client) practices can improve a firm's social performance. We anticipate that businesses will follow this strategy to increase their capacity for socially responsible management. Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí (2009) observed that the high speculation associated with ecological insurance activities would result in subpar financial performance.

The writing of critical analyses highlights corporations and harmonizes ecological responsibility with financial strategy, which can reduce asset utilization, enhance partner relations, and boost brand perception, all of which can increase revenue. Internal socially responsible management is a second-order variable that includes philanthropy and human rights, according to Zhu and Sarkis (2004). A six-item scale endorsed by Carter and Jennings (2002) and Emmelhainz and Adams (1999) can elevate social rights. A four-item scale developed by Carter and Jennings (2002) can be used to measure philanthropy. Here is where we develop a new theory.

*Hypothesis 4: Supplier monitoring and assessment have a positive impact on a firm economic performance*

#### 2.2.5. Relationship between Internal and External Management Practices (Socio-Environmental)

Worker engagement and proactive planning are related to ecological improvement through CSR management Marshall et al. (1996). Kolk (2016) asserted that increasing CSR oversight through internal staff and external organizations could raise environmental awareness among the general public and improve a company's environmental practices, following the conclusions of Marshall et al. (1996). We assume that as of 2005, firm social responsibility has resulted in an improvement in environmental performance. Both internal staff and external communities are included in CSR management practices. Internal (for employee wellbeing and working conditions) and external (for the network or the client) practices can enhance a company's reputation for social performance. Walker & Jones (2012) argued that organizations should enhance employee security and working conditions to improve representative fulfillment, prevent accidents, increase efficiency, and decrease loss. We anticipate that businesses will follow this strategy to increase their capacity for socially responsible management. Papagiannakis, Voudouris, Lioukas, & Kassinis (2019) observed that the high speculation of ecological insurance exercises would result in subpar financial performance.

The writing of critical examination emphasizes corporations and harmonizes ecological responsibility with financial strategy, which can reduce the utilization of assets and enhance partner relations, and brand image, which can increase income. Internal socially responsible management, which includes philanthropy and human rights, is a second-order variable, according to Zhu and Sarkis (2004). Carter and Jennings (2002) and Emmelhainz and Adams (1999) both adopted a six-item scale that can be used to elevate social rights. An orientation by Carter and Jennings (2002) four-item scale can be used to calculate philanthropy. Here, we develop a new theory.

***Hypothesis 5:** Adopting proactive socio-environmental practices is positively associated with a firm's economic performance.*

### **2.2.6. Corporate Sustainability Performance Mediating Role:**

The Extended Sustainability Practices and Corporate Business Approaches reflect the benevolence and behavior of the opportunities associated with ecological expansion as it looks to the regeneration of significance for the business Lloret (2016). According to Baumgartner and Rauter (2017), adopting a sustainable stance reduces the adverse effects of organizational operations on the environment and society while enhancing the company's ability to generate revenue. In their research, Baumgartner & Rauter (2017) proposed that corporate sustainability practices link social and environmental aspects to the process of strategic management and emphasize an organization's deliberate approach to development in a sustainable environment. Corporate sustainability strategies "respond to the social, environmental, and economic requirements for both the company and society" (Epstein and Roy, 2001; Engert and Baumgartner, 2016; Baumgartner, 2014). Incorporating social and environmental considerations into the development process for the company. The definition of corporate sustainability strategy used in this study is the application of sustainable growth principles to business activities. The need for cleaner manufacturing has grown over time due to concerns about social, economic, and environmental sustainability. The work of Tumlin (2012) reveals that to achieve sustainability; research must focus on both mechanical and vibrant proportions. The following suggestion is based on the discussion above:

***Hypothesis 6:** Corporate sustainability performance mediates the positive relationship between smart technologies and the firm's economic sustainability.*

### **3. RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This study will discuss sustainability in SCM practices and their impact on a company's economic performance. There will also be a discussion of the impact of external and internal sustainable management on the firm's economic performance. This study will be helpful for the firms to analyze their economic performances keeping in view their impacting factors from the internal and external environment. The company's economic performance will be the DV of this study. This study will have three independent variables, i.e., Supplier Collaboration, Environmental management practices, Social Responsible Management, and Supplier monitoring and assessment. There will be a mediating variable in this study, i.e., CSR whose role in Social Responsible Management and the company's economic performance will be analyzed.

#### **3.2. Survey Questionnaires and Measures**

The extended sustainability practices and corporate business approaches reflect the benevolence and behavior of the opportunities associated with ecological expansion as it looks to the regeneration of significance for the business Lloret (2016). According to Baumgartner and Rauter (2017), adopting a sustainable business strategy reduces the adverse effects of organizational operations on the environment and society while improving the company's economic performance. Furthermore, corporate sustainability practices should emphasize an organization's deliberate approach to development in a sustainable environment by tying social and environmental aspects to strategic management. Corporate sustainability strategies "correspond to the social, environmental, and economic requirements for both the company and society" (Epstein and Roy, 2001; Engert and Baumgartner, 2016; Baumgartner, 2014). Incorporating environmental and social concerns into a company's development process. Applying sustainable growth principles to business operations is the definition of corporate sustainability strategy in this study. The need for cleaner manufacturing has grown over time due to concerns about social, economic, and environmental sustainability. Analyzing the work of Tumlin (2012) reveals that research must be focused on both mechanical and vibrant proportions to achieve sustainability.

#### **3.3. Data Collection**

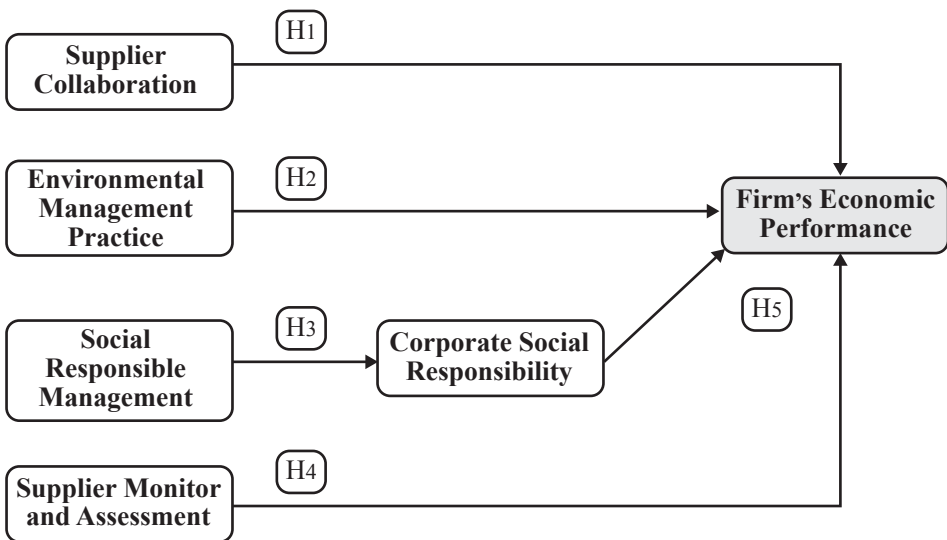
The population is restricted to the Karachi business sector to guarantee that the sampled enterprises have accepted and executed SSCM activities at the company level. Prior research has shown that ISO14001 and ISO9001 scheme implementation experience motivates businesses to launch SSCM programs (Jabbour, Jugend, Jabbour, Gunasekaran, & Latan, 2015). With this objective in mind, data were collected from a representative sample of supply chain executives and managers in Karachi-based businesses. A survey was used to gather information.

Initially, we evaluated a pool of 29 Karachi-based companies and their combined 200 supply chain employees. An adequate sample size of 96 people participated in this study. As stated in this study, a response rate of 48% was enough to test the hypotheses. Table I displays the results of the sample's descriptive analysis using the t-test.

### 3.4. Data Analysis

With the help of SPSS, we verified the conceptual model's hypotheses using real-world data by applying partial least squares analysis (Peng & Lai, 2012). We use SPSS because it can examine elaborate theoretical structures with nothing in the way of preconditions, such as simple measurement scales and distribution assumptions. Interest in structural equation modeling, a type of multivariate statistical analysis popularized in the 1980s, has spread to more contemporary fields, including "green management" and "operations management" (Peng and Lai, 2012). Measurement (or "outer") and structural models are obtained to put the conceptual model through its paces (inner model).

### 3.5. The Conceptual Framework of the Study



**Figure 1:** The conceptual framework for the firm's economic performance with sustainability practices

## 4. RESULTS

This paper aims to evaluate the sustainable supply chain practices on a firm's economic performance and the impact of socially responsible management on a firm economic performance with CSR as a mediator.

**Table 1:** Descriptive Statistics

VARIABLES	MEAN	ST.DEV	MIN	MAX	SKEWNESS		KURTOSIS	
					Statistic	Std. Error	Statistic	Std. Error
Supplier Collaboration	3.0114	1.05585	1.00	5.00	-.143	.257	-.475	.508
Environmental Management Practices	2.8636	1.05244	1.00	5.00	.279	.257	-.634	.508
Social Responsible Management	2.5455	1.23091	1.00	5.00	.328	.257	-.889	.508
Supplier Monitor and Assessment	2.8977	1.05089	1.00	5.00	.087	.257	-.456	.508
Corporate Social Responsibility	2.8636	1.19560	1.00	5.00	.352	.257	-.961	.508
Firm's Economic Performance	2.8068	1.16321	1.00	5.00	.298	.257	-.810	.508

**Table 2:** Correlations Matrix

VARIABLES	SC	EM	SRM	SMA	CSR	FEP
SC	1	.715**	.632**	.685**	.648**	.713**
EM	.715**	1	.795**	.652**	.725**	.748**
SRM	.632**	.795**	1	.595**	.738**	.765**
SMA	.685**	.652**	.595**	1	.702**	.708**
CSR	.685**	.652**	.595**	.702**	1	.791**
FEP	.713**	.748**	.765**	.708**	.791**	1

**Table 3:** Measurement of Variables & Reliability Statistics

VARIABLES	SOURCE ITEM	CRONBACH ALPHA
Supplier Collaboration	6	.870
Environmental Management Practices	6	.857
Social Responsible Management	5	.907
Supplier Monitor and Assessment	7	.903
Corporate Social Responsibility	4	.910
Firm's Economic Performance	6	.901

**Table 4:** Statistical Results

Direct Relationships	Coefficient	T Stat.	P Values	Result
Supplier Collaboration -> Firm's Economic Performance (H1)	.201	2.179	0.00	Accept H1
Environmental Management Practices -> Firm's Economic Performance (H2)	.140	1.269	0.00	Accept H2
Supplier Monitor and Assessment-> Firm's Economic Performance (H4)	.374	3.815	0.00	Accept H3
Social Responsible Managements -> Corporate Social Responsibility (H3)	.256	3.003	0.00	Accept H4

**Indirect Relationships**

Social Responsible Managements -> Corporate Social Responsibility->Firm's Economic Performance (H5)	0.4971	5.6170	0.00	Accept H9
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#### **4.1. Data Collection**

The data was collected through emails and using what's app. The questions were compiled through Google Forms, and links to the forms were sent to study participants. The total target sample was around 150.

#### **4.2. Descriptive Statistics**

Descriptive average scores of all items by individual participants were calculated. Table 1 shows the results of the descriptive analysis of the study.

#### **4.3. Reliability**

To determine the reliability of the question, Cronbach alpha, and internal consistency are calculated. Table 3 shows the results of Cronbach alpha. The alpha values were evaluated using the incremental criteria with the following reading. The results show that all the variables have an alpha reading greater than 0.8, meaning the scale of the item used to measure the relationships is highly reliable.

#### **4.4. Statistical Results**

The statistical findings of the investigation are shown in Table 4. Supplier collaboration favors enterprises' economic performance, as the p-value is 0.000 and the coefficient value is 0.201. Thus, H1 is supported. As the p-value is 0.000 and the coefficient value is 0.140, we may conclude that hypothesis 2 is supported. With a p-value of 0.000 and a coefficient value of 0.374, we can conclude that H3 is supported. Supplier monitoring and evaluation favorably affect a company's economic success. H4 is supported since the p-value is 0.000 and the coefficient value is 0.256, indicating that socially responsible management has a favorable effect on the organization's economic performance. Corporate social responsibility mediates between businesses' economic success and socially responsible management, as the P-value is 0.000 and the coefficient value is 0.04971; therefore, we can conclude that Hypothesis 5 is validated.

### **5. CONCLUSION**

This article aims to examine the link between sustainable supply chain practices and the bottom line. This research demonstrated that economic output would improve if sustainable practices were prioritized. The study's findings strongly emphasized the need for sustainable business practices so that they might serve as a guideline for a medium or small-sized enterprise. The research demonstrated the significance of sustainable practices and the necessity for businesses to prioritize them to boost their bottom lines. The company has to know that SSCM practices are interconnected and will usually lead to better results.

In Pakistan, sustainable supply chain management methods have a favorable effect on a company's economic success, according to the report. These techniques aid in reducing expenses, enhancing efficiency, and enhancing customer connections,

all of which contribute to increased profitability. To enhance economic performance, businesses should use sustainable supply chain management methods. The research also found many obstacles to applying sustainable supply chain management strategies, including a lack of knowledge, insufficient resources, and limited government assistance. Thus, Pakistan's government and private sector must take action to foster the adoption and implementation of these practices.

### **5.1. Limitations of the Study**

This study has considered the Karachi business sector and its time-related constraints. Existing and prospective Karachi industrialists may benefit from the findings. The questionnaire was developed to ask supply-chain executives, managers, and supervisors of the appropriate supply-chain management teams in the Karachi industry various questions in a constrained time frame. Due to a lack of time and resources, the sample size was not extensive. Only a limited examination of particular industries, such as the automobile and manufacturing sectors, could be conducted. Additional limitations were:

Owing to the absence of trustworthy data, it may not be easy to effectively quantify the impact of sustainable supply chain management methods on a firm's economic performance. Insufficient awareness of the local context: The research may not be able to capture the intricacies of the Pakistani setting, which may be essential to comprehend the full impact of sustainable supply chain management techniques. Owing to the restricted availability of data, the sample size of the research may be minimal, reducing the accuracy of the results. The study may be limited in breadth and accuracy due to the limited resources available.

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