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# Investigating Shariah Compliant Green Firm Performance Using Eco-Efficient Infrastructure and Green Organizational Capabilities: The Intervening Role of Shariah Compliant Sustainable Production

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## Abstract

The current study attempted to investigate the impact of eco-efficient infrastructure (EEI) and organizational capabilities on *Shariah*-compliant green organizational performance (SCGOP), with *Shariah*-compliant sustainable production (SCSP) serving as a moderator. To achieve the studys goal, data was collected from 528 respondents in the manufacturing sector using a stratified sampling technique. The findings showed that a firms EEI and organizationa l capabilities play an important role in achieve green performance. Additionally, SCSP plays an important mediating role. The current study contributed to the development of policies for organizations to improve their green performance and theoretically EEI which has been overlooked in previous literature.

***Keywords*:** eco-efficient infrastructure (EEI), green organizational capabilities (GOC), PLS-SEM, Shariah-compliant sustainable production (SCSP), Shariah-compliant Green performance (SCGP)

## Introduction

In the contemporary business landscape, organizations are increasingly recognizing the importance of adopting sustainable practices to minimize their environmental impact and contribute to a greener future (Ahmad et al., 2023; Rahman, 2023). This shift towards sustainability aligns with the principles of environmental stewardship and resource conservation enshrined in Islamic teachings (Hart & Milstein, 2003; United Nations, 1987). From an Islamic perspective, businesses have a moral and ethical responsibility to operate in a manner that safeguards the environment and promotes the well-being of all living beings (Ahmad & Sulaiman, 2016). This responsibility extends to adopting sustainable practices throughout the

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entire value chain, from product development and sourcing to production, distribution, and consumption.

The achievement of *Shariah*-compliant green firm performance requires a holistic approach that encompasses eco-efficient infrastructure (EEI), green organizational capabilities (GOC), and *Shariah*-compliant sustainable production practices. EEI involves the adoption of energy-efficient technologies, utilization of renewable energy sources, and implementation of water conservation measures. GOC entail the integration of environmental considerations into all aspects of decision-making, employee training, and stakeholder engagement (Ahmad et al., 2023). *Shariah*-compliant sustainable production practices form the cornerstone of a truly environmentally responsible business. This involves the adoption of circular economy principles, minimization of waste generation, and maximization of resource recovery and reuse (Ahmad et al., 2023). By implementing these practices, businesses can significantly reduce their environmental impact, enhance their resource efficiency, and improve their product quality, ultimately strengthening their brand reputation and achieving *Shariah*-compliant green firm performance (SCGP). The worldwide environmental concern has rapidly increased, therefore, different sectors have also transformed their structure towards green. In this regard, the current study attempted to investigate the role of EEI and GOC in *Shariah*-compliant green firm performance. EEI, includes planning, development, organizational working structures, transportation, and effective energy utilization which helps the organization to transform towards green without harming the natural resources along with expanding its goals (Saroop & Allopi, 2016). Moreover, as far as GOC is concerned, Nguyen et al. (2023) have shown that GOC plays a vital role to achieve a *Shariah*-compliant green firm performance. In this regard, the current study employed a unique combination of EEI and GOC to assess the *Shariah*-compliant green firm performance. Moreover, *Shariah*-compliant sustainable production (SCSP) also contributes to the literature and stakeholder theory.

The ecological issues became significant after the Unified Countries' Meeting on Human Climate, held in 1972 and this gathering fostered a field of natural strategy (Mondal & Sahu, 2023). Therefore, a dramatic increase was observed in the adoption of environmentally sustainable practices, with scholars and specialists paying considerable attention to this issue (Su &

Swanson, 2019). Research in this space developed from the idea of "Green Business" to "Greening" associations useful units which incorporate different perspectives, such as green economic execution, green HRM, green obtaining, green funding, green advancement, and green IT as well as green organization (Khan & Liu, 2023; Mastini et al., 2021). *Shariah*-compliant green performance (SCGP) is about responsible and sustainable actions which lead towards a cleaner, healthier, and a more beautiful world for everyone (Ahmed et al., 2023). SCGP refers to the provision of services, goods, and procedures that improve natural resources and do not damage the environment. Energy efficiency, waste management, production of renewable goods, reduction of carbon emissions from fossil fuels, and corporate environmental protection are all associated with SCGP (Ahmed et al., 2021). SCGP encompasses various aspects, such as green management and marketing innovation and green product and process innovation. SCGP exhibits significant and confirmed impacts of ecological execution on a companys monetary capacities (Molina-Azorín et al., 2009). Li et al. (2021) defined the relationship between environmental outcomes, SCGP, and organizations. The results demonstrated that environmental and organizational performances are positively impacted when green innovation, SCGP, and GOC are combined. The results also confirmed that adopting SCGP causes manufacturers to focus on developing innovative processes to better meet customer demands which improves customer service and boosts sales (Lee et al., 2014). Higher firm performance is demonstrated by creative processes and innovative products (Akgün et al., 2009).

Achieving "SCGP" usually means lowering the ecological footprint and enhancing the environmental sustainability of different systems, products, or processes (Wang et al., 2018). Enhancing SCGP allows the resolution of various environmental issues and difficulties, such as greenhouse gas emissions are one of the main causes of climate change and SCGP measures may help to reduce them. SCGP helps to mitigate climate change by lowering carbon emissions, increasing energy efficiency, and switching to renewable energy sources (Omer, 2008b). A common component of SCGP is the more economical use of resources, such as energy, raw materials, and water. This may lessen the environmental damage brought on by resource production and extraction while also aiding in the conservation of limited resources. SCGP seeks to reduce waste and pollution which lessens the harmful effects on the quality of air and water (Yang et al., 2022). Both,

ecosystem health and public health may benefit from this. SCGP has the ability to support the conservation of endangered species and preservation of biodiversity by reducing pollution and habitat destruction. The achievement of SCGP is in line with sustainable development principles which seek to satisfy the current needs without compromising the capacity of future generations to satisfy their own. Energy security can be improved by shifting to renewable energy sources and increasing energy efficiency. Fossil fuels, which frequently carry environmental and geopolitical risks, can be used less frequently. SCGP can stimulate economic growth and innovation in fields, such as sustainable agriculture, green technology, and renewable energy by resulting in the creation of new green jobs and industries (Fitzgerald, 2010). SCGP initiatives have the potential to reduce health risks associated with pollution and environmental contaminants by promoting cleaner air, water, and food. Communities that adopt sustainable and ecologically friendly practices typically have better access to green spaces, cleaner air and water, and lowered noise pollution. To increase resilience to environmental challenges, such as extreme weather events, SCGP measures, that is, sustainable land management and climate-resilient infrastructure can be implemented (Omer, 2008a). In the end, attaining SCGP may assist in addressing a variety of societal and environmental issues, such as pollution, public health issues, resource depletion, and climate change. Moreover, it advocates for a future that is more equitable and sustainable for both present and future generations.

Implementation of EEI projects in different areas and geological locales (Bleischwitz & Hennicke, 2004). The idea of green hierarchical ability alludes to an organization's ability to coordinate manageability into its systems, activities, and culture. Survey academic articles, research papers, and industry reports examined various elements of GOC, such as natural administration frameworks, eco-advancement, and maintainable inventory network, the executives, and worker commitment. EEI alludes to framework projects that are planned and executed with an emphasis to expand the asset proficiency and limit the natural effects throughout their life cycle. This incorporates viewpoints, such as energy productivity, utilization of inexhaustible materials, squandering decrease, and reusing (Kumar, 2021). By incorporating eco-effective practices into framework improvement, it is feasible to line up with the standards of the firm's green presentation to make a more maintainable and stronger constructed climate (Chew et al., 2019).

Despite the growing recognition of the importance of SCSP, there remains a significant gap in the implementation of EEI and GOC, hindering the transition to a more sustainable SCGP (King & Lenox, 2001). This gap represents a test to accomplish the ecological objectives and utilize financial open doors related to asset effectiveness, squandering decrease, and improved seriousness. The COVID-19 pandemic has upset the worldwide economies and featured the earnest requirement for economic practices and a change towards a green firm presentation. Understanding the effect of EEI and GOC on SCGP, with an emphasis on the interceding job of feasible creation, is critical to direct the post-pandemic recuperation endeavors. Be that as it may, the absence of far-reaching research on this particular relationship is impeded (Bocken et al., 2022). For the improvement of systems and strategies, reasonable development, mindfulness, and reception of EEI in framework improvement, there is a need to comprehend and survey the genuine effect of such drives on the firm's green execution, extensively (Kujala et al., 2021). The absence of exact proof and normalized approaches obstructs the capacity to evaluate the advantages and difficulties related to EEI, making it challenging to direct policymaking, venture choices, and execution systems. Thus, there is a requirement for exploration and examination to assess the viability and capability of EEI in advancing the standards of FSCGP including asset proficiency, squander decrease, and financial and social advantages (De Sousa et al., 2018).

## Literature Review

### Islamic Stakeholder Theory (IST) of Organizational Sustainability

Islamic stakeholder theory (IST) is a framework for corporate social responsibility (CSR) that is grounded in Islamic values and principles (Ahmad & Sulaiman, 2016). It emphasizes the importance of social justice, ethical conduct, and environmental stewardship in business practices (Ahmad & Sulaiman, 2016; Du Bois & Sabri, 2016). IST recognizes that all the stakeholders are interconnected and have legitimate interests in the firms success (Al-Haddad & Rahmad, 2016; Rashed & Abdallah, 2016). It advocates for a holistic approach to CSR that integrates the social, ethical, and environmental considerations into all aspects of business decision-making (Hassan & Ali, 2014; Ahmad & Sulaiman, 2016). IST also provides a framework to evaluate and measure the effectiveness of CSR initiatives in an Islamic context (Ahmad & Sulaiman, 2016). The guideline expresses that an organization ought to help all the partners and not merely investors. Be

that as it may, this approach sees hierarchical maintainability as an upper hand through partner fulfillment. It stresses maintainability, development, and social and natural obligation. It improves cutthroat execution and market administration by upgrading the hierarchical supportability. Manageability detailing, a feasible store network for the executives, and cleaner creation are the most significant uses of this methodology (Rahman et al., 2023). The current study stressed the possibility to foster a productive cooperative association with many partners through information, connection, and conduct transformation (Rahman et al., 2023). Associations ought to cooperate with their partners. Investment, participation, and discussion can uphold associations partner collaborations. Adjusting conduct to partner interests is vital to satisfying partners and choosing partner combinations. The current study also recommended that ST may be utilized to gauge what partners know, how they connect, and how they change their way of behaving to assist an association with keeping up with its tasks (Hörisch et al., 2014).

EEI is designed to minimize resource consumption, such as energy, water, and raw materials. This aligns with the principle of resource efficiency which is a cornerstone of sustainability. By using resources more efficiently, organizations can reduce their environmental impact and operational costs. EEI is often designed to reduce the environmental footprint of an organizations operations (Xie & Hayase, 2007). This entails fewer greenhouse gas emissions, less waste being produced, and less pollution. To achieve environmental sustainability, these results are essential. Organizations may experience long-term cost savings with SCSP. Energy-efficient transportation and building infrastructure, for instance, can eventually lead to lower operating costs (Jayamaha, 2007). One of the main factors promoting business sustainability is this financial component. Organizations are required to comply with environmental regulations in numerous regions. To avoid legal problems and possible fines, EEI can assist organizations in adhering to these regulations, which would increase their sustainability (Garvare & Johansson, 2010). Businesses can acquire a competitive edge by showcasing their dedication towards sustainability by implementing EEI. This can draw in partners, investors, and customers who care about their environment, enhancing the sustainability of the company as a whole. Customers, staff members, investors, and other stakeholders are expecting more and more from businesses in terms of environmental responsibility (Waddock et al., 2002).

## Empirical Review

### *Eco-Efficient Infrastructure and Shariah-Compliant Sustainable Production*

The goal of EEI is to optimize the economical use of resources including raw materials, water, and energy. Resource consumption is the goal of SCSP and EEI assists to achieve this goal by implementing waste and resource waste minimization technologies and practices (Babu et al., 2023). Energy-efficient systems and technologies are frequently used in EEI. At SCSP, cutting greenhouse gas emissions and energy use is a top priority. Energy-efficient manufacturing techniques and renewable energy sources are examples of EEI that help to achieve energy efficiency goals (Cai et al., 2022). SCSP aims to encourage recycling and reuse while reducing the amount of waste produced. To meet SCSP objectives, EEI integrates waste reduction strategies, such as effective production techniques and waste management systems. EEI attempts to lessen the production activities negative environmental effects. It also helps to lower the emissions, prevent pollution, and protect the environment. The same goals are pursued by SCSP to safeguard ecosystems and lessen the environmental harm (Boesch, 2006).

An essential component of SCSP is ensuring that organizations follow environmental regulations which is something that EEI frequently does. Sustainability requires adhering to legal restrictions and environmental regulations. SCSP takes into account a product or services complete life cycle, from the extraction of raw materials to their disposal. To assess and reduce environmental effects throughout a products life cycle, EEI integrates life cycle thinking. Economic sustainability is a key component of social responsibility (SCSP), in addition to environmental responsibility (Boesch, 2006). EEI can lead towards cost savings and increased profitability which is crucial for the long-term success of an organizations sustainability initiatives. Moreover, it often involves the adoption of innovative technologies and processes. SCSP encourages continuous innovation and adoption of sustainable technologies to reduce the environmental and social impacts. SCSP often aims to transition to a circular economy where products and materials are designed for reuse and recycling (Ghisellini et al., 2016). EEI can support circular economy principles by designing systems that facilitate recycling and product reuse. While EEI primarily focuses on environmental aspects, it can indirectly

contribute to social sustainability by creating healthier and safer working environments and by addressing community concerns related to environmental pollution (Ghisellini et al., 2016).

### *Organizational Capabilities and Sustainable Production*

Organizations having strong capabilities pertaining to innovation and technology are better positioned to develop and adopt environmentally friendly and energy-efficient technologies. They can continuously improve their production processes, making themselves more sustainable over time. Effective resource management capabilities enable the organizations to optimize resource use, reduce waste, and minimize the consumption of raw materials, energy, and water (Henningsson et al., 2004). This is a fundamental aspect of SCSP. Capabilities in developing and implementing EMS, such as ISO 14001, help organizations establish systematic approaches to monitor and improve their environmental performance. This ensures that sustainability objectives are integrated into the production process. Organizations with strong supply chain management capabilities can select suppliers that adhere to sustainability standards and practices (Awaysheh & Klassen, 2010). This ensures that the raw materials and components used in production meet sustainability criteria. Capabilities in training and developing the workforce are crucial to ensure that employees understand and implement SCSP practices. An informed and skilled workforce is essential to achieve sustainability goals. Organizations that excel in building partnerships and collaborations can work with providers, clients, and different partners to co-make maintainable arrangements, such as joint initiatives to reduce emissions or to improve resource efficiency (Lages et al., 2023).

Capabilities pertaining to risk assessment and management help the organizations anticipate and mitigate potential environmental, regulatory, and social risks associated with their production processes. Organizations having the capability to track and comply with environmental regulations can avoid legal issues and fines while contributing to SCSP. Capabilities pertaining to monitoring and reporting on sustainability performance help organizations track progress towards their sustainability goals, communicate their achievements to stakeholders, and make necessary adjustments. The capability to drive cultural and organizational change is essential for instilling a sustainability mindset throughout the organization (Bertassini et al., 2021). This includes fostering a culture of sustainability

and aligning employee values with sustainability objectives. As organizations move towards a circular economy model, they need capabilities to redesign products and processes for recycling and reuse. This involves understanding reverse logistics, remanufacturing, and product stewardship.

### *Shariah-Compliant Sustainable Production and Shariah-Compliant Green Organizational Performance*

SCSP is a fundamental aspect of green organizational performance (GOP). An organizations commitment to produce goods and services sustainably is a key indicator of its environmental responsibility (Veleva & Ellenbecker, 2001). SCSP aims to reduce resource consumption and waste generation. GOP involves resource efficiency practices, such as minimizing energy use, water consumption, and raw material waste in the organizations operations. SCSP seeks to maintain economic viability while reducing the environmental and social impacts. *Shariah*-compliant green organizational performance (SCGOP) assesses the organizations ability to balance profitability with environmental responsibility. It often includes the implementation of environmental management systems, eco-friendly certifications, and adherence to environmental regulations. SCSP practices are critical to meet these requirements. SCSP extends to the design, manufacturing, and end-of-life considerations of products (Ciceri et al., 2010).

SCGOP is reflected in an organizations efforts to produce sustainable, eco-friendly, and recyclable products. Organizations with SCGOP prioritize sustainable sourcing and supply chain practices. They work with suppliers who follow eco-friendly standards which aligns with the principles of SCSP. Strategies to lower carbon emissions and fight climate change are part of both SCSP and GOP. This involves using energy-efficient technologies, renewable energy sources, and lowering emissions caused by transportation. Republicans frequently mandate that businesses submit sustainability reports detailing their environmental performance. Since SCSP practices show the organizations dedication to SCSP processes, they are an essential part of this reporting. The shift towards a circular economy model, in which materials and products are made to be recyclable, reusable, and remanufactured, is embraced by both ideas. Circular economy implementation is facilitated by SCSP practices. GOP indicates a companys dedication to practice good environmental stewardship. This covers

initiatives aimed at preserving natural resources, lessening pollution, and safeguarding ecosystems—all crucial components of SCSP. Both ideas demand that businesses ought to properly manage all the environmental risks and adhere to environmental regulations. SCSP procedures are essential to preserve compliance and lower the hazards (Giannakis & Papadopoulos, 2016). SCGOP encourages businesses to be creative and flexible in response to shifting stakeholder expectations and environment. Continuous innovation in environmental technologies and processes is a common component of SCSP practices.

### *Mediating Role of Shariah Compliant Sustainable Production*

The companys green initiatives have an impact on SCSP practices. As the company adopts green practices, it is probably going to use SCSP processes, which would minimize its impact on environment, use fewer resources, and produce more environmentally friendly products (Yacob, et al., 2019). Since SCSP practices show the organizations dedication towards SCSP processes, they are an essential part of this reporting. The shift to a circular economy model, in which materials and products are made to be recyclable, reusable, and remanufactured, is embraced by both ideas. Circular economy implementation is made easier by SCSP practices (Singh et al., 2023).

SCGOP reflects an organizations commitment to be a good environmental steward. Capabilities in monitoring and reporting on sustainability performance help organizations track progress towards their sustainability goals, communicate their achievements to stakeholders, and make necessary adjustments. The capability to drive cultural and organizational change is essential for instilling a sustainability mindset throughout the organization. This includes fostering a culture of sustainability and aligning employee values with sustainability objectives. SCSP involves the consideration of the entire life cycle of a product or service, from raw material extraction to disposal. EEI incorporates life cycle thinking to evaluate and minimize environmental impacts throughout the products life cycle. SCSP not merely addresses issues pertaining to environmental and social responsibility, however, it also focuses on economic sustainability as well. EEI can lead towards cost savings and increased profitability (Berl et al., 2010) which is crucial for the long-term success of an organizations sustainability initiatives. EEI involves the adoption of innovative technologies and processes. SCSP encourages

continuous innovation and the adoption of sustainable technologies to reduce environmental and social impacts. SCSP often aims to transition to a circular economy, where products and materials are designed for reuse and recycling. EEI can support circular economy principles by designing systems that facilitate recycling and product reuse.

## Methodology

### Sampling and Data Collection

The present study utilized a quantitative overview technique for inquiry. The poll was utilized to gather information from Specific areas that were utilized for SCGP. The unit of examination included enterprises and associations and the respondents comprised executive heads and managers and production in charge involved in dealing with the organization. These respondents occupied three gatherings, that is, executives, managers, and production heads since they are the main heads of those associations to manage an SCGP. Administrators and creation heads were the workers who were liable for the board. These three gatherings of respondents were chosen from every association as they were the most suitable individuals who were the delegates and significant personals to address the overview questions. According to the Industries and Organizations Authority, the total population was 69 industries and organizations. Majority of the industries and organizations were contacted and only 65 industries and organizations agreed to participate in survey. There were two rounds of data collection. Data was gathered by utilizing individually administered survey questionnaire methods for the first cycle which started in July. For this reason, surveyors were employed who underwent training to ensure they understood the subject and process of gathering the data. In the public and private sectors and organizations, we distributed 450 and 500 questionnaires, respectively. Two hundred and seventy-eight usable surveys were received from private and public sectors of economy and organizations.

The second round was conducted in October. Industry-related conference attendees included executives and big data administrators (managers and production chiefs) from various industries and organizations. Selected respondents from both public and private sectors and organizations received the questionnaires which they were invited to complete at their leisure. A total of 100 useful responses from private

enterprises and organizations and 124 useful responses from public industries and organizations were received in this round. We struggled to maintain homogeneity among the respondents, who were all former employees of public and private companies with between 100 and 250 workers, respectively.

To control the common method bias (CMB) concerns, we implemented several measures. Firstly, participants were ensured on their anonymity and secrecy. To prevent participants from being able to distinguish between the dependent and independent constructions, the sequence was randomized in which questionnaires items were asked (Podsakoff et al., 2003). This work suggested using full collinearity test to evaluate common method variance in the context of structural equation modeling. The current study employed this useful method, which was based on a study conducted by Elstak (2015), to identify CMB with the aid of variance inflation factors (VIFs) produced by a comprehensive collinearity test. VIF values greater than 3.3 suggest that the model might be dirty by CMB standards. Therefore, the model may be considered free of CMB if VIF values are less than 3.3 with the entire collinearity test. The results showed that every constructs VIF value was less than 3.3, indicating that the studys CMB contamination was absent.

Additionally, PLS-SEM was used to analyze the data with Smart-PLS 3. This study employed the underlying theory to try, predict, and explain the study constructs. PLS-SEM is a helpful technique when it comes to the primary goal of using structural modeling to explain and forecast the structures (Hair et al., 2016). Moreover, it is considered as a flexible approach for model building (Ringle et al., 2005) Additionally, PLS-SEM was used to analyze the data with Smart-PLS 3.

**Table 1**

*Questionnaire and measures*

| Sr. | Variable Names | Items | Sources |
|---|---|---|---|
| 1. | Eco-Efficient Infrastructure | 5 | Bartolomeo. et al. (2003) |
| 2. | Organizational Capabilities | 5 | Afzal, A., et al. (2022). |
| 3. | Shariah Compliance Sustainable Production | 5 | Khan, S. A. R., et al. (2022 |
| 4. | Shariah compliant firm green performance | 5 | Wang, K.-H., et al. (2022) |

## Findings

**Table 2**
*Demographic Analysis*

| Head | Description | Percentage |
|---|---|---|
| Gender | Male | 51% |
| | Female | 49% |
| Age | 20-29 | 73.60% |
| | 30-45 | 23.60% |
| | 46-59 | 6% |
| | Over 60 | |
| Educational Level | Graduation | 52% |
| | Masters | 43% |
| | PhD | 5% |

It has been shown in Table 2 that majority (73.6%) of the respondents were aged between the ranges of 20-29 and 23.6% of the majority of respondents had having age ranging 30-45. The table depicts that young generation is mostly employed and shows great interest in green environment in firms. The manager has the power to motivate the employees and visitors. According to the Table, 51% of respondents were men and 49% were women, indicating that men constituted the majority of sample. It was also demonstrated that although the majority (52%) of respondents were graduates, 43% of the respondents held a masters degree, and 5% of the respondents were PhDs.

### Measurement Model Assessment

**Table 3**
*Convergent Validity*

| Constructs | Items | Loadings | CR | AVE |
|---|---|---|---|---|
| EEI | E1 | 0.77 | 0.8 | 0.514 |
| | E2 | 0.567 | | |
| | E3 | 0.611 | | |
| | E4 | 0.614 | | |
| | E5 | 0.759 | | |
| SCGP | FG1 | 0.74 | 0.87 | 0.574 |

| Constructs | Items | Loadings | CR | AVE |
|---|---|---|---|---|
| | FG2 | 0.73 | | |
| | FG3 | 0.82 | | |
| | FG4 | 0.757 | | |
| | FG5 | 0.737 | | |
| | GC1 | 0.63 | | |
| | GC2 | 0.845 | | |
| GOC | GC3 | 0.771 | 0.89 | 0.621 |
| | GC4 | 0.853 | | |
| | GC5 | 0.82 | | |
| | SCSP1 | 0.688 | | |
| | SCSP2 | 0.844 | | |
| SCSP | SCSP3 | 0.73 | 0.879 | 0.595 |
| | SCSP4 | 0.749 | | |
| | SCSP5 | 0.833 | | |

Table 3 explains how the constructs factor loadings, composite reliability (CR), and average variation extracted (AVE) were utilized to determine whether they were valid. When items have high factor loadings (>0.50) on their constructs, the validity of the constructs is said to be convergent (Hair et al., 2011) and the outcome shows that the factor loadings were higher than 0.50. AVE) and CR were used to assess the constructs convergent validity. All the constructions had AVE values greater than 0.50.

**Discriminant Validity**

**Table 4**
*HTMT ratio*

| | EEI | FSCGP | GOC | SCSP |
|---|---|---|---|---|
| EEI | | | | |
| SCGP | 0.808 | | | |
| GOC | 0.735 | 0.651 | | |
| SCSP | 0.775 | 0.866 | 0.763 | |

Table 4 displays the HTMT ratio, a useful method to gain access to discriminant validity Rasoolimanesh (2022). HTMT ratio should be less than 0.90 to demonstrate discriminant validity. All ratio values met this condition which provided the proof that discriminant validity was established.

**Figure 1**
*Model Assessment*

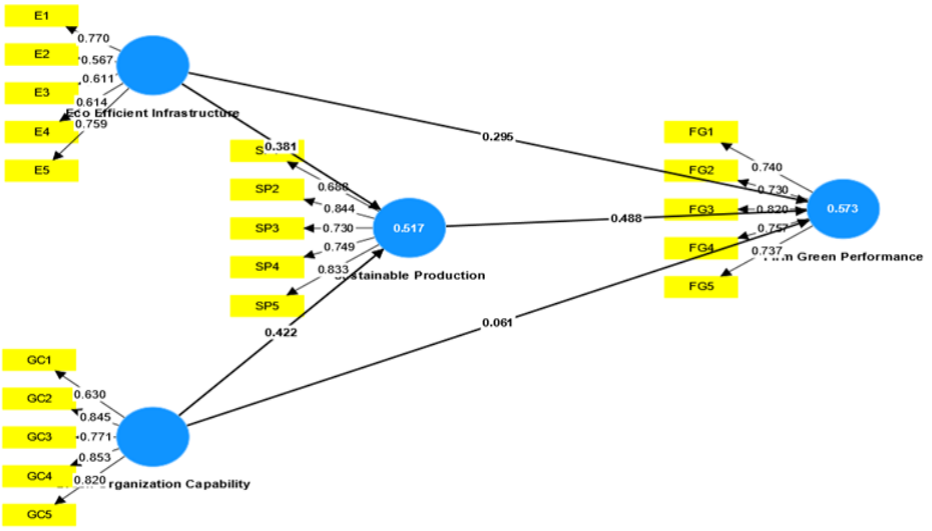


**Table 5**
*Direct and Indirect Effect*

| | Hypotheses | Beta | *t*-value | *p* values | Decisions |
|---|---|---|---|---|---|
| H1 | EEI → SCGP | 0.084 | 5.695 | 0.000 | Supported |
| H2 | EEI → SCSP | 0.099 | 3.827 | 0.000 | Supported |
| H3 | GOC → SCGP | 0.087 | 3.082 | 0.002 | Supported |
| H4 | GOC → SCSP | 0.124 | 3.405 | 0.001 | Supported |
| H5 | SCSP → SCGP | 0.109 | 4.463 | 0.000 | Supported |
| H6 | EEI → SCGP | 0.063 | 2.943 | 0.003 | Supported |
| H7 | GOP → SCGP | 0.079 | 2.614 | 0.009 | Supported |
| | Mediation Analysis | | | | |
| H8 | EEI → SCSP →SCGP | 0.206 | 2.726 | 0.007 | Supported |
| H9 | OC → SCSP →SCGP | 0.186 | 2.838 | 0.005 | Supported |

In Table 5, to understand the major relationship effects within the constructs, the SEM-PLS structural model analysis was conducted. The study used a bootstrapping procedure to assess the significance of the path coefficients. According to the tests applied and derived results, it was stated that all the hypotheses were "supported" as the values of p and t were up to

the mark. Hence, the p-value should be less than 0.05 and the t-value should be greater than 1.645.

## Discussion and Conclusion

Due to rising environmental concerns and sustainability considerations, the concepts of EEI and green company performance have received considerable attention recently. The resource efficiency idea, which holds that organizations can improve their performance by employing resources more effectively, is consistent with EEI. According to the hypothesis, businesses that use eco-efficient processes can cut back on resource usage, waste production, and related expenses.

The need to internalize external environmental costs has been emphasized in theoretical framework of environmental economics which favors environmentally friendly infrastructure. Eco-efficient strategies can minimize externalities and enhance a companys l ong-term economic viability. By utilizing their distinctive resources and talents, businesses can acquire a competitive edge from a strategic management standpoint. Environmentally friendly infrastructure can be viewed as a valuable resource that provides businesses with a competitive edge by lowering environmental hazards, increasing reputation, and luring environmentally aware customers. In response to institutional pressures including governmental rules, social conventions, and stakeholder expectations, businesses may adopt eco-efficient methods.

### Practical Implications

EEI can lead to reduced asset utilization and waste generation, resulting in cost savings. For example, implementing energy-efficient development processes or assembly procedures can reduce utility costs and enhance productivity. Under multiple systems, the criteria for natural norms are becoming increasingly stringent. Organization that do not do harm to the ecosystem foundation are more equipped to adhere to these standards, therefore avoiding penalties and legal complications. The findings contributed to an unparalleled understanding of a wide range of factors that impact the inclination of companies to implement environmental friendly innovations and strive towards a circular economy. As far as our knowledge extends, we contribute to academic writing in three manners. Regardless, multiple composing threads are combined to create a unified econometric

framework aimed at identifying a comprehensive set of factors that impact the performance of green initiatives within companies.

Furthermore, there is a diverse enhancement trend that is being evaluated and seen in various social gatherings of companies and locations, accompanied by two types of typical advantages of advancements. Furthermore, this study offers further verification regarding spills from other leading companies in the same industry, specifically focusing on the likelihood of organizations adopting environmental-friendly innovations. These findings have also generated insights for systems that aim to facilitate greater experimentation in order to promote environmental friendly initiatives. Therefore, these findings also expedite progress towards a circular economy in addition to a more sustainable long-term development. Our insights suggest specific procedural actions aimed at assisting small and medium-sized enterprises. Additionally, efforts inside the organization's domain are making advancements with environmental benefits. Viability, which is essential for achieving that goal, requires the implementation of strategies such as public procurement of sustainable products. It has the potential to offer enhancements and ongoing advantages to the end user, which have been implemented at a reduced cost compared to environmental friendly advancements inside industries. In addition, establishing connections across initiatives and promoting collaboration in advancement projects could enhance the diffusion of knowledge from environmental leaders and increase the propensity of ventures to provide sustainable benefits.

The transition to a Circular Economy provides value through eco-planning, analyzing item life cycles, promoting clean production, and fostering an environmentally neutral economy. However, certain obstacles prevent the organizations from implementing the Circular Economy. The impediments linked to arranging are a noteworthy categorization that must be addressed, as they are hindering organizations from implementing the change. The corporate environmental management framework aligns with the supply organizations of the Circular Economy. As the objective of this study was to propose a framework that included the identification of strategy-related barriers in supply chains during the transition to a circular economy. Additionally, it aimed to uncover the causes, effects, and relationships among these barriers. Finally, the study also analyzed the material industry from the perspective of a developing economy,

specifically Turkey. In order to determine the materialness, this research conducted a contextual analysis in the apparel industry to demonstrate the circumstances, causal relationships, and connections between obstacles. The results indicated that the lack of rules on the enforcement of CE is the main obstacle, since it has the strongest correlation with other factors.

Environmental change and environmental degradation pose significant risks to businesses. Eco-effective methods can mitigate these hazards by reducing a company's ecological footprint and reliance on limited resources. Consumers and investors are increasingly favoring environmentally-friendly businesses. Implementing sustainable practices and utilizing an environmentally efficient framework can attract environmentally conscious customers and investors, providing a competitive advantage. Implementing an eco-effective framework often necessitates progress. This can stimulate the development of novel products, processes, and technologies, fostering a culture of continuous enhancement and increasing overall efficiency. Companies that actively pursue eco-efficiency can enhance their reputation and increase their brand value. Customers are more likely to trust and support organizations that demonstrate a commitment to sustainability. An eco-effective foundation contributes to the long-term sustainability of both companies and the world. By mitigating the adverse ecological impacts, organizations can ensure their sustainability while contributing to global environmental objectives. Essentially, the concepts of eco-productive framework and green firm performance are based on many management and economic theories. Over time, these ideas provide significant benefits, such as cost reduction, consistent administration, risk mitigation, and improved market positioning. Companies that adopt eco-productivity practices are more sustainable and better positioned to thrive in an increasingly environmentally conscious world.

## Limitations

The current study observed some limitations. For instance, one data base was used during the research and selection of papers linked to organizational capability. Exclusion standards were employed, such as conference proceedings and refining, by research area categories. The content loss may have been caused by this. This means that other findings could be developed if other researchers modified this research using different criteria. The study also compared the organizational capability knowledge area with corporate sustainability and its findings were based on

this comparison. Future studies may widen the field of organizational capability research by employing alternative search criteria, delving deeper into the connections between organizational capability and corporate sustainability, or looking at various organizational capability and sustainability connections. The developed frameworks lack of empirical confirmation is another drawback. However, the frameworks support is materialized by the relationships that were formed through mapping the findings from earlier literature. The relationships between organizational capability and corporate sustainability, given in the framework, may still be validated in the future through empirical research and an analysis of the actual outcomes of this relationship. After COVID-19 pandemic, there would likely be a continuous and increased emphasis on sustainability, with eco-friendly organizational practices, SCSP, and EEI all playing an increasingly important part in determining the business performance. Companies that proactively adapt these trends would be better positioned to prosper in a changing corporate climate marked by a greater emphasis on social and environmental responsibility.

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