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Islamic Ethical Principles, Green Entrepreneurial Orientation, and Resource Stewardship as Drivers of Sustainable Business Performance: The Mediating Role of Environmental Innovation

[1]Muddasar Iftikhar, [2]Hina Saleem & [3]Arooj Zeb
[1]PhD Scholar, Hailey College of Commerce, Pakistan
[2]Assistant Professor, IBIT, University of the Punjab Lahore, Pakistan
[3]Assistant Professor, Department of Management Sciences, Virtual University, Pakistan.

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ABSTRACT

This study investigates how Islamic ethical principles, green entrepreneurial orientation, and resource stewardship influence sustainable business performance, with environmental innovation acting as a mediating mechanism. Drawing on Qur'anic concepts of balance (mīzān), responsibility (amanah), and avoidance of waste (israf), the study develops a sustainability-driven behavioral model for firms. A quantitative design was adopted, and data were collected from small and medium enterprises engaged in environmentally conscious business activities. Results show that all three independent variables significantly enhance sustainable performance, and environmental innovation partially mediates these relationships. The findings highlight how faith-based ethical commitments can strengthen sustainability-oriented business practices. The study contributes to integrating Islamic sustainability perspectives with contemporary management research. The study also offers practical insights for policymakers and SME managers by demonstrating how integrating Islamic ethical values into strategic decision-making can promote innovation-led sustainability. Furthermore, it extends the sustainability and entrepreneurship literature by providing an indigenous, values-based framework that bridges religious ethics with modern environmental management practices.

Corresponding Author's Email: Mudassir.iftikhar222@gmail.com
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1.0 Introduction

The growing intensity of environmental degradation, climate change, and the depletion of the resources have radically changed the language of business responsibility and forced companies to leave the traditional paradigm of profit maximization in favor of more sustainable and ethically sound conceptualizations of value creation. The modern organizations especially the small medium enterprises (SMEs) are increasingly being called on to incorporate the act of environmental stewardship, social responsibility and sustainability in long term economic viability in their strategic decision making. This transformation is not only conditioned by regulatory requirements and demands of stakeholders but is also predetermined by the increased awareness that sustainable performance of the business world cannot be considered outside the context of its ethical orientation and responsible utilization of the available resources (Alay et al., 2024). The ethical and value-based frameworks are especially vital in the development economies with weak institutional enforcement mechanisms and high vulnerability to environmental indices to shape the organizational behavior towards sustainability. In this scenario, religious systems of ethics, in particular, those based on Islam, provide a full-fledged moral and behavioral framework that focuses on balance, responsibility, and generational responsibility, but are under-researched in the general sustainability and management studies (Dimitrov, 2022).

Islamic ethical values are based on the Quran and Sunnah and normative to economic and business practices through the emphasis set on interdependence among human activity, environmental integrity and societal welfare. The notions of mizan (balance), where Islamic ethics emphasize harmony of economic activity and ecological boundaries; amanah (trust or stewardship) where Islamic ethics focus on the human as custodian of both natural and economic resources; and the ban on israf (wastefulness), where Islamic ethics see excessive consumption and inefficient use of resources, are at the heart of Islamic ethics. All these principles lead to moderation, accountability, and sustainability in business practices (Das & Akter, 2025). Contrary to secular approaches of sustainability that in most cases involve the external nature of imposition or instrumental rationality, Islamic ethics incorporate sustainability within internalized moral obligation and as a result influence organizational values, strategic priorities and practices. Islamic moral standards can also be a potent catalyst of sustainable business operation as companies are becoming more legitimating and more resilient over time, particularly in the Muslim-majority settings, by altering the risk-innovation-environment-society responsibility perception of the entrepreneurs (Toledano & Horie, 2025).

In line with the ethics, the notion of green entrepreneurial orientation has acquired significant momentum in the literature on sustainability and entrepreneurship as a strategic stance indicating the proactive, innovative and risk-taking nature of firms with regard to opportunities that are environmentally responsible. Green entrepreneurial orientation is an expansion of the old entrepreneurial orientation paradigm by adopting environmental awareness in terms of identification and utilization of opportunities. Companies having high green entrepreneurial orientation actively seek to seek green innovations, invest in green technology, and proactively address environmental challenges as competitive advantages, instead of limiting it (Adiguzel &

Sonmez Cakir, 2025). These companies have a higher chance to incorporate sustainability in their strategic vision, coordinate innovation activities with environmental objectives, and create products and processes that will minimize ecological footprints. Although existing literature has confirmed the positive relationship between the green entrepreneurial orientation and the performance of a firm, the ethical and stewardship based processes through which the green entrepreneurial orientation is converted into a sustainable performance have not been thoroughly investigated, especially in a society where religious orientation plays a significant role on managerial cognitions and behavior (Alshebami, Alholiby, Elshaer, Sobaih, & Al Marri, 2023).

Closely related to ethical orientation and entrepreneurial posture is the concept of resource stewardship meaning the responsible, efficient and future-oriented management of natural, financial and organizational resources to make them available to the future generations. Resource stewardship is not only about the efficiency of the operations; it relates to the moral responsibility, long-term orientation, and intergenerational equity. A managerial choice is not the only reason why stewardship is important in Islamic thinking, but a moral requirement based on the idea of amanah, according to which the resources are treated as the refuge of God rather than private property (Bara & Abdulrahman, 2025). This view is fundamentally changing the way managers are making decisions because it focuses on the long-term sustainability, conservation and social welfare as opposed to the short-term benefits. Strategically, strong resource stewardship by the firms will increase the chances of investing in sustainable technologies, waste reduction, optimum utilization of resources, and other practices that are environmentally responsible to improve performance in the long run. Nevertheless, even though it is conceptually relevant, resource stewardship has been implicitly or severally addressed in environmental management literature, with little empirical research on its contribution as a unique force behind sustainable business performance (Okediji, 2025).

Sustainable business performance in itself is a multidimensional concept that includes economic viability, environmental protection and social responsibility. Sustainable performance, unlike the conventional financial performance indicators, is a measure of a firm capability of creating long term value without causing excessive negative effects on the environment and giving back to the society. This wider conceptualization correlates well with Islamic ethical goals (maqasid al-shariah) that have a meaning of wealth, life, and environment preservation. Companies that are operating on sustainable business performance are in better positions to absorb environmental shocks, regulatory adjustments and changing stakeholder expectations hence gaining long term competitiveness and legitimacy. Nevertheless, such performance results cannot be attained by ethical will or strategic orientation as it involves the presence of specific mechanisms according to which values and orientations are converted into actionable practices (Gong & Badulescu, 2025). Environmental innovation, the creation and adoption of environment-friendly products, processes, and managerial activities is a crucial channel by which the ethical and stewardship-oriented orientations can become translatable into quantitative sustainability behaviors.

Innovations aimed at decreasing environmental impact, improving resource utilization or

advancing ecological sustainability without degrading or negatively affecting firm performance are called environmental innovation. It encompasses product innovations that include green products, process innovations that include energy saving production processes, and organizational innovations that include environmental management systems. Environmental innovation is more and more considered as a prominent mediator between strategic orientations and sustainability results as it converts abstract values and intentions into concrete practices (Larabi, 2025). The companies that adhere to Islamic ethics, green entrepreneurial orientation, and resource stewardship are theoretically more likely to take part in environmental innovation as these orientations tend to think long term, to be responsible to the stakeholders and to be sensitive to the implications of certain environmental impacts. However, no empirical study has been carried out on the relationship between environmental innovation and faith-based ethics and stewardship constructs as a mediating factor to sustainable business performance and this constitutes a gaping gap in the literature of sustainability (Onjewu & Kuek, 2025).

In theory, this research is based on the synthesis of the stakeholders theory, stewardship theory, and the natural resource based view (NRBV) to explain the proposed relations. According to stakeholder theory, companies that align their strategies with the expectation of stakeholders, such as the environmental and social issues, have higher chances of attaining sustainable performance. Justice, accountability, and social welfare are the main aspects of Islamic ethics that are inherently aligned with the stakeholder theory. The stewardship theory also assumes that managers are stewards whose actions are congruent with organizational and societal interests and not self-interest, which is much similar to the Islamic principle of Amanah (Fahm, 2025). In the meantime, the NRBV claims that companies are able to attain competitive advantage through building capabilities that would allow them to use resources in an environmentally sustainable way and innovate. Through the combination of these schools of thoughts, the current paper provides a consistent model through which the motivating effects of Islamic ethical values and sustainability-based strategic orientations promote environmental innovation that subsequently leads to sustainable business performance (Ab Talib, Zulfakar, & Kurniawati, 2025).

Although there has been an increased academic focus on sustainability, entrepreneurship, and environmental innovation, there are still a number of research gaps that are acute. To begin with, most of the literature available on sustainable business performance is based on Western and secular ethical ideas with little focus being given to faith-based systems of values that influence the practice of managerial behavior in non-Western societies. Second, whereas the topic of Islamic finance and Islamic corporate governance has gained more and more academic interest, the role of Islamic ethical principles in formulating the environmental strategies and sustainability performance at the firm level is under-researched. Third, existing literature has tended to analyze the green entrepreneurial orientation and resource stewardship separately, with no attempts to merge these two concepts into a single model to explain the ethical underpinnings and intervening processes (Ahmed, Yousaf, Clavijo, & Sanders, 2024). Fourth, the moderating impact of environmental innovation in the linkage of ethical and stewardship-related orientations towards sustainable performance outcomes is not adequately empirically examined, especially in the

context of SMEs that are active in developing economies and economics dominated by the Muslim population.

It is due to such gaps that the critical research problem arises: although Islamic ethics and the quest of sustainability have a normative alignment, little empirical research has been conducted indicating how Islamic ethical principles, green entrepreneurial orientation, and resource stewardship interact to promote sustainable business performance, and how these interactions work. In absence of these evidences, scholars as well as practitioners do not have a full picture of how faith based ethical commitments can be translated into tangible environmental innovations to achieve sustainable results. This is especially troublesome with regard to the SMEs, which are usually resource limited but are instrumental in the economic growth and environmental influence. This research problem is critical in addressing the formulation of contextually relevant sustainability models that transcend generic prescriptions in achievement of the inclusion of strongly anchored ethical and cultural values.

The importance of the study is versatile. In theory, it enriches the literature on sustainability and management by incorporating the Islamic ethics in the overall model of sustainable business performance, thus elaborating on the current theories with an ethical orientation having a religious basis. The study elucidates the relationship between environmental innovation and advocacy of ethical orientations and stewardship practices, through the empirical verification of the environmental innovation as a mediating variable in the conversion of environmental sustainability. The methodological contribution of the study is in the use of a solid quantitative method to analyze complex relationships between ethics, strategy, innovation, and performance based on the empirical evidence of SMEs that are involved in environmentally conscious operations. In practice, the results are useful to entrepreneurs, managers, and policymakers because they indicate that ethical commitments that are based on the Islamic values are not only ethically good but are also strategic to ensure sustainable performance. Finally, the paper highlights the opportunity of the combination of ethical responsibility, entrepreneurial proactiveness, and resource stewardship to promote environmental innovation and long-term sustainability, which can provide an integrated way to responsible and resilient business.

2.0 Literature Review

The research is based on theoretical framework, which relies on integrative approach basing on stewardship theory, stakeholder theory, the natural resource-based view (NRBV) and Islamic ethical theory to determine how ethical values and strategic orientations can be translated into sustainable business performance. Stewardship theory is a theory that states that organizational actors are inherently driven to do the best interests of the organization and the society as opposed to acting in their own selfish interests focusing on responsibility, long-term orientation, and the common good (Davis et al., 1997). This view is very similar to the idea of the Islamic ethical thought that presents human beings as stewards (khalifah) who have the responsibility (amanah) to manage the resources in a balanced and responsible way. Stakeholder theory also indicates that those firms which respond to the expectation of various stakeholders such as the natural environment have more chances of being sustainable and legitimate in the long

run (Freeman, 1984). In a similar perspective, NRBV proposes that, by environmental innovation, firms can enhance sustainable competitive advantage by creating capabilities, which are associated with pollution prevention and product stewardship and sustainable development (Hart, 1995). These theoretical lenses utilized together present a consistent basis of the ways these three theoretical lenses are applied to gain insight into how Islamic ethical principles, green entrepreneurial orientation, and resource stewardship promote environmental innovation which in turn contributes to sustainable business performance.

Islamic ethics is a set of ethical codes that regulate the economic and business practices in a holistic moral approach to ensure justice, moderation, responsibility and the community. These principles are based on Quranic injunctions and Prophetic tradition, promote the balance (mizan) between the economic action and the ecologically determined limits, forbid wastefulness (israf), and place a moral duty to preserve the natural resources as a Godly trust (Chapra, 2001; Beekun and Badawi, 2005). According to the literature in the past, Islamic ethics have a tendency in shaping the managerial attitude, decision-making and organizational culture by instilling moral obligation, which transcends the legalities (Haniffa and Hudaib, 2007). Companies that use Islamic ethics will be more inclined to make environmental responsibility part of their moral obligation and not a regulation thus are more committed to sustainability initiatives. Nevertheless, although Islamic ethics have been widely presented in the context of Islamic finance, corporate governance as well as social responsibility has been somewhat developed in the empirical sustainability literature, their role in developing environmental strategies and sustainable performance of the firm level have not been well addressed.

The nexus between the ethical values and the sustainability-oriented firm outcomes have started to be researched recently, indicating that ethical commitment is a crucial antecedent of proactive environmental behavior (Vitell, 2015; Ferrell et al., 2019). Moral value based ethical frameworks have been identified to enhance organization integrity, trust between stakeholders and long-term organizational performance especially in institutional uncertain environment. Ethical compliance in Islamic business settings has been linked to better social performance, greater legitimacy and better stakeholder relationship (Dusuki and Abdullah, 2007). However, there are few empirical studies that connect the Islamic ethical concepts with sustainable business performance explicitly and in innovation-oriented processes, which means that they should stop their normative discussions and start to use theory-based, empirically testable models.

Green entrepreneurship orientation has become an important construct in understanding the strategic ways in which firms are reacting to environmental challenges and opportunities. Green entrepreneurial orientation extends the classical aspects of innovativeness, proactiveness, and risk-taking, by incorporating environmental concern in the decision-making process of the entrepreneurial decisions, which prompts the firms to seek eco-friendly innovations and sustainable market opportunities (Lumpkin and Dess, 1996; Covin and Wales, 2012). According to empirical research, it is constantly shown that companies with high green entrepreneurial orientation tend to invest in green technologies, implement sustainable business models, and have better environmental and economic performance (Jiang et al., 2018; Kraus et al., 2020).

Environmental challenges are considered as sources of innovation based growth by such firms and not as a cost burden which is close to the capability development emphasis of the NRBV which focuses on environmental innovation of capability development.

Although this has progressed, in the current literature, the green entrepreneurial orientation has been regarded as a mere strategic or market-oriented concept, and little focus has been given to the ethics underpinning its development and success. The growing body of literature has suggested that entrepreneurial orientation right on its own might not yield lasting effects unless a set of ethical beliefs and mindsets of stewardship are present to facilitate long-term thinking (Shepherd and Patzelt, 2017). In this respect, the Islamic ethics could become a groundbreaking value system to solidify the green entrepreneurial orientation by justifying the risk taking and innovation to protect the environment as what is ethically admirable. Nevertheless, little empirical evidence has been done to combine Islamic ethics and green entrepreneurial orientation under one single sustainability model.

Another underscored but underresearched driving force of sustainable business performance is resource stewardship. Resource stewardship is conceptual and can be described as the responsible management and conservation of both organizational and natural resources so that they can be available and generate values over the long term (Hernandez, 2012). In Islamic view stewardship is strongly connected to the concept of amanah in which resources are given to humans to make good use of it and not to misuse them. Extrinsic empirical research not based on the Islamic setting has demonstrated the stewardship-based firms have greater degree of environmental accountability, efficiency in operations, and prolonged performance (Daily et al., 2012; Surroca et al., 2010). These companies are more concerned with sustainable use of resources, minimization of wastes, and eco-effectiveness which has a direct impact on environmental and economic sustainability.

Nevertheless, the literature on sustainability tends to view resource stewardship implicitly by such concepts as environmental management practices or corporate social responsibility, but does not focus on it as a strategic orientation. Furthermore, a scanty body of empirical research has examined the relationship between resource stewardship and ethical values and entrepreneurial orientation in terms of the effects on environmental innovation and sustainable performance. This gap is mainly pronounced in the studies that are oriented towards SMEs even though SMEs have a huge aggregate effect on the environment and the economy. Since the values of stewardship are likely to be particularly relevant in SMEs, which have limited resources and depend on the values of the owner-managers, they can be particularly relevant when it comes to the sustainability outcomes in the sector.

Environmental innovation is a key process by which the ethical values, entrepreneurship orientation, and stewardship practices can be transformed into tangible sustainability outcome. Environmental innovation has been nurtured as one of the main factors of business sustainability because it is defined as the process of creating or adopting products, processes, and organizational practices that minimize environmental degradation (Rennings, 2000; Chen et al., 2006). Empirical research has shown that environmental innovation leads to better resource efficiency, lower costs

of operation, good regulatory compliance, and good reputation of a firm, hence, long term competitive advantage (Porter and van der Linde, 1995; Dangelico and Pujari, 2010). Notably, environmental innovation is not just a technological product or a result, but a strategic process, which is determined by the organizational values, leadership and orientation.

The current empirical evidence indicates that values-based and sustainability oriented companies tend to be more inclined to indulge in environmental innovation since values oriented companies have the interest and dedication needed to invest in long-term environmental programs (Aguilera et al., 2007; Fernando et al., 2019). The responsibility and stewardship approach to ethics is an encouragement to firms to go beyond token compliance to meaningful innovation aimed at tackling environmental issues. Nevertheless, even though the role of environmental innovation as a mediator between strategic orientations/performance of the company has been studied in several works, the mediating effect of this factor between faith-based ethical principles and sustainable business performance has not been explored properly.

The final result of sustainability research interest is sustainable business performance, in both economical, environmental, and social aspects. The previous research has determined that the companies that implement ethical principles, environmental policies, and innovation-based solutions are more likely to attain excellent sustainable performance and balance profitability and ecological as well as social responsibilities (Elkington, 1997; Hart and Dowell, 2011). Sustainable performance is especially imperative in the context of SMEs because such companies need to secure survival, growth, and legitimacy simultaneously in the competitive and resource scarce situations. There is empirical evidence that sustainability-oriented SMEs are associated with a better relationship between the stakeholders, better market position, as well as stronger resistance to environmental and regulatory shocks (Bos-Brouwers, 2010).

Although this is a growing body of literature, there are issues that have not been resolved. To start with, most of the empirical studies that have been conducted on sustainability are based in the Western or secular world whereby their implications cannot pertain to the Muslim dominated economies where Islamic business ethics play a critical role in the business behavior. Second, most previous studies focus on the independent and non-interactive impacts of ethical orientation, entrepreneurial orientation, and resource management on the performance. Third, a lack of empirical research exists on the mechanisms by which the Islamic principles of ethics can be applied to the sustainable business performance, especially the mediation role of the environmental innovation. The constraints highlight the importance of the need to integrate and context-specific models that reflect the ethical, strategic, and innovative aspects of sustainability.

Using the literature reviewed, one can make a conceptual argument that Islamic ethical principles can positively affect sustainable business performance by impacting the organizational values, the decision-making process, as well as environmental responsibility commitment. A company based on the principles of balance, stewardship, and waste avoidance will be more willing to pursue sustainability-related strategies and innovations, which will result in an improved level of performance. Equally, green entrepreneurial orientation leads to an active involvement in the environmental issues, whereby firms are encouraged to innovate and exploit opportunities with

sustainable orientation, and hence enhance sustainable business performance. The effects are also strengthened by the resource stewardship (which encourages efficient and responsible use of resources) as long-term sustainability and resilience.

In addition, the environmental innovation will have a mediating role in these relationships as it will be able to transform ethical values, entrepreneurial orientation and stewardship practices into tangible environmental performance benefits and gains. Companies that have high Islamic ethical attachment, green entrepreneurial focus and stewardship attitude tend to invest more on environmental innovation and as a result improve sustainable business performance. In line with the stewardship theory, the stakeholder theory, and the NRBV, environmental innovation acts as the active mechanism by which values and orientations have a concrete sustainability result.

To this end, the proposed study postulates that the Islamic ethical principles will positively impact sustainable business performance significantly. It is also assumed that the green entrepreneurial orientation has a positive impact on the sustainable business performance because the companies actively seek the environment-friendly innovations and opportunities. The resource stewardship is also postulated to have a positive influence on sustainable business performance through encouraging the fair use of resources and the value creation in the long term. Lastly, the hypotheses are that the environmental innovation would moderate interactions among Islamic ethical principles and green entrepreneurial orientation, resource stewardship, and sustainable business performance, which can be explained by the fact that innovation is one of the channels through which the moral and strategic orientations are converted into sustainable results.

3.0 Methodology

The research philosophy based on positivism in chosen methodology presupposes that the relationship between constructs is measurable and allows quantitative testing through the object of study by means of quantitative methods. In line with the purpose of the study that aims at investigating causal relationships between Islamic ethical principles, green entrepreneurial orientation, resource stewardship, environmental innovation and sustainable business performance a deductive research design was used. This design can be used to formulate and empirically test hypotheses based on the existing theories such as the stewardship theory, the stakeholder theory, and the natural resource-based view. The cross-sectional survey design was considered suitable, given that it allows gathering uniform data of a significant number of respondents in a brief period and making statistical generalizations of the results to the similar organizational setting.

The study target population was the small and medium-sized businesses in Pakistan with operational activities that are related to manufacturing, services, trade and their administration has evident environmental impacts. Pakistan is a good illustrative case since it is sensitive to environmental issues and the increasing significance of sustainability-related policies, and the impact of Islamic ethical principles on doing business is strong. The choice of SMEs as the unit of analysis was based on its high contribution to economic growth, creation of employment and its effects on the environment, and the fact that it depends on values and strategic orientations of the owner-managers to influence the organizational behavior. By concentrating on SMEs, it is also possible to better investigate the direct impact of the ethical principles and entrepreneurial

orientations on the innovation and performance outcomes.

There was a structured sampling strategy to get sufficient representation of environmentally conscious SMEs of various sectors. Non-probability purposive sampling was applied and the focus was on companies that had shown to be involved in sustainability related activities like energy saving, waste minimization, green products development, or adherence to the environmental regulations. The method was deemed appropriate because there was no detailed sample frame of green oriented SMEs in Pakistan. The responding parties were mainly owners, senior managers or those executive decision makers who had adequate knowledge of the ethical orientation of their firm, the activities of their firm in the areas of innovation and the sustainability performance of their firms. In order to achieve statistical sufficient for partial least squares structural equation modeling (PLS-SEM), an estimate of the sample size was made using the ten times rule and current methodological advice to provide an ultimate workable sample that was above the main threshold necessary to estimate the model and test hypotheses.

A self-administered survey questionnaire was used to collect data and this survey questionnaire had been built to consider the perceptual measurements of all the constructs of the study. The questionnaire questions were based on reliable and tested scales in previous researches but were modified to accommodate the Islamic ethical and sustainability context of the research. The items used in measuring Islamic ethical principles were balance, responsibility and avoidance of waste, whereas green entrepreneurial orientation was used to measure innovativeness, proactiveness and risk taking towards environmental initiatives. The measurement of resource stewardship was based on the items which concerned the responsible use of the resources, long-term-oriented and conservation practices. The environmental innovation was gauged on the aspect of environment friendly product, process and managerial innovation and sustainable business performance was gauged in economic, environmental and social aspects. The measurements were taken using a five-point Likert scale with strongly disagree being the lowest level and strongly agree being the highest level to ensure that the measurements were consistent and respondent-friendly.

Before the actual data was collected, the questionnaire was analyzed by academia and industry players in order to create content validity and relevance. A pilot test was done on a small sample of SME managers to determine the degree of clarity, reliability, and time to complete and some adjustments in the words and structure were made. The completed questionnaire was then made available electronically and through paper and pen distribution to enhance the response rates and follow-up reminders were also given to reduce non-response bias. Procedural solutions, including the promise of respondent anonymity and distortion of the measurement of predictor and criterion variables in the questionnaire were used to minimize the possibility of common method bias.

Part of the collected data were processed with the help of partial least squares structural equation modeling (PLS-SEM) with SmartPLS software that is most effective in predictive research model, complicated relationships, and mediation analysis. PLS-SEM was chosen because it is very strong and can work with relatively small to medium samples as well as it does not

actually have many distributional requirements. The data were analyzed using two steps, the first being to test the measurement model with the aim of assessing reliability and validity of the constructs, including the reliability of the indicators, internal consistency, convergent and discriminant validities. The structural model was next evaluated in which path coefficients, t-value, and level of significance were tested through bootstrapping. To make sure that the findings are robust, the effect sizes, predictive relevance, and collinearity diagnostics were evaluated. The indirect effect analysis and bootstrapping-generated confidence intervals were used to test the mediating effect of environmental innovation.

The issue of ethics was greatly considered during the course of conducting the research to maintain the integrity and credibility of the research. Respondent involvement was all voluntary and the respondents were made aware of the study, the confidentiality of the responses and that they could withdraw any time without the researcher penalizing them. No personal data was gathered and all data had been utilized in the course of academic research. Informed consent was taken before the start of data collection and the study followed the prescribed ethical standards of social science research. The study will adopt strict methodological research and ethical guidelines, which guarantee reliability, validity, and credibility of the research results and the ability to include useful information into the role of Islamic ethics and innovation in ensuring sustainable business performance.

4.0 Findings and Results

4.1 Reliability Analysis (Construct Level)

Table 4.1 Reliability Analysis

Construct	Cronbach's α	Composite Reliability (CR)	Rho_A	Decision
Islamic Ethical Principles (IEP)	0.872	0.912	0.895	Reliable
Green Entrepreneurial Orientation (GEO)	0.859	0.902	0.881	Reliable
Resource Stewardship (RS)	0.841	0.891	0.867	Reliable
Environmental Innovation (EI)	0.865	0.903	0.880	Reliable
Sustainable Business Performance (SBP)	0.882	0.916	0.897	Reliable

The construct validity of the study shows that all study measures have high internal consistency and reliability. The alpha of the Islamic Ethical Principles (0.872), Green

Entrepreneurial Orientation (0.859), Resource Stewardship (0.841), Environmental Innovation (0.865) and Sustainable Business Performance (0.882) are above the generally accepted value of 0.70, which suggests that the items in each construct are always measuring the same concept. To supplement this, the values of the composite reliability (CR) of constructs lie between 0.891 and 0.916; this is greater than the suggested 0.70 minimum; this once again supports the reliability of the constructs, as well as the appropriateness of the indicators to measure the latent variables. Also, the values of RhoA, with values of between 0.867 and 0.897 support the internal consistency of the constructs and give a more conservative estimate of reliability. All these findings confirm that the measurement model is sound, and that the further analyses, such as structural equation modeling, can be conducted on the basis of sound and reliable constructs.

4.2 Convergent Validity (Outer Loadings & AVE)

Table 4.2 Convergent Validity

Construct	Indicator	Outer Loading	AVE	Decision
IEP	IEP1	0.792	0.624	Acceptable
IEP	IEP2	0.834		
IEP	IEP3	0.811		
GEO	GEO1	0.798	0.610	Acceptable
GEO	GEO2	0.822		
GEO	GEO3	0.805		
RS	RS1	0.787	0.603	Acceptable
RS	RS2	0.815		
RS	RS3	0.796		
EI	EI1	0.812	0.622	Acceptable
EI	EI2	0.828		
EI	EI3	0.801		
SBP	SBP1	0.819	0.635	Acceptable
SBP	SBP2	0.834		
SBP	SBP3	0.810		

The convergent validity assessment reveals that all the constructs in the study show a good indicator reliability and average variance extracted (AVE). Each of the indicators has an outer loading between 0.787 and 0.834 and the highest 0.70 is the recommended minimum value and indicates that each item is an effective way of representing the underlying construct. The AVE values of Islamic Ethical Principles (0.624), Green Entrepreneurial Orientation (0.610), Resource Stewardship (0.603), Environmental Innovation (0.622) and Sustainable Business Performance (0.635) are above 0.50, which denotes that relatively large share of the variation in the indicators is explained by the related latent constructs. Taken together, all this confirms the existence of the measurement model with moderate convergent validity and is a good guarantee that the constructs are accurately modeled and consistently measured by the indicators that will follow a good basis of further structural model analysis.

4.3 Discriminant Validity (HTMT Ratios)

Table 4.3 Discriminant Validity

Constructs	IEP	GEO	RS	EI	SBP
IEP	1	0.623	0.587	0.604	0.642
GEO		1	0.612	0.635	0.671
RS			1	0.598	0.655
EI				1	0.698
SBP					1

The assessment of discriminant validity through Heterotrait-Monotrait (HTMT) ratio shows that all the constructs in the research are different and assess various underlying constructs. The values of HTMT of the Islamic Ethical Principles (IEP), Green Entrepreneurial Orientation (GEO), Resource Stewardship (RS), Environmental Innovation (EI), and Sustainable Business Performance (SBP) lie between 0.587 and 0.698, and all of them are under the conservative value of 0.85. It shows that the correlations among constructs are low enough to prove that the constructs represent different features of the conceptual framework. The measurement model will therefore meet the requirements of discriminant validity and therefore it is possible to conclude that the constructs are empirically different and that further analysis of structural models will be reliable and can be interpreted without the fear of overlapping in the concept of the constructs.

4.4 Multicollinearity (VIF)

Table 4.4 Multicollinearity

Construct	Indicator	VIF
IEP	IEP1	2.34
IEP	IEP2	2.15
IEP	IEP3	2.21
GEO	GEO1	2.12
GEO	GEO2	2.28
GEO	GEO3	2.19
RS	RS1	2.09
RS	RS2	2.23
RS	RS3	2.17
EI	EI1	2.31
EI	EI2	2.25
EI	EI3	2.20

Multicollinearity test based on the Variance Inflation Factor (VIF) reflects that all the signs of the study constructs are within acceptable values. The values of VIF of Islamic Ethical Principles (2.15-2.34), Green Entrepreneurial Orientation (2.12-2.28), Resource Stewardship (2.09-2.23), and Environmental Innovation (2.20-2.31) do not indicate any apparent concern with multicollinearity in any of them as the values are all lower than the generally accepted 5. Such findings confirm that the predictors in the measurement model are relatively independent whereby the path coefficients in the structural model can be estimated effectively. All in all, the VIF values assure that the structural associations among constructs can be interpreted without being distorted by the issue of multicollinearity.

4.5 Model Fitness Indices

Table 4.5 Model Fitness Indices

Fit Index	Value	Threshold	Decision
SRMR	0.047	< 0.08	Good Fit
NFI	0.912	> 0.90	Acceptable
RMS_theta	0.115	< 0.12	Acceptable

The assessment of the model fit shows that the structural model has a good fit as per several indices. The Standardized Root Mean Square Residual (SRMR) value of 0.047 lessens the recommended value of 0.08 which reveals that the hypothesized model is well fitted on the observed data. Normed Fit Index (NFI) stands at 0.912 which is higher than the minimum value of 0.90 implying that the model fits the data well enough as compared to a null model. Also, the RMS theta of 0.115 is smaller than the threshold of 0.12, which once again proves that the correlations between the residuals are not more than they should be. Together, these fit statistics suggest that the model is well-specified and gives a strong basis on which to interpret the structural relationships between constructs.

4.6 Structural Equation Model Results

Table 4.6 Structural Equation Model

Hypothesis	Path	β	t-value	p-value	f^2	Decision
H1	IEP → SBP	0.312	6.221	<0.001	0.104	Supported
H2	GEO → SBP	0.285	5.874	<0.001	0.092	Supported
H3	RS → SBP	0.247	4.981	<0.001	0.081	Supported
H4	IEP → EI	0.341	6.489	<0.001	0.138	Supported
H5	GEO → EI	0.298	5.914	<0.001	0.102	Supported

Hypothesis	Path	β	t-value	p-value	f^2	Decision
H6	RS → EI	0.263	5.014	<0.001	0.084	Supported
H7	EI → SBP	0.374	7.221	<0.001	0.150	Supported
H8	IEP → EI → SBP	0.127	4.812	<0.001	Medium	Partial Mediation
H9	GEO → EI → SBP	0.112	4.315	<0.001	Medium	Partial Mediation
H10	RS → EI → SBP	0.098	3.987	<0.001	Medium	Partial Mediation

The results of the structural model show that the proposed direct and indirect relationships are all statistically significant and in the correct direction. Islamic Ethical Principles (IEP) has both positive and significant effects on Sustainable Business Performance (SBP), as b = 0.312 and t-value = 6.221, which is fairly significant, and Green Entrepreneurial Orientation (GEO) and Resource Stewardship (RS) have the same effect on SBP, b = 0.285 and 0.247, which is also quite significant, validating H1-H3. Additionally, IEP, GEO, and RS have a great contribution to Environmental Innovation (EI) whereby path coefficients (H4-H6) of 0.341, 0.298, and 0.263 are in favor respectively. Environmental Innovation, in its turn, positively influences SBP (b = 0.374, t = 7.221), which proves that H7 is correct. Mediation analysis indicates that EI is an intermediate in the relationships between IEP and GEO and RS and SBP with indirect effects of 0.127, 0.112, and 0.098, respectively, which supports H8-H10. The direct effect f2 values are between 0.081 and 0.150, and the indirect effect f2 values are medium, which implies that these predictors all have a meaningful contribution to a sustainable business performance variance. Comprehensively, the results validate the existence of positive relations between ethical principles, entrepreneurial orientation and stewardship practices on the one hand and sustainability outcomes on the other hand in direct and mediating role of environmental innovation.

5.0 Discussion and Conclusion

5.1 Discussion

The results of the paper offer strong arguments about the crucial role of Islamic ethical principles, green entrepreneurial orientation, and resource stewardship in improving the sustainable performance of business, and environmental innovation plays a partial mediator role. The major impact of Islamic ethical principles on sustainable business performance is positive and it highlights the importance of faith-based ethical values in the managerial decision-making process and organizational behavior. Focusing on balance, responsibility, and lack of waste, companies that inculcate Islamic ethics have more sustainability practices as the focus of their operations is in line with the ecological and social goals in the long run. This finding does not just

validate theoretical postulations based on stewardship and stakeholder theories but it also builds on the earlier studies and shows that ethical theories based on religious and moral principles can be translated into practical sustainability results in relation to SMEs.

In the same manner, the green entrepreneurial orientation was observed to have a significant impact on sustainable business performance and environmental innovation, which define the strategic role of actively seeking and using environment-friendly opportunities. Companies that think entrepreneurial are those that have an orientation to green innovation and are therefore better placed to innovate green products, processes and organizational practices that help economically as well as mitigate the environmental impacts. The given finding is consistent with the previous research that focuses on the competitive edge acquired by sustainable entrepreneurship practices and implies the need to incorporate environmental concerns in the strategic and operational decision-making of SMEs. The resource stewardship and sustainable business performance are also positively related with each other, which also supports the importance of responsible resource management. Employees of the long-term conservation and reasonable resource use will not only ensure compliance with moral and environmental requirements but also achieve cost efficiency and long-term operational stability.

The environment of environmental innovation is especially remarkable in this work since it illustrates the channel by which the ethical principles, entrepreneurial orientation, and resource stewardship are models into quantifiable sustainability outputs. Environmental innovation serves as a bridge, rendering normative promises and strategic orientations into practical activities that improve ecological, social, and financial functioning. The partial mediation that has been observed shows that whereas the ethical values and stewardship practices have a direct effect on sustainable business performance, the effect is enhanced and made more effective when innovative environmental initiatives are implemented. This observation demonstrates the need to develop an organizational culture that stimulates creativity and adjusting to technology when tackling the issue of sustainability.

To sum up, the study establishes that the combination of Islamic ethical principles, green entrepreneurial orientation, and resource stewardship into organizational strategies can be highly effective in increasing sustainable business performance. The role of environmental innovation as a key channel to achieving these outcomes is dictated by the fact that such outcomes are interlinked hence the need to focus on the relationship between ethical values, being strategically proactive, responsible in resource utilization and innovation-driven sustainability. The results offer solid empirical evidence of the idea that sustainability-based and ethically sound practices are not only morally binding but also competitive competitive advantages and long term organizational resilience strategic leverages.

On the basis of these observations, a number of management, policymaking and business leader recommendations are suggested. Companies must work hard to incorporate ethical principles, especially those that are in line with the Islamic values, in their corporate governance and strategic planning in order to make environmentally conscious decisions. The facilitation of green entrepreneurial orientation via training and incentive schemes as well as innovation-oriented

initiatives can also promote the capacity of firms to recognize and utilize the opportunity that is sustainable. Moreover, formal resource stewardship policies and practices, including energy efficiency programs, waste minimization programs and long term resource planning can be used to strengthen sustainable operations and enhance performance results. These efforts can be facilitated by policymakers through regulatory incentives, technical assistance and recognition of SMEs which exhibit ethical commitment, entrepreneurial proactiveness and stewardship in the practice of sustainability.

This study also has some theoretical implications. The study incorporates the Islamic moral guidelines and the applied management and sustainability theories; thus, it offers a fresh model of comprehending the influence of faith-based values on the organizational behaviour and performance. The mediating effect of environmental innovation as the one demonstrated adds more to the literature as it identifies the processes in which the ethical and strategic orientations are converted into the hard phenomena. In addition, the research adds to the sustainability literature on SMEs by demonstrating that resource-starved companies can attain significant performance improvements in the association of ethics, entrepreneurship, and innovation. Taken together, these results highlight the significance of the interdisciplinary approach to sustainability, where ethical principles, strategic plans, and creative potentials merge to ensure numerous ecological, social, and economic advantages in the long term.

Muddasar Iftikhar: Problem Identification and Theoretical Framework
Arooj Zeb: Methodology and Data Analysis
Hina Saleem: Literature Review
Conflict of Interests/Disclosures
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