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Sustainable Business Performance: Examining the Role of Green HRM Practices, Green Innovation and Responsible Leadership through the Lens of Pro-Environmental Behavior

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Abstract: Due to the recent economic crisis, the requirement for sustainable company performance has spread across the globe, with green initiatives being seen as the best way to address it. Recent literature and regulators have taken notice of this predicament. The deployment of green innovation, responsible leadership induction, and green human resource management (GHRM) techniques have been made necessary by the significant focus on attaining business sustainability. This study aims to provide light on the banking industry's perception of how GHRM practices, green innovation, and responsible leadership affect business sustainability practices. The data were provided by 396 banking professionals employed by the top five commercial sector banks nationwide. By using the Mplus program for analysis, the study's hypotheses were evaluated using structural equation modeling. The findings show a positive relationship between GHRM practices, ethical leadership, green process innovation, and sustainable company performance. However, an intriguing finding between responsible leadership and sustainable business performance was the role that pro-environmental conduct played as a partial mediator. The findings offer scholars and practitioners interested in firms' sustainable business performance additional context-specific social, ecological, and financial implications. The effectiveness of GHRM practices, responsible leadership, and green innovation as a strategy to increase business sustainability in a developing country environment has only received minimal academic attention so far. A literary gap exists as few studies have been conducted to test the role of green HRM, responsible leadership, and green innovation's impact on sustainable business practices. Small number of studies taken pro-environmental behaviors as a mediator in the recent past. In light of this, the present study has taken these behaviors as a mediator to test the mediation effect in the banking sector of Pakistan. So, the present study removed the gap by exploring the mediation effect of pro-environmental behaviors. The selection of Pakistan's banking sector for analysis in the present study is a significant contribution to the literature because no studies have previously been conducted on Pakistan's banking sector to analyze the role of green HRM practices, responsible leadership, and green innovation's impact on sustainable business performance through the mediating role of their pro-environmental behavior. The present study provides guidelines to senior management in the banking sector to understand the role of green HRM practices, responsible leadership, and green innovation practices' importance for sustainable business performance as sustainable performance is essential to excel in this competitive business world.

Keywords: green HRM practices; green innovation; responsible leadership; sustainable business performance; pro-environmental behavior

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1. Introduction

Globalization and the emergence of social-media-influenced businesses and corporations to change their mind regarding profitability as businesses are no longer thought to be motivated by actions that maximize profits. Businesses must perform more sustainably to maintain their position in the market, both nationally and internationally, since social media development and globalization have increased public awareness of businesses' social and environmental responsibilities [1]. The corporate world and enterprises today have learned that people are the focus of all initiatives that cover people, profit, and the planet. Due to the advancement of society's emphasis on environmental issues and the enactment of more stringent environmental regulations by governments, there are significant consequences for businesses in Pakistan. To address environmental challenges in response to demands from many stakeholders, company managers are becoming more actively involved in modifying their strategy, internal initiatives for green innovation, and high-quality sustainable development [2]. Pollution served as a tangible indicator of poor or wasteful resource utilization. To establish a better balance between financial and environmental consequences, several firms have been advised to adopt low-carbon and environmentally responsible HRM practices.

Globalization has forced business organizations to consider beyond profit maximization, giving rise to corporate sustainability, which develops a "green" strategy of HRM and leadership and produces long-term value for customers and workers, among others. This approach places a strong emphasis on the environment by taking into account all aspects of corporate operations and their effects on society, culture, the economy, and the ecosystem [3]. Previous studies connected business sustainability to higher profits, lower waste, resources, water, power, and total costs [4,5]. These studies also linked business sustainability to higher worker productivity [6,7], lower hiring and attrition costs, and lower operational and strategic concerns [8]. Therefore, both academics and practitioners must have a thorough grasp of the variables influencing business sustainability. Humans heavily impact how businesses operate, as well as their efforts to adopt sustainability [9]. Only those who are aware of their responsibility for their activities while maintaining a positive mindset toward surroundings that may have an influence on the environment use green-oriented management techniques. Employer engagement, eco-friendly education, eco-friendly salary and benefits, and eco-friendly recruiting and selection are all key components of GHRM strategies. The GHRM has a significant impact on the establishment of environmentally friendly standards and procedures inside organizations [10]. Pakistan's financial sector has made considerable recent advancements. The banking sector in Pakistan is regarded as one of the world's most rapidly growing sectors [11]. This research will examine the function of responsible leadership in the context of employee performance. Any nation's financial system is crucial to that nation's overall economic health. Consequently, the leadership position is essential, and without it, the banking industry cannot continue to succeed. The banking sector of Pakistan covers the whole of Pakistan without any discrimination in any area and motivates the researchers to take this sector for the present study.

Pakistan's economic structure relies upon the banking system, which is one of the nation's fastest-growing sectors [12]. The total number of bank branches increased by 420 to 14,477 branches as of December 2021 [13]. The banking sector provides finance to every industry for their growth, and if the banking sector itself implements policies regarding GHRM practices and responsible leadership to achieve sustainable business performance then it can lend loans to those industries that play their role in low-carbon emission and higher sustainable business performance. Albert Bandura's social learning theory (SLT) has gained a lot of traction as one of the most important theories of learning and is frequently used to explain a range of organizational behaviors. According to this hypothesis, learning new skills and behaviors may be accomplished via the observation of others. The four phases of this learning process are attention, retention, reproduction, and motivation. It is sometimes referred to as observational learning [14]. Leaders have a greater capacity to serve as examples for followers to see and absorb since they have official authority, a higher position, and control over resources. Responsible leaders will first take concrete steps to put environmental preservation ideals into practice by outlining environmental, social, and economic values to followers [15]. Such actions provide a vital message to followers that environmental measures are supported within the company, boosting the probability that workers will take part in environmental efforts. Additionally, leaders may teach staff how to engage in environmental practices at work by personally showing such behaviors.

The present paper focused on sustainable performance achievement by GHRM and responsible leadership through the lens of pro-environmental behavior because sustainable performance determines the mentality of business owners that they are implementing strategies for achieving sustainable business performance. Companies execute sustainably when they conduct their operations without degrading society's and the environment's quality. Even on a worldwide scale, a green firm conducts its operations with the welfare of mankind and the quality of the planet's resources in mind [16]. When managers are aware of the social and environmental demands placed on them by customers, potential customers, and the government, they can help their company run in a highly sustainable manner. They can also ensure that these demands are not compromised in the name of a little more profit. Such a company maintains accurate records of the environmental issues that arise as a result of its activities and conducts its operations following the guidelines established by environmental regulatory bodies. If a corporation safeguards the quality of the environment and the welfare of the local populace in the area where it conducts its activities, it can have sustainable performance. As a result, the corporation cultivates an atmosphere that will allow it to grow [17]. The influence of responsible leadership is substantial on how well businesses and workers function [18] owing to its several facets, which include financial, societal, and ecological [19]. So, the current study will add to the corpus of information about the GHRM and RL implications on sustainable economic success in the banking sector of Pakistan, studying how green HRM practices, green process innovation, and responsible leadership affect the banking industry of Pakistan to execute sustainably in business.

A literary gap exists as few studies have previously been conducted to test the role of green HRM, responsible leadership, and green innovation's impact on sustainable business practices. Mediating role of pro-environmental behaviors is least resrached area in the banking sector. In light of this, the present study has taken these behaviors as a mediator to test the mediation effect in the banking sector of Pakistan. So, the present study removed the gap by exploring the mediation effect of pro-environmental behaviors. The selection of Pakistan's banking sector for analysis in the present study is a significant contribution to the literature because no studies have previously been conducted in Pakistan's banking sector to analyze the role of green HRM practices, responsible leadership, and green innovation's impact on sustainable business performance through the mediating role of their pro-environmental behavior. The present study's preliminary findings indicate that green HRM and responsible leadership have a significant influence on enhancing sustainable performance. Employees' active participation in sustainable performance is significantly influenced by their opinions of the organization's socially responsible image, as demonstrated through responsible leadership and environmentally friendly HRM procedures. The present study provides guidelines to senior management in the banking sector to understand the role of green HRM practices, responsible leadership, and green innovation practices' importance for sustainable business performance as sustainable performance is essential to excel in this competitive business world.

The structure of this paper consists of five parts. After introducing the topic, the paper gives the blueprint of the interrelationship of green HRM practices, green innovation, responsible leadership, pro-environmental behaviors, and sustainable business performance in light of past literary arguments. The third part describes how the sample, sampling technique, and sample size were selected. It also provides supportive data for the study concepts that have been acquired. This part also describes how the validity of data has been analyzed, and results, on account of this analysis, have been set. Afterward, the results and analysis section are presented along with the hypotheses' results. Then, the conclusion, implication, recommendations, limitations, and future directions of the study are given.

2. Literature Review

Sustainable business performance is an essential element for businesses and it depends upon functions, processes, and operations of the business activities that determine the impact on the environment and health of employees and customers. It is necessary to conduct business deals to foster stronger social connections with the stakeholders, including producers, customers, the public in general, and regulatory authorities. A highly sustainable firm plans its plans and strategies to maximize revenue without sacrificing the ecosystem's quality and the well-being of society. Over 70% of the top businesses in their industries have prioritized sustainability in their work agendas during the last several years. Leading firms' studies confirm that cooperation with supply chain (SC) players is essential to the success of their sustainability initiatives. Green or sustainable supply chain management (SSCM) entails incorporating economic and environmental goals into the management of the supply chain's operational strategy. Its integration boosts financial return and profitability while reducing the carbon impact [20]. The United Nations has established sustainable goals for the world that emphasize sustainable development, and countries across the world are implementing these goals [21]. Businesses across the globe have given considerable attention to sustainable development. In the present study, researchers focused on the contributions of green HRM, green innovative practices, and responsible leadership in sustainable business performance. The respondents to our study who work in the banking industry were also evaluated for the mediating effects of their pro-environmental activities. With the aid of earlier literary arguments, this research offers its principles regarding green HRM, green innovation methods, responsible leadership, pro-environmental behavior, and sustainable business performance. Researchers have identified several antecedents, including transformational leadership [22], ethical leadership [23], transactional leadership [24], servant leadership [25], environmental strategy [26], environmental proactivity and environmental awareness [27], and response management [27] for the performance of employees. According to studies, leadership plays a paramount role in organizational performance [28]. As per leadership studies, executives are crucial due to their role in strategy formulation and implementation for achieving organizational performance. A responsible business leader considers the company's economic, societal, and environmental challenges all at once [19]. Although the body of existing work substantially deepens our comprehension that leadership is an essential and crucial part of work, situational, and environmental performance, this line of inquiry is nevertheless constrained in several ways.

First, with an eye toward the future, responsible leadership has become more important for the future environment. Organizations are converting their energy systems into green energy [29], which is an essential element of the environment. Deciding on business strategies that are moral and include the interests of all parties—including shareholders, customers, producers, staff, the environment, and future generations—is necessary to achieve sustainable performance [30]. This style of leadership is crucial for enabling environmental practices and improving business performance because responsible leaders are accountable for sustainable decisions by taking into account all stakeholders and future generations [31]. However, the majority of the current research has heavily emphasized other leadership styles, such as servant leadership, transformational leadership, and agile leadership, and has generally ignored the paramount importance of responsible leadership regarding environmental performance. Second, responsible leadership due to its triple bottom approach is effective for the economic, environmental, and social aspects of the firm. It indicates that responsible leadership will ultimately be beneficial for boosting organizational tasks and contextual performance. Past studies have tested the various leadership styles with task and contextual performance as the role of visionary leadership in contextual performance [32], and transformational leadership's impact on task performance [33].

Individual performance has a significant impact on how long an organization will exist. Performance is based on an individual's actions or conduct, and performance may be evaluated from the perspective of contextual performance, which comprises actions that enhance the efficacy of the organization by creating a conducive atmosphere for task performance [34]. Additionally, actions that are not specifically connected to work duties but have a big influence on organizational, cultural, and psychological settings are included in the contextual performance. These actions act as catalysts for the effective completion of the duties that have been given to them. A person's performance is demonstrated to spur business expansion [35], organizational effectiveness [36], and overall performance of the organization [37]. Whereas, individual performance can be boosted through the induction of responsible leaders at workplaces [38].

2.1. Green HRM Practices and Sustainable Business Performance

This is a term developed from the green management concept, strategies, and procedures used by businesses to manage the environment [39]. It is known as the area of human resource management that focuses on efforts to turn organizational people into green workers with a vision to complete organizational sustainability goals and an awareness of environmental sustainability. The term "GHRM" also refers to a system that uses HRM strategies to encourage resource usage within corporate settings to achieve environmental sustainability. According to the theory underlying the movement and definition of GHRM, three fundamental ideas—ecology, sustainability, and social justice—serve as the foundation for the movement's ideology [40]. Businesses are no longer thought to be motivated by actions that maximize profits. People are the focus of all operations nowadays, and corporations and the corporate world have acknowledged this change. This has transformed business and given rise to corporate sustainability, which develops "green" strategies to build long-term value for stakeholders including customers and staff [41]. Humans heavily impact business operations, environmental strategy, and initiatives to embrace it [9]. Only those who have a favorable view of the environment and a feeling of responsibility for their actions that could influence the environment use green-oriented management techniques. According to the authors, GHRM procedures are crucial in supplying the elements required for establishing corporate sustainability. The importance and possibilities of GHRM in attaining business sustainability are therefore highlighted in recent research [10]. The purpose of this research is to examine how GHRM practices impact corporate sustainability initiatives from the perspective of the banking sector. This study is important because it addresses a gap in the literature that has been identified on the causal link between GHRM practices and company sustainability. The industry's viewpoint on this crucial topic is notably underrepresented in the current literature. By presenting the industry's perspective on GHRM and corporate sustainability, the current research fills this vacuum in the literature. Practitioners will be able to assess the value of GHRM practices in realistically achieving business sustainability with the aid of the study's findings. Considering the aforementioned arguments, it can be hypothesized:

H1: *Green HRM practices have a significant positive impact on sustainable business performance.*

2.2. Green Innovation and Sustainable Business Performance

When a business provides a unique product, service, or method to serve its stakeholders, it is considered green innovation. The dynamic capabilities viewpoint was created as an extension of the resource-based approach, and it contends that a company's distinct skills and resources are its most valuable assets for creating and maintaining a competitive edge [42]. Technology advancements and the advantages of green technology are necessary for green innovation. Recycling techniques also have a beneficial impact on corporate performance, while green innovation may dramatically reduce costs and offer the chance to boost business performance [43]. When a business adopts proactive strategies to fulfill the goals and preferences of its stakeholders while also taking the next generation into account, sustainable development has occurred. Prior definitions of sustainability included meeting social and economic requirements without compromising the environment. Prior research on company sustainability has centered on accomplishing three specific goals, namely, social, environmental, and economic. The sustainability idea places a strong emphasis on achieving both company goals and people's well-being. According to the aforementioned definitions of sustainability, businesses should not only focus on maximizing shareholder value but also take into account how their activities may affect society, the environment, and employees [44]. The advantages of sustainability practices will eventually be seen in higher profits, enhanced product quality, brand fulfillment, loyalty to the company, enhanced brand image, government support, cost savings from sustainable supply chains and logistics, decreased environmental liability, and lower legal and regulatory costs [45]. Focusing on green product innovation in corporate resources and processes, a recent study was conducted on sustainable business performance [46]. It found that using or integrating company resources (physical and human resources), as well as business operations such as organizational functions, production, and brand recognition, to shield the community and the environment from the detrimental consequences of firms led the firm directly toward corporate sustainability performance. Based on these arguments, we propose the following hypothesis:

H2: *Green Innovation has a significant positive impact on sustainable business performance.*

2.3. Responsible Leadership and Sustainable Business Performance

Leadership plays a crucial role in the success of any business, and responsible leaders are individuals who concurrently address economic, societal, and environmental concerns [19]. Leadership roles in sustainable business performance are essential as a leadership approach toward environmental aspects is vital, which sets a priority for sustainable development. The literature reveals that various leadership styles were tested with sustainable development such as ethical leadership [47], green transformational leadership [48], empowering leadership [49], and sustainable leadership [50]. The current study will further increase this knowledge by examining the contribution of leadership to long-term corporate success. Based on above mentioned literature, we proposed the flowing hypothesis:

H3: *Responsible Leadership has a significant positive impact on sustainable business performance.*

2.4. Responsible Leadership and Pro-Environmental Behaviour

Pro-environmental behavior is a type of workplace conduct that covers any acts made by employees to protect the environment, whether they are doing official tasks or acting voluntarily. Examples include conserving water and electricity, recycling paper, and printing on both sides. Pro-environmental workplace conduct entails measures that are meant to benefit the environment, such as water and energy conservation. Pro-environmental actions fall into two categories: proactive pro-environmental actions and task-related pro-environmental actions. To qualify as task-related pro-environmental conduct, the official actions or obligations outlined in the job description must be carried out in an environmentally responsible manner. Proactive environmental behavior, on the other hand, is voluntary behavior that incorporates individual actions and a self-starting strategy to behave in an eco-friendly manner [51]. Consequently, both sorts of pro-environmental conduct are crucial for any organization's environmental management system. The environmental performance of the organizations is more likely to be positively impacted by these initiatives. Additionally, studies have shown that maintaining employees' skills, motivation, and capabilities that form the cornerstone of the environmental management system is essential to maintaining environmental performance [52]. To contribute to the body of knowledge and close the gap in the banking industry, the current study uses pro-environmental behavior as a mediator between responsible leadership and sustainable business performance. It has been proven to be a predictor of sustainable business performance. In light of this, we suggested the following hypothesis:

H4: *Responsible Leadership has a significant positive impact on Pro-environmental behavior.*

2.5. Green Innovation and Pro-Environmental Behaviour

Green Innovation has explained what ecosystem innovation is [53]. Green innovation will decrease product consumption as well as certain environmental dangers such as CO_2 emissions and other effects of climate change. Environmental design is characterized by the development of novel environmental systems, the application of eco-design principles, and the development of sustainable processes. Green innovation entails coming up with fresh concepts and encouraging creativity in goods, services, operations, and procedures [54]. Green innovation leads toward a positive impact on sustainability as well as pro-environmental behaviors of employees. So, we proposed the following hypothesis for the present study.

H5: *Green Innovation has a significant positive impact on Pro-environmental behavior.*

2.6. Green HRM Practices and Pro-Environmental Behaviour

The definition of green HRM is "HRM practices that improve favorable environmental results". Through ongoing learning and development, the adoption of environmental objectives and strategies that are fully implemented with goals and strategic directions, and with the application of advancement strategies, green HRM can use human assets to achieve sustainable development, reduce waste, and have a civic moral compass and a competitive edge. [55]. In the new century, a proactive business attitude to environmental problems first emerged and "goes above pollution prevention and the mitigation of environmental impact" [55]. The management of human resources that combines environmental management concepts and procedures is referred to as "green HRM". A supportive company that uses green HR practices is positively connected with an employee's willingness to create and implement eco-friendly initiatives. Moreover, the modern strategy incorporates both corporate and environmental aims. Organizations must improve their environmental performance as well as their cultural, ecological, and economic sustainability [56]. There is a clear link between HR management and environmental administration since human resources are a company's lifeblood and contribute to the achievement of environmental sustainability. Organizations must embrace green HRM strategies, or "HRM components of green management", to encourage employee pro-environmental behavior at work, in response to the rising environmental concern throughout the world. HRM has an effect on employee attitudes and behavior at work, which, in turn, influences organizational performance, according to behavioral studies in HRM. Initiatives in green HRM urge staff members to act properly to save the environment. Green HRM practices assist employees in developing pro-environmental mindsets in both their professional and personal lives by increasing their environmental awareness and honing their habits. By encouraging workers to participate in environmental activities, green HRM supports environmentally favorable activities. We have put out the following hypothesis in light of the debate above.

H6: *Green HRM has a significant positive impact on Pro-environmental behavior.*

2.7. Pro-Environmental Behaviour, Responsible Leadership, and Sustainable Business Performance

"Willingness to engage in pro-environmental activities" has been characterized as an employee's pro-environmental conduct. Several of these behaviors have been documented in the literature, including turning the lights off when leaving the workplace printing double-sided, forgoing the use of disposable cups, assisting businesses with the implementation of greening strategies, commuting by bicycle, lowering waste, and developing new environmental initiatives. [57]. Employee environmental behavior is crucially important for enhancing environmental performance. Employee engagement in environmental issues and the adoption of pro-environmental behaviors is seen as a successful strategy for firms looking to adopt a commitment to the environment and enhance environmental performance [58]. Based on the debate above, we have put out the following hypothesis.

H7: *Pro-environmental behavior mediates the relationship between Responsible Leadership and Sustainable Business Practices.*

2.8. Green Innovation, Pro-Environmental Behaviour, and Sustainable Business Performance

Employees who exhibit improved pro-environmental attitudes should be more motivated to provide original concepts and environmentally friendly solutions to issues. Furthermore, staff members would come up with novel solutions and suggestions that might aid in the molding of procedures to be more ecologically friendly. This may also occur as a result of workers' increased affiliation with green HRM, as social identity theory predicts. Companies will be building a reputation for a moral and responsible business while implementing green innovation, which might have an impact on pro-environmental behaviors [59]. Employees would need to feel connected to green innovation and as they identify with it for these ethical practices to be successful. Workers may feel secure connecting themselves with a responsible firm since they will be sure that their employer is more ethical and responsible. This may help the employee's reputation as a responsible citizen. People would believe that such trustworthy firms do not deceive employees but rather encourage and give rewards for doing so, so they may share their original ideas without fear of suffering bad consequences [60]. After this debate, we suggest that pro-environmental actions serve as the trigger for sustainable corporate practices. Thus, we suggest that:

H8: *Pro-environmental behavior mediates the relationship between Green Innovation and Sustainable Business Practices.*

2.9. Pro-Environmental Behaviour, Green HRM Practices, and Sustainable Business Performance

In recent years, psychologists have been looking at potential interventions that may improve employees' pro-environmental behavior in their home environments, while in organizational settings, this idea has drawn the interest of academics [61]. Pro-environmental conduct refers to conscious efforts made by a person to reduce the damaging effects of his or her activities on the environment. People spend one-third of their time at work, making it crucial that they act in an environmentally friendly manner [61]. Hence, it is anticipated that improving employees' pro-environmental behavior will have favorable effects not just on corporate settings but also on their personal life, having a greater effect on society as a whole. The organization's environmental approach and workers' pro-environmental conduct are both closely correlated with GHRM, according to the study. GHRM has furthermore been shown to be a predictor of worker pro-environmental behavior and environmental performance. In a recent study, several mediators in the relationship between GHRM and environmental performance were investigated [52]. To promote pro-environmental behaviors and attitudes among employees, the concept of green HRM is put out. To do this, green HRM should plan and build their training programs so that they effectively teach awareness of the environment, as well as the necessary corporate values, attitudes, and knowledge. The role of green HRM has been tested previously, and in the present study, the researchers proposed to test the following hypothesis.

H9: *Pro-environmental behavior mediates the relationship between Green HRM and Sustainable Business Practices.*

2.10. Pro-Environmental Behavior and Sustainable Business Performance

The effectiveness of corporate activities for environmental sustainability depends on how pro-environmental staff behaves. Ensuring adequate integration of ecological sustainability into strategies for human resources is one of the significant problems HR professionals face today. Despite the increased interest in researching environmental management and its possible advantages for business, few academics have examined the reasons behind employees' pro-environmental conduct. During the last few decades, unrelenting climate change, extensive environmental damage, and escalating resource shortages have all advanced at alarming rates. Across the world, an increasing number of organizations are implementing various pro-environment programs [62]. Nonetheless, many pro-environmentally friendly corporate initiatives rely on employee pro-environmental behavior to be effective and, in some cases, to be created. Because of this, these behaviors are recognized as important factors in corporate social and environmental performance, which has an impact on both businesses and their constituents as well as the environment [63]. It shows that pro-environmental behavior plays a vital role in the sustainability of business organizations.

H10: *Pro-environmental behavior has a significant positive impact on sustainable business performance.*

To confirm the pertinence of the hypotheses used in the present study, Table 1 is included with references to previous empirical studies.

Table 1. Hypotheses with source.

Hypothesis	Statement	Source
H1	Green HRM techniques significantly improve the performance of sustainable businesses.	[64]
H2	Green Innovation has a significant positive impact on sustainable business performance.	[64]
H3	Responsible Leadership has a significant positive impact on sustainable business performance.	[65]
H4	Responsible Leadership has a significant positive impact on Pro-environmental behavior.	[66]
H5	Pro-environmental conduct is significantly influenced favorably by green innovation.	[67]
H6	Pro-environmental behavior is significantly impacted favorably by green HRM.	[68]
H7	Pro-environmental behavior mediates between responsible leadership and sustainable business performance.	[69]
H8	Pro-environmental behavior mediates between Green Innovation and sustainable business performance.	[59]
H9	Environmentally friendly behavior acts as a bridge between effective Green HRM and sustainable performance.	[70]
H10	Pro-environmental behavior has a significant positive impact on sustainable business performance.	[71]

Source: Author's completion.

A research model is presented in Figure 1.

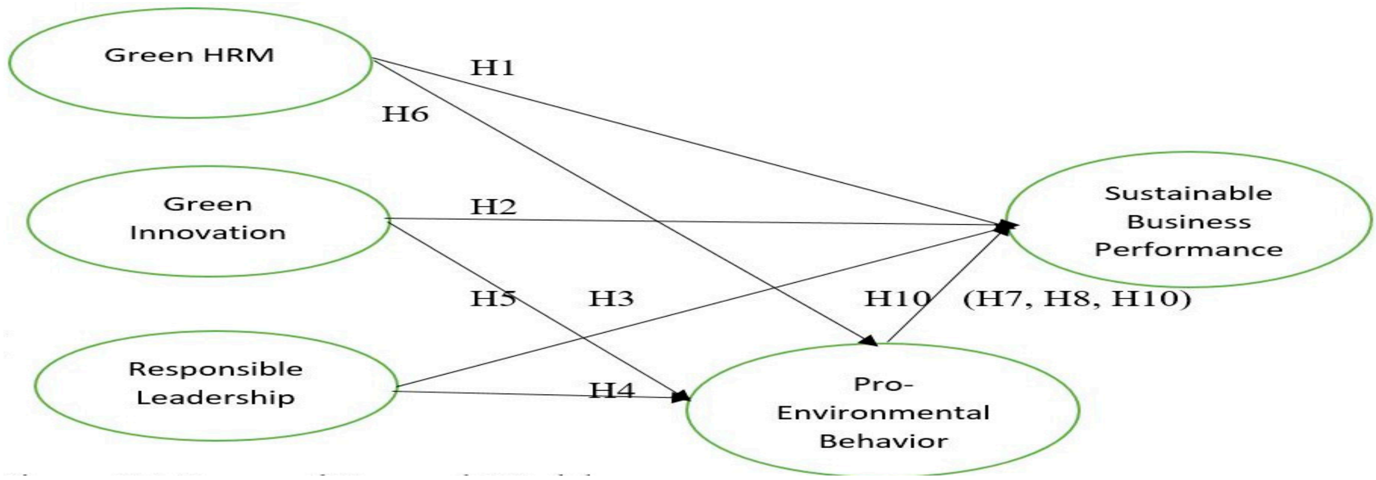

Figure 1. Research Model. Note: H8, H9 and H 10 are mediating variables.

3. Research Methodology

The research methodology section contains sample selection, sample size, sampling technique, data collection, measurements used in the study, handling of social desirability, and methods used to control common method biases in the current study.

3.1. Sample, Sampling Technique, and Sample Size

Sampling is picking the ideal representative of the population involves a series of methods [72]. The sample must be representative of the whole population and if the sample is wrongly selected then the study is useless. To reflect Pakistan's banking sector, the current study was conducted in that country's banking industry, we have selected the four provincial and one federal capital of Pakistan. We have divided the population of the present study into strata's and then selected the five strata based on a stratified random sampling technique. The purpose behind the selection of these five cities was the number of branches working in these cities. These cities have the largest number of banking branches in Pakistan, which provides the basis for selecting these cities for sample purposes. Only when the sample size is sufficient can the study's findings be generalized, and they cannot be generalized in the absence of a sufficient sample size. If the population of the study is greater than 100,000 then a sample size of 384 is adequate [72]. The population of the present study is also higher than 100,000, which provides the basis for a large sample size.

3.2. Data Collection and Measures

Data from respondents were gathered using a survey questionnaire approach. A total of 600 questionnaires were distributed among bankers from five cities according to the number of branches in the cities. Five top commercial banks were selected based on the number of branches working in Pakistan. These banks include the National Bank of Pakistan (NBP), Habib Bank Limited (HBL), Allied Bank Limited (ABL), MCB, and United Bank Limited (UBL). We have received 428 questionnaires and out of 428, 396 questionnaires were fully completed and usable condition for analysis. So, the response rate is 66% in the present study.

The reliability and validity of the measures were pre-established as we have used the adapted scales in the present study. The green HRM scale consists of ten items [73]. In other words, GHRM includes integrating an organization's environmental management goals into the HR procedures, such as recruiting and selection, development and training, performance management and assessment, and incentives and acknowledgment. Green HRM practices are considered essential for boosting organizational performance as it is possible to effectively concentrate managerial attention by combining several human resource management strategies, such as staff selection and training, performance evaluation and rewards, employee autonomy, and enablement [74]. The green innovation scale consists of four items [73]. We used the green innovation scale, which has four components, to measure the innovation of green products. Responsible leadership scale consists of four items [75]. Responsible leadership can be measured through different scales, and researchers measured it through different dimensions. Responsible leadership can be measured through the triple bottom approach in which a leader will only be considered as responsible leadership if he/she takes care of economic, social, and environmental aspects simultaneously [76]. The sustainable business performance scale has five items [73]. Sustainable business practices can be measured through different scales developed by various authors. In the present study, researchers have adopted the scale for measuring sustainable business practices. We have used a five-point Likert scale to measure the response of the above-mentioned scales for the present study.

3.3. Managing Social Desirability and Issues of Common Method Bias

To address the issue of social desirability, we let the respondents know that their information will only be utilized for the current study's research goals and will not be shared with anyone else. Further, we convinced respondents to answer the questions with honesty and guaranteed them that their data will only be used in aggregate form. The data were collected from individuals working in the banking sector, and we used the cross-sectional technique of data collection, which enhanced the chances of common method bias. To overcome the issues of CMB, we requested the respondents to respond genuinely and honestly. We also performed the single-factor Harman test and results revealed that there were no potential issues of common method bias in the data as the highest variance shared by single factor was 29.8%, which is far less than 50% [77,78]. As a result, it is determined that the data of the current study do not include any probable common technique bias issues.

4. Data Analysis and Results

The analysis is of two types: the first one is descriptive analysis and the second one is hypothesis testing. SPSS was utilized to carry out a descriptive analysis, and hypothesis testing was conducted through Mplus. The results of descriptive analysis depict that there were more men than women among the respondents indicating that men predominate in Pakistan's banking industry. Male respondents, 339, and female respondents, 48, which is comparatively low. The majority of respondents belong to the less than thirty years category as 189 respondents were below 30 years of age, which is 48.8 % of the sample size. Five private sector commercial banks were selected for the study and the majority of the responses were collected from HBL, MCB, UBL, ABL, and BAHL. HBL is the largest private-sector commercial bank with the highest number of branches across Pakistan. Most of the respondents have a master's education: 249 respondents have master's degrees, which is 64.3% of the sample size.

A large number of respondents have 3–6 years of experience in the banking sector and 118 respondents have 3–6 years of banking experience, which is 30.5% of the sample. Punjab is the largest province according to population and 209 respondents belong to Punjab, which is 53% of the entire sample size. Extensive details regarding respondents are given in Table 2.

4.1. Measurement Model Assessment

The measurement of the model consists of two sections. In the first section, individual items' reliability and cross-loadings were tested by using SPSS. In the second section, mean, standard deviation, composite reliability, and correlation analysis were performed.

4.1.1. Individual Item Reliability

All items' factor loading must be more than 0.7 as a requirement for convergent validity, and no items loading from any other construct may be higher than the construct being assessed [79,80]. Hence, the items removed, which now have smaller loading, enhance the quality of the data. Based on cross-loading results, only two item factor loadings are less than 0.7, which are now removed from the table. These two items are part of green HRM practices, and now the green HRM practices scale has eight items.

4.1.2. Cross Loadings

Cross-loading findings are shown in Table 3; all loadings are above or close to the threshold value of 0.7. Cross loadings enable discriminant validity, which is accomplished as a result.

Through the use of the Mplus software version 8.8, the structural equation modeling (SEM) approach is employed to assess the study's hypothesis. SEM is the second generation of multivariate analysis, which covers every characteristic of the first-generation and updated version for handling complex models [81]. One of the most important advancements in the field of social sciences is SEM due to its significant role in social sciences [82].

Table 2. Demographic Statistics.

		Frequency	Percentage
Gender	Male	339	87.6
	Female	48	12.4
Age	Up to 30 years	189	48.8
	31 to 40 years	137	35.4
	41 to 50 years	43	11.1
	50 and above	18	4.7
Banking Organization	HBL	104	29.6
	MCB	86	22.2
	UBL	71	18.3
	ABL	64	16.5
	BAHL	62	16.0
Education	Graduation	39	10.1
	Masters	249	64.3
	MPhil	83	21.4
	PhD	5	1.3
	Others	11	2.8
Banking Experience	Up to 1 year	72	18.6
	1–3 years	105	27.1
	3–6 years	118	30.5
	6–9 years	39	10.1
	9 years and above	53	13.7
Province	Punjab	205	53.0
	Sindh	91	23.5
	KPK	28	7.2
	Baluchistan	27	7.0
	AJK	22	5.7
	GB	14	3.6

Source: Author's completion. Note: HBL = Habib Bank Limited, UBL = United Bank Limited, ABL = Allied Bank Limited, BAHL = Bank Al-habib Limited, KPK = Khyber Pakhton Khuwa, AJK = Azad Jammu Kashir, GB = Gilgat Baltastan.

Table 3. Cross Loadings.

	GHRMP	GI	RL	SBP
GHRMP1	0.812	0.299	0.222	0.339
GHRMP2	0.765	0.245	0.125	0.303
GHRMP3	0.772	0.284	0.122	0.135
GHRMP4	0.797	0.244	0.239	0.157
GHRMP5	0.799	0.130	0.107	0.545
GHRMP6	0.822	0.147	0.138	0.652
GHRMP7	0.815	0.237	0.399	0.158
GHRMP8	0.791	0.337	0.268	0.201
GI1	0.315	0.801	0.189	0.168
GI2	0.248	0.815	0.386	0.198
GI3	0.299	0.734	0.283	0.269
GI4	0.287	0.784	0.288	0.276
RL1	0.233	0.136	0.722	0.099
RL2	0.264	0.211	0.815	0.136
RL3	0.302	0.221	0.719	0.227
RL4	0.108	0.248	0.754	0.199
SBP1	0.169	0.155	0.122	0.718
SBP2	0.215	0.097	0.186	0.814
SBP3	0.245	0.194	0.187	0.764
SBP4	0.199	0.214	0.307	0.715
SBP5	0.187	0.274	0.248	0.732

Source: Author's completion. Note: GHRMP = Green Human Resource Practices, GI = Green Innovation, RL = Responsible Leadership, SBP = Sustainable Business Performance.

We have confirmed the validity and reliability of the scale to verify the study's hypothesis. The reliability of the scale is already measured as the scale was adopted, whereas the Average variance extracted (AVE) and the square root of AVE were used to assess the convergent and discriminant validity of the model. Each of the AVE scores exceeded 0.5, which is acceptable as per the criteria [82]; while, by utilizing the square root of AVE, we established the discriminant validity, where the square root of AVE value must be higher than the correlation of the relevant construct [83], which is fulfilled in the present study. Table 4 depicts descriptive statistics, i.e., mean (M), standard deviation (SD), composite reliability (CR), average variance extracted (AVE), and correlation among variables. Means and SD were calculated (responsible leadership (Mean = 4.011, SD = 0.875), environmental performance (Mean = 3.998, SD = 0.801), task performance (Mean = 4.101, SD = 0.890), contextual performance (Mean = 3.895, SD = 0.795), and sustainability practices (Mean = 0.3.929, SD = 0.799)). To investigate the relationship between the variables, correlation studies were carried out. The results of correlation analysis revealed that responsible leadership and environmental performance are strongly and positively associated (r = 0.244, $p < 0.01$), task performance (r = 0.365, $p < 0.01$), contextual performance (r = 0.188, $p < 0.01$), and sustainability practices (r = 0.289, $p < 0.01$). Environmental performance (r = 0.264, $p < 0.01$), task performance (r = 0.319, $p < 0.01$), and contextual performance (r = 0.209, $p < 0.01$) are all substantially and positively connected with sustainability practices.

Table 4. Mean, Standard Deviation, Validity, and Correlation.

Variable Name	Mean	SD	CR	AVE	RL	EP	TP	CP	SP
RL	4.011	0.875	0.839	0.525	(0.725)				
EP	3.998	0.801	0.862	0.559	0.244 ***	(0.748)			
TP	4.101	0.890	0.855	0.519	0.365 ***	0.027	(0.720)		
CP	3.895	0.795	0.868	0.577	0.188 ***	0.066 *	0.072 **	(0.760)	
SP	3.929	0.799	0.819	0.511	0.289 ***	0.264 ***	0.319 ***	0.209 ***	(0.715)

Source: Author's completion. Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Note: Discriminant Validity is measured through the Square root of AVE. SD = Standard Deviation; CR = Composite Reliability; AVE = Average Variance Extracted; RL = Responsible Leadership; EP = Environmental Performance; TP = Task Performance; CP = Contextual Performance; SP = Sustainability Practices.

The present study used the adapted scales and factor loadings, which were checked before the dissemination of the survey questionnaire. Only those items included for analysis have loadings of more than 0.50. Survey questionnaire reliability and validity were tested. Alpha values of constructs were more than 0.70, which indicates that there is no issue of reliability. Whereas, convergent validity was tested through average variance extracted and composite reliability. The results of AVE were more than 0.50 and CR was 0.70, which indicated that there is no issue of convergent validity. Discriminant validity was tested through cross-loadings and results depict that relationship of items with their respective variables was greater than other variables. Low correlation between variables leads toward discriminant validity. Table 5 consists of the direct and indirect paths.

The above-mentioned results depict that green HRM, green innovation, responsible leadership, and pro-environmental behavior have a significant and positive impact on sustainable business performance. Green HRM has more impact on sustainable business performance compared with other variables of the study. Mediation exists in the model, whereas there is partial mediation because the relationship is still significant and its impact becomes decreased. A 62.40% variation in the performance of sustainable businesses can be attributed to predictors such as responsible leadership, green innovation, and green human resource management, according to the coefficient of determination results. Statistics for the R square are displayed in Table 6.

Table 5. Direct and Indirect Path.

Relationship	Beta Value	SD	*p* Value	t Statistics
Direct Relationship				
Green HRM→SBP	0.298	0.089	0.002	2.944
GI→SBP	0.188	0.099	0.016	2.074
RL→SBP	0.278	0.082	0.007	2.845
RL→PEB	0.199	0.096	0.010	2.136
GI→PEB	0.235	0.088	0.021	2.135
GHRM→PEB	0.196	0.086	0.019	2.214
PEB→SBP	0.215	0.079	0.009	1.985
Indirect Relationship				
GI→PEB→SBP	0.111	0.110	0.021	1.699
RL→PEB→SBP	0.104	0.106	0.026	1.568
Green HRM→PEB→SBP	0.135	0.099	0.035	1.799

Source: Author's completion.

Table 6. Coefficient of determination.

	R Square	Adjusted R Square
Sustainable Business Practices	0.624	0.610

Source: Author's completion.

The results of the present study are summarized in Table 7, which briefly describes the decision of the hypothesis. The present study tested ten hypotheses and the decision depicts that seven were completely accepted and the mediation hypotheses were partially accepted. Partial acceptance of the hypotheses was due to their decreased indirect impact. Partial mediation is a case where the indirect effect of mediating variable becomes less impactful than the direct one with insignificant impact value [33]. The hypothesis results are shown in Table 7 with respective results.

Table 7. Results of hypothesis testing.

Hypothesis	Statement	Beta Coefficient	Decision
H1	Green HRM techniques significantly improve the performance of sustainable businesses.	0.298	Accepted
H2	Green Innovation has a significant positive impact on sustainable business performance.	0.188	Accepted
H3	Responsible Leadership has a significant positive impact on sustainable business performance.	0.278	Accepted
H4	Responsible Leadership has a significant positive impact on Pro-environmental behavior.	0.199	Accepted
H5	Pro-environmental conduct is significantly influenced favorably by green innovation.	0.235	Accepted
H6	Pro-environmental behavior is significantly impacted favorably by green HRM.	0.196	Accepted
H7	Pro-environmental behavior mediates between responsible leadership and sustainable business performance.	0.104	Partial Accepted
H8	Pro-environmental behavior mediates between Green Innovation and sustainable business performance.	0.111	Partial Accepted
H9	Environmentally friendly behavior acts as a bridge between effective Green HRM and sustainable performance.	0.135	Partial Accepted
H10	Pro-environmental behavior has a significant positive impact on sustainable business performance.	0.215	Accepted

Source: Authors' completion.

4.2. Discussion

Researchers and industry professionals have been more interested in green HRM and sustainable business performance. However, in most studies, researchers tested the role of green HRM in developed nations and various industries. The current study examined how green HRM and responsible leadership fit within Pakistan's banking industry. Recent studies found that green HRM is essential for establishing sustainable performance, and responsible leadership roles in the presence of green HRM were not tested. By examining how green HRM and leadership affect sustainable business performance in Pakistan's banking industry, the current study closes this gap.

Despite the connection between green HRM and sustainable company success, the body of extant literature, particularly in the context of developing nations, lacks significant proof. Our results have contributed to this body of knowledge by revealing that employees' opinions on their company's participation in green HRM initiatives are important if they are relevant to the environment and have a favorable effect on pro-environmental behavior. Therefore, businesses that apply green HRM practices foster an atmosphere that is tailored to the individual's beliefs and degree of development, which, in turn, encourages pro-environmental actions that contribute to sustainable growth. Employees are self-motivated to act in an environmentally friendly manner to ensure a sustainable future when they observe that their employer has a real commitment to protecting the environment.

Green HRM and responsible leaders play a crucial role in developing sustainable development. We are not the first to suggest that employees are crucial to protecting the environment and that their pro-environmental conduct is crucial for sustainable development; in fact, several experts have revealed the same conclusions in recent research [48].

5. Conclusions

In conclusion, as sustainability has become a major issue for everyone, modern businesses are unable to ignore its significance. This topic is extremely important, particularly in the context of developing countries, as the majority of developing countries are experiencing severe sustainability challenges as a result of their inadequate environmental management plans and leadership obligations. To slow down the rate of environmental deterioration in the country, the management of firms is urged to collaborate with employees about personal and environmental aspects. Understanding how people affect a company's success is crucial given the rising concern for sustainable development. Because employees spend a lot of time at work, they must comprehend how their actions might have a big influence on the company's ability to function sustainably. It is evident to us that when firms include sustainability principles in essential business operations such as green human resource management, green innovation, and responsible leadership, there is a greater chance for sustainable development. By implementing green HRM and responsible leadership approaches in the business world, organizations will achieve the desired level of sustainable development. It will also help the government to fulfill its commitments to the United Nations regarding the implementation of sustainable development goals [21]. In a nutshell, now is the moment to actively engage an organization's workforce in addressing the problem of sustainability since this is one of the workable tactics that may help us move toward a better and more sustainable future.

5.1. Implications of the Study

The findings of our study add to the body of knowledge regarding green HRM and responsible leadership in the context of sustainable performance, as the majority of earlier studies have primarily focused on developed countries when addressing this issue. The results of this investigation have important theoretical and applied ramifications. The current study has considerable theoretical value since it advances the body of knowledge by incorporating employee pro-environmental behavior as a mediator between the link between green HRM and sustainable performance.

Our findings have intriguing practice-related ramifications as well. The present study's preliminary findings indicate that green HRM and responsible leadership have a significant influence on enhancing sustainable performance. Employees' active participation in sustainable performance is significantly influenced by their opinions of the organization's socially responsible image, as demonstrated through responsible leadership and environmentally friendly HRM procedures. Therefore, using green HRM and responsible leadership strategies might help businesses that seek to encourage sustainable behaviors at the individual level. Unfortunately, Pakistan lacks almost any environmental emphasis in many industries, which is concerning for a nation currently dealing with severe climate change circumstances [48]. Policymakers must adopt the recommendations from this study to engage the workforce in enhancing environmental sustainability for a brighter and more sustainable future. By taking environmental responsibility more seriously, policymakers may make sustainable performance plans stronger. This may be addressed by strengthening the implementation and oversight of responsible leadership disclosure and green HRM.

Sustainability practices are the need of the hour and the present study results indicate that with the induction of responsible leadership, green innovation, and green HRM practices, the sustainable business performance of organizations can be enhanced. Enhanced sustainable business performance will further provide numerous benefits such as less carbon, more environmentally friendly products, and healthy workplaces.

Business groups have changed their objectives regarding sustainable development as they have come to understand its significance for the advancement of the country. To make the world more sustainable, the United Nations also created sustainable development goals and provided recommendations to nations all over the world. Without the assistance of organizations, nations cannot accomplish these goals, and Pakistan's banking industry is one of the fastest-growing industries in the world [42]. The current study can assist top banking management in achieving more sustainable growth through the appointment of responsible leaders in top and middle-level management as well as the adoption of green HRM practices.

5.2. Recommendations of the Study

Business organizations should set priorities for green innovation for the sustainable development and implementation of sustainable business practices for production and routine matters. If the top management of organizations prioritizes green HRM policy then results will be more favorable in terms of sustainable development. In the appointment of a new employee, the recruitment committee must analyze his/her views about green policies and sustainable development. Business organizations should launch campaigns regarding green innovation and sustainable development. These campaigns help in the dissemination of messages regarding sustainability across the organization. Organizations should encourage employees to participate in within-organization competitions regarding green innovative ideas, low-carbon techniques, problem-solving teams, newsletters, etc. Organizations should recognize the efforts of staff contributing to sustainable development and implementing sustainability practices through appreciation letters, public recognition, paid vacations, monetary benefits, etc. Organizations should develop comprehensive pieces of training for staff regarding environmental awareness, sustainable development, and skill development. Government can also play role in the development and implementation of sustainability policy by providing a rebate on taxes to organizations implementing sustainability practices.

5.3. Limitations and Directions for Future Research

Some restrictions on the present study must be addressed. First off, future researchers should employ longitudinal data to enhance causality as the cross-sectional data collection method used in the current study does not completely preclude some of the causal extrapolations. Second, the notion of sustainable development, and particularly the impact of green HRM and leadership, are still in its infancy in Pakistan, where the data utilized in the current study were gathered. The concept of sustainable development is thus interpreted differently in different cultures, making it dangerous to generalize the findings to other countries. However, further studies carried out in other developing countries may increase our knowledge of this link. The sample of the present study was taken from the top five commercial banks working in Pakistan; although, the Pakistani banking sector also has several other banks including specialized, Islamic, and microfinance. It also decreases the generalizability of the present study findings. Future researchers should collect data from all categories of banking sectors based on a longitudinal approach to minimize the factor of common method bias. Future researchers can also test the various mediators such as green intellectual capital and pro-environmental behavior to further probe the issue of sustainable development.

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