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Impact of green purchasing and green human resource management on business performance

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ABSTRACT

This research examines the impact of green human resource management and green purchasing on business efficiency in Pakistani manufacturing organizations. Data from 200 respondents from the manufacturing sector was gathered using the quantitative research method. Green human resource management and green buying were evaluated using three independent criteria. The main role of this research is that it is possible to observe a positive impact of independent variables on organization performance using the random sampling technique, especially in Pakistan manufacturing industries. This research can help managers and practitioners in a variety of ways. The findings could persuade management and practitioners to implement green human resource management (GHRM) and green purchasing (GP) in their organizations. Furthermore, companies can use both GHRM and GP to fulfil sustainability goals. Furthermore, the data implies that the GHRM-GP connection lowers blood pressure. This conclusion suggests that managers can align green purchasing strategies and practices with human resource strategies and practices to improve operational efficiency and reduce regulatory and compliance fines. Managers are encouraged to implement GHRM and GP simultaneously to achieve simultaneous improvement.

Keywords: *Green human resource management, Green purchasing, Business Performance, Supply chain management, Sustainability.*

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1. Introduction

Environmental problems have grown and spread faster than forest fires in recent decades, adding dramatically to climate change and global warming from country to country, area to area, and world-level territory (Albhirat et al., 2024). In addition, a scarcity of natural resources, as well as contamination of the air and water, has a detrimental effect on human life, resulting in several diseases. Furthermore, natural resource scarcity, as well as air and water pollution, hurt flora and fauna as well as human health, leading to infections such as heart problems, lung cancer, chronic stroke, cholera, etc. (Rashid et al., 2024a).

1.1 Background of the Study

Human fear has increased in the previous 20 years, with an increasing number of worldwide calamities and ecologists anticipating rising sea levels due to melting ice caps (Huserbråten et al., 2019). According to the WHO, India is one of the world's most contaminated nations. India has struggled to enforce pollution norms strictly for the automotive sector, and the Indian automobile industry is no exception. Quick economic progress, combined with the emergence of the middle class, has resulted in rising demand for two- and four-wheelers. Pollution from automobiles is choking Indian cities. Polluted air is India's fifth leading factor for death, according to The Times of India (2018). As a result, it is essential for Indian car companies to follow environmentally friendly policies in order to reduce their adverse effects on the atmosphere and protect the environment from further damage (Chaudhary et al., 2019).

Likewise, the growing global demand for processes, products, and services that generate less waste, consume less energy, save money, and cause less damage to the environment and human lives is driving the implementation of these procedures, goods, and services. Green practices are seen as a way for some companies to enter a new marketplace and gain a competitive advantage through increased brand credibility. The returns on investment in green practices are capital-intensive, uncertain, and have a long-term maturity (Rashid et al., 2024b). Variations in supply-chain associates' green goals, technological advancements, and financial- sustainability are all considerations to consider. Businesses must collaborate with their supply chain associates to increase their sustainable activities. Sharing information, facts, and experience with a crucial firm's supply chain partners would aid in executing a green supply chain (GSCP). Firms take aggressive steps to participate in GSCP to obtain an advantage in the marketplace and enter markets to improve efficiency in a country like Ghana, where participants aren't as involved in executing green practices as they should be, and the compliance of environmental laws hasn't seen enough light. To achieve a competitive edge and gain access to markets, businesses take constructive (Acquah et al., 2020). According to government estimates, Malaysia's manufacturing sector accounts for 23% of the country's GDP (Ghouri et al., 2020).

1.1.1 Green human resource management

Green human resource management (GHRM), also known as the HRM part of green control, is a new attempt to put the two distinct fields together (Ghouri et al., 2020) which has been proposed as one of the methods for effectively implementing green initiatives (Chaudhary et al., 2019). In order to successfully enforce the environmental sustainability strategy, organizations must boost the development of green approaches and behaviors among employees aligned with the organization’s green objectives. In theory, GHRM may aid in environmental management by encouraging employees' acceptable job-related and discretionary behavior. GHRM is thought to facilitate the adoption of pro-environmental measures by boosting capabilities and fostering a supportive culture (Chaudhary et al., 2019).

1.1.2 Green purchasing

Green buying behaviors, known as environmentally friendly goods, also known as sustainable or green products, are referred to as green purchasing behavior (GPB). Green consumption, on the other hand, is generally associated with an environmentally friendly pattern of consumption in which consumers consider the effect of purchasing, using, and discarding a large number of products or using a large number of green services in a given environment. Other researchers have described environmentally friendly goods as those that are recyclable and do not pollute the atmosphere or deplete natural resources. Many international organizations have been producing green products for several years, and a large number of people are willing to accept these green items (Soomro et al., 2020; Rasheed et al., 2024).

1.2 Problem Statement

One of the most critical environmental problems in Karachi is industrial pollution. Pakistan steel mills and related industries are among the largest iron and steel industries in Bin Qasim. Karachi shipyard engineering works, Peoples Steel Mill, automotive industries, and other manufacturing industries that use metal and its alloys in food manufacturing. No wastewater treatment or recycling plants exist in any manufacturing sector. Karachi's unplanned development and manufacturing have resulted in environmental degradation in the city and its coastal areas. The current study paper focuses on Pakistan's public health and environmental issues. Various environmental issues are to blame for people living unhealthy lives. Food shortages, improper sanitation, and waste management are all significant issues in the region. The cause of unsafe or unhealthy public health is environmental issues. We need clean, dry, pure, healthy, supportive, and better environments to live healthy lives. The world in which we work significantly impacts our health and happiness. We are both explicitly and indirectly reliant on the environment to obtain the necessities of existence. We needed clean air, nutritious food, safe drinking water, and secure living quarters (Sherani, 2019).

1.3 Research Requirements

This research adds to the existing information base by looking into GHRM activities and their connection to environmental and business performance. In the current study, EP highlighted the association between GHRM and BP for this novel contribution (Ghouri et al., 2020). Several academics have described human resource management (HRM) as having strategic relevance in designing and executing company strategies based on long-term sustainability both within and outside the enterprise (Acquah et al., 2020). As a result, this research aims to see how institutional force affects green abilities and practices. Government bodies, consumers, and rivals exert institutional pressure on businesses to adopt green policies (Foo et al., 2019).

The previous study related business performance to different green practices variables, and it is a fact that when you work on all variables in the green supply chain simultaneously, the result will not occur as effectively as it should. This study binds the two main variables of a manufacturing firm, which can have a valuable result on business performance. It is important to classify those aspects that are harmful to the environment and how the Pakistani manufacturing firm manages these factors to reduce waste and make it beneficial for human life and the environment. However, developing countries still think that is a long-term investment. They are unaware that it will be mandatory for the manufacturing sector after a few years. Further, it has also been proved that their positive effect will boost business performance in the long term.

1.4 Research Questions

Q1: Does GHRM positively affect business performance?

Q2: Does GP positively affect business performance?

1.5 The Objective of the Study

The key purpose of this study is to understand how green human resource management and green buying affect overall business efficiency. The paper also assists Pakistani manufacturing industries in having an overview, awareness, and understanding of the impact of the green concept on business success.

2. Literature Review

2.1 Introduction

The study's major determination is to clarify green human resource management and its importance, as well as green purchasing management and its related organizational challenges. GSCM is almost connected with improving maintainability within an organization’s supply chain. It focuses on reducing waste within businesses that operate It focuses on eliminating waste within organizations with supply chain operations through specific activities such as item planning, fabric procurement, item delivery, and item life cycle management. GSCM provides planning activities and supply chain management to improve an organization’s support capability.

2.2 Green Human Resource Management

GHRMPS stands for "human resource policies and procedures that endorse environmental policies and their implementation by businesses to minimize waste, avoid emissions, and achieve fair use of natural resources and energy to improve corporate credibility and efficiency" (Acquah et al., 2020). It entails framing the organizational hiring process so employees share the company's environmental values and principles. Employees were required to contribute only to attaining sustainability objectives if they were aware of the organization’s green human resource management and environmental culture. The job description stipulates that the organization’s green commitment should be reflected in the job description documentation and recruitment ads, allowing prospective employees to test their compatibility with the company's green culture. Employees are more likely to display attitudes that align with the organization’s philosophy if they have an excellent person-organization match. As a result, green hiring and, as a result, green recruiting and selection are more likely to produce a workforce that shares the organization’s green ideals, philosophies, and community. As a result, both job-related and optional green procedures are implemented to achieve the organization’s goals (Chaudhary et al., 2019). Human resource management activities that are environmentally friendly (GHRMPS). Human resource management is critical to the performance of corporate plans and policies. As a result, effective integration of environmental thinking into a company's activities and vision necessitates employee training in environmental practices and initiatives. GHRM is a new area of study that has gotten much attention after studies highlighting the importance of human resource practices for successful environmental management and enhanced firm EP (Acquah et al., 2020). GHRM activities promote ecological resource use to emphasize environmental protection and improve human resource actions and responsibility. Human resource management activities that are environmentally friendly for the environment's health. Additionally, for employee encouragement for the green environment, the idea of "going green" through organizational functions was proposed (Ghouri et al., 2020).

2.3 Green Purchasing

Green buying is defined as purchasing ecologically friendly products while avoiding those that are harmful to the environment. It's also a green product that satisfies customers' requirements without harming the atmosphere, resulting in a more affluent world. The products in question are environmentally friendly and have a low environmental impact. The products mentioned above have a low environmental impact and provide superior environmental efficiency (Soomro et al., 2020). A consumer's search for, or use of, items, services, or ideas to meet a specific need is referred to as purchasing behavior. The purchase of ecologically friendly products is referred to as green buying behavior, biodegradable, or considering environmental issues. It's usually related to making responsible purchases. In a way that is ethical, long-term, and sustainable. The purchasing of energy-

efficient goods, the avoidance of over-packaged items, a preference for decomposable and recyclable artifacts, and pollution mitigation are all examples of green buying action (Amoako et al., 2020). One of the key factors of organizational sustainability, according to supplier selection in relation to environmental purchasing management, The assessment process benefits not only the buying firm but also provides insight into the buying firm's needs as well as feedback to their suppliers for future development. Performance evaluation in today's market focuses on financial outcomes and company sustainability activities to minimize environmental pollution and increase societal health. Green purchasing is characterized as a company's environmentally conscious purchasing practices aimed at conserving natural resources, maintaining eco-system efficiency, using the least amount of water and energy possible, preventing contamination, reducing waste disposal to landfills, and encouraging suppliers to produce environmentally friendly goods. Green purchasing is usually defined as collaboration between a purchasing company and the supplier to minimize waste through recycling, reuse, low-density packaging, and the purification and replacement of input materials (Foo et al., 2019).

2.4 Green Human Resource Management and Business Performance

Several studies have shown that employee engagement, competence, and participation in environmental policies positively impact financial results. Furthermore, they assert that GHRM improves financial performance and that the value of GHRM extends beyond the conservation of natural resources to include financial performance. Greener recruiting, selection, training, rewards, assessment, company operations procedures, and individual employee greener values are all examples of GHRM that can help businesses gain a competitive advantage, boost revenue, and enhance profitability. Furthermore, it is suggested that GHRM adoption attracts future skilled workers who can help a company boost its financial performance. Furthermore, this research suggests that GHRM gives you a competitive edge, which could lead to improved FP. Firms' efforts to limit their activities negatively influence the environment and society while enhancing operational, market and financial performance are aided by supply chain processes and activities. In order to reduce their negative environmental and social impact while obtaining economic rewards, companies are incorporating ecological initiatives into supply chain operations and activities (Acquah et al., 2020).

2.5 Green Purchasing and Business Performance

According to a growing body of research, there is also evidence of a connection between environmental friendliness and firm results. The proposed model and empirical results, in particular, indicate that environmental performance positively affects firm performance. They claim that environmental performance influences a business's financial performance through market (revenue) and cost pathways. Customers who favor environmentally friendly companies' goods may positively affect revenue (Carter et al., 2000). Environmental policies, such as strategic environmental procurement and eco-friendly green project creation, have been found to increase a company's competitive position and lower market risks. When environmental issues are at the forefront, tensions between consumers and organizational stakeholders wreak havoc on regional and global collaboration, causing disputes in various fields (Hashmi, 2023). As a result, several programs have been developed and implemented to enhance environmental performance while ensuring long-term development. Green buying is valuable for reducing consumption's environmental effects and promoting sustainable production technologies. Customers' growing awareness of the importance of being green seems to drive the pressure to be greener (Baloch & Rashid, 2022). Customers' increased understanding of sustainable growth and eco-friendly concerns tend to motivate the escalation of pressure to be greener. The pressure causes a ripple effect. Major retail companies are placing much pressure on their vendors, which might push "green" demand even deeper throughout the entire supply chain. In order to gain the benefits of efficient green procurement processes, organizations collaborate with vendors on environmental challenges. According to various case studies from European and Australian firms, green purchasing techniques are employed as a method to gain a competitive advantage since they improve organizational and financial efficiency. Low carbon pollution and carbon output monitoring throughout the supply chain give green procurement a fresh

lease on life. Green buying creates a competitive advantage while also protecting capital and improving company efficiency (Dubey et al., 2013).

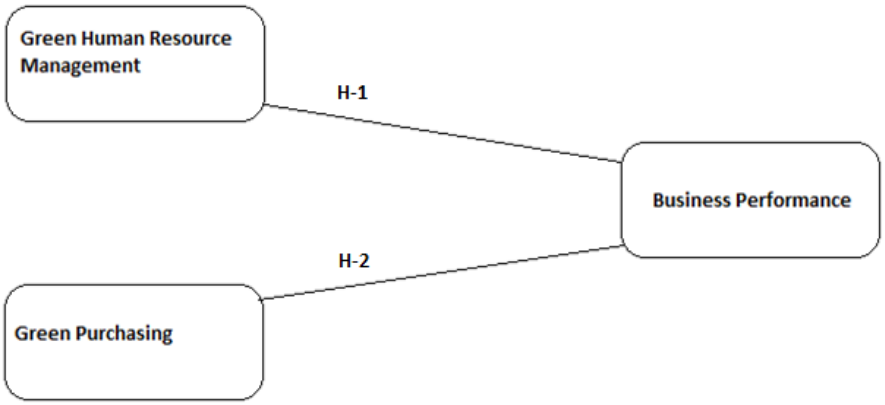

Figure 1: Research model

Source: Author's work

2.6 Hypotheses

H1. GHRM significantly and positively affects BP.

H2. GP significantly and positively affects BP.

3. Research Methodology

A systematic approach to addressing a research issue by gathering data using different methods, analyzing the data, and drawing conclusions from the data is called methodology. A research technique is a study or analysis model (Rashid et al., 2024c). The effect of factors such as GHRM and GP on organizational performance in the manufacturing sector is investigated in this research paper using quantitative research. This article tested the hypothesis using a deductive method (Hashmi, 2022; Rashid, 2016; Rashid & Amirah, 2017). The hypothesis was generally checked in quantitative analysis, and data was identified using a deductive method. A quantitative approach is used to obtain categorical data for statistical research, with information obtained through a survey questionnaire (Rashid et al., 2024d; Younis et al., 2016). Another rationale was the qualitative method, which poses a trustworthiness issue. Therefore, the quantitative research was deemed appropriate (Haq et al., 2023).

3.1 Methods and Collection of Data

Data was collected from young respondents using a self-administered questionnaire, and the survey's metrics were derived from earlier research. The questionnaire was broken into two parts. In the first section of the questionnaire, all closed-ended variables were calculated using a 5-point Likert scale. 1 (strongly disagree) to 5 (strongly agree) (Rashid et al., 2024e; Khan et al., 2021; Khan et al., 2022). The demographic information of the respondents made up the second section. This study aimed to determine the influence of GHRM and GP on supply chain performance and organization. a case of the manufacturing sector in Karachi. To extract authentic purpose from an examination, it is essential to utilize a suitable and logical methodology regarding the subject, evaluate results, and attain the level of association and significance between variables. The method of data collection was a questionnaire-based survey (Agha et al., 2021; Das et al., 2021; Haque et al., 2021). Professionals from the manufacturing industry in Karachi were surveyed for their responses, and their feedback was recorded accordingly; they were also requested to fill out questionnaires."

3.2 Statistical Technique

Since evaluating the relationship between a single dependent variable is easier, multiple regressions were performed to examine the relationship between the independent and dependent variables. Statistical testing research is programmed (i.e., SPSS) (Amirah et al., 2024; Younis et al., 2016).

3.3 Data Collection

The sample size for this research survey was 200 people in the manufacturing industry (Hashmi et al., 2021a; Younis et al., 2016). Data was collected from young respondents using a self-administered questionnaire. All closed-ended variables were assessed using a five-point Likert scale (Hashmi et al., 2021b; Rashid & Rasheed, 2024). Random sampling ensures that the sample's results are comparable to those obtained from a survey of the entire population (Hashmi et al., 2020a; Rashid & Rasheed, 2023; Shadish, 2002).

4. Results and Findings

4.1 Descriptive Profile of Data

In this phase, many methods are utilized to examine the special view of data. First, the responders' profiles are assessed. As per table 1, Males account for 80.5% of respondents, while females account for 19.5%. As per Table 1, 27.5% of respondents are between the ages of 20 and 30, 62% are between the ages of 31 and 40, and 10.5% are between the ages of 41 and 50. Table 1 shows that respondents' professional experience is divided into three categories: 39% are from lower management. 44.5% are from middle management, and 16.5% are from high management. Table 1 shows that respondents' work experience is divided into three categories: 21% with 1 to 5 years of experience, 26% with 5 to 10 years of experience, and 53% with 10 or more years of experience.

Table 1: Gender

		Frequency	Percent	Valid Percent	Cumulative- Percent
Valid	Female	39	19.5	19.5	19.5
	Male	161	80.5	80.5	100.0
	Total	200	100.0	100.0	
Valid	20-30	55	27.5	27.5	27.5
	31-40	124	62.0	62.0	89.5
	41-50	21	10.5	10.5	100.0
	Total	200	100.0	100.0	
Valid	Lower Management	78	39.0	39.0	39.0
	Middle Management	89	44.5	44.5	83.5
	Top Management	33	16.5	16.5	100.0
	Total	200	100.0	100.0	
Valid	1-5 years	42	20.5	21.0	21.0
	10 and more	52	25.5	26.0	47.0
	5-10 years	106	54.0	53.0	100.0
	Total	200	100.0	100.0	

Source: SPSS output

4.2 Validation of the Model

Each variable was tested for reliability to ensure the model was consistent. Cronbach's alpha value must be greater than 0.7 (Rasheed & Rashid, 2023; Rashid et al., 2022a), indicating model trustworthiness.

4.2.1 Reliability analysis

Table 2 represents the reliability and statistics of green human resource management

Table 2: Reliability Statistics

Cronbach's- Alpha	N of-Items
.778	5

Source: SPSS output

We may accept these numbers because the range of reliability values was 0.778. According to Hashmi et al. (2020b), a score of more than 0.7 implies that the scale items are reliable internally (Rashid & Rasheed, 2022; Rashid et al., 2021; Rasheed et al., 2023).

Table 3: Reliability Statistics

Cronbach's Alpha	N of Items
.723	5

Source: SPSS output

Table 3 represents the reliability and statistics of green purchasing. We may accept these numbers because the range of reliability values was 0.724. According to Rashid et al. (2022b), a score of more than 0.7 implies that the scale items are reliable internally (Hashmi & Mohd, 2020; Khan et al., 2023a).

Table 4: Reliability Statistics

Cronbach's Alpha	N of Items
.733	5

Source: SPSS output

Table 4 represents the reliability and statistics of business performance. We may accept these numbers because the range of reliability values was 0.733. According to Rashid et al. (2020), a score of more than 0.7 implies that the scale items are reliable internally (Khan et al., 2023b).

4.3 Hypotheses Testing

Hypotheses were examined using SPSS software with a linear regression test.

4.3.1 R-Square, Adjusted R-Square and Durbin Watsin

Table 5: Model Summary

Model	R	R -Square	Adjusted R-Square	Standard. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F. Change	
1	.578[a]	.334	.327	.46096	.334	49.396	2	197	.000	1.953

a. Predictors: constant, GP, GHRM
b. Dependent Variable: BP

Source: SPSS output

As per Table 5, the R-square indicates how much variance in the dependent variable is explained by independent variables. R^2 values must be equal to or greater than 0.10, according to Rashid et al. (2019), for a concept's variance to be deemed sufficient. As a result, the R2 value in Table 6 is 0.334, which is sufficient. Adjusted R-square portrays the generalization of the fallouts in multiple regressions, i.e., the difference between the sample results and the population. It is vital to have a little discrepancy between the R-square and the adjusted R-square. The value in Table 6 is 0.327, close to 0.334, so it is acceptable.

Using a statistical method or regression analysis, the Durbin-Watson (DW) statistic measures autocorrelation in error terms. The Durbin-Watson statistic will always be assigned a number between 0 and 4. The Durbin-Watson value for Table 6 is 1.95. A score of 2.0 indicates that there is no autocorrelation in the sample. A score between 0 and less than 2 is considered positive autocorrelation, while a value between 2 and 4 is harmful and is referred to as negative autocorrelation.

Table 6: ANOVA[A]

Model		Sum of Squares	df	Mean- Square	F	Sig.
1	Regression	20.992	2	10.496	49.396	.000[b]
	Residual	41.859	197	.212		
	Total	62.851	199			

a. Dependent Variable: BP
b. Predictors: constant, GP, GHRM

Source: SPSS output

Statistical significance is a p-value less than 0.05 (Usually 0.05). As a result of the solid evidence against the null hypothesis, the null hypothesis is rejected, and the alternative hypothesis is accepted. Because the sig value in Table 7 is 0.00, which is less than 0.05, it suggests that the independent variables GHRM and GP are relevant to the dependent variable BP.

Table 7: Coefficients

Model		Unstandardized-I Coefficients		Standardized-I Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound-	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.793	.343		2.310	.022	.116	1.470					
	GHRM	.388	.059	.385	6.606	.000	.272	.504	.418	.426	.384	.993	1.007
	GP	.429	.063	.400	6.862	.000	.306	.552	.432	.439	.399	.993	1.007

a. Dependent Variable: BP

Source: SPSS output

All variables have significance, according to the sig values in Table 8. Similarly, every dependent variable affects the dependent variable. The sig values are all less than 0.05. Collinearity's VIF value suggests that almost all independent variables have a value of less than ten, demonstrating that multicollinearity does not exist, that the effects given by the model are pure, and that the effects of other independent variables do not harm one's effect. We can use several rules to see if our VIFs are within acceptable boundaries. In practice, if a VIF is more significant than 10, it is considered high; it indicates high multicollinearity. We're in fine shape and may continue with our regression with values around 1.

4.3.2 Summary of hypotheses testing

Table 8 shows which hypotheses have been accepted or rejected.

Table 8: Summary of Hypotheses

Hypotheses	Result
H1: GHRM has a significant effect on business performance.	Accepted
H2: GP has a significant effect on business performance.	Accepted

Source: SPSS output

Multicollinearity does not exist because all of our VIF values are less than 4, we can conclude that the independent variables are not multicollinear. If the V.I.F. score is greater than 5, then it means that independent variables are linked. According to the above Table 8 of coefficients, a 1% rise in GHRM will boost the organization's business performance by 38%, while a 1% increase in GP will increase the business performance by 42%. As a result, the hypothesis is accepted and confirmed, implying that GHRM and GP have a beneficial impact on business success.

5. Conclusion, Discussion, Implications, Limitations & Recommendations

5.1 Conclusion

This study looked at business performance through the lens of green culture. A total of 200 people from the manufacturing industry in Karachi, Pakistan, were surveyed. It was discovered that if an individual receives proper GHRM training, his job performance has an impact on his business

performance. Furthermore, the greater the number of green purchases in your procurement area, the more significant the direct impact on business performance. Businesses gain a competitive advantage by increasing revenue. As a result, profitability will improve. This research aimed to verify the influence of GHRM and GP on business performance. Due to various problems, including its complexity, which presents its challenges, industries have shown resistance and hesitancy in adopting the green culture, so it has not been easy to persuade many organizations to adopt it. However, as time passes and more research and study into this green culture is conducted, organizations are becoming more willing to recognize its long-term benefits. GHRM and GP have grown in popularity in developed countries. As a result, this research aims to highlight the beneficial and positive effects of green practices on business performance, particularly in Pakistan, where green practices are less understood and adopted for the reasons stated above. This study used a 15-question questionnaire that was quite reliable and valid. These questions were separated into three variables: GHRM and GP, two independent variables, and business performance, a dependent variable. These three variables are included in a theoretical model that depicts the impact on business performance. A total of 200 respondents were picked from a population of various manufacturing industries in Karachi, Pakistan, with a professional background in supply chain management. The study's findings revealed that GHRM and GP have a constructive impact on company operations.

5.2 Discussion

Major environmental challenges and the depletion of natural resources have confined human growth to a focus on the Earth's careful use. Previous research has noted a gap in the literature because of a deficiency of studies analyzing the influence of GPB on customers (Young et al., 2010). With this in mind, one of the primary goals of this work was to investigate the primary elements that impact the GPB of young clients in Sindh, Pakistan. If organizations are to perform well, they must receive more attention. Furthermore, they should want to achieve long-term business sustainability. In that case, they must understand the need for green culture adaptation and promote it in business seminars so that it may positively affect Pakistan's manufacturing sector in the long term from the buyer's perspective. As detailed in the literature review, numerous aspects influence an organization’s business performance. Green human resource management and green purchasing were two elements used in this study to elaborate on the organization’s business performance. One of the things that has proven to be quite influential is experience. Every time a company wants to talk about improving its performance, they want to know how we can do it. According to this study, all of the aforementioned criteria have a beneficial impact on organizational success. The impact of green purchasing on business success is significant. It is an essential tool for analyzing and enhancing the company's performance based on data.

5.3 Implications

5.3.1 Organisational implications

This research helps managers and practitioners in a variety of ways. The findings could persuade management and practitioners to implement GHRM and GP in their organizations. Furthermore, companies can use both GHRM and GP to fulfil sustainability goals. Furthermore, the data implies that the GHRM-GP connection lowers blood pressure. This conclusion implies that managers can align green purchasing strategies and practices with human resource strategies and practices to improve operational efficiency and reduce regulatory and compliance fines. Managers are encouraged to implement GHRM and GP at the same time in order to achieve simultaneous improvement.

5.3.2 Theoretical implications

Because we summarized the green research into two main variables: one controlling internal strength (GHRM) and the second, green purchasing, the external factor of vendors, this research contributes theoretically to the literature regarding GHRM and GP's positive impact on business

performance. This clearly shows that when you have to implement any strategy, you must do so internally and externally simultaneously. Which has become a standard for your company? They can also incorporate more green practices into their study. It will also assist them in conducting additional research in this area. This research may be useful to future academics who desire to research this field using future technologies. Besides, this paper responds to extant studies exploring the synergy between GHRM, GP, and BP.

5.4 Limitations

The following limitations should be considered when interpreting the outcomes of this research: These restrictions might be used to guide future research. The study only collects data from companies in Karachi's manufacturing industry. This could have an impact on the study's generalizability. To strengthen the reliability and validity of their conclusions, future studies may collect data from various industries in Pakistan. Furthermore, we employed a sample size of 200 people from the population, which could be a flaw in our study. As a result, future studies may examine measures to boost respondent engagement to confirm the accuracy of the findings of this study.

5.5 Recommendation

Future studies can use various techniques to decrease their impact on the study's conclusions because common methods and nonresponse bias tend to affect every survey study. Furthermore, the current research can be expanded to include a range of characteristics of a company's success, such as profitability, public perception, and brand awareness. This research was carried out in other developing and underdeveloped countries and other sorts of industries, such as food, logistics, and service, such as wholesalers and retailers.

References

Acquah, I., Agyabeng-Mensah, Y., & Afum, E. (2020). Examining the link among green human resource management practices, green supply chain management practices and performance. *Benchmarking: An International Journal*, *28*(1), 267–290. https://doi.org/10.1108/BIJ-05-2020-0205

Agha, A. A., Rashid, A., Rasheed, R., Khan, S., & Khan, U. (2021). Antecedents of Customer Loyalty at Telecomm Sector. *Turkish Online Journal of Qualitative Inquiry, 12*(9), 1352-1374. https://www.tojqi.net/index.php/journal/article/view/5873/4175

Agyabeng-Mensah, Y., Ahenkorah, E., Afum, E., Nana Agyemang, A., Agnikpe, C., & Rogers, F. (2020). Examining the influence of internal green supply chain practices, green human resource management and supply chain environmental cooperation on firm performance. *Supply Chain Management: An International Journal*, *25*(5), 585–599. https://doi.org/10.1108/scm-11-2019-0405

Albhirat, M. M., Rashid, A., Rasheed, R., Rasool, S., Zulkiffli, S. N. A., Zia-Ul-Haq, H. M., & Mohammad, A. M. (2024). The PRISMA Statement in Enviropreneurship Study: A Systematic Literature and a Research Agenda. *Cleaner Engineering and Technology*, *18*(2024), 100721. https://doi.org/10.1016/j.clet.2024.100721

Amirah, N. A., Him, N. K, Rashid, A., Rasheed, R., Zaliha, T. N., & Afthahnoon, A. (2024). Fostering a Safety Culture in Manufacturing Industry through Safety Behavior: A Structural Equation Modelling Approach. *Journal of Safety and Sustainability*, In press. https://doi.org/10.1016/j.jsasus.2024.03.001

Amoako, G. K., Dzogbenuku, R. K., & Abubakari, A. (2020). Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior. *International Journal of Productivity and Performance Management*, *69*(8), 1609–1626. https://doi.org/10.1108/ijppm-12-2019-0595

Baloch, N. & Rashid, A. (2022). Supply chain networks, complexity, and optimization in developing economies: a systematic literature review and meta-analysis. *South Asian Journal of Operations and Logistics, 1*(1), 1-13. https://doi.org/10.57044/SAJOL.2022.1.1.2202

Carter, C. R., Kale, R., & Grimm, C. M. (2000). Environmental purchasing and firm performance: an empirical investigation. *Transportation Research Part E: Logistics and Transportation Review*, *36*(3), 219–228. https://doi.org/10.1016/s1366-5545(99)00034-4

Chaudhary, A., Chen, C., & Mathys, A. (2019). Dietary change scenarios and implications for environmental, nutrition, human health and economic dimensions of food sustainability. *Nutrients, 11*(4), 856. https://doi.org/10.3390/nu11040856

Das, S., Ghani, M., Rashid, A., Rasheed, R., Manthar, S., & Ahmed, S. (2021). How customer satisfaction and loyalty can be affected by employee's perceived emotional competence: The mediating role of rapport. *International Journal of Management, 12*(3), 1268-1277. https://doi.org/10.34218/IJM.12.3.2021.119

Dubey, R., Bag, S., Ali, S. S., & Venkatesh, V. G. (2013). Green purchasing is key to superior performance: an empirical study. *International Journal of Procurement Management*, *6*(2), 187. https://doi.org/10.1504/ijpm.2013.052469

Foo, M. Y., Kanapathy, K., Zailani, S., & Shaharudin, M. R. (2019). Green purchasing capabilities, practices and institutional pressure. *Management of Environmental Quality*, *30*(5), 1171–1189. https://doi.org/10.1108/meq-07-2018-0133

Ghouri, A. M., Mani, V., Khan, M. R., Khan, N. R., & Srivastava, A. P. (2020). Enhancing business performance through green human resource management practices: an empirical evidence from Malaysian manufacturing industry. *International Journal of Productivity and Performance Management*, *69*(8), 1585–1607. https://doi.org/10.1108/ijppm-11-2019-0520

Haq, Z. U., Rasheed, R., Rashid, A., & Akhter, S. (2023). Criteria for Assessing and Ensuring the Trustworthiness in Qualitative Research. *International Journal of Business Reflections, 4*(2), 150-173. Available at: http://journals.pu.edu.pk/journals/index.php/ijbr/article/view/7358

Haque, I., Rashid, A., & Ahmed, S. Z. (2021). The Role of Automobile Sector in Global Business: Case of Pakistan. *Pakistan Journal of International Affairs, 4*(2), 363-383. https://doi.org/10.52337/pjia.v4i2.195

Hashmi, A. (2022). Factors affecting the supply chain resilience and supply chain performance. *South Asian Journal of Operations and Logistics, 1*(2), 65-85. https://doi.org/10.57044/SAJOL.2022.1.2.2212

Hashmi, A. R., & Mohd, A. T. (2020). The effect of disruptive factors on inventory control as a mediator and organizational performance in health department of Punjab, Pakistan. *International Journal of Sustainable Development & World Policy, 9*(2), 122-134. https://doi.org/10.18488/journal.26.2020.92.122.134

Hashmi, A. R., Amirah, N. A., & Yusof, Y. (2020a). Mediating effect of integrated systems on the relationship between supply chain management practices and public healthcare performance: Structural Equation Modeling. *International Journal of Management and Sustainability*, *9*(3), 148-160. https://doi.org/10.18488/journal.11.2020.93.148.160

Hashmi, A. R., Amirah, N. A., & Yusof, Y. (2021b). Organizational performance with disruptive factors and inventory control as a mediator in public healthcare of Punjab, Pakistan. *Management Science Letters, 11*(1), 77-86. https://doi.org/10.5267/j.msl.2020.8.028

Hashmi, A. R., Amirah, N. A., Yusof, Y., & Zaliha, T. N. (2020b). Exploring the dimensions using exploratory factor analysis of disruptive factors and inventory control. *The Economics and Finance Letters, 7*(2), 247-254. https://doi.org/10.18488/journal.29.2020.72.247.254

Hashmi, A. R., Amirah, N. A., Yusof, Y., & Zaliha, T. N. (2021a). Mediation of inventory control practices in proficiency and organizational performance: State-funded hospital perspective.

Uncertain Supply Chain Management, *9*(1), 89-98. https://doi.org/10.5267/j.uscm.2020.11.006

Hashmi, R. (2023). Business Performance Through Government Policies, Green Purchasing, and Reverse Logistics: Business Performance and Green Supply Chain Practices. *South Asian Journal of Operations and Logistic*s, *2*(1), 1–10. https://doi.org/10.57044/SAJOL.2023.2.1.2301

Huserbråten, M. B. O., Eriksen, E., Gjøsæter, H., & Vikebø, F. (2019). Polar cod in jeopardy under the retreating Arctic sea ice. *Communications Biology*, *2*(1), 1–8. https://doi.org/10.1038/s42003-019-0649-2

Khan, S. K., Ahmed, S., & Rashid, A. (2021). Influence of social media on purchase intention and customer loyalty of generation Y with the mediating effect of conviction: a case of Pakistan. *Pakistan Journal of International Affairs*, *4*(2), 526-548. https://doi.org/10.52337/pjia.v4i2.207

Khan, S. K., Rashid. A., Benhamed, A., Rasheed, R., & Huma, Z. (2023b). Effect of leadership styles on employee performance by considering psychological capital as mediator: evidence from airlines industry in emerging economy. *World Journal of Entrepreneurship, Management and Sustainable Development*, *18*(6), 799-818. https://doi.org/10.47556/J.WJEMSD.18.6.2022.7

Khan, S., Rasheed., R., Rashid, A., Abbas, Q., & Mahboob, F. (2022). The Effect of Demographic Characteristics on Job Performance: An Empirical Study from Pakistan. *Journal of Asian Finance, Economics and Business*, *9*(2), 283-294. https://doi.org/10.13106/JAFEB.2022.VOL9.NO2.0283

Khan, S., Rashid, A., Rasheed, R., & Amirah, N. A. (2023a). Designing a knowledge-based system (KBS) to study consumer purchase intention: the impact of digital influencers in Pakistan. *Kybernetes*, *52*(5), 1720-1744. https://doi.org/10.1108/K-06-2021-0497

Rasheed, R., & Rashid, R. (2023). Role of service quality factors in word of mouth through student satisfaction. *Kybernetes*, In press. http://dx.doi.org/10.1108/k-01-2023-0119

Rasheed, R., Rashid, A., & Ngah, A. H. (2024). Role of Leadership Styles to Foster Innovative Capabilities and Green Purchasing. *Journal of Global Operations and Strategic Sourcing*, In press. https://doi.org/10.1108/JGOSS-05-2023-0047

Rasheed, R., Rashid, A., Amirah, N. A., & Afthanorhan, A. (2023). Quantifying the moderating effect of servant leadership between occupational stress and employee in-role and extra-role performance. *Calitatea*, *24*(195), 60-68. https://doi.org/10.47750/QAS/24.195.08

Rashid, A. & Rasheed, R. (2022). A Paradigm for Measuring Sustainable Performance Through Big Data Analytics–Artificial Intelligence in Manufacturing Firms. *Available at SSRN 4087758*. https://doi.org/10.2139/ssrn.4087758

Rashid, A. (2016). Impact of inventory management in downstream chains on customer satisfaction at manufacturing firms. *International Journal of Management, IT and Engineering*, *6*(6), 1-19.

Rashid, A. Rasheed, R., Rahi, S., & Amirah, N. A. (2024c). Disruptive Factors of Vendor-Managed Inventory in the Manufacturing Industry. *Supply Chain Forum: An International Journal*, In press. https://doi.org/10.1080/16258312.2024.2330913

Rashid, A., & Amirah, N. A. (2017). Relationship between poor documentation and efficient inventory control at Provincial Ministry of Health, Lahore. *American Journal of Innovative Research and Applied Sciences*, *5*(6), 420-423.

Rashid, A., & Rasheed, R. (2023). Mediation of Inventory Management in the Relationship between Knowledge and Firm Performance. *SAGE Open*, *13*(2), 1-11. https://doi.org/10.1177/21582440231164593

Rashid, A., & Rasheed, R. (2024). Logistics Service Quality and Product Satisfaction in E-Commerce. *SAGE Open*, *14*(1), 1-12. https://doi.org/10.1177/21582440231224250

Rashid, A., Ali, S. B., Rasheed, R., Amirah, N. A. & Ngah, A. H. (2022a). A paradigm of blockchain and supply chain performance: a mediated model using structural equation modeling. *Kybernetes, 52*(12), 6163-6178. https://doi.org/10.1108/K-04-2022-0543

Rashid, A., Amirah, N. A., & Yusof, Y. (2019). Statistical approach in exploring factors of documentation process and hospital performance: a preliminary study. *American Journal of Innovative Research and Applied Sciences, 9*(4), 306-310.

Rashid, A., Amirah, N. A., Yusof, Y., & Mohd, A. T. (2020). Analysis of demographic factors on perceptions of inventory managers towards healthcare performance. *The Economics and Finance Letters, 7*(2), 289-294. https://doi.org/10.18488/journal.29.2020.72.289.294

Rashid, A., Baloch, N., Rasheed, R., & Ngah, A. H. (2024b). Big Data Analytics-Artificial Intelligence and Sustainable Performance through Green Supply Chain Practices in Manufacturing Firms of a Developing Country. *Journal of Science and Technology Policy Management*, In press, *https://doi.org/*10.1108/JSTPM-04-2023-0050

Rashid, A., Rasheed, R., & Amirah, N. A. (2023). Information technology and people involvement in organizational performance through supply chain collaboration. *Journal of Science and Technology Policy Management*, In press. https://doi.org/10.1108/JSTPM-12-2022-0217

Rashid, A., Rasheed, R., & Amirah, N. A., & Afthanorhan, A. (2022b). Disruptive factors and customer satisfaction at chain stores in Karachi, Pakistan. *Journal of Distribution Science, 20*(10), 93-103. https://doi.org/10.15722/jds.20.10.202210.93

Rashid, A., Rasheed, R., & Ngah, A. H. (2024a). Achieving Sustainability through Multifaceted Green Functions in Manufacturing. *Journal of Global Operations and Strategic Sourcing, 17*(2), 402-428. https://doi.org/10.1108/JGOSS-06-2023-0054

Rashid, A., Rasheed, R., Amirah, N. A., Yusof, Y., Khan, S., & Agha, A., A. (2021). A Quantitative Perspective of Systematic Research: Easy and Step-by-Step Initial Guidelines. *Turkish Online Journal of Qualitative Inquiry, 12*(9), 2874-2883. https://www.tojqi.net/index.php/journal/article/view/6159/4387

Rashid, A., Rasheed, R., Ngah, A. H., Pradeepa Jayaratne, M. D. R., Rahi, S. & Tunio, M. N. (2024e). Role of Information Processing and Digital Supply Chain in Supply Chain Resilience through Supply Chain Risk Management. *Journal of Global Operations and Strategic Sourcing, 17*(2), 429-447. https://doi.org/10.1108/JGOSS-12-2023-0106

Rashid, A., Rasheed, R., Tanveer, U., Ishaq, S., & Amirah, N. A. (2024d). Mediation of Integrations in Supply Chain Information Management and Supply Chain Performance: An Empirical Study from a Developing Economy. *Journal of Science and Technology Policy Management*, In press. https://doi.org/10.1108/JSTPM-08-2023-0143

Shadish, W. R. (2002). Revisiting field experimentation: Field notes for the future. *Psychological Methods*, *7*(1), 3–18. https://doi.org/10.1037/1082-989x.7.1.3

Soomro, R. B., Mirani, I. A., Sajid Ali, M., & Marvi, S. (2020). Exploring the green purchasing behavior of young generation in Pakistan: opportunities for green entrepreneurship. *Asia Pacific Journal of Innovation and Entrepreneurship*, *14*(3), 289–302. https://doi.org/10.1108/apjie-12-2019-0093

Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, *18*(1), 20–31. https://doi.org/10.1002/sd.394

Younis, H., Sundarakani, B., & Vel, P. (2016). The impact of implementing green supply chain management practices on corporate performance. *Competitiveness Review Journal*, *26*(3), 216–245. https://doi.org/10.1108/cr-04-2015-0024