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The Impact of Green Marketing on Organization Sustainable Performance; A Study on Textile industry of Pakistan

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ABSTRACT

Responding to the critical need of environmentally intensive sector; sustainability, this study aims to investigate the influence of green marketing on the organization sustainable Performance in the textile industry in Pakistan. Using Triple Bottom Line, the Resource-Based View, and the Stakeholder Theory, the impact of multi-layered concept of green marketing; green strategy, internal green marketing, green products, and green marketing communication on dimensions of sustainable performance has been investigated. For this, a quantitative research design is adopted and data was collected from 99 managers of textile firms through survey. Analytics of the data were performed through the Partial Least Squares Structural Equation Modeling (PLS -SEM). The findings indicate that green marketing does not always achieve the goal of enhancing organizational sustainability; rather it has selective effects. This study discovered that green marketing strategy and green marketing communication are very useful in enhancing environmental performance, whereas its impact on economic and social dimensions is not statistically significant in the short-term. This study emphasis the integration of sustainability in the strategic planning process, as well as explaining the environmental initiatives in a transparent manner to attain tangible environmental benefits. This is why a long-term orientation of green marketing of textile companies is important: once the organization integrates more, it is possible to open the door to economic and social advantages in the long run, as well as to environmental progress.

Introduction

Sustainability has become a significant challenge in all industries, especially those that are highly impactful in terms of environmental effects (Shibly & Hoque, 2025; Dangelico & Vocalelli, 2017). In this regard, despite a significant economic contribution in terms of production, employment creation and revenues, textile industry is particularly notable because of the active use of water, energy, and chemicals, and its detrimental effects on natural environment, posing a serious threat to sustainability. Sustainable performance is regarded as a multidimensional concept that includes economic, environmental, social facets but not financial performance. This view is endorsed by the Triple Bottom Line (TBL) theory that underlines the simultaneous accomplishment of economic, environmental and social performance in the long-run sustainability (Nogueira, 2025). To respond, green marketing has become a widely-recognized strategic approach towards incorporating environmental concerns into the marketing operations of organizations (Ezeh, 2025). Green marketing is not only limited to products that are environmentally friendly, but also includes strategic, structural, product, and communication based activities to cater environmental concerns (Muliasari et al., 2025). Previous studies advocated that green marketing leads to sustainable performance by adhering global standards of sustainability (Akude et al., 2025). Supported by the Legitimacy Theory, organizations use sustainable practices to conform to society values, especially within industries that are sensitive to environmental practices (Crossley et al., 2021). Although the importance of green marketing continues to increase, there is limited empirical evidence regarding its role in sustainable performance of organizations(Akude et al., 2025). The available literature is quite theoretical and most of it is based in developed economies (Ezeh, 2025). Responding to the call, the current study attempts to investigate the impact of green marketing on organizations's sustainable performance in textile sector of Pakistan(Chen et al., 2024).

Textile industry is an economic pillar in Pakistan, which has made significant exports, employment, and industrialization contributions (Pakistan Bureau of Statistics, 2022; Ahmed and Hamid, 2019). However, companies are under mounting environmental pressures and sustainability demands. In addition, it is difficult to accesssustainability related information since managers in most of the textile companies are unwilling to share such data or do not have much interest in these matters. Previous studies show the importance of adopting green marketing practices to address rising environmental concern and improve sustainability performance (Akude et al., 2025). However, the relationship between the green marketing and Organization sustainable performance especially in developing countries like Pakistan remains less described. (Saleem et al., 2021)**.** This gap is critical as textile Sector is known for environmental sensitivity due to its high water consumption, chemical usage, and waste generation (Islam, 2024; Journal of the Indian Chemical Society, 2023)

Particularly, it explores the impact of different dimensions of green marketing; green strategy, internal green marketing, green product, and green marketing communication on economic, environmental and social performance of textile organizations. The study attempts to expand research on achieving sustainable performance within Pakistan's textile sector. It shows how marketing practices aligning with sustainable goals can improve organizational outcomes. The findings offer managerial implications through designing effective green marketing strategies to achieve sustainable performance and comply with the international sustainability standards to gain competitive advantage.

Literature Review & Hypotheses Development

Green Marketing

Green marketing has evolved around the world over the past few decades (Papadas, Avlonitis, & Carrigan, 2021). It is now considered as an essential strategy to achieve sustainability in Industrial sector (Papadas, Avlonitis, & Carrigan, 2021). Green marketing has numerous definitions as many scholars defined it with different perspectives (Papadas et al., 2021). Dominantly, green marketing is defined as the integration of environmental sustainability into Marketing practices (Leonidou, Katsikeas, & Morgan, 2020). That ensures organizational activities with ecological responsibilities (Leonidou et al., 2020). Green marketing is a multidimensional construct that encompasses strategic orientation, internal processes, product-related practices, and marketing communication activities (Leonidou et al., 2020). It consists of four dimensions (Green strategy, Internal green marketing, green product, Green marketing communication (Leonidou, Katsikeas, & Morgan, 2020). Green strategy shows organizational commitment to environmental values (Papadas et al., 2017).It includes clear policy statement, green cross-departmental goals, stakeholder engagement (Chen, Tang, Jin, Li, & Paillé, 2021). A well-defined green strategy enhances alignment between marketing practices and sustainability objectives (Leonidou et al., 2020) that enables organizations to achieve their goals (Khan et al., 2021) & ultimately achieve a long-term competitive advantage (Saunila et al., 2022).

Internal marketing focuses on employee motivation through environmental trainings, rewards system and culture that supports sustainability (Paillé, Chen, Boiral, & Jin, 2020). Internal environmental alignment with sustainability significantly influences the sustainable performance of organization (Shi and Yang, 2018). Green product involves ecofriendly packages and promotes reverse logistics, i.e. recycle materials and influences customers' perceived benefits from green products (Yadav, Balaji, & Jebarajakirthy, 2021). Market communication includes Eco labeling and green branding so that it will be easier to spread awareness about the benefit of the green products (Leonidou, Katsikeas, & Morgan, 2020).

Organization Sustainable Performance

Organizational sustainable performance focuses on achieving economic, environmental, and social outcomes instead of focusing only on financial results (Saunila et al., 2022; Hahn et al., 2021). This broader review has been adopted through the triple bottom line framework (Elkington, 2018; Tseng et al., 2020) that integrates three dimensions comprises of financial, social, and environmental performance. That shows that organizations must balance profitability along with environmental and social responsibilities to achieve long-term success and sustainability (Saunila et al., 2022; Fatma et al., 2021), representing a shift from a profit-based orientation towards value creation for stakeholders such as employees and customers (Freeman et al., 2020; Harrison et al., 2020). Studies have shown that organizations with sustainable practices exhibit superior innovations; also, effective stakeholder engagement with sustainability reporting results in improved financial outcomes (Mio et al., 2020; Alshehhi et al., 2021). Economic performance aims to achieve long-term economic benefits, cost reduction, sales growth, and market share expansion through improved efficiency and market competitiveness (Saunila et al., 2022; Khan et al., 2021). Environmental performance relates to reducing emissions, minimizing waste, using eco-friendly materials, and forming partnerships with sustainable suppliers (Khan et al., 2021; Zhu et al., 2020). Social performance includes corporate social responsibility, brand reputation, stakeholder trust, and reduction in negative publicity (Fatma et al., 2021; Hur et al., 2020).

Green Marketing and Organizational Sustainable Performance

Green Marketing has been increasingly identified as a promotional tool that helps in the alignment of the organizational marketing strategy and sustainability goals (Leonidou et al., 2020; Papadas et al., 2021). Literature revealed that green marketing plays an important role in enhancing economic, environmental, and social performance (Leonidou et al., 2020; Papadas et al., 2021). However, Previous research has shown dimensions of green marketing to have different influences on organizational performance (Leonidou et al., 2020; Papadas et al., 2021). Supported by the Legitimacy Theory, organizations use sustainable practices to conform to society values, especially within industries that are sensitive to environmental practices (Crossley et al., 2021; Gezgin, 2024). Within the textile sector, due to growing environmental and societal concerns, the importance of incorporating green marketing practices in determining sustainable performance results assumes even greater importance (Islam, 2024; Khan et al., 2021).

Green Product & Sustainable Performance

Green product initiatives are related to the creation of environmentally friendly products made possible by the recyclable materials, minimized hazardous substances, and increased manufacturing efficiency utilized by green technology (Kumar & Polonsky, 2022). These measures are likely to minimize damage to the environment while helping to make costs effective and public perceptions better (Khan et al., 2021). In addition, green products improve business reputations and consumer trust and can thus impact positively social outcomes (Fatma et al., 2021). Thus, it can be hypothesized that green product practices positively impact every facet of sustainability (Leonidou et al., 2020).

H1: Green product positively affects economic performance.
H2: Green products positively influence environmental performance.
H3: Green product is positively related to social performance.

Green Strategy- Sustainable Performance

Green strategy shows the long-term dedication of the organization towards environmental values and incorporates sustainability within the corporate strategies and decision-making structures (Leonidou et al., 2020). A green strategy benefits companies by allowing them to align their internal resources and sustainability efforts to become more successful and environment-friendly (Khan et al., 2021). Strategically embedded initiatives have, therefore, been forecasted to promote economic advantages, mitigate environment, and enhance legitimacy (Saunila et al., 2022).

H4: There exists a positive effect of green strategy on economic performance.
H5: Green strategy positively influences environmental performance.
H6: Green strategy positively influences social performance.

Green Marketing - Sustainable Performance

Green marketing in the internal context promotes employee engagement, environmental training, and the establishment of an organizational culture with a focus on sustainability (Paillé et al., 2020). Employees who are familiar and committed to environmental goals have a higher chance of being receptive to green projects and promoting their effective implementation (Shi & Yang, 2018). This internal alignment can improve efficiency in daily operations, reduce waste, and optimize perceptions from various stakeholders, thus impacting every aspect of sustainable performance (Saunila et al., 2022).

H7: Internal green marketing has a positive influence on economic performance.

H8: There is a positive impact of internal green marketing on environmental performance.
H9: Internal green marketing positively impacts social performance.

Green Marketing Communication - Sustainable Performance

Through green marketing communication, information regarding environmental activities is openly communicated through eco-labeling communication, green branding communication, and sustainability reporting communication (Leonidou et al., 2020; Testa et al., 2021). Communicating effectively enables firms to signal their environmental concern to stakeholders, minimize information asymmetry, and establish a higher level of trust (Mio et al., 2020). Green marketing communication, i.e. eco labeling, green promotion strengthens customers' trust and enhances corporate reputation (Shabbir et al., 2020; Majeed et al., 2022), thus improving social and economic performance (Shabbir et al., 2020; Majeed et al., 2022). In this regard, green communication can be expected to positively impact economic, environmental, and social aspects of legitimacy by enhancing corporate image through improved stakeholder relations (Shabbir et al., 2020).

H10: Green marketing communications positively affect economic performance.
H11: Green marketing communications positively affect environmental performance.
H12: Green marketing communications are positively associated with social performance
Conceptual Framework of the study

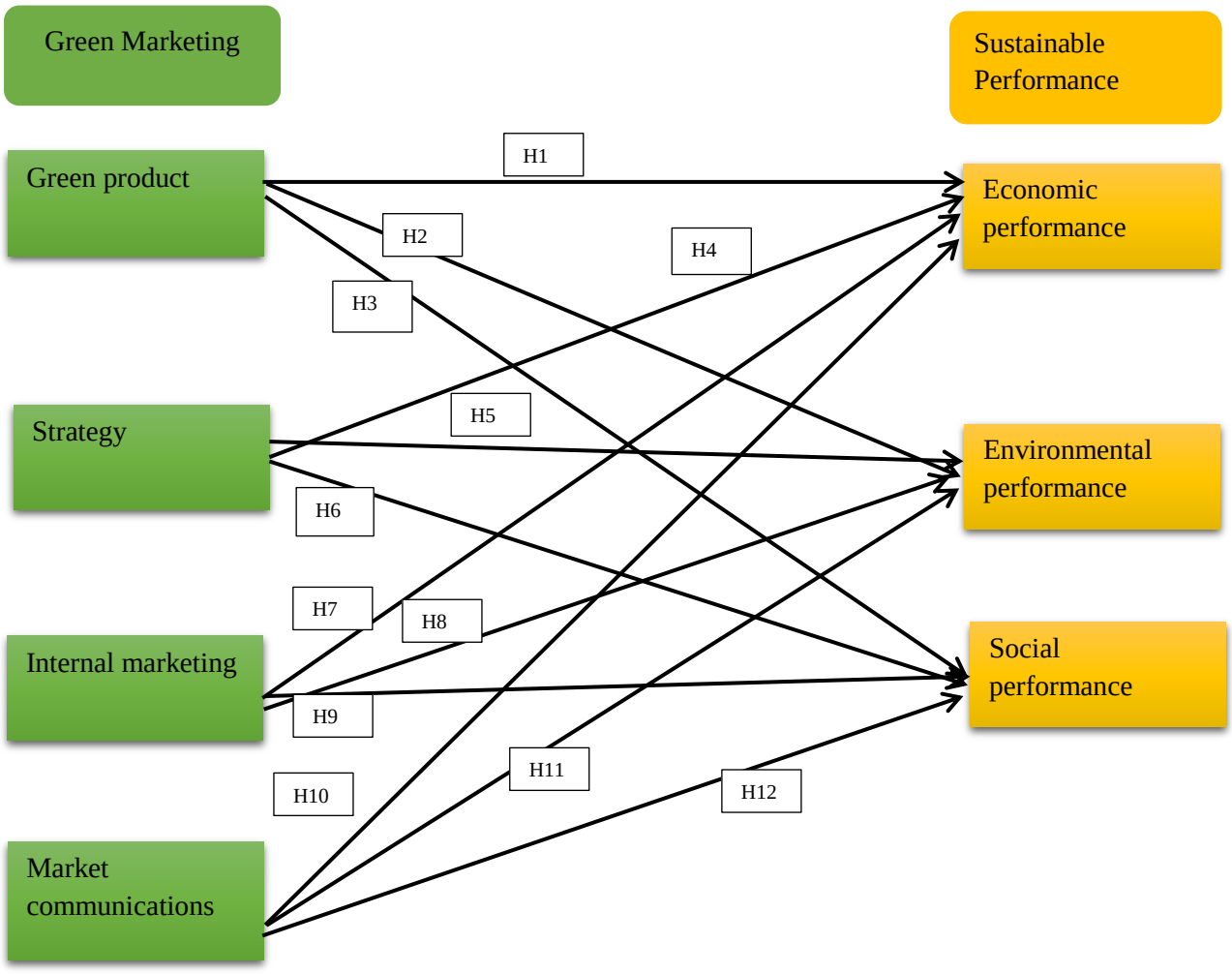


Figure 1: The Conceptual Framework of the Study

Research Methodology

To investigate the impact of green marketing practices on sustainable performance, a descriptive research design is adopted using survey. Data were collected through self-administered questionnaires from 150 full-time managers working in textile companies through convenience sampling. Out of total, 103 questionnaires were obtained. Four questionnaires were screened out in the initial screening since some respondents did not complete the questionnaires and analysis was done on 99 valid questionnaires through PLS.

Measurement of Variables

To measure green marketing a multidimensional construct, comprises of green strategy, internal green marketing, green product, and green marketing communication. 12 items were adopted by Papadas et al. (2017, 2019) on a 5 –point likert scale ranging from strongly disagree to strongly agree. The organizational sustainable performance was measured through 16 items, adapted by Fauzi et al., (2010) and Kocmanova and Docekalova, (2011) on a 5-point scale ranging from very poor to excellent.

Results

Data Analysis

Data was analyzed through PLS-SEM application in the Smart PLS software. PLS-SEM is the most suitable model to use for applied research, particularly where the sample size is medium and the model is complex. Also, it does not presuppose rigid normality, which can be applied to social science and management research. The analysis was conducted in a two-step process that is usually suggested in PLS-SEM. We tested the measurement model first to test reliability and validity. Internal consistency was tested using Cronbachs alpha, composite reliability, and rho A to test reliability. Indicator loadings and average variance extracted (AVE) were used to test convergent validity, whereas cross- loadings, FornellLarcker criterion, and heterotraitmonotrait (HTMT) ratio were utilized to test discriminant validity. Second,structural model is evaluated to test all hypotheses concerning the relationships between the green marketing dimensions and the organisational sustainable performance. The strength and direction of such relationships were estimated by estimating path coefficients (b). Bootstrapping was also conducted using 5,000 resamples to test the hypotheses using t -values and p -values. The coefficient of determination (R^2) used to test the explanatory power of the model, and the relative influence of individual predictors was analyzed using the effect size (f 2) values. On the whole, this method enabled to evaluate the quality of measurements and causal relationships stringently to make results statistically and theoretically sound.

Respondents' Profile

The demographic profile shows respondents' gender, age, education level, managerial roles and monthly income (Table 1). it is seen that out of the 99 respondents, 86 respondents (86.9) were male, whereas 13 respondents (13.1) were female. This disproportion indicates the male dominated managerial and decision-making roles in the Pakistani textile industry. Age Mix of the Respondents show that 15 respondents were in their 20-30s,30 respondents fall in 31-40s, 31 respondents were within the 41-50 years age bracket and 23 respondents were 51 years and above. As most of the respondents were above30, it implies that the data were gathered from experienced professionals who have had considerable exposure to the industry. As far as the education level of the respondents is concerned, 22 respondents are undergraduates, 49 respondentsare graduates, and28 respondents have master level qualifications. Managerial Role Distribution of the Respondents show that 15 respondents areline managers, 26 were operational managers, 28 were

functional managers and 30 respondents were strategic managers. Monthly Income Distribution reveal that 13 respondents receive less than PKR 51,000-56,000, 13 respondents receive PKR 56000-75000,40 respondents have monthly income of PKR 76,000-95,000, and 33 have monthly income of PKR 96,000 and above. In short, the demographic profile suggests that the respondents were mostly males, aged, receiving high salaries and well educated people who occupied different managerial posts in textile firms.

Table 1: Respondents' Profile

Demographic Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Gender	Male	86	86.9
	Female	13	13.1
Age Group (Years)	20–30	15	15.2
	31–40	30	30.3
	41–50	31	31.3
	51 and above	23	23.2
Education Level	Undergraduate	22	22.2
	Graduate	49	49.5
	Master's	28	28.3
Managerial Role	Line Manager	15	15.2
	Operational Manager	26	26.3
	Functional Manager	28	28.3
	Strategic Manager	30	30.3
Monthly Income (PKR)	Below 51,000 – 56,000	13	13.1
	56,000 – 75,000	13	13.1
	76,000 – 95,000	40	40.4
	96,000 and above	33	33.3
	Total	**99**	**100.0**

Table 2: Reflective Constructs Measurement Properties

Dimensions	**Construct Items**	**Item Loading**	**Cronbach's alpha**	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
Strategy (S)	A1	0.536	0.612	0.677	0.668	0.290
	A2	0.572				
	A3	0.518				
	A4	0.650				
	A5	0.500				
Internal Marketing (IM)	A6	0.639	0.749	0.692	0.685	0.386
	A7	0.897				
	A8	0.578				
Product (P)	A9	0.524	0.660	0.681	0.606	0.423
	A10	0.682				
	A11	0.896				
Marketing Communication (MC)	A12	0.674	0.662	0.633	0.612	0.675
	A13	0.873				
	A14	0.672				
Economic	B1	0.635	0.670	0.673	0.787	0.627

Performance (EP)	B2	0.565				
	B3	0.773				
	B4	0.632				
	B5	0.646				
Environmental Performance (ENP)	B6	0.664	0.658	0.712	0.767	0.371
	B7	0.638				
	B8	0.764				
	B9	0.609				
	B10	0.709				
	B11	0.438				
Social Performance (SP)	B12	0.576	0.567	0.443	0.683	0.607
	B13	0.558				
	B14	0.681				
	B15	0.526				
	B16	0.790				

Table 2 shows that the internal consistency of the measurement scales was evaluated with the help of Cronbach alpha, Composite Reliability (CR), and rhoA which are traditional measures that are suggested in PLS-SEM to evaluate the internal consistency (Hair et al., 2019). The alpha values of certain constructs including the Strategy, Internal Marketing, Product, and Marketing Communication are less than the traditional alpha value of 0.70. But Cronbach alpha is a conservative value and will tend to underestimate reliability in PLS-SEM, especially in research and in a study on a developing economy (Hair et al., 2019). Most of the constructs have composite reliability values ranging between 0.585 and 0.787, which is acceptable internal consistency. Hair et al. (2019) indicate that composite reliability methods that are greater than 0.60 are deemed to be good applied studies. The rhoA values are another internal consistency indicator, as they demonstrate consistency between the construct indicators (Dijkstra and Henseler, 2015). All in all, even though the values of Cronbach alpha are lower in some instances, the composite reliability and rhoA are similar to state the fact that the measurement scales have sufficient reliability, and can be further analyzed.

Measuring convergent validity, indicator loadings and Average Variance Extracted (AVE) were used. Indicator loadings are the degree to which the item mirrors its construct (Hair et al., 2019). Loadings of the majority of the items exceed the acceptable limit of 0.50, which proves that the indicators adequately explain their constructs. Even though the loadings of some items are a bit less than 0.50, they were still considered because of their theoretical importance and theoretical value to content validity, which is tolerable in applied research (Hair et al., 2019). The range of the AVE values is between 0.290 and 0.427 of green marketing dimensions, and between 0.307 and 0.427 of sustainable performance dimensions. Although AVE values are lower than the recommended 0.50, Fornell and Larcker (1981) say that a convergent validity is still adequate when the composite reliability is over 0.60. As this condition is satisfied, convergent validity is acceptable. Accordingly, the findings verify that there is acceptable convergent validity among the constructs.

Table 3: Discriminant Validity-Cross Loading

	EP	ENP	IM	MC	P	S	SP
A1	0.135	0.306	0.138	0.172	0.039	**0.536**	0.204
A2	0.113	0.129	0.283	0.130	0.188	**0.472**	0.069
A3	0.144	0.226	0.265	0.234	0.138	**0.518**	0.139
A4	0.050	0.334	0.183	0.174	0.104	**0.650**	0.161
A5	0.118	0.236	0.083	0.256	0.235	**0.500**	0.013
A6	-0.074	-0.007	**0.139**	-0.032	0.165	0.157	0.022
A7	0.135	0.219	**0.897**	0.092	0.328	0.328	0.335
A8	0.187	0.152	**0.578**	0.069	0.235	0.152	0.084
A9	0.073	-0.048	0.259	0.013	**0.054**	0.173	-0.133
A10	0.099	0.220	0.289	0.100	**0.682**	0.200	0.159
A11	0.311	0.324	0.333	0.326	**0.896**	0.193	0.116
A12	0.225	0.254	0.267	**0.474**	0.270	0.316	0.131
A13	0.245	0.465	-0.042	**0.873**	0.163	0.219	0.340
A14	-0.094	0.154	0.164	**0.372**	0.298	0.191	0.001
B1	**0.635**	0.286	0.048	0.224	0.255	0.074	0.177
B2	**0.565**	0.289	0.099	0.087	0.176	0.069	0.307
B3	**0.773**	0.425	0.131	0.229	0.133	0.131	0.331
B4	**0.632**	0.275	0.135	0.133	0.108	0.189	0.251
B5	**0.646**	0.340	0.216	0.254	0.211	0.182	0.225
B6	0.283	**0.664**	0.077	0.242	0.129	0.383	0.324
B7	0.387	**0.638**	0.251	0.233	0.259	0.285	0.432
B8	0.301	**0.764**	0.147	0.563	0.172	0.426	0.321
B9	0.176	**0.309**	0.100	0.037	0.258	0.043	0.041
B10	0.402	**0.709**	0.252	0.328	0.295	0.343	0.336
B11	0.273	**0.438**	0.079	0.295	0.314	0.093	0.312
B12	0.069	0.337	0.152	0.149	0.139	0.143	**0.576**
B13	0.391	0.269	0.224	0.224	0.071	0.061	**0.558**
B14	0.248	0.344	0.151	0.352	0.102	0.214	**0.681**
B15	0.198	0.320	0.218	0.009	0.114	0.128	**0.526**
B16	0.031	0.104	0.169	0.044	0.072	0.118	**0.390**

Three complementary methods were used to measure discriminant validity namely Cross-Loadings, Fornell-Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT) according to Henseler et al. (2015). The outputs of the cross-loading indicate that the indicators receive greater loading on the construct on which they are supposed to load as compared to other constructs (Table 3). This agrees that indicators assess different concepts and do not intersect with other constructs too much (Hair et al., 2019).

Table 4: Discriminant Validity (Using Fornell-Larcker criterion)

(Using Fornell-Larcker criterion)	EP	EnP	IM	MC	P	S	SP
EP	0.654						
EnP	0.499	0.609					
IM	0.200	0.251	0.621				
MC	0.305	0.529	0.109	0.612			
P	0.280	0.354	0.372	0.297	0.651		

S	0.202	0.483	0.334	0.355	0.229	0.539	
SP	0.383	0.506	0.315	0.350	0.171	0.242	0.554

Table 4 shows the correlations between the square root of the AVE and the correlations of the square root of the AVE and other constructs are higher meaning that the constructs have good discriminant validity (Fornell and Larcker, 1981).

Table 5: Discriminant Validity (Using Heterotrait-Monotrait Ratio)

Using Heterotrait-Monotrait Ratio (HTMT)	**EP**	**EnP**	**IM**	**MC**	**P**	**S**	**SP**
EP							
EnP	0.743						
IM	0.422	0.511					
MC	0.701	1.114	1.124				
P	0.516	0.722	1.279	1.457			
S	0.471	0.784	0.944	1.250	0.872		
SP	0.644	0.859	0.720	0.846	0.580	0.676	

Table 5 shows that the majority of the values of HTMT fall below the threshold value of 0.90 and a few are >1, however it shows acceptable discriminant validity among constructs (Henseler et al., 2015). Though some of the values tend to go near the maximum limit, they are still within acceptable boundaries of applied management research. All in all, the findings of the discriminant validity indicate that the constructs are empirically different and can be analyzed in a structural model. The correlation analysis in PLS-SEM is implicitly considered by evaluating discriminant validity instead of the conventional Pearson correlations. The Fornell-Larcker and HTMT outputs imply that there are no too many multicollinearities between the constructs.This implies that the independent variables (green marketing dimensions) have a connection with the sustainable performance dimensions, but are still independent enough to enable determination of structural relationships to be reliable (Hair et al., 2019).

Table 6: f^2 (effect size)

	EP	**EnP**	**IM**	**MC**	**P**	**S**	**SP**
EP							
EnP							
IM	0.009	0.004					0.077
MC	0.049	0.190					0.101
P	0.025	0.033					0.001
S	0.002	0.118					0.002
SP							

The f2 values demonstrate that the effects of most of the relationships are not that large in size, although marketing communication and strategy illustrate comparatively stronger effects on environmental performance (Table 6). This also proves that the environmental outcomes are more sensitive to the green marketing efforts than the economic or social outcomes.

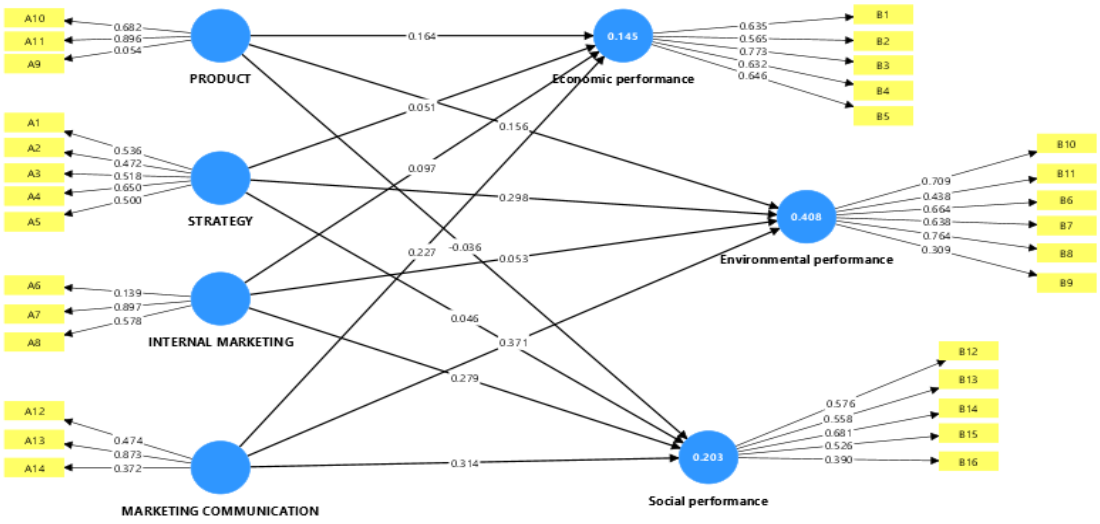


Figure 2. Study Model along with the Loadings

Structural Model (Regression Paths)

Table 7: Regression analysis

Hypotheses	R	R-square	B	P values	Results
H1: INTERNAL MARKETING -> Economic performance	0.086	0.007	0.083	0.05	Supported
INTERNAL MARKETING -> Environmental performance	0.231	0.53	0.190	0.005	Supported
INTERNAL MARKETING -> Social performance	0.254	0.065	0.172	0.008	Supported
MARKETING COMMUNICATION -> Economic performance	0.150	0.023	0.173	0.004	Supported
MARKETING COMMUNICATION -> Environmental performance	0.395	0.156	0.386	0.000	Supported
MARKETING COMMUNICATION -> Social performance	0.250	0.063	0.202	0.001	Supported
PRODUCT -> Economic performance	0.172	0.030	0.172	0.204	Not supported
PRODUCT -> Environmental performance	0.271	0.073	0.230	0.204	Not supported
PRODUCT -> Social performance	0.135	0.018	0.095	0.831	Not supported
STRATEGY -> Economic performance	0.160	0.026	0.202	0.001	Supported
STRATEGY -> Environmental performance	0.452	0.180	0.454	0.005	Supported
STRATEGY -> Social performance	0.200	0.040	0.177	0.770	Not supported

The figure 2 and table 7 shows show that internal marketing has shown a positive association with the three dimensions of sustainable performance. Precisely, internal marketing is only weakly but significantly related with economic performance (R = 0.086, b = 0.083, p = 0.05) and explicates only 0.7% of the variance (R2 = 0.007). The effect size is little and yet the correlation is significant at the traditional value of p 0.05. Moreover, there is the statistically significant and positive effect of internal marketing on the environment (R = 0.231, b = 0.190, p = 0.005), which explains the 5.3 share (R2 = 0.053). In the same way, internal marketing and social performance are positively and significantly correlated (R = 0.254, b = 0.172, p = 0.008) and its explanatory power is 6.5 percent, which supports the idea that the internal organizational practices reinforce the social sustainability

initiatives. Concerning the marketing communication, the results indicate that the relationship between the knowledge and the three dimensions of sustainability is statistically significant. Marketing communication has a positive relationship with the economic performance (R = 0.150, b = 0.173, p = 0.004) and this relationship contributes to 2.3% of the variation, which indicates a significant but not a large contribution. The largest impact of marketing communication is on environmental performance (R = 0.395, b = 0.386, p = 0.000), which accounts 15.6 percent of the variance, which is a moderate to strong explanatory power by the established SEM guidelines (Hair et al., 2017). Moreover, social performance is extensively determined by marketing communication (R = 0.250, b = 0.202, p = 0.001), which is a 6.3-percent contributor, indicating that social responsibility and stakeholder engagement are better when marketing communication is effective. On the other hand, the product dimension does not exhibit statistically significant relationships with any of the dimensions of sustainable performance. All the relationships between product and economic performance (b = 0.172, p = 0.204), environmental performance (b = 0.230, p = 0.204), and social performance (b = 0.095, p = 0.831) are insignificant. There is nothing wrong about such non-significant results, because when models do not achieve statistical significance, it does not mean that the models fail, but rather means that certain aspects of context or sector are just true (Hair et al., 2019). On the green strategy, the findings indicate a divided trend. There is a statistically significant and positive impact of strategy on economic performance (R = 0.160, b = 0.202, p = 0.001) that strategies that are well-constructed lead to better financial performance. In addition, the relationship between strategy and environmental performance has the highest relationship among all paths tested (R = 0.452, b = 0.454, p = 0.005), which explains 18 percent of the variance (R2 = 0.180). Such high explanatory ability is indicative of the pivotal role that strategic commitment plays in the realization of environmental sustainability goals. Nevertheless, the correlation between strategy and social performance does not represent statistically significant (b = 0.177, p = 0.770) in that strategic initiatives might not necessarily lead to social sustainability outcomes, which could be because of implementation gaps or contextual factors. On the whole, the results prove that the most successfully explained dimension of sustainable performance is the environmental performance, especially with the help of marketing communication and strategic orientation. The economic performance has a less impressive explanatory power whereas product related variables do not have significant influence in all dimensions. Such findings are in line with the methodology that recommends the interpretation of statistical significance in conjunction with the effect size and the explained variance in order to derive meaningful theoretical and practical implications (Hair et al., 2017; Sekaran and Bougie, 2016).

Discussion

Green Product and Sustainable Performance (H1 -H3)

The first hypothesis shows that the green product efforts do not significantly impact Economic performance (p = 0.204), hence rejected H1. Also, so it can make the brand seem cooler, or provide a long term advantage, the immediate cash advantage is missing due to the increased production costs, investments in tech, or people unwilling to pay more. That is what a series of previous research discovered - green innovation typically does not yield immediate results, but delayed (Leonisou et al., 2013; Dangelico and Vocalelli, 2017). Hypothesis 2 shows that there is no significant association between green product and positive environmental performance (p = 0.204), hence rejected. In principle, selling green stuff would not make a big difference unless the entire process and supply chain is green as well. According to past studies, it has been noted that it is more about process innovation rather than on the product (Khan et al., 2021; Zhu et al., 2020). Hypothesis 3 examines the impact of Green product on social performance. Results shows no impact (p = 0.831), hence rejected. Green products alone will not increase employee welfare, community health or social impact. That is consistent with previous research that indicates that

culture, labor relations and stakeholder relationships are more important than fine tuning the product design (Fatma et al., 2021; Hur et al., 2020).

Overall, results show inconsistent findings about green product programs. Although the expectation was that green products would help increase all the three performance dimensions, only economic performance had a statistically significant correlation. There was no connection with environmental and social outcomes. Accepting H2 and H3 implies that it is not sufficient to launch green products to enhance environmental or social outcomes. This is in agreement with previous literature that indicates that environmental benefits are more associated with production procedures as well as supply chains than with the features of a product as an individual (Khan et al., 2021; Leonidou et al., 2020). The fact that there is no connection between the green products and the social performance also is a pointer that social benefits such as employee welfare, community involvement, and trust of the stakeholders require company-wide policies and not only on the product (Fatma et al., 2021). Green products in the Pakistani textile situation appear to be market-based rather than institutionally mandated, which is why they are not disrupting the social or environmental performance to a great extent. This partly goes against the results of the developed countries where green products have more sustainability impacts, indicating the essence of the context in the developing countries (Kumar & Polonsky, 2022).

Green Strategy and Sustainable Performance (H4 -H6)

H4 turns out that big picture green strategies are very profitable ($p = 0.001$), hence supported. Firms implementing complete green programs experience improved money flows due to efficiencies, cost reduction and competitive advantage. This supports the Porter Hypothesis that doing something about the environment can in fact strengthen a firm in its financial sense (Saunila et al., 2022). The results of Hypothesis 5 also got supported as Green strategy has a positive impact on the environmental performance ($p = 0.005$). Determined approach to sustainability reduces emissions and waste and increases the resource description. That is what a entire body of previous research has emphasized the strategic angle is the primary force behind elite environmental performance (Leonidou et al., 2020; Khan et al., 2021). Hypothesis 6 results shows that green strategy does not have a significant impact on social performance ($p = 0.770$), hence rejected. Green strategy does not suffice to achieve such social metrics as worker wellbeing or community development unless it is integrated into CSR strategies. Previous research indicates that this requires specific social policies to start the social part (Fatma et al., 2021).

The results are largely in favor of green strategy in enhancing the economic and environmental performance and thus H4 and H5 are accepted. This informs us that companies, which have formal environmental policies, have clear sustainability policies and have long-term objectives, experience increased efficiency, less expenditure and compliance. It supports the Porter Hypothesis which suggests that aggressive environmental policies enhance competitiveness and financial outcomes (Saunila et al., 2022). It is also highlighted by other researchers that strategic environmental focus is significant to best environmental performance (Leonidou et al., 2020; Khan et al., 2021). However, H6 was not accepted, i.e. green strategy does not have a significant role in social performance. Although a strategic environmental position can enhance compliance with regulations and operations, it does not specifically address labour concerns, safety, or community development. Some previous research claims that social performance requires direct CSR actions and governance modifications rather than the environmental policies (Fatma et al., 2021). Social sustainability in the Pakistani textile industry is primarily governed by the compliance regulations, which is likely to deteriorate the connection between the green strategy and the social performance.

Internal Green marketing and Sustainable Performance (H7 -H9)

H7 results show completely supported. Internal green marketing provides a slight yet significant improvement ($p = 0.05$). Engaging employees with the concept of sustainability on board (via discussions, training, and participation) contributes to productivity and reduces expenses. This is supported in the literature, which emphasizes the importance of the staff vibing the green values in boosting performance in general (Paillé et al., 2020). Similarly, internal green marketing performs well to the environment with a positive association ($p=0.005$), hence supporting H8. Educating and encouraging the crew to be more green actually becomes improved environmental outcomes. Other like studies emphasize the importance of in-house environmental consciousness towards achieving sustainability (Pham et al., 2020). The results also shows a complete support of H9 which implies that Internal green marketing has a positive contribution to social performance ($p = 0.008$). This indicates that green culture shared within the firm enhances social performance through the engagement of the employees, ethical action, and good corporate citizenry. That is consistent with research results that internal sustainability practices create social capital in orgs (Fatma et al., 2021).

Overall, Green marketing within an organization has a positive impact on economic performance, environmental performance, and social performance. This proves that employee engagement, environmental training, and internal communication are very important in transforming green marketing into actual sustainability gains. These findings are reminiscent of previous research that emphasizes internal fit and organizational culture to meet sustainability objectives (Paillé et al., 2020; Pham et al., 2020). The most interesting positive relationship is that with social performance which implies that internal green marketing will increase employee commitment, ethical conduct, and organizational citizenship, which improves corporate image and stakeholder confidence (Fatma et al., 2021)). It confirms the notion that attempts to be sustainable are most effective when the employees transfer environmental values and not merely react to the external pressure (Paillé et al., 2020).

Green Marketing Communication and Sustainable Performance (H10-H12)

The hypotheses H10, H11, and H12 with respect to examine the impact of green marketing communications on all dimensions of sustainable performance show complete support (all p values are less than 0.05). H10 checks whether green marketing communications impact positively on the economic performance. The statistics indicate a positive relationship that is definite ($p = 0.004$). Authentic discussion of green activities earns brand loyalty and attracts sales, which convert into improved profits. This is according to the previous research which links green marketing to financial performance (Leonidou et al., 2020; Saunila et al., 2022). H11 also got supported as Green marketing boasts the environment, appearing well ($p < 0.001$). Open and honest dialogue motivates the stakeholders to be responsible and sustainable behaviors are established. The same conclusion was made by Chen (2010) with respect to the strength of green brand message in the context of environmental outcomes (Testa et al., 2021). Similarly, H12 shows a positive impact of Green marketing communications on social performance ($p = 0.001$). Green marketing enhances the social performance because it strengthens the relations between the stakeholders, and develops trust to the society. Past studies reveal that a sustainability-oriented communication approach raises the image and social credit of a company (Fatma et al., 2021).

The overall effect of the eco-labeling, sustainability reporting, and effective communication on the environmental performance that is big points to how the three elements enhance the responsible and accountable behavior in relation to the environment (Leonidou et al., 2020; Testa et al., 2021). The connection with economic performance supports the previous studies that indicated that credible green communication enhances brand image, customer trust, and competitiveness in the

market, which eventually leads to improved financial performance (Saunila et al., 2022; Fatma et al., 2021). High impact on social performance shows that sustainability-based communication reinforces the relationship among the stakeholders and social legitimacy (Crossley et al., 2021). Green marketing communication is a very important source of sustainable performance in export oriented textile industries where the international-buyer is very sensitive on the disclosures of sustainable activities. Concisely, green marketing is an effective yet discriminating instrument of enhancing sustainable performance. The most sensitive one is environmental performance, particularly to green strategy and green marketing communication, as the pressure on textile by regulatory and buyers is so high (Zhu & Sarkis, 2004; Kant, 2012). Internal green marketing and communication boost economic and social performance, but it appears to require more institutional backing and long-term investment to achieve the results consistently. The results indicate that even though green marketing may provide fast environmental payoffs, it has slower economic and social returns, which hinge on its greater integration into the organization. This trend reflects the situation in the textile industry in Pakistan, where environmental compliance is on the top, as in the global market environment, it is what the customers want, and the economic and social sustainability needs the long-term strategic and cultural changes.

Managerial Implications

This study demonstrates that there are a number of practical implications to managers in the Pakistani textile industry. These results indicate that green marketing does have an effect on the sustainable performance of a company, although not in all dimensions. Most significantly, the green marketing strategy and communication actually increase the environmental performance but their impact on economic and social performance is more scattered in the short term. In essence green marketing can be viewed as a means of enhancing environmental performance, however, some of its features such as internal green marketing and communication aid in achieving economic and social objectives.

Firstly, the massive job of the green marketing strategy is that the top-level commitment is the main key to creating a tangible environmental change. Managers must incorporate environmental objectives in their strategies, policies as well as long-term planning. The tangible outcomes can be achieved through setting clear environmental goals, investing in cleaner technology, and harmonizing sustainability goals in departments (less waste, emissions, resources, etc) (Leonidou et al., 2020; Saunila et al., 2022). This is an indication that sustainability must be a leadership-driven process, as opposed to a haphazard or token green activity.

Second, it is evident that green marketing communication can significantly affect environmental performance, which is why it is important to be open and interact with the outside world. Managers ought to put their neck in green communication practices that are credible like eco-labels, sustainability reports and honest environmental advertisements. Such strategies besides increasing environmental responsibility, enable companies to uphold their environmental commitments (Testa et al., 2021; Leonidou et al., 2020). Compliance is a primary concern to the global customers and green communication can enable firms to remain viable in the global markets. Simultaneously, the results indicate that a good green communication also benefits the economic and social performance through the enhancement of brand credibility and stakeholder trust.

Third, although the environmental performance is the most reactionary, the implications of the effects of the economic and social performance mean that managers must see the green marketing on a long-term, integrative scale. There are also certain financial and social benefits that may emerge in the near future- in particular in the area of internal green marketing and communication - however, even greater, long-run gains will be achieved by investing in the long-term,

restructuring operations, and including more stakeholders (Saunila et al., 2022; Elkington, 2018). Managers should not give up green initiatives due to the short-term cost pressure, rather they should view them as a long-term way to sustainability.

Conclusion

This research aimed to investigate the effect of green marketing on the sustainable performance of organizations within the context of the textile industry in Pakistan. The main aim of the research was to investigate the empirical relationship between green marketing's dimensions of strategy, internal marketing, product, and marketing communication and the economic, environmental, and social performance of textile organizations. Results of the research offer significant and useful keys to understand the importance of green marketing in promoting sustainability within the environmentally sensitive sector of textile industry. The findings indicate that green marketing has a positive effect on sustainable organizational performance, although it is not significant on all organizational performance dimensions. The findings highlight that a significant positive effect exists on environmental performance between variables based on green marketing strategy and green marketing communication. This shows that environmental sustainability is well achieved through commitment to strategies and proper communication about environmental practices. The effect of dimensions of green marketing on economic and social performance is shown to be statistically insignificant. This indicates that, whereas improvements in the environment can be achieved within a short period, economic and social improvements take a longer time. In sum, the results support the goals of this research work and validate the key role green marketing has had in improving sustainable performance. It should be noted that the current paper has filled the identified gap in research by contributing empirical findings from developing countries, which had less prior research on this subject. By using the quantitative method and the application offered by PLS-SEM, the current paper has proffered a systematic and accurate analysis on the role green marketing has had on sustainable performance results. While evaluating the success of this overall project, it can be noticed that this research satisfies its own objectives because it has been able to provide empirical insights that carry important subject matter and real-world implications. These implications and references specifically contribute towards understanding how green marketing works within the textile industry in Pakistan. Conclusion: This study thus emphasizes the importance of regarding the concept of green marketing as a tool for improving the textile sector environmentally, while its other effects might take time to surface in terms of its economic or social implications. This paper emphasizes the need to integrate marketing and sustainability and proves that sustainable development on a larger scale can indeed be achieved when the concept of environmental responsibility is incorporated within the organizational context.

Limitations & Future Directions of the Study

Despite the fact that this research managed to reach the objectives that were set, there are a number of limitations that must be identified when interpreting the results, which also led to suggestions as to future research. To start with, this research used convenience sampling design and this narrows down the findings to a broader population. Accessibility, time constraint, and willingness of textile firms to participate were the criteria used in selecting respondents, as opposed to the random selection. Consequently, the results might not be a true reflection of the whole population of the textile companies in Pakistan. Probability-based methods of sampling, including stratified or random sampling, should be used in future studies to increase the external validity and make the textile industry more representative (Hair et al., 2019). Second, the sample size was not too large; however, it is rather modest, which is necessary to conduct PLS-SEM analysis. Although PLS-SEM can perform reliable analysis with smaller samples than covariance-based SEM. This is due to the fact that a larger sample size would enhance statistical power and offer more consistent

estimates of parameters. It is recommended that large samples are used in future, which can give the option to apply multi-group analysis or other more advanced structural models and enhance the validity of results (Hair et al., 2019). The research was a cross-sectional research design, where the information was gathered at one time. As a result, the determined connections between sustainable performance and green marketing practices are relationships not causal. This constraint is especially in regard to economic and social performance that tend to be expressed in the longer term. The future researches must utilize longitudinal research designs to detect delayed or cumulative impacts of green marketing actions as well as to identify causality in a better manner (Saunila et al., 2022; Elkington, 2018). This research is descriptive research as because of the time and less convenience of accessibility it was difficult to undergo Causal research. Causal research which is appropriate more for that research in future it might be possible that causal research will be carried out and data collection would be longitudinal in order to get more precise results. There were certain limitations in measurement model, because some of the constructs showed rather low Cronbach's alpha as well as AVE. Even though the composite reliability values were acceptable and the indicators with lower loadings were maintained because of their theoretical implication, the problems could influence the measurement precision. In subsequent studies, measurement scales need to be improved and retested, perhaps by deleting weak items or rewording those items to better satisfy the local environment, or by creating scale-specific items to enhance the reliability and convergent validity (Fornell and Larcker, 1981; Hair et al., 2019). The research had been based on self-reported data, subject to social desirability bias. The respondents might also have exaggerated on the green marketing activities or sustainable performance of their firms in order to paint a good picture of their organizations. The next generation of research can help minimize the problem of bias by adopting mixed approaches, secondary data, objective performance measures, or triangulating surveys responses with interviews and sustainability reports (Podsakoff et al., 2003). The respondents are heterogeneous which limits it. The respondents were on various levels of management, that is, line, operational, functional and strategic management. This diversity can also bring in various points of view, though it can also create discrepancies in perceptions in as far as strategy formulation and performance measurement are concerned. Future studies may utilize multi-group analysis to identify the difference in responses between managerial levels or concentrate on one stage of the management to increase the consistency of measurement and interpretability (Hair et al., 2019). Despite the several hypotheses put forward, some of them, especially those concerning the relationship between green products and green strategy with the social performance were not empirically stated. This selective importance might be explained by the contextual specifics of the Pakistani textile industry where the environmentally adequate compliance is valued under the impact of the regulatory and international purchaser pressure, whereas the economic and social advantages of green marketing might take longer time frames to become tangible. It is possible that in future research, mediating or moderating variables, including organizational culture, regulatory pressure, firm size, or stakeholder engagement, can be involved to explain these mixed outcomes more appropriately (Jamali, 2006; Papadas et al., 2017). The research was only carried out in the Pakistani textile sector that has its own regulatory, economic and market specifications. Due to this fact, the results cannot be directly generalized to other industries or nations. In future research, this study would be replicated in other industries or cross-country to increase the degree of generalizability and find out the effect of institutional and cultural variables on the success of green marketing activities (Khan et al., 2021; Leonidou et al., 2020).

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