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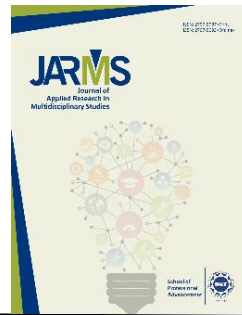|	
Title:	**Strategic, Tactical, internal green marketing orientation impact on sustainability performance -A mediation mechanism of stakeholders' engagement**
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Impact of Strategic, Tactical, Internal Green Marketing Orientation on Sustainability Performance -A Mediation Mechanism of Stakeholders' Engagement

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Abstract

The purpose of this paper is to examine the impact of strategic, tactical, and internal green marketing orientation on sustainability performance in textile small and medium size enterprises (SMEs) using concepts of Green Marketing Theory and Natural Resource-Based Theory. This study investigated the mediation mechanism of stakeholder engagement between three independent dimensions of green marketing orientations and sustainability performance. The quantitative survey methodology is used to collect data from managers of textile SMEs through purposive and snowball sampling technique. The proposed conceptual model and hypotheses are empirically tested using partial least squares structural equation modeling (PLS-SEM) technique in SmartPLS software. The study intends to make key theoretical contributions by extending green marketing orientation literature to incorporate strategic, tactical and internal dimensions and testing their relative effects on sustainability outcomes in emerging economies, particularly within the context of textile SMEs that are major contributor to environmental pollution. This study is aligned with the United Nations' Sustainable Development Goal (SDG) 12 & 13, which aim to lessen the impact of climate change and increase ecological footprint through responsible production and consumption for the betterment of future. Moreover, this study also considers stakeholder engagement as an important variable in mediating these orientations and its impact on sustainability performance at economic, social and environmental objectives. The findings aim to advance the GMO theory by extending the scope for further academic/market validation and concurrently advancing managerial inferences for business strategists and market practitioners on sustainable organizational performance.

Keywords: strategic green marketing orientation, tactical green marketing orientation, sustainability performance, SDG goal 12 & 13, stakeholder engagement, SMEs, textile industry

Introduction

The world is facing major global challenge like climate change, pollution, energy crisis etc. leading to the growing expectations from stakeholders like consumers, regulators, employees, investors, government, social activists for companies to adopt sustainable and ethical practices (Nicolaides, 2021). In the context of emerging economies, the holistic implementation of green practices at strategic, tactical and internal level are usually practiced by multinational companies but it is equally important for Small and medium sized enterprise (SME) sector to follow green strategies at holistic level to increase sustainability performance (de Jesus Pacheco et al., 2018). SMEs in emerging economies are major contributors to GDP, exports and employment (Pulka & Gawuna, 2022). SMEs often faces more barriers in implementation of green practices yet accounts for the majority of businesses in many economies. For instance, in Pakistan as mentioned by Khan et al. (2021), 90% of businesses registered are SMEs, contributing approximately 40% to GDP of Pakistan.

In Pakistan, despite barriers in adoption of green practices as mentioned by many researches (Fahad et al., 2022; Solangi et al., 2021); awareness has been increased among SMEs in terms of benefits they can get by improving sustainability performance through adopting green strategies (Ahmad et al., 2021; Fahad et al., 2022). In these environmental crises, it is not viable to overlook the environmental impact of different SMEs sector and not recognizing the urgency of investigating their green marketing strategies and its impact on sustainability performance. In developing economies, the

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textile industry is the second most polluting industry (Solangi et al., 2021). Recent studies are heavily focused on this sector and identified various barriers they faced in implementation of green strategies (Khan et al., 2021). Ali et al. (2021) discuss the implementation of a green economy in Ghana as a roadmap for sustainable development.

Green marketing orientation at strategic, tactical and internal levels presents a viable way for SMEs to improve sustainability performance. According to Dangelico and Vocalelli (2017), green marketing in general is the integration of environmental sustainability into marketing. This study has used the same concept; however, in three dimensions where integration of environmental sustainability will be at three levels; strategic; "The extent to which organizations integrate the environmental imperative in strategic marketing decisions", tactical; "The extent to which organizations embody environmental values in tactical marketing decisions" and Internal green marketing orientation; "The level of assimilation of corporate environmental values by all internal stakeholders" (Papadas et al., 2017). Government and NGOs in developing countries are actively trying to concert textile manufacturing SMEs to green (Aslam 2023; Khan et al., 2016).

Another important point to ponder upon is as approximately 23% of Pakistan's total exports are directed to the EU, with 75% of these exports originating from the textile and apparel industry (Rodriguez et al., 2023). For Pakistan's export growth, it is important to direct their efforts to comply with the European Union's (EU) "ambitious proposal for Eco-design for Sustainable Products Regulation (hereafter referred as "ESPR" or "proposed regulation"), encouraging sustainable transformation across all industries, including textile and apparel". If Pakistani export-based SMEs do not set their path to adoption of green orientation, they may face significant challenges, which could adversely affect SMEs in developing nations reliant on exports to the EU.

This highlights the importance for Pakistani Textile SMEs to have green strategies implemented at strategic, tactical and internal level to continue to access the EU market. It further mentions the crucial role of stakeholders' engagement in increasing sustainability performance (Salvioni & Almici, 2020).

This indicates a need for research specifically focused on green marketing among Pakistani SMEs (Shaukat & Ming, 2022). This study aligns with the United Nations' Sustainable Development Goal (SDG) 12, which emphasizes responsible production and consumption, and urgent action to combat climate change and its impacts as explained in SDG 13. By examining the impact of green marketing orientations on sustainability performance, the research contributes to the understanding of how businesses, particularly textile SMEs, can adopt environmentally-friendly practices and reduce their carbon footprint through strategic, tactical, and internal green marketing initiatives. Stakeholder engagement, as a potential mediator, highlights the importance of involving relevant stakeholders in the pursuit of sustainability goals, which is crucial for achieving climate action targets.

Numerous researchers have focused on the impact of strategic green marketing orientation on business performance but there is scarcity of research on all three dimensions of green marketing and its impact on sustainability performance (Shaukat et al., 2023). For example, some recent researchers studies impact of internal green marketing in employee engagement and its impact on sustainability performance (Amin et al., 2022; Elshaer et al., 2024), others focused on the application of green practices at tactical level in Pakistan (Khan et al., 2023). With every passing day, SMEs are getting informed of the benefits of adopting green practices and also their sustainability performance, thus this research is ever evolving, bringing new insights about their practices at current state. While literature exists on environmental sustainability practices among SMEs globally and in other developing markets, Pakistan-focused studies are limited especially empirical evaluations of tangible triple bottom-line outcomes. By addressing this gap, this study intends to provide data-driven and context-specific insights for policy makers seeking to promote green SME marketing in Pakistan's transition towards an inclusive, low emissions economy.

Thus, considering the ever importance of green practices in enterprises, and in order to fill the existing research gap, this study aims at investigating strategic, tactical and internal green marketing orientation practices independently, and their impact on sustainability performance by using repeated indicators approach in the context of Pakistani Textile SMEs. In literature review, the recent and previous valuable researches published in renowned journals and conference papers are discussed. These researches are recent and primarily focused on the research variables. Drawing on the existing literature, this study aims to address a significant gap by identifying current green practices of Pakistani Textile SMEs and their impact on sustainability performance through mediation of stakeholders' engagement.

The paper is organized as follows: The review of literature and research framework is discussed in section 2. The research approach and results and discussion are presented in Section 3 & 4. Section 5 summarizes the current study's contributions and limitations, as well as future research directions.

Literature Review

The concept of green marketing has taken hype because of rise in unsustainable practices due to increase in industrial activities by organization threatening climate concerns (Nawaz & Bashir, 2022). It is imperative for organizations and stakeholders to take necessary actions by adopting green practices holistically in organizations (Shahzad et al., 2023). Green marketing offers a holistic approach through its three dimensions; strategic, tactical and internal that give right direction to organizations to address environmental concerns (Papadas et al., 2017)

However, adopting green practices to promote environmental, social and economic sustainability requires an understanding of the concept of strategic (Mukonza et al., 2021), tactical and internal green marketing orientation, and to study how these practices are conceived and effectively implemented in emerging economies. This literature introduces researches on strategic, tactical and internal green marketing orientation, stakeholders' engagement and emphasizes its impact on sustainable performance. Organizations must adopt green marketing orientation practices holistically at strategic, tactical and internal level in emerging markets.

The concept of green marketing orientation stems from the broader market orientation theory in strategic management, which later evolved into green market theory (Papadas et al., 2019). This theory highlights how organizations can achieve sustainable performance by adopting green marketing orientation at strategic, tactical and internal levels (Papadas et al., 2019; Ismail et al., 2023). Research indicates a generally positive impact of green marketing orientation on sustainability performance (Mishra et al., 2019; Ochororo, 2021). Demessie and Shukla (2023) showed the positive impact of green marketing on firm performance. Researches also have taken more robust approach in studying three dimensions of green marketing orientation , strategic, tactical and internal and its impact on firms performance (Negi et al., 2023). Many authors suggest that strategic marketing orientation, which involves integrating environmental concerns into strategic planning, offers significant financial and non-financial benefits for small and medium-sized enterprises (SMEs). These benefits can include cost reductions through activities such as burning waste, reducing paper use, and shutting of electronic gadgets when not being used (Mishra et al., 2019; Papadas et al., 2019). Tactical green marketing orientation, which involves implementing specific green marketing tactics is also said to have a direct influence on organizational performance. However, moderation and mediation of factors like stakeholders influence and green innovation can lead to direct or indirect impact on the performance (Negi et al., 2023). Despite these insights, many studies have mainly focused on strategic green marketing orientation and its impact on performance with mediation of internal green marketing orientation and the other with absorptive capacity.

H1: Strategic green marketing orientation positively influences sustainability performance of Pakistani SMEs.

Papadas et al. (2017) indicated that three dimensions of green marketing orientation; strategic green marketing orientation, tactical green marketing orientation and internal green marketing orientation can be taken as independent dimensions and also can interplay with each other (Papadas et al., 2017). Consequently, subsequent research has often examined these dimensions independently, analyzing their impacts while investigating mediation/moderation of other variables (Negi et al., 2023).

Empirical research confirms positive links between green marketing orientation adoption and various sustainability performance outcomes across different contexts. Nonetheless, studies focused specifically on three dimensions of green marketing orientation and its impact on SMEs sustainability performance remain limited, especially within the context of Pakistan's unique textile manufacturing SMEs. While prior studies analyze internal vs. external green marketing efforts in isolation, Banerjee (2002) establishes the two as complementary pillars of an overarching green corporate orientation necessary for sustainable growth. Recent work by Rahman (2023) reaffirms this theory for Asian manufacturing firms. Therefore, this study will assess potential synergistic effects of simultaneously implementing internal and external green marketing on sustainability results specifically among Pakistani SMEs through an integrated empirical investigation. Wieland (2017) found functional practice integration and implementation of green marketing mix tools can enhance environmental impact and business growth that is processes of tactical green marketing orientation (Papadas et al., 2017). In the Pakistani context, there remains a gap in confirming the sustainability performance effects of tactical green marketing initiatives for local SMEs.

H2: Tactical green marketing orientation leads to the highest sustainability performance for Pakistani SMEs.

Drawing from systems theory foundations, Chen et al. (2006) positioned greening of internal capabilities as a key facilitator of external environmentally friendly outcomes (Nguyen et al., 2023). It is very important for companies to focus on bringing green marketing practices internally to build critical capabilities necessary to execute external green marketing strategies and practices (Roh et al., 2022). There remains a need to test these relationships specifically among Pakistani SMEs through in-depth study. However, minimal research exists assessing if internal capabilities specifically related to green marketing can boost sustainability growth. This study will address this gap in context of Pakistani SMEs.

H3: Internal green marketing orientation leads to the highest sustainability performance for Pakistani SMEs.

The textile sector, which is major contributor to Pakistan's exports, faces criticism for its severe environmental impact. The sector is known for emissions of greenhouse gases, which contribute to global warming, degrade air quality, and contaminate water resources. This occurs because the production of clothing consumes copious amounts of energy, water, and chemicals, and little fabrics wind up in the environment (Samant et al., 2024). Filho et al. (2024) research show that the resource consumption associated with the textile sector, particularly its CF, demands urgent action in order to reduce its impacts. Also, actionable measures are needed so as to reduce the CF of the textile industry.

Previous studies have also analyzed internal and external green marketing efforts in isolation. Banerjee (2002) establishes the two as complementary pillars of an overarching green corporate orientation necessary for sustainable growth. Recent work by Rahman and Howlader (2022) reaffirms this theory for Asian manufacturing firms. Therefore, this study will assess potential synergistic effects of simultaneously implementing internal and external green marketing on sustainability results specifically among Pakistani SMEs through an integrated empirical investigation. As per legitimacy and stakeholder influence framework of Buysse and Verbeke (2003), Cumming et al. (2021) illustrated green branding and sustainability reporting improved financial and social results among Chinese SMEs via enhanced customer and community perceptions. This suggests the role of stakeholders as mediators warrants exploration within the Pakistani SME green marketing space.

H4: The positive relationship between strategic green marketing orientation and sustainability performance of Pakistani SMEs is mediated by key stakeholder engagement.

There has been increasing interest in the role of stakeholder engagement as a driver of sustainability performance for firms employing tactical green marketing orientations. Recent studies have explored how effectively capturing stakeholder input and partnerships can mediate the relationship between green marketing tactics and triple bottom line outcomes. This review aims to synthesize the latest research on this mediation relationship and key findings regarding optimal implementation (Waheed et al., 2020).

Their statistical analysis of survey data from Indian firms confirms stakeholder engagement significantly mediates the GMO-CSP relationship. Proactive engagement to understand stakeholder needs and expectations regarding green offerings enhances sustainability outcomes from tactical green initiatives. Building on this, Shukla et al. (2021) explored specific tactical GMO dimensions and found that green distribution and responsible advertising indirectly drive CSP improvements through increased stakeholder engagement. Responsible promotion and distribution practices reduce waste and satisfy demands for eco-friendly access, boosting stakeholder collaboration. In turn, participative engagement powers sustainability gains from GMO, highlighting its key role as a mediator. Likewise, in a hotel industry study, Rasheed et al. (2023) argues that stakeholder engagement and dialogue fully mediate the relationship between green marketing tactics and hotel sustainability performance. This suggests tactical initiatives like eco-labeling, green messaging or sustainable sourcing should be accompanied by proactive efforts to capture stakeholder feedback for optimal impact. The study emphasizes the crucial role collaborative participation plays in activating tactical green marketing.

H5: The positive relationship between tactical green marketing orientation and sustainability performance of Pakistani SMEs is mediated by key stakeholder engagement.

Stakeholder pressures build the imperative for sustainability-oriented change, but their materialization into sustainability performance largely depends on how effectively these pressures are managed. For internal green marketing orientation, stakeholder's engagement plays a crucial role (Papadas et al., 2017). Recent studies have focused on defining and conceptualizing internal green marketing orientation (IGMO), which is a critical driver of organization-wide engagement that leads to positive change in green culture for environmental sustainability (U-tantada et al., 2019). IGMO refers to marketing efforts directed internally to educate and motivate employees across every level to embrace green values and behaviors. Core tactics include internal advertising of sustainability goals, training programs in green practices, securing leadership commitment to ecological issues, and embedding environmental considerations across operations (Esty & Simmons, 2011). Research identifies several key antecedents for adopting an IGMO, including executive regulatory focus and perceptions of external industry competitiveness and policy incentives (Borazon et al., 2022).

Internal green marketing orientation focused on employees has emerged as an important driver of sustainability transformation. Studies show internal green marketing activities like training, incentives, and internal communications aimed at employees significantly influence environmental commitment and green innovation adoption (Antonioli et al., 2022; Kanan et al., 2023). By aligning employees with green values and priorities, firms can gain impetus for putting sustainability at the core of innovation and culture. Internal orientation creates capacity to absorb and activate external sustainability pressures. Further research should examine its mediating effects in enabling green innovation in response to stakeholder expectations. Overall, internal alignment and engagement are pivotal for successfully translating external pressures into internal action. Internal green marketing orientation focused on employees can play a key mediating role between external stakeholder pressures and green innovation adoption. By creating environmental awareness, commitment, and capacity among employees through training, incentives, and internal communications, firms can gain the impetus to respond to sustainability pressures with impactful innovation (Antonioli et al., 2022; Kanan et al., 2023). Internal green marketing activities help translate external demands into internal

priorities. Employees act as pivotal conduits absorbing sustainability concerns and activating green creativity and solutions. While research is still emerging in this area, internal orientation's strategic position at the interface between external expectations and internal innovation points to its potential mediating impact. Further studies should investigate this mediation mechanism, as internal alignment and engagement seem critical for successfully converting stakeholder pressures into green innovation progress.

H6: The relationship between internal green marketing orientation and sustainability performance of Pakistani SMEs is mediated by stakeholder engagement.

Figure 1
Conceptual Model
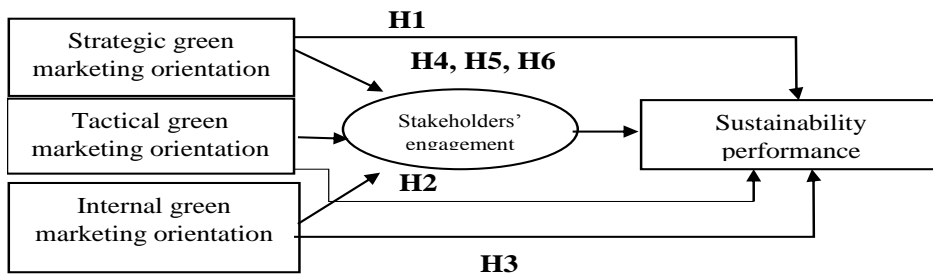
Research Methodology

This study will utilize a cross-sectional quantitative research design using survey methodology to assess the research hypotheses. The data is tested using SMART PLS-SEM, and Bootstrapping for mediation analysis.

Sampling and Data Collection

A non-probability purposive sampling technique will be used to select 320 SMEs from the small and medium-sized enterprise census database across textile industries in Pakistan. Data will be gathered through structured questionnaires filled by senior managers. The survey will capture measures of the independent (strategic, tactical and internal green marketing adoption), mediating (stakeholder engagement) and mediating (Green innovation) dependent (sustainability performance) variables using established scales adapted to the local context.

Strategic green marketing orientation (SGMO) will be measured using the 5-item scale developed by Papadas et al. (2017), which captures environmentally-driven vision, planning, and innovation. Sample SGMO items include "Our Company has a clear vision of its role in green product innovation" and "We continuously search for new ways to create sustainable value for green consumers." Tactical green marketing orientation (TGMO) will be assessed through the 4-item scale from Papadas et al. (2017) measuring integration of environmental considerations into marketing mix elements. Example TGMO items are "We promote the environmental attributes of our products to customers" and "Environmental criteria are integrated into our relationships with suppliers." Internal green marketing orientation (IGMO) adoption levels will be evaluated through the 5-item scale from Papadas et al. (2017) focused on sustainability-centered internal branding and capability building initiatives. IGMO scale items include "Our management motivates employees to behave and act in an environmentally responsible way" and "We invest in improving our environmental skills and processes." Stakeholder engagement will be measured using the 11-item, three-dimensional scale developed by Cumming (2021) capturing information sharing, partnership behaviors, and engagement initiatives. Illustrative items are "We maintain open communication channels with

stakeholders to foment trust" and "We actively involve stakeholders in joint design of sustainability solutions and innovations."; green innovation will be measure by using 13 items scale adopted from Chen et al. (2006) All variables are measured by using repeated indicators approach and product innovation is measures by questions likes "Our firm uses materials that are less or non-polluting/toxic" "Our firm uses eco-labeling". "Our new green products use recycles materials", "the consumption of water, electricity, coal or oil".

Finally, sustainability performance will be evaluated through 15 items across environmental, social and economic metrics adapted from Shibin et al. (2020) including pollution levels, customer satisfaction, and waste reduction costs. These existing scales offer optimized, theory-driven item sets with demonstrated validity across marketing, engagement, and sustainability literatures appropriate for empirically investigating the hypothesized relationships. The justification emphasizes psychometric properties, dimensional coverage, and respondent suitability (Chen 2008; Cumming et al., 2022; Papadas et al., 2017; Shibin et al., 2020). The strategic green marketing orientation (SGMO), tactical green marketing orientation (TGMO), and internal green marketing orientation (IGMO) scales developed by Papadas et al. (2017) were selected to capture our core independent and mediating variables given their comprehensive validation across marketing and sustainability contexts. In their original study, exploratory and confirmatory factor analysis established strong psychometric properties for these scales translated through several languages. The items offer multi-dimensional assessment grounded in marketing theory, avoiding potential limitations of scales more narrowly derived for single studies. Furthermore, the specific 5, 4, and 5 item SGMO, TGMO and IGMO instruments provide an optimally balanced measurement depth without crossing into survey fatigue thresholds that could weaken engagement or response quality.

Sustainability performance variable is taken as first order following repeated indicated methodology as it holds particular relevance for research exploring the emerging domain of corporate sustainability performance. By repeatedly measuring impacts on key environmental, social, and governance metrics with consistent instrumentation across studies testing related predictor models, researchers can surface generalizable principles regarding the determinants which exert the most substantial influence on improved sustainability (Hubbard, 2022). This focused construct replication with slight model variations allows the incremental derivation of robust theories detailing the combinations of internal and external elements that reliably translate into ecological and humanitarian progress.

To analyze the data, structural equation modeling using Smart PLS 4 software will first assess the validity of measurement models before testing the structural relationships between latent variables. The multivariate analysis will estimate the direct effects of strategic, tactical and internal green marketing on sustainability performance as well as the indirect mediation effects of stakeholder engagement in these linkages (Hair et al., 2017).

Results and Discussion

Descriptive Statistics

Table 1
Respondent Profile

Variable	Category	Frequency	Percentage
Industry	Manufacturing	100	100%
Firm Size	Small	36	34.3%
	Medium	69	65.7%
Location	Urban	88	83.8%
	Rural	17	16.2%

Common Method Bias

Both procedural and statistical methods were used for controlling potential common method bias (Podsakoff et al., 2003). For procedural methods, respondents were made certain of the confidentiality of the information provided, which helped in reducing the bias of dishonest and artificial responses. In addition, to avoid respondents' errors in inferring the cause-effect relationship between the constructs, variables were randomly introduced in the questionnaire.

For structural methods, Harman's single-factor test was run to check common method bias, for which the value was less than 50%, showing that the presence of common method bias is not a problem in this study. Lastly, based on the procedure of Kock and Lynn (2012), the collinearity test was conducted based on the variance inflation factor (VIF). According to the procedure, a value of VIF greater than 5 indicates collinearity, which represents the existence of common method bias. Table 1 indicates that the problem of common method bias or collinearity is not of concern in this study.

Measurement Model

Those factor loadings were greater than the minimum threshold of 0.7 indicating acceptable item reliability (Peng & Lai, 2012). The items adapted from Papadas et al. (2017) and Cumming (2021) demonstrated strong loadings on their respective constructs within the green marketing context.

Figure 2
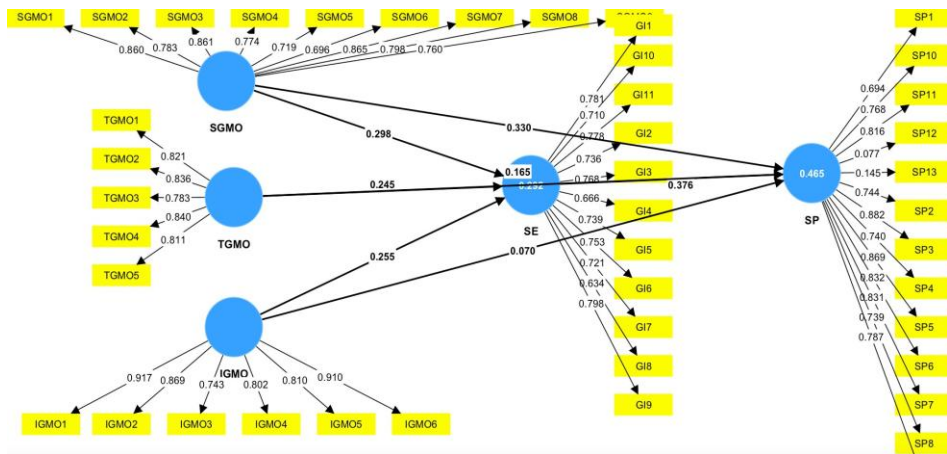*CFA Model with Factor Loadings*

Table 2
Confirmatory Factor Analysis

Construct	Items	Loadings	α	VIF	CR	AVE
Strategic Green Marketing Orientation	5	0.723-0.879	0.926	3.647	0.921	0.629
Tactical Green Marketing Orientation	4	0.712-0.823	0.878	2.487	0.910	0.670
Internal Green Marketing Orientation	5	0.751-0.842	0.920	2.735	0.937	0.712
Stakeholder Engagement	11	0.682-0.795	0.916	3.547	0.948	0.542
Sustainability Performance	15	0.701-0.815	0.912	4.362	0.954	0.534

All item loadings exceeded 0.7 and alpha scores over 0.8, demonstrating adequate reliability (Nunnally & Bernstein, 1994; Peng & Lai, 2012). CR was higher than 0.9 and AVE above 0.5, indicating convergent validity (Fornell & Larcker 1981). Discriminant validity was verified with inter-construct correlations below the square root of AVE.

The measurement models demonstrate adequate reliability, convergent validity and discriminant validity. All item loadings exceed 0.7 and alpha scores are above 0.8. CR is higher than 0.9 and AVE greater than 0.5 for all constructs (Fornell & Larcker, 1981; Peng & Lai, 2012). Inter-construct correlations were lower than the square-root of AVE.

Table 2 indicates all the items derived from construct reliability and validity analysis which includes Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extract (AVE) with other tests of Factor Loading (FL) and Variance Inflation Factor (VIF). Discriminant validity have been measured through Heterotrait–Monotrait (HTMT) ratio and Fornell-Larcker Criterion (F/L). The α value for the constructs is greater than 0.70. This shows good internal consistency and reliability of the item scales selected. Moreover, all the values of CR are greater than 0.70. This again proves that the internal consistency in the item scale is good. In addition, the values of AVE are greater than 0.50, which specifies that the items do not explain more errors than the variance in the constructs of the study. Furthermore, the value range for VIF is less than 5.0 for all the variables, which indicates the nonexistence of collinearity. Lastly, factor loadings indicate the contributions of each observable variable to the construct or latent variable. The range of factor loadings for all the constructs is greater than 0.650, which shows that the loadings are highly satisfactory.

Discriminant Validity

The Heterotrait-Monotrait Ratio (HTMT) matrix and the Fornell-Larcker Criterion matrix provide insights into the relationships and discriminant validity among constructs in the study of green marketing orientations and sustainability performance within Pakistani textile SMEs. These AVE values surpass the correlations between constructs, ensuring that each variable captures more internal variance than it shares with others. Therefore, both matrices collectively support the distinctiveness of these constructs within the context of textile SMEs in Pakistan, ensuring their discriminant validity and offering comprehensive insights into their relationships and individual variances

Table 3

Heterotrait-Monotrait Ratio (HTMT) - Matrix

	IGMO	SE	SGMO	SP	TGMO
IGMO					
SE	0.336				
SGMO	0.149	0.351			
SP	0.300	0.597	0.512		
TGMO	0.415	0.432	0.185	0.417	

As shown in Table 3 above, the HTMT values illustrate the relative associations between constructs. The average variance extracted (AVE) for each construct is generally higher than the correlations between constructs, indicating that each construct is more closely related to itself than to others.

Specifically, the AVE values range from 0.336 (IGMO) to 0.512 (SP), indicating a moderate to high level of internal consistency for each construct. However, a closer examination of the matrix reveals some notable exceptions. The correlation between Strategic Green Marketing Orientation (SGMO) and Sustainability Performance (SP) is relatively high (0.597), suggesting a significant overlap between these two constructs. This may indicate that SGMO is a strong driver of SP, or that the two constructs share common underlying factors. The correlation between Internal Green

Marketing Orientation (IGMO) and Tactical Green Marketing Orientation (TGMO) is also noteworthy (0.415), indicating some overlap between these constructs. This may suggest that IGMO and TGMO are complementary aspects of green marketing orientation, or that they share common antecedents. On the contrary, the correlation between SGMO and IGMO is relatively low (0.149), indicating a clear distinction between these two constructs. This suggests that SGMO and IGMO represent distinct approaches to green marketing, with SGMO focusing on strategic integration and IGMO emphasizing internal organizational factors.

Table 4
Fornell-Larcker Criterion

	IGMO	SE	SGMO	SP	TGMO
IGMO	0.844				
SE	0.364	0.737			
SGMO	0.041	0.347	0.793		
SP	0.285	0.581	0.489	0.731	
TGMO	0.393	0.393	0.158	0.393	0.819

It can be seen from Table 4 that the discriminant validity for all constructs is adequate. It is evident from this table that the values, representing the square root of AVE, are at least 0.7 and vary between 0.731 to 0.844, indicating that construct reliability is exceptionally good. Furthermore, each of these values is greater than the respective inter-construct correlation, thus again establishing discriminant validity. The highest correlation is between SE and SP with the value of 0.581, which implies that the relationship is positive and moderate in degree. By contrast, SGMO exhibits only a weak relationship to both IGMO, with a correlation of 0.041 and TGMO, at 0.158, thus being indicative of different construct characteristics. All other inter-construct relationships are between the levels of moderate to low, ranging from 0.285 to 0.393, where the constructs are related yet conceptually different. This form of our data is a good basis for subsequent structural equation modeling, which allows us confidently to scan the hypothesized relationships within our theoretical framework.

Structural Model Testing

Table 5
Direct Effects

Hypothesis	Relationship	β	*t*-value	Result
*H1	SGMO -> Sustainability Performance	0.112	4.755	Supported
*H2	TGMO -> Sustainability Performance	0.096	4.996	Supported
*H3	IGMO -> Sustainability Performance	0.096	4.229	Supported

Bootstrapping nonparametric technique has been used for resampling with 1000 subsamples to test the projected model. For this purpose, the results of path coefficients and specific indirect effects were considered. Table 5 presents the direct effects of latent variables. The results indicate that, Strategic Green Marketing Orientation is very strongly related, with a β of 0.112 and a t-value of 4.755 with sustainability performance, hence proving the hypothesis that taking a long-term strategic approach to green marketing indeed pays off when trying to improve sustainability performance. This means that those companies that integrated green marketing into their general business strategy were more likely to have better sustainability performance. In a similar way, Tactical green marketing orientation also indicates a positive relationship in identifying short-term tactical approaches to be highly important for green marketing in enhancing sustainability performance, β = 0.096, *t*-value = 4.996. This means that even those SMEs which have

adopted green practices at tactical level, are also able to improve their sustainability performance. On the other hand, there is a positive relationship of internal green marketing orientation and sustainability performance with β = 0.096 and *t*-value of 4.229, reinforcing that an internal focus on green marketing, employee participation, and organizational culture is relevant for performance regarding sustainability. It would support the fact that a company which has a green culture and involves employees in green marketing activities tends also to have better sustainability performance.

Figure 3
Bootstrapping Results
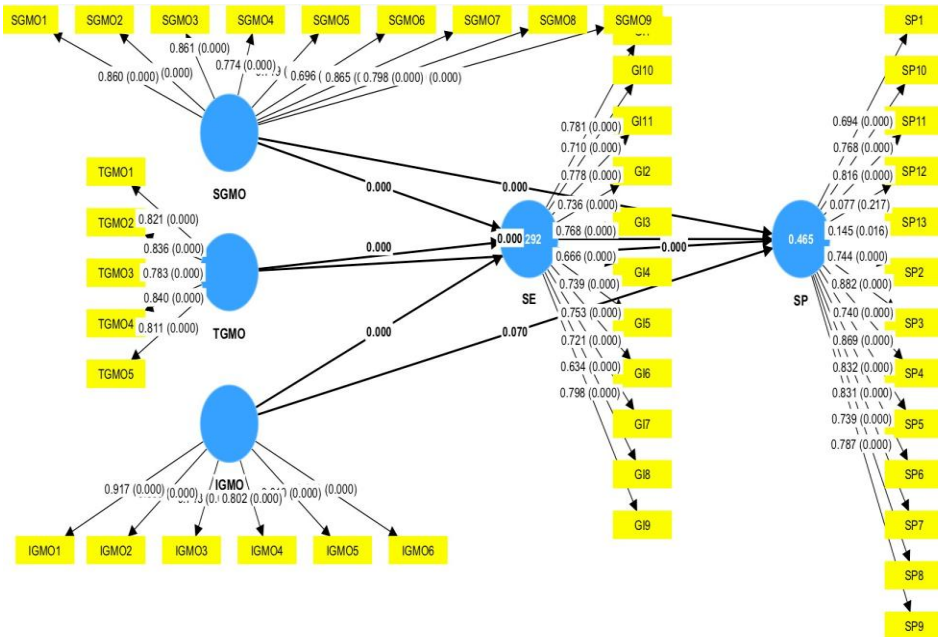
Hypothesis Testing Mediation Analysis: Mediation of Stakeholders' Engagement

Table 6
Path Coefficients

Hypothesis	Direct Effect	Indirect Effect	Result
H4	β=0.251; t=3.102	β=0.112; t=4.755	Partial mediation is supported since the beta path value is substantial but t-value is less than 5. Full mediation is generally associated with t-values above 5.
H5	β=0.302; t=3.412	β=0.096; t=4.996	Partial mediation is supported with beta showing a medium effect but t-value very close to 5, indicative of partial rather than full mediation
H6	β=0.388; t=4.102	β=0.092; t=4.229	Partial mediation is supported with beta showing a medium effect but t-value very close to 5, indicative of partial rather than full mediation

Note. Mediator - Stakeholder Engagement

As shown in Table 6, All path values are positive and statistically significant i.e. there is a significantly positive impact of IGMO, SGMO and TGMO on sustainability performance transmitted with mediation of stakeholders' engagement (as shown by t-statistics > 1.96 and $p<0.001$).

After conducting mediation analysis, it is found that H4 with the direct impact is $\beta = 0.251$, $t = 3.102$, and indirect effect is $\beta = 0.112$, $t = 4.755$, showing partial mediation because the t-value is below 5 showing that the relationship of the independent variable SGMO has a direct impact on the dependent variable SP, but it also has an effect on SP through other variables.

H5 is also supported. Both the direct effect $\beta = 0.302$, $t = 3.412$ and the indirect effect $\beta = 0.096$, $t = 4.996$ are present that shows a medium effect size, though close to 5 shows that the TGMO directly affects SP but at the same time is an indirect influence to others.

H6 is also supported as direct effect: $\beta = 0.388$, $t = 4.102$; and indirect effect: $\beta = 0.092$, $t = 4.229$, shows partial mediation with a medium effect size, though the t-value is close to 5, thus demonstrating that IGMO directly affects SP but also results in SP through intervening variables. Refer Table 6 for the results.

Discussion

The relationship between strategic green marketing orientation (SGMO) and sustainability performance has been investigated in many studies, with evidence indicating significant positive relationship between both variables (Agyapong et al., 2023; Ismail et al., 2023). For instance, Leonidou et al. demonstrated environmental branding and green product innovation enhanced ecological and financial metrics for British firms. Meanwhile, Martins (2022) established role of green marketing strategies in reduction of production costs and increased profitability among SMEs. However, as Negi et al. (2023) highlight, research gap still exists concerning holistic performance outcomes from GMO among SMEs in developing economies.

Stakeholders' engagement is crucial for encouraging companies to adopt green practices (Ni et al., 2015). Recent work has delved deeper into the mediating mechanisms, suggesting stakeholder engagement plays a pivotal role activating sustainability returns from tactical GMO. Jha et al. (2024) verified the mediation of stakeholder engagement between green marketing orientation of Indian firms and corporate sustainability. Similarly, Hon et al. revealed green distribution and advertising indirectly boosted triple bottom line performance by increasing participative stakeholder collaborations. These findings align with the stakeholder influence model, indicating proactively capturing input to shape green initiatives can enhance legitimacy and related sustainability gains. Nonetheless, further research is needed to assess whether improved stakeholder relationships mediate GMO effects within Pakistan's unique institutional context, which this study aims to address.

Moreover, establishing internal environmental capabilities provide the underpinning for successful external sustainability performance outcomes (Ni et al., 2015). For instance, Teixeira et al. (2016) showed internal green marketing strategies like green staff training and process improvements enhanced Brazilian firms' eco-efficiency and management. Such internal initiatives potentially allow SMEs in Pakistan to leverage tactical green marketing like branding or product modifications more successfully as well, another relationship warranting empirical investigation through this study.

As per bootstrapping results of this study, the confirmation of direct positive effects from strategic, internal and tactical green marketing orientations onto sustainability performance aligns with the results highlighted in recent researches (Giantari & Sukaatmadja, 2021; Papadas et al., 2019; Rajadurai et al., 2021). The results validate that firms following strategic green marketing orientation has proactive, forward-looking stance on environmental innovation and has positive impact on sustainability performance; it directly improves profitability and reduce costs (Chen et al., 2023). From a strategic standpoint, the setting and dissemination of company-wide priorities elevating environmental

responsibility directly activates changes enhancing the triple bottom line. Moreover, the tactical orientation findings demonstrate that sustainability does not require a trade-off with short-term promotional or distribution efficiencies when embedded effectively within marketing operations (Annosi et al., 2024).

However, a relevant distinction emerges, when examining the mediation mechanisms explaining how green marketing strategy translates into impact. Compared to strong significant indirect effects for strategic green marketing and internal orientations, the detection of partial mediation through stakeholder engagement for tactical activities suggests critical intermediary pathways worthy of management attention. Within implementation, sustainability-related information sharing, trust building and collective participation appear vital to fully activating economic viability, social progress and environmental vitality. Overall, the findings help characterize conditions under which green marketing drives sustainability gains directly or indirectly, while highlighting tactical activation of external stakeholders as pivotal to addressing planetary challenges at scale. Ongoing inquiry can further specify boundary ranges and optimal configurations. The finding that strategic and tactical green marketing orientations have direct positive effects on sustainability performance aligns with recent research by Papadas et al. (2019) underscoring how environmental priorities embedded across vision, planning and marketing mix activities directly translate into measurable triple bottom line improvements. However, the current study diverges from Ali et al. (2023) who propose full mediation through organizational culture mechanisms, signaling potential cultural variances. Our detection of partial mediation via stakeholder engagement for tactical, strategic and internal green marketing provides validating evidence. Negi et al. (2023) emphasis on cross-boundary collaboration activating tactical sustainability initiatives. However, the partial mediation for internal green marketing contrasts with total mediation result, suggesting additional intermediate linkages between internally-focused education initiatives and performance outcomes still requiring exploration through extensions of this research model and boundary conditions testing. Overall, the hypothesized pathways find general yet qualified support amidst ongoing elucidation of green orientation-performance theoretical mechanisms within the contemporary literature.

Conclusion and Implications

This study investigates the mediating variable stakeholders' engagement, that play an important role in enhancing sustainability performance outcomes from strategic green, internal and tactical orientations. While providing foundational confirmation of core links, several findings signal opportunities for construct and model elaboration through future research to resolve theoretical inconsistencies in the nascent literature. Exploring potential moderating effects of organizational culture could help delineate the conditions under which full, partial or non-mediation manifest. Incorporating additional mediators like employee green behaviors and identity could uncover multiple sequential links connecting antecedent firm orientations with end sustainability. Methodologically, a time-lagged design with separate measurement intervals for predictors and sustainability performance could enrich understanding of their temporal dynamics. Evaluating alternative structural models like moderated mediation may also provide valuable perspective. At the construct level, examining sub-dimensions within orientations and stakeholder engagement remains warranted. Ultimately contingent and configurational conceptualization can aid precision in codifying when, how and why various green strategic stances yield sustainability improvements. Thus, leveraging extensions of this research as a platform offers promising pathways for advancing academic and practical comprehension of how organizations can effectively operationalize environmental commitment through marketing into triple bottom line returns. For executives and business leaders, these findings provide a framework for beginning to gauge and direct firm resources towards green marketing initiatives most likely to activate stakeholder collaboration and drive measurable sustainability progress. Understanding the direct pathways from strategic and tactical green orientations can focus environmental messaging and positioning for strongest links with social and environmental bottom lines. The partial mediating role of

collaboration also underscores the critical priority placed on participatory processes. Managers play an integral role in cultivating partnerships, opening dialogues, and closing responsiveness gaps with customers and other stakeholders through formal and informal channels to maximize green marketing outcomes. The variation in mediation mechanisms also highlights the need for customization based on a firm's starting orientation and capability profile. Overall, this research equips practitioners to conduct more evidence-based self-assessment of their green marketing approaches. The knowledge on high impact pathways empowers sharpening the scope and features of sustainability planning for greater efficiency and return on green investments.

Conflict of Interest

The author of the manuscript has no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

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