

## The Role of social and cultural factors in consumers' adoption of innovative green products: Exploring green marketing strategies

Bandar Fahad M Alharbi<sup>1\*</sup>

<sup>1</sup>Business Administration Department of Business Administration College of Business Administration Majmaah University, Majmaah 11952, Saudi Arabia; Bandar.a@mu.edu.sa (B.F.M.A.).

**Abstract:** To examine how social and cultural factors influence consumer adoption of innovative green products in Saudi Arabia, the UAE, and Qatar while exploring the effectiveness of green marketing strategies and government initiatives in promoting sustainable consumption patterns. The study integrates multiple theoretical foundations: the Theory of Planned Behavior (TPB), the Innovation Diffusion Model (IDM), and the Green Marketing Mix (GMM). This integrated framework explains how cultural values, social norms, and environmental awareness interact with consumer behavior toward green products in the Gulf context. A mixed-methods approach was employed, combining quantitative surveys (N=847) with qualitative interviews (N=54). Data was collected through stratified random sampling across Saudi Arabia (n=421), the UAE (n=261), and Qatar (n=165). Structural equation modeling analyzed relationships between variables, while thematic analysis explored qualitative insights. Environmental consciousness emerged as the strongest predictor of green purchase intention ( $\beta = 0.36$ ,  $p < 0.001$ ), followed by perceived product quality ( $\beta = 0.28$ ,  $p < 0.01$ ). Cultural values showed significant influence, particularly in Saudi Arabia (M = 3.92) compared to the UAE (M = 3.65) and Qatar (M = 3.78). Qualitative findings revealed that religious principles and social norms significantly shape consumer behavior, while high costs remain a primary barrier to adoption. Organizations should develop culturally sensitive marketing strategies that align with Islamic environmental principles while addressing affordability concerns. Governments can enhance adoption through subsidies, improved distribution networks, and standardized certification systems. The findings provide a framework for implementing effective green marketing strategies in the Gulf region. This research uniquely combines cultural, social, and economic perspectives in examining green product adoption in the Gulf region. It provides novel insights into the interplay between religious values, social norms, and environmental consciousness in shaping sustainable consumption patterns. The study offers practical recommendations for policymakers and businesses to promote green consumerism while respecting cultural sensitivities.

**Keywords:** Green marketing, Consumer behavior, Cultural values, Environmental awareness, Gulf Cooperation Council, Sustainable consumption.

### 1. Introduction

In light of escalating global environmental challenges, environmental sustainability has become a cornerstone for achieving inclusive development in the Gulf Cooperation Council (GCC) region. Saudi Arabia, the United Arab Emirates (UAE), and Qatar have emerged as regional leaders, spearheading ambitious strategies to transition toward a green economy. These nations have implemented policies and initiatives rooted in their national visions, aiming to balance economic growth with preserving natural resources [1, 2]. However, consumers' adoption of innovative green products remains a

complex challenge, reflecting the intricate interplay between growing environmental awareness and the deeply ingrained social and cultural values that shape purchasing behaviors in the region.

To address these challenges holistically, it is crucial to acknowledge the pivotal role of social and cultural contexts in shaping consumer decisions. Social norms, traditions, and values—deeply embedded in Gulf societies—are facilitators and barriers to adopting sustainable behaviors [3, 4].

Although individuals are increasingly aware of the importance of eco-friendly products, achieving a substantial shift in consumer behavior demands innovative marketing strategies that move beyond conventional approaches and are carefully tailored to align with local contexts.

This study explores the critical role of social and cultural factors in shaping consumer responses to innovative green products, explicitly focusing on Saudi Arabia, the UAE, and Qatar as representative models of the GCC region. By integrating quantitative and qualitative analyses, the research aims to develop a comprehensive marketing framework that capitalizes on the unique characteristics of local communities. The study seeks to contribute scientifically and practically by advancing sustainability efforts in the region [1].

It provides actionable insights for designing culturally compatible green marketing strategies to address existing barriers, promote widespread adoption, and generate positive environmental and economic impacts [5].

### *1.1. Scientific Significance*

This study significantly contributes to green marketing by presenting a globally applicable framework for understanding consumer behavior toward green products. Integrating cultural, social, and economic dimensions offers a deeper understanding of the factors influencing sustainable product adoption. The research bridges theory and practice, leveraging the Theory of Planned Behavior [6] and the Green Marketing Mix [7] providing a robust tool for academic research and practical implementation.

The study introduces a flexible model adaptable to diverse cultural and economic contexts. It addresses gaps in the literature by exploring the interplay between cultural values, social norms, and economic factors. This nuanced perspective advances academic discourse and lays the groundwork for cross-cultural comparisons and regional-specific marketing strategies [8, 9].

Moreover, integrating quantitative and qualitative methodologies enriches the field, combining empirical evidence with in-depth insights into consumer motivations and barriers. This dual approach ensures robust, reliable findings applicable across diverse contexts, enhancing the study's scientific significance and offering a comprehensive understanding of green consumer behavior [5, 10].

### *1.2. Practical Significance*

This study offers practical tools for policymakers and businesses by emphasizing the importance of integrating social and cultural factors into green marketing strategies. The framework provides a roadmap for businesses to develop innovative marketing approaches that align with local values and consumer expectations. Tailoring campaigns to cultural norms can enhance marketing effectiveness, build consumer trust, and boost green product adoption [3, 4].

The research offers actionable recommendations for governments, such as subsidies, tax incentives, and infrastructure investments, to make green products more affordable and accessible. These measures can address financial and logistical barriers, promoting sustainable consumption and accelerating the transition to a green economy [1, 11].

The study also highlights the role of public-private partnerships in advancing sustainability goals. Collaborative initiatives, like awareness campaigns and certification programs, can build consumer confidence in green products [12]. These insights support national sustainability visions, such as Saudi Vision 2030 and the UAE Green Growth Strategy, while contributing to global efforts to achieve the UN Sustainable Development Goals (SDGs).

### 1.3. Relevance to Contemporary Challenges

This study addresses critical global challenges like climate change, environmental degradation, and pollution, which threaten ecosystems and human well-being. Enhancing the understanding of green consumer behavior offers practical solutions to promote sustainability and reduce carbon footprints. These insights are vital for transitioning to sustainable consumption and mitigating environmental crises [10, 13]. The research supports global initiatives such as the UN Sustainable Development Goals (SDGs), particularly SDG 12: Responsible Consumption and Production. It emphasizes sustainable resource use, waste reduction, and eco-friendly products, offering strategies to achieve these goals by identifying social, cultural, and economic factors influencing green product adoption [8, 14].

The study is particularly relevant to the Gulf Cooperation Council (GCC) region, where rapid economic growth and urbanization have heightened environmental pressures. It provides region-specific insights to develop tailored policies and marketing strategies, aligning local efforts with global sustainability agendas [1, 12].

By bridging global sustainability goals with local consumer behavior, this study fosters a deeper understanding of green product adoption drivers and barriers, paving the way for scalable, impactful solutions that benefit both the environment and society.

## 2. Theoretical Framework and Literature Review

The theoretical framework and literature review are central to this study, building on prior research and establishing a foundation for the methodology and analysis. This research examines the intersection of green marketing and social and cultural factor's impact on consumer behavior, focusing on Saudi Arabia, the UAE, and Qatar, where cultural dynamics significantly influence sustainable consumption patterns.

The study explores similarities and differences across contexts by incorporating insights from contemporary cross-cultural studies and recent developments in green product certifications. This approach aims to provide a deeper understanding of the unique cultural realities in the Gulf region, contributing to the broader academic discourse on green marketing and sustainable consumption.

### 2.1. Recent Studies in Diverse Contexts

A recent study conducted in India and China [13] revealed that cultural values and social norms are primary drivers for adopting green technologies, particularly in communities with strong familial ties. In contrast, research in the United States and Europe [10] demonstrated that heightened environmental awareness, driven by governmental and media campaigns, significantly promotes sustainable consumption. Similarly, studies in Brazil and Indonesia [15] identified high product costs as a major barrier, emphasizing the need for innovative pricing strategies to enhance the accessibility of green products.

### 2.2. Recent Studies in the Gulf Cooperation Council (GCC)

Countries Recent studies in GCC countries have explored the social and cultural factors influencing green product adoption [16]. Highlighted the role of Islamic values in Saudi Arabia, showing that adherence to principles like foresight and moderation increases eco-friendly purchasing behavior. Similarly, Saleh and Ahmed [14] found that higher social status in the UAE and Qatar drives green product adoption to express identity and values. Al-Humaidi [17] reviewed a shift in GCC green marketing strategies toward cultural values and community engagement, emphasizing the need for locally aligned messaging [18]. Studied Kuwait and Bahrain, revealing that culturally tailored government campaigns and financial incentives significantly boost sustainable consumption. Additionally, Al-Masoud, et al. [19] in Oman found that traditions like respect for family and heritage strongly influence green product adoption, challenging marketers to move beyond environmental benefits alone. These studies collectively highlight the importance of cultural and social factors in shaping sustainable consumption in the GCC.

### 2.3. Theoretical Framework

This research integrates multiple theoretical models to analyze consumer behavior and green product adoption comprehensively:

#### 2.3.1. The Theory of Planned Behavior

[1] examines how attitudes, subjective norms, and perceived behavioral control shape consumer intentions and actions.

#### 2.3.2. The Diffusion of Innovations Model

[2]: Explains the innovation adoption process and how sociocultural factors can accelerate or hinder it.

Green Marketing Mix [5]: This section highlights the influence of product attributes, pricing strategies, promotional efforts, and distribution channels on consumer decisions.

#### 2.3.3. Value Belief Norm Theory

[4]: Explores the role of personal values and environmental beliefs in driving pro-environmental behaviors.

#### 2.3.4. The Technology Acceptance Model

[8]: Investigates how perceived usefulness and ease of use affect consumer acceptance of innovative green products. By combining these models, the study provides a holistic framework for understanding the multifaceted drivers of green product adoption.

**Definition of Key Terms** To ensure conceptual clarity and precision, this study adopts the following definitions: **Green Marketing:** A collection of marketing activities designed to promote environmentally friendly products and services while reducing ecological impacts [5]. **Social and Cultural Factors:** Values, norms, traditions, and beliefs that shape individual behaviors within a community [6]. **Green Products:** Products with a reduced environmental footprint are achieved through eco-friendly materials or sustainable production techniques [7].

## 3. Research Gaps

Despite the growing literature on green marketing, critical gaps remain, especially in GCC countries. First, while some studies address sociocultural factors, few explore their interaction with economic determinants of green purchasing behavior. The high cost of sustainable products in the Gulf highlights the need to analyze how cultural values and social pressures influence willingness to pay premium prices.

Second, more comparative studies are needed to examine the impact of social and cultural factors across GCC countries. While research has focused on Saudi Arabia and the UAE, studies including Kuwait, Qatar, Bahrain, and Oman would offer deeper insights into regional cultural dynamics.

Third, limited research exists on how demographic variables—such as age, education, and income—mediate the relationship between sociocultural factors and green product adoption. Understanding these interactions could improve targeted marketing strategies.

Finally, despite increasing sustainability initiatives in the Gulf, there is a lack of research evaluating the effectiveness of governmental policies in driving green consumption. Addressing this gap is crucial to assess policy impacts and identify areas for improvement in promoting sustainable practices.

## 4. Importance of the Theoretical Framework and Literature Review

The theoretical framework and literature review are central to this study, offering a solid foundation for examining the link between green marketing and sociocultural factors. By addressing gaps in prior research, the study advances the understanding of sustainable consumption in GCC countries.

Integrating global and regional insights allows for a nuanced analysis of cultural dynamics and their impact on green product adoption. This alignment between theory and practice ensures a coherent approach to data collection, analysis, and actionable recommendations.

## 5. Research Problem

GCC countries, particularly Saudi Arabia, the UAE, and Qatar, are experiencing a significant shift toward environmental sustainability and a green economy. Despite increasing awareness of sustainable practices, consumer adoption of green innovations faces challenges due to the complex interplay of sociocultural values, economic factors, and limited engagement with green products.

The gap between environmental awareness and cultural influences on purchasing decisions highlights the need for research to explore these dynamics. This study addresses this gap by examining sociocultural and demographic factors shaping consumer behavior, focusing on Saudi Arabia, the UAE, and Qatar. It also aims to develop strategic green marketing approaches and assess the effectiveness of governmental and institutional initiatives in promoting green product adoption in the region.

## 6. Research Objectives

**Analyze Sociocultural Influences:** Examine the cultural and social dimensions influencing consumer behavior toward innovative green products in Saudi Arabia, the UAE, and Qatar.

**Assess Environmental Awareness:** Evaluate the role of environmental awareness in shaping consumer decisions to adopt eco-friendly innovations.

**Strategic Framework Development:** Design a green marketing framework tailored to the sociocultural contexts of GCC countries, focusing on Saudi Arabia, the UAE, and Qatar.

**Demographic Insights:** Explore how demographic variables—such as age, education, and income— influence purchasing attitudes toward green products.

**Evaluate Government Initiatives:** Investigate the effectiveness of governmental and institutional programs in fostering sustainability and promoting the adoption of green innovations.

**Identify Barriers:** Identify and analyze the key challenges and barriers hindering green product adoption, including financial and cultural constraints.

## 7. Research Questions

How do social and cultural values in Saudi Arabia, the UAE, and Qatar influence consumers' decisions to adopt innovative green products?

To what extent do consumers in these countries perceive green products as practical solutions to environmental challenges?

What are the most effective green marketing strategies tailored to the sociocultural characteristics of GCC countries?

How do demographic characteristics—such as age, education, and income—shape attitudes toward purchasing green products in Saudi Arabia, the UAE, and Qatar?

What role do governments and institutions play in enhancing environmental awareness and promoting the adoption of green innovations?

How do consumers in Saudi Arabia, the UAE, and Qatar navigate financial barriers, such as high costs, when purchasing green products?

## 8. Research Hypotheses

**Sociocultural Factors:** Social and cultural values significantly influence consumers' readiness to adopt innovative green products in Saudi Arabia, the UAE, and Qatar.

**Environmental Awareness:** Higher levels of environmental awareness positively correlate with increased adoption of green innovations in the GCC region.

**Cultural Alignment in Marketing:** Green marketing strategies aligned with local cultural values are more effective in attracting GCC consumers.

**Demographic Influence:** Education and income significantly influence consumers' willingness to purchase green products.

**Government and Institutional Role:** Governmental and institutional initiatives are pivotal in enhancing environmental awareness and fostering a sustainable green market.

**Perceived Quality:** The perceived quality of green products positively impacts consumers' willingness to adopt them in Saudi Arabia, the UAE, and Qatar.

## 9. Significance of the Research

This research offers a comprehensive, scientifically grounded exploration of green marketing and sustainable consumption in the GCC. Addressing key barriers to green product adoption and providing actionable recommendations bridges the gap between theory and practice. The study has the potential to significantly contribute to sustainable marketing and consumer behavior while supporting policymakers and businesses in promoting green innovations across Saudi Arabia, the UAE, Qatar, and the wider GCC region.

### 9.1. Linking Research Findings to National Initiatives

#### 9.1.1. Saudi Vision 2030

Saudi Vision (2030). Supporting the transition to a green economy through green marketing strategies that boost environmental awareness and promote sustainable products [2]. Marketing green initiatives, such as the Saudi Green Initiative [1] can stimulate sustainable innovation. Expanding environmental education campaigns to align with Vision 2030's sustainability goals and cultivate an eco-conscious culture [2].

UAE's National Green Growth Strategy Strengthening clean energy adoption through marketing campaigns that support initiatives like the UAE Energy Strategy 2050 [9]. Promoting sustainable projects, such as Dubai Sustainable City and Sustainable Cities, to highlight their positive impact on everyday life [12]. Supporting public-private partnerships to achieve sustainability and economic innovation goals [5].

Qatar's Sustainability Policies Leveraging green marketing to promote initiatives such as Lusail Sustainable City and solar energy projects [11]. Increasing public awareness of national environmental policies and their role in improving quality of life [10]. Enhancing collaborations between government and private sectors to support sustainable products and services [1].

## 10. Research Methodology

The research methodology is carefully designed to align with the study's objectives, research questions, and hypotheses, ensuring a structured and systematic data collection, analysis, and interpretation approach. This study employs a mixed methods approach to thoroughly examine the social and cultural factors influencing consumer behavior toward innovative green products in Saudi Arabia, the UAE, and Qatar.

### 10.1. Research Design

This study employs a descriptive and analytical design:

**Descriptive Design:** This design provides a detailed overview of consumer behavior, environmental awareness, and marketing practices in the target region, addressing the study's first and second objectives.

**Analytical Design:** This design examines the relationships and causal links between identified variables, such as social and cultural factors, demographic characteristics, and government initiatives, aligning with the study's third and fourth objectives.

## 10.2. Research Approach

A mixed methods approach ensures a holistic investigation by combining quantitative and qualitative data:

**Quantitative Approach:** Structured surveys will collect measurable data, quantifying the influence of social, cultural, and demographic factors on green product adoption. Advanced statistical tools will be employed to model relationships between variables.

**Qualitative Approach:** Semi-structured interviews and focus group discussions will provide deeper insights into cultural nuances, social attitudes, and consumer perceptions. Examples of innovative green products, such as solar panels and eco-friendly packaging, will be used as discussion prompts.

## 10.3. Population and Sampling

### 10.3.1. Population

The study targets consumers in Saudi Arabia, the UAE, and Qatar. These consumers represent diverse demographic profiles, including age, income, education, and geographic location variations. This inclusion enriches the study by capturing these three Gulf countries' unique cultural and economic dynamics.

### 10.3.2. Sampling Technique

A stratified random sampling approach will ensure representation across key demographic segments, including age groups, income levels, educational backgrounds, and urban-rural divides. This method minimizes selection bias and ensures a balanced and comprehensive representation of the population in each country.

## 10.4. Sample Size

### 10.4.1. Quantitative Sample

A total of 847 respondents will be included, distributed as follows:

A total of 421 participants were from Saudi Arabia, reflecting its larger population, geographic diversity, and the presence of both urban and rural communities.

261 participants from the UAE, acknowledging its high population density in urban centers and its role as a regional hub for green innovation.

165 participants from Qatar, representing its unique socioeconomic and cultural context.

### 10.5. Qualitative Sample

54 participants will participate in interviews, distributed equally among the three countries. This approach gathers rich, context-specific insights, complementing the quantitative findings with in-depth perspectives.

This sampling strategy ensures that the study captures the diverse and multifaceted consumer behavior and attitudes across the three countries, providing a robust foundation for analysis and actionable insights.

## 10.6. Data Collection Methods

### 10.6.1. Quantitative Data Collection

- A structured questionnaire will measure demographic data, environmental awareness, cultural values, social norms, and purchasing behaviors. Questions will utilize a Likert scale for consistency and ease of analysis.
- The questionnaire was distributed and collected in collaboration with universities in Saudi Arabia, the UAE, and Qatar. This partnership facilitated access to diverse respondents across the three countries, ensuring comprehensive coverage and logistical support for data collection.

### 10.6.2. Qualitative Data Collection

Semi-structured Interviews: To elicit insights into social and cultural influences, semi-structured interviews with green marketing and sustainability experts will be conducted.

Focus Group Discussions: Focus group discussions with consumers will explore barriers, motivations, and perceptions related to green product adoption, integrating real-world examples to enhance understanding.

### 10.7. Research Instruments

Survey Questionnaire: Includes demographic questions, attitude scales, and measures for behavioral intentions and purchasing patterns.

Reliability: Assessed using Cronbach's Alpha for internal consistency.

Validity: Ensured through face and content validity during pretesting and pilot testing.

Interview Guide: Explores social norms, cultural influences, and perceived barriers in detail.

Pilot Testing: Conducted to refine tools for clarity and relevance.

### 10.8. Data Analysis Plan

#### 10.8.1. Quantitative Analysis

SPSS and AMOS will be used for descriptive (e.g., mean, standard deviation) and inferential statistics (e.g., regression, ANOVA).

Structural Equation Modeling (SEM) will test complex relationships between variables.

Control variables like income and education will refine the model.

#### 10.8.2. Qualitative Analysis

Thematic analysis using NVivo will identify recurring themes.

The Constant Comparative Method will ensure consistent theme identification.

Integration of Results:

Triangulation will synthesize quantitative and qualitative findings for a comprehensive understanding.

### 10.9. Ethical Considerations

This study involved collecting data through a structured survey to explore [This study significantly contributes to green marketing by presenting a globally applicable framework for understanding consumer behavior toward green products]. The survey focused on gathering general information about [Their opinion on green products] and did not include sensitive or personally identifiable data.

Approval from an ethics review board was deemed unnecessary as the study did not involve medical, psychological, or high-risk interventions. Additionally, the institution where the study was conducted [Saudi Higher Education Council] does not require ethics board approval for studies of this nature. The collected data were anonymized to ensure participant confidentiality, and all participants provided informed consent before participating in the study.

Informed Consent: Participants will receive study details and provide written consent.

Confidentiality: Data will be anonymized to protect identities. Voluntary Participation: Participants can withdraw without consequences. Cultural Sensitivity: Instruments and interactions will respect cultural norms in Saudi Arabia and the UAE.

### 10.10. Addressing Potential Challenges

Participant Recruitment: Collaboration with local organizations, universities, and digital platforms (e.g., social media) will aid recruitment.

Time Constraints: A detailed data collection, analysis, and reporting timeline will ensure meeting deadlines.



Bias Mitigation: Pretesting, stratified random sampling, and straightforward instrument design will minimize response and selection biases.

### 10.11. Variables and Measurement

#### 10.11.1. Independent Variables

Social factors (e.g., peer influence, social norms).

Cultural factors (e.g., traditions, collectivism).

Demographic characteristics (e.g., age, income, education).

Dependent Variable: Adoption of green products, measured through behavioral intention and purchasing behaviors.

Control Variables: Gender, access to green products, and geographic location.

### 10.12. Validity and Reliability

#### 10.12.1. Validity Assessment

Face Validity: Reviewed by academic experts for clarity and relevance; adjustments made for target audience suitability.

Content Validity: Ensured comprehensive coverage of research variables aligned with theoretical models and literature.

#### 10.12.2. Reliability Testing

Cronbach's Alpha results:

Environmental Awareness:  $\alpha = 0.85$

Perceived Product Quality:  $\alpha = 0.88$

Willingness to Pay a Premium:  $\alpha = 0.91$

Green Purchase Intention:  $\alpha = 0.89$

Cultural and Social Values:  $\alpha = 0.83$

High reliability across all sections.

#### 10.12.3. Pilot Testing

Conducted with 30 participants to refine the questionnaire.

Ambiguous questions were revised, technical terms simplified, and the structure streamlined to reduce response fatigue.

Ensured robust and reliable research instruments

Analysis of Green Product Adoption: Enhanced Insights

**Table 1.**

Demographic profile (N=847).

Category	Details
Gender Distribution	Male (58%), Female (42%)
Age Groups	18-24: 12%, 25-34: 35%, 35-44: 28%, 45-54: 17%, 55+: 8%
Education Levels	High School: 10%, Some College: 14%, Bachelors' Degree: 52%, Graduate Degree: 24%
Employment Status	Fulltime: 65%, Parttime: 15%, Self-employed: 8%, Student: 7%, Unemployed: 5%
Geographic Representation	Urban: 78%, Rural: 22%

### 10.13. Descriptive Statistics and Reliability (N=847)

Environmental Awareness:  $M = 3.92$ ,  $SD = 0.78$ , Cronbach's  $\alpha = 0.85$ .

Perceived Green Product Quality:  $M = 3.61$ ,  $SD = 0.92$ , Cronbach's  $\alpha = 0.88$ .

Willingness to Pay Premium:  $M = 3.24$ ,  $SD = 1.05$ , Cronbach's  $\alpha = 0.91$ .

Green Purchase Intention:  $M = 3.71$ ,  $SD = 0.87$ , Cronbach's  $\alpha = 0.89$ .

Social Norms:  $M = 3.48$ ,  $SD = 0.95$ , Cronbach's  $\alpha = 0.83$ .

Cultural Values:  $M = 3.80$ ,  $SD = 0.82$ , Cronbach's  $\alpha = 0.86$ .

#### 10.14. Comparative Analysis: Saudi Arabia, UAE, and Qatar

##### 10.14.1. Environmental Awareness

UAE ( $M = 4.01$ ) showed higher awareness than Saudi Arabia ( $M = 3.84$ ) and Qatar ( $M = 3.89$ ),  $F(2, 844) = 3.56$ ,  $p < 0.05$ .

##### 10.15. Perceived Green Product Quality

Comparable across all three countries, with no significant differences observed.

##### Willingness to Pay Premium:

UAE participants ( $M = 3.42$ ) were slightly more willing than those in Saudi Arabia ( $M = 3.18$ ) and Qatar ( $M = 3.22$ ),  $F(2, 844) = 4.12$ ,  $p < 0.05$ .

##### 10.16. Cultural Values

Stronger influence in Saudi Arabia ( $M = 3.92$ ) compared to UAE ( $M = 3.65$ ) and Qatar ( $M = 3.78$ ),  $F(2, 844) = 5.74$ ,  $p < 0.01$ .

##### 10.17. Social Norms

Qatar ( $M = 3.56$ ) demonstrated slightly higher adherence to social norms compared to Saudi Arabia ( $M = 3.48$ ) and UAE ( $M = 3.42$ ),  $F(2, 844) = 2.78$ ,  $p = 0.06$  (marginally significant).

##### 10.18. Key Insights

The UAE leads in environmental awareness and willingness to pay a premium for green products.

Saudi Arabia demonstrates a more substantial influence of cultural values on green product adoption.

Qatar shows moderate trends across variables but higher adherence to social norms.

**Table 2.**

Comparative Analysis: Saudi Arabia, UAE, and Qatar.

Country	Environmental Awareness (M)	Perceived Quality (M)	Willingness to Pay (M)	Cultural Values (M)	Social Norms (M)
Saudi Arabia	3.84	3.61	3.18	3.92	3.48
UAE	4.01	3.61	3.42	3.65	3.42
Qatar	3.89	3.61	3.22	3.78	3.56

#### 10.19. Regression and Interaction Analysis

##### 10.19.1. Predictors of Green Purchase Intention

- Environmental Awareness:  $\beta=0.36$ ,  $t(420)=7.85$ ,  $p<0.001$
- Perceived Quality:  $\beta=0.28$ ,  $t(420)=5.92$ ,  $p<0.01$
- Cultural Values:  $\beta=0.19$ ,  $t(420)=4.11$ ,  $p<0.05$
- Income:  $\beta=0.22$ ,  $t(420)=4.74$ ,  $p<0.01$
- Education:  $\beta=0.18$ ,  $t(420)=3.92$ ,  $p<0.05$

##### 10.20. Interaction Effects

Interaction between Education and Cultural Values:

$\beta = 0.12$ ,  $t(420) = 2.95$ ,  $p < 0.05$ , indicating that cultural values significantly influence purchase intention among highly educated participants.

### 10.21. Qualitative Data Analysis Across Three Countries

#### 10.21.1. Overview of Qualitative Data

Insights were gathered from 54 participants: Saudi Arabia (23), UAE (19), and Qatar (12). Participants included experts, policymakers, and consumers with experience in sustainability, green marketing, and environmental policy.

### 10.22. Thematic Analysis (Qualitative Insights)

#### 10.22.1. Growing Eco Consciousness

Quotes: *"Awareness campaigns have made me more conscious of my choices, especially regarding plastic waste."*  
*"I feel a responsibility to protect the environment for future generations."*

Analysis: Awareness campaigns have significantly increased environmental consciousness. Participants in all three countries expressed a strong sense of responsibility toward sustainable practices driven by education and environmental initiatives.

#### 10.22.2. Price Concerns

Quote: *"The price of green products is a major deterrent; they are simply not affordable for everyone."*

Analysis: Cost emerged as the primary barrier to green product adoption. Participants emphasized the need for affordable pricing and financial incentives to make green products more accessible.

#### 10.22.3. Trust in Green Claims

Quote: *"Some companies claim to be green, but I doubt their authenticity without proper certifications."*

Analysis: Participants were skeptical of green product claims, stressing the importance of certifications and transparency to build trust.

#### 10.22.4. Social and Religious Influences:

Quotes: *"Islam emphasizes environmental stewardship, which motivates me to support eco-friendly initiatives."*  
*"I rely on family and friends for recommendations on green products."*

Analysis: Cultural and religious values significantly shape green product adoption. In Saudi Arabia and Qatar, Islamic principles of environmental stewardship were key motivators, while social norms and peer recommendations strongly influenced purchasing behavior.

#### 10.22.5. Barriers to Adoption

- Quotes: *"Limited availability in local markets."*
- *"I do not fully understand the benefits of green products."*

Analysis: The limited availability of green products in local markets and a lack of consumer understanding of their benefits were identified as significant obstacles. Addressing these barriers through improved distribution networks and consumer education is essential.

## 11. Practical Recommendations Based on Qualitative Insights

### 11.1. Pricing Strategies

#### 11.1.1. Cost Reduction

Implement government-backed subsidies or tax incentives to lower consumer costs.  
 Encourage brands to offer discounts or loyalty programs for green products.

#### 11.1.2. Awareness Campaigns

Collaborate with religious and community leaders to emphasize environmental stewardship in Islamic and cultural contexts.  
 Design tailored educational campaigns highlighting the benefits of green products for different demographic groups.

### 11.1.3. Improving Availability

Foster public-private partnerships to expand green product distribution, especially in rural areas.

### 11.2. Certification and Transparency

Establish clear certification standards to enhance trust in green product claims.

#### 11.2.1. Targeted Marketing Strategies

Develop culturally sensitive advertising that aligns green products with local values and traditions.

#### 11.2.2. Emerging Patterns and Regional Insights

##### 11.2.2.1. Regional Similarities

Environmental awareness is growing across Saudi Arabia, the UAE, and Qatar, driven by government campaigns and education.

Cultural and religious values strongly influence purchasing behavior, particularly in Saudi Arabia and Qatar.

##### 11.2.3. Regional Differences

Saudi Arabia: Religious values are key motivators, but challenges include limited rural product availability and consumer skepticism.

UAE: A diverse, urbanized population requires marketing strategies that address varying cultural preferences while emphasizing modernity.

Qatar: A smaller, cohesive market shows potential for community-driven campaigns and government-supported initiatives.

## 12. Conclusion from Qualitative Data Analysis

The qualitative insights complement quantitative findings, offering a deeper understanding of green product adoption drivers and barriers in Saudi Arabia, the UAE, and Qatar. Key takeaways include:

**Leveraging Cultural and Religious Values:** Marketing campaigns incorporating Islamic and cultural principles resonate strongly, especially in Saudi Arabia and Qatar.

**Expanding Awareness Efforts:** Campaigns should highlight environmental and economic benefits while engaging religious and community leaders for greater impact.

**Addressing Cost and Availability Barriers:** Governments and businesses must collaborate to reduce costs and improve accessibility, particularly in underserved areas.

**Building Trust Through Transparency:** Clear certification systems and transparent communication can address skepticism and build consumer confidence in green claims.

## 13. Discussion

This enhanced analysis provides a comprehensive understanding of the sociocultural, economic, and psychological factors influencing green product adoption in Saudi Arabia, the UAE, and Qatar. By integrating quantitative and qualitative insights, the study offers actionable recommendations for policymakers and marketers to promote sustainable consumer behaviors effectively.

Here is how the analysis aligns with and addresses the research objectives, questions, and hypotheses:

### 13.1. Research Objectives

**Objective 1: Analyze Cultural and Social Dimensions Influencing Green Product Adoption**  
Cultural values significantly influenced green product adoption, with Saudi Arabia ( $M = 3.92$ ) and Qatar ( $M = 3.78$ ) showing more substantial impacts than the UAE ( $M = 3.65$ ,  $p < 0.01$ ). Islamic

environmental stewardship values were particularly influential in Saudi Arabia and Qatar, driving sustainable behaviors.

#### Objective 2: Assess Environmental Awareness and Its Role

High environmental awareness was observed overall ( $M = 3.92$ ), with the UAE leading ( $M = 4.01$ ), followed by Qatar ( $M = 3.89$ ) and Saudi Arabia ( $M = 3.84$ ). Awareness was the strongest predictor of green purchase intent ( $\beta = 0.36, p < 0.001$ ), highlighting its critical role in eco-friendly behaviors.

#### Objective 3: Develop a Strategic Green Marketing Framework

Tailored strategies include culturally sensitive advertising, awareness campaigns involving religious and community leaders, and demographic-specific marketing for Saudi Arabia, the UAE, and Qatar.

#### Objective 4: Explore Demographic Impacts

Income ( $\beta = 0.22, p < 0.01$ ) and education ( $\beta = 0.18, p < 0.05$ ) significantly predicted purchase intent, with higher-income and more educated individuals in Qatar and the UAE showing greater willingness to adopt green products. An interaction effect between education and cultural values ( $\beta = 0.12$ ) underscored the nuanced role of demographics.

#### Objective 5: Investigate Government and Institutional Roles

Recommendations include government subsidies, public-private partnerships to enhance product availability, and standardized green product certifications across Saudi Arabia, the UAE, and Qatar.

### 13.2. Research Questions

Question 1: How do social and cultural values influence adoption decisions? Cultural values directly ( $\beta = 0.19$ ) and indirectly influenced purchase intent. Social norms and religious influences, particularly in Saudi Arabia and Qatar, were key drivers.

Question 2: To what extent do consumers perceive green products as sustainable solutions? Perceived green product quality was relatively high ( $M = 3.61$ ) across the three countries, with growing eco-consciousness, especially in Qatar.

Question 3: What are effective culturally relevant marketing strategies? Strategies include leveraging Islamic values, culturally sensitive advertising, and collaborating with community and religious leaders to create resonant messages.

Question 4: How do demographics shape purchase attitudes? Age influenced willingness to pay, with those aged 25-44 more willing than those 55+. Income and education strongly predicted intent, particularly in the UAE and Qatar.

Question 5: What is the role of governments and institutions? Governments can provide subsidies, improve distribution networks, and establish green certifications. Institutional partnerships can enhance product availability, especially in rural areas of Saudi Arabia and Qatar.

### 13.3. Research Hypotheses

Social and cultural factors strongly influence adoption readiness:

Supported by the significant effects of cultural values and social norms across the three countries.

Higher environmental awareness increases eco-innovation adoption:

Strongly supported by environmental awareness is the most significant predictor of purchase intent ( $\beta = 0.36, p < 0.001$ ).

Culturally aligned marketing strategies enhance green marketing success:

This is supported by qualitative insights on the importance of cultural and religious sensitivity, particularly in Qatar and Saudi Arabia.

Education and income promote green product adoption:

This is confirmed by their significant effects in the regression model.

Government and institutional initiatives improve awareness and market sustainability:

Supported by qualitative findings and the potential impact of recommended initiatives to drive adoption in all three countries.

### 13.4. Interpretation of Statistical Analyses

#### 13.4.1. Correlation Analysis

The correlation matrix reveals strong positive relationships among all variables ( $r > 0.5$ ), indicating their interconnectedness. Green purchase intention showed the highest correlation with perceived quality ( $r = 0.73$ ), highlighting the importance of product perceptions in shaping consumer behavior.

**Table 3.**  
Correlation matrix.

Variable	1	2	3	4	5
Environmental awareness	1.00	0.68	0.54	0.71	0.60
Perceived quality	0.68	1.00	0.57	0.73	0.61
Willingness to pay premium	0.54	0.57	1.00	0.58	0.50
Green purchase intention	0.71	0.73	0.58	1.00	0.69
Social norms	0.60	0.61	0.50	0.69	1.00
Cultural values	0.65	0.66	0.55	0.72	0.63

#### 13.4.2. Regression Analysis

The regression results identify environmental awareness, perceived quality, cultural values, income, and education as significant predictors of green purchase intention. Environmental awareness had the most significant effect ( $\beta = 0.36$ ), followed by perceived quality ( $\beta = 0.28$ ).

**Table 4.**  
Regression results.

Predictor	Variable	Beta ( $\beta$ )	P value
Environmental awareness	0.36	7.85	<0.001
Perceived quality	0.28	5.92	<0.01
Cultural values	0.19	4.11	<0.05
Income	0.22	4.74	<0.01
Education	0.18	3.92	<0.05

#### 13.4.3. Descriptive Statistics

The descriptive statistics (Table 3) show means above 3 for all variables, indicating generally positive levels. The scales' reliability ( $\alpha > 0.8$ ) supports their internal consistency.

**Table 5.**  
Descriptive statistics.

Variable	Mean (M)	Standard deviation (SD)	Cronbach's alpha ( $\alpha$ )
Environmental awareness	3.92	0.78	0.85
Perceived green product quality	3.61	0.92	0.88
Willingness to pay premium	3.24	1.05	0.91
Green purchase intention	3.71	0.87	0.89
Social norms	3.48	0.95	0.83
Cultural values	3.80	0.82	0.86

### 13.5. Interpretation

The results support the hypotheses, showing that sociocultural factors, environmental awareness, and perceived quality significantly influence green purchase intent (questions 1-3). Demographics also play a role (question 4), while qualitative insights highlight the potential for government and institutional initiatives (question 5).

The findings address the research objectives by analyzing sociocultural dimensions, assessing awareness, guiding tailored marketing strategies, exploring demographic impacts, and suggesting government-led initiatives (objectives 1-5).

In conclusion, the results validate the hypotheses, answer the research questions, and align with the study's objectives. These insights provide a strong foundation for promoting green product adoption in the region.

## 14. Discussion of Results

### 14.1. Impact of Results on Policymakers and Institutions

The findings provide actionable insights for policymakers and institutions promoting sustainable consumption in Saudi Arabia, the UAE, and Qatar. For example:

#### 14.1.1. Government Subsidies:

The significant role of perceived product quality and affordability suggests that governments in all three countries could introduce subsidies or tax incentives to reduce financial barriers associated with green products. Qatar, with its smaller but affluent population, could leverage targeted subsidies to accelerate green product adoption.

#### 14.1.2. Educational Campaigns:

Environmental awareness emerged as a strong predictor of green purchasing behavior, particularly in the UAE and Qatar. Government-led campaigns could focus on the importance of sustainability, utilizing digital platforms and collaborations with community and religious leaders in Qatar to enhance their reach.

#### 14.1.3. Certification Standards

Establishing and promoting standardized certifications for green products in the Gulf region, including Qatar, can enhance consumer trust. This step is particularly critical for countries like Qatar, where concerns about product authenticity may be less pronounced but still influential.

### 14.2. Practical Implications for Companies

Businesses in Saudi Arabia, the UAE, and Qatar can use these findings to enhance their strategies:

#### 14.2.1. Marketing Strategies

Develop culturally sensitive campaigns aligned with local values, such as Islamic environmental principles, especially in Saudi Arabia and Qatar, where cultural and religious influences are strong.

#### 14.2.2. Product Development

Focus on creating high-quality green products that exceed consumer expectations, as perceived quality is critical across all three countries.

#### 14.2.3. Pricing Models

Implement flexible pricing, such as installment plans or discounts, to address affordability concerns, particularly in Saudi Arabia and Qatar.

### 14.3. Theoretical Contributions

This research advances green marketing and sustainability by:

#### 14.3.1. *Expanding Cultural Studies*

It explores the interplay of social, cultural, and economic factors in Saudi Arabia, the UAE, and Qatar, offering a deeper understanding of green consumer behavior in the Gulf.

#### 14.3.2. *Integrating Theoretical Models*

By combining the Theory of Planned Behavior and the Green Marketing Mix, the study provides a comprehensive framework for analyzing green product adoption in the Gulf context.

#### 14.3.3. *Filling Research Gaps*

The study addresses gaps in the literature, such as the role of government initiatives and demographic interactions, with unique insights from Qatar adding further depth.

### 14.4. *Study Limitations and Future Research Directions*

#### 14.4.1. *Study Limitations*

##### 14.4.1.1. *Sample Representativeness*

Findings may not fully apply to other Gulf countries or regions with different socioeconomic contexts.

##### 14.4.2. *Cultural Specificity*

Results are rooted in Gulf cultural and religious norms, particularly in Saudi Arabia and Qatar, limiting their relevance to non-Gulf contexts.

##### 14.4.3. *Quantitative Measures*

Reliance on quantitative metrics may not fully capture the complexity of social and cultural factors.

#### 14.4.4. *Directions for Future Research*

##### 14.4.3.1. *Expanding Geographical Scope*

Include more Gulf countries or regions like North Africa and Southeast Asia to explore variations in green product adoption.

##### 14.4.4. *Technological Influences*

Investigate the role of emerging technologies like blockchain and AI in enhancing consumer trust and green product certification in the Gulf.

##### 14.4.5. *Longitudinal Studies:*

Conduct long-term research to track changes in consumer attitudes and behaviors in response to evolving policies and market dynamics.

##### 14.4.6. *Deepening Qualitative Insights*

Use ethnographic studies or focus groups to explore cultural influences on sustainable consumption in Saudi Arabia, the UAE, and Qatar.

### 14.5. *Ethical Considerations*

This study involved collecting data through a structured survey to explore [This study significantly contributes to green marketing by presenting a globally applicable framework for understanding consumer behavior toward green products]. The survey focused on gathering general information about [Their opinion on green products] and did not include sensitive or personally identifiable data.



Approval from an ethics review board was deemed unnecessary as the study did not involve medical, psychological, or high-risk interventions. Additionally, the institution where the study was conducted [Saudi Higher Education Council] does not require ethics board approval for studies of this nature. The collected data were anonymized to ensure participant confidentiality, and all participants provided informed consent before participating in the study.

## 15. Results and Recommendations

### 15.1. Results

#### 15.1.1. The Impact of Social and Cultural Factors

Cultural values significantly influence green product adoption, with Saudi Arabia ( $M=3.92$ ) showing a more substantial impact than the UAE ( $M=3.65$ ) and Qatar ( $M=3.78$ ,  $p<0.01$ ). Religious principles, such as Islamic environmental stewardship, were key motivators, aligning with prior research on societal values in cohesive communities.

#### 15.1.2. Environmental Awareness as a Key Predictor

Environmental awareness strongly predicted green purchase intent ( $\beta=0.36$ ,  $p<0.001$ ). The UAE led in awareness ( $M=4.01$ ), followed by Qatar ( $M=3.89$ ) and Saudi Arabia ( $M=3.84$ ), reflecting the success of the UAE's government-led campaigns. These results mirror findings from Europe and North America.

#### 15.1.3. Role of Perceived Quality and Cost

Perceived quality was the second most influential factor ( $\beta=0.28$ ,  $p<0.01$ ), emphasizing the need for high-quality green products. High prices remained a barrier ( $M=3.24$ ), consistent with global challenges observed in Brazil and India.

#### 15.1.4. Demographic Factors and Their Influence

Income ( $\beta=0.22$ ,  $p<0.01$ ) and education ( $\beta=0.18$ ,  $p<0.05$ ) significantly predicted green product adoption. Higher-income and educated groups showed greater willingness to invest in sustainability, aligning with findings from Germany and Canada.

#### 15.1.5. Role of Governmental Initiatives

Participants supported government interventions like subsidies and improved distribution infrastructure to enhance accessibility. These findings align with successful policies in Denmark and Japan, which reduced economic barriers and increased green product acceptance.

### 15.2. Recommendations

#### 15.2.1. Innovative and Sustainable Pricing Strategies

- Implement government subsidies and loyalty programs to reduce consumer costs.
- Adopt competitive pricing models to make green products accessible to a broader audience.

#### 15.2.2. Community Awareness

- Develop targeted environmental awareness campaigns that address all demographic segments.
- Collaborate with religious and community leaders to highlight the intersection of sustainability with cultural and religious values.

#### 15.2.3. Ensuring Product Quality and Transparency

- Businesses should focus on improving the quality of green products and providing accredited certifications to build trust.

- Marketing initiatives should emphasize functional and environmental benefits to enhance consumer confidence.
- Improving Product Availability:
- Foster collaboration between governments and the private sector to expand distribution networks, ensuring green products are accessible in both rural and urban areas.
- Developing Culturally Sensitive Marketing Strategies:
- Design marketing approaches that resonate with local cultural and religious values, emphasizing how green products can enhance the quality of life and foster social responsibility.

## 16. Conclusion

This study highlights the critical role of integrating governmental support, enhanced product quality, and culturally aligned marketing strategies to accelerate the transition toward sustainable consumption in Saudi Arabia, the UAE, and Qatar. The findings emphasize the need for collaborative efforts among governments, businesses, and communities to address key barriers such as affordability, accessibility, and trust in green products.

Stakeholders can foster environmental consciousness and encourage eco-friendly purchasing by implementing targeted awareness campaigns, transparent certification systems, and innovative pricing models. These strategies align with the region's cultural and religious values and offer a pathway to achieving tangible environmental and economic benefits.

Adopting these recommendations will contribute to a more sustainable future by bridging the gap between consumer expectations and market offerings while reinforcing the Gulf region's commitment to global sustainability goals.

## Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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