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Mohsen. Mirzaei [1], Ezzatollah. Abbasian [2*], Seyed Reza. Seyed Javadin [3]

1 PhD Student, Department of Business Administration, Kish International Campus, University of Tehran, Kish , Iran
2 Professor, Department of Financial Engineering, Faculty of Accounting and Financial Sciences, Faculties of Management, University of Tehran, Tehran, Iran
3 Professor, Department of Marketing and Market Development, Faculty of Business Administration, Faculties of Management, University of Tehran, Tehran, Iran

Corresponding author email address:
e.abbasian@ut.ac.ir

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# Providing the Consumer Behavior Model with a Green Marketing Approach

## ABSTRACT

This study aimed to investigate the direct and indirect effects of cause-related marketing on green consumption attitude, intention, and behavior among cosmetics consumers in Tehran. This research employed a mixed-methods design consisting of a qualitative phase for identifying CRM and green consumption components through meta-analysis and expert interviews, followed by a quantitative phase using structural equation modeling (SEM). In the qualitative phase, 20 marketing experts contributed to component extraction using MAXQDA and content analysis. In the quantitative phase, 450 questionnaires were distributed among cosmetics consumers in Tehran, yielding 387 valid responses. The model included four latent constructs—cause-related marketing, green consumption attitude, green consumption intention, and green consumption behavior—measured using both researcher-developed and standardized scales. Reliability, convergent validity, and discriminant validity were evaluated prior to SEM estimation. SEM results indicated that cause-related marketing had significant positive effects on green consumption behavior ($\beta = 0.660$, $p < 0.001$), green consumption intention ($\beta = 1.105$, $p < 0.001$), and green consumption attitude ($\beta = 0.945$, $p < 0.001$). Green consumption intention significantly predicted behavior ($\beta = 0.021$, $p = 0.034$), while green consumption attitude significantly predicted both behavior ($\beta = 0.330$, $p < 0.001$) and intention ($\beta = 0.251$, $p = 0.001$). Indirect pathways were also significant, including CRM → attitude → behavior ($\beta = 0.311$, $p < 0.001$), CRM → attitude → intention ($\beta = 0.237$, $p = 0.001$), CRM → intention → behavior ($\beta = 0.023$, $p = 0.042$), and attitude → intention → behavior ($\beta = 0.005$, $p = 0.009$). Cause-related marketing exerts strong direct and indirect influences on consumers' green attitudes, intentions, and behaviors, demonstrating its strategic importance in closing the green attitude–behavior gap and promoting sustainable consumption in the cosmetics industry.

**Keywords:** green marketing, mixed-methods research (quantitative–qualitative), cause-related marketing

## Introduction

Escalating environmental degradation, resource scarcity, and climate change have pushed firms and consumers to reconsider the ecological consequences of production and consumption patterns. Against this backdrop, green marketing and green consumption have emerged as central strategic and behavioral responses intended to reduce environmental harm while sustaining competitive advantage and consumer welfare [1, 2]. Early work on green branding showed that green brand image, satisfaction, and trust are key drivers of green brand equity, highlighting the need to align environmental performance with credible communication [1]. Subsequent studies in hospitality, tourism, and retailing have documented that environmental commitment and sacrifice for the environment shape behavioral intentions, such as choosing green hotels or environmentally certified services [3, 4]. In parallel, research on organic food and sustainable products has emphasized that

environmental concern, perceived health benefits, and ethical motivations are increasingly salient in consumer decision-making, particularly as governments and firms invest in green innovation and environmental sustainability policies [2, 5, 6].

The theory of planned behavior (TPB) and related intention-based frameworks have become the dominant lenses for explaining green purchase intention, suggesting that attitude toward behavior, subjective norms, and perceived behavioral control jointly shape pro-environmental choices [5, 7, 8]. Empirical studies across sectors—ranging from organic food to green hotel stays and green skincare—confirm that favorable environmental attitudes and strong perceived control significantly increase the intention to purchase green products [3, 9, 10]. At the same time, environmental concern, knowledge, and beliefs are shown to function as antecedents of these TPB constructs, strengthening the cognitive and affective foundations of green consumption [11, 12]. Environmental awareness and health consciousness, in particular, have been identified as powerful motivators for eco-friendly consumption and organic food uptake, as consumers increasingly associate “green” with personal and societal well-being [6, 13, 14]. Recent conceptual and empirical work measuring environmental awareness and its determinants confirms that higher ecological knowledge and concern are associated with stronger environmental intentions across both adults and adolescents [15-17].

Within this broad stream, numerous studies in the Iranian context have explored green purchase intention and behavior, often integrating TPB with additional variables such as environmental concern, perceived risk, and socio-demographic characteristics. Research on Iranian consumers has shown that environmental concerns and knowledge significantly predict intention to purchase green agricultural products and other eco-labeled goods [18, 19]. Extensions of TPB that incorporate environmental ethics and moral obligations further indicate that ethical sensitivity and environmental responsibility strengthen green purchase intentions and ethical green buying behavior [20-22]. Studies on sales promotion and organic products in local markets show that motivational components of promotion can encourage customers to choose greener alternatives when messages resonate with their values and perceived benefits [23, 24]. A meta-analysis of factors affecting green product purchase intention conducted on Iranian studies synthesizes these findings and confirms the pivotal roles of environmental attitudes, perceived value, and social influences in shaping intention [25]. In recent work, green marketing strategies and green marketing mix are also found to enhance green repurchase intention, demonstrating the importance of coherent strategic alignment between environmental positioning and marketing implementation [26, 27].

Despite these advances, the well-documented intention–behavior gap remains a persistent challenge: consumers often report strong pro-environmental attitudes and intentions, yet their actual purchase patterns remain only moderately green [28]. Research in emerging and developed markets alike shows that perceived price premiums, quality uncertainty, and habitual buying constrain the translation of intentions into consistent green behavior [29, 30]. In the Iranian context, evidence suggests that while green purchase intention is positively related to actual purchases, this relationship is moderated by income and economic constraints, underscoring the role of structural and financial barriers [31]. At the same time, comparative research in other markets confirms that consumers’ willingness to pay for green attributes is sensitive to price and perceived value, and that health consciousness and environmental beliefs can partially offset price-related resistance [8, 10, 13, 30]. Recent work differentiating between environmental awareness, health consciousness, and basic personal conditions further indicates that these variables jointly influence green consumption intention for durable goods such as green furniture [17].

Demographic and socio-cultural factors add further complexity. Studies on food and lifestyle products show that age, gender, and consumption habits shape preferences and willingness to adopt green alternatives [32, 33]. Gendered norms and stereotypes can either facilitate or inhibit sustainable consumption; for instance, the "green-feminine" stereotype suggests that eco-friendly behavior is often coded as feminine, which may discourage some male consumers from choosing green options [34, 35]. Recent multi-group analyses of online green purchasing highlight that age, gender, and income moderate the relationships between attitudes, perceived usefulness, and purchase intentions in digital environments, implying that segmentation and tailored messaging are critical for effectiveness [36]. Within Iran, empirical evidence indicates that educational level, environmental awareness, and social norms play a significant role in predicting green purchase intention, especially among younger and more educated consumers [18, 24].

Parallel to this work on green consumer behavior, cause-related marketing (CRM) has gained prominence as a strategic corporate social responsibility (CSR) tool that links a brand's sales or profits to support for a social or environmental cause. Experimental and field studies have demonstrated that cause–brand fit, perceived corporate motives, and campaign authenticity critically shape consumer responses, including attitudes toward the company and purchase intentions [37-40]. When consumers perceive a high fit between the brand and the supported cause, and interpret the firm's motives as altruistic rather than purely profit-driven, they are more likely to respond favorably to the campaign and to reward the brand through purchase and advocacy behaviors [38, 41]. Meta-analytic evidence on CRM confirms that campaign effectiveness is influenced by perceived fit, cause importance, relational proximity, and executional factors, and that emotional engagement and perceived sincerity are central mechanisms [42].

However, CRM is vulnerable to consumer skepticism, especially when campaigns are perceived as opportunistic or inconsistent with the firm's broader behavior. Studies in Malaysia and other markets show that skepticism toward CRM can dampen the positive effects of campaigns on attitudes and purchase intentions, emphasizing the need for transparency and credible CSR integration [43, 44]. Research on millennials' responses to CRM for LGBTQ homeless youth illustrates that when campaigns are perceived as authentic and aligned with deeply held social values, they can generate strong supportive responses even in sensitive domains [45]. More recent work explores the role of perceived altruism and the emotional pathways through which CRM operates: perceived altruism enhances emotional warmth and trust, which in turn foster favorable attitudes and purchase intentions [41, 46]. These findings converge on the view that CRM can function as an effective lever for both social impact and market performance when it is perceived as genuine, well-aligned, and emotionally resonant.

Within the green marketing domain, CRM has particular potential to address the intention–behavior gap by reframing green purchases not only as environmentally responsible but also as direct contributions to social or ecological causes. Meta-analytic and empirical studies indicate that CRM can enhance perceived value, moral satisfaction, and social identity associated with consumption, thereby strengthening pro-environmental intentions and behaviors [4, 29, 42]. At the same time, CRM campaigns must navigate concerns about greenwashing and moral licensing; if consumers suspect that environmental claims are exaggerated or that cause support is symbolic, the campaigns may backfire [28, 44]. The interplay of cause–brand fit, corporate reputation, and attributions of responsibility thus becomes especially salient when CRM is used to promote green products and sustainable lifestyles [38, 39].

The cosmetics industry represents a particularly relevant context for the intersection of green marketing, CRM, and gendered consumption. Cosmetics are closely tied to identity, body image, and self-expression, and purchasing decisions are often shaped by gender norms, social expectations, and hedonic motives [34, 35]. At the same time, cosmetics have significant environmental and health externalities due to chemical ingredients, packaging waste, and energy-intensive production processes. Studies on green skincare products underscore that country-of-origin cues, price sensitivity, and perceived efficacy are critical determinants of purchase intention, suggesting that green positioning alone is insufficient without credible functional performance [10]. In emerging economies, where environmental regulation and consumer protection frameworks are evolving, the challenge of balancing affordability, perceived quality, and environmental safety is even more pronounced [29, 30].

In Iran, research on green consumption in cosmetics and fast-moving consumer goods has documented moderate levels of green awareness and intention, with evidence of positive but not yet strong attitudes toward eco-friendly products [18-20]. Studies on green value and repurchase intention, as well as on the moderating role of income and demographic characteristics, suggest that while many consumers express concern for environmental issues, economic constraints, product availability, and skepticism about green claims hinder consistent adoption of green brands [26, 31, 36]. Recent research on the effect of green marketing on green repurchase intention via green marketing strategies, and on the impact of awareness and perceived value on ethical purchasing behavior, highlights the importance of integrated strategic approaches that combine credible communication, value creation, and ethical positioning [22, 27]. Yet, the specific role of CRM as a structured, cause-linked mechanism for strengthening green attitudes, intentions, and behaviors in the Iranian cosmetics market remains underexplored.

Concurrently, digital transformation is reshaping how firms design and communicate green and social-value propositions. The integration of green marketing with green human resource management and internal engagement has been proposed as a pathway for building sustainable brands that are credible both internally and externally [47]. In parallel, work on digital transformation and green marketing in brand positioning underscores that technology-enabled platforms allow firms to personalize messages, highlight eco-innovation, and connect cause campaigns with real-time consumer engagement, especially among younger segments [48]. These developments create new opportunities for cosmetics brands operating in competitive urban markets such as Tehran to leverage CRM and green marketing in mutually reinforcing ways.

Despite the breadth of international and domestic research on green consumption, TPB-based determinants, and CRM, several conceptual and empirical gaps persist. First, relatively few studies integrate CRM constructs—such as cause–brand fit, perceived motivations, authenticity, and skepticism—into structural models of green attitudes, intentions, and behaviors, particularly in non-Western markets and product categories like cosmetics [37, 38, 43, 45, 46]. Second, while Iranian research has extensively examined green purchase intention and its antecedents, the potential of CRM to reduce the green attitude–behavior gap through cognitive, affective, and normative pathways remains largely untested [21, 25, 27]. Third, there is a need for models that explicitly capture the mediating roles of green attitude and green consumption intention in translating CRM efforts into observable green consumption behavior, accounting for the complex socio-demographic and value-based configurations documented in prior studies [11, 12, 17, 36].

Accordingly, the present study aims to develop and empirically test a structural model that explains how cause-related marketing influences green consumption attitude, green consumption intention, and green consumption behavior among cosmetics consumers in Tehran.

## Methodology

Since the present study follows a specific orientation and is conducted to obtain a solution to a defined problem, and given that it involves developing a model, it can be argued that this research falls within the category of applied and developmental studies. Moreover, the research adopts a mixed-methods design (quantitative–qualitative) and possesses a descriptive–analytical nature. In terms of time, the data collected for this study are cross-sectional, and the geographical scope is the city of Tehran.

The statistical population of the qualitative phase consists of 20 marketing experts, including university professors and specialists. The statistical population of the quantitative phase includes all customers of the cosmetics industry in Tehran. Based on Cochran's formula, a minimum sample size of 384 individuals was required; however, to ensure greater accuracy, 450 questionnaires were randomly distributed.

In this study, to develop a conceptual model of the factors influencing cause-related marketing and a conceptual model of the determinants of green consumption intention, the qualitative method—supported by meta-analysis and interviews—was applied. Qualitative data were analyzed using MAXQDA software through content analysis, and conceptual models were extracted. After identifying the dimensions and indicators influencing cause-related marketing and green consumption intention, the study entered the quantitative phase.

In this article, descriptive analyses of the variables were subsequently conducted. Finally, after designing the structural model and evaluating convergent and discriminant reliability using the structural equation modeling method, the research model was estimated.

In this research, to identify and extract the primary and secondary components of variables related to cause-related marketing and green purchase intention, a meta-analysis approach was used. This method enables researchers to aggregate and analyze results derived from multiple studies and produce reliable and comprehensive patterns of factors influencing consumer behavior. To achieve this, scientific articles published in Persian and English between 2010 and 2025 were thoroughly reviewed. In the analytical process, articles related to cause-related marketing (CRM) and green consumption intention were selected, and based on their content, the structural and behavioral components of these variables were identified and categorized.

## Findings and Results

The meta-analysis results for the green purchase intention variable are reported in Table 1.

**Table 1**

*Meta-analysis Results for the Green Purchase Intention Variable*

| Row | Component | Source |
|---|---|---|
| 1 | Willingness to purchase green products in the future | Vensciut et al. (2023); Powell et al. (2016); Dean et al. (2012); Chen & Peng (2012); Mohammadian & Bakhshandeh (2014) |
| 2 | Probability of choosing organic products in the next purchase | Vensciut et al. (2023); Powell et al. (2016); Dean et al. (2012); Chen & Peng (2012); Mohammadian & Bakhshandeh (2014) |

| | | |
|---|---|---|
| 3 | Intention to replace conventional brands with green brands | Vensciut et al. (2023); Powell et al. (2016); Dean et al. (2012); Chen & Peng (2012) |
| 4 | Intention to spend more on green products | Vensciut et al. (2023); Powell et al. (2016); Dean et al. (2012); Chen & Peng (2012) |
| 5 | Perceived environmental benefits and positive impact of green purchasing | Vensciut et al. (2023); Despotovic et al. (2021); PajiAzelis & Krontalis (2014); Ghoveydel & Soleimani (2020) |
| 6 | Intention to purchase due to lower pollution of green products | Vensciut et al. (2023); Powell et al. (2016); Dean et al. (2012); Chen & Peng (2012); Abbasi et al. (2021) |
| 7 | Perceived price | Shanmugam et al. (2022); Gah & Balaji (2016); Reiter et al. (2015); Hsu et al. (2017); Tawfiq & Vaitiyanathan (2018); Liao et al. (2020) |
| 8 | Perceived value and quality | Shanmugam et al. (2022); Gah & Balaji (2016); Reiter et al. (2015); Hsu et al. (2017); Tawfiq & Vaitiyanathan (2018); Liao et al. (2020); Haj Ali Akbari & Yousefi (2016); Toulabi et al. (2021) |
| 9 | Health consciousness | Wang et al. (2023); Zhang & Qi (2021); Mai & Hoffmann (2015); Pirayesh Maivan et al. (2020); Ghaedamini Harouni et al. (2024) |
| 10 | Subjective norms | Greaves et al. (2013); Bardbar & Faghani Makrani (2016); Abbasi et al. (2018) |
| 11 | Social factors | Shanmugam et al. (2022); Gah & Balaji (2016); Reiter et al. (2015); Hsu et al. (2017); Tawfiq & Vaitiyanathan (2018); Liao et al. (2020) |
| 12 | Age factors | Liang et al. (2024); Tian et al. (2017); Michon et al. (2010) |
| 13 | Gender factors | Liang et al. (2024); Wang et al. (2023); Zhao et al. (2021); Brüg et al. (2016) |
| 14 | Educational factors | Liang et al. (2024); Li et al. (2023); Lang et al. (2019); Reiter et al. (2015) |
| 15 | Income factors | Liang et al. (2024); Zhang et al. (2019); Serisatan et al. (2023) |
| 16 | Individual social responsibility | Haj Ali Akbari & Yousefi (2016); Bakhshandeh & Kazemi (2017) |

As shown in Table 1, based on the meta-analysis, 16 components of the green purchase intention variable were identified, including willingness to purchase green products in the future, likelihood of choosing organic products in the next purchase, intention to replace conventional brands with green brands, willingness to pay more for green products, perception of environmental benefits and positive impacts, intention to purchase due to lower pollution, perceived price, perceived value and quality, health consciousness, subjective norms, social factors, age factors, gender factors, educational factors, income factors, and individual social responsibility.

The meta-analysis results for the cause-related marketing variable are reported in Table 2. As shown in Table 2, based on the meta-analysis, 10 components of the cause-related marketing variable were identified, including brand–cause fit, perceived motivation, authenticity and credibility, consumer skepticism, consumer attitude toward the brand, willingness to pay, consumer identification with the cause, transparency and financial disclosure, word-of-mouth advertising, and perceived effectiveness.

**Table 2**

*Meta-analysis Results for the Cause-Related Marketing Variable*

| Row | Component | Source |
|---|---|---|
| 1 | Brand–cause fit | Zhang et al. (2020); Kordes et al. (2020) |
| 2 | Perceived motivation | Zhang et al. (2020); Jeon & An (2019) |
| 3 | Authenticity and credibility | López et al. (2024); Zhang et al. (2020); Jeon & An (2019) |
| 4 | Consumer skepticism | Hensley et al. (2019); Anwar & Muhammad (2012) |
| 5 | Consumer attitude toward the brand | López et al. (2024); Zhang et al. (2020) |
| 6 | Willingness to pay | Fan et al. (2022); Anwar & Muhammad (2012) |
| 7 | Consumer identification with the cause | López et al. (2024); Zhang et al. (2020) |
| 8 | Transparency and financial disclosure | López et al. (2024); Jeon & An (2019); Zhang et al. (2020) |
| 9 | Word-of-mouth advertising | Kao et al. (2025); López et al. (2024) |
| 10 | Perceived effectiveness | Melero & Montaner (2016); Zhang et al. (2020) |

To ensure the validity of the meta-analysis results and to screen the components of cause-related marketing and green purchase intention, the opinions of 20 experts were used in this study.

Table 3 presents the demographic distribution of the experts participating in the research. As shown in the table, the majority of experts have between 10 and 15 years of relevant work experience, and most hold a master's degree. Additionally, in terms of gender, most participants in the qualitative sample are male, and their ages range between 30 and 50 years.

**Table 3**

*Characteristics of Experts Involved in Screening the Components Identified from Meta-analysis*

| Gender | Age | Education | Work Experience |
|---|---|---|---|
| Male | 40–50 years | Master's | 15–20 years |
| Male | 40–50 years | Master's | More than 20 years |
| Male | 50–60 years | PhD | 10–15 years |
| Female | 30–40 years | Master's | 15–20 years |
| Male | 30–40 years | Master's | 15–20 years |
| Male | 30–40 years | Master's | 10–15 years |
| Female | 50–60 years | PhD | 10–15 years |
| Female | 40–50 years | Master's | 10–15 years |
| Male | 30–40 years | Master's | 10–15 years |
| Female | 40–50 years | Master's | More than 20 years |
| Female | 40–50 years | PhD | 15–20 years |
| Male | 40–50 years | Master's | 10–15 years |
| Male | 40–50 years | PhD | 10–15 years |
| Female | 40–50 years | Master's | 10–15 years |
| Male | 30–40 years | Master's | 10–15 years |
| Male | 40–50 years | PhD | 15–20 years |
| Male | 30–40 years | PhD | 15–20 years |
| Female | 30–40 years | Master's | 10–15 years |
| Male | 30–40 years | PhD | 10–15 years |
| Female | 30–40 years | Master's | More than 20 years |

Based on the qualitative analysis results, it can be stated that green consumption intention—one of the key components of sustainable consumer behavior—reflects individuals' willingness and intention to purchase green and organic products. According to the evidence derived from qualitative analysis, green consumption intention is shaped by environmental attitudes and eco-friendly values and is strengthened by environmental awareness, environmental education, and green advertising. Furthermore, social and demographic factors such as recommendations from peers, social influence, individual social responsibility, gender, age, education, and related characteristics may increase green purchase intention. In purchase decision-making, the price and quality of green products, product satisfaction, and the perceived value of green consumption also play significant roles, while ethical motivations and commitment to environmental civic responsibility further reinforce the intention to select green brands. Overall, green consumption intention reflects a combination of individual attitudes, social factors, and product attributes, functioning as the primary pathway toward the realization of green consumer behavior.

Based on the qualitative analysis, the key terms related to cause-related marketing include campaigns supporting a social cause, meaningful and relevant causes, transparent and honest advertising, accurate information regarding how contributions are spent, corporate transparency, consumer trust in the campaign, and logical congruence between the brand and the social cause. Additionally, concepts such as consumer positive feelings toward the brand, positive brand image in the customer's mind, positive attitudes toward the campaign, long-term positive effects of the campaign on the social cause, and the meaningfulness of the cause for the consumer play important roles in shaping purchase behavior and financial support for campaigns. Other essential components include consumer willingness to pay a higher amount to support the cause, recommending the campaign to others, sharing experiences on social media, and alignment between consumer values and campaign goals—all of which demonstrate the positive and lasting effect of cause-related marketing on consumer behavior and brand image.

The structure of the components of cause-related marketing and green purchase intention can be illustrated using Figures 1 and 2 in MAXQDA software.

**Figure 1**

*Components of Cause-Related Marketing extracted from Qualitative Analysis*

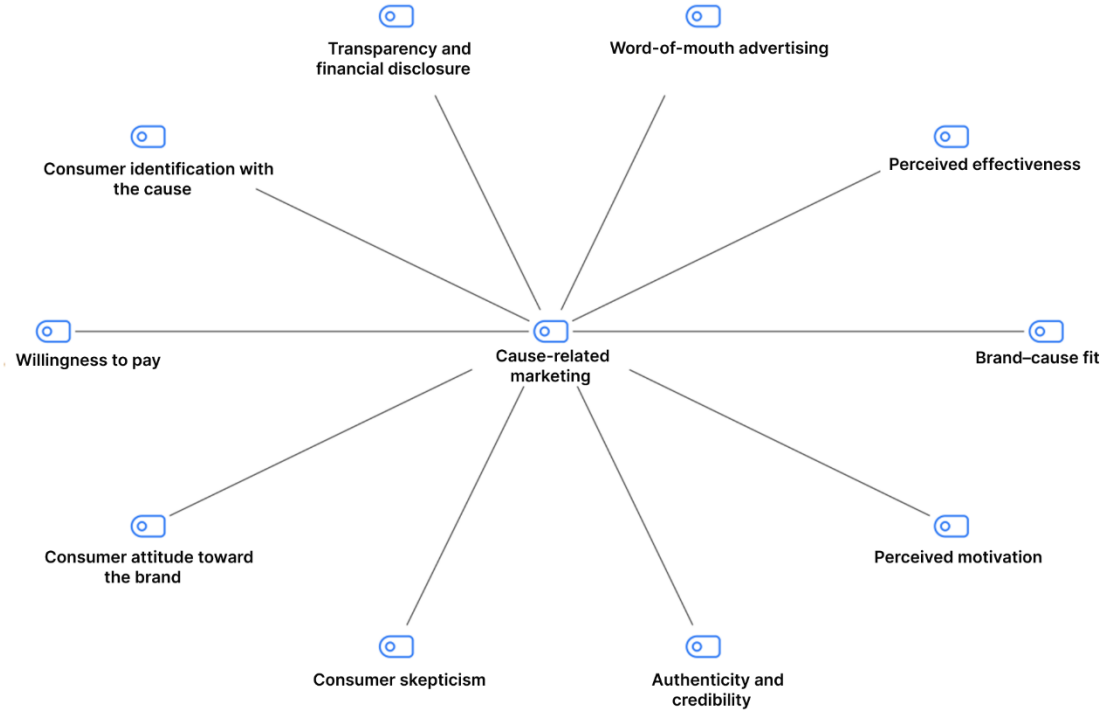



**Figure 2**

*Components of Green Consumption Intention extracted from Qualitative Analysis*

As shown in the previous section, in the first stage, the components associated with green consumption intention and cause-related marketing were identified using meta-analysis. Subsequently, to screen these components, expert opinions were utilized. Table 4 presents the components of each variable along with the calculated agreement coefficient derived from expert evaluations. As shown in Table 4, the agreement coefficient among experts for all identified components exceeds 50 percent; therefore, the components of green consumption intention and cause-related marketing extracted through meta-analysis are considered sufficiently valid based on expert consensus.

**Table 4**

*Final Components Extracted from Qualitative Analysis After Screening*

| Variables | Components | Agreement Coefficient (%) |
|---|---|---|
| Cause-related marketing | Brand–cause fit | 86.67 |
| | Perceived motivation | 93.33 |
| | Authenticity and credibility | 66.67 |
| | Consumer skepticism | 86.67 |
| | Consumer attitude toward the brand | 93.33 |
| | Willingness to pay | 66.67 |
| | Consumer identification with the cause | 55.00 |
| | Transparency and financial disclosure | 100.00 |
| | Word-of-mouth advertising | 60.00 |
| | Perceived effectiveness | 93.33 |
| Green consumption intention | Willingness to purchase green products | 80.00 |
| | Probability of choosing organic products | 86.67 |
| | Intention to replace conventional brands with green brands | 86.67 |
| | Willingness to spend more on green products | 73.33 |
| | Perception of environmental benefits | 93.33 |
| | Intention to purchase due to lower pollution | 86.67 |
| | Perceived price | 86.67 |
| | Perceived value and quality | 66.67 |
| | Health consciousness | 93.33 |
| | Subjective norms | 80.00 |
| | Social factors | 66.67 |
| | Age factors | 100.00 |
| | Gender factors | 66.67 |
| | Educational factors | 93.33 |
| | Income factors | 80.00 |
| | Individual social responsibility | 100.00 |

In the quantitative section of this study, 450 questionnaires were distributed among customers in the cosmetics industry in the city of Tehran. After collecting the questionnaires, 387 completed questionnaires were ultimately obtained and used for analysis; therefore, the questionnaire completion rate was 86 percent. In Table 5, the distribution of the quantitative sample by age group of the participants is presented.

Of the total 387 individuals who participated in the quantitative analysis, 12.1 percent were under 35 years old, 35.1 percent were between 35 and 45 years old, 18.4 percent were between 46 and 50 years old, 24.3 percent were between 51 and 55 years old, and 10.1 percent were older than 55 years. Therefore, it can be inferred that the majority of the quantitative sample of the study are between 35 and 55 years old.

**Table 5**

*Frequency Distribution of the Quantitative Sample by Age Group*

| Age group | Frequency (persons) | Relative frequency | Cumulative frequency |
|---|---|---|---|
| Under 35 years | 47 | 12.1 | 12.1 |
| 35–45 years | 136 | 35.1 | 47.2 |
| 46–50 years | 71 | 18.4 | 65.6 |

| | | | |
|---|---|---|---|
| 51–55 years | 94 | 24.3 | 89.9 |
| Over 55 years | 39 | 10.1 | 100.0 |

In Table 6, the distribution of the quantitative sample by gender is presented. As shown in the table, of the total 387 individuals who participated in the quantitative section of the study, 80.9 percent of the respondents were women and 19.1 percent were men. Therefore, it can be inferred that the majority of the respondents in the quantitative section are women.

**Table 6**

*Frequency Distribution of the Quantitative Section by Gender*

| Gender | Frequency | Relative frequency | Cumulative frequency |
|---|---|---|---|
| Women | 313 | 80.9 | 80.9 |
| Men | 74 | 19.1 | 100.0 |

In Table 7, the distribution of the quantitative sample by educational level is provided. As shown in the table, of the total 387 individuals who participated in the quantitative section of the study, 69.8 percent have a bachelor's degree or lower, 24 percent have a master's degree, and 6.2 percent have a doctoral degree. Therefore, it can be concluded that the majority of the quantitative sample have a bachelor's degree or lower.

**Table 7**

*Frequency Distribution of the Sample by Educational Level*

| Educational level | Frequency | Relative frequency | Cumulative frequency |
|---|---|---|---|
| Bachelor's degree or less | 270 | 69.8 | 70.9 |
| Master's degree | 93 | 24.0 | 94.4 |
| Doctoral degree | 24 | 6.2 | 100.0 |

In Table 8, the descriptive analysis of the variables used in the research model is presented. Considering the use of a 5-point Likert scale in the questionnaires, where item scores range from 1 to 5, if the mean score of a given variable is greater than 3, the level of that variable is considered above average; if the mean is less than 3, the level is considered below average.

**Table 8**

*Descriptive Analysis of the Research Indicators*

| Variables | Mean | Maximum | Minimum | Standard deviation |
|---|---|---|---|---|
| Cause-related marketing | 2.958 | 5 | 1 | 1.015 |
| Green consumption intention | 2.905 | 5 | 1 | 0.892 |
| Green consumption attitude | 2.970 | 5 | 1 | 1.091 |
| Green consumption behavior | 2.963 | 5 | 1 | 1.033 |

Based on the quantitative results and the opinions of cosmetics industry customers in the city of Tehran included in the sample, the mean of the cause-related marketing variable was reported as 2.958. Given that this value is less than the theoretical mean of the 5-point Likert scale (3), it can be inferred that the level of customers' perception and evaluation of cause-related marketing activities in this industry is average and relatively lower than expected. This indicates that, although cause-related marketing activities are being implemented, they are not yet sufficiently recognized or effective among customers and likely require strengthening in terms of campaign communication, transparent information, and more targeted advertising.

Furthermore, the mean of the green consumption intention variable was reported as 2.905, which is again lower than the theoretical mean of the 5-point Likert scale. This finding suggests that customers' willingness to purchase environmentally

friendly products is still at a moderate level and that there is a need to develop educational and motivational programs, awareness-raising campaigns, and promotion of the benefits of green products to enhance green purchase intention among consumers.

The mean of the green consumption attitude variable was found to be 2.97, which, similar to the other variables, is lower than the theoretical mean of the 5-point Likert scale. This shows that customers' attitudes toward green and environmentally friendly products are still at a moderate level and that, although some initial awareness exists, a sufficiently positive attitude and mental commitment toward green consumption have not yet formed. Therefore, marketing programs should focus on strengthening environmental values and the individual and social benefits of green consumption in order to shape and reinforce positive customer attitudes.

Finally, the mean of the green consumption behavior variable was reported as 2.963, which also remains below the theoretical mean of the 5-point Likert scale. This finding indicates that actual green consumption behavior in customers' cosmetic product purchases is lower than expected, and that a gap exists between attitude, intention, and actual behavior.

Overall, the descriptive analysis results indicate that in the cosmetics industry in Tehran, the levels of customer understanding and acceptance of cause-related marketing, as well as green consumption intention, attitude, and behavior, are at a moderate and less-than-expected level. This underscores the importance of strengthening green and cause-related marketing programs, transparent communication, consumer education, and the creation of incentives for green purchasing.

The proposed structural model includes four latent variables: cause-related marketing, green consumption intention, green consumption attitude, and green consumption behavior. The two variables of cause-related marketing and green consumption intention were measured using a researcher-made questionnaire whose items were derived from the qualitative analysis results. The cause-related marketing variable includes 31 items, and the green consumption behavior variable consists of 35 items. The variables of green consumption attitude and green consumption behavior were measured using standardized questionnaires, consisting of 6 and 4 items, respectively.

Before estimating the structural model, it is necessary to examine the normality of the distribution of the latent variables. In this study, the nonparametric Kolmogorov–Smirnov test was used to assess the normality of variable distributions. The results of this test are presented in Table 9. Based on the statistics reported in Table 9, and in particular the significance levels of the Kolmogorov–Smirnov test, it is observed that at the 95 percent confidence level, the distributions of cause-related marketing, green consumption intention, green consumption attitude, and green consumption behavior are normal.

**Table 9**

*Examination of the Normality of the Distribution of Latent Variables*

| Significance level | Test statistic | Variables |
|---|---|---|
| 0.736 | 0.027 | Cause-related marketing |
| 0.398 | 0.033 | Green consumption intention |
| 0.304 | 0.035 | Green consumption attitude |
| 0.184 | 0.038 | Green consumption behavior |

In this study, to evaluate the reliability of the latent variables in the structural model, Cronbach's alpha, composite reliability, and convergent and discriminant reliability indices were used. The results of the reliability analysis of the research variables in the structural model are presented in Table 10. As shown in the table, the Cronbach's alpha and composite

reliability values for all variables are greater than 0.7. Additionally, the AVE index for all variables is greater than 0.5. Therefore, the latent variables in the structural model of the research exhibit an acceptable level of reliability.

**Table 10**

*Reliability Analysis of Latent Variables in the Structural Model*

| Variables | Number of items | Cronbach's alpha | Composite reliability | AVE |
|---|---|---|---|---|
| Cause-related marketing | 31 | 0.969 | 0.971 | 0.523 |
| Green consumption behavior | 4 | 0.718 | 0.825 | 0.541 |
| Green consumption intention | 35 | 0.972 | 0.973 | 0.510 |
| Green consumption attitude | 6 | 0.872 | 0.907 | 0.627 |

**Table 11**

*Examination of Discriminant Validity (Fornell–Larcker Criterion)*

| Variables | Cause-related marketing | Green consumption behavior | Green consumption intention | Green consumption attitude |
|---|---|---|---|---|
| Cause-related marketing | 0.723 | | | |
| Green consumption behavior | 0.689 | 0.736 | | |
| Green consumption intention | 0.668 | 0.656 | | |
| Green consumption attitude | 0.645 | 0.670 | 0.704 | 0.792 |

In Table 11, the results of examining the discriminant validity of the research variables based on the Fornell–Larcker criterion are presented. As can be seen from the table, the obtained values indicate that each research variable is sufficiently distinct from the others and that discriminant validity is established in the structural model. In other words, the indicators related to each variable correlate more strongly with their own construct than with other variables, which reflects the conceptual distinctiveness and structural validity of the variables in the research model. These findings confirm the validity and reliability of the structural model results and provide assurance that each variable operates as an independent and distinct construct in measuring the studied latent structures.

Subsequently, the structural relationships between the variables were estimated using SmartPLS software. Before conducting path analysis (estimating the structural equation model), model fit must be assessed so that weak indicators, if any, can be removed and the fit indices can be improved to an acceptable level. For this purpose, first-order confirmatory factor analysis was used.

In Figure 3, the results of the estimated structural model of the research along with the estimated coefficients (factor loadings) are presented. The numbers inside the circles in Figure 4 represent the coefficient of determination. In this model, green consumption behavior is the dependent variable, cause-related marketing is the exogenous variable, and green consumption attitude and green consumption intention are the mediating variables.

As shown in Figure 3 and Table 12, the estimated factor loadings for all latent variables in the model are greater than 0.4 and therefore fall within an acceptable range; thus, the estimated model has acceptable validity.

**Figure 3**

*Structural Model of the Research with the Factor Loadings of Each Path*

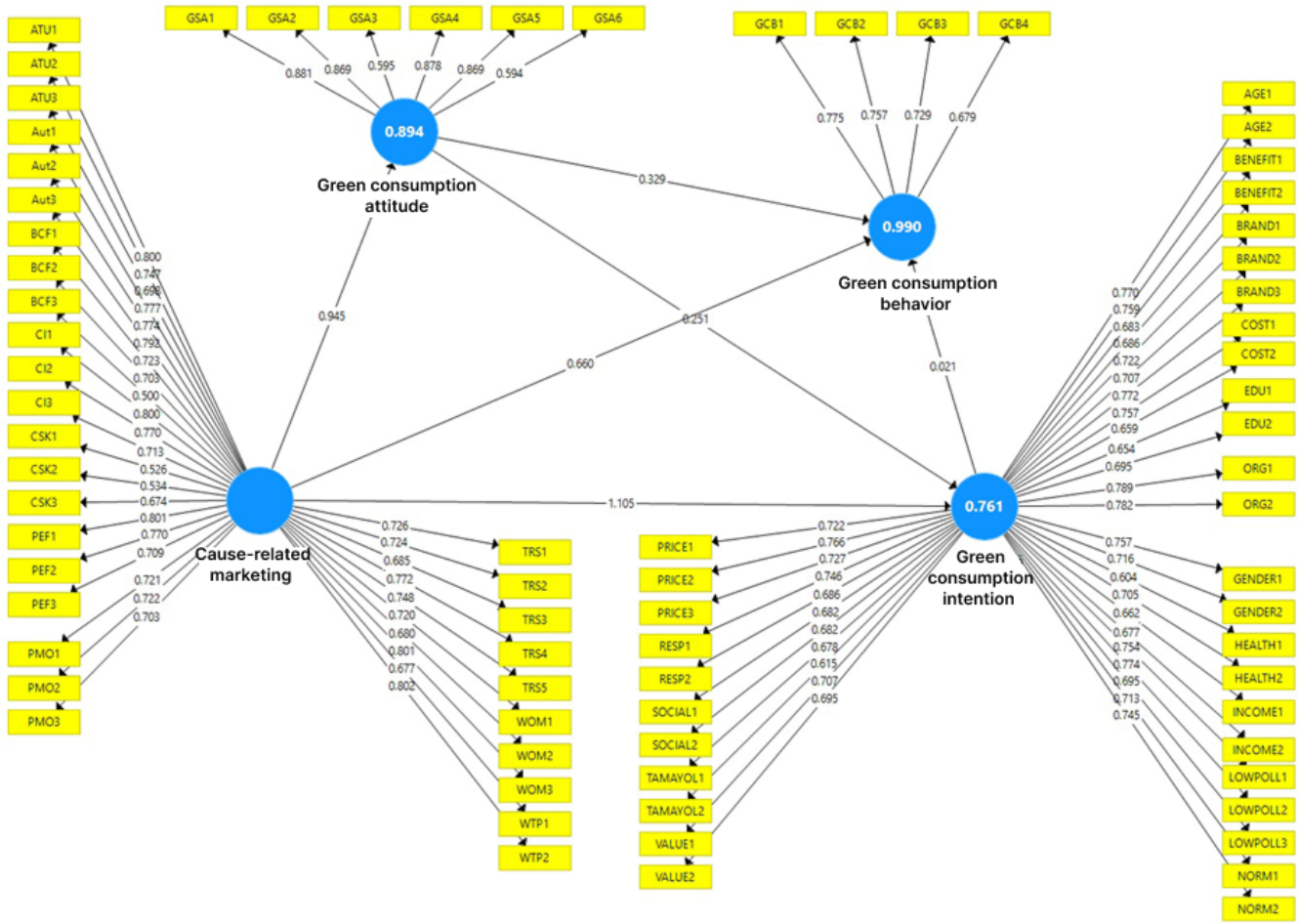



**Table 12**

*Factor Loadings of Latent Variables in the Structural Model*

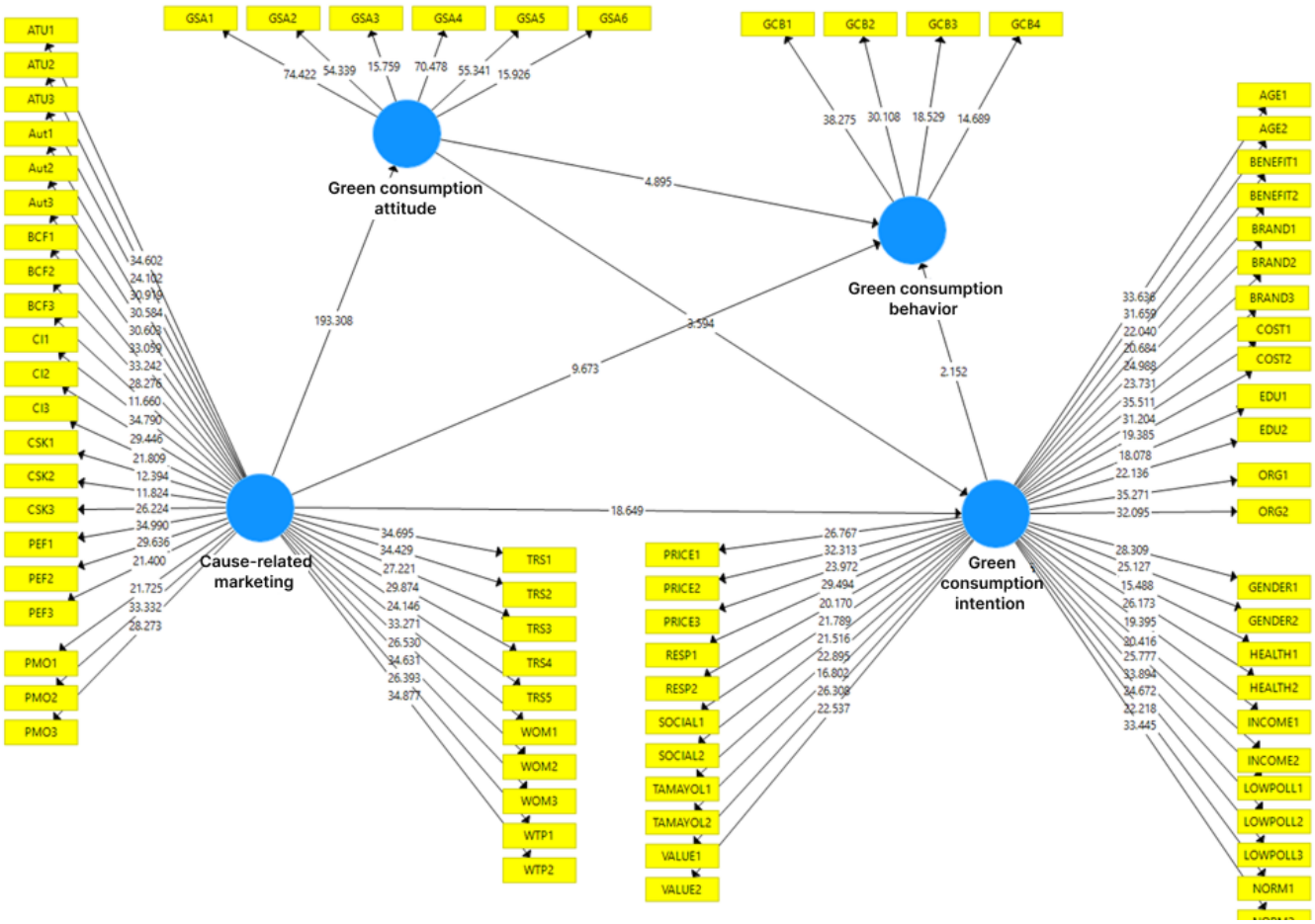
| | Cause-related marketing | Green consumption behavior | Green consumption intention | Green consumption attitude |
|---|---|---|---|---|
| AGE1 | | | 0.770 | |
| AGE2 | | | 0.759 | |
| ATU1 | 0.800 | | | |
| ATU2 | 0.747 | | | |
| ATU3 | 0.698 | | | |
| Aut1 | 0.777 | | | |
| Aut2 | 0.774 | | | |
| Aut3 | 0.792 | | | |
| BCF1 | 0.723 | | | |
| BCF2 | 0.703 | | | |
| BCF3 | 0.500 | | | |
| BENEFIT1 | | | 0.683 | |
| BENEFIT2 | | | 0.686 | |
| BRAND1 | | | 0.722 | |
| BRAND2 | | | 0.707 | |
| BRAND3 | | | 0.772 | |
| CI1 | 0.800 | | | |
| CI2 | 0.770 | | | |
| CI3 | 0.713 | | | |
| COST1 | | | 0.757 | |
| COST2 | | | 0.659 | |
| CSK1 | 0.526 | | | |

| | | | | | |
|---|---|---|---|---|---|
| CSK2 | 0.534 | | | | |
| CSK3 | 0.674 | | | | |
| EDU1 | | | 0.654 | | |
| EDU2 | | | 0.695 | | |
| GCB1 | | 0.775 | | | |
| GCB2 | | 0.757 | | | |
| GCB3 | | 0.729 | | | |
| GCB4 | | 0.679 | | | |
| GENDER1 | | | 0.757 | | |
| GENDER2 | | | 0.716 | | |
| GSA1 | | | | | 0.881 |
| GSA2 | | | | | 0.869 |
| GSA3 | | | | | 0.595 |
| GSA4 | | | | | 0.878 |
| GSA5 | | | | | 0.869 |
| GSA6 | | | | | 0.594 |
| HEALTH1 | | | 0.604 | | |
| HEALTH2 | | | 0.705 | | |
| INCOME1 | | | 0.662 | | |
| INCOME2 | | | 0.677 | | |
| LOWPOLL1 | | | 0.754 | | |
| LOWPOLL2 | | | 0.774 | | |
| LOWPOLL3 | | | 0.695 | | |
| NORM1 | | | 0.713 | | |
| NORM2 | | | 0.745 | | |
| ORG1 | 0.789 | | | | |
| ORG2 | 0.782 | | | | |
| PEF1 | 0.801 | | | | |
| PEF2 | 0.770 | | | | |
| PEF3 | 0.709 | | | | |
| PMO1 | 0.721 | | | | |
| PMO2 | 0.722 | | | | |
| PMO3 | 0.703 | | | | |
| PRICE1 | | | 0.722 | | |
| PRICE2 | | | 0.766 | | |
| PRICE3 | | | 0.727 | | |
| RESP1 | | | 0.746 | | |
| RESP2 | | | 0.686 | | |
| SOCIAL1 | | | 0.682 | | |
| SOCIAL2 | | | 0.682 | | |
| TAMAYOL1 | | | 0.678 | | |
| TAMAYOL2 | | | 0.615 | | |
| TRS1 | 0.726 | | | | |
| TRS2 | 0.724 | | | | |
| TRS3 | 0.685 | | | | |
| TRS4 | 0.772 | | | | |
| TRS5 | 0.748 | | | | |
| VALUE1 | | | 0.707 | | |
| VALUE2 | | | 0.695 | | |
| WOM1 | 0.720 | | | | |
| WOM2 | 0.680 | | | | |
| WOM3 | 0.801 | | | | |
| WTP1 | 0.677 | | | | |
| WTP2 | 0.802 | | | | |

In the next step, the significance of the effects of the variables must be evaluated, for which the bootstrapping technique and the T-statistic are used.

**Figure 4**

*Structural Model of the Research with the T-statistic for Each Path*




In Figure 4, the structural model of the research is presented along with the model coefficients and T-statistics (values in parentheses). If the absolute value of the T-statistic for any given path is greater than 2, then at the 95 percent confidence level that path has a statistically significant effect; otherwise, it does not have a statistically significant effect at the 95 percent confidence level.

The results of Figures 3 and 4 can be summarized in Table 13. Based on the evidence presented in Table 13, it can be inferred that at the 95 percent confidence level, cause-related marketing has a positive and significant effect on green consumption behavior, as the significance level associated with the T-statistic for this path is less than 0.05. According to the results, it can be argued that a one-unit increase in the level of cause-related marketing leads to a 0.660-unit increase in green consumption behavior among cosmetics customers in the city of Tehran. This result indicates that strengthening cause-related marketing activities—such as cosmetic brands supporting environmental or social causes—directly increases actual green consumption behaviors among customers. In other words, the more strongly companies link their brand to social responsibility in their advertising, the more likely consumers are to purchase environmentally friendly products.

At the 95 percent confidence level, cause-related marketing also has a positive and significant effect on green consumption intention, as the significance level associated with the T-statistic for this path is less than 0.05. Based on the results, it can be argued that a one-unit increase in the level of cause-related marketing leads to a 1.105-unit increase in green consumption intention among cosmetics customers in Tehran. This finding suggests that cause-related marketing activities influence not

only customers' actual behavior but also their internal intention and willingness to select green products, and that marketing messages with ethical and environmental content can play an important role in strengthening consumers' cognitive and emotional motivations to choose sustainable products.

The results further showed that, in the structural model of the research and at the 95 percent confidence level, cause-related marketing has a positive and significant relationship with green consumption attitude. This means that raising awareness through targeted marketing campaigns can reinforce consumers' positive perceptions and favorable attitudes toward green behaviors. According to the estimated coefficients, a one-unit increase in the level of cause-related marketing leads to a 0.945-unit increase in green consumption attitude among cosmetics customers in Tehran. Consequently, this type of marketing not only shapes behavior and purchase intention but also transforms consumers' fundamental attitudes regarding the importance of environmental sustainability.

At the 95 percent confidence level, green consumption intention has a positive and significant effect on green consumption behavior, as the significance level associated with the T-statistic for this path is less than 0.05. This means that the stronger consumers' intention to buy green products, the more likely it is that actual green behavior will occur. According to the results, a one-unit increase in green consumption intention leads to a 0.021-unit increase in green consumption behavior among cosmetics customers in Tehran. This finding is fully consistent with the theoretical framework of the theory of planned behavior (Ajzen, 1991). According to this theory, individual behavior is a direct result of behavioral intention, which itself derives from attitude, subjective norms, and perceived behavioral control. Therefore, when consumers have a positive attitude toward environmental protection and feel that purchasing green products is under their control, their intention to perform green behavior is strengthened and ultimately leads to actual behavior. In the context of the cosmetics industry, this result is particularly important because it shows that advertising, educational interventions, and marketing policies that stimulate the intention to purchase green products can indirectly influence consumers' actual behavior. In other words, fostering ethical and environmental motivations, increasing access to green products, and providing transparent information about the environmental benefits of goods are among the strategies that can transform green purchase intention into actual behavior in this industry.

At the 95 percent confidence level, green consumption attitude also has a positive and significant effect on green consumption behavior, as the significance level associated with the T-statistic for this path is less than 0.05. Based on the results, it can be argued that a one-unit increase in green consumption attitude leads to a 0.330-unit increase in green consumption behavior among cosmetics customers in Tehran. In fact, a positive attitude is not only a reflection of individuals' environmental awareness, but also acts as a motivational force that transforms the desire to purchase environmentally friendly products into actual behavior. This finding is consistent with the theoretical perspective of the theory of planned behavior and the values–attitudes–behaviors (VAB) model. According to these theories, positive attitudes toward a behavior increase the likelihood of performing that behavior. This means that if a consumer believes that purchasing green products helps reduce pollution, preserve natural resources, and improve public health, this belief will naturally be reflected in their actual choices. From a consumer psychology perspective, a positive attitude toward green products is typically formed by a combination of cognitive, affective, and behavioral dimensions. The cognitive dimension includes awareness of the environmental impacts of products; the affective dimension reflects feelings of satisfaction or pride from engaging in environmentally friendly behavior; and the behavioral dimension reflects the willingness to take action. Therefore, when

companies in the cosmetics industry in Tehran are able to strengthen all three dimensions of attitude simultaneously—through consumer education, eco-friendly packaging design, and honest communication about natural ingredients, among others—the likelihood that positive attitudes will translate into actual purchase behavior increases.

**Table 13**

*Findings from Estimation of the Structural Model*

| Path | Coefficient | Standard error | T-statistic | Significance level |
|---|---|---|---|---|
| Cause-related marketing → Green consumption behavior | 0.660 | 0.068 | 9.673 | 0.000 |
| Cause-related marketing → Green consumption intention | 1.105 | 0.059 | 18.649 | 0.000 |
| Cause-related marketing → Green consumption attitude | 0.945 | 0.005 | 193.308 | 0.000 |
| Green consumption intention → Green consumption behavior | 0.021 | 0.010 | 2.152 | 0.034 |
| Green consumption attitude → Green consumption behavior | 0.330 | 0.067 | 4.895 | 0.000 |
| Green consumption attitude → Green consumption intention | 0.251 | 0.070 | 3.595 | 0.001 |

At the 95 percent confidence level, green consumption attitude has a positive and significant effect on green consumption intention, as the significance level associated with the T-statistic for this path is less than 0.05. Based on the results, it can be argued that a one-unit increase in green consumption attitude leads to a 0.251-unit increase in green consumption intention among cosmetics customers in the city of Tehran. This result indicates that attitude, as a key mediating variable, directs both green consumption behavior and green consumption intention and indirectly enhances the effectiveness of cause-related marketing. This finding clearly shows that the stronger and more positive individuals' attitudes toward environmental protection, social responsibility, and green values are, the greater their intention and willingness to purchase environmentally friendly products will be. It can be stated that attitudinal changes play a significant role in shaping behavioral intention, and that attitude, as a cognitive and affective factor, underpins green purchase decisions among consumers. This result is consistent with the theory of planned behavior and the value–attitude–intention model. According to these frameworks, attitude toward a behavior plays a determining role in the formation of the intention to perform that behavior. In fact, individuals develop the intention to perform a behavior when they consider that behavior personally and morally desirable. Therefore, consumers who believe that purchasing green products helps improve public health and protect the environment are more inclined to choose such products.

In the context of the cosmetics industry, this finding indicates that the formation of a positive attitude toward natural and environmentally friendly products can significantly increase green purchase motivation. Consumers in this domain—especially younger and more educated segments—are more likely to purchase brands that demonstrate transparency, honesty, and green innovation in their policies when they possess a combination of environmental attitudes and a sense of social responsibility. On the other hand, this result shows that green consumption attitude plays a mediating role between cause-related marketing and green consumption intention. This means that advertising and marketing messages can effectively strengthen purchase intention only when they first succeed in changing consumers' attitudes. In practice, cause-related marketing activities, if properly designed—with an emphasis on social, environmental, and ethical benefits—can shape positive attitudes and thereby increase green purchase intention.

Given the structural model of the research, several indirect effects can be identified. In Table 14, the indirect effects of the variables are extracted. As shown in the table, there are four main indirect effects in the model.

**Table 14**

*Indirect Effects in the Structural Model of the Research*

| Path | Coefficient | Standard error | T-statistic | Significance level |
|---|---|---|---|---|
| Cause-related marketing → Green consumption intention → Green consumption behavior | 0.023 | 0.011 | 2.065 | 0.042 |
| Green consumption attitude → Green consumption intention → Green consumption behavior | 0.005 | 0.002 | 2.370 | 0.009 |
| Cause-related marketing → Green consumption attitude → Green consumption behavior | 0.311 | 0.064 | 4.889 | 0.000 |
| Cause-related marketing → Green consumption attitude → Green consumption intention | 0.237 | 0.066 | 3.591 | 0.001 |

The results of the analysis of indirect effects show that cause-related marketing has a positive and significant effect on green consumption behavior through the mediating role of green consumption intention. This finding means that marketing initiatives with a social responsibility and environmental orientation can indirectly influence consumers' actual behavior by strengthening their intention to purchase green products. The path coefficient of 0.023 indicates that each one-unit increase in the level of cause-related marketing leads to an increase in green consumption behavior, through the channel of green consumption intention, by this amount. Although this effect is relatively small, it provides empirical confirmation of the role of purchase intention as a cognitive–behavioral mediator that links marketing efforts to actual consumer behavior; in other words, advertising or marketing campaigns can lead to green behavior only when they first succeed in creating an internal intention among consumers.

The results of the analysis of indirect effects also show that green consumption attitude, through the mediating role of green consumption intention, has a positive and significant effect on green consumption behavior. Based on the path coefficient of 0.005, it can be said that each one-unit increase in consumers' positive attitude toward the environment, through the strengthening of green purchase intention, leads to a small but significant increase in green behavior. This result confirms that although attitude alone affects behavior, its practical impact is strengthened when it is transformed into purchase intention. However, the low coefficient value suggests that in the process of transforming attitude into behavior, factors such as financial constraints, lack of trust in green brands, or weak social motivations may act as barriers.

The results of the analysis of indirect effects indicate that cause-related marketing also has a positive and significant effect on green consumption behavior through the mediating role of green consumption attitude. The path coefficient of 0.311 reflects the substantial impact of this indirect pathway; in other words, targeted marketing activities that emphasize social goals, environmental protection, or participation in social responsibility first lead to the formation of a positive attitude toward green consumption, and this positive attitude then results in actual behavior. This finding clearly reflects the role of attitude as an effective cognitive mediator that transfers the impact of marketing from the level of mental perceptions to actual behaviors. Such a relationship is consistent with theoretical models such as the hierarchy of effects model and Ajzen's theory of planned behavior.

Finally, the analysis of indirect effects showed that cause-related marketing has a positive and significant effect on green consumption intention through green consumption attitude. The path coefficient of 0.237 indicates that when brand marketing messages can foster a positive environmental attitude among consumers, this attitude manifests as green purchase intention. In other words, in this pathway, attitude plays a facilitating role by allowing the effects of ethical and environmental marketing to be transferred to the level of conscious decision-making and purchase intention.

## Discussion and Conclusion

The findings of this study provide a comprehensive structural explanation of how cause-related marketing (CRM) influences green consumption attitude, intention, and behavior among cosmetics consumers in Tehran. The structural model

demonstrated that CRM has strong, positive, and significant effects on all three green consumption constructs—attitude, intention, and actual behavior. These results confirm that CRM functions as a powerful communication and value-signaling mechanism capable of altering consumer cognition, emotions, and actions. The magnitude of the effects observed in this study, particularly the large coefficients for CRM → green attitude and CRM → green intention, highlights that consumers respond strongly to marketing messages that align brands with meaningful environmental or social causes, provided that these messages are perceived as authentic and well-integrated.

The strong effect of CRM on green consumption behavior supports prior research underscoring the role of cause–brand fit, perceived authenticity, and emotional resonance in shaping consumer decision-making. Studies have shown that when consumers perceive coherence between the firm's values and the supported cause, attitudes and behavioral responses improve substantially [38, 39]. The present findings align with this evidence: consumers who encounter campaigns demonstrating genuine commitment—such as supporting ecological conservation or socially vulnerable groups—are more likely to reward the brand through sustainable purchasing. Furthermore, meta-analytic evidence indicates that CRM influences behavior through cognitive and affective pathways, reinforcing both moral satisfaction and perceived product value [42]. The robust direct effect of CRM on behavior observed in this study supports these pathways and confirms that CRM can enhance perceived meaningfulness of green consumption.

The significant effect of CRM on green consumption intention also aligns with findings that consumers' motivations and brand perceptions are strengthened when they observe companies investing in altruistic initiatives. Research suggests that CRM enhances emotional engagement, brand trust, and perceived sincerity, all of which amplify green purchase intention [41, 46]. Similarly, prior studies demonstrate that consumers' interpretation of a brand's motives—whether altruistic or self-serving—influences their willingness to support CRM campaigns [37, 40]. The present results confirm that CRM, when well-executed, can meaningfully increase consumers' internal motivation to choose environmentally friendly products, particularly in markets where green product availability and eco-awareness are growing.

The positive effect of CRM on green consumption attitude is also consistent with theoretical and empirical work highlighting the importance of moral and emotional framing in shaping pro-environmental attitudes. When CRM messages emphasize environmental ethics, social welfare, or collective benefits, they reinforce normative beliefs and strengthen the affective foundations of environmental attitudes [11, 15]. Moreover, studies show that CRM fosters positive brand associations and perceived authenticity, which enhance consumers' willingness to adopt a favorable attitude toward green products [38, 41]. The strong path coefficient found in this study suggests that CRM is highly effective in shaping the attitudinal domain, which in turn influences intention and behavior, demonstrating a cascading effect within the model.

Beyond the direct effects of CRM, the study confirmed that green consumption intention has a positive and significant effect on actual green consumption behavior. This finding is fully aligned with the theory of planned behavior, which posits that behavioral intention is the most proximal antecedent of behavior [5, 7]. Similar patterns have been reported in studies on green skincare, green hotel stays, and organic food consumption [3, 6, 10]. However, the relatively small path coefficient observed in this study suggests that intention alone is insufficient to fully overcome structural, financial, or habitual barriers to engaging in green consumption—an argument long emphasized in the literature on the attitude–behavior gap [28]. Constraints such as price sensitivity, limited product availability, and skepticism about green claims may still prevent consumers from consistently acting on their intentions [29, 30].

The effect of green consumption attitude on green consumption behavior, observed as positive and significant, further supports the role of attitudes as precursors to sustainable behaviors. Prior research confirms that positive environmental attitudes predict higher willingness to purchase green products, especially when attitudes are supported by cognitive knowledge and affective engagement [4, 12]. The VAB (value–attitude–behavior) model similarly suggests that environmental values shape attitudes, which then influence behavioral consistency [11]. The present results align with these frameworks, emphasizing that fostering environmentally positive attitudes among consumers is essential for promoting sustained behavioral change. Importantly, attitude serves as a mediator between CRM and both intention and behavior, confirming CRM's indirect influence on sustainability-oriented consumer psychology.

The study's indirect effects further illuminate the multi-layered influence of CRM. CRM's indirect effect on behavior through intention, though modest, demonstrates that CRM enhances consumers' internal motivation to buy green products, which then partially translates into actual behavior. This aligns with findings that CRM increases emotional engagement and moral satisfaction, both precursors to behavioral intention [41, 42]. The indirect effect of attitude on behavior through intention affirms the importance of cognitive transformation and internalized beliefs in shaping sustainable consumption choices [13, 14]. The largest indirect effect observed—CRM → attitude → behavior—supports the theoretical argument that attitudes are foundational mechanisms in translating marketing cues into actionable consumer behavior. This phenomenon is well-documented in cause–brand fit and perceived authenticity research, which shows that CRM's effectiveness resides in its capacity to shape meaningful attitudes toward both the brand and its supported causes [38, 39].

Finally, CRM's indirect effect on green consumption intention through attitude reinforces the critical role of attitudinal change. Prior studies also show that environmental attitudes function as mediators between perceived green value and purchase intention [26]. The current findings extend this evidence by demonstrating that CRM-induced attitude shifts can enhance green purchase intentions, particularly within sustainability-sensitive product categories such as cosmetics [10, 19]. Together, these findings confirm that CRM is not merely a promotional tactic but a strategic tool for shaping consumer beliefs, preferences, and long-term behavior.

Overall, the results of this study demonstrate that CRM is a highly effective mechanism for enhancing green attitudes, intentions, and behaviors in the cosmetics market in Tehran. The integration of environmental and social cause messaging within marketing communications significantly strengthens consumer engagement with green products, thereby offering a viable pathway for reducing the green attitude–behavior gap observed in previous studies [21, 28]. The findings contribute to both CRM research and green marketing literature by offering empirical support for the mediating roles of attitude and intention in explaining the pathways through which CRM influences behavior.

Despite its contributions, this study has several limitations. First, the use of cross-sectional data limits the ability to infer causal relationships with certainty; long-term behavioral patterns and attitude–behavior consistency could not be assessed over time. Second, the study relies on self-reported data, which may be influenced by social desirability bias, particularly given the ethical and environmental nature of the subject matter. Third, the sample is limited to cosmetics consumers in Tehran, which restricts the generalizability of the findings to other cities, industries, or demographic groups. Fourth, although the model captures major CRM and green consumption variables, other influential factors—such as perceived product quality, economic constraints, and cultural norms—were not included in the structural model and may have contributed to

unexplained variance. Finally, CRM implementation strategies were not evaluated directly, meaning that differences between campaigns with high or low effectiveness could not be explored.

Future studies should employ longitudinal or experimental designs to better capture causal dynamics and behavioral changes over time. Research could also be expanded to other product categories, such as food, household goods, or apparel, to compare the differential impact of CRM across industries. Additionally, future models should incorporate variables such as trust in green claims, perceived greenwashing, and price sensitivity to better explain residual variance in intention and behavior. Multi-group analyses can be used to examine how demographic factors—such as age, gender, and income—moderate CRM effectiveness. Finally, qualitative research could explore consumer interpretations of CRM authenticity to provide deeper insights into how CRM messages are received and processed.

Companies should design CRM campaigns that emphasize authenticity, transparency, and strong cause–brand alignment to maximize consumer trust and engagement. Brands should invest in educational messaging that strengthens environmental attitudes before attempting to influence purchase behavior. Firms in the cosmetics industry should ensure that CRM initiatives are paired with credible green product performance, clear labeling, and transparent communication about environmental benefits. Integrating CRM with digital engagement strategies, influencer partnerships, and sustainability reporting can further enhance visibility and influence consumer perceptions, ultimately supporting the transition to more sustainable consumption patterns.

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## Authors' Contributions

All authors equally contributed to this study.

## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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