

The Impact of Integrated Green Marketing on Sustainable Consumption with the Mediating Role of Green Purchasing Intent

Mahdi Aliyari¹

1. Management Department, Business Management major, Islamic Azad University, Central Tehran Branch, Iran

ARTICLE INFO

Keywords: *Green Marketing, Green Purchasing Intent, Sustainable Consumption*

ABSTRACT

The aim of the present study was to investigate the impact of integrated green marketing on sustainable consumption through the intention to purchase green products. The statistical population of this research consists of consumers of green products in Tabriz city, where, based on the Cochran formula, 300 individuals were selected. Data were gathered using standardized questionnaires including the Green Purchasing Intent questionnaire by Hong et al. (2014), and the LÜCHIK Sustainable Consumption questionnaire (2011). Content validity, convergent validity, and discriminant validity of the questionnaires were confirmed by experts, calculating means and extracting variances respectively. Ultimately, the hypotheses of the research were examined using the Structural Equation Modeling (SEM) method through Smart PLS software, and it was identified that each dimension of product, price, place, and promotion in integrated green marketing has a significant positive effect on sustainable consumption through the intention to purchase green products by consumers. The findings indicated that the main hypothesis was supported by four sub-hypotheses; therefore, integrated green marketing on sustainable consumption with the mediating role of green product purchase intention has a significant positive impact.

Introduction

In the current global scenario, companies are facing major challenges and striving hard to develop innovative ways to stay competitive and increase their profits. For a company's long-term presence in the competition, marketing innovation has always been essential. Consumer preferences are constantly changing, and therefore, generating new ideas, developing new products, and using innovative marketing ideas for selling them are inevitable for companies. Over the years, companies that have successfully innovated have generally received rewards in the form of growth, profitability, and access to new markets. In recent decades, environmental sustainability has become a top international political issue and is recognized as a key motivating factor for innovation (Lee, 2008).

In recent centuries, industrial development has given way to sustainable development. Among them, industrial managers, especially in advanced countries, are looking for ways to increase their organizational performance while supporting the environment. An integrated strategy to achieve increased productivity along with green management is known as green productivity, which has been highlighted as the key to sustainable development. One of the tools of this approach is green marketing. Green marketing is widely recognized as a tool for addressing sustainable development issues (Kar & Harichandan, 2022). However, in order to gain more advantages in the market, companies sometimes overlook social ethics and environmental values. Therefore, researchers, industry experts, and even the general public have become concerned not long ago about preserving the environment, promoting social standards, and progressing towards long-term well-being. Environmental sustainability compels companies to develop new and creative ways to integrate environmental concerns into their operations and marketing strategies (Wang & Zhang, 2020). Hence, understanding how businesses operate and offer goods and services to a market that values "green" and "sustainable" recommendations is crucial. In recent years, researchers have expanded their research horizons on sustainable consumption. Statistics and results have shown that environmental preservation is one of the most important criteria that consumers consider when making a purchase. This market concern puts pressure on marketers to change their approaches and adopt a new marketing solution called green marketing. Market changes are driven by consumption patterns and individuals' tastes. In the current scenario, what is important for companies is promoting sustainable consumption through green marketing. Sustainable consumption involves using products with minimal undesirable effects on the environment, ensuring that human needs are met not only today but also for future generations. Green marketing is a social process through which individuals and groups meet their needs and desires by exchanging products and their values ethically to minimize negative impacts on the environment. In other words, as stated by "Polonsky," green marketing encompasses all activities designed to create and facilitate exchanges to satisfy human needs and desires in a way that minimizes detrimental environmental effects. In green marketing, activities such as recycling packaging, energy efficiency, and promoting sustainable materials are emphasized. Green marketing innovations such as sustainable packaging and efficient product recycling can be utilized to promote sustainable consumption (Mohajan, 2021). Marketing can highlight sustainable packaging to persuade environmentally conscious customers to choose standout green products. Customers are more inclined to select a product when they receive positive emotional responses from accepting it.

Green marketing in companies is one of the best options for engaging consumers' purchasing intentions. By producing green products and utilizing green marketing, companies can fulfill their social responsibilities to society and gain a competitive advantage over other competitors. Each company has its unique marketing mix (Ansar, 2013). Green marketing shares the same traditional marketing mixes but the challenge for marketers is the creative use of these mixes. The marketing mix (product, price, place, and promotion) should be accompanied by an understanding of public policy processes. In fact, the key to a company's success from the outset is finding the right combination of this marketing mix based on its capabilities, skills, potential and actual talents, and aligning it based on a proper understanding of market conditions and considering the interests and priorities of eco-conscious consumers will lead to the development of a precise strategy that can serve as the foundation for other activities and organizational policies in the future (Borden, 1964).

Green products are biologically produced products that contribute to the preservation and enhancement of the natural environment by conserving energy or resources and reducing or eliminating the use of toxic substances and waste. In other words, a green product is one that causes minimal harm to the environment and involves methods of repair, renovation, recycling, recovery, and reduction. This product is the focal point of the marketing mix and the most important part of the overall green marketing strategy. However, it should be understood that the greenness of a product is not limited to its primary goal alone; rather, it encompasses all aspects related to the product such as the raw materials used, manufacturing methods, and product packaging. These products are more expensive compared to regular products. Mandes (1991)

showed that the emergence of the green market does not necessarily imply that consumers are willing to buy environmentally friendly products at higher prices.

The distribution of the product should be based on appropriate marketing networks and be located in environmentally safe places free of pollution. Furthermore, a designed space that conveys a sense of greenness can influence positive buying behavior in customers. Green marketers use sustainable strategies and approaches for advertising and communication. Green advertising claims that products or services that are environmentally friendly or have saved resources or energy in their production process are advertised. These advertisements have a significant impact on consumer purchasing behavior by encouraging them to purchase environmentally non-harmful goods (Chang, 2011).

Integrated marketing holds special importance in determining the company's position in the target market and attracting new customers. Having a greater mix in relation to eco-friendly products steers customers towards buying green products. Therefore, having sufficient awareness and comprehensive advertising in connection with green products increases consumer awareness and performance, leading to careful consideration when purchasing these types of products. For instance, Saadatnia (2022) demonstrated that the green product mix and the green promotion mix positively influence consumers' intention to purchase at the Tehran Shirt Industries. Another important component in this study is the conscious consumer behavior regarding environmental issues, increasing awareness of green products and the environment. Customers' inclination to purchase a product or service can demonstrate the effectiveness of efforts and actions taken to preserve and retain customers. The intention to purchase is one of the stages of decision-making in purchasing behavior to study the consumer's behavior to purchase a particular brand. Consumer purchasing intention of a brand is shaped not only by the attitude towards that brand but also by considering a set of brands. The intention to purchase green products refers to the probability and willingness of an individual to acquire products that are environmentally compatible. The intention to purchase green products is the desire to buy products after becoming aware that the product or brand is green (Ramayah et al., 2010).

Although the main effects and benefits of environmental actions in establishing long-term relationships with customers are not clearly defined, and there are few studies that have reported conflicting results regarding the impact of green marketing on customers' purchase intentions, most research in this field confirms the impact of green marketing on customer behaviors. However, the mediating role of sustainable consumption is less observed. Therefore, the present study aimed to investigate the impact of integrated marketing on sustainable consumption with the mediating role of green purchasing. Green marketing strives to create a vision for marketing that is environmentally, socially, and economically sustainable. Each variable in this model has been described and defined according to past experiences. The role of each variable in this research model is determined in the following section. The main variables of this model are integrated marketing, green product purchase, and sustainable consumption. In accordance with the research model, integrated marketing with product, price, place, and promotion dimensions serves as the independent variable, sustainable consumption as the dependent variable, and green product purchase as the mediating variable. Based on the discussion, the research model of the present study is presented in Figure 1.

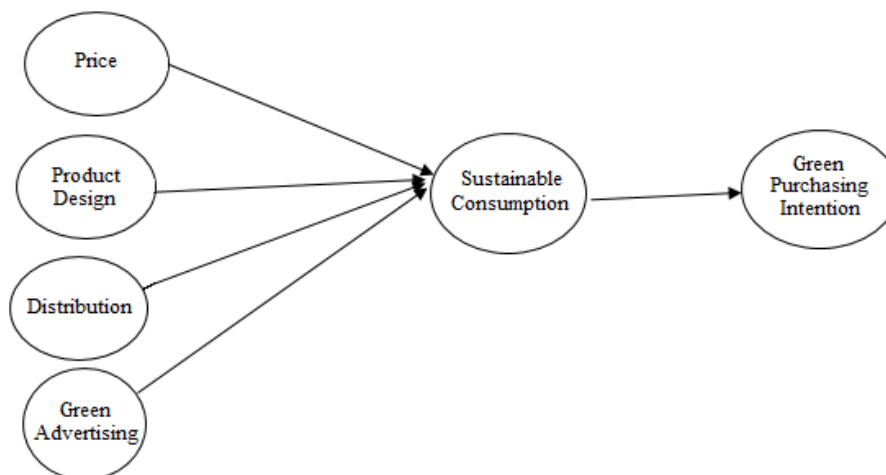


Figure 1. Conceptual Model of the Research

Research Methodology

The present study is practical in terms of its objective. Also, in terms of the quantitative nature of the data, it is descriptive-survey type, and in terms of the method of data collection, it is of a survey type. The target population of the present research has been consumers of environmentally friendly products in the city of

Tabriz. The sample size was determined to be 300 individuals using Cochran's formula for an unknown population size with a 6% margin of error. The validity of the questionnaire designed for this research was approved by some university professors, master's graduates, and marketing management experts; its reliability was also confirmed after distributing it among the sample consumers with a Cronbach's alpha of 0.93. To determine the content validity, experts' opinions and specialists from the studied organization were used.

In the present study, two methods of documentary (library) and field research have been used to collect data. The tool used in this research is a questionnaire. The research questionnaire consisted of four parts: 1) Questions related to demographic characteristics such as age, gender, and education level; 2) A standard green marketing mix questionnaire with 23 questions in 4 dimensions of green product, packaging and distribution, green promotion, and price, designed to evaluate the green marketing mixes in an organization. The questionnaire is scored using the Likert spectrum. The questionnaire intends to purchase green from Khorakian and colleagues (2014), which consists of 3 dimensions, and the Lucci sustainable consumption questionnaire (2011) were used. Data analysis was performed using structural equation modeling method with Smart PLS software.

- Measurement Model Fit

In order to determine the validity and reliability of the structures and variables of the research, indices such as composite reliability, Cronbach's alpha, extracted mean and variance, measurement model quality index, and convergent validity coefficient have been used. According to Tables 1, 2, and 3, it can be observed that the extracted mean and variance values for all structures are greater than 0.5.

Based on the calculations made in this study, the reliability of the latent variables was examined using a composite reliability index, and as shown in Tables 1, 2, and 3, the reliability of the variables exceeds 0.5, indicating acceptable reliability.

Table 1. Average Variance Extracted (AVE) of Market Segmentation Mixed Questionnaire

Variables	AVE
Product	0.686
Price	0.627
Green advertising	0.551
Distribution	0.520

Table 2. Average Variance Extracted (AVE) of Green Purchase Questionnaire

Variable	AVE
Green purchase intention	0.641

Table 3. Average Variance Extracted (AVE) of Sustainable Consumption Questionnaire

Variable	AVE
Sustainable consumption	0.581

Findings

Descriptive examination of the cognitive population characteristics of the subjects revealed that the highest frequency was related to the age group of 23 to 28 years (40.1%), while the lowest frequency was associated with the age group of 39 years and above (5.2%). Furthermore, 67.4% were male and 32.6% were female. Most customers had a bachelor's degree (50%) and the lowest frequency was allocated to customers with a diploma (8.12%).

Factor loadings are obtained by calculating the correlation between indicators of a construct and that construct, with a cut-off value of 0.50 generally considered for the appropriateness of factor loadings. Considering the factor loadings derived from the model execution in Table 4, the suitability of this criterion can be confirmed. Additionally, all factor loadings are significantly above 0.96, indicating the significance of the structures at a significance level of 0.05 (Table 4).

Table 4. Standardized coefficients, t-statistic, and level of significance

Direct hypotheses	Path Coefficient	T-Value	Result
Green product design → Purchase intention	0.514	7.19	Hypothesis Confirmed

Pricing of green products → Purchase intention	0.171	1.91	Hypothesis Confirmed
Green advertising → Purchase intention	0.182	2.87	Hypothesis Confirmed
Green distribution → Purchase intention	0.191	1.94	Hypothesis Confirmed
Purchase intention → Sustainable consumption	1.058	13.91	Hypothesis Confirmed

- Sub-Hypothesis 1: Green product design has a significant and positive effect on sustainable consumption through the mediating role of green purchasing.

In investigating the effects of the green product design variable on customers' purchase intention, the path coefficient is estimated at 0.514. Considering the T-Value of 19.7, in addition to that, the path coefficient of the effects of the green product design variable on sustainable consumption through the indirect effect of green purchase intention is estimated at 0.581. With a T-Value of 13.91 (for a coefficient to be significant, the significance number should be outside the range of (1.96, -1.96), which in this case is smaller than the 0.05 significance level), it can be concluded that this path coefficient is significant at the 0.05 level of error. Therefore, green product design plays a significant and positive role in sustainable consumption through the mediating role of green purchasing, and Hypothesis 1 is confirmed (Table 4 and Figures 2 and 3).

- Sub-Hypothesis 2: Pricing green products has a significant and positive effect on sustainable consumption through the mediating role of green purchasing.

In examining the effects of the pricing of green products variable on customers' purchase intention, the path coefficient is estimated at 0.171. With a T-Value of 91.1, in addition to that, the path coefficient of the effects of the pricing of green products variable on sustainable consumption through the indirect effect of green purchase intention is estimated at 0.581. With a T-Value of 13.91 (for a coefficient to be significant, the significance number should be outside the range of (1.96, -1.96), which in this case is smaller than the 0.05 significance level), it can be concluded that this path coefficient is significant at the 0.05 level of error. Therefore, pricing green products plays a significant and positive role in sustainable consumption through the mediating role of green purchasing, and Sub-Hypotheses 2 is confirmed (Table 4 and Figures 2 and 3).

- Sub-Hypothesis 3: Green advertising has a significant and positive effect on sustainable consumption through the mediating role of green purchasing.

In examining the effects of the green advertising variable on customers' purchase intention, the path coefficient is estimated at 0.1812. With a T-Value of 87.2, in addition to that, the path coefficient of the effects of the green advertising variable on sustainable consumption through the indirect effect of green purchase intention is estimated at 0.581. With a T-Value of 13.91 (for a coefficient to be significant, the significance number should be outside the range of (1.96, -1.96), which in this case is smaller than the 0.05 significance level), it can be concluded that this path coefficient is significant at the 0.05 level of error. Therefore, green advertising plays a significant and positive role in sustainable consumption through the mediating role of green purchasing, and Sub-Hypothesis 3 is confirmed (Table 4 and Figures 2 and 3).

- Sub-Hypothesis 4: Green distribution has a significant and positive effect on sustainable consumption through the mediating role of green purchasing.

In examining the effects of the green distribution variable on customers' purchase intention, the path coefficient is estimated at 0.191. With a T-Value of 19.41, in addition to that, the path coefficient of the effects of the green distribution variable on sustainable consumption through the indirect effect of green purchase intention is estimated at 0.581. With a T-Value of 13.91 (for a coefficient to be significant, the significance number should be outside the range of (1.96, -1.96), which in this case is smaller than the 0.05 significance level), it can be concluded that this path coefficient is significant at the 0.05 level of error. Therefore, green distribution plays a significant and positive role in sustainable consumption through the mediating role of green purchasing, and Sub-Hypothesis 4 is confirmed (Table 4 and Figures 2 and 3).

- Main Hypothesis: Integrated marketing has a significant and positive effect on sustainable consumption through the mediating role of green purchasing.

With the confirmation of all 4 sub-hypotheses, the main hypothesis is accepted as well, and integrated marketing on sustainable consumption through the mediating role of green purchasing has a significant and positive effect (Table 4 and Figures 2 and 3).

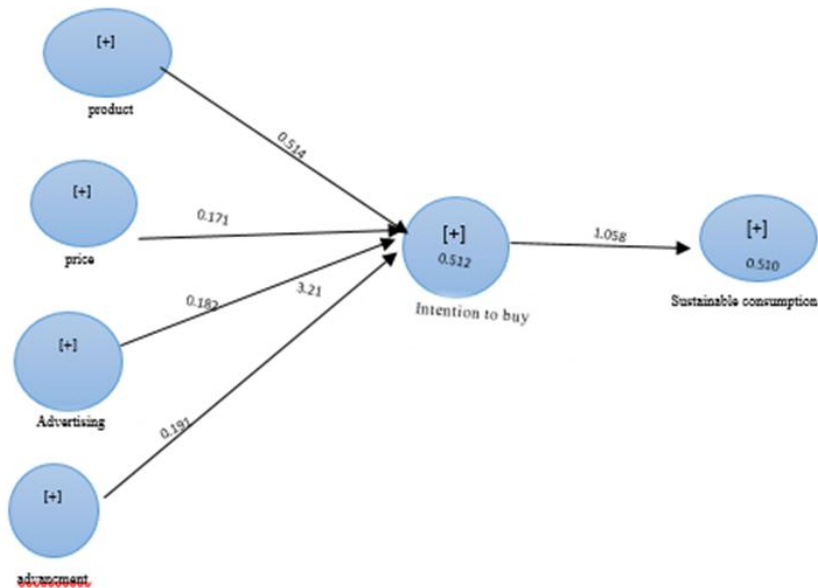


Figure 2 - Research model in standardized coefficients state

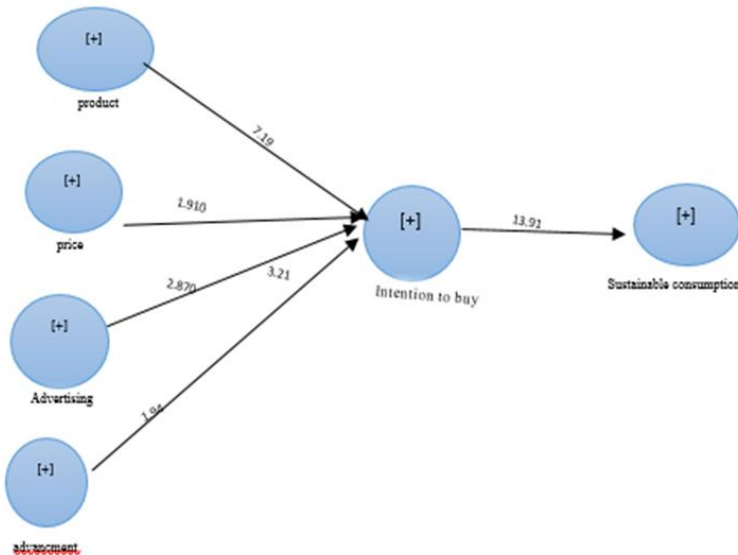


Figure 3 - Research model in significant values state

Discussion and Conclusion

The aim of the current research was to investigate the impact of integrated marketing on sustainable consumption through the mediating role of green purchasing. The research findings indicated that integrated marketing on sustainable consumption through the mediating role of green purchasing has an effect. In other words, when a company takes green marketing steps and conveys this to customers, it leads customers to turn their focus towards green purchasing for sustainable development. The result of this study aligns with the findings of Azadmanesh and Yarahadi (2020), Ramezani (2010), HemmatiNezhad and Izanloo (2020). It should be noted that green marketing holds a valuable position worldwide. Rezaii Karasholi and Allahyari in a study titled "Investigating the Impact of Integrated Green Marketing on Green Purchase Decisions of Consumers (A Study on Consumers of Pegah Dairy Products)" demonstrated that the dimensions of advertising, distribution, and price of integrated green marketing have a positive and significant effect on consumers' green purchasing.

Empirical findings by Amin and Tarun (2020) indicate that green marketing mix components have a significant positive relationship with the intention of non-European tourists to purchase green products, in line with the present study. One component of integrated marketing is price, which can consist of pricing policies, price-influencing factors, and price fairness, all of which have a positive and significant impact on

consumers' intention to purchase green products, consistent with the study by Morla and Kawakami (2012). The results demonstrate that designing green products has a significant and positive impact on sustainable consumption through the mediating role of green purchasing. This finding is in line with previous studies (Lee et al., 2015; Lin and Huang, 2012) in the field of sustainable consumption. Manufacturers should enhance consumer curiosity about product features, design, and sustainability concepts and inform them about the benefits of green items compared to non-green items through an integrated promotional mix. Product information and presentation styles are potentially valuable for cognitive understanding and effectively influence consumer purchasing behavior.

Producing products with unique and special designs that are reusable, recyclable, energy-efficient, and environmentally friendly compared to similar products is considered as one of the effective factors in green product purchasing intention. Advertising can play a significant role in influencing consumers of green products. In fact, advertising plays a crucial role in efforts to make consumers aware of environmentally-friendly products and serves as a powerful tool to inform and influence consumer behavior, helping consumers know where to purchase environmentally-friendly products.

The findings of Wang et al. (2018) indicate that green advertising and high-quality products and services can increase the trust of European tourists. Trust leads to a positive inclination of consumers to recommend green hotels. Green advertising and high-quality products and services can enhance the trust of European tourists. Remarkably, advertising has significant positive effects on sustainable consumption for both groups of tourists. These findings are consistent with the results of the current study. Therefore, green marketers should be allowed to utilize green advertising as a tool to reach potential customers. This way, consumers not only become aware of how a product contributes to environmental conservation but also are encouraged to make the purchase. This indicates the confirmation of the hypothesis regarding the influence of advertising on the intention to purchase green products.

In conclusion, consumers who are knowledgeable about environmental issues are more inclined towards purchasing green products, and the influence of consumption values towards green issues is evident in consumer buying behavior. Based on these findings, suggestions are proposed that can be fruitful for responsible entities such as companies producing environmentally friendly products. It is recommended that managers of such companies adhere to strategies like creating recyclable and low-pollution products for the environment, as well as increasing consumer awareness through advertising. By promoting environmental friendliness as a way for green marketing to benefit them. Research stages have shown that public awareness regarding green products and their types is limited. It is also suggested to use appropriate packaging for green products, diversify suitable discounts, provide unique brand advantages, and create attractive distribution channels for the brand.

Since the target population of this study was consumers of green products in the city of Tabriz, it is recommended for future researchers to investigate and analyze in other cities of Iran, especially in Tehran due to its size and diversity. Compare the results with the present research.

References

- Azadmanesh, F., & Yarahadi, F. (2020). The influence of green marketing mix components on consumers' intention to purchase Rojine tomato paste. Fifth National Conference on Economics, Management, and Accounting, Ahvaz.
- Amin, S. and Tarun, M. T. (2021). Effect of consumption values on customers' green purchase intention: a mediating role of green trust. *Social Responsibility Journal*.. Vol. 7. No. 8. 1320-1336.
- Ansar, N. (2013). Impact of green marketing on consumer purchase intention. *Mediterranean Journal of Social Sciences*. Vol. 4. No. 11. 650-655.
- Hamzah, M. I. and Tanwir, N. S. (2021). Do pro-environmental factors lead to purchase intention of hybrid vehicles? The moderating effects of environmental knowledge. *Journal of Cleaner Production*, Vol. 7. No. 279.123643.
- Hong, Z. & Guo, X. (2019). Green product supply chain contracts considering environmental
- Kar, S. K. and Harichandan, S. (2022). Green marketing innovation and sustainable consumption: A bibliometric analysis. *Journal of Cleaner Production*, Vol. 361, 132290.
- Lee, H.S., Lee, J. (2015). Convergence factors of affecting rehospitalization of tuberculosis patients. *Journal of Digital Convergence*, Vol. 13. No. 5. 259-267.
- Lin, P. C. and Huang, Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner production*, Vol. 22. No. 1. 11-18.

- Mohajan, H. (2011). Green marketing is a sustainable marketing system in the twenty first century.
- Morel, M. Kwakye , F. (2012). Green marketing: Consumers' Attitudes towards Eco friendly Products and Purchase Intention in the Fast Moving Consumer Goods(FMCG) sector, Accessed .
- Ramayah, T., Lee, J.W.C. and Mohamad, O. (2010). Green product purchase intention: some insights from a developing country. *Resources, Conservation and Recycling*. Vol. 54. No12. 1419-1427.
- responsibilities. *Omega*. Vol. 83. 155-166.
- Ramezani, M. R., Esmaeili Pour, R., & Tandkar, H. (2010). The impact of integrated green marketing on consumer decision-making process. *Quarterly Journal of Business Management*, 2(5), 79-98.
- Rezaii Karasholi, H., & Allahyari Bozangjani, A. (2012). Investigating the impact of integrated green marketing on green purchase decisions of consumers: A study on consumers of Pegah Shiraz dairy products. *New Marketing Research Journal*, 2(2), 165-180.
- Saadatnia, Farhad. (2022). Investigation and identification of the impact of integrated green marketing on consumers' purchase intention. *Third National Conference on Knowledge Management and E-Business with a Resilient Economy Approach*, Mashhad.
- Wang, S., Wang, J., Wang, Y., Yan, J., & Li, J. (2018). Environmental knowledge and consumers' intentions to visit green hotels: The mediating role of consumption values. *Journal of Travel & Tourism Marketing*, Vol. 35. No.9. 1261-1271.
- Wang, X., & Zhang, C. (2020). Contingent effects of social norms on tourists' pro-environmental behaviours: The role of Chinese traditionality. *Journal of Sustainable Tourism*, Vol. 28. No.10. 1646-1664.