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The Effect of Greenwashing, Attitudes & Beliefs on Green Purchase Intention (Case Study: Kerman Environmentalists)

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ABSTRACT

Today, many consumers advocate green products to reduce the effect of their consumption practices on the environment. For this reason, companies have tried to produce green products, but many of the actions of companies in the field of green product production are misleading and deceptive, which is called greenwashing. The present study aimed to investigate the effect of understanding greenwashing, attitudes, and beliefs on green purchase intention among environmentalists. The population included the environmentalists in Kerman, to whom a standard electronic questionnaire was sent for data collection. Finally, 384 questionnaires were collected and analyzed. The findings indicated that the understanding of greenwashing has a positive effect on the confusion of green consumption and an increase in perceived risk. However, it can reduce the perceived benefit, satisfaction, and loyalty. In addition, the attitude and beliefs of the environmentalists have a positive effect on the perceived benefit, satisfaction, and loyalty. If environmentalists have a positive attitude toward green products, there will be less confusion about consuming green products.

KEYWORDS

Greenwashing, Consumer Behavior, Marketing, Environmentalists, Sustainability, Green Consumption.

نشریه علمی

آموزش محیط زیست و توسعه پایدار

«مقاله پژوهشی»

اثر سبز شویی، نگرش‌ها و باورها بر قصد خرید سبز (مورد مطالعه: طرفداران محیط زیست شهر کرمان)

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چکیده

امروزه بسیاری از مصرف‌کنندگان برای کاهش تاثیر شیوه‌های مصرف خود بر محیط زیست، خواستار محصولات سبز هستند به همین دلیل شرکت‌ها نیز اقدام به تولید محصولات سبز نموده‌اند اما بسیاری از اقدامات شرکت‌ها در زمینه تولید محصولات سبز، گمراه کننده و فریبنده تشخیص داده شده است که به آن سبز شویی می‌گویند. این پژوهش به منظور بررسی تاثیر درک سبز شویی، نگرش‌ها و باورها بر قصد خرید سبز در بین طرفداران محیط زیست انجام شده است. جامعه آماری پژوهش، طرفداران محیط زیست در کرمان بوده و داده‌ها از طریق ارسال پرسشنامه استاندارد الکترونیکی برای این جوامع، جمع‌آوری گردیده است. در نهایت ۳۸۴ پرسشنامه جمع‌آوری شده و مورد بررسی قرار گرفت. یافته‌های پژوهش نشان می‌دهد درک سبز شویی تاثیر مثبتی بر سردرگمی مصرف سبز و افزایش ریسک درک شده دارد و سود درک شده و رضایت و وفاداری را کاهش می‌دهد همچنین نگرش و باور طرفداران محیط زیست تاثیر مثبتی بر منفعت درک شده و رضایت و وفاداری آنها دارد و اگر طرفداران محیط زیست به محصول سبز باور داشته و نگرش مثبتی نسبت به آن داشته باشند به احتمال کمتری دچار سردرگمی در مصرف محصولات سبز می‌شوند.

واژه‌های کلیدی

سبز شویی، رفتار مصرف کننده، بازاریابی، طرفداران محیط زیست، پایداری، مصرف سبز.

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Introduction

Nowadays, COVID-19 is considered a global health challenge that appeared in the 21st century. It has resulted in positive environmental effects despite being considered a global disaster. Shutdowns, quarantines, and temporary border closures resulted in reduced air pollution through less production and travel at the beginning of the onset of COVID-19. Although such positive environmental effects are temporary, it can show that changes in our lifestyle can have positive effects on the environment (El Zowalaty et al., 2020) and reiterate that human actions are the main cause of environmental damage (Nittala & Moturu, 2023). Global jobs were revived and reducing greenhouse gas emissions in this short period of time was not a sustainable way for the environment. In this regard, long-term policies should be emphasized for coping with environmental problems (Irfan et al., 2022).

Sustainability is currently considered as a novel topic due to indiscriminate environmental degradation (Chua et al., 2019; Quoquab et al., 2019). Environmental degradation is mainly caused by excessive consumption and green consumption is considered the key to sustainable development (Wu & Chen, 2014). Human consumption is regarded as one of the main causes of climate change, the production of waste materials and the reduction of scarce resources. As a result, the consumption of products with minimal effect on the environment is highly welcomed. The use of environmentally friendly products known as green products can significantly affect the preservation of the environment (Ahmed et al., 2020). Increasing attention to environmental protection has affected consumers to select environmentally friendly products (Yadav & Pathak, 2017). Some consumers change their purchasing behavior to decrease the effect of their consumption practices on the environment. This shift towards more environmentally friendly consumption, sometimes known as green consumption, has accelerated in many developed countries (Perera et al., 2016).

Increasing consumption of green products and services has encouraged organizations to apply environmental practices to establish a

positive image in society (Delmas & Burbano, 2011). Since the product represents the company, many companies have associated the image of their products with environmental and social practices to pretend that they are aligned with the market needs and trends (Correa et al., 2017). Green marketing refers to a process that identifies, forecasts, and satisfies the needs of customers and society profitably and sustainably (Do Paco et al., 2009). In addition, it is considered a method of responding to customers who care about environmental concerns and the distinction of the product by creating a green brand image (Chang, 2011; Chen et al., 2016). Companies welcome greening for different reasons, including law enforcement, strategic interests, and stakeholder pressure (Chen, 2008). Today, many companies are implementing a green marketing campaign to win the competition (Al Majali & Tarabieh, 2020). Nevertheless, many environmental claims which focus on green attributes are ambiguous and deceptive (Chen & Chang, 2012).

The real change in consumers' attitudes towards the environment is often costly and that is why companies apply greenwashing (Chen & Chang, 2013). Greenwashing refers to the disclosure of false or incomplete information related to an organization to present an environmentally responsible image (Furlow, 2010). Furthermore, it is considered an action to mislead consumers about the environmental techniques of a product or service (Lyon & Montgomery, 2015). Some researchers define this term as the deliberate misrepresentation of environmental efforts in a company (Alves, 2009; Furlow, 2010). Some consumers complain that many companies represent their products as greener than they are (Aji & Sutikno, 2015). A survey of retail companies in the US, UK, Canada, and Australia aimed to check the accuracy of green statements on product labels. This study showed the environmental claims of 98% of the surveyed products as problematic (Correa et al., 2018).

Environmentalism is the desire to act with environmentalists' intentions and environmentalists' behavior which has recently developed in favor of the natural environment, increased quality of the environment, or

minimal damage to the environment (Robinson et al., 2019). Environmental attitude is related to the awareness of environmental issues and commitment to its preservation. Environmental behavior refers to the actions which are conducted based on environmental attitudes to positively affect the behavior and choice of environmental activities (Hjalager & Kwiatkowski, 2019). However, consumers' concerns about the environment can fail to result in the purchase of green products (Englis & Phillips, 2013). Consumers often claim that they care deeply about the environment but fail to act so in their purchases and consumption (Perera et al., 2016). According to Kinnunen (2020), greenwashing may have a greater effect on consumers who have stronger environmental values since they are more prone to respond to green cues and search for green products. Martinez et al. (2019) raised the question, "To what extent does the understanding of greenwashing affect consumer green behavior and satisfaction?"

Understanding the consumer attitude to green purchase intention is of paramount importance for marketers since it helps to develop appropriate strategies for the development of green product markets (Yadav & Pathak, 2017). Furthermore, understanding the determinants of consumer green purchasing behavior may remove the obstacles to green consumption (Welsch & Kuhling, 2009). Martinez et al. (2019) studied some factors affecting green purchase intention, such as loyalty, satisfaction, green consumption confusion, perceived risk, and perceived benefit, to evaluate consumer behavior in the face of greenwashing (Martinez et al. 2019). In this study, such factors are considered to investigate the factors affecting green purchase intention. Based on such scenarios, this study evaluated the effect of greenwashing perception, attitudes, and beliefs of the environmentalists on different aspects of green purchase intention, including satisfaction, loyalty, green consumption confusion, perceived risk, and perceived benefit. The population included the environmentalists in Kerman, who were expected to be the leaders in the field of green product consumption and consider green purchase intention.

Environmentalists and green consumption

Environmentalism is considered a form of awareness or protection of the environment, awareness in the world in the face of global environmental changes, ecosystem collapse, and loss of biodiversity due to human presence and influence (Sen & Nagendra, 2019). Environmentalist behavior, which is known as green sustainable, or eco-friendly behavior, refers to the behaviors in which protective measures are taken towards the environment (Krajhanzl, 2010). In addition, environmentalist behavior is defined as all possible measures aimed at preventing damage or protecting the environment, whether in general areas (e.g., participation in environmental movements) or in specialized areas (e.g., recycling) (Balunde et al., 2019). Previous literature indicates that environmentalist behavior as part of climate change adaptation behaviors may positively help environmental sustainability (Steg & Vlek, 2009). Consumers who are concerned about the environment are more prone to search for green products and have a willingness to pay a higher price for such products (Guyader et al., 2017). Green consumers are those who care about the quality, price, and compatibility of the product with the environment while purchasing (Martinez et al., 2019). Creating a shared sense of responsibility for the environment can encourage consumers to purchase organic products in the short term and adopt this lifestyle in the long term (Chen & Peng, 2012).

Greenwashing

Due to the increase in green consumption, many companies have linked their product image with environmental practices. In this regard, some of these measures were identified as greenwashing (Furlow, 2010). The term "greenwashing" emerged in the 1980s and is known as exaggerating sustainability claims to gain market share (Dahl, 2010). Greenwashing is used to describe a company that exaggerates the environmental performance of its products, while this claim may never be proven (Pargual et al., 2011). Greenwashing refers to the false claims of a company for its sustainable and green products. Such a concept is defined as misleading the consumer about the

environmental applications of a company and the environmental benefits of the product (Avcilar & Demirgunes, 2017). Greenwashing refers to the use of an environmentally friendly appearance to hide an environmentally unfriendly substance (Du, 2015). Companies value green consumers and aim to link the image of their products with green values to earn more profit (Kinnunen, 2020). However, sustainable production can be slow and expensive, while greenwashing is considered as an easy approach to attracting the attention of green consumers (Chen & Chang, 2013). The frequent number of false green marketing claims has led to some problems in highlighting green companies in the market since consumers are concerned about the conflict between the image and reality of green products (Nguyen et al., 2019). Thus, if the claims are perceived to be deceptive, consumers cannot trust the product and the company, leading to failure in the purchase decision (Chen & Chang, 2013). Therefore, greenwashing affects the green purchase intention (Zarei et al., 2014; Karimi et al., 2019).

Consumer behavior

Consumer behavior is affected by a group or an organization. The effect of consumer behavior on society is critical since it can cause some consequences for society, the economy, and the environment (Junior et al., 2018). Green behavior studies emphasize environmental concern as one of the main cognitive measures (knowledge and beliefs) to forecast a person's green behavior (Jaiswal & Kant, 2018). Nowadays, most information about companies is available on the Internet, and consumers in developing economies are highly aware of the environmental performance of companies (Qayyum et al., 2022). Numerous studies have been conducted on the environmental responsibility of consumers in addressing environmental problems. In this regard, consumers are expected to guide or regulate their consumption in an instrumental way (Connolly & Prothero, 2008). Green purchasing behavior is typically evaluated by the willingness to purchase green products. Such intentional behavior results in making the decision to purchase such products (Joshi & Rahman, 2015). In the following paragraphs, attitudes, beliefs, perceived risk, perceived

benefit, green consumption confusion, satisfaction, and loyalty will be discussed in the context of consumer behavior.

Attitude

Attitude refers to an interaction in memory between a certain object and the summary evaluation of that object. Attitude indicates the psychological evaluation of a product by the consumer (Maichum et al., 2016). In addition, attitude is strongly related to behavior. The effect of attitude on behavior is a positive or negative response to an object or behavior (Watts & Chi, 2018). In many cultures, a positive relationship exists between attitude and behavioral intention (Mostafa, 2007). Dirzyte and Rakauskiene (2016) evaluated green consumption behaviors in Lithuania and found a relationship between attitude and green consumption.

Beliefs

Beliefs refer to a person's possible subjective judgments on distinguishable aspects of his world. Beliefs are the building blocks of a person's conceptual structure and are regarded as databases determining a person's attitudes, intentions, and behavior (Lee et al., 2006). In addition, beliefs affect consumer attitudes, mental norms, and perceived behavioral control (Wu & Chen, 2014). A person's beliefs about product attributes and quality are significant since they determine the desirability of attitude toward a product or service (Junior et al., 2018).

Perceived risk

Consumer behavior requires risk since any activity can have social and economic consequences which cannot be predicted with certainty. Furthermore, some may have unintended consequences. Perceived risk acts as a deterrent to purchase (Martinez et al., 2019). Perceived risk is regarded as the uncertainty of consumers while they fail to forecast the consequences of their purchase decisions (Juliana et al., 2020). Consumer uncertainty involves functional risk, financial risk, psychological risk, physical risk, social risk, and time risk (Hsu & Lin, 2006). Greenwashing has a positive effect on consumer confusion and perceived risk in green purchases since green appearance increases consumer choice errors (Tarabieh, 2021). It is

expected that greenwashing has a positive effect, while the attitude and beliefs of environmentalists negatively affect the perceived risk.

Perceived benefit

The marketing literature clearly shows that a consumer's purchase behavior is closely associated with the perceived benefits of the consumer. Perceived benefit refers to the value or performance which is presented by a product or service that customers obtain by using it (Zhao et al., 2020). Perceived benefits can be divided into monetary economy, quality, convenience, value, expression, and entertainment (Chandon et al., 2000). When the consumer finds the benefits of green products, his attitudes and beliefs about the product become positive. Since greenwashing cannot add any benefits to the product, the perception of greenwashing becomes negative when he realizes the benefits of the product (Junior et al., 2018). Greenwashing is expected to have a negative effect, while the attitude and belief of the environmentalists play a positive role in the perceived profit.

Green consumption confusion

When greenwashing is spreading in green marketing, consumers are increasingly skeptical of the companies pursuing the green trend. Such a suspicion is negatively related to the green purchase intention of consumers (Nguyen et al., 2019). Consumer confusion is related to the inability of consumers to understand different aspects of a product correctly and appropriately. Customers are confused and require some information about the product (Tarabieh, 2021). Many consumers consider green claims as marketing strategies and do not trust them all (Lyon & Maxwell, 2011). Consumer confusion means the inability to establish a coherent interpretation of product characteristics during the information processing process (Turnbull et al., 2000). Greenwashing is expected to leave a positive effect, while the attitudes and beliefs of environmentalists have a negative effect on green consumption confusion.

Satisfaction and loyalty

Consumer satisfaction and loyalty have the

highest effect on consumers' image of a company (Ko et al., 2013). A positive image of the company can enhance consumers' willingness to purchase the company's products, resulting in greater satisfaction and loyalty among customers (Kim et al., 2012). Satisfaction is defined as the evaluation of the perceived difference between prior expectations and actual product performance. Loyal customers are those who repurchase a brand, only consider that brand, and do not search for information related to the brand (Oliver, 1999). Trustworthy products lead to greater satisfaction and loyalty (Chang et al., 2014). In addition, greenwashing is expected to have a negative effect, while the attitude and belief of the environmentalists have a positive effect on their satisfaction and loyalty towards green consumption.

Thus, the present study aims to investigate the effect of greenwashing on green purchase intention among environmentalists. Figure 1 displays the research model.

Hypotheses

H1: The attitude and belief of environmentalists have an effect on the perceived risk of the consumption of green products.

H2: The perception of greenwashing by environmentalists has an effect on the perceived risk of the consumption of green products.

H3: The attitude and belief of environmentalists have an effect on the perceived profit of the consumption of green products.

H4: The perception of greenwashing by environmentalists has an effect on the perceived profit of the consumption of green products.

H5: The attitude and beliefs of environmentalists have an effect on the confusion of the consumption of green products.

H6: The perception of greenwashing by environmentalists has an effect on the confusion of the consumption of green products.

H7: The attitude and belief of environmentalists have an effect on their satisfaction and loyalty towards the consumption of green products.

H8: The perception of greenwashing has an effect on the satisfaction and loyalty of environmentalists to the consumption of green products.

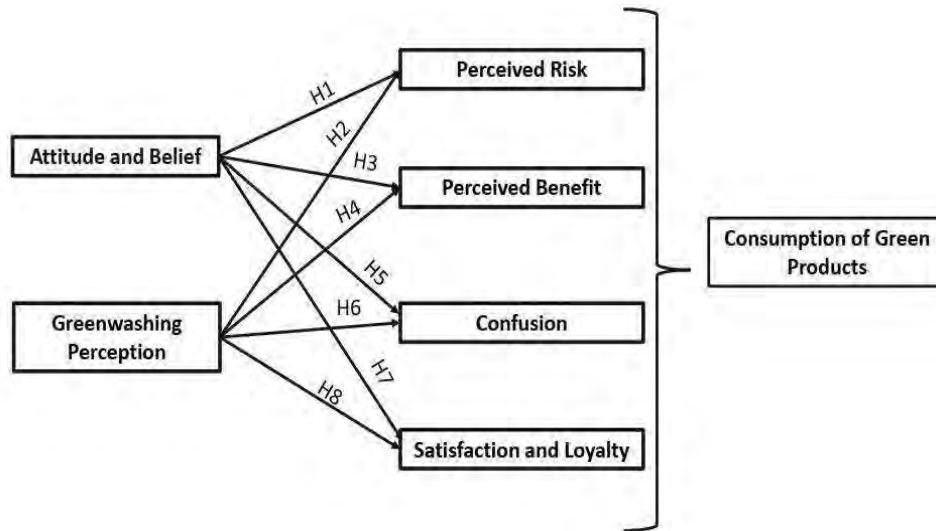


Figure 1: The Conceptual Model of the Research (Adapted from the Research of Junior et al., 2018 and Martinez et al., 2019)

Research Methodology

The statistical population in this study included the environmentalists in Kerman Province. Through convenience sampling, those over 18 years of age who declared themselves to be environmentalists were investigated. To measure the variables, the questionnaire related to each variable in a study by Junior et al. (2018) on a five-point Likert scale from completely disagree to completely agree was used. Table 1 shows the information related to

the research questionnaire. Based on Cochran's formula for an unlimited population, the sample size was determined as n=384, and out of 392 approved questionnaires, 384 questionnaires were selected for analysis. SPSS was used for descriptive statistics, and PLS was used for statistical tests. Also, the validity of the variables has been confirmed through convergent validity and discriminant validity, and the reliability of the variables has been confirmed through composite reliability (CR).

Table 1: Research Questionnaire Information

Source	Number of questions	Variable
Junior et al., 2018	11	Greenwashing
	8	Attitude and Belief
	11	Satisfaction and Loyalty
	6	Confusion
	5	Perceived Risk
	6	Perceived Risk

Research Findings

In this study, for demographic data analysis, variables of gender, age range (above 18 years), family income, marital status, and shopping frequency were investigated, the results of which are given in Table 2. As shown, most of the respondents were male (57.03%), married (73.18%), aged 25-29 years (31.25%), and had

an income between 5 and 10 million (59.38%). According to the demographic information in the research sample, more than half of the subjects (51.56%) stated that they made more than three purchases a week, which given the situations they have to buy or not buy green products, has a positive aspect for a more detailed study.

Table 2: Description of Demographic Variables of the Research

Percentage	Number	Levels	Variable
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42.97	165	Female	Gender
57.03	219	Male	
21.35	82	Between 18-24	Age
31.25	120	Between 25-29 years	
25.52	98	Between 30-35 years	
16.67	64	Between 35-50 years	
5.21	20	Over 50 years old	
2.34	9	Less than 2 million	Family income
17.71	68	Between 2 and 5 million	
59.38	228	Between 5 and 10 million	
20.57	79	More than 10 million	Marital status
26.82	103	Single	
73.18	281	married	Number of purchases per week
5.21	20	At most once	
10.16	39	twice	
33.07	127	three times	
51.56	198	More than three times	

To test research hypotheses, causal relationships based on structural equation modeling have been used. Figure 2 shows the

model drawn by PLS along with the standardized factor loading coefficients and path coefficients.

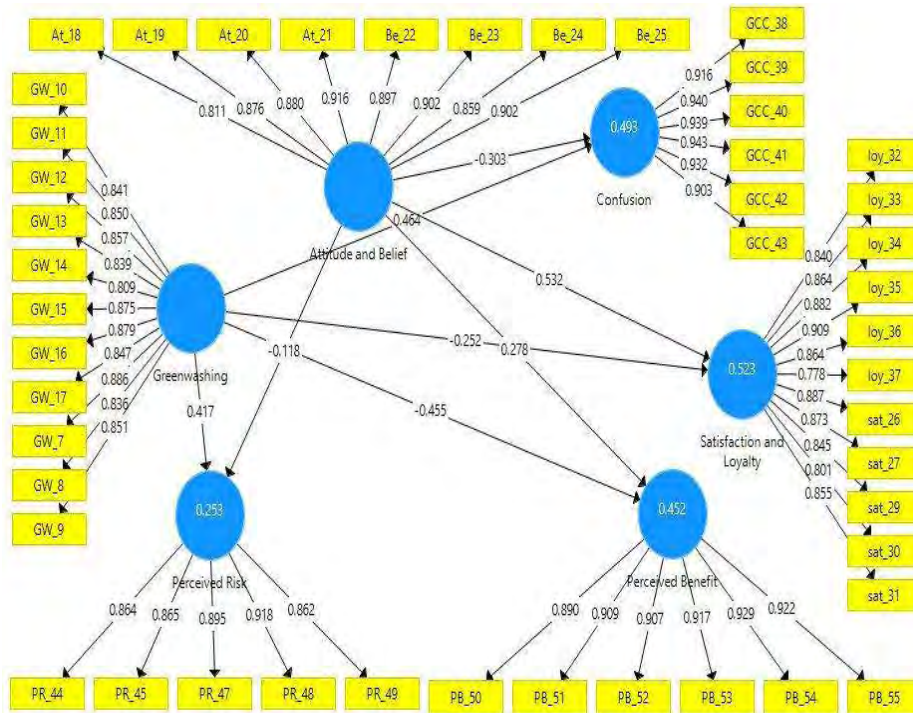


Figure 2: Research Model with Standardized Factor Loadings and Path Coefficients

Table 3 shows the results of convergent validity and reliability, coefficient of determination (R^2), and predictive squared correlation coefficient (Q^2). For the CR, values above 0.7 are acceptable. The CR for all variables is above 0.7. Thus the reliability of the model is confirmed. Also, the average variance

extracted (AVE) of observed variables extracted by constructs is higher than 0.5, and convergent validity is also confirmed. For R^2 , which is the rate of change in each of the independent variables through the dependent variables of the model, the values of 0.19, 0.33, and 0.67 are low, medium, and high R^2 , as well as the values

of 0.02, 0.15 and 0.35 for Q², are low, medium and high Q² of the model, respectively. According to the obtained values of R² and Q²,

it can be said that the model has an acceptable structural fit.

Table 3: The results of convergent validity, Composite reliability, R2 and Q2 of research variables

Q ²	R ²	CR	AVE	Variable
-	-	0.967	0.726	Greenwashing
-	-	0.965	0.776	Attitude and Belief
0.183	0.253	0.946	0.776	Perceived Risk
0.349	0.452	0.968	0.833	Perceived Benefit
0.396	0.493	0.974	0.863	Confusion
0.355	0.523	0.968	0.731	Satisfaction and Loyalty

The criterion used to confirm divergent validity was also proposed by Fornell and Larcker (1981) and showed that the square root of AVE should be higher than the correlation

between the constructs of the model (Fornell & Larcker, 1981). As shown in Table 4, divergent validity is also confirmed.

Table 4: Evaluation of Divergent Validity by Fornell and Larcker Method

Satisfaction and Loyalty	Confusion	Perceived Benefit	Perceived Risk	Attitude and Belief	Greenwashing
					0.852
				0.881	-0.661
			0.881	-0.394	0.496
		0.913	-0.311	0.579	-0.639
	0.929	-0.582	0.397	-0.610	0.664
0.855	-0.558	0.648	-0.323	0.698	-0.604

Table 5 shows the test results of the research hypotheses. If the t-statistic of the research hypothesis is higher than ±1.96 at the 95% confidence level, the hypothesis is confirmed; otherwise, the hypothesis is rejected. The value of the t-statistic of H1, which examines the

negative impact of attitude and beliefs on perceived risk, is 1.897. As a result, this hypothesis is rejected at the 95% confidence level. Also, the value of the t-statistic of other hypotheses is higher than ±1.96, so they are confirmed.

Table 5: Evaluation of the Hypotheses

Result	p-value	t-value	Path coefficient	Type of impact	hypotheses
reject	0.058	1.897	-0.118	negative	H1: The effect of Attitude and beliefs on perceived risk
accept	0.000	7.156	0.417	positive	H2: The effect of the perception of greenwashing on the perceived risk
accept	0.000	5.297	0.278	positive	H3: The effect of Attitude and beliefs on perceived benefit
accept	0.000	10.062	-0.455	negative	H4: The effect of the perception of greenwashing on the perceived benefit
accept	0.000	6.473	-0.303	negative	H5: The effect of Attitude and beliefs on green consumption confusion
accept	0.000	8.959	0.464	positive	H6: The effect of the perception of greenwashing on green consumption confusion

Result	p-value	t-value	Path coefficient	Type of impact	hypotheses
accept	0.000	9.795	0.532	positive	H7: The effect of Attitude and beliefs on Satisfaction and Loyalty
accept	0.000	4.502	-0.252	negative	H8: The effect of the perception of greenwashing on Satisfaction and Loyalty

Conclusion

Since one of the ways of sustainable development is the consumption of products that cause the least damage to the environment, the consumption of green products has become very important, and investigating the factors affecting the intention to purchase green products can greatly help companies producing these products. Environmentalists care more about environmental protection than other members of society. For this reason, in this study, the attitude and belief of these people towards green products, as well as their perception of greenwashing in green products and the effect of these factors on the intention to buy green products have been investigated. As shown in Table 5, the study results show the positive effect of the perception of greenwashing on the perceived risk and confusion of green consumption and the negative impact of greenwashing on the perceived profit, satisfaction, and loyalty. Also, the results showed that attitude and belief have a positive effect on perceived profit, satisfaction, and loyalty and a negative impact on confusion of green consumption. But the negative impact of attitude and belief on perceived risk was not confirmed. The study results are consistent with the study results of Correa et al. (2017), Junior et al. (2018), and Martinez et al. (2019).

In this study, all the hypotheses were confirmed except for the negative impact of attitude and belief on perceived risk, indicating the effect of the perception of greenwashing and the attitude and beliefs of consumers on their intention to buy green products. Today, the environmental awareness of consumers and the demand for such products have increased, especially among environmentalists. Environmentalists have positive attitudes and beliefs about the consumption of green products, which can affect their perceived risk of the consumption of green products, perceived profit, their confusion about the

consumption of green products, and satisfaction and loyalty to such products. But since environmentalists search for companies' environmental information more than others and review this information more sensitively, they may consider the information deceptive and not only not consuming green products but also avoid buying and consuming such products. Because their perception of greenwashing not only affects their perceived profit and perceived risk, but also causes them to be confused about consuming green products and reduces their satisfaction and loyalty to the consumption of such products. The consumption of green products can be a basic solution to protect the environment and prevent damage to the environment. So, the companies' real environmental information is very important and causes consumer satisfaction, companies' competitive advantage, and, most importantly, environmental protection.

This study showed that if greenwashing is perceived about companies' products, it affects the intention to buy green products by consumers. Because by perceiving greenwashing, the confusion of green consumption and the perceived risk of the consumption of green products increases, while the perceived profit and satisfaction, and loyalty to the product reduces, which increases the importance of the real environmental information of companies. For this reason, it is suggested that companies avoid greenwashing and make all their environmental information transparently and clearly available to consumers to use the material and spiritual benefits of producing green products. So that the consumers of their products, especially the environmentalists who more seriously check the accuracy of their environmental information, can be sure that their products are environmentally friendly and do not believe in greenwashing products. Also, it is suggested to the companies producing green products not to ignore the importance of consumers' attitude

and belief in green products on their intention to buy green products, and by trying to show the importance of consuming green products, affect consumers' intention to buy green products.

The limitation of this study was the lack of

widespread use of a specific green product by environmentalists in Kerman. Therefore, a specific product was not investigated in this regard, and the consumption of any type of green product was considered.

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