

The effects of green scepticism on green buying decisions: the mediation role of product evaluation, environmental knowledge, product experience and environmental concerns

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Abstract: These days, consumers' environmental concerns have changed their buying behaviour. Green purchase intention refers to the consideration of environmental criteria, besides price, quality, efficacy, etc. while deciding for purchase, the ultimate goal of which is a reduction in destructive environmental effects and as well as improvement in natural resources exploitation. The main purpose of this study is to check the effect of consumers' green scepticism on green buying decision, with the consideration of the mediation role of product evaluation, environmental knowledge, product experience, and environmental concerns. The research population consists of consumers of green products who live in Iran. The questionnaire was used as the main data collection tool. The questionnaire was distributed among 300 consumers of green products. Structural equation modelling was employed for data analyses, using SPSS 19.0 and AMOS 21.0. Results showed that green scepticism significantly affects product evaluation, environmental knowledge, product experience, and green buying decision. Furthermore, services assessment, environmental knowledge, and frequent use of services affect green purchase intention. However, environmental concerns do not have any significant effect in green buying decision. Finally, the results revealed that product evaluation functions as a mediator in the relationship between green scepticism and green buying decisions.

Keywords: green scepticism; environmental knowledge; product experience; green buying decision; environmental concerns.

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1 Introduction

Increased international concerns about environmental sustainability and climate change have made all organisations consider environmental issues in their marketing strategies (Nidumolu et al., 2009). This engages various departments of the organisations, including research and development, design, and production and marketing (Foster and Green, 2000; Lenox and Ehrenfeld, 1997). Successful development and production of sustainable products and services are necessary to reduce environmentally-destructive effects of industrial practices, also to increase clean production (Supaat et al., 2020). Marketing plays a significant role in this respect as its inputs to define the product concept are extremely important. Furthermore, the development of green products/services for environmental sustainability is of no use unless the products/services are accepted and promoted in the market. Therefore, a marketing strategy can play a vital role in creating a green market via relationships with consumers to make them aware of environmental sustainability and to inform them about the advantages of environmentally-sustainable products and services.

Increased consideration of environmental issues in marketing literature, experimental studies, in particular, has significantly led businesses towards the integration and implementation of green marketing in daily practices (Fuentes, 2015). Not doing so, organisations will be unable to achieve their potential in improving the consumers' life quality (Polonsky, 2011). Such green plans have resulted in the development of green products in various industries. Green market has been estimated to have an annual growth of 13% (Goh and Balaji, 2016).

Green marketing is a phenomenon supported by environmental activists and university professors (Rosenbaum and Wong, 2015) as a means of establishing global and social welfare for consumers. However, in most cases, company directors are not able to perceive the revenues from green marketing plans (Ginsberg and Bloom, 2004) because profit sources associated with green marketing are realised via the increase in invisible assets including brand image and reputation (Chen, 2010; Ko et al., 2012).

Companies which practice comprehensive environmentally-friendly strategies provide their benefits and stockholders with the perception that they consider current environmental concerns and care for the community and the ecosystem, considering

green marketing as internal and external opportunities (Lash and Wellington, 2011). Green marketing can bring lower costs and greater revenues, in comparison with competitive privilege, through business development (Kotler, 2011).

Despite the increased supplier green products and services, consumers are left with an imprisoned concert that the companies may release false and misleading environmental reports to increase their sales and establish their plan. For example, a report reveals that 39% of consumers believe environmental claims are not precise. This lack of trust for believing in environmental claims of the company is regarded as ‘green scepticism’.

It is predicted that increased irresponsible environmental behaviours by companies are one of the key factors of the increase in uncertainty towards environmental practices and advantages of green products (Walker and Salt, 2012; Goh and Balaji, 2016). A review of the literature rebuilds contradictory opinions regarding the effects of green scepticism and buying intentions. For example, environmental concerns have been identified as an important predictor of green purchase purposes (Goh and Balaji, 2016; Hartmann and Apaolaza-Ibáñez, 2010). However, the role of consumers’ scepticism in affecting environmental concerns is it still unclear. Similarly, although previous studies have shown that environmental knowledge positively affects consumers’ attitudes towards green products (Suki, 2013; Mostafa, 2006), sceptical consumers regard informational aspects of green assertions as being exaggerated (Mohr et al., 1998). Hence, examining green scepticism in Iran can improve our perception of how companies can successfully compete over green demands and consider green scepticism in their behaviour change. Accordingly, the main purpose of this study is to further understand the impact of green scepticism on the green buying decisions, with the consideration of the mediation role of product evaluation, environmental knowledge, product experience, and environmental concerns.

2 Literature review

Previous studies not only have examined various responses of demanders while concentrating on establishment of various green products (Xu et al., 2015), but also have investigated the effects of such marketing strategies (e.g., applied emotional demands, green demands against non-green ones, environmentally-useful demands against economically-useful demands, individual benefits demands against other individuals’ benefits demands, long-term demands against short-term demands) (Kronrod et al., 2012; Ku et al., 2012; Matthes et al., 2014; Xu et al., 2015; Wang et al., 2017).

However, few studies have considered green demands through a sceptical viewpoint. Hence, the current study is aimed at examining the effect of scepticism on green purchase demands in a country. Useful studies on green marketing will probably provide various theoretical sources for investigating the best approach to spread green strategies associated with the sustainable development of a perfect society (Wang et al., 2017).

2.1 Green scepticism

Scepticism refers to a personal tendency towards incredulity and disbelief. This has been defined as a personality trait, while most studies on organisational-social responsibilities (Mendini et al., 2018) have stressed on situational scepticism which results from distrust in the information provided by companies and organisations, and is different from

personal characteristics (Friestad and Wright, 1994; Mendini et al., 2018). Consumers' attitudes towards company motivations fall in two groups; exterior motivations, where consumers believe that companies try to increase their revenues through marketing strategies, and inner motivations, where consumers perceive that the organisation is really worried about social issues and has based its practices accordingly (Du et al., 2007; Ellen et al., 2006; Mendini et al., 2018). The closer is the perceptions in the community to inner motivations, the more positive responses are expressed by the consumers. On the contrary, prominent exterior motivations lead to fewer desirable behavioural responses and increased scepticism to consumers (Ellen et al., 2000).

Green scepticism is a personal (or public) tendency to distrust in another's (Obermiller and Spangenberg, 1998). Previous studies have demonstrated that, unlike pessimism which is the pervasive personality trait characterised with unrealistic expectations, hopelessness and violence, scepticism is also expressed regarding the organisation's ability to realise the outcomes. Therefore, green scepticism is the distrust towards green product advertising and environmental assertions. Researchers regard scepticism as a decentralised feature affecting consumers' sentiment concerning marketing in terms of advertising, branding, marketing, and sales. Additionally, consumers are also sceptical about other product information, such as reports by consumers, friends, and salespeople, so that they are more suspicious about advertising. It appears that sceptical consumers show a less positive response to the advertisement and are less convinced with green advertising. Yiridoe et al. (2005) showed consumers' doubt about green services is due to wrong interpretation of services, and to some extent due to diverse standards and certificate for green services.

According to scientific research carried out by Athens among several consumers around the world, more than 50% of them asserted to be concerned about environmental health issues (Mobrezi and Khoshtinat, 2016). This concern is so great that many customers demand products which are 100% environmental compliant, however they are imposed to more payments (Rex and Baumann, 2007). Green marketing and related business have attracted Iranian attention. Environmental issues and environment protection are among the most important standards considered by manufacturers and customers while purchasing because they trust and respect the individuals and organisations who seek to protect the environment. They believe that individuals and organisations working with this attitude want to do the job in the right manner.

Also one of the important barriers to making a purchase intention is consumer scepticism about the quality of green products. They make a purchase when they realise the difference between the green and the other products (Nguyen et al., 2019). In Iran most food brands sometimes make significant mistakes, but they always show that they are environmentally friendly in their advertising programs. Therefore, they may be inconsistent and sceptical when they notice green crop promotion activities (Nyilasy et al., 2014). Consumers can start making negative claims about consumption motivation because, they are sceptical of the claims made about green brands, and they may even stop buying (Obermiller et al., 2005). For example, people may refuse to purchase products or services of a company that is known for its non-green production or has 'green scepticism' (Leonidou and Skarmeas, 2017). Therefore, it is hypothesised that:

- H1 Green scepticism has a direct and significant effect on the purchase intention.
- H2 Green scepticism has a direct and significant effect on product evaluation.

- H3 Green scepticism a direct and significant effect on environmental concern.
- H4 Green scepticism has a direct and significant effect on environmental subjective knowledge.
- H5 Green scepticism has a direct and significant effect on product experience.

2.2 *Product evaluation*

It can be claimed that no comprehensive research has so far been evaluated consumes opinions regarding such products. Research on consumers' responses to product cycles, green products for instance, show that the difference in the results obtained depend about of services studied (Hamzaoui and Linton, 2010; Anstine, 2000; Michaud and Llerena, 2011) and awareness of tags. Previous research has also shown that awareness of tags significantly affects the degree of scepticism towards the label (Lähteenmäki et al., 2010; Pieniak et al., 2010). Although consumers' attitudes towards the products that do not harm the environment have generally been positive (Mobley et al., 1995), a number of studies have shown that consumers may even respond negatively to these products (e.g., poorer quality, less willingness to pay for products) (Achabou and Dekhili, 2013; Anstine, 2000; Hamzaoui and Linton, 2010).

In the following Cheng et al. (2020), in their study are considering the direct impact of consumer scepticism from the time the product is evaluated on the consumer's mind and they state that green consumption compares the effect of consumer's mental examinations in different situations (e.g., environmental conflicts and consumer scepticism about green claims). Therefore, it is hypothesised that:

- H6 Product evaluation has a direct and significant effect on purchase intention.

2.3 *Environmental concern*

Environmental concerns or individual concerns about the environment are essential to understand the goals of green product purchase. This is a universal tendency for the protection of the surroundings (Dunlap and Van Liere, 1978; Goh and Balaji, 2016). Environmental concerns are the extent of one's involvement with environmental issues. In Bang et al. (2000), they realised that consumers with better surface of environmental concerns were more likely to pay considerable amounts of money for renewable energy than those with less environmental concerns. While researchers have attributed these discrepancies to several exterior factors including demographic factors, it is widely accepted that environmental concerns tend to be less likely to cut down on relevance to green purchase intentions (Kalafatis et al., 1999).

In addition to the fact that environmental concerns can directly affect green purchase intention, they can also indirectly influence green purchase intention through environmental knowledge (Bang et al., 2000). They realised that environmental-interested consumers are willing to know more about renewable energy. Likewise, Bamberg (2003) showed consumers with very high levels of environmental concerns are involved in environmental actions due to their desirable assessment and opinions regarding green action. Consumers with high environmental concerns were found to be more aware of green products and were highly aware of buying inappropriate environmental products.

Furthermore, they showed a high level of behavioural beliefs that had a substantial impact on attitudes toward environmentally-compatible actions. The researchers found that consumers that intensively preoccupied in environmental subjects have more environmental knowledge, that each has a significant effect on their attitudes and the purpose of purchase for environmentally-compatible products. Pagiaslis and Krontalis (2014) found concerns have both direct and indirect impact on the tendency to pay for and use biofuels through knowledge and beliefs. So, when consumers have numerous environmental concerns, and maybe they have a more powerful and clearer belief in environmental issues (Goh and Balaji, 2016).

H7 Environmental concern has a direct and significant impact on purchase intention.

2.4 Environmental knowledge

In general, knowledge refers to each person's understanding of a concept. This article is about environmental knowledge. Environmental awareness of the individual and the green shopping process are positively correlated and the coverage range is very broad (Davison et al., 2014). Because environmental awareness (Grob, 1995; Harraway et al., 2012; Mobley et al., 2010) and the worldview environment from an attitude perspective (Barr et al., 2001; Davis et al., 2009; Grønhøj and Thøgersen, 2012; Pao and Tsai, 2011). From the perspective of influencing consumer environmental behaviour, the field of research is considerable. In addition, in developed countries, a few researchers have also suggested that perceived environmental knowledge can have a direct relationship with positive beliefs about green products that further influence the motivation to buy such products (Kumar et al., 2017; Yadav and Pathak, 2016; Chan, 2001). Living without the environment can be sustainable. For this reason, any knowledge related to the life and environment of individuals can be called environmental knowledge (Mantzicopoulos and Patrick, 2011).

H8 Environmental subjective knowledge has a direct and significant effect on purchase intention.

2.5 Product experience

Marketing process deals with subjective and emotional relationships and always emphasises on experimental characteristics of a product to establish more direct and more significant experience to the consumers (Nysveen et al., 2013; Monfared et al., 2017). Product experience originates from the overall concept of the organisation's marketing strategy, which is both theoretically and practically crucial (Lemon and Verhoef, 2016). Abbott (1995) stated that what people want is not the products and services of the organisations but their satisfied experiences of that organisation. Many researchers have also suggested that providing motivating and influential experiences for green products as well as establishing a credible brand in the minds of consumers may work in the long run (Francisco-Maffezzoli et al., 2014; Morhart et al., 2015; Swimberghe et al., 2014; Monfared and Mirhoseini, 2014).

The mark experience involves all potential and Internal audience response (emotions, affects, perceptions) and the behavioural responses stimulated by relevant brands as part of a green trademark design and its characteristics, packaging, communication and the environment (Brakus et al., 2009).

Consumers differ not only in how they perceive marks but also in how they relate to marks (Fournier, 1998). Therefore, the product experience is defined as the performance of a set of action and reaction between a consumer and an organisation, as well as the stimulation of direct and indirect relationships (e.g., in relation to a product) or, an indirect concept, with the company in a personal, memorable way. Consumers weight brands against their experiences and then decide (Brakus et al., 2009; Beckman et al., 2013; Dennis et al., 2014; Nysveen et al., 2013; Lin, 2015; Kazemi et al., 2015; Ding and Tseng, 2015).

Also, Szabo and Webster (2020) founded it is possible that the consumer gained experience while reviewing and buying a green product from the experience of others and reduce scepticism in the mind of the consumer. So, we expect that:

H9 Product experience has a significant effect on purchase intention.

2.5.1 The mediating role of product evaluation, environmental concern, subjective environmental knowledge, product experience

In addition to its positive effects, green scepticism can also have indirect effects and here by using the green product awareness variable, the effect of scepticism on the final purchase intention can be changed (Paço et al., 2013; Spangenberg et al., 2010). Environmental knowledge can have a significant impact on the consumer decision-making process in order to purchasing green products. Even if this knowledge is through previous consumer experiences that can include details about why this product is good, what impact it has on public health, how much competitive value it has in terms of financial and environmental benefits that can be met, in long-term and mid-term reduce scepticism.

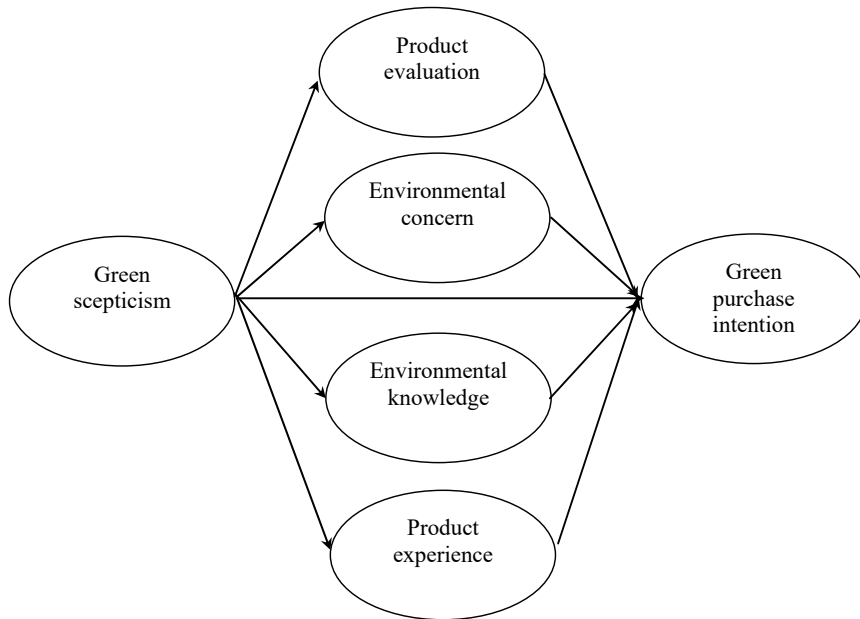
In general, people tend to seek knowledge about green products. Consumers often find it difficult to compare green products with regular products when evaluating green-labelled products and believe that environmental information is an added feature of these products (Nguyen and Feng, 2020). Several studies show that environmental concerns are one of the main motivations for people to buy green products (Nguyen and Feng, 2020). For these reasons, consumers, despite being aware of the potential consequences of green products, accept products that may be substandard. Thus, this study shows the moderating effect of information, knowledge, environmental concern and product experience on relationship between green scepticism and purchasing goals. Hence the hypothesis that:

H10 Product evaluation can lead to the effect of the green scepticism variable to purchase intention.

H11 Environmental concern has a mediating role in the effect of green scepticism on purchase intention.

H12 Subjective environmental knowledge mediates the effect of green scepticism on purchase intention.

H13 Product experience mediates the effect of green scepticism on purchase intention.

Figure 1 Research conceptual model

3 Methodology

3.1 Measures

In the present research, a questionnaire has been used to collect data. The questionnaire consists of 22 questions (items) designed for the measurement of green scepticism, product evaluation, product experience, purchase intention, environmental concern, and environmental knowledge. Here, four items were designed to measure green scepticism (Fenko et al., 2016; Mangleburg and Bristol, 1998; Goh and Balaji, 2016), four items for product evaluation (Goh and Balaji, 2016; Fenko et al., 2010), four items for product experience (Fenko et al., 2016; Moskowitz, 1995; Goh and Balaji, 2016), four items for green purchase intention (Goh and Balaji, 2016), three items for environmental concern (Goh and Balaji, 2016) and three items were designed for measuring environmental knowledge (Barber et al., 2009).

To answer the questions concerning all variables (independent and dependent), a five-point Likert scale was developed ranging from 'strongly disagree' to 'strongly agree'. The questionnaire was distributed among 300 Iranian consumers of green products. In this regard, the research questionnaire was distributed to customers of green poultry producing companies in Gilan and Yazd province, Iran as well as customers of Refah and Ofoogh Koorosh chain stores that offer green products. Cronbach's alpha coefficient and composite reliability were calculated for each of the research constructs to examine the questionnaire reliability, the results of which are presented in Table 1. As the results in Table 1 show, the reliability of the questionnaire is confirmed (Bagozzi and Yi, 1988). Also, to assess the construct validity of the questionnaire, factor loading of the questions was calculated (Table 1). Since the factor loading of all the questions was

higher than 0.6, the validity of the research instrument was confirmed (Bagozzi and Yi, 1988). AVE index was also calculated for convergent validity of the questionnaire. The value of this coefficient ranges from zero to one, with values above 0.5 being accepted (Fornell and Larcker, 1981). Therefore, the convergent validity of the structures is also confirmed according to Table 1. Details of the results of the survey instrument reliability and validity are presented in Table 1. The questionnaire has also been reviewed by experts; so the content validity of the questionnaire has also been confirmed.

Table 1 Questionnaire reliability and validity

<i>Construct</i>	<i>Item</i>	<i>Factor loading</i>	<i>Cronbach's alpha</i>	<i>Composite reliability (CR)</i>	<i>AVE</i>
Green scepticism	GS1	0.761*	0.81	0.82	0.60
	GS2	0.735*			
	GS3	0.774*			
	GS4	0.868*			
Environmental concern	EC1	0.749*	0.80	0.81	0.62
	EC1	0.831*			
	EC3	0.713*			
Product evaluation	PE1	0.673*	0.79	0.80	0.50
	PE2	0.627*			
	PE3	0.750*			
	PE4	0.866*			
Environmental knowledge	EK1	0.767*	0.83	0.85	0.65
	EK2	0.752*			
	EK3	0.677*			
Product experience	PEX1	0.734*	0.82	0.84	0.53
	PEX2	0.913*			
	PEX3	0.764*			
	PEX4	0.636*			
Purchase intention	PI1	0.941*	0.85	0.86	0.74
	PI2	0.765*			
	PI3	0.714*			
	PI4	0.692*			

Note: * $p < 0.05$

3.2 Data collection

This study intended to investigate the mediating role of product evaluation, environmental knowledge, product experience and environmental concerns on the relationships between green scepticism and green purchase intention in Iran. The research population includes all consumers of green products in Iran. Accordingly, the questionnaire was distributed among the consumers referring to major chain markets offering green products. Samples were selected randomly and a total number of 300 questionnaires were completed and collected. Table 2 presents the demographic profile of

respondents. Based on the data in this table, 60% of the respondents were male and 40% were female. Moreover, 85% of them were married while 15% were single. In respect with age, 13.3% of the respondents were up to 24 years old, 40.2% were 26 to 35 years old, 27.3% were 36 to 45 years old, 10.8% were 46 to 55 years old, and finally, 8.4% of them were over 55 years old. Regarding education, 20% of the respondents' educational level was below diploma, 9.2% were holders of diploma, 18.3% were holders of an upper-diploma certificate, 42.5% were bachelor's holders, 9.2% were holders of master's and 0.8% were PhD holders.

Table 2 Demographic profile of respondents

<i>Variable</i>	<i>Group</i>	<i>Percent</i>
Gender	Male	60
	Female	40
Marital status	Single	15
	Married	85
Age	Below 25	13.3
	26–35	40.2
	36–45	27.3
	46–55	10.8
	Over 55	8.4
Education	Below diploma	20
	Diploma	9.2
	Upper diploma	18.3
	Bachelor's	42.5
	Master's	9.2
	PhD	0.8

3.3 Data analysis

Data analysis in this research involved two stages. In the first stage, SPSS 19.0 was used to examine the descriptive and inferential statistics. In the second stage, structural equation modelling (AMOS 21.0 software) was employed for factor analysis (for the validity of questionnaire measures) and examining the model and the research hypotheses. Structural equation modelling is a multivariate analysis technique of multivariate regression family that allows the researcher to simultaneously examine a set of regression equations. This method is one of the major methods of analysing the structure of complex data for the analysis of various variables that show the simultaneous effects of variables in a theory-based structure. The CMIN/DF, RMSEA, CFI, NFI, RFI and IFI indices were used to evaluate the model fitness.

4 Findings

In this study, structural equations modelling and AMOS 21.0 software were used for examining the hypotheses. Also to examine the model fitness, various fitness indicators

were used including χ^2/df , RMSEA, CFI, NFI, RFI, and IFI. χ^2/df does not have a fixed value for an acceptable model but small values indicate model fitness, with values smaller than three showing good fitness (Hair et al., 1998). It has been recommended to use the RMSEA that is presented as the magnitude of the difference for each degree of freedom. The RMSEA index for good models is 0.08 or less (Hair et al., 1998). Values above 0.10 indicate a reasonable error for approximation in the population. Models with an RMSEA of 0.10 or more have poor fitness. In the AMOS program, by contract, CFI, NFI, RFI, and IFI must be equal to or greater than 0.07 for the model to be accepted (Hair et al., 1998). Table 3 summarises the data for the model fitness.

Table 3 Model fitness indicators

<i>Fitness indicator</i>	<i>Results</i>
χ^2/df	2.175
RMSEA	0.053
CFI	0.953
NFI	0.920
RFI	0.915
IFI	0.954

The proposed model is a good model to investigate the relationship between research variables because as shown in Table 3, the fit indices of the model indicated that our model fitness was acceptable.

According to Table 4, green scepticism has a direct and significant effect on the purchase intention ($\beta = -0.200$; $p < 0.01$). Therefore, Hypothesis 1 is confirmed. This study found that the more sceptical consumers are, the less positive their attitudes, brand evaluations, and word-of-mouth intentions and the lower the consumers' purchase intentions (Fabiola and Mayangsari, 2020; Leonidou and Skarmeas, 2017). According to Table 4, green scepticism has a direct and significant effect on product evaluation ($\beta = -0.343$; $p < 0.01$) Therefore, Hypothesis 2 is confirmed. Because consumer scepticism about a company's motives for CSR initiatives could result in a diminished intention to speak positively (Sengabira et al., 2020; Skarmeas and Leonidou, 2013), or even to speak negatively about a brand (Leonidou and Skarmeas, 2017). To examine Hypothesis 3, since the p-value is greater than 0.05, the assumption of the equality of the regression coefficient with zero ($\beta = 0$) is held, in contrast to the assumption of inequality of the regression coefficient with zero ($\beta \neq 0$), which implies rejecting the effect of independent variable on the dependent variable. In other words, green scepticism has no significant effect on environmental concern, so Hypothesis 3 is not supported ($\beta = -0.024$; $p > 0.05$). Albayrak et al. (2011) found that scepticism reduces customer concern for the environment and that even consumers who are highly sceptical about green products may sometimes create a product evaluation process that can be to decrease the worry themselves relative to the environment. According to Table 4, green scepticism has a direct and significant effect on environmental subjective knowledge ($\beta = -0.107$; $p < 0.05$), so Hypothesis 4 is confirmed. Also according to Table 4, green scepticism has a direct and significant effect on product experience ($\beta = -0.143$; $p < 0.05$), so Hypothesis 5 is confirmed. Yiridoe et al. (2005) stated that people's

scepticism about green produce is due to misinformation and sometimes lies about organic products. Therefore, even if they decide to buy green products, doubts about the authenticity of the information and the performance of the products may change their opinion. Also, based on the results, product evaluation has a direct and significant effect on purchase intention, so Hypothesis 6 is confirmed ($\beta = 0.215$; $p < 0.01$). A personal report that is created in the minds of consumers about their internal beliefs and views about green products and their sustainable environmental behaviour, and has an impact on their purchasing intent (Levine and Strube, 2012). The result shows that environmental concern does not have a significant impact on purchase intention, so Hypothesis 7 is not supported ($\beta = 0.045$; $p > 0.05$). Hence, the mental worries and concerns of consumers do not lead to the intention of consumers to buy green products. (Hamzah and Tanwir, 2020) According to Table 4, environmental subjective knowledge has a direct and significant effect on purchase intention, so Hypothesis 8 is confirmed ($\beta = 0.114$; $p < 0.05$). Therefore, environmental knowledge creates a favourable attitude in the consumer as a kind of sustainable consumption program to protect the environment, which has a positive effect on the consumer's intention to buy (Suki, 2013). The result also shows that product experience has a significant effect on purchase intention, so Hypothesis 9 is supported ($\beta = 0.116$; $p < 0.05$). Therefore, the more previous consumers' experiences with green products, the more they intend to buy green. (Fenko et al., 2016)

To examine Hypotheses 10–13 (mediation effects), the Sobel test was used, which is commonly employed to investigate how a mediator affects the relationship of the two main variables. In Sobel test, if Z-value is greater than 1.96, at 95% confidence level, significance of a mediator can be verified. This value is calculated from the following equation:

$$Z\text{-value} = \frac{a \times b}{\sqrt{(b^2 \times s_a^2) + (a^2 \times s_b^2) + (s_a^2 \times s_b^2)}} \quad (1)$$

where a denotes the coefficient of the path between the independent and mediator variables, b shows the coefficient of the path between the mediator and dependent variables, S_a is the standard error of the path between the independent and mediator variables, and S_b is the standard error of the path between the mediator and dependent variables.

Moreover, to evaluate the indirect effect, a statistic is used called VAF (Iacobucci and Duhachek, 2003) taking a value between 0 and 1. This value assesses the ratio of indirect effect to the whole effect. VAF is measured from the following equation:

$$VAF = \frac{a \times b}{(a \times b) + c} \quad (2)$$

where a is the coefficient of the path between the independent and mediator variables, b is the coefficient of the path between the mediator and dependent variable, and c is the coefficient of the path between the independent and dependent variables.

Table 4 Results of hypothesis testing

<i>Hypothesis</i>	<i>Standardised path coefficients</i>	<i>p-value</i>	<i>Result</i>
Green scepticism → purchase intention	-0.200	**	Confirmed
Green scepticism → product evaluation	-0.343	**	Confirmed
Green scepticism → environmental concern	-0.024	-	Rejected
Green scepticism → subjective environmental knowledge	-0.107	*	Confirmed
Green scepticism → product experience	-0.143	*	Confirmed
Product evaluation → purchase intention	0.215	**	Confirmed
Environmental concern → purchase intention	0.045	-	Rejected
Subjective environmental knowledge → purchase intention	0.114	*	Confirmed
Product experience → purchase intention	0.116	*	Confirmed
Green scepticism → product evaluation → purchase intention	-0.570	**	Confirmed
Green scepticism → environmental concern → purchase intention	-0.046	-	Rejected
Green scepticism → subjective environmental knowledge → purchase intention	-0.420	*	Confirmed
Green scepticism → product experience → purchase intention	-0.065	-	Rejected

Notes: * $p < 0.05$, ** $p < 0.01$

Hypothesis 10 Product evaluation mediates the effect of green scepticism on purchase intention. Given the above explanation, the values are substituted in equation (1), showing that the value of the Sobel test statistic to test the above hypothesis is 2,599, and since this value is greater than 1.96, Hypothesis 10 is confirmed. Now, the greatness of this effect is calculated by the VAF, which is equal to -0.570, so product evaluation can lead to the effect of the green scepticism variable to purchase intention. The results also showed that the more creative in the way of loading green products make reduces green scepticism, and the product evaluation process for choosing green products is done with more pleasure and increases the intention to buy (Fenko et al., 2016).

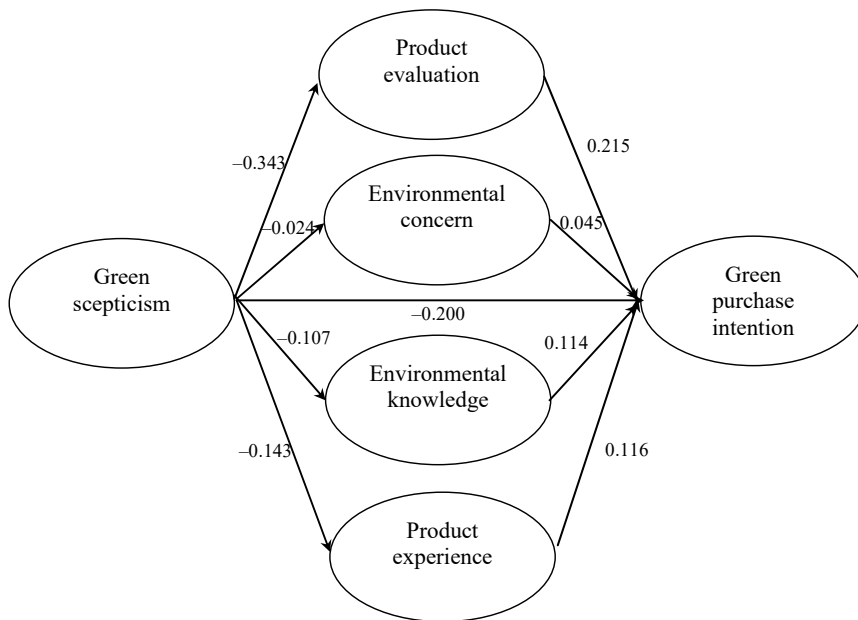
Hypothesis 11 Environmental concern has a mediating role in the effect of green scepticism on purchase intention. Since environmental concern has no significant effect on green purchase intention according to the results of Table 4, it cannot act as a mediator variable and Hypothesis 11 is not confirmed. Hartmann and Apaolaza-Ibáñez (2010) stated that environmental concerns have a significant impact on people's beliefs and thus reduce green scepticism and their intention to buy a green product.

Hypothesis 12 Subjective environmental knowledge mediates the effect of green scepticism on purchase intention. The value of the Sobel test statistic to examine the above hypothesis is 2.35, and since this value is greater than 1.96, Hypothesis 12 is confirmed. The greatness of this effect is calculated by the VAF, which is equal to -0.420 . Based on the findings, environmental knowledge acts as a suitable tool to reduce green scepticism. On the other hand, it will increase the intention to buy green. Green awareness affects consumers' beliefs about buying green products (Cabral and Dhar, 2019).

Hypothesis 13 Product experience mediates the effect of green scepticism on purchase intention. The value of the Sobel test statistic to examine the above hypothesis is 1.56, and since this value is smaller than 1.96. Hence, Hypothesis 13 is not confirmed. The results show that the experience of green products may reduce consumer scepticism about green products and especially the information contained on them, and thus change the evaluation of the products and the consumer's intention to buy (Fenko et al., 2016).

The final model of this study with standard coefficients is presented in Figure 2.

Figure 2 Structural model



5 Discussion and conclusions

The findings showed that green scepticism had a significant effect on purchase intention. Accordingly, Hypothesis 1 was confirmed. This means that social factors alone drive people to consume green products. Thus, social factors can be identified in the tendency

to buy green goods and by inducing these parameters, the tendency for buying green services can be reinforced. This is not in line with Mobrezi and Khoshtinat (2016). The findings showed that green scepticism had a significant effect on product evaluation and purchase intention, so H2 was confirmed. This means that the type of labelling and product category plays a critical role in determining the consumers' response to green products. Another point in the difference in consumers' scepticism regarding health labels is familiarity with the labelling system. Previous research has shown that familiarity with labels significantly affects the degree of scepticism about the label (Lähteenmäki et al., 2010; Pieniak et al., 2010). These results suggest that reducing consumer's scepticism about food labels and gaining consumer's confidence can have a positive impact on product evaluation.

The results showed that green scepticism had no significant effect on environmental concern, so Hypothesis 3 of the study was not confirmed. This means that environmental concerns cannot affect customers' loyalty attitudes. Accordingly, the reasons that this variable does not have a significant effect on a positive attitude into green services should be examined. This result is in agreement with those of the study by Mobrezi and Khoshtinat (2016).

The findings showed that green scepticism had a significant effect on subjective environmental knowledge; therefore, H4 was confirmed. This means that consumers' subjective environmental knowledge has a positive effect on conducting people's attitude toward green products. Therefore, it can be realised that green purchasing can be part of the subjective element of green customers by carefully examining causes of this factor. This means green scepticism had a significant effect on what consumers perceive about green products. This finding is not consistent with Mobrezi and Khoshtinat (2016). Also, factors that reinforce consumers' subjectivity can increase their willingness to procure green services. This is equivalent to the study by Polonsky and Rosenberger (2001).

The findings showed that green scepticism had a significant effect on product experience; hence, Hypothesis 5 of the research was confirmed. This means that consumers' lack of positive experience with green services affects their propensity to buy for the first time. Most importantly, it is critical that experience can reduce consumer's scepticism about green products. This finding does not agree with of Mobrezi and Khoshtinat (2016).

The results revealed that product evaluation significantly affects purchase intention, so Hypothesis 6 was confirmed. This means that the role of social factors in creating a positive viewpoint towards green products has been attached to the minds of consumers. Therefore, identifying and reinforcing social impacts can enhance a positive attitude toward green products. This is not consistent with the reports presented by Mobrezi and Khoshtinat (2016). The results also indicated that environmental concern had no significant effect on purchase intention; as a result, Hypothesis 7 of the study was not proved. This manifests that consumers' naturalism does not affect their positive view towards green products.

Our results showed that subjective environmental knowledge had a significant effect on purchase intention. Therefore, Hypothesis 8 of the research was confirmed. This means that consumers' personal beliefs and awareness of environmental problems, emotional participation in environmental issues, and the consequences of human practices on the environment directly influence their positive attitude towards green products.

Findings showed that product experience had had a significant effect on purchase intention, so Hypothesis 9 was confirmed. This means that consumers' positive experience with green products has increased their willingness to repurchase green products. This is consistent with the study of Mobrezi and Khoshtinat (2016).

Mediation results showed that product evaluation and subjective environmental knowledge mediate the effect of green scepticism on purchase intention. But environmental concern and product experience have no mediating role in the effect of green scepticism on purchase intention.

The impact of environmental concerns and green purchase intention reflects the intensity of personal intention and calls for one's intended purpose which is to buy green products. The effect of behavioural intention on the individuals' behaviour indicates that they tend to interact with the behaviours they want to perform. Subjective environmental knowledge involves all opinions of the customers of the environmental system as well as the awareness of the responsibilities associated with sustainable environmental development. The findings showed that environmental knowledge play an important role in attitudes toward consumer behavioural attitudes.

Researchers recommend brand owners to ask their marketing managers to promote the branding process to improve their negative image. Brand managers should choose their advertising strategy in a way that encourages consumers to reflect their image. Marketing experts and brand managers must use product image compatibility or similarity with the consumer to place a brand. Several factors influence the positive attitude towards green products that affect the willingness to buy green products. Given these factors, the desire to buy such products can increase. The first of these factors is consumers' attitudes towards the environment, which refers to one's judgment on the protection and improvement of the environment.

The second factor is that consumers' environmental responsibility for these products should be increased. The final factor is that consumers are behaving better towards environmental advertising. Such advertising can influence green purchase intention, which is one's desire to prioritise products that are more environmentally-friendly than traditional products.

5.1 Limitations and future research

This study identifies some of the limitations that may be used in future research. In theory, this study focuses on two specific variables, namely green consumer's scepticism, and purchase intention, but future research will be able to specifically consider factors which may affect the above-mentioned variables. While this study examined the impact of variables on green consumers' scepticism and purchase intention simultaneously, future studies will be able to individually examine these two variables and examine or alter their impact on each other.

Finally, this study provides new evidence for understanding more about consumers' feelings regarding green products and formulating the most optimal strategies for introducing green products with the greatest impact on consumers' evaluations and their willingness to buy. However, future research can, by examining the related psychological effects, separate the strategy of the selected design. Methodologically, some of the research already done compare green products, noting that green brands may be valuable in terms of identity, effectiveness or skill. For example, in past investigation issues raised that when appraising green marks, costumers in India are compared to North American,

European or Australian consumers, which may result in lesser attention to the identity and quality of green values, and places special emphasis on the amounts relevant to green marks and services. Therefore, future research can publish similar experiences regarding cross-country differences and examine potential cultural differences based on the findings. Besides, such experiences rely on online users. Consequently, subsequent investigation can experiment the outcomes and implications of this article concerning real consumers.

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