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Investigating the factors affecting female consumers' willingness toward green purchase based on the model of planned behavior

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Abstract

International researches show that consumers' environmental concerns have caused them to change their buying behavior gradually and rethink about the products they buy. Green purchase means adding environmental aspects to criteria such as price and performance when deciding to buy the ultimate goal of which is to reduce environmental effect on sourcing and to increase efficiency of resources. Therefore, the main objective of this study is to investigate the factors affecting female consumers' willingness for green purchase based on the model of planned behavior in Iran. The research method is applied, fundamental and developmental in terms of its objective and it is descriptive-survey in term of its method. The study population consists of women living in the West of Tehran. The results show that positive attitude toward green products affects personal self-image, social impacts and willingness to buy green products. The willingness to buy green products does not affect environmental concerns and subjective norms; therefore, consumers' willingness to buy green products increases by increasing environmental concerns. However, positive attitude toward green products does not affect environmental concerns, subjective norms and personal naturalism. Willingness to buy green products also does not affect the social impact and personal self-image.

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1. Problem statement

In the wake of increase in environmental concerns all over the world, consumers have been very keen to protect and support the environment. Therefore, conducting scientific research and studies in this regard seems necessary

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(Ebad Askari and Hagh Talab, 2013). Based on the scientific researches of Mr. Atman in 16 countries, more than 50% of consumers in each country have claimed that they are concerned about the health of the environment. In Australia, 84% of consumers believed that the responsibility for the environment will guarantee the health of future generations (Ranjbar and Kheiri, 2011). This concern is to an extent that many consumers are demanding products that are one hundred percent in line with environmental standards, even if they have to pay more (Rex and Baumann, 2014).

Green marketing and its position in the business environment and trade issues in Iran is highly regarded and environmental issues and environmental protection is one of the most important standards that are considered by producers, distributors and consumers in the time of shopping.

With regard to the highlighted role of women than men in household purchases (Resalat newspaper, 21 April, 2013) as well as the promotion of women through independent activities in support of environmental sustainability that has been defined based on the activities of the Association for Women supporting environment and sustainable development in 1992 (Zarrin Joy Alvar, 2011), recognizing their intended values and investigating their shopping style when encountered with green products as well as their ecological behavior and above all, predicting their green purchase patterns are the basis of their study. In fact, the researcher in this study seeks to find and to investigate the factors influencing the patterns of women's behavioral patterns when buying green products based on the model of "planned behavior". Therefore, based on the results of previous researches, the following model is proposed.(Fig 1)

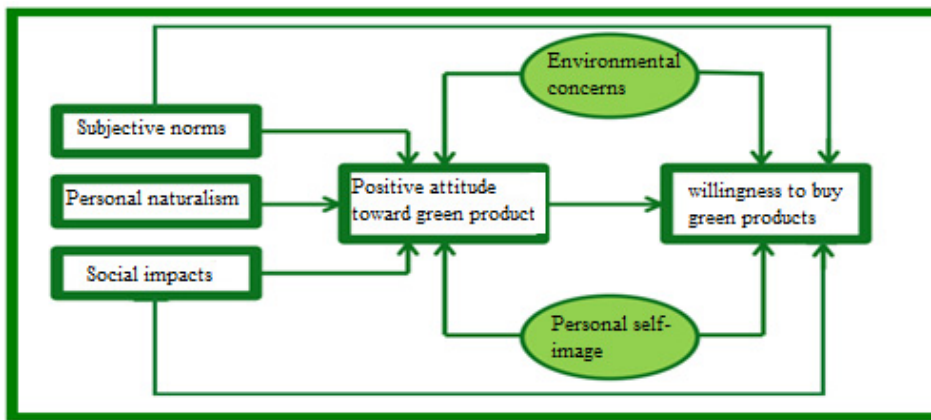


Fig 1. planned behavior

2. Research hypotheses

Hypotheses studied in this study are consisted of the following 10 main hypothesis:

- H1: Environmental concerns affect the positive attitude of women towards green products.
- H2: Environmental concerns affect women's willingness to buy green products.
- H3: subjective norms affect the positive attitude of women towards green products.
- H4: Subjective norms affect women's willingness to buy green products.
- H5: Social impacts affect the positive attitude of women towards green products.
- H6: Personal naturalism affect women's willingness to buy green products.
- H7: Personal naturalism affects the positive attitude of women towards green products.
- H8: Women's personal self-image affects their positive attitude towards green products.
- H9: Women's personal self-image affects their willingness to buy green products.
- H10: The positive attitude of women towards green products affects their willingness to buy green products.

3. Research literature

3.1. Green Marketing History

Green marketing history goes back to 1970, far from the concerns in 70s, an idea called green marketing proclaimed its emergence in the late 80s. At this point, the focus of customers turned towards green products and green marketing was raised after that and a lot of research was done, especially in developed countries (Peattie and Cran, 2011).

The advent of the green movement increasingly provoked diverse markets that were involved with green marketing (Chan, 2000). Marketers expected to get a positive response from consumers through green marketing activities and this will be followed by selling more and more share in the market (Lee, 2008). In fact, the green marketing became gradually more highlighted with global concerns growing steadily.

4. Research variables

In this part of the research, the variables in the research model are investigated.

Willingness to buy green products: means adding environmental aspects to criteria such as price and performance when deciding to buy the ultimate goal of which is to reduce environmental effect on sourcing and to increase efficiency of resources. Schlegelmilch, Bohlen & Diamantopoulos (1996) investigated the relationship between the decision to buy green products and awareness of environmental issues and have concluded that customers' level of awareness of environmental issues affects their willingness to buy green products. A large number of customers show their increased environmental awareness and preference for green products with willingness to buy green products and pay more for environmentally friendly products / services (Han, Hsu, Lee and Sheu, 2011).

Personal self-image: when consumers are not fully aware of the value of a commodity, they use their experiences to assess its value (Tsur, 2008). Previous studies on the theory of planned behavior have found that past experiences play an important role in shaping the behavior intention (Han, Hsu, Lee, and Sheu, 2011). Many researchers believe that, with the assumption that consumers' behaviors are a result of their learning (Kim & Chang, 2011), considering their past behavior can provide a better prediction of their behavior intention (Conner and Armitage, 1998).

Subjective norms: According to the theory of Fishbein and Ajzen (1975), subjective norms are a reflection of the social pressure that is perceived by the person and shapes a certain behavior (Kim & Chang, 2011). In other words, subjective norms indicate the person's perception of whether people determine a certain behavior or not, i.e. it is the person's perception of social norms' pressure or others' beliefs that determine whether the person should behave in a certain way or not (Ajzen, 1985). Thus, subjective norms depend on a person's knowledge of prominent opinions of the person whom he accepts (Jim and Kang, 2011). A large number of studies in the field of psychology suggest the theory that subjective norms are an important factor in behavioral intention. In this context, the TRA model has identified subjective norms and attitudes as the determinants of behavioral intentions (Kim and Kim, Shin, 2009).

Personal naturalism: is a state of conservation behavior referring to efforts made to protect the nature after the product purchase, use or consumption.

Social impacts: is the degree of influence of family and relatives, such as parents, relatives and acquaintances and close friends on the behavior and decisions of each individual. In this study, the social impacts are measured according to the criteria of individuals' participation in the group of friends and the discussion and learning within the group that has been developed in the form of a questionnaire (Lee, 2008).

Positive attitudes towards green products: Karsajian found that attitude toward air pollution has been the most important variable in determining the behavior of consumers towards the product. Baouderjan (1988) also considers a positive attitude toward a life-style of being aware of environment as the cause of environmentally friendly purchase and use (Mustafa, 2007).

Environmental concerns: In this study, individuals' concern is measured according to the degree of involvement of individuals with environmental issues that is related to them that is developed in the form of a questionnaire (Lee, 2008); like using products that have an environment-friendly production process (Jerry et al., 1998), using products that cause less environmental pollution (Brien et al., 2011), using detergents that are less phosphate (Kaman Li, 2008), preferring to use products that are not dangerous for the environment (Polonsky and Rosenberger, 2013).

5. Research background

Based on the study of Ghaharзад (2013) and Leonido et al. (2013), overall results of the literature reflects the impact of factors such as: the willingness to buy green products, a positive attitude toward these products, income, age, consumer perception and recyclability, perceived confidence, perceived risk, trust, green brand positioning and green brand awareness, attitudes toward green brand, perceived value, environmental concerns, demographic differences on green consumption and willingness to buy green products. According to the research topic, problem statement and importance and necessity of research in this study, other factors such as variables of the model, including subjective norms, social impacts, personal self-image, personal naturalism, a positive attitude towards products, environmental concerns can also be effective, but just the last two factors have been investigated and others have not been addressed in the previous studies. This study has been conducted by developing a model of planned behavior and given that the previous studies have not directly focused on women's green purchase, this study has attempted to develop a relatively comprehensive model that can be considered among rare and innovative researches in this field.

6. Research method and the study population

The research method is applied in terms of its objective and is descriptive-survey in term of its method. The study population included 310 women. A total of 310 questionnaires were distributed, of which 279 were usable and analyzed. The reliability of each component of the questionnaire was investigated using Cronbach's alpha and all were confirmed in a good level. SPSS and AMOS software were used for data analysis.

7. Inferential statistics

Table 1 shows the results of the structural model to test the hypotheses related to variables. According to the values presented in this table, when the significance level is equal to or less than 0.05, the hypothesis is confirmed. The results of the statistical analysis suggest that hypotheses 2, 4, 5, 8 and 10 are confirmed and the rest of the hypotheses are not confirmed.

Table 1. p-values for research hypotheses

Hypothesis	p-value	result
1	0/16	not confirmed
2	0/027	confirmed
3	0/30	not confirmed
4	0/033	confirmed
5	0/009	confirmed
6	0/07	not confirmed
7	0/09	not confirmed
8	0/008	confirmed
9	0/06	not confirmed
10	0/007	confirmed

8. The results of hypotheses testing and comparing them with previous studies

In this section, the results of hypotheses testing and their comparison with previous researches are explained in detail.

The first hypothesis is not confirmed and it means that environmental concerns cannot affect female consumers' positive attitude in Iran. Therefore, the causes that this variable is not so affective on positive attitude towards green

products should be investigated. This conclusion is consistent with the research of Askarzadeh (2013) and is not consistent with the results of the study of Leonido (2013).

The second hypothesis investigates the effect of women's environmental concerns on their willingness to buy green products. Confirmation of this hypothesis suggests that by increasing environmental concerns, female consumers' willingness to buy green products increases. This is consistent with the study of Ebad Askari and Haghtalab (2013).

The third hypothesis investigates the effect of women's subjective norms on their positive attitudes towards green products. The hypothesis, with a t-value of 1/53 and significance level of 0/125, was not confirmed. This means that subjective norms of Iranian women does not affect developing positive attitudes towards green products. Therefore, green purchase can be a part of green consumers' subjective norm by examining the root causes of this factor. This is consistent with the research of Askerzadeh (2013).

The fourth hypothesis investigates the effect of women's subjective norms on their willingness to buy green products. The hypothesis, with a t-value of 2/34 and significance level of 0/019, was not confirmed. Therefore, strengthening factors affecting consumers' subjective norm can increase the willingness of Iranian woman to buy green products. This is consistent with the research of Polonsky et al. (2001).

The fifth hypothesis investigates the effect of social impacts on the formation of women's positive attitude toward green products. Confirmation of this hypothesis suggests that the role of social impacts in creating positive attitudes toward green products is highlighted in Iranian women. Therefore, identifying and strengthening social impacts can increase the positive attitude toward green products. This is consistent with the study of Abbasi, Enayati and Rahbar (2011).

The sixth hypothesis investigates the effect of social impacts on the willingness to buy green products. The hypothesis, with a t-value of 1/05 and significance level of 0/291, was not confirmed. This means that social impacts do not cause the willingness to buy green products among Iranian women. Therefore, social factors in the willingness to buy green products can be identified and the by strengthening these factors, the willingness to buy green products can be increased. This is consistent with the research of Abbasi, Enayati and Rahbar (2001).

The seventh hypothesis investigates the effect of women's personal naturalism on their positive attitude toward green products. The hypothesis, with a t-value of 1/90 and significance level of 0/056, was not confirmed. Therefore, women's personal naturalism does not affect their positive attitudes toward green products. This is consistent with the research of Jerry et al. (1998).

The eighth hypothesis investigates the effect of personal self-image on women's positive attitude toward green products. Confirmation of this hypothesis suggests that women's personal self-image directly affects their positive attitudes toward green products. This is consistent with the study of Donglike et al. (2019), Hamdi, Ghafari and Afsordegan (2011).

The ninth hypothesis investigates the effect of women's personal self-image on their willingness to buy green products. The hypothesis, with a t-value of 0/271 and significance level of 0/805, was not confirmed. This means that personal self-image does not directly affect women's positive attitudes toward green products. This is consistent with the research of Donglike et al. (2019).

The tenth hypothesis investigates the effect of women's positive attitude toward green products on their willingness to buy green products. Confirmation of this hypothesis suggests that women's positive attitude toward green products affects their willingness to buy green products. This is consistent with the study of Porrodi and Dadashian (2014), and it is not consistent with the study of Abbasi, Enayati and Rahbar (2011).

9. Recommendations

Increase in public awareness and concern about the health and environmental protection has led consumers to consider environmental issues in their purchases. In addition, today, protection of environment is the critical task of management that is perceived as a tool to create positive mental image of the company and an important element for the success of a business organization. But given that environmental concerns do not affect attitudes towards green products, advertising can be used that is an important tool of promotion and plays a major role in the connection between consumers and organizations.

Green advertising has had an exponential growth in nearly past two decades and in fact it is a driving force in increasing public awareness of environmental issues and rising demand for environmentally friendly

commodities. Therefore, it is suggested that advertising agencies use all the ecological, environmental sustainability or environmentally friendly messages so as to be able to meet the needs and demands of stakeholders who are concerned about the environment. They should also use advertises that have emotional content, which can increase purchase intent and take a vital step in the process of perception.

The impact of environmental concerns and the willingness to buy green products indicates the intensity of the personal intention and will to do his desired target that is buying green products. The effect of behavioral intention on individuals' behavior indicates that they tend to engage in behaviors that they are going to do. In this context, researchers define behavioral intention as the mental possibility to plan to form a specific behavior. For example, the intention to buy a certain product has been detected as a good predictor of actual behavior in buying the product.

Subjective norms are a reflection of the social pressure that is perceived by the person and shapes a certain behavior. In other words, subjective norms indicate the person's perception of whether people determine a certain behavior or not, i.e. it is the person's perception of social norms' pressure or others' beliefs that determine whether the person should behave in a certain way or not. Thus, subjective norms play a more important role than attitudes in predicting consumers' behavioral intentions.

A large number of studies in the field of psychology suggest the theory that subjective norms are an important factor in behavioral intention. Subjective norms measure others' influence on behavior. If societal expectations are that people should do the behavior in question, then it is more likely that the person behave in that way. If the consumer believes that others have a good opinion about green products, he will be more intent to buy these types of products.

Social impact is the degree of influence of family and relatives, such as parents, relatives and acquaintances and close friends on the behavior and decisions of each individual. Now, if we could change these effects to power, the person or group's path can be changed. Social impact can be entered into the green products' marketing through social ties. Consumers, who are concerned about the environment, buy products and services that believe have a positive effect on the environment. People, who are concerned about the environment, take actions such as spending more to protect the environment, prefer green products to other products, the use of public vehicles in order to protect the environment, separation and delivery of recyclable waste, save energy and refuse to buy products with inappropriate packaging, buy standard sprays and buy drinks in biodegradable containers.

This category of customers wants to support green products. Even the also boycott products polluting environment. In trade fairs that are held, companies should identify consumers who have a high level of personal naturalism toward consuming green products use the influence that these customers can have.

In the dimension of social symbolism, people define themselves through messages they send to others through the purchase or use of a certain product; and in the dimension of personal symbolism, consumers develop their identity, character and personal feelings by joining a greater variety of goods that make a sense of individual ownership or control. Therefore, consumption, clearly and symbolically, becomes a social or internal symbol.

Self-image is generally an abbreviation of one's self. People tend to realize their personal identity in order to recognize their position and roles in life. There is no universal criterion to measure and compare people and the only way that people can know themselves is through observing the things they have and own.

In this regard, the transition from negative self-images to ideal and desired self-images is considered as a marketing task to develop consumption patterns. The negative or rejected selves are considered anti-stimulus for the behavior of consumers.

Consumers often use mental models to distinguish between products and brands and are often willing to identify patterns that are consistent with their positive and acceptable self. By providing the above description, the researcher recommends brand to marketing managers in order to improve the negative self-image. The image of a brand is conceptualized by the power, desirability and uniqueness of the brand in the mind of an individual that causes the creation of positive results from the perception of quality and positive attitude toward the brand and creates great positive effects. Brand managers should work in advertisings that encourage consumers to reflect on their self-image. Marketing professionals and advertising managers should use compatibility or similarity of product image with the consumer in order to position the brand. There are also some factors that can affect negative meanings of brands in the market and help managers encourage consumers to use green products. Examples of such factors include company's image, consumer patterns, product characteristics (ability to meet the expectations) along with intergenerational effects of service and memories of childhood.

There are some factors that affect the effect of positive attitude toward green products on the willingness to buy green products. By paying attention and considering these factors, the willingness to buy such products can be increased. These factors include: consumer attitudes toward the environment, this refers to the judgment of the individual to protect and enhance the environment. Empirical research in this area indicates that this effect is in an average level in its best state.

The second factor is the seriousness that women show in understanding the environmental problems. The third factor is that consumers' environmental responsibility toward these products should be increased. And final factor is the behavior that consumer shows towards the environmental ads. Such ads can affect green purchase intention that is the willingness of the person to prioritize products that are environmentally friendly as compared to traditional products.

10. General conclusion

By investigating the proposed hypotheses, it was revealed that by increasing ads to increase public awareness about buying green products and consequently, decreasing environmental concerns and increasing the effect of subjective norms through the society and its effect on increasing green products as well as increasing consumer attitudes towards green products through attitudes towards the environment, women's seriousness in understanding the environmental problems, increasing understanding of environmental responsibility to green products, purchase of green products increases. Thus, according to the explanations provided, the results of this study seem logical.

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