

A STUDY OF FACTORS EFFECTIVE ON THE BUYING BEHAVIOR OF ORGANIC PRODUCTS

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ABSTRACT: Nowadays, consumers' demand for organic and environmentally friendly products toward a healthy lifestyle has been increased. Therefore, in regard to the increasing growth of demands for green products, the consumers of organic products as an important group of customers in the industry are more considered. The main purpose of this study is to study and determine the factors that influence on the buying behavior of organic products. This study is applied research concerning purpose. The method is described – survey study. The statistical population (n=384) of this study includes the consumers of organic products in Tehran city and Frequency the sample size was selected by Cochran's formula. Descriptive statistics included frequency tables and mean. Also, in inferential level variance analysis test and structural equation modeling, including confirmatory factor analysis and path analysis were used. o analyze data, SPSS 20 software package and Amos 18 software package were used. According to the results of this study, there is no need that sellers of organic products pay attention to customers' gender and age for encouraging them to buy organic products. Sale managers of organic products must consider the availability of these products; force suppliers to be ensured about consumers' access to organic foods in stores and don't limit their sale to specific stores. Also the results showed that awareness of the benefits of organic products paves the way to change the purchasing behavior of organic products buyers.

Keywords: Organic products, Behavior, Consumers, Advertising and structural equation

INTRODUCTION

Now-a-days, marketing somehow is related to our lives [1]. all the citizens know the dynamics of the marketing since they observe this phenomenon everywhere in their surroundings, in television, magazines and even mailboxes, etc. At home, at school, at work and at play, no matter where we look, we can see the effects of this phenomenon. All of this means to attract customers and encourage people to buy in the competitive world which is done through a network of humans and activities as long as the distance between producer and consumer was short, the producer was aware of consumers' needs, wants, tastes and customs and there was no need for marketing and marketing management. Also the situation of limited production, the concepts such as production planning, marketing strategy, competition and marketing system were not the focus of industry owners, but in today's economic conditions in which many large corporations consider national borders very small for their business activities, think globally, produce globally as well as distribute their own products globally, many marketing activities should be done to get the goods from the manufacturer to the consumer. In fact, marketing includes all operations that in the distance between production and consumption accelerate the direction of goods and services towards the consumer. Marketing involves a broad range of activities including purchasing raw material, production, quality control, transport, storage, preparation for use, sterilizing, freezing, packaging, transporting to wholesale and retail distribution centers, transporting to near and far markets, pricing, determining sales agents, identifying customer, sales and after-sales service [2].

In short, the marketing means activities that are done to actualize the potential transactions in order to satisfy human needs and wants. Marketers are motivated to sell natural products by awareness of issues such as the environment, herbs and green world. Environmental-friendly products are so popular among consumers because the consumers are aware of the healthy and safety nature of

these products. Those marketers, who are involved in the sale of natural foods, are forced to classify their market scientifically in order to increase their own market shares. Those who believe in the benefits of health, science and environment preservation and try to improve their life style can be considered as the customers of natural foods. In addition, customers are willing to pay for the purchase of green products studied the change in the approach of consumers. Consumers are concerned about the impact of environmental damages on their health and safety. Their concerns have forced marketers to include environmental issues in their decision-making process. Another point is that the two major approaches namely ensuring about the awareness of foods and health are considered as the factors that attract consumers to buy organic foods. This awareness of health gradually increases. Many people are well aware that organic food is better for health than inorganic food. In addition, consumers are aware and agree that organic foods are healthier than inorganic foods, have good taste, have no adverse effects and have better quality. Customers buy organic food for their health benefits. Effective discussions play an important role in creating awareness of consumers, and consumers are ready to spend more money for green products. Since we buy goods and services, we can use our daily experience in market to understand the concepts and theories of this field [3].

All issues mentioned above play an important role in understanding consumer purchasing patterns and encouraging the development of green products. Each role has several factors that determine the popularity of organic foods. Also, awareness of the destruction of natural resources rise to the issue of environmental protection that in turn creates an environment-friendly consumption called as "green consumption" [2]. By paying attention to the issue of environmental protection, environmental ethics has impacted on consumers activities. In particular, consumers demands leads to an increase in the diversity of different categories of green products such as laundry detergents, personal care products and energy storage electronic

devices [4] By popularity of green products in the market, more consumers are looking for green products. The section related to personal hygiene followed by foods section has dedicated the second sale rank in the organic industry. D'Souza et al [5] claim that ecological interests of consumers may be the main factors in the marketing of personal care products. Although, the rapid growth in the sale of organic and natural products has aroused the interest of researchers in this area, but most of the research in the personal care industry has dealt with marketing strategy rather than consumer behavior. It will be difficult to provide effective marketing strategies without a thorough understanding of consumer behavior, in relation to these products. Therefore, the initial purpose of this study is to examine the purchase behavior of organic products by consumers based on the Theory of Planned Behavior (TPB). In particular, this study considers consumer values as a factor precedent for tendency to purchase and previous experiences as a predictor of purchase intention. In addition, the moderating effect of perceived control behavior on the relationship between tendency to purchase and purchase intention. According to above explanations, this study seeks to answer this main question: which factors impact on the purchase intention of organic products?

RESEARCH QUESTIONS OR HYPOTHESES:

- H1: Health awareness impacts positively on the tendency or willingness to purchase organic care products.
 H2: Environmental awareness impacts positively on the tendency or willingness to purchase organic care products.
 H3: Appearance awareness impacts positively on the tendency or willingness to purchase organic care products.
 H4: Consumers tendency to buy organic care products impacts positively on the purchase intention of organic care products.
 H5: Subjective norms impacts positively on the purchase intention of organic care products.
 H6: Perceived behavioral control about buying organic care products impacts positively on the purchase intention of these products.
 H7: earlier experiences about other organic care products impacts positively on the purchase intention of organic products,
 H8: The more perceived control of behavior, the more the positive relationship between behavior and tendency to buy organic care products will be.
 H9: Demographic factors impacts on the buying behavior of organic products.

table 1: Review of literature

Findings	Year	Researcher
They used the theory of planned behavior in their study to examine the effect of previous values and experiences of consumer on the purchase intention of organic care products. The findings suggest that environmental awareness has a positive impact on attitude towards buying organic care products. Furthermore, earlier experiences were detected as predictor of purchase intention.	2011	Hee Yoon & Chung
They attempted to compare gender differences and their attitudes toward environment and green products and study the relationship between these attitudes and environmental products. The findings showed that there aren't any significant differences between gender and environmental attitudes as well as attitudes towards green products.	2010	Tan & Lau
They tried to compare American and Korean consumers' intentions to purchase environmental products with high involvement (hybrid car). The findings showed that the personal image and willingness to search for information about green products have positive relationship with purchase intention of hybrid car among the consumers of both countries.	2010	Jason & Seong Hee
Mustafa in his study examined the impact of psychological factors on green consumption in Kuwait. The findings showed that the major variables affecting green consumption include altruism values , environmental concerns, environmental knowledge, skepticism towards environmental claims, attitudes toward green consumption, and purchase intention of green products.	2009	Mostafa
They studied the theory of planned behavior in buying organic foods. Their introduced model assessed the effect of subjective norms, attitude, price importance, availability, and concerns about health on the purchase intention of organic foods. The results showed that the model introduced by them predicts the purchase intention of organic foods better than the original TPB model.	2005	Tarkyann & Sandoyst
They studied the inconsistency between attitudes and consumer behavior. The findings showed that there is a major distinction between green and non-green buyers in different properties of individuals such as confidence, spirit of joining to group, cooperation with others and perceived effectiveness, there is a major distinction between green and non-green buyers.	2009	Gupta & Ogden
They investigated the relationship between psychological and social factors and green consumer behavior. Their findings suggest that the relationship between environmental attitudes, individual norms, perceived self-efficacy by green consumer and social norms (inhibitor) with behavior dimensions of consumer are supported.	2011	Mohammadian & Khatayi

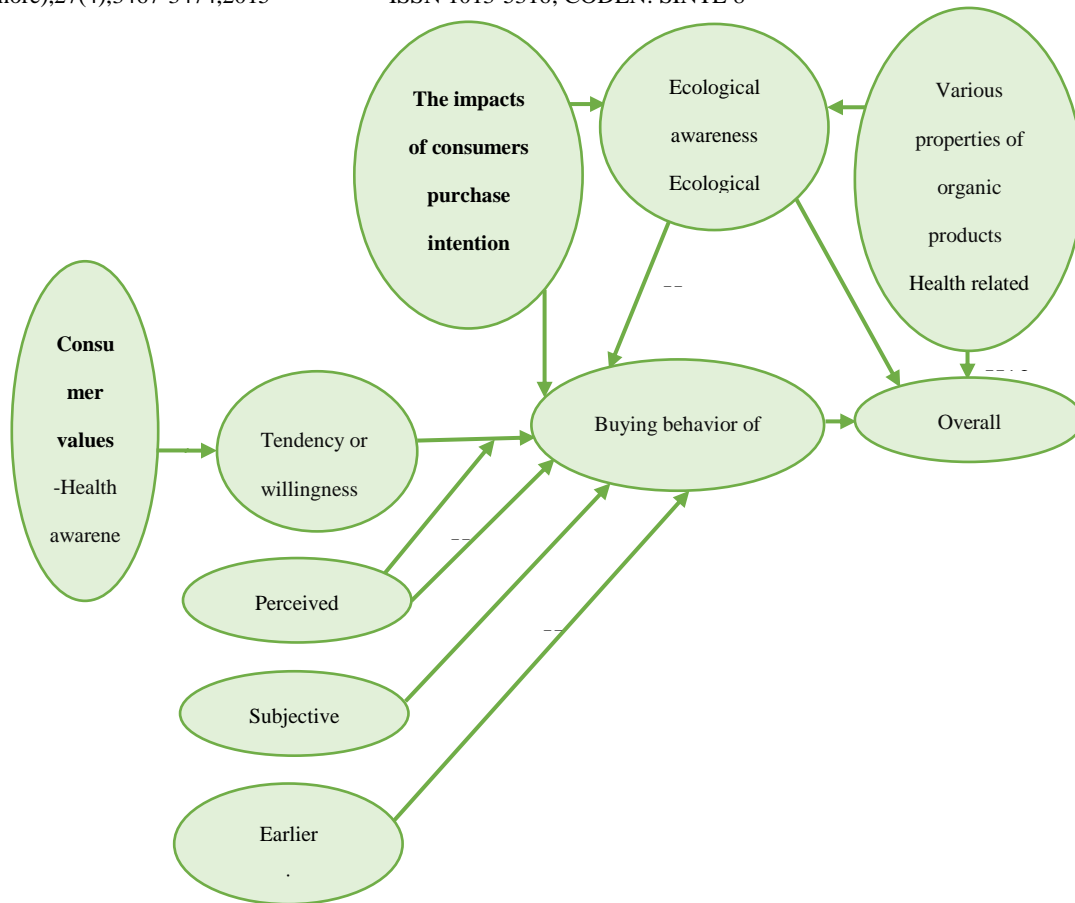


Fig1. Research Conceptual Model:

H10: The health-related benefits impact on the buying behavior of organic products.

H11: The availability of organic foods impacts on the buying behavior of organic produce.

H12a: Buying behavior of organic products impacts on the overall satisfaction from organic products.

H12b: properties of organic products impact on overall satisfaction from organic products.

H13: Consumer purchase intent impact on ecological awareness and ecological behavior affects consumers.

H14: Various properties of organic products impacts on the ecological awareness and ecological behavior of consumer.

H15: ecological awareness and ecological behavior of consumer impact on the buying behavior of organic products.

H16: ecological awareness and ecological behavior of consumer impact on overall satisfaction from organic products.

MATERIALS AND METHOD

The method is descriptive –survey study. The statistical population (n=384) of this study includes the consumers of organic products in Tehran city and Frequency the sample size was selected by Cochran's formula. Descriptive statistics included frequency tables and mean. Also, in inferential level variance analysis test and structural equation modeling including confirmatory factor analysis

and path analysis were used. Through this approach we can test the acceptability of theoretical models in specific populations by the use of correlation, experimental and non-experimental data. To analyze data, SPSS 20 software package and Amos 18 software package were used.

Research findings

To assess the extent to which the model is consistent with experimental data, fitness indexes were used that their results are presented in the following table

According to the above table, the important fitness indexes of overall measurement model for research variables including df/χ^2 , RMSEA, PCFI and CFI have acceptable value. Therefore, we can rely on the estimated parameters of model and adaptability of questions with intended structures statistically.

Structural model (path analysis)

After the results of confirmatory factor analysis were reported, at this stage you can test the relationships between research constructs. For this purpose, the intended model was implemented using structural equation modeling by amos18 software.

Table 2: fitness indices of overall measurement model

Desired value	Reported value	Index	Variable
-	2392.32	χ^2	overall measurement model
Higher than zero	893	Df	
Less than 3	2.68	χ^2/df	
Less than 1	0.088	RMSEA	
More than 0.5	0.56	PNFI	
More than 0.5	0.64	PCFI	
More than 0.9	0.9	NFI	
More than 0.9	0.9	CFI	
More than 0.9	0.71	GFI	
More than 0.9	0.64	AGFI	
Close to zero	0.086	RMR	

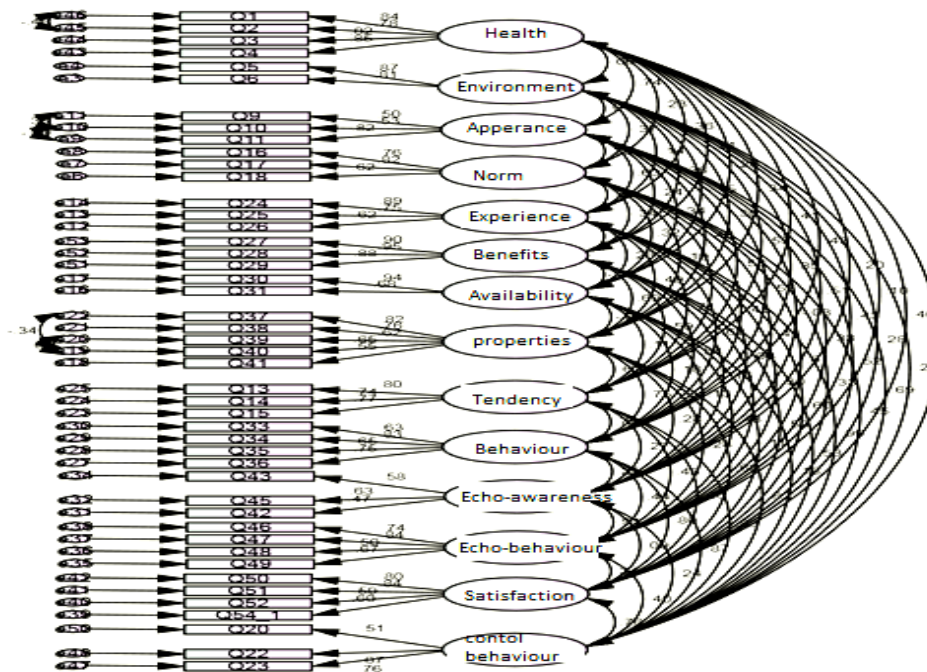


Fig. 2: measurement model of research variables in standard mode

Table 3: Correlation between variables in measurement model and its comparison with the extracted root mean square of variance

	1	2	3	4	5	6	7	8	9	10	11	12	13
Behavior Control (1)	0.65												
Environment (2)	0.21	0.84											
Norm(3)	0.44	0.38	0.78										
Appearance (4)	0.61	0.07	0.34	0.61									
Experiences(5)	0.69	0.12	0.35	0.60	0.74								
Availability(6)	0.17	-0.13	0.35	0.30	0.24	0.83							
Properties(7)	0.63	0.26	0.12	0.40	0.46	-0.00	0.68						
Tendency (8)	0.87	0.53	0.57	0.59	0.73	0.16	0.63	0.70					
Behavior(9)	0.56	0.35	0.46	0.50	0.61	0.19	0.65	0.65	0.79				
Echo-Appearance (10)	0.23	0.57	0.48	-0.08	0.00	0.19	0.23	0.27	0.22	0.55			
Echo-Behavior (11)	0.39	0.46	0.69	0.38	0.28	0.46	0.23	0.48	0.44	0.53	0.68		
Satisfaction(12)	0.66	0.21	0.31	0.57	0.57	0.16	0.65	0.63	0.63	0.08	0.31	0.75	
Health (13)	0.35	0.02	0.22	0.56	0.35	0.17	0.37	0.47	0.41	-0.18	0.11	0.44	0.82

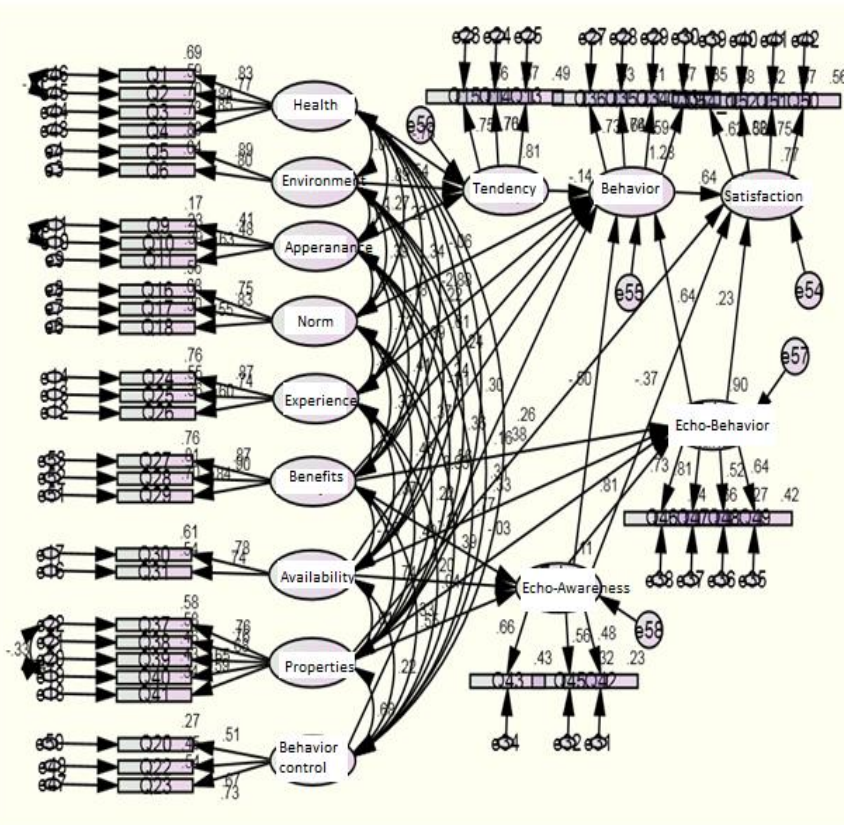


Figure 3: Path Analysis Model

Table 4: fitness indices of path analysis model

Desired value	Reported value	index	variable
-	2392.32	χ^2	Path Analysis Model
Higher than zero	893	df	
Less than 3	2.68	χ^2/df	
Less than 1	0.088	RMSEA	
More than 0.5	0.56	PNFI	
More than 0.5	0.64	PCFI	
More than 0.9	0.9	NFI	
More than 0.9	0.9	CFI	
More than 0.9	0.71	GFI	
More than 0.9	0.64	AGFI	
Close to zero	0.086	RMR	

According to Table 3, some fitness indices of the structural model don't have a desirable value. Error variance value of variable related to the purchase intention of organic products is negative, i.e. more than 100 % variance of behavior variable is explained, while such thing is not possible in practice. Therefore, according to corrected proposals presented by software and the study of theoretical background, various amendments were made to improve the model as described in the following:

Also, by studying the multivariate normal distribution of data, we find that the critical ratios (dividing skewness and kurtosis by standard error) related to observed variables are above 2.58 which show a significant difference in the distribution of these variables with normal distribution. Also, mardia coefficient (237.1) and its critical ratio (25.29)

indicate violation of multivariate normality in the collection of gathered data. Therefore, Bootstrap method was used to estimate model parameters.

Below you can see the structural model after final corrections. Bootstrap can be considered as sampling by replacement with a prototype sample many times that a sample distribution can be obtained by the use of all sampling results. This sample distribution provides a basis for the estimates, particularly estimates of standard errors for different parameters. Because the parent sample that is derived from sub samples is a representative sample of the population. It is expected to estimate the standard errors more carefully in comparison to sampling which has done once. The obtained results of bootstrap

TABLE 5: CORRECTED PATHS ON STRUCTURAL MODELS (BASED ON THEORETICAL BACKGROUNDS)

Applied corrections	Path properties	Number
Adding path	Environmental awareness -> ecological awareness	1
Removing path	Availability of Products -> Purchasing Behavior of Organic Products	2
Adding path	Ecological awareness ---> ecological behavior	3

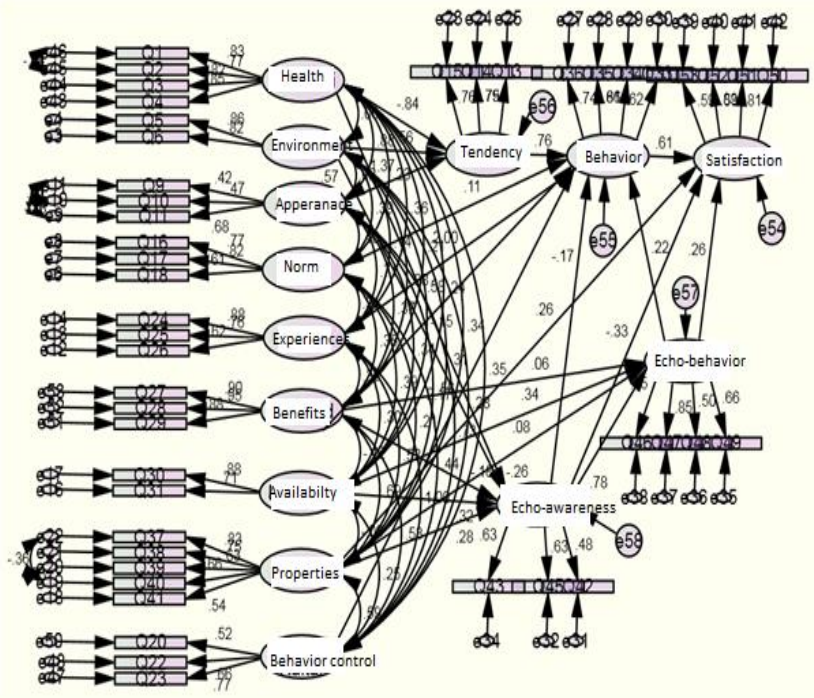


Fig. 4 Structural model after final corrections

implementation on the main model of research for 150 PA sample can be seen in Table 5.

The fitness indices were retested. The results showed that other fitness indices were close to desired values. Therefore, this model has goodness of fit to test hypothesis and is reliable statistically.

CONCLUSION:

Different factors play a role in understanding the purchase behavior of consumers and encouraging the development of green products. In this study, we investigate some of these factors and their effects on purchase behavior of organic products and overall satisfaction after purchase.

The results of this study are consistent with the results of studies done by Kim and Chung [6] and Paul and Rana [7] related to the positive relationship between variables. To change the purchase behavior of consumers toward organic products, the sellers of organic products should try to inform consumers about the environment and the adverse effect of using non-organic products like unrecyclable dishes in environment, gradual warming and destruction of Ozone layer. Those who are aware of environment are more susceptible to change their purchase behavior in order to improve the environment. Therefore, it is suggested to sellers of organic foods to encourage present buyers to purchase more and attract new customers to buy organic

foods by creating positive mentality and good feeling in customers from the consumption of organic products and showing evidences of reduction in environment damages resulted from the consumption of these products.

The consumer relies on himself to decide about the purchase of organic products or has already used them, doesn't have any effect on his purchase behavior in the future. It is suggested to sellers of these products to be more cautious about the use of these results and evaluate all aspects by considering the results of earlier studies. The sellers of organic products should not expect the consumers who have already used organic products, still be inclined to purchase these products. They should not stop their efforts by assuming that customers themselves want to use such products due to their own earlier experiences, but they should try to attract new customers and increase sale through methods that have the greatest effect on changing consumers' behavior. Based on the results of research related to the sellers of organic products, there is no need to pay attention to the gender and age of people in order to encourage them to purchase organic products. The sale managers of organic products should pay attention to the availability of these products and make providers to ensure about the access of consumers to organic foods in stores, so that they can increase the knowledge and understanding about environmental issues

Table 6: Path coefficients, effects of all constructs and the significance of estimated parameters

Hypotheses testing		Effect coefficient	Sig. (t)	Research Hypotheses	Hypothesis number
supported	***	.74	3.73	Health awareness impacts positively on the tendency or willingness to purchase organic care products.	H1
supported	***	0.48	5.02	environmental awareness impacts positively on the tendency or willingness to purchase organic care products	H2
supported	***	.55	5.74	appearance awareness impacts positively on the tendency or willingness to purchase organic care products	H3
supported	.02	.88	2.38	Consumers' tendency to buy organic care products impacts positively on the purchase intention of these products.	H4
rejected	.62	.1	0.49	Subjective norms of consumers impacts positively on the purchase intention of organic care products.	H5
rejected	.113	.23	1.58	Perceived behavioral control about buying organic care products impacts positively on the purchase intention of these products.	H6
rejected	.09	.28	1.65	Earlier experiences about other organic care products impacts positively on the purchase intention of organic products.	H7
rejected	.06	.61	1.68	The health-related benefits impact on the buying behavior of organic products.	H10.1
deleted in analysis				The availability of organic foods impacts on the buying behavior of organic produce.	H10.2
supported	***	.46	4.68	Buying behavior of organic products impacts on the overall satisfaction from organic products.	H11.1
supported	0.01	.35	2.34	Properties of organic products impact on overall satisfaction from organic products.	H11.2
rejected	.159	.12	-1.41	The health-related benefits impact on the ecological awareness of consumers.	H12.1
rejected	.503	.07	0.66	The health-related benefits impact on the ecological behavior of consumers.	H12.2
supported	0.00	.17	3.06	The availability of organic foods impacts on the ecological awareness of consumers.	H12.3
supported	***	.3	4.36	The availability of organic foods impacts on the ecological behavior of consumers.	H12.4
supported	.047	.32	1,89	Different properties of organic products impact on the ecological awareness of consumers.	H13.1
rejected	.38	.16	.87	Different properties of organic products impact on the ecological behavior of consumers.	H13.2
rejected	.55	-.26	-.59	Ecological awareness of consumer impacts on the buying behavior of organic products.	H14.1
rejected	.45	.21	.75	Ecological behavior of consumer impacts on the buying behavior of organic products.	H14.2
rejected	.18	.19	1.345	Ecological behavior of consumer impacts on the overall satisfaction from organic products.	H15.1
rejected	.09	-.39	-1.65	Ecological awareness of consumer impacts on the overall satisfaction from organic products.	H15.2
supported	***	.32	4.64	Environment awareness impacts on the ecological awareness	suggestion
supported	***	.85	5.34	Ecological awareness impacts on the ecological behavior.	suggestion

among consumers, don't devote the sale of these products to specific stores and provide different kinds of these products in most of big supermarkets and retailers

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