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ANALYSIS OF AFFECTIVE DRIVES ON CONSUMERS GREEN PURCHASE DECISION

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ABSTRACT

This research has been prepared with the purpose of Analysis of affective drives on consumers green purchase decision of diary and meat products of Kaleh Company in Guilan province. In this regard, a sample of 384 consumers of this company were randomly selected and studied. It is a measurement type study and questionnaires have been used for collecting data. For data analysis and model approval, structural equation modeling (SEM) and confirmatory factor analysis (CFA) have been used. Result is that all product dimensions (distribution, promotion and price of the green marketing mix) affect the consumers' green purchase decision in a positive and meaningful way. Also results on effect of demographic factors show that sex and age have no effect on green purchase but marital status and education have meaningful relation with decision on green purchase.

Keywords: Green marketing, Green marketing mix, Consumer's green purchase, stable development

INTRODUCTION

During last two decades consumers have become environmentalist because they are aware of world's environment problems and increasing environment protection activities (Chen, 2010). More consumption results in more environmental impacts of production procedures, transportation and waste. Therefore more prosperous economy causes increase of using fossil energies to an extent unbearable to environment. This has resulted in emerge of new and more severe environmental rules. Meanwhile using some policies, some industries have taken the necessary steps toward reducing impacts on environment (Ramazanian el al., 2010). Companies should set their production, distribution, promotion and pricing policies in a way that they minimize the environmental harms while guiding consumers toward an environment-friendly behaviour (Ranai Kordshouli and Yari Bouzanjani, 2012). because ignoring environmental pressure is impossible (Chang and Chen, 2013). So regarding the important role of environmental and social issues for the consumers, paying attention to what drives affect their green purchasing decision is important. Consequently, current study is going to analyses those drives.

THEORETICAL AND EXPLANATION
Green purchase decision

Chan (2001) defines green purchase as a special environment-friendly behaviour by which consumers display their concerns over environment (Mei et al., 2012). In this regard, international researches shows that consumers' environment concerns have made them to change their purchase method gradually and re-think about the product they buy. There are even reasons that for really supporting the environment, many consumers are ready to pay more for products which follow the environment standards (Nakhai and Kheyri, 2012). Therefore, considering environment issues in marketing activities will create competitive advantages for companies through which they can take a good position in the market (Kotler and Gary,

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1999). In this research, effects of various drives are analysed. These motives have been selected through a comprehensive review of the previous researches in this field which are located in two categories: green marketing mix (green product, green price, green distribution and green promotion) and demographic factors (sex, marital status, education and age).

Green marketing mix

According to Petti, Green marketing is a generalist managerial process in charge of recognition, prediction and satisfaction of customer and meeting society's needs in a profitable and at the same time a stable way (Chen and Chai, 2010). Mixes which include product, price, distribution and promotion are company's tactical marketing tools which can be controlled and used to impact product demand (Rex and Baumann, 2007).

Green product

Today, because of the popular environmentalism in the world, sale of green products has considerably raised and more consumers are inclined to pay extra charges for green products (Chen, 2010). Green product is a product that doesn't harm the environment and also contains components which aren't potentially harmful for the environment (Ranai Kordshouli and Yari Bouzanjani, 2012). For example if its energy consumption is efficient, if it's made of recyclable materials (Polonsky and Rosenberger, 2001) and if its production process is environment-friendly (Lee, 2008).

Green price

Green price is a vital and important factor in the green marketing mix (Tiwari et al., 2011). Green price is about pricing methods in which economic and environmental costs of production and marketing have been calculated providing the consumers with a value and businesses a suitable profit (Constantinos et al., 2012). Most green products are offered with higher prices than similar products. This way, most consumers pay the higher price only if they find out about product's added value. According to Ginsberg and Bloom, consumers select a green product among other substitute products when its functional and mental characteristics are above or at least equal to other products in addition to being environment friendly (Ginsberg and Bloom, 2004).

Green distribution

Green distribution includes the activities about monitoring and raising environmental aspect in company's demand chain. Its tactical efforts, includes cooperation with network partners to redevelop the product or waste disposal adjustments and customer's assurance of possibility of recycling the recyclable materials (Constantinos et al., 2012). But Strategically companies may set necessary policies for distributors to take more environmental standards in implementing special marketing roles (Zhu and Sarkis, 2004).

Green promotion

Green promotion, reflects the relations designed for raising the awareness of beneficiaries of company's efforts, obligations and successes in protecting the environment (Dahlstrom, 2011). It may include activities to reduce any negative environmental effect of company's marketing efforts (Kotler, 2011). For example, Dell changed use of recycled paper in its directly sent catalogues by 50% and ING changed all its raised printing material to carbon-moderated programs (Belz and Peattie, 2009).

Demographic factors

Inclination to green purchasing is accompanied by characteristics of consumers (D' Souza et al., 2006). They can be sex, marital status, education, age, etc. Efforts to recognize environment-friendly consumers dates back to early 1970s (Fisher et al., 2012). So far, many researchers have investigated about impacts

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of demographic elements in green marketing and results of their works determined the impact level and importance of different elements. In some cases, results were different (Abbasi and Rahbari 2012).

METHODOLOGY

In this research, effects of various drives are analysed. These drives have been selected through a comprehensive review of the previous researches in this field like those of Fisher, Bashyal and Bachman (2012), Boztepe (2012), Ranai Kordshouli and Yari Bouzanjani (2012), Ramazanian, Esmailpour and Tondkar (2010) which are categorized into two categories: green marketing mix (green product, green price, green distribution and green promotion) and demographic factors (sex, marital status, education level and age). Therefore, regarding the above mentioned issues, research hypotheses are as follows:

1- Green product is positively related to consumers' green purchase decision; 2- Green price is positively related to consumers' green purchase decision; 3- Green distribution is positively related to consumers' green purchase decision; 4- Green promotion is positively related to consumers' green purchase decision; 5- There is a meaningful difference between consumers' sex and green purchase decision; 6- There is a meaningful difference between consumers' marital status and green purchase decision; 7- There is a meaningful difference between consumers' education level and green purchase decision; 8- There is a meaningful difference between consumers' age and green purchase decision.

In the current study, for better understanding of the relations between independent variables (green marketing mix and demographic elements) and dependent variable (green purchase decision) they have been illustrated in figure 1 in the form of conceptual model. In this model, we have selected and shown the drives that can affect consumers' green purchase decision based on previous researches.
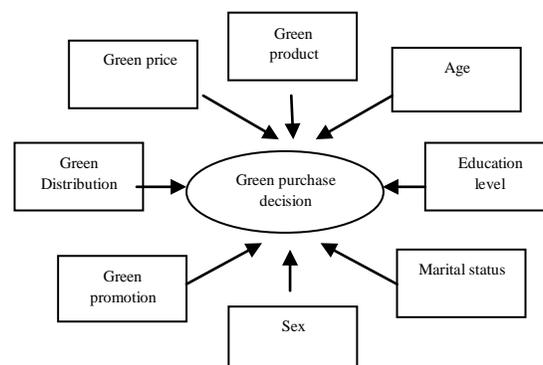
previous researches.

Figure 1: Conceptual model of research

this research, descriptive-measuring applied type. Statistical area of this research is all consumers of Kaleh Company in Guilan province. Based on general statistics of Statistical Centre of Iran, population of Guilan province was 2,480,874 in 2011. 384 were selected by random sampling (Morgan table). Field method and questionnaires were used for data collection. There are 26 questions in the questionnaire which were analysed based on Likert Scale 5 items spectrum (very high,…very low). Questionnaire of this research is made by researcher. Confirmatory factor analysis was used for narrative content study of the test. For confirmatory factor analysis and structural equation modeling, standard factor loading was calculated. Results of confirmatory factor analysis of research variables are shown in chart 1. Also for final assessment, Cronbach's alpha index has been used which should be above 7.0 to be acceptable. Cronbach's alpha index for all variables has been shown in table 2. Software SPSS 20 was used for analysis of demographic characteristics and for analyzing data confirming model, structural equation modeling through software AMOS 20 was used.
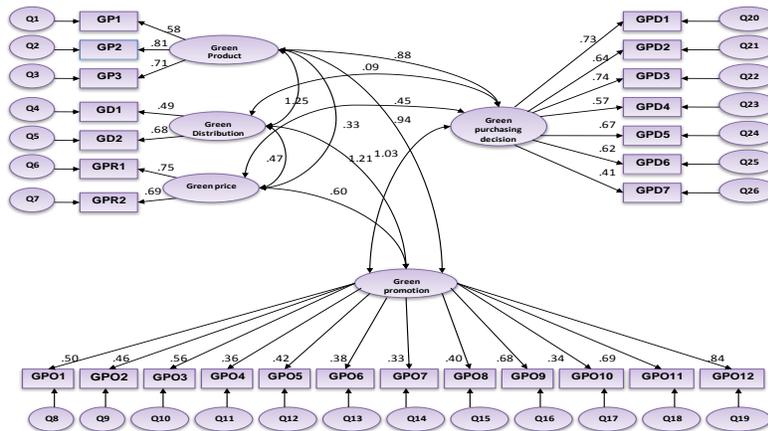
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Chart 1: Standard factor loading of factor analysis

Standard factor loading of confirmatory factor analysis for analyzing the power of relation between these variables and their visible variables are above 0.3 in all cases. Therefore, questionnaire's factor structure for these variables is confirmed and there is no need to remove a question from the analysis.

Table 1: Cronbach's alpha for research indexes

Index	Number of questions	Cronbach's alpha
Green product	3	0.726
Green price	2	0.702
Green promotion	2	0.761
Green distribution	7	0.801
Green purchase decision	12	0.719
Total	26	0.826

As can be seen from table 2, Cronbach's alpha calculated for all items is above 0.7 which confirms high validity of the questionnaire.

Case Study

Kaleh Diary and Meat Company is a subsidiary of giant Solico Group which was founded in 1991. During the past years, this company has largely developed its production capacity, quality and diversity of products, country-wide distribution network and exports. So that, it's considered now as one of the two leader companies of diary and meat products market in Iran. Accordingly, we have tried to study the greening of this company from guilan province consumers' point of view during a 5 months period of time in 2014.

RESULTS

To execute the statistical methods, calculate the test statistic and logical deduction of study's hypotheses, the most important thing is to specify a suitable statistical method for the research. To do this, being aware of data distribution is of basic priority. So the reliable Kolmogorov–Smirnov test has been used for investigating the theory of normality of research data. As its meaningfulness level for all variables was above 0.05, so all investigated variables in the present research have normal distribution. Therefore we use parameter methods.

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Conceptual model fitness test

In this part, study's conceptual model is illustrated and its fitness is evaluated through different methods shown in chart 2. In this chart, standard indexes between research components mentioned in study's conceptual model are shown. For meaningfulness test of the resulted indexes, Student's t-test was used.
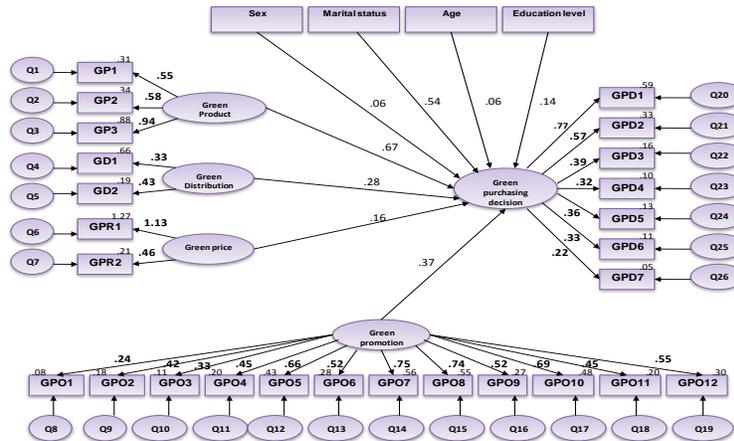

Chart 2: Standard indexes routes between study variables

Model's Goodness-of-fitness

Finally to specify fitness of study's model, different "fitness indexes" have been determined by the help of confirmatory factor analysis shown in table 4. Each of these resulted indexes alone is not the reason of fitness or non-fitness of the model but they should be analysed together.

Table 3: Fitness indexes of structural model

Result	Desired amount	Fitness index
2.530	<3.00	χ^2/df
0.963	>0.90	GFI
0.077	<0.08	RMSEA
0.041	<0.05	RMR
0.953	>0.90	NFI
0.985	>0.90	IFI
0.927	>0.90	CFI

As determined in table 3, all fitness indexes are in desired level. Therefore, model has a suitable fitness.

Analyzing the data and testing hypotheses

Structural equation modeling has been used for analyzing the data. Results of data test and presumptions test are indicated in table 4.

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Table 4: Result of evaluation of the structural model

Route		Standard route index (βeta)	Amount of statistics t	Meaningfulness level
Variable				
Green product		0.66	9.807	<0.001
Green Distribution		0.275	1.857	0.013
Green Price	Green purchase decision	0.165	3.584	<0.001
Green promotion		0.367	5.65	<0.001
Sex		0.064	1.379	0.168
Marital status		0.54	10.602	<0.001
Age		0.062	1.328	0.184
Education level		0.142	3.034	<0.001

Based on results of the conceptual model, we will discuss later about research's hypotheses.

According to table 4, meaningfulness level between green product and green purchase decision of the consumers is less than 0.001 and this means that there is a meaningful relation between green product and green purchase decision of consumers in a certain level (99%). Also the index of route between these two variables is 0.66 which shows the effect of green product and green purchase decision of consumers. Therefore the first hypothesis is confirmed. Meaningfulness level between green distribution and green purchase decision of the consumers is 0.013 and less than 0.05 and this means that the relation between green distribution and green purchase decision of consumers is in a meaningful certain level (95%). Also the index of route between these two variables is 0.275 which shows the effect of green distribution and green purchase decision of consumers. Therefore the second hypothesis is confirmed. meaningfulness level between green price and green purchase decision of the consumers is less than 0.001 this means that the relation between green price and green purchase decision of consumers is in a meaningful certain level (99%). Also the index of route between these two variables is 0.165 which shows the effect of green price and green purchase decision of consumers. Therefore the third hypothesis is confirmed. Meaningfulness level between green promotion and green purchase decision of the consumers is less than 0.001 this means that the relation between green promotion and green purchase decision of consumers is in a meaningful certain level (99%). Also the index of route between these two variables is 0.367 which shows the effect of green promotion and green purchase decision of consumers. Therefore the fourth hypothesis is confirmed. Meaningfulness level between sex and green purchase decision of the consumers is 0.168 and more than 0.05 and this means that the relation between sex and green purchase decision of consumers is not in a meaningful certain level (95%). It means that there is no difference between men and women in green purchase decision. Therefore the fifth hypothesis is not confirmed. meaningfulness level between marital status and green purchase decision of the consumers is less than 0.001 and this means that the relation between marital status and green purchase decision of consumers is in a meaningful certain level (99%). Regarding the codes given to singles (1) and married ones (2), it's learned that married people are more inclined to green purchase than singles. Therefore the sixth hypothesis is confirmed. Meaningfulness level between age and green purchase decision of the consumers is 0.184 and more than 0.05 and this means that the relation between age and green purchase decision of consumers is not in a meaningful certain level (95%). It means that there is no difference on age in green purchase decision. Therefore the seventh hypothesis is not confirmed. meaningfulness level between education level and green purchase decision of the consumers is 0.002 and less than 0.05 and this means that the relation between education level and green purchase decision of consumers is in a meaningful certain level (99%). It means that green purchase decision is different in people with different level of education. In other word, people with higher education are more inclined to green purchase. Therefore the eighth hypothesis is confirmed.

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DISCUSSION

In this part, regarding study's results, we'll briefly discuss about differences and similarities between this work and previous ones:

Result of testing the first hypothesis shows the positive impact of green product on green purchase which is similar to the results of some other researches including those of Ramazanian, Esmailpour & Tondkar (2010), Boztepe (2012) who showed that these three aspects of green marketing mix are effective elements in consumers' green purchase decision. About test of fifth hypothesis on lack of a relation between sex and green purchase, results are similar to those of Abbasi and colleagues (2012), Khorshidi & Hosseinzadeh (2012). But results of the present research is different from those of some others; for example works of Bashyal & Bachman (2012), Boztepe (2012) and Lee (2009) who showed that sex is effective in green purchase and environmental behaviours. About test of sixth hypothesis i.e. meaningful relation between consumers' marital status and their green purchase decision, results are similar to those of Boztepe (2012), Diamonto Lopez and colleagues (2003) and Laros and colleagues (2001) but they are different from works of Fisher and colleagues (2012) and Abbasi, Enayati and Rahbari (2012) who proved that there is no relation between consumers' marital status and their green purchase behaviour. About test of seventh hypothesis on lack of a relation between age and green purchase, results are similar to those of Abbasi, Enayati and Rahbari (2012), Khorshidi and Hosseinzadeh (2012) in Iran and Diamonto Lopez and colleagues (2003) and Van Liere and Dunlap abroad. But results of the present research is different from those of some others; for example works of Fisher & colleagues and Boztepe (2012) who showed that there is a positive relation between age and green purchase behaviour. About test of eighth hypothesis i.e. meaningful relation between consumers' education level and their green purchase decision, results are similar to those of Paco and colleagues (2009), Boztepe (2012), Diamonto Lopez and colleagues (2003) and Fisher and colleagues (2012) but they are different from works of Straughan and Roberts (1999) and Abbasi, Enayati and Rahbari (2012) who proved that there is no relation between consumers' education level and their green purchase behaviour.

Conclusion

Present research was to study the drives effecting the green purchase decision of consumers of diary and meat products of Kaleh Company in Guilan province. It has 8 hypotheses which were confirmed except two. Also the findings proved that green product has the most impact and green price has the least. Green promotion and green distribution were second and third most effective drives respectively. About demographic factors, results proved that sex and age has not considerable affect on green purchase but about marital status and education level it was learned that married and higher educated consumers are more inclined to purchase green. Regarding the highest impact level of green product on consumers' green purchase decision, It can be concluded that companies should consider environmental aspects more in their products, because nowadays consumers are more sensitive about environmental aspects and with the purpose of supporting environment are ready to pay more for products with environmental standards. Therefore companies have the opportunity to improve their environmental behaviours and benefit from the new demands in the green market. Also about green promotion, companies should to pay special attention to importance of environmental issues and inform customers of the activities and policies they have launched to protect environment and reduce negative effects on it. About green distribution, companies should follow the environmental standards in their transportation system and try to use more updated ones. About green pricing, it's recommended to bring them close to the value customer receives resulting in their satisfaction of fair prices. Therefore and based on the above explanation, it can be concluded that green marketing mixes can have considerable effect on companies' sales increase in addition to effectively impacting consumers' green purchase decision. But About demographic factors, results proved that sex and age has not considerable affect on green purchase but about marital status and education level it was learned that married and higher educated consumers are more inclined to purchase green. Now regarding more importance of the environmental issues today and considering that such supports can be useful for society and company's sale, so it's recommended to people in charge and

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companies to spread the environmental knowledge and awareness among all consumers including singles, married, educated, non-educated etc so that paying attention to environmental issues is developed among all social categories.

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