GREEN PRODUCTS AND CONSUMERS' PURCHASE INTENTION

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Abstract - Over the last few decades, concerns related to the environment and environmental issues have dramatically increased. In the ecologically conscious marketplace, consumers are more concerned than before about the environment and the effect of their purchasing behaviors. Hence, knowledge of green consumer purchase intention is important for both environmental and business reasons. This research employs the questionnaire survey method to examine the hypotheses. Structural equation modeling (SEM) is applied to test the research model. Through the results of this study; environmental knowledge, perceived consumer effectiveness, and marketing communication have a significant positive influence on consumers' environmental purchase intention. However, subjective norms do not directly influence green purchase intention.

Key Words - Environmental knowledge, Green purchase intention, Perceived Consumer Effectiveness, Green marketing.

I. INTRODUCTION

The last few decades have witnessed a dramatic increase in environmental awareness and consciousness worldwide (Barber, 2010).Since the beginning of the 1990s, with the growing importance of environmental protection in various countries, new expressions such as "the Earth decade" or "decade of the environment" have emerged (Xiao-di and Tie-jun, 2000, Awad, 2011). During this decade, social and ecological concerns took on great importance for consumers and they have begun to change their behavior integrating environmental considerations into lifestyle choices and decisions (Do Paço and Raposo, 2008; Barber, 2010). Therefore, a new generation of the consumer was appeared who demonstrates this ecological concern through his/her purchasing decisions. Thus, the total amount of green consumption and green purchase have increased dramatically (Xiao-di and Tie-jun, 2000;Chamorro and Banegi, 2006).

As the increase of the environmental consciousness has led to a considerate impact on consumer behavior, theyhave started demanding more environmentally friendly products (Cheah and Phau, 2005).Marketers should not be surprised that, although many consumers claim they are concerned with the environment, their purchase behavior does not always reflect this preoccupation (Alwitt and Pitts, 1996; Akehurst et al., 2012). There are several factors that can strongly influence consumers' purchase behavior for green products. Hence, since the sustainable product market expanding at a remarkable rate, it is important to look at what factors influence the consumer‘s selection process. Knowing these factors is really helpful for marketers to establish and communicate a strong environmental image for organizations, and help them to make a clear competitive advantage to their consumers (Promotosh, 2011).Therfore, themain objectiveof the present work is to examine a range of factors in relation to the green purchase intention.

II. THEORETICAL FRAMEWORK

2.1. Environmental knowledge

Environmental knowledge defined as a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystems(Fryxell and Lo, 2003).According to Barber et al (2009), environmental knowledge involves how much an individual actually knows about the environment (objective environmental knowledge) and how much a person thinks he/she knows about that, or self-assessed knowledge (subjective environmental knowledge). The behavioral literature shows a direct relationship between knowledge and consumer behavior or purchase decision. Also, Ali and Ahmad (2012);Mostafa (2009);Rokicka (2002); Chan and Lau (2000) and Dispoto (1977) have found a positive relationship between ecological knowledge and pro-environmental intention or behavior.The rise of consumers' knowledge about eco-friendly products and the environment is a significant component of ecological conscious consumer behavior. Therefore, hypothesis 1 is proposed as follow:

H1. Consumers' environmental knowledge will have an influence on their intentions to buy green products.

2.2. Perceived consumer effectiveness

Perceived Consumer Effectiveness (PCE) defined as the evaluation of the self in the context of the issue (Kim and Choi, 2005)and the judgment and beliefof an individual about the extent to which his/her actions and efforts can make a solution to a problem(Ellen et al, 1991). According toKim (2002),PCE is a significant predictor of individually oriented pro-environmental behaviors like energy saving, green purchase, and recycling behavior. In addition, Kim and Choi (2005) reported that PCE is directly related to green purchase behavior.Hence, hypothesis 2 is proposed as follow:

H2. Perceived Consumer effectiveness will have an influence on the intention to buy green products.

2.3. Subjective norms

As Fishbein and Ajzen (1975) stated, subjective norms refer to perceived pressures on a person to perform a given behavior and the person's motivation to comply with those pressures (Kim et al., 2009).

According to the TPB model of Ajzen (1985, 1991), both subjective norms and attitude toward a behavior are immediate determinants of intention to perform a behavior. Furthermore, numerous studies supported the strong relationship between subjective norms and consumers' behavioral intentions for green purchasing (Kalafatis et al., 1999;Tarkiainen and Sundqvist, 2005; Kim and Chung, 2011). Therefore, Hypothesis 3 is proposed as follow:

H3. Subjective norms will have an influence on the intention to buy green products.

2.4. Marketing communication

According to Kotler (2000) "modern marketing calls for more than developing a good product, pricing it attractively, and making it accessible. Companies must also communicate with present and potential stakeholders as well as the general public"(Kotler, 2000, p. 271). Marketing communication is defined as "the strategies, methods, processes through which meaningful information is exchanged between people about an organization's activities"(Clarke, 2011, p. 7).The first perception that a consumer forms about a product is by exposure to information initiated by the marketer including media advertising and/or the information provided on product labels (D'Souza et al., 2006).It is difficult for marketers to persuade the consumers to purchase their products without providing enough information to them. While consumers' concerns about the environment have moved into mainstream marketing and public has more tendency to buy environmental products, companies should provide sufficient and reliable information for their consumers (Chen and Chang, 2012).Unlike other physical attributes of a product, environmental attributes are difficult to detect unless there is sufficient information about them (D'Souza et al., 2006). Companies need to reveal sufficient and trustworthy information about the environmental performance of their products to obtain consumer trust (Chen and Chang, 2012).

Due to this difficulty in detecting green attributes, consumers rely on outside factors such as media advertising and/or information provided on product labels (D'Souza et al., 2006). Evidence has shown that green advertising has increased in the pasttwo decades owing to the growth of public consciousness of ecological issues and skyrocketing demand for eco-friendly products (Leonidou et al., 2011). Furthermore, the results of a survey indicate that environmental messages in advertisements and labels of products often affect the purchase decisions of 70 percent of respondents (Chase and Smith, 1992).

Therefore, Hypothesis 5 is proposed as follows:

H4. Marketing communication will have an influence on consumer's green purchase intention.

III. METHODOLOGY

This study uses the questionnaire survey method to empirically verify the hypotheses and focuses on the consumers residing in Qazvin (a city of Iran) and shop at two large shopping centers of the city. Consumers were given the questionnaire after they entered the shopping center. A total of 400 completed questionnaires was obtained and deemed sufficiently complete to be useable. A structural equation model (SEM) using Lisrel 8.54 was applied to test the research model.

IV. RESULTS AND DISCUSSION

For using SEM procedure, confirmatory factor analysis (CFA) used to test the measurement model.

Construct	Item	Factor loading	t-value
Environmental knowledge	Ek1	0.57	10.95*
	Ek2	0.73	13.94*
	Ek3	0.70	14.15*
	Ek4	0.68	12.98*
	Ek5	0.82	16.00*
PCE	P1	0.69	14.76*
	P2	0.68	14.14*
	P3	0.66	13.31*
	P4	0.71	15.08*
	P5	0.71	15.06*
Subjective norms	SN1	0.69	12.18*
	SN2	0.60	11.39*
	SN3	0.75	14.33*
	SN4	0.65	12.57*

	Marketing communication	MK1	0.85	21.07*
		MK2	0.91	23.25*
		MK3	0.95	25.15*
	Green purchase intention	GP1	0.93	23.69*
		GP2	0.80	28.92*
		GP3	0.87	21.31*

Table 1. The results of the measurement model

*p < .01.

The fit indices indicated a satisfactory fit between the model and the data:
(RMSEA = 0.08, RMR = 0.12, SRMR = 0.10, CFI = 0.93, GFI =0.90, NFI = 0.93, NNFI = 0.95, and IFI = 0.93). Given the good fit of the model, the estimated path coefficients of the structural model were then tested to examine the six hypotheses. The results of the hypotheses related to the structural model are summarized in table 2. Most of the hypotheses of latent variables were strongly supported, except for hypothesis H3 (t = 1.19).

Hypothesis	Path coefficient	t-value	Results
H1	0.49	2.89*	H1 is supported
H2	0.66	4.97*	H2 is supported
H3	0.10	1.19*	H3 is not supported
H4	0.78	7.71*	H4 is supported

Table 2. The results of the structural model

*p < .01.

CONCLUSION AND MANAGERIAL IMPLICATIONS

This research is the very first empirical study of its kind in Iran,whichexamined the factors affectingconsumers'green purchase intention. Comprehensive data analysis via structural equation model (SEM) was employed to achieve a better understanding of the collected information. Results indicate that three out of four hypotheses were identified to be statistically significant for Iranian consumers in purchasing pro-environmental products. Environmental knowledge positively influenced green purchase intention. In other words, higher environmental knowledge can lead to higher intention toward buying green products. Similarly, perceived consumer effectiveness (PCE) positively and directly influenced green purchase intention. Subjective norms showed no directly positive impact on green purchase intention. Marketing communication was the most important factor influencing consumer's intention to purchase green products

Threecontextual factors are facilitating consumers' intentions toward green purchases. Marketers and manufacturers are recommended to consider or improve these factors if they would like to be successful in selling green products or increasing market penetration for existing environmental products. The findings also suggest that using stronger and greater marketing communication should be a significant consideration for marketers and manufacturers to increase consumers' purchase intentions for green products. As a result, it is suggested that marketers try to use proper communication messages and convey useful information on the benefits of green products to the consumer. They can use effective marketing communication tools such as labels and advertisements, to encourage consumers toward eco-friendly products.

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