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PROMOTING GREEN PURCHASE BEHAVIOR TO THE YOUTH (CASE OF BAHRAIN)

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ABSTRACT: *Promoting green purchase behavior means encouraging and persuading people to buy environmental friendly products. By adopting green marketing, firms can emphasize their social responsibility and promote their businesses as friends of the environment. Going green depends on boosting green purchases through effective promotional campaigns. To achieve this goal, firms need to identify the determinants of their customers' green purchase behavior. This study was conducted on 243 youths in Bahrain; it examined the impact of environmental knowledge, attitudes, and concerns on shaping and boosting green purchase behavior. The findings of this study revealed that the youth in Bahrain have poor knowledge and concern and rather positive attitudes about the environment. The study also found that the three determinant variables (knowledge, concern, and attitudes) are positively associated with green buying behavior and that they play a significant role in shaping green buying behavior*.

KEYWORDS: Environment, Green Purchase, Green Promotion, Environmental Concern

INTRODUCTION

Green purchase behavior refers to buying environmental friendly products (Kilbourne and Pickett, 2008), also referred to as "green products" or "sustainable products." A green product is generally known as a product that causes no harm to environmental factors such as air, soil, or water and will not negatively affect people's health and safety (Mossause and Geiser, 2012). According to Honary (2001), green products are referred to as green because "they are safer, more ecologically friendly, and healthier than their counterparts that are derived from petroleum feedstock". Other researchers defined green products as products that do not contribute to the earth's pollution or depletion of natural resources and can be recycled (Shandasani et al., 1993).

People are becoming more concerned about the environmental issues such as energy saving, recycled packages, and buying green products (Tan and Yeap, 2012; Dagher and Itani, 2012; Leonidou et al., 2010; Mustafa, 2007). Such a change in people's knowledge, concern, attitude, and buying behavior for environmental issues is partially due to feelings that their life is in danger because of some worrying environmental indicators such as air pollution, animal extinction, global warming, and ozone layer holes (Leondis et al., 2010). Media and environmental pressure groups play important roles in increasing awareness of such worrying signs (Mellilo and Miller, 2006; Aitken, 2006). In response to these concerns and positive attitudes toward environmental issues, more companies are adopting green marketing (Cornin et al., 2011; Song-Turner, 2008; Saxina and Kandelwal, 2010; Rex and Baumann, 2007; Subhani et al., 2012; Tan, 2011). Being green is beneficial for companies: it brings significant opportunities to boost their sales and profits, to gain a competitive advantage over those competitors with no or fewer environmental interests, to

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increase their market share among green consumers, and to enhance employee morale (Pirakatheeswari, 2009; Ottman, 2011; Yakup and Sevil, 2011; Hartoyo et al., 2012; Zahria et al., 2011).

Identifying knowledge, attitudes, and buying behaviors for green products is essential for companies and governments planning to develop appropriate policies and strategies to promote green purchase concern and behaviors (Dagher and Itani, 2012; Tan, 2010). The vast majority of environmental research has focused on Western cultures (Battacharya, 2001; Parkash, 2002; Dagher and Itani, 2012; Hartoyo et al., 2012; Rahber and Abdul Waheed, 2010). To what extent are people in Arab countries aware of environmental issues? What are their attitudes toward such issues? Do they show any concern for buying green products? This study, conducted in the Kingdom of Bahrain, sought answers to these questions. The respondents were young people: as in many other Arab countries, the Bahrain youth sector accounts for more than 60% of the population, therefore representing a significant proportion of the consumers for most goods and services. The findings of this study can confidently be generalized to all the Gulf countries (Saudi Arabia, Kuwait, Qatar, Oman, and United Arab Emirates) with which Bahrain shares multiple cultural, political, economic, and geographic aspects.

LITERATURE REVIEW

The literature review presents four themes from which the study hypotheses were drawn.

Environmental buying behavior

Given the benefits of green products and their positive impact on people's health and welfare, to what extent do people prefer such products? The literature provides mixed findings (McCarthy and Sharma, 2001; Leonidou et al., 2010). Chatra (2007) found that the preferences of people in the city of Coimbatore in India for eco-friendly products varied among product categories. While most of the respondents scored high preference for food and cosmetics, they scored low preference for furniture and medicines. Those who buy green products benefit in safety, health, status, and symbolism (Ottman et al., 2006; Thogersen and Crompton, 2009). Some studies found that people increasingly show interest in green consumption as reflected in their behavior such as recycling more, buying fewer non-environmental products, and turning off unnecessary lights (Flatters and Willmott, 2009; Bodet, 2008; Chen, 2010).
The above led to the development of hypothesis 1.

H1: The youth in Bahrain prefer to buy green products.

Youth's knowledge of environmental issues

Environmental knowledge refers to the amount of information one has about environmental issues (Amini et al., 2007; Haron et al., 2005). Some researchers argue that a multivariate relationship may not reflect the true relationship between the environmental factors such as knowledge, attitude, and green buying behavior (Kollmuss and Agyeman, 2002; Laroche et al., 2002). Therefore, some researchers investigated the relationship between environmental variables using bivariate relationships (Tilikidou et al., 2002). Given the importance of environment to quality of life, to what extent are people aware of environmental issues? Chatra (2007) study in the city of

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Coimbatore in India revealed that levels of customer knowledge of eco product types varied for different products. For example, respondents scored the highest knowledge (53.3%) for food products and the lowest (28.3%) for cosmetics. In this respect, Cherian and Jacob (2012) stated that "it is clearly evident from review of literature that the majority of the consumers still lack "green" knowledge and because of such low knowledge towards green products, organizations are still not pushing towards developing more green products nor are they working hard on green packaging".

Results of other studies indicated that consumers are becoming aware of environmental products and are willing to pay more for them (Lee, 2009; Rahbar and Wahis, 2011; Lee, 2008; D Souza, 2004). The literature shows mixed results regarding relationships of environmental knowledge and green purchase behavior. Laroche et al., (2002) concluded that environmental knowledge plays no significant role in shaping the green purchase behavior of Canadians. In the same respect, Hwang et al., (2000) reported that there is no guarantee that consumers with high knowledge about the environment buy environmentally friendly products. Other studies reported a positive relationship between environmental knowledge and green purchase behavior (Vining and Ebroo, 1990; Hines et al., 1986; Kaiser et al., 1999). Some studies argued that knowledge influences behavior through attitudes, and reported a positive relationship between environmental knowledge and attitudes (Sharifah et al., 2005; Bedrons, 2007; Cheah and Phan, 2006; Yeoh and Paladino, 2007). Shelegelmiche et al. (1996) found that those with more environmental knowledge acted more positively in buying recycled paper products. The positive relationship between environmental knowledge and behavior was found also among consumers in Greece (Tilikidou, 2007). From the above discussion, hypotheses 2 and 3 were developed:

H2: The youth in Bahrain have a good knowledge of environmental issues
H3: There is a significant and positive relationship between youth's environmental knowledge and their green purchase behavior.

Youth's attitudes toward environmental issues

Environmental attitudes refer to the degree of favor or disfavor towards environmental issues (Milfont, 2007). Some psychologists refer to this as "environmental concern" (Vining and Erbco, 1992; Dunlap and Jones, 2002). Given that all people like to live in a clean and healthy environment, it is expected that all people should have positive attitudes towards environmental issues.

Some studies related people's environmental attitudes to the concept of collectivism. Such studies claim that collectivistic persons (those who care for others and like to do good things for the society) are more likely to develop positive environmental attitudes (Hofstede, 1980; Lavoch et al., 2001; McCarthy and Shrum, 1994; R Y K Chan, 2001; Ling-Yee, 1997; McCarthy and Shrum, 2001). Other studies related attitudes towards the environment to political interests and actions. These studies claim that since the protection of the environment is a major public concern, politically active people are likely to have positive attitudes toward protecting the environment (Bohlen et al., 1993; Owen and Videras, 2006; Hampel et al., 1996). Some studies claimed that liberal people tend to show more positive environmental attitudes (Dunlop, 1975; Hinc and Gifford, 1991; Olli et al., 2001; Strangham and Roberts, 1999; Van Liere and Dunlop, 1981).

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Gaski (1999) found that people who have more respect for the law are more likely to develop positive environmental attitudes.

In the context of environmental studies, the relationship between attitude and behavior is inconsistent (Gupta and Ogden, 2006; Bedrous, 2007). Some studies found a positive association between the two variables (Straughan and Roberts, 1999; Meinhold and Malkus, 2005; Majlath, 2008; Loundsbury and Tournatzky, 1977; Rahbar and Abdul Wahid, 2010; Spruyt, 2007; Davidson et al., 2007; Lee 2009). A number of studies found that the positive attitude toward environmental issues most likely results in buying green products (Tilikidou, 2007; Martin and Simintiras, 1995; Fraj and Martinez, 2007; Tanner and Kast, 2003; Hassan and Buncha, 2006; Cheah and Phau, 2006; Harthman and Apaolaza, 2006). Such a positive relationship between environmental attitudes and green purchase behavior was also found in the service sector where some studies found that positive attitudes and satisfaction influence customers to visit, revisit, recommend, and pay more for green restaurants/hotels (Han et al., 2009, 2010; Han and Kim, 2010; Tan and Yeap, 2012). On the other hand, other studies concluded that the attitude and behavior relationship is moderate (Davis 1995). However, in studying environmental attitudes, it is important to take note of general versus specific attitude (Sun and Wilson, 2008). In predicting a single behavior, a specific attitude is a stronger predictor than a general one (Hungerford and Tomera, 1986; Eagle and Chaiken, 1998). In this respect, Mainiari et al. (1997) found that consumers' specific attitudes led them to behave environmentally in terms of buying green products and switching to brands packaged in recycled materials. This was also emphasized by Bamberg (2003) who reported that only specific attitudes are direct determinants of specific behaviors. A similar finding was reported by others who stated that attitudes predict behavior better in the case of specific issues of the environment than general issues (Brelim and Kassim, 1996; Crosby and Taylor, 1986; Hines et al., 1987). This means that those who think positively about the environment are more likely to buy and even pay more for green products (Tsen et al., 2006; Majlath, 2008).

However, there is no guarantee that those with positive attitudes toward environmental issues will behave pro-environment (Rahbar and Abdul Wahid, 2010). Some studies found no significant relationship between attitudes toward environment and purchasing green products (Ruhabar and Abdul Wahid, 2010; Mainieri et al., 1997; Peattie, 2001; Gupta and Ogden, 2006; Cleveland et al., 2005; Pickett-Baker and Ozaki 2008). For example, Follows and Jobber (2000) found a poor relationship between attitudes toward environment and preference for products with green attributes. Similarly, Balderjahn (1988) found no significant relationship between environmental attitudes and green buying behavior. Abdul Wahid and Abustan (2002), in a study of the youth in Malaysia, found that 50% claimed to be willing to be pro-environment in their attitudes and behaviors. Similarly, Lee (2008) found that in Hong Kong, attitudes of young consumers did not play a significant role in shaping their buying behavior. Also supporting this finding, Mintal (2006) reported that consumers' positive attitudes toward environmental issues did not result in a preference for green products. In spite of the inconsistency on the relationship between attitude and behavior, this study hypothesizes:

H4: The youth in Bahrain have positive attitudes toward the environment.

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H5: There is a significant and positive relationship between the youths' environmental attitudes and their green purchasing behavior.

Youth concern for environmental issues

One is said to be concerned with the environment if he/she is emotionally involved with various environmental issues (Lee, 2008). Schultz (2000) states that environmental concern holds three interrelated factors: concern for the people, concern for the biosphere, and concern for the self. Carlo (1999) found that consumers in developed countries are more concerned about the environment. An increasing environmental concern is pushing firms to go green, to be more aware of protecting the environment, and to be responsible and careful in providing better quality of life for society (Banerjee, 2003; Hoy and Lichter, 2000; McKinsey, 2007; Rex and Baumann, 2007). In this respect, Lai (2000) found that although people living in Hong Kong show high concern for protecting the environment, they think that the government is responsible for taking corrective measures. Lin and Chang (2012) predicted that the more environmentally concerned customers are, the greater the difference between their usage of green and non-green products. Lin and Chang (2012) also found that consumers who are more concerned about the environment choose green products over non-green ones.

The question is whether such environmental concern plays a role in the green purchase behavior of consumers. Some studies found a positive relationship between the two variables. Lin and Chang (2012) found that environmental consciousness moderates usage of green products. Dagher and Itani (2002) reported that the more people are concerned about the environment, the more they prefer green products. Such a positive relationship between these two variables was also reported by Vanliere and Dunlop (1980), Datta (2011), and Roberts and Bacon (1997). As people become concerned about the protection of the environment, the concept of "green consumerism" spreads (Eriksson, 2002). Laroche et al. (2001) reported that people are becoming more concerned about the environment, which is reflected positively in their green buying behavior. Other researchers found that environmental concern may lead to buying green products through the concept of buying intention. For example, someone concerned about garbage disposal most likely intends to buy products with recycled packages (Follows and Jobber, 2000). Subhani et al., (2012) supported this and stated that "when an individual is concerned about the damages caused by non-environmentally friendly products to the environment and people living in it, this encourages him/her to prefer environmentally friendly products over non-environmentally products". Those more concerned about the environment not only favor green products; they are also willing to pay more for eco-friendly products (Laroche et al., 2991).

Some researchers investigated the environmental concern through the concept of perceived consumer effectiveness (PCE). According to Tan (2011), "PCE was first described by Kinnear, Taylor, and Ahmed (1974) as a measure of an individual's belief that he or she can have an effective contribution on pollution abatement". Kinnear et al. (1974) used PCE to predict environmental concern. Schultz et al. (2004) and Joonas (2008) also supported the positive relationship between PCE and environmental concern. People who scored higher PCE were more concerned about the environment (Kim and Choi, 2005). Other researchers found PCE to be a better predictor of environmental behavior than concern (Straughan and Roberts, 1999; Roberts,

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1996). Ellen et al. (1991) found that PCE differs from environmental concern and can predict certain pro-environmental behaviors.

A positive environmental concern does not necessarily result in buying green products (Subhani et al., 2012; Picket-Baker and Ozaki, 2008). A poor relationship between the two variables might be due to different reasons: for example, habitual buying of a non-green product (Stern, 1999; Simon, 1992) or the high price of the green product (Pearce, 1990).The above discussion led to the development of the hypotheses 6 and 7 of the study:

H6: The youth in Bahrain are concerned for the environment.

H7: There is a significant and positive relationship between youths' environmental concern and their green purchase behavior.

RESEARCH METHODS

The sample

The study recruited 243 undergraduate students, aged 19-23 years: 50% male and 50% female. Convenience sampling was used to collect the required data. Studying youth is considered valid because they account for about 60% of Bahrain population and represent the new generation of consumers.

The procedure of data collection

Personal interview using a specially designed questionnaire collected the study's data.

Variable specifications and statistical technique

The study used multiple regression analysis and correlation analysis to find the relationship between the green buying behavior of the young consumers (dependent variable) and three determinant factors (independent variables): environmental knowledge, environmental attitudes, and environmental concern.

Measurement instrument

The questionnaire used for data collection included 60 questions divided into four sections. The first three sections measured the independent variables (knowledge, attitude, and concern); the fourth section measured the dependent variable (green buying behavior). The first section measured young consumers' general knowledge about environmental matters. Respondents were to answer 15 questions using a scale of 1 = *Totally unaware*, 2 = *Somewhat aware*, and 3 = *Totally aware*. The knowledge questions were adapted from Maloney et al., (1975).

The second section measured the young consumers' attitudes toward various environmental issues. This section included 15 questions using a five-degree Likert-Scale: 1 = *Strongly disagree* to 5 = *Strongly agree*. The 15 attitude questions and their measurement instrument were adapted from a number of studies: two questions from Bohlen and Schlegelmilch (1993), one question from Dunlap and Van Liere (1978), two questions from Blaikie (1992), one question from Steel et al. (1994), one question from Zimmermann (1996), two questions from Herrera (1992), one question from Maloney et al. (1975), two questions from Forgas and Joliffe (1994), one question from Dutcher et al. (2007), and two questions from Guagnano and Markee (1995).

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The third section also used 15 Likert-Scaled questions to measure the young customers' concerns about the environmental issues. The 15 environmental concern questions and their measuring scales were adapted from the following studies: seven questions from Maloney et al. (1975), two questions from Dutcher et al. (2007), three questions from Guagnano and Markee (1995), and three questions from Wright et al. (2003).

Section four of the questionnaire used 15 questions to measure the young customers' buying behaviors for green products. Respondents were to answer the behavior questions using a five-degree scale ranging from 1 = *Never* to 5 = *Very often*. The 15 questions of this section were adapted from the following studies: two questions from Dutcher et al. (2007), four questions from Schultz and Zelezny (1998), two questions from Nooney et al. (2003), and four questions from Kaiser (1998).

STUDY FINDINGS

Before testing the hypotheses, Cronbasch Alpha was calculated to test the reliability of the internal consistency of the scales used: the four variables were highly reliable with the following alpha values: environmental knowledge (alpha = .613), environmental attitudes (alpha = .749), environmental concern (alpha = .777), and green buying behavior (alpha = .865).
Next, the four variables were analyzed using mean and standard deviation in order to identify the variation in the responses of the respondents to the questions related to the four variables. Table 1 highlights the results of this analysis.

Table 1: Mean and standard deviation of the four variables

Variables	**Mean**	**SD**	**N**
Environmental knowledge*	2.07	.235	243
Environmental attitudes**	3.63	.356	243
Environmental concern**	3.17	.413	243
Green buying behavior***	2.59	.518	243

*1 means totally unaware while 3 means totally aware
**1 means strongly disagree (very negative) while 5 means strongly agree (very positive)
***1 means never (very negative) while 5 means often (very positive)

The above results are not very promising and send signals to those concerned -government and industries - that serious work must be done to boost knowledge, attitudes, and concerns for the environment and reflect positively in green behavior.The low overall mean score of 2.59 for green buying behavior indicates that respondents are not pro-environment in their behavior. Such poor environmental behavior can be observed in the young peoples' responses to the 15 environmental buying behavior questions, which ranged between scores of 2 (*rarely act pro-environment*) and 3 (*sometimes act pro-environment*). These results reject H1.

With respect to environmental knowledge, findings revealed that Bahrain youth are poorly aware of the environment-related matters and information (mean = 2.07). In their responses to the 15

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environmental knowledge questions, most respondents scored between 1 (*totally unaware*) and 2 (*somewhat aware*), therefore rejecting H2.

Regarding attitudes toward environmental issues, respondents scored rather positive attitudes (mean = 3.63). This means that most of the youth would like to live in a clean and healthy environment though they do not actively support anti-environmental issues. To view the holistic picture, we analyzed responses to the 15 questions related to their attitudes toward the environment and found that most scored between 3 (*uncertain*) and 4 (*positive attitude*). Based on such findings, H4 was accepted.

For their concern about the environment, the overall mean score of 3.17 indicates that the respondents are indifferent (i.e. *do not care*) about environment–related issues. This is emphasized in the result of the responses to the 15 environmental concern questions: most responses cluster around scores of 2 (*no concern*) and 3 (*indifferent concern*), therefore rejecting H6.

For testing hypotheses 3, 5, and 7, Pearson correlation and multiple regression analysis were performed. Pearson correlation was used to view the association between the dependent variable (green buying behavior) and the three independent variables (knowledge, attitudes, and concern). Tables 2 and 3 present the summary of correlation and regression tests.

Table 2: Pearson correlation (r) analysis

Details	Environmental knowledge	Environmental attitudes	Environmental concern
Green buying behavior (control factor)			
Pearson correlation (r)	0.224	0.195	0.254
Significance	0.000	0.001	0.000
Degrees of freedom (df)	240	240	240

Table 3: Results of multiple regression analysis

Dependent variable: Green behavior			
Model	Standardized coefficient (beta)	t-value	Significance
Constant		0.685	0.494
Environmental knowledge	0.382	2.802	0.006
Environmental attitudes	0.206	2.273	0.024
Environmental concern	0.240	3.039	0.003
Adjusted R square = 0.104 F value = 10.399 Significance = 0.000			

Results in table 2 indicate that the correlation between respondents' green behavior and each of the three independent variables is positive and statistically significant at 0.01 level. This means

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that more knowledge, more positive attitudes, and more concern towards environment means more pro-environment buying behavior.

The overall result for the regression model is statistically significant at 1% level with the F-value of 10.399. The results in table 3 also show that all independent variables are statistically significant at < .05 in determining the dependent variable. Furthermore, results of standardized beta revealed that, among the three independent variables, knowledge was the most important determining factor in shaping the green behavior of the youth in Bahrain (beta = 0.382) followed by concern (beta = 0.240) then attitudes (beta = 0.206). The results of the regression analysis also revealed that only 10.4 percent of the variation in the dependent variable is explained by the three independent variables (Adjusted R square = 0.104).
Information shown in tables 2 and 3 give full support to accept hypotheses 3, 5, and 7, as detailed below.

Correlation analysis revealed a strong positive relationship between environmental knowledge and green purchase behavior at < .01 significance (r = .224, Sig = .000). Regression analysis indicated that environmental knowledge is an effective determinant factor in shaping green purchase behavior (beta = .382, t = 2.802, Sig = .006). Therefore, hypothesis 3 is accepted.Environmental attitudes positively correlated with respondents' green purchase behavior at < .01 significance (r = .195, Sig = .001). On the other hand, environmental attitude was found to have a noticeable role in determining green purchase behavior (beta = .206, t = 2.273, Sig = .024). Therefore, hypothesis 5 is accepted.With regard to H7, findings revealed that the young peoples' environmental concern is positively associated with their green purchase behavior at < .01 significance (r = .254, Sig = .000) and that such concern plays a significant role in shaping green purchase behavior of the youth (beta = .240, t = 3.039, Sig = .003). Therefore, hypothesis 7 is accepted.

CONCLUSION

This study examined four environmental factors of the educated youth in Bahrain: environmental knowledge, environmental attitudes, environmental concern, and environmental buying behavior. The findings of the study revealed that the youth in Bahrain scored reasonable for attitude but low for knowledge, concern, and behavior. A strong positive relationship was found between the respondents' green behavior and the three determinant factors (knowledge, attitudes, and concern). Although the antecedent factors have significant influence on the dependent variable, regression analysis revealed that the three independent variables explained only 10.4% of the variations in the dependent variable; 90% of the determination of the respondents' environmental behavior remains unexplained.

IMPLICATIONS (RECOMMENDATIONS)

Youth in Bahrain (and other Gulf countries) account for about 60% of the population and are major customers of many goods and services. According to this study, the youth are not pro-environment in their concern and in their behavior. This study also revealed that the environmental behavior of the youth can be boosted through boosting their environmental knowledge, attitudes, and concern. To achieve this, government and industries have the responsibilities of developing proper

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programs and campaigns targeting the youth (Rundle-Thiele, Paladino, and Apostol 2008; Leonidou et al. 2010). In this respect, Pickett-Baker and Ozaki (2008) claimed that "pro-environmental values are more likely to result in more pro-environmental behavior". Environmental advertisements have a significant influence on green marketing (Cherian and Jacob, 2012; Davis, 1994; Baldwin, 1993). On the other hand, some studies concluded that people found environmental advertisements to be less credible (Chan, 2004). Recommended below are some possible promotional tools that government and companies might use to spread the environmental culture and develop green citizens and consumers.

Government's tasks to promote green behavior

- To replace normal trash bins with recycle bins that come in colors for different types of trash. The proposed bins to be positioned throughout the country.
- To sponsor environmental campaigns promoting an environmental culture. Include broadcast, print and online advertisements; speeches in schools, colleges and shopping centers; and distributing leaflets with utility bills.
- To teach environment-related courses in schools and colleges
- To form and train professional green teams with good environmental knowledge and effective communication skills to participate in environment-related seminars, conferences, and interviews.
- To require, by law, ministries and government institutions to go green, especially those dealing directly with people. For example, providing and encouraging electronic applications and complaints instead of printed ones.
- To organize monthly environmental events in various shopping centers: contests, games, etc.
- To impose tough penalties on those who harm the environment
- To use mass media to educate and improve environmental knowledge and attitudes, particularly among young people. To promote activities like recycling, reducing the use of disposable paper products, and learning the harm of using plastic bags via mass media, which may have a significant effect on green consumption (Moser and Uzze, 2003).

Companies' tasks to promote green behavior

- To adopt green marketing in product design, pricing, promotional, and distribution in a way to promote environmental protection (Polonsky, 2011).
- Some customers perceive green products as being less effective (Lin and Chang, 2012). In order to change this perception, companies might recruit credible sources to boost the perceived effectiveness of green products and increase consumers' willingness to buy them (Aaker et al., 2010).
- To promote green culture through advertising and other activities such as sales promotions.
- To promote eco labels on green products (D Souza et al., 2006). Eco labeling is an effective marketing tool for providing sufficient and proper eco information about the product that will likely have positive effects on consumer attitudes towards and preference for green products (D Souza et al., 2006; Sammer and Wu Stenhagen, 2006; Rashid, 2009; Kuhn, 1999; Lin and Chang, 2012).
- To promote the eco-label in shops and supermarkets through in-store banners, leaflets and brochures. Part of shopping is impulsive: consumers make decision in response to promotional activities in the store (Hawthorne, 2009).

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- To sell green products at a price close to the non-green ones. Many people avoid green products because they assume that green products are unnecessarily expensive.
- To educate consumers of the benefits of green products to them, to their families and to the whole society
- To apply effective green marketing to make green products desirable for consumers (Zaharia et al., 2011).

These recommendations are tools with which government and companies can promote green knowledge, attitudes, concern, and behavior. Applying such tools might encourage "green word-of-mouth" as effective boosting the environmental culture (Chitra, 2007). The proposed promotional tools, if applied properly, should result in having people with more knowledge, positive attitudes, and more concern about environmental issues. Such people, then, would read more about environmental matters, communicate these more with friends and relatives, be more determined to protect the environment, avoid activities and products considered to be against the environment, and prefer green products. In other words, a proper green promotion will result in spreading the culture of "green." To motivate people to shift from "non-green" to "green," advertising messages need to be convincing enough to arouse green actions (Tan, 2011; Cherian and Jacob, 2012; Hawthorne, 2009).

FUTURE RESEARCH (LIMITATIONS)

- This study was conducted on one segment of the population: 19-23 year old undergraduate students. To increase the reliability and credibility of the results, similar research should study other segments of the population
- The positive association between environmental behavior and the determinant variables (knowledge, attitudes, and concern) contradicts the results of many studies in the literature. Again, in order to assure the credibility of these results, similar studies should replicate this research with different segments of the population.
- This study relates to the environmental behavior in general. Better results might be obtained if a specific behavior or product were examined (Cherian and Jacob, 2012).
- This study looked at the sample as a unified segment. Future research should examine the effect of sample demographics (age, gender, education, and income) on the association between antecedent factors (knowledge, attitude, and concern) and consumer environmental behavior. For example, the literature indicates that some studies found differences in the environmental behavior of males and females (Zelezny et al., 2000; Googh, 1994)
- This research examined three determinant factors (knowledge, attitude, and concern). It would be useful if additional parameters - religion, friends and relatives, affiliation, marital status, etc. - were examined.

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