

Impact of green marketing mix on purchase intention

Thoria Omer Mahmoud *



Department of Management, College of Economics and Business, Administration University of Kassala, Kassala, Sudan

ARTICLE INFO

Article history:

Received 10 May 2017

Received in revised form

10 December 2017

Accepted 20 December 2017

Keywords:

Green marketing mix

Purchase intention

Theory of planned behavior

ABSTRACT

Green marketing concept emerged as a result of organizations' interest in environment. These originations realized that their survival and continuity lies in the coordination between its interest and the benefits of consumer and society. Green marketing includes a broad range of activities such as product modification, change in the production process, modification in advertising, and change in packaging. This paper aims to at investigating the influence of applying green marketing mix elements (product, pricing, distribution and promotion) in Sudan on purchase intention. The design of this research is descriptive and quantitative in nature. The target population for the study is the postgraduate (MBA) listing all universities in Khartoum state that offered graduate level courses were used as the sampling frame. A total of 417 questionnaires were distributed and 341 questionnaires were returned. Statistical analysis revealed that there is significant relationship between green marketing mix elements and consumer's purchase intention. Future research can investigate relationships identified in this work, as well as test out mediating and moderating relationships. This study will provide better information as input to government policy makers, who responsible for business development, to encourage the manufacturing farm's use of green marketing to benefit key stakeholder interests.

© 2017 The Authors. Published by IASE. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Today's, environment awareness of consumers has considerably increased throughout the world. Environmental problems such as global warming and pollutions have become global issues (Shirsavar and Fashkhamy, 2013) and non-biodegradable solid waste, harmful impact of pollutants etc., both marketers and consumers are becoming more and more sensitive to the need for switch to green products and services. It is extensively believed that the shift to "green" may appear to be costly in the short term; it definitely proves to be essential and advantageous, cost-wise too, in the long run. Environmental problems are still the main worry for the whole world and human beings. Air pollution, conservatory effects and ecological unbalances, are the main environmental problems that have occurred till now along with the activities of human being (Sharma, 2011). One of the biggest problems with the green marketing area is that there has been little attempt to academically examine environmental or green marketing. Previous studies

focused mainly on green marketing strategies (Devi Juwaheer et al., 2012; Awan, 2011; Fan and Zeng, 2011; Solvalier, 2010). In addition many studies examined relationship between green products and intention (Iaroche et al., 2001; Paul and Rana, 2012; Lam and Mukherjee, 2005; Gan et al., 2008). Very few studies have examined green marketing mix and purchase intention, for example Ansar (2013) investigated green marketing mix as (ecological price, environmental advertisement, ecological packaging). On the other hand, Wanninayake and Randiwela (2008) studied (green product, green package, green place, green promotion). However this paper aims to investigating the influence of applying green marketing mix elements (product, pricing, distribution and promotion) in Sudan on purchase intention.

2. Literature review and theoretical background

2.1. Green marketing mix

Every company has its own favorite marketing mix. Some have 4 P's and some have 7 P's of marketing mix. The 4 P's of green marketing are that of a conventional marketing but the challenge before marketers is to use 4 P's in an innovative manner.

* Corresponding Author.

Email Address: thoria.omer@yahoo.com (T. O. Mahmoud)

<https://doi.org/10.21833/ijaas.2018.02.020>

2313-626X/© 2017 The Authors. Published by IASE.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

2.2. Green product

In the past decade, words like green products, sustainable, environmentally friendly, pro-environmental, eco-friendly and ecological have often been used interchangeably by marketers to advise and tempt the consumers as piece of Green Marketing (Gosavi, 2013). Environmentally friendly” refers to products or services that are not harmful to the outdoor environment. However, for more than a decade, the U.S. Federal Trade Commission (FTC) has issued warnings about products or services marketed as environmentally friendly, environmentally safe. Mainieri et al. (1997) described eco-friendly products as ecologically safe products that can facilitate the long term objective of protecting and preserving our natural habitat namely, environmentally friendly products or environmentally awareness products, are referred to as products designed to lessen the consumption of natural resources required and minimize the adversely environmental impacts through the whole life-cycles of these goods (Tseng and Hung, 2013). A green product is defined as “a product that was manufactured using toxic-free ingredients and environmentally-friendly measures, and which is certified as such by an acknowledged organisation” (Kumar and Ghodeswar, 2015).

Product is the center of green marketing mix and the most essential part whole green marketing strategy. However, it should be considered in brain that green product is not limited to the last object only but involves all the elements of the product, such as the materials it used, the production process, the package of the product, etc. (Fan and Zeng, 2011).

In business, the terms “green product” and “environmental product” are used generally to explain those that effort to protect or boost the natural environment by conserving energy and/or resources and reducing or eliminating use of noxious agents, pollution, and waste (Singh and Pandey, 2012).

2.3. Green price

The price is the cost paid for a product. It is a critical element of the marketing mix. The majority of consumers will only be ready to pay a premium if there is a perception on additional product value (Eric, 2007). This value may be enhanced performance, function, design, visual appeal, or taste (Sharma, 2011). Environmental benefits are usually an added plus but will often be the deciding factor between products of equal value and quality (Singh, 2013). Green marketing should get all these facts into consideration though charging a premium price (Bukhari, 2011). According to Hashem and Al-Rifai (2011); the green pricing refers to the price particular in the light of company's policies with regard to environmental consideration imposed by rules and corporation instructions or its initiatives in this regard. However green product often requires

higher initial cost but in a long-run, it will be economy (Fan and Zeng, 2011).

Green pricing takes into consideration the people, planet and profit in a method that takes care of the health of employees and communities and ensures efficient productivity. Value can be added to it by changing its emergence, functionality and through customization, etc. (Shil, 2012). It is in some cases higher than the prices of the normal alternatives. A higher price compared to the ordinary alternative can be formative factor for some customers, verifying the accurateness of the products green features. Others do not consider the price at all but choose the environmental friendly alternative (Solvalier, 2010).

In the book by Ottman (1998), it is pointed out that consumers are actually not interested in paying more for a product declared “green”. It is for this reason the marketers need to pay emphasis on the pricing of the product. Price is the only element that can create an ideal mix between the returns and profit, rest other elements create costs (Awan, 2011).

2.4. Green place

Green place is about managing logistics to cut down on transportation emissions, thereby in effect aiming at reducing the carbon footprint (Shil, 2012), is related to distribution gates use that deal with green products, which are suitable for customers, in terms of facilitating their delivery, and to secure cycling procedures conducting inside environmental conditions and requirements (Hashem and Al-Rifai, 2011). Place represents the location where a product can be purchased. It can mean physical as well as virtual stores. Product distribution should be of the satisfactory channels, and clearly and correctly placed at environmentally safe place where there is no contamination whatever. For green businesses to be established and become competitively priced, companies have to make sure that their distributors are concerned of the environment and establish that they establish a green distribution strategy (Eric, 2007).

Place is not a cost generator factor, it has numerous features that can create revenue and certain outcome. This element of the marketing mix is dealt ‘how-to-handle-distance’ (Awan, 2011). Logistics is another part of the correlation, because it approaches procurement, material handling, distribution, storage, material revival and disposition. The choice of where and when to make a product obtainable by organization, will have significant impact on the customers. Very few customers will go out of their way to buy green products (Sharma, 2011) merely for the sake of it.

Green distribution is a very delicate operation. Customers must be guaranteed of the ‘Ecological nature’ of the product. The green environment is a constantly regulated environment and as such high level of compliance is essential when carrying out distribution of green products (Yazdanifard and

Mercy, 2011). Few interested customers will go out of their way to buy green products (Singh, 2013).

2.5. Green promotion

This refers to providing genuine information about the products in a way that does not harm the materialistic and moral consumers' interests (Hashem and Al-Rifai, 2011). Green promotion involves configuring the tools of promotion, such as advertising, marketing materials, signage, white papers, web sites, public relations, sales promotions, direct marketing and on-site promotions, videos and presentations by keeping people, planet and profits in mind (Shil, 2012). Significant promotion tools green advertising as promotional messages that may appeal to the wants and desires of environmentally concerned consumers (Ankit and Mayur, 2013). The objective of green advertisements is to influence consumers' purchase behavior by encouraging them to buy products that do not hurt the environment and to direct their interest to the positive consequences of their purchase behavior, for themselves as well as the environment (Rahbar and Abdul Wahid, 2011). Marketing communication is defined as a cross-functional activity. Engaging in green promotion, may impact the likelihood that companies' claims are precisely monitored (Lao, 2014).

Green promotion involves communicating information on the environmental commitments and the efforts made by companies to consumers. This element in the green marketing mix includes various activities like paid advertising, public relations, sales promotions, direct marketing and on-site promotions (Fan and Zeng, 2011). Green promotion means transferring actual environmental information to those consumers who are involved in a company's activities. Also, companies' commitment to protect natural resources is for the purpose of attracting the target market (Shirsavar and Fashkhamy, 2013).

2.6. Purchase intention

Numerous researches have struggled to discover the relationship between academic theories and empirical behaviors in the customer purchasing intention field because the customers' purchase intention is biform the final consequence beyond perspective, Chen (2013) studied green purchase intention Comparing with Collectivistic (Chinese) and Individualistic (American) Consumers in Shanghai, China. The results indicated that there existed a significance relationship between environmental knowledge, attitudes, environmental concern and social influence and green purchase intention and there is a significant difference between the collectivistic (Chinese) and the individualistic (American) consumers with respect to environmental knowledge, attitudes, social influence and green purchase intention except environmental concern.

Wang (2014) examined the relative importance of the four antecedent variables (external locus of control, collectivism, environmental visibility, and subjective norms) for green purchase intentions. The findings show that unlike collectivism values, environmental visibility, and subjective norms, which exert a positive effect on green product purchase intentions, the external locus of control exerts a negative effect. The results of this study also show the dominant effect that collectivism values exert on green purchase intentions.

According to Arslan and Zaman (2014) purchase intention can be defined as the possibility; a consumer will purchase a product or service in future. A positive purchase intention drives to consumer for actual purchase action or a negative purchase intention restrain to consumer not to purchase that. An increase in purchase intention means an increase in the possibility of purchasing. Researchers can also use purchase intention as an important indicator for estimating consumer behavior. When customers have a positive purchase intention, this forms a positive brand commitment which propels consumers to get an actual purchase action (Wu et al., 2011). The cost of retaining a recent customer is cheaply than prospecting for a new customer (Ihtiyar and Ahmad, 2014).

2.7. Theory of planned behaviour and green marketing

The Theory of Planned Behaviour (TPB) is an important social cognitive model that aims to explain variance in volitional behaviour (Ajzen, 1991) and has proven successful in doing so. It has also been validated in the context of pro environmental behaviour (Yazdanpanah and Forouzani, 2015). The TPB proposes that one's intention to perform a behavior is predicted by attitudes, subjective norms, and perceived behavioral control. According to the theory of planned behavior, perceived behavioral control, together with behavioral intention, can be used directly to predict behavioral achievement (Ajzen, 1991). The integrative model presented in Fig. 1.

Throughout the years there have been different suggested theories explaining consumer behaviors (Samarasinghe, 2012). Some derive from the social sciences: psychology, sociology, or economics. Others concentrate more on the effects of marketing variables, and stress the effects of external stimuli, such as advertising, physical product differentiation, packaging, promotion, retail availability, point of sale display, direct selling and so on (Kalafatis et al., 1999).

2.8. Green marketing mix and purchase intention

There are few researches studies green marketing mix as Hashem and Al-Rifa, (2011) they explore effect of green marketing mix by chemical industries companies in three Arab States in West Asia on consumer's mental image, thus Rakhsha and

Majidazar (2011) Evaluated of effectiveness of green marketing mix on consumer satisfaction and loyalty.

According Ansar (2013) developed framework to look at the Impact of Green Marketing on Consumer Purchase Intention (Socio-demographic variables, Price, Environmental advertisement and Ecological packaging) with Green Purchase Intention. The study showed of those variables Positive and significant correlation is found to have positive association with Green purchase intention.

Matjaz et al. (2010) explained positive purchase intention to buy an environmentally friendly product in spite of a higher price. Ali et al. (2011) showed that a person with positive intentions to buy green product show higher actual buying rates than those people who have low or no intention of buying green products. Also that competitive price and quality of a green product have positive impact on customers GPB, if they have high and positive intention to purchase them.

Wanninayake and Randiwela (2008) introduced oxford business and economic conference program there are relationship between elements of the mix, namely (product, package, price, place and promotion) and how each of those variables correlates to the purchase decision.

Schiffman and Kanuk (1991) claimed consumer behavior is what displayed by consumers in searching for, purchasing, using, evaluating, and disposing products and services that they expect will satisfy their needs cited by Dolcemascolo and Martina (2010). The actions that people take and choices they make to consume certain products and services or to live in certain ways rather than others all have direct and indirect impacts on the environment (Hai and Mai, 2012).

3. Theoretical background and hypothesis development

Lack of economic resources of consumers was found to magnify the effect of price and act as a barrier to purchase of green products. However, low price sensitivity of consumers was found to positively affect green purchase behavior. Conversely, high price sensitivity negatively affected. Green purchase behavior and intention of consumers it clear that high price.

Pickett-Baker and Ozaki (2008) found that, except for cleaning products, most consumers cannot identify greener products. This may be because most green messages labels are falling flat and not making an impression in the minds of shoppers. Hence, green communication is a major area of weakness for green marketers. Carlson et al., (1993) results showed affirmed a parallel rise environmental advertising accompanied by greater consumer interest in the environment. In fact, advertising terms such as "recyclable, environmentally friendly, ozone safe, biodegradable" can be see regularly in green advertisement's and consumers are often exposed to such message, whilst some of these message also pertained to

consumer resistance. Likewise Mathur and Mathur (2000) argued that consumers were more positive towards environmental messages in advertisements are more are more credible. Thus this study posits that:

H.1 There is a positive relationship between green product and purchase intention.

H.2 There is a positive relationship between green price and purchase intention.

H.3 There is a positive relationship between green place and purchase intention.

H.4 There is a positive relationship between green promotion and purchase intention.

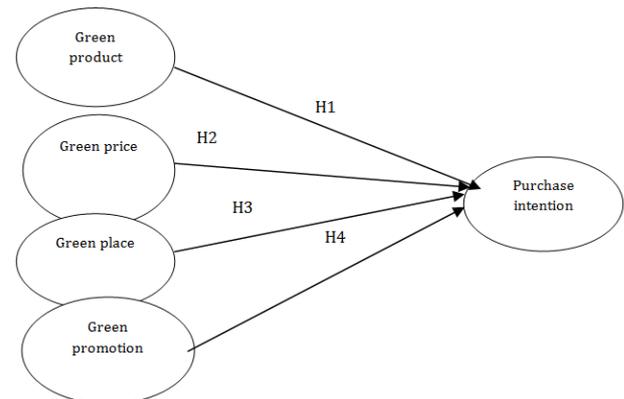


Fig. 1: Green marketing mix

4. Research methodology

4.1. Sample and data collection

This study collect data for testing the hypotheses via questionnaire survey of the unit of analysis in this study was an undergraduate business student (MBA) from Universities in Sudan, where convenient sample and self-administrated survey was used to distribute 417 questionnaires. A professional translation to questionnaire was firstly conducted from English into Arabic and back to English. Subsequently, a number of researchers in the same field assessed the correctness and the clearance of questions and measurement items. A sample of questionnaire was secondly developed and sent to five professional academicians to reduce concern regarding the face validity of measures. Several alterations to question wording, modification of items, as well as the format and esthetics of the questionnaire were made for clarity. In stage three, pre-test was conducted upon fifty copies of the surveys distributed to the firms randomly; it reveals that the values of Cronbach's Alpha test for the variables fall above the 0.70, these variables have an acceptable level of reliability (Sekaran, 1992). The survey were collected during august and September 2015, a total of 341 out of 417 questionnaires received from respondents, the overall response rate was 82%. Table 1 presents the questionnaires rate of return this was considered as high rate due to questionnaires given one by one to respondents and in researches used a self-administrated survey

(Sekaran, 1992). Those who didn't responded to fill the questionnaire some were mentioned that they were not authorized to fill the questionnaires while others were not transparent in their justifications.

Based on the descriptive statistics using the frequency analysis shows that (46.6%) of the respondent are male, where (53.4%) female. With regard to respondents age (55.4%) are young with less than 30 years, while the others ranged 30-40 are (34.0%), those from 41 to 50 are (9.4%), and above 50 years are (1.2%). In term of University/ college (14.4%) from Sudan University of science and Technology, (11.7%) Alnilein University, (9.7%) Khartoum University, (11.7%) Alzaeem Alazhari University, (10.6%) University of Science and Technology, (6.7%) Amdurman Islamic University, (7.9%) Sudan Academy for Banking Science, (7.6%) Alahfad University for girls, (7.6%) Sudan International University, (2.1%) The future University, (3.8%) University of Medicine Science and Technology, (6.2) Garden City University.

As for status (39.6%) Married, (56.6%) single and (3.8%) other. For the income respondents (500-1000) were represented (19.1%), the respondents among (1001-2000) were represented (46.0%), the respondents between (2001-4000) were represented (11.1%), the respondents between (4001-6000) were represented (6.7%), lastly respondents has no income represented (16.1%) as lower ratio.

Concerning the occupation (55.4%) employee, (10.3%) Section management, (4.7%) management,

(16.1%) student and (13.5%) is other. Regarding their years of experience (46.0%) are 5 years and less, those ranged from 6 to10is (22.0%), 11-15is (8.5%) where above 15 years was (7.0%) and (16.4%) No experience.

Table 1: Questionnaires rate of return

Total Questionnaires sent to the college	417
Returned questionnaires (not filled- up)	9
Completed questionnaire received from respondents	341
Returned questionnaires (partially answered)	9
Questionnaires not returned	58
Overall response Rate	84 %
Usable response Rate	82 %

Source: prepared By Researcher in 2015

4.2. Goodness of measures

This paper employed 5-point Likert scale for all measures, ranging from "strongly disagree" to "strongly agree". Measures used in this study adopted and generated from available previous studies. Based on Polonsky (2011), green marketing is the effort by a company to design, promote, price and distribute products in a manner which promotes environmental protection. This paper measured green marketing with 4 items through multidimensional construct to include green product, green price, green place, and green promotion. Purchase intention was measured through adopted from Chiu et al. (2012). Table 2 presents the measurement of the variables of study.

Table 2: Measurement of the variables

items	Source
green product	Hashem and Al-Rifai (2011)
Green price	Hashem and Al-Rifai (2011)
green place	Hashem and Al-Rifai (2011); Burt and Carralero-Encinas, (2000)
green promotion	Hashem and Al-Rifai (2011)
Purchase intention	Chiu et al. (2012)

Validity and reliability tests as means to assess the goodness of measure of study construct (Sekaran, 1992). The study used exploratory factor analysis for testing the validity and unidimensionality of measures of all variables under study. Factor analysis was done on the 19 items, which was used to measure green marketing mix, and 5 items, which was used to measure purchase intention. Table 3 showed the summary of results of factor analysis on green marketing, purchase intention, and environmental knowledge. In the first run of factor analysis, dropped items (mix6=0.396) were found to have communalities less than 0.50. In the second run of factor analysis, item (im2=0.480) still had communalities value less than 0.50, and was dropped in the next run. In the third run Item (mix13) was dropped in the subsequent run, all assumptions were satisfactory fulfilled. All the remaining items had more than recommended value of at least 0.50 in IM with KMO value of 0.903. Results of factor analysis on purchase intention in the first run of factor analysis all the remaining items

had more than recommended value of at least 0.50 in OC with KMO value of 0.805.

4.3. Reliability analysis

Reliability is an assessment of the degree of consistency between multiple measurements of variables (Hair et al, 2010). To test reliability this study used Cronbach's alpha as a diagnostic measure, which assesses the consistency of entire scale, since being the most widely used measure. According to Hair et al. (2010), the lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research. While Nunnally (1967) considered Cronbach's alpha values greater than 0.60 are to be taken as reliable. The results of the reliability analysis summarized in Table 2 confirmed that all the scales display satisfactory level of reliability (Cronbach's alpha exceed the minimum value of 0.6). Therefore, it can be concluded that the measures have acceptable level of reliability.

Table 3: Exploratory factor analysis

construct	Variables/items	Factor loading	eigenvalues	PVE
GMM KMO = 0.903 TVE = 60.95 BTS = 2282.241	G. Product		6.485	40.534
	G.PRO1	.852		
	G.PRO2	.719		
	G.PRO3	.638		
	G.PRO4	.619		
	G. price		1.430	8.940
	G.PR1	.753		
	G.PR2	.737		
	G.PR3	.725		
	G.PR4	.567		
	G. place		1.213	7.584
	G. PL1	.753		
	G. PL2	.740		
	G. PL3	.716		
	G. PL4	.696		
	G. promotion			1.092
G.PROm1	.795			
G.PROm2	.780			
G.PROm3	.651			
G.PROm4	.609			
PI KMO = 805 TVE = 61.115 BTS = 674.455	Purchase intention		3.056	61.115
	P. I1	.560		
	P. I2	.569		
	P. I3	.703		
	P. I4	.639		
	P. I5	.585		

Source: prepared by researcher in 2015. Factor loading=0.35

Table 3 shows the means and standard deviations of four component of green marketing mix. The table reveals that the students of universities in Sudan concern in green marketing mix. For the product (mean=4.227, standard deviation=0.768), for green promotion (mean=4.222, standard deviation=0.758), for green place (mean=4.14, standard deviation=0.781), for green marketing mix is green price (mean=4.01, standard deviation=0.768). Given that the scale used a 5-point scale (1=strongly

disagree, 5=strongly agree) it can be concluded that the students of universities in Sudan is highly concern of green marketing mix.

Table 4 shows the means and standard deviations of one component of repurchase intention. Table reveals that the students of universities in Sudan concern in purchase intention. The means and standard deviations (mean=4.051, standard deviation=0.763). Given that the scale used a 5-point scale (1=strongly disagree, 5=strongly agree).

Table 4: Descriptive of green marketing mix and purchase intention, variables

NO	green marketing mix Variables	Mean	Standard Deviation	Number of items	Cronbach's alpha					
						1	2	3	4	5
1	Green product	4.227	0.768	5	.840	1				
2	Green price	4.019	0.768	4	.786	.434**	1			
3	Green place	4.148	0.781	4	.750	.532**	.503**	1		
4	Green promotion	4.222	0.758	4	.830	.564**	.507**	.533**	1	
5	purchase intention	4.051	0.763	4	.815	.451**	.419**	.395**	.468**	1

Source: prepared by researcher in 2015. Note: All variables used a 5-point likert scale (1= strongly disagree, 5= strongly agree)

4.4. Data analysis procedures

Multiple regression analysis was used to test the research hypotheses. This technique is appropriate when the researchers' objective is to predict changes independent variables in response to changes in independent variables. Table 5 shows the results of the multiple regression equation testing the influence of the green marketing mix on purchase intention. In addition the results show that the green marketing mix is a positive significantly influenced purchase intention. The results showed that the hypothesis was supported, i.e. there is a positive relationship between green product and purchase intention. ($\beta=0.196$, $p<0.01$), there is a positive relationship between green price and purchase intention ($\beta=0.119$, $p<0.05$), there is a positive relationship between green place and purchase

intention ($\beta=0.183$, $p<0.01$) and there is a positive relationship between green place and purchase intention ($\beta=0.314$, $p<0.01$). This result gives support to hypotheses H1, H2, H3 (green marketing mix and repurchase intention). The results of the Multiple Regressions summarized in Table 5.

Table 5: Multiple regressions: green marketing mix variables, and purchase intention (Beta coefficient)

Variables	Purchase intention
Green product	0.196***
Green price	0.119**
Green place	0.183***
Green promotion	0.314***
R ²	0.445
Adjusted R ²	0.439
Δ R ²	0.445
F change	65.627***

Source: prepared by researcher in 2015. Note: Level of significance: * $p<0.05$, *** $p<0.001$

5. Discussion

The finding of this research demonstrates that four forms of green marketing mix namely: (green product, green price, green place and green promotion) have a significant positive relationship with purchase intention. The findings point out that the green marketing in students of universities has a positive relationship with purchase intention, and this finding shows significant relationship between green products and green advertising with purchasing decision, and it also lined with [Tang et al. \(2014\)](#) who showed consumer attitude positively affects purchase intention to green product. In same context demonstrates that green price has a significant positive relationship with purchase intention ([Weisstein et al., 2014](#)). [Wanninayake and Randiwela \(2008\)](#) stated that environment friendly products and packages make the significant impact of customer buying decisions and friendly distribution, and promotion with the environment friendly product information will also significantly impact on the buying decisions in selecting products of foods. [Ansar \(2013\)](#) argued that environmental advertisements, price and ecological packaging positively related with the Green purchase intention. The results confirm the significant positive impact of green marketing mix on purchase intention.

5.1. Implication to research and practice

This paper investigated the relationship between green marketing mix and the purchase intention. This can contribute to a better understanding of the antecedents of the purchase intention. This study further will add to the theory of planned behavior view by specifying which of attitudes are more influential in creating the customer purchase intention. Moreover, the research is among of the first studies that validate the measurement of green marketing mix (4P) with purchase intention. In addition, this paper will provide better understanding about considering the role of green marketing mix and identify the main constructs it that will effect on consumer purchase intention and to encourage the marketing managers to use the more effective construct in enhancing the relationship with customers.

6. Conclusion

There are many limitations that must be taken into account in this study. First, the study is focusing on green marketing and purchase intention. Problem relates more empirical grounded insights are needed to test the conceptual factors that ascertains gap between perceived greenness of product food and actual greenness.

The Environmental problems in Sudan are growing rapidly. The increasing economic development, rapid growth of population and growth of industries in Sudan is putting a strain on

the environment, infrastructure and the countries natural resources. Industrial pollution, soil erosion, deforestation, rapid industrialization, urbanization, and land degradation are all worsening problems. Environmental pollution is one of the most serious problems facing humanity and other life forms on our planet today. In green marketing, consumers are willing to pay more to maintain a cleaner and greener environment. Green marketing assumes even more importance and relevance in developing countries like Sudan. In future only those companies will reap the greatest reward that innovates with new products, materials, technologies which are eco-centric and address the challenge by walking their talk. This paper certainly closed the gap in the existing literature and the body of knowledge. This study provided empirical evidence that green marketing mix can lead consumers to purchase intention in long terms.

6.1. Limitation directions for future research

In this study the researcher has used three dimensions of relationship quality represented in the following: customer satisfaction, customer trust and customer commitment. Future research can adopt more and different dimension such as, cooperation, adaptation, communication and atmosphere that may effect on repurchase intention. The study was based on confined on customers of automotive companies in Sudan. Future research may apply the model on different country. The sample also included only the automotive companies in Sudan, so all the respondents of the questionnaire were only from one culture which would be a great accomplishment if a future a study tested respondents who belonged to different cultures. The study also was exclusive to one type of industry (automotive); it is recommended in future research to adapt the model in different industries such as, electronics, tourism and insurance sectors.

References

- Ajzen I (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50: 179–211.
- Ali A, Khan AA, Ahmed I, and Shahzad W (2011). Determinants of Pakistani consumers' green purchase behavior: Some insights from a developing country. *International Journal of Business and Social Science*, 2(3): 217-226.
- Ankit G and Mayur R (2013). Green marketing: Impact of green advertising on consumer purchase intention. *Advances in Management*, 6(9): 14- 17.
- Ansar N (2013). Impact of green marketing on consumer purchase intention. *Mediterranean Journal of Social Sciences*, 4(11): 650-655.
- Arslan R and Zaman M (2014). Impact of brand image and service quality on consumer purchase intention: A study of retail store in Pakistan. *Research on Humanities and Social Science*, 4(22): 98-106.
- Awan U (2011). Green marketing: Marketing strategies for the Swedish energy companies. *International Journal of Industrial Marketing*, 1(2): 1-19.

- Bukhari SS (2011). Green Marketing and its impact on consumer behavior. *European Journal of Business and Management*, 3(4): 375- 383.
- Burt S and Carralero-Encinas J (2000). The role of store image in retail internationalisation. *International Marketing Review*, 17(4/5): 433-453.
- Carlson L, Grove SJ, and Kangun N (1993). A content analysis of environmental advertising claims: a matrix method approach. *Journal of Advertising*, 22(3): 27-39.
- Chen L (2013). A study of green purchase intention comparing with collectivistic (chinese) and individualistic (american) consumers in Shanghai, China. *Information Management and Business Review*, 5(7): 342- 346.
- Chiu CM, Hsu MH, Lai H, and Chang CM (2012). Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents. *Decision Support Systems*, 53(4): 835-845.
- Devi Juwaheer T, Pudaruth S, and Monique Emmanuelle Noyaux M (2012). Analysing the impact of green marketing strategies on consumer purchasing patterns in Mauritius. *World Journal of Entrepreneurship, Management and Sustainable Development*, 8(1): 36-59.
- Dolcemascolo D and Martina G (2010). Sustainable marketing: how environmental and social claims impact on the consumer's purchasing behavior. M.Sc. Thesis, Polytechnic University of Milan, Italy.
- Eric K (2007). Green marketing practises by kenya petroleum refineries: A study of the perception of the management of oil marketing companies in kenya. Ph.D. Dissertation, University Of Nairobi, Kenya.
- Fan H and Zeng L (2011). Implementation of green marketing strategy in China: A study of the green food industry. M.Sc. Thesis, University of GAVLE, China.
- Gan C, Wee HY, Ozanne L, and Kao TH (2008). Consumers' purchasing behavior towards green products in New Zealand. *Innovative Marketing*, 4(1): 93-102.
- Gosavi PS (2013). Gaining competitive advantage through green marketing of cell phone. *ASM's International E-Journal of Ongoing Research in Management and IT*, 13(1): 1-11.
- Hai HV and Mai NP (2012). Environmental awareness and attitude towards green purchasing of vietnamese consumers. JSPS Asian CORE Program: Japan Society for the Promotion of Science, Nagoya University and VNU University of Economics and Business, Tokyo, Japan.
- Hair JF, Black WC, Babin BJ, and Anderson RE (2010). *Multivariate data analysis: A global perspective*. Pearson Prentice Hall, New Jersey, USA.
- Hashem TN and Al-Rifai NA (2011). The influence of applying green marketing mix by chemical industries companies in three Arab States in West Asia on consumer's mental image. *International Journal of Business and Social Science*, 2(3): 92-101.
- Ihtiyar A and Ahmad FS (2014). Intercultural communication competence as a key activator of purchase intention. *Procedia-Social and Behavioral Sciences*, 150: 590-599.
- Kalafatis SP, Pollard M, East R, and Tsogas MH (1999). Green marketing and Ajzen's theory of planned behaviour: a cross-market examination. *Journal of Consumer Marketing*, 16(5): 441-460.
- Kumar P and Ghodeswar BM (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence and Planning*, 33(3): 330-347.
- Lam SY and Mukherjee A (2005). The effects of merchandise coordination and juxtaposition on consumers' product evaluation and purchase intention in store-based retailing. *Journal of Retailing*, 81(3): 231-250.
- Lao K (2014). Research on mechanism of consumer innovativeness influencing green consumption behavior. *Nankai Business Review International*, 5(2): 211-224.
- Laroche M, Bergeron J, and Barbaro-Forleo G (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, 18(6): 503-520.
- Mainieri T, Barnett EG, Oskamp S, Unipan JB, and Valdero TR (1997). Green buying: the influence of environmental concern on consumer behavior. *The Journal of Social Psychology*, 137(2): 189-204.
- Maletic M, Maletic D, and Gomiscek B (2010). Green product development - customers and producers reflection. *International Journal of Energy and Environment*, 4(4): 139-152.
- Mathur LK and Mathur I (2000). An analysis of the wealth effects of green marketing strategies. *Journal of Business Research*, 50(2): 193-200.
- Nunnally JC (1967). *McGraw-Hill series in psychology, Psychometric theory*. McGraw-Hill, New York, USA.
- Ottman JA (1998). *Green marketing: Opportunity for innovation*. NTC Business Books, Lincolnwood, USA.
- Paul J and Rana J (2012). Consumer behavior and purchase intention for organic food. *Journal of consumer Marketing*, 29(6): 412-422.
- Pickett-Baker J and Ozaki R (2008). Pro-environmental products: marketing influence on consumer purchase decision. *Journal of consumer marketing*, 25(5): 281-293.
- Polonsky MJ (2011). Transformative green marketing: Impediments and opportunities. *Journal of Business Research*, 64(12): 1311-1319.
- Rahbar E and Abdul Wahid N (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business Strategy Series*, 12(2): 73-83.
- Rakhsha R and Majidazar M (2011). Evaluation of effectiveness of green marketing mix on consumer satisfaction and loyalty: (Case study: The East Azarbaijan Pegah Dairy Company in Tabriz, Iran). *Middle-East Journal of Scientific Research*, 10(6): 755-763.
- Samarasinghe R (2012). Is social psychological model sufficient: empirical research gaps for understanding green consumer attitudinal behavior. *International Journal of Advanced Research in Management and Social Sciences*, 1(4): 28-54.
- Sekaran U (1992). *Research methods for business: A skill building approach*. John Wiley and Sons, Singapore.
- Sharma Y (2011). Changing consumer behaviour with respect to green marketing—a case study of consumer durables and retailing. *International Journal of Multidisciplinary Research*, 1(4): 152-162.
- Shil P (2012). Evolution and future of environmental marketing. *Asia Pacific Journal Of Marketing and Management Review*, 1(3): 74- 81.
- Shirsavar HA and Fashkhamy F (2013). Green marketing: A new paradigm to gain competitive advantage in contemporary business. *Trends in Advanced Science and Engineering*, 7(1): 12-18.
- Singh G (2013). Green: the new colour of marketing in India. *ASCI Journal of Management*, 42(2): 52-72.
- Singh PB and Pandey KK (2012). Green marketing: Policies and practices for sustainable development. *Integral Review*, 5(1): 22-30.
- Solvalier I (2010). Green marketing strategies case study about ICA group AB. M.Sc. Thesis, Karlstad University, Karlstad, Sweden.

- Tang Y, Wang X, and Lu P (2014). Chinese consumer attitude and purchase intent towards green products. *Asia-Pacific Journal of Business Administration*, 6(2): 84-96.
- Tseng SC and Hung SW (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production*, 59: 174-184.
- Wang ST (2014). Consumer characteristics and social influence factors on green purchasing intentions. *Marketing Intelligence and Planning*, 32(7): 738-753.
- Wanninayake WMCB and Randiwela P (2008). Consumer attractiveness towards green products of FMCG sector: An empirical study. In the Oxford Business and Economics Conference, Oxford University, Oxford, UK.
- Weisstein LF, Asgari M, and Siew SW (2014). Price presentation effects on green purchase intentions. *Journal of Product and Brand Management*, 23(3): 230-239.
- Wu PC, Yeh GYY, and Hsiao CR (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australasian Marketing Journal (AMJ)*, 19(1): 30-39.
- Yazdanifard R and Mercy IE (2011). The impact of green marketing on customer satisfaction and environmental safety. In the 2011 International Conference on Computer Communication and Management, IACSIT Press, Singapore, 5: 637-641.
- Yazdanpanah M and Forouzani M (2015). Application of the theory of planned behaviour to predict iranian students' intention to purchase organic food. *Journal of Cleaner Production*, 107: 342-352.