The Effect of Green Advertising as a Moderator on Green Purchase Attitude - Green Purchase Intentions Relationship. The Case of Young Egyptian Consumers

Samaa Taher Attia

Abstract

Purpose: This study aims to examine the effect of green advertising as a moderator on Green Purchase Attitude (GPA) - Green Purchase Intentions (GPI) relationship. However, in order to get a deeper insight on the different factors that could affect GPI, this current paper will also test how different psychographic and attitudinal factors could predict Environmentally Conscious Consumer Behaviour (ECCB). Then, in turn, it will test the effect of Environmentally Conscious Consumer Behaviour (ECCB), and Green Purchase Attitudes (GPA) on Green Purchase intentions (GPI).

Design/methodology/approach: Surveys were distributed among university students.

Findings: The results offer insight as Gender was identified as the only demographic that acts as a predictor to ECCB while both perceived consumer effectiveness (PCE) & environmental concern (EC) as psychographic predictors. Further, empirical support was evident for a direct impact of the relationship between Environmentally Conscious Consumer Behaviour (ECCB) on Green Purchase Attitudes (GPA). Finally, cognitive and affective responses to green advertising were found to moderate the relation between Green Purchase Attitudes (GPA) & Green Purchase Intentions (GPI).

Research limitations/implications: A major limitation lies in the small sample size used in the study. Future studies should include bigger sample size, yet, more variables to embrace the complicated topic of green purchase intentions.

Originality/value: This paper offers practical and deep guidelines to international green marketers who are planning to target the Egyptian market as an example of middle-eastern markets.

Samaa Taher Attia
Associate Professor - Marketing,
The British University in Egypt,
Egypt

INTRODUCTION

Technological and industrial revolutions as well as the misuse of the environmental resources have attracted the attention to the environmental deterioration in terms of pollution, global worming, acid rain, Ozone layer reduction, etc. (Akehurst et al 2012, Ishaswini & Datta 2011). This increased environmental awareness and the possible approaches to enhance green behaviour. Indeed, testing consumer green purchase intentions and whatever could affect/enhance it, such as environmentally conscious consumer

behaviour (ECCB) including perceived consumer effectiveness (PCE) and environmental concern (EC) have been in the heart of the literature.

ENVIRONMENTALLY CONSCIOUS CONSUMER BEHAVIOUR (ECCB)

ECCB can simply be defined as one who focuses on purchasing products that have a positive impact on the environment (Roberts & Bacon 1997), i.e. purchasing of green products over non green ones (Murarolli 2012). In other words, it is "Behaviour orientation" (Akehurst et al 2012: 978). Roberts (1996) had developed ECCB scale which includes both demographic and attitudinal dimensions as he believes that these are the most important. Based on this, ECCB scale contains a compilation of behavioural items, as it represents six factors (Roberts & Bacon 1997); 1) use of recycled products, 2) driving habits to reflect the dependency on oil, 3) general recycling issues and bioddegraduity, 4) consumer purchase decisions and how environmental concerns may better this process, 5) reducing the amount of electricity used, and 6) saving electricity by using small Wattage bulbs.

In terms of predicting ECCB, there are controversies with reference to results related to the different relationship among ECCB and its predictors. Those variables could be mainly, divided into psychographic and demographic. For the psychographic variables, many authors found that perceived consumer effectiveness (PCE) is more effective in predicting ECCB. PCE could be defined as the consumer's perception of how his/her actions would impact environmental outcomes in terms of solving environmental problems (Murarolli 2012; Akehurst et al 2012). Furthermore, many studies found that Environmental Concern (EC) could predict ECCB (Lee, 2009). Environmental concern represents the awareness of individuals' environmental problem and willingness to be part of the problem solution (Dunlap & Johns 2002; Chan & Lau 2000). Almost all these studies were conducted in developed/western

countries. However, such cases in developing countries are yet to be discovered.

Furthermore, previous studies have attempted to research the relationship between gender (as predictors of ECCB) and green purchase intentions and uncovered varying results. For instances, the study of Florenthal & Arling (2011) investigated how gender and income affect individuals holding green lifestyles, green attitudes and green behavioural intentions. Results of this study indicated that even though females do not practice greener lifestyles than males, they do, however, value green product attributes more than males; indicating a positive relationship between green attitudes and female gender.

A similar study was conducted by Lee (2009) to examine the relationship between gender and environmental attitude, environmental concern, perceived seriousness of environmental problems, perceived environmental responsibility, peer influence, self identity in environmental protection and green purchasing behaviour in Hong Kong adolescent consumers. Among several other findings, the author identified that females hold more favourable green attitudes establishing that female adolescents in Hong Kong represent a significant market for green products. Wahid et. al (2011) supports this study after determining that females have higher green purchase behaviour than males and Rahim et. al (2012) found that females reflect a more positive attitude towards green advertising indicating a higher level of environmentalism. Similar results were identified by Haytko & Matulich (2010) establishing that females tend to be more environmentally responsible and exhibit more positive attitudes towards green advertising and green products.

Moreover, Stevels, Agema & Hoedemaker (2001) also agree that because females attribute more value to green products, this creates market opportunities if coupled with other benefits such as design, durability and ease-of-use. Some other

studies have identified that gender has, in fact, no effect on green purchase attitudes. Results of the study of Lin & Shih (2010) revealed no difference between the different genders in regard with green purchase attitudes. The authors identified that differences only existed within different marital status and age groups.

On the other side, some other studies contrasted with the results discussed above. Mostafa's (2007) study in Egypt, which is more relevant to this study, identified that males are more aware of environmental matters, they hold more environmental concerns and express more positive attitudes towards green purchase than their female counterparts. However a justification as to why that was not provided. So, based on this discussion, it is proposed that:

H1a: Demographics, in terms of gender, age, major, G.P.A and year of study, are predictors of ECCB.

H1b: Psychographics, in terms of PCE and EC, are predictors of ECCB.

ECCB & PURCHASE ATTITUDE

In general, Akehurst et al (2012) found a positive relation between ECCB and green purchase behaviour in Portugal when they collected online data. More specifically, Murarolli (2012) stressed the positive relationship between ECCB and green purchase intentions. Based on this, it is proposed that:

H2: There is a positive relationship between ECCB and Green Purchase attitude (GPA).

GREEN PURCHASE INTENTION AND GREEN PURCHASE ATTITUDE

Florenthal & Arling (2011) identified a positive significant relationship between green purchase attitudes and intentions. However, in many other studies, "attitude behaviour gap" was found, where although it was expected that there will be a positive relation between green

purchase attitude and green purchase intention, in many studies this relation was not found (e.g., Akehurst et al 2012 and Gupta & Odgen 2009). For example, Chan (2001) cited in Akehurst et al (2012) found that Chinese consumers have knowledge and share ecological values, yet, green purchase intentions does not necessarily lead to green purchasing behaviour. Papista & Krystallis (2012) also refers to this attitude behaviour gap and refers to several studies that indicate that the relationship between green attitudes and actual green buying is weak. Pickett-Baker & Ozaki's (2008) study explains that this attitude behaviour gap is due to green attitudes not being specific enough to lead to action purchases, and provides recommendations on how this gap can be closed.

On the other hand, many other studies found a significant relation between GPA and GPI. For instance, Kalafatis et al (1999) confirms the application of the theory of planned behaviour in green marketing and establishes that green purchase attitudes lead to green purchase intentions, particularly in more established markets. Lien and Chen (2010) also applied the theory of planned behaviour on green consumption, drawing on similar conclusions. Similarly, Kotchen & Reiling (2000) identify that green attitudes predict green intentions and behaviour.

Therefore, for Egyptian consumers we predict that:

H3: There is a positive relationship between green purchase attitudes (GPA) and green purchase intentions (GPI).

GREEN ADVERTISING AS A MODERATOR BETWEEN G.P. ATTITUDE AND G.P. INTENTION

Rahim et al. (2012) explored green advertising and environmentally responsible consumer behaviour by measuring levels of awareness and perception towards green advertising by Malaysian youth. The results of the study

identified a positive relationship between consumer responses to green advertising and consumers' concern of the environment and knowledge of green living. Another relationship was identified by D'Souza, Taghian & Lamb (2006) that determined that consumers have future green purchase intentions, even if green products are lower in quality, if environmental information is expressed. This was challenged by D'Souza et al. (2006) that argue that consumers in fact are not tolerant of green products when they are of lower quality.

The study of Follows & Jobber (2000) tested a consumer model of environmentally responsible purchase behaviour and identified that there is a hierarchical relationship between consumer values to product specific attitudes to purchase intentions to purchase behaviour. This study can be extended further to presume that those environmentally responsible consumers that hold "green" values will probably accept green advertising with a more favourable attitude which can be extend further to purchase

intentions and behaviour. However, Rahbar & Wahid (2011) argued that this is not the case. Their study revealed that green advertising helps consumers become more knowledgeable about green products and helps them make a more informed purchase decision, but it does not, however, influence consumers' buying behaviour of green products.

On the other hand, Cheah & Phau (2011) explained how consumers that hold favourable attitudes towards environmentally responsible products are more probable to purchase environmentally friendly products and hence recommended that marketing communications should emphasize environmental support campaigns and environmentally conscious product strategies which should result in increased green purchase behaviour. Based on this:

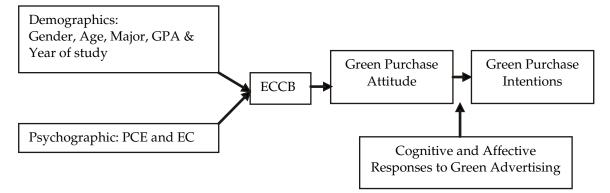H4: Green advertising moderates the relation between GPA and GPI.

Figure 1: The research framework

METHOD

The ECCB (Straughan & Roberts 1999, Roberts & Bacon 1997) was measured by 30-items in a Likert-format, anchored by "Strongly agree" (5) and "Strongly disagree" (1) and calculated as a sum of the responses to the 30-items scale (with appropriate items reverse scored). The ECCB's reliability is very good as its Cronbach's alpha

coefficient was 0.919, after deleting one item "to save energy, I drive my car as little as possible" (DeVellis, 1991).

Socio-demographic measures. Four key demographic variables were used: gender, G.P.A, major, and year of study. Psychographic measures. Two psychographic variables were included PCE and EC adapted from Straughan &

Roberts (1999), and Roberts & Baccom (1997). Green purchase intention. Three statements were used to measure respondents' intention to buy green products (GPI), five point scale was used where 1 represented strongly disagree, and 5 strongly agree. Cronbach's alpha coefficient was 0.93. Green purchase attitude. Similar to GPI, three statements were used to measure respondents' attitude towards green purchase. This scale was adapted from Mostafa (2006).

FINDINGS

Descriptive
We obtained a convenience sample of 89 respondents from university students: 28.5% males, and 71.4% females. The majority 28% are fourth year, while 24% are third year, and around 49% were from both first and second year (24% from first year, and another 24% from second year). In terms of major, the majority were specialised in Marketing 25.8%, followed by HR 19.1%, then General Business 15.7%, Accounting and Finance 7.9% and finally MIS 1.1%; 30% were missing data or have not yet been specialised.

Finally, in terms of G.P.A, the majority earned a G.P.A between 50% to 60% (25%), followed by 60 to 70% (21.3%), then, from 40% to 50% (18%), then from 70% to 80% 10.1% and finally, 2.2% earn either lower than 40% or higher than 80%. 23.4% of respondents did not answer this question and hence is missing data.

Testing hypotheses
In order to test the hypotheses, many regression tests took place due to the small sample size at hand as will be explained next:

First, in order to test: H1a: Demographics, in terms of gender, age, major, G.P.A and year of study, are predictors of ECCB, a multiple linear regression was used where ECCB was the dependent variables and socio-demographic variables (gender, age, major, G.P.A, and year of study) were the independent variables/ predictors. As shown in Table (1a), only gender predicts ECCB. This is similar to what Florentihal and Arling (2011), Lee (2009), Wahid et al (2011) and Rahim et al (2012) have found.

Table 1a: Socio-demographic variables as Predictors and Dependent variable: ECCB

Multiple R=.43		*R²= .18*	*Adj. R²= .17*
Δ R² = 0.18		*Constant (intercept) = 0.00*	
F=19.78	*p = .00*		
Items	*B*	*Beta*	*t-value*
Gender	0.49	0.43	0.00
Dependent variable: ECCB			

Indeed, this agrees with the results of Lee (2009) model, despite researching a younger sample (high school students) on a much larger magnitude (6,010 respondents). Another study Haytko & Matulich (2010) reinforced the same results and also investigated a similar age group sample, (university students), but again on a larger magnitude (565 respondents). This may imply that such results can be more widely applied.

Then, to test: H1b: Psychographics, in terms of PCE and EC, are predictors of ECCB, in another linear regression model psychographic variables (EC, and PCE) were the independent variables while ECCB was the dependent, table 1b. The resulted regression model explains 34 percent (Adjusted R2) of the total variance and is significant, F (5.44, p-0.00) both PCE and EC were significant. PCE were significant and therefore both of them predict ECCB. However, PCE is believed to have the higher predictive power where B=0.57, while EC=0.29. Based on this, H1 is partially accepted.

Table 1b: Psychographic variables as Predictors and Dependent variable: ECCB

Multiple R=.60		R^2= .36	Adj. R^2= .34
ΔR^2 = 0.06		Constant (intercept) = 0.00	
F=16.05	p = .00		
*Items	B	Beta	t value
PCE	0.57	0.53	0.00
EC	0.29	0.25	0.00
Dependent variable: ECCB			

Then, in order to test the second hypotheses (H2: There is a positive relationship between ECCB and Green Purchase attitude (GPA)), first, following Ishaswini and Datta (2011), a factor analysis was conducted for the ECCB scale. Interestingly, this factor analysis resulted in two main factors as depicted in table 2. Following Ishaswini and Datta , the first factor is called "Green Buyer" and the second factor is called "Pro-environmental concern".

Then, a multiple regression analysis was conducted, were ECCB as factors was the independent variable and GPA was the dependent. Surprisingly, both factors were significant, however, the first factor , based on B,

had a heavier effect on GPA compared to the second factor. Table 3a.

Finally, in order to know exactly which items predicts GPA, another regression analysis was conducted, Table 3b, where all ECCB items were entered. Funny enough, only two items were found significant. The first one with highest effect (B=.48) was "I buy high efficiency light bulbs to save energy" which in fact belongs to Factor 1. While the second item " When there is a choice, I always choose that product which contributes to the least amount of pollution" which belongs to factor 2 (B=.32). This confirms the second hypothesis, and therefore, H2 is not rejected.

Table 2: Factor analysis of ECCB

Factor 1: "Green Buyer"		0.97
ECCB_1 To save energy, I drive my car as little as possible.	.86	
ECCB_2 I normally make a conscious effort to limit my use of products that are made of or use scarce resources.	.72	
ECCB_3 I try to buy energy efficient household appliances.	.72	
ECCB_4 I always try to use electric appliances (e.g. dishwasher, washer and dryer) before 10a.m. and after 10 p.m.	.82	
ECCB_5 I will not buy products which have excessive packaging.	.85	
ECCB_6 When there is a choice, I always choose that product which contributes to the least amount of pollution.	.70	
ECCB_7 I have tried very hard to reduce the amount of electricity I use.	.90	
When humans interfere with nature, it often produces disastrous consequences.	.86	
ECCB_9 I have switched products for ecological reasons.	.63	
Eigenvalue: 19.82		
Percentage of variance: 70.78		

Factor 2: "Pro-environmental concern"		0.98
ECCB_10 I use a recycling centre or in some way recycle some of my household trash.	.93	
ECCB_11 I make every effort to buy paper products made from recycled paper.	.84	
ECCB_12 I have convinced members of my family or friends not to buy some products which are harmful to the environment.	.80	
ECCB_13 I have replaced light bulbs in my home with those of smaller wattage so that I will conserve on the electricity I use.	.76	
ECCB_14 I have purchased products because they cause less pollution.	.84	
ECCB_15 I do not buy products in aerosol containers.	.93	
ECCB_16 Whenever possible, I buy products packaged in reusable containers.	.84	
ECCB_17 When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	.93	
ECCB_18 When I have a choice between two equal products, I always purchase the one which is less harmful to other people and the environment.	.84	
ECCB_19 I buy toilet paper made from recycled paper.	.84	
ECCB_20 I buy Kleenex made from recycled paper.	.84	
ECCB_21 I buy paper towels made from recycled paper.	.88	
ECCB_22 I will not buy a product if the company that sells it is ecologically irresponsible.	.84	
ECCB_23 I have purchased light bulbs that were more expensive but saved energy.	.84	
ECCB_24 I try only to buy products that can be recycled.	.76	
ECCB_25 To reduce our reliance on foreign oil, I drive my car as little as possible.	.80	
ECCB_26 I usually purchase the lowest priced product, regardless of its impact on society.	.76	
ECCB_27 I do not buy household products that harm the environment.	.76	
ECCB_28 I buy high efficiency light bulbs to save energy.	.80	
Eigenvalue: 3.76 *Percentage of variance: 13.44*		
Kaiser –Mayer –Olkin (KMO) 0.89 **Bartlett test of sphericity Chi-square=10661.16 (p=0.00)**		

Table 3a: Regression analysis results of testing H2. (GPA as factors)

Multiple R=.54	*R^2= .29*	*Adj. R^2= .28*	
$\Delta R^2 = 0.10$	*Constant (intercept) = 0.00*		
F=18.18	**p = .00**		
It s	*B*	*Beta*	*t-value*
Factor 1: Green Buyer	169.06	.43	4.84
Factor 2: Pro-environmental concern	125.15	.32	3.58
Dependent variable: GPA			

Table 3b: Regression analysis results of testing H2. (GPA as items)

Multiple R=.60	R²= .38	Adj. R²= .36	
Δ R² = 0.06	Constant (intercept) = 0.00		
F=26.58	p = .00		

Items	B	Beta	t-value
*I buy high efficiency light bulbs to save energy.	.48	.42	3.89
**When there is a choice, I always choose that product which contributes to the least amount of pollution.	.32	.25	2.31
Dependent variable: GPA			

*Item that belong to factor 1.
**Item that belongs to factor 2.

Then, in order to test the third hypothesis (H3: There is a positive relationship between green purchase attitudes (GPA) and green purchase intentions (GPI)) , a new regression analysis was conducted where the three items of GPA were the independent while GPI was the dependent. Table 4 depicts the results. Interestingly, only one item was significant which is "Purchasing green is a….idea" where the respondent had the choice of: Bad, very bad, neutral, good and very good. This confirms that there is a positive relationship between GPA and GPI and therefore H3 is not rejected.

Table 4: Regression analysis results of testing relationship between green purchase attitudes (GPA) and green purchase intentions (GPI)

Multiple R=. 46	R²= .21	Adj. R²=.20	
Δ R² = 0.21	Constant (intercept) = 0.00		
F=24.21	p = .00		

*I ems	B	Beta	t-value
Purchasing green is a ….idea	.34	.46	4.92
Dependent variable: Green Purchase Intentions			

Furthermore, in order to test the fourth hypothesis (H4: Green advertising moderates the relation between GPA and GPI), first factor analysis was conducted for Cognitive and Affective Responses to Green advertising, followed by regression analysis. In more details, table 5 presents the results of factor analysis of Cognitive and Affective Responses to Green advertising (GA) where five factors resulted; Factor 1: "Cognitive & Affective responses to GA", Factor 2: "Consumer reaction to companies' GA", Factor 3: "Consumer personal belief towards GA", Factor 4: "Ethical impact of G.A", Factor 5: "Consumer negative attitude towards G.A.". As per the reliability of each factor, the acceptability of the measurement model used in this current study is assessed by testing reliability and validity. Results are presented in table 5 next to each factor, the rule of thumb for acceptable Alpha is 0.7, however, in exploratory research 0.6 is also acceptable. All the items loading in the table are within acceptable limits (Attia 2003; Tortosa et al 2009).

Regarding moderating effect, table 6 represents that Cognitive and Affective Responses to Green advertising actually moderates the relationship between "Green purchase attitude" and "Green purchase intentions". In more details, results revealed that cognitive and affective responses to

green advertising in fact moderate the relation between GPA and GPI. Specifically, two main factors out of the five factors were found to moderate this relationship. This goes in line with what Rahim et al (2012) found, where the results of the study identified a positive relationship between consumer responses to green advertising and consumers concern of the environment and knowledge of green living. More interestingly, as mentioned earlier, D'Souza, Taghian & Lamb (2006) found that consumers have future green purchase intentions, even if green products are lower in quality, if environmental information is expressed. Cognitive responses to green advertising are also expressed in Shrum et. al's (1995) psychographic profiling of green consumers reveals that green consumers are careful shoppers who seek information on products, including information from advertising, although they may be sceptical of it. On a more affective level, Pickett-Baker & Ozaki (2008) support that green marketing should utilise affective strategies which would influence attitude formation, indicating that affective responses may have a moderating effect. This is also supported by Lee (2009) who recommends that green marketers should use emotional appeals in their communications.

Table 5: Factor analysis of Cognitive and Affective responses to Green advertising

Items	Factor Loading	Reliability Analysis (α)
Factor 1: " Cognitive & Affective responses to G.A."		0.76
Q1 Green advertising is valuable to society Q3 Green advertising leads people to be more socially responsible	.61	
Q4 Green advertising shows the consumer that the firm is addressing consumers environmental concerns	.66	
Q5 Green advertising strengthens company image	.64	
Q6 I think green advertising is good	.70	
Q9 Green advertising is good business practice	.73	
Q13 Products and services that are advertised as green are safer to use	.55	
Q14 Green advertising is good at addressing environmental problems	.48	
Q52 Companies use green advertising to protect their reputations	.64	
Eigenvalue: 7.37 *Percentage of variance: 25.43*		
Factor 2: "Consumer reaction to companies' G.A."		0.75
Q16 Green advertising is believable	.55	
Q41 Green advertising presents a true picture of the product being advertised	.75	
Q42 Sponsors of green advertising have sincere intentions	.72	
Q43 I have more confidence in advertised green products than in unadvertised green ones	.50	
Q44 I believe the claims in green advertising are truthful	.63	
Q53 Green advertising results in higher prices for products	.51	
Eigenvalue: 3.44 *Percentage of variance: 11.88*		
Factor 3: "Consumer personal believe towards G.A."		0.76
Q15 Green advertising is a good source of information about products/services	.57	
Q37 Green advertising results in better products	.54	

Q39 Green advertising helps to solve environmental problems	.61	
Q40 Green advertising is interesting to see	.80	
Q46 I plan to switch to products and services that were advertised as being green *Eigenvalue 2.79* *Percentage of variance: 9.63*	.44	
Factor 4: "Ethical impact of G.A"		0.64
Green advertising is unprofessional	.72	
Q48 I prefer products with eco-labeled packages	.50	
Q49 Green advertising exploits environmental issues instead of addressing them	.57	
Q50 Green advertising is deceptive	.64	
Q51 Green advertising preys upon consumers' environmental concern	.83	
Q54 Advertisements that focus on environmental concerns persuade people to buy products they do not really need	.71	
Q56 I don't pay much attention to green advertising	.42	
Eigenvalue 1.91 *Percentage of variance: 6.58*		
Factor 5: "Consumer negative attitude towards G.A."		0.71
Q55 Green advertising is unnecessary **Q57 I have an unfavorable view of green advertising**	.98	
Q58 Green Ad Green advertising in unprofessional	.57 .68	
Eigenvalues 1.73 **Variance 5.98**		
Kaiser –Mayer –Olkin (KMO) 0.57 **Bartlett test of sphericity Chi-square=958.41 (p=0.00)**		

Table 6: Regression results of moderation

Multiple R=.43	*R²= .18*	*Adj. R²=.15*	
Δ R² = 0.07	*Constant (intercept) = 0.00*		
F=5.84	*p = .00*		
	B	**Beta**	**t-value**
Factor 2: Consumer reaction to companies	.33	.33	2.68
Factor 3: Consumer personal believe towards Green Advertising	.26	.27	2.17
Dependent variable: Green Purchase Intentions			

Finally, the path relationships of the whole model were estimated by performing Structural Equation Modelling - SmarPLS. In order to obtain t-statistics, the bootstrap procedure was used to evaluate the significance of the parameters (Large and Thomsen 2011). The results of the parameter estimation are shown in Table 7 These results provide empirical support for all proposed hypotheses. All regression coefficients are in the predicted direction and significant.

In details, confirming the results obtained earlier, there was support for H1, which predicted that ECCB is positively linked to GPA. Similar to Florenthal and Arline (2011) GPA would lead to

GPI, indeed, they identified a positive significant relationship between green purchase attitudes and intentions. This goes in line with the studies of Kalafatis et. al (1999), Kotchen & Reiling (2000) and Lien and Chen (2010) as discussed earlier.

Table 7: Results of Structural Equation Modelling - SmarPLS

Path	R^2	t-statistics	Sig.
ECCB ⟶ GPA	0.81	16.28	.00
GPA ⟶ GPI	0.34	2.67	.00
GPA ⟶ Green advertising ⟶ GPI	0.26	2.45	.00

Finally and furthermore, that green advertising would positively moderate the relation between GPA and GPI. This is in line with Shrum et. al's (1995) study that indicates that green consumers (i.e., those that hold green attitudes) will be receptive to green advertising as long as communication messages are not vague or misleading. It also goes in line with Pickett-Baker & Ozaki's (2008) who recommend that in order to close the attitude behaviour gap, marketing communications that increase awareness and provide product/benefit information are necessary. As Juwaheer et. al (2012) explained that green marketing strategies contribute to increased purchasing behaviour of green products.

Results of this study revealed that cognitive and affective responses to green advertising in fact moderate the relation between GPA and GPI. This goes in line with what Rahim et al (2012) found, where the results of the study identified a positive relationship between consumer responses to green advertising and consumers concern of the environment and knowledge of green living.

DISCUSSION & IMPLICATIONS

What Egypt has been through and still going through, in terms of revolutions and political instability, present a real challenge for marketers who would want to explore the behaviour of the Egyptian consumers. This is especially true with the "green behaviour" that has been in the heart of the attention recently. This study is unique in that it gets closer to the "green" attitudes and intentions of the Egyptian consumers after these revolutions.

This study presents the chance to examine in a developing coungtry a conceptual framework that has been discussed to some extent in previous studies. Indeed, following Akehurst et al (2012), a conceptual framework which posited a positive relationship between ECCB, GPA, GPI and Green Advertising was developed. Our analysis provides an empirical support for a direct impact of the relationship between ECCB & GPA, GPA & GPI moderated by Green advertising. Similar to Mostafa (2007) we found a positive relation between gender as a predictor to ECCB, however, the rest of the demographic factors were not significant, maybe this is because of the effect of the Egyptian revolution (2011) and the economic and political damages that came with it where the real genuine effect is only the gender, rather than anything else.

From Haytko and Matulich (2008) we incorporated in our framework green advertising as a moderator. Our results are important as they show that green advertising indeed, positively affects the relation between GPA and GPI. This means that the more customers are exposed to information regarding green purchase through green advertising, the higher his/her tendency have GPI. This result is

as expected and consistent with previous discussion regarding the importance of green advertising as an important awareness tool, where customers would learn more about the importance of holding GPI and therefore, serve the environment and reduce harm to our beloved mother earth.

The results of this study are important, as they provide a better understanding of what factors that would affect GPI. Theses results suggest that green advertising is crucial and contributes to GPI. In fact, this current study shows how complicated it is when it comes to GPI. Specifically, in order to improve and encourage GPI, companies should contact consumers in/directly via green advertising to influence their purchase intentions. Also, ECCB and GPA have a positive effect on GPI.

LIMITATION AND FUTURE RESEARCH

Although this study has an important contribution to research and some key managerial implications, still like the vast majority of research, it has some limitations that should be addressed: the fact that GPI is a complex term and other constructs might contribute to it, so, incorporating other factors such as consumer personality could reveal another untested perspective.

Also, it would be encouraged if similar research could be repeated with larger sample size especially that this sample is university students.

BIBLIOGRAPHY

[1]   Akehurst, G., Afonso, C. and Goncalves, H. (2012) 'Re-examining green purchase behaviour and the green consumer profile: new evidences', Management Decision, vol. 50, no. 5, pp. 972-988.

[2]   Attia, S. (2004) Acheiveing Competitive positioning: The role of resources within environmental constraints, PhD thesis. Aston University, UK.

[3]   Banerjee, S., Gulas, C. and Iyer, E. (1995) 'Shades of Green: A Multidimensional Analysis of environmental advertising', Journal of Advertising, vol. XXIV, no. 2, pp. 21-31.

[4]   Barber, N. (2010) "Green" wine packaging: targeting environmental consumers', International Journal of Wine Business Research, vol. 22, no. 4, pp. 423-444.

[5]   Carlson, L., Grove, S., Kangun, N. and Polonsky, M. (1996) 'An international comparison of environmental advertising: Substantive versus associative claims', Journal of Macromarketing, vol. Fall, pp. 57-68.

[6]   Chan, R. (2001) 'Determinants of Chinese consumers' green purchase behaviour', Psychology and Marketing, vol. 18, no. 4, pp. 389-413.

[7]   Chan, R. and Lau, L. (2000) 'Anecedents of green purchase: A survey in China. ', Jourenal of consumer Marketing, vol. 17, no. 4, pp. 338-413.

[8]   Chan, R., Leung, T. and Wong, Y. (2006) 'The effectiveness of environmental claims for services advertising', Journal of Services Marketing, vol. 20, no. 4, pp. 233-250.

[9]   Chang, C. (2011) 'Feeling ambivalent about going green. Implications for green advetising processing', Journal of Advertising, vol. 40, no. 4, pp. 19-31.

[10] Cheah, I. and Phau, I. (2011) 'Attitudes towards environmentally friendly products: The influence of ecoliteracy, interpersonal influence and value orientation', Marketing Intelligence & Planning, vol. 29, no. 5, pp. 452-472.

[11] D'Souza, C., Taghian, M. and Lamb, P. (2006) 'An empirical study on the influence of environmental labels on consumers', Corporate Communcations, vol. 11, no. 2, pp. 162-173.

[12] D'Souza, C., Taghian, M., Lamb, P. and Peretiatkos, R. (2006) 'Green products and coporate strategy: an empirical investigation', Society and Business Review, vol. 1, no. 2, pp. 144-157.

[13] DeVellis, R. (n.d) Scale development: Theory and Application, Newbury Park, CA: Sage.

[14] Dikmen, G. (2010) 'Consumer responses to green advertising in Turkey', Istanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi, vol. 9, no. 17, pp. 119-134.

[15] Do Paco, A. and Raposo, M. (2009) '"Green" segmentation: an application to the Portuguese consumer market', Marketing Intelligence & Planning, vol. 27, no. 3, pp. 364-379.

[16] Dunlap, R. and Jones, R. (n.d) 'Environmenal concern: Conceptual and measurement issues', in Dunlap, R., Riley, R. and Michelson, W. Hand book of environmental sociology, Greenwook Press.

[17] Emerald Article (2006) 'Green is green at General Electric: Is Jeff Immelt the man to pull "Ecomagination" Off?', Strategic Direction, vol. 22, no. 9, pp. 21-23.

[18] Florenthal, B. and Arling, P.A. (2011) 'Do green lifestyle consumers appreciate low involvement green products', Marketing Management Journal, vol. 21, no. 2, pp. 35-45.

[19] Follows, S.B. and Jobber, D. (2000) 'Environmentally responsible purchase behaviour: a test of a consumer model', European Journal of Marketing, vol. 34, no. 5, pp. 723-746.

[20] Fotopoulos, C. and Krystallis, A. (2002) 'Purchasing motives and profile of the Greek organic consumer: a countrywide survey', British Food Journal, vol. 104, no. 9, pp. 730-765.

[21] Getzner, M. and Grabner-Krauter, S. (2004) 'Consumer preferences and marketing strategies for "green shares" Specifics of the Austrian market', International Journal of Bank Marketing, vol. 22, no. 4, pp. 260-274.

[22] Gupta, S. and Ogden, D. (2009) 'To buy or not to buy? A social dilemma perspective on', Journal of Consumer Marketing, vol. 26, no. 6, pp. 376-391.

[23] Han, H., Hsu, L. and Lee, J. (2009) 'Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers' eco-friendly decision-making process', International Journal of Hospitality Management, vol. 28, pp. 519-528.

[24] Hartmann, P. and Apaolaza-Ibanez, V. (2009) 'Green advertising revisited: Conditioning virtual nature experiences', International Journal of Advertising, vol. 28, no. 4, pp. 715-739.

[25] Hartmann, P. and Apaolaza-Ibanez, V. (2011) 'Consumer attitude and purchase intention toward green energy brands: The roles of psychological benefits and environmental concern', Journal of Business Research, vol. Forthcoming, pp. 1-11.

[26] Haytko, D. and Matulich, E. (2008) 'Green Advertising and Environmentally Responsible Consumer Behaviors: Linkages Examined', Journal of Management and Marketing Research, pp. 2-11.

[27] Haytko, D.L. and Matulich, E. (2010) 'Green Advertising and Environmentally Responsible Consumer Behaviors: Linkages Examined', Journal of Management and Marketing Research, vol. 1, pp. 2-11.

[28] Insch, A. (2011) 'Conceptualization and anatomy of green destination brands', International Journal of Culture, Tourism and Hospitality Research, vol. 5, no. 3, pp. 282-290.

[29] Ishaswini, N. and Datta, S. (2011) 'Pro-enviromental concern influencing green buying: A study on Indian consumers', Journal of Consumer Mareketing, vol. 28, pp. 40-47.

[30] Iyer, E. and Banerjee, B. (1993) 'Anatomy of green advertising', Advances in Consumer Research, vol. 20, pp. 494-501.

[31] Juwaheer, T., Pudaruth, S. and Noyaux, M. (2012) 'Analysing the impact of green marketing strategies on consumer purchasing patterns in Mauritius', World Journal of Entrepreneurship, Management and Sustainable Development, vol. 8, no. 1, pp. 36-59.

[32] Kalafatis, S., Pollard, M., East, R. and Tsogas, M. (1999) 'Green marketing and Ajzen's theory of planned behaviour: A cross market examination', Journal of consumer Marketing, vol. 16, no. 5, pp. 441-460.

[33] Karna, J., Juslin, H., Ahonen, V. and Hansen, E. (2001) 'Green Advertising: Greenwash or a true reflection of marekting strartegy?', Greener Management International, vol. 33, pp. 59-70.

[34] Kilbourne, W. (1995) 'Green Advertising: Salvation or Oxymoron? ', Journal of Advertising, vol. XXIV, no. 2, pp. 7-19.

[35] Kim, S., Haley, E. and Koo, G. (2009) 'Comparison of the paths from consumer involvement types to AD responses between corporate advertising and product advertising', Journal of Advertising, vol. 38, no. 3, pp. 67-80.

[36] Kotchen, and Reiling, S. (2000) 'Enviromental attitudes, motivations, and contingent valuation of nonuse values: A case study involving endangered specis', Ecological Economics, vol. 32, pp. 93-107.

[37] Large, R. and Thomsen, C. (2011) 'Drivers of green supply management performance: Evidence from Germany', Journal of Purchasing & Supply Management, vol. 17, no. 3, pp. 176-184.

[38] Lee, K. (2009) 'Gender differences in Hong Kong adolescent consumers' green purchasing behavior.', Journal of Consumer Marketing, vol. 26, no. 2, pp. 87-96.

[39] Leonidou, L., Leonidou, C., Palihawadana, D. and Hultman, M. (2011) 'Evaluating the green advertising practices of international firms: A trend analysis', International Marketing Review, vol. 28, no. 1, pp. 6-33.

[40] Lewis, B. (2009) The influnce of the dominant social paradigm on consumer environmental attitudes, values and behaviors, Athens: PhD dissertation, The University of Georgia.

[41] Lien, C. and Chen, Y. (2010) 'Trhe relationships b etween green consumption dognition and behavioural intention for consumers in hte restaurant industry', IEEE internaional conference indusry Eng. Eng. Mangafge. IEEM , 748-752.

[42] Lin, C.-C. and Shih, D.-H. (2010) 'Green consumption attitudes of the tourists lodging in the resort hotel', International Conference on Bioinformatics and Biomedical Engineering, 1-4.

[43] Manaktola, K. and Jauhari, V. (2007) 'Exploring consumer attitude and behaviour towards green', International Journal of Contemporary Hospitality Management, vol. 19, no. 5, pp. 364-377.

[44] Mostafa, M.M. (2007) 'Gender differences in Egyptian consumers' green purchase behaviour: the effects of environmental knowledge, concern and attitude', International Journal of Consumer Studies , vol. 31, pp. 220-229.

[45] Murarolli, M. (2012) A green residential wish list: Most important features according to homeowners, University of Missouri – Columbia: Master of Science.

[46] Paco, A. and Raposo, M. (2009) '"Green" segmentation: an application to the Portuguese consumer market', Marketing Intelligence & Planning, vol. 27, no. 3, pp. 364-379.

[47] Papadopoulos, I., Karagouni, G., Trigkas, M. and Platogianni, E. (2010) 'Green marketing: The case of Greece in certified and sustainably managed timber products', EuroMed Journal of Business, vol. 5, no. 2, pp. 166-190.

[48] Papista, E. and Krystallis, A. (2012) 'Investigating the types of value and cost of green brands: Proposition of a conceptual framework', Journal of Business Ehics, vol. 115, no. 1, pp. 93-100.

[49] Pergelove, A., Prior, D. and Rialp, J. (2010) 'Assessing advertsing efficiency. Does the Internet play a role?', Journal of Advertising, vol. 39, no. 3, pp. 39-54.

[50] Pickett-Baker, J. and Ozaki, R. (2008) 'Pro-environmental products: marketing influence on consumer purchase decision', Journal of Consumer Marketing, vol. 25, no. 5, pp. 281-293.

[51] Rahbar, E. and Wahid, N.A. (2011) 'Investigation of green marketing tools' effect on consumers' purchase behavior', Business Strategy Series, vol. 12, no. 2, pp. 73-83.

[52] Rahim, M.A., Zukni, R.Z., Ahmad, F. and Lyndon, N. (2012) 'Green Advertising and Environmentally Responsible Consumer Behavior: The Level of Awareness and Perception of Malaysian Youth', Asian Social Science, vol. 8, no. 5, pp. 46-54.

[53] Rahim, M.H.A., Zukni, R.Z.J.A., Ahmad, F. and Lyndon, N. (2012) 'Green Advertising and Environmentally Responsible Consumer Behavior: The Level of Awareness and Perception of Malysian Youth', Asian Social Science, vol. 8, no. 5, pp. 46-54.

[54] Raska, D. and Shaw, D. (2012) 'When is going green good for company image?', Management Research Review, vol. 35, no. 3, pp. 326-347.

[55] Roberts, J. and & Bacon, D. (1997) 'Ecologically conscious consumer buying', Journal of Business Research, vol. 40, pp. 79-89.

[56] Robinot, E. and Giannelloni, J. (2010) 'Do hotels' "green" attributes contribute to customer satisfaction', Journal of Services Marketing, vol. 24, no. 2, pp. 157-169.

[57] Schlegelmilch, B., Bohlen, G. and Diamantopoulos, A. (1996) 'The link between green purchasing decisions and measures of environmental consciousness', European Journal of Marketing, vol. 30, no. 5, pp. 35-55.

[58] Schuhwerk, M. and Lefkoff-Hagius, R. (1995) 'Green or Non-green? Does type of appeal matter when advertsing a green product? ', Journal of Advertising, vol. XXIV, no. 2, pp. 45-54.

[59] Shrum, L., McCarty, J. and Lowrey, T. (1995) 'Buyer characteristics of ghte green consumer and their implications for advertising stragtegy', Journal of Advertising, vol. 24, no. 2, pp. 71-90.

[60] Stevels, A., Agema, R. and Hoedemaker, E. (2001) 'Green marketing of consumer electronics II', Second International Symposium on Enviornmentally Conscious Design and Inverse Manufacturing, 590-594.

[61] Straughan, R. and Roberts, J. (1999) 'Environmental segmentation alternatives: a look at green consumer behavior in the new millennium', Journal of Consumer Marketing, vol. 16, no. 6, pp. 558-575.

[62] Ttlikidou, I., Aoamson, I. and Sarmanidts, C. (2002) 'The measurement instrument of ecologically-conscious consumer behaviour', New Medit, vol. 4, pp. 1-8.

[63] Wahid, N.A., Rahbar, E., Shyan, T.S. and Ramayah, T. (2011) 'Relationship between environmental volunteers' demographic characteristics and their green purchase behaviour: evidence from Penang (Malaysia)', International Journal of Global Environmental Issues, vol. 11, no. 3/4, pp. 299-309.

[64] Zakersalehi, M. and Zakersalehi, A. (2012) 'Consumers' attitude and purchasing intention toward green packaged`foods; A Malaysian perspective', International Conference on Economics Marketing and Management, Singapore, 1-5.

[65] Zinkhan, G. and Carlson, L. (1995) 'Green Advertising and the Reluctant Consumer', Journal of Advertising, vol. XXIV, no. 2, pp. 1-6.