

The Grass is Not Always Greener on the Other Side: The Impact of Environmental Campaigns on Green Purchasing Behavior

Cherouk Amr Yassin

Head of Quality Assurance Unit and Assistant Professor of Marketing, College of Management and Technology, Arab Academy for Science Technology and Maritime Transport, Smart Village Campus

Citation: Cherouk Amr Yassin (2022) The Grass is Not Always Greener on the Other Side: The Impact of Environmental Campaigns on Green Purchasing Behavior, *International Journal of Business and Management Review*, Vol.10, No. 8, pp.1-20

ABSTRACT: *As a developing country, we confront several environmental challenges. The country's environmental worth lags well behind that of wealthy countries. Nonetheless, the governments have recently paid attention to environmental issues. Aside from that, individuals display a proactive attitude regarding the importance of environmental protection efforts due to severe environmental challenges. This research article investigates the impact of the governmental environmental campaign on green purchasing behaviour in a developing country. The structural equation modelling analysis outcomes show that environmental campaigns for green awareness influence green purchasing behaviour through the green attitude, perceived behavioural control, and subjective green norms. The relationships discovered in this study provide practitioners with insight into understanding and stimulating pro-environmental consumer behaviour knowledge in developing countries. Scholars of environmental management will benefit from the study's novel comprehensive approach to analysing sustainable consumption trends and motivating its population to take action to preserve their environment. Practitioners may find our findings helpful in developing strategies to influence consumer attitudes and behaviour toward sustainable products in developing countries.*

KEYWORDS: Consumer Behaviour, Environmental Campaign, Green Attitude, Green purchasing behaviour, Sustainable products.

INTRODUCTION

It is not always true that the grass is greener on the opposite side; it is greener where it is watered. Climate change caused by humans offers a worldwide hazard never before seen. Researchers agree that coping with climate change necessitates international cooperation and significant social reform. Researchers and policymakers are concerned about the low use of environmentally friendly items (Mustafa et al., 2022). Researchers focus on consumers' increased concern about environmental issues, which drives countries to embrace green techniques in their operations. Environmental issues can be efficiently controlled, if not averted if customers are prepared to take responsibility and choose green products (Patwary et al., 2020). Developed countries' governments have already begun implementing green initiatives and marketing tactics to attain long-term profits to identify consumers' preferences for green

products long ago (Yusof et al., 2017). Green marketing is a component of the modern economy, and green marketing tactics are primarily used in developed countries (Hasan et al., 2019).

Despite extensive research on consumers' decision-making processes, the findings on customers' green behavioural intentions are inconsistent (Yadav and Pathak, 2017). Research in developing countries has primarily focused on the importance of green movements and consumer environmental consciousness (Yang et al., 2019) without measuring the impact of environmental campaigns on green consumer behaviour. The researcher discovered that few studies included the critical elements of the theory of planned behaviour and indicators of green marketing tools while investigating green marketing in consumer behaviour. For example, Chin et al. (2018) used green marketing methods to underlie the Theory of Planned Behaviour. However, the study disregarded the critical Theory of Planned Behaviour characteristics such as attitude, subjective norm, behaviour intention and perceived behavioural control.

The key dependent variable in the Theory of Planned Behavior, according to Ajzen (1991), is consumer intention, which demonstrates a person's propensity to behave in a specific way. Similarly, Biswas and Roy (2015) examined green consumption behaviour in terms of perception and value, ignoring consumers' subjective norms and perceived behavioural control. However, considering the influences of green attitude, green subjective norm, and green perceived behavioural control provides a more constructive view of green behaviour (Roy et al., 2017). Recent findings show that green marketing tools affecting consumers' behavioural intentions have yet to be investigated and deserve further investigation (Prakash and Pathak, 2017). Elements connected to consumer green behavioural intentions, such as subjective norm, attitude, and perceived behavioural control, are still unknown to Egyptian consumers.

Egyptian consumer is getting more aware of the merits of green products. However, it is still a novel concept to the general public. Various studies have found that the Arab region's environmental consciousness is lower than that of Western nations (Al Surf and Mostafa, 2017). The consumer must be informed and made aware of environmental dangers. The new green movements must reach the masses, which will take time and effort to continuously assess their effect, consequences, and improvement. In terms of theoretical applications in green marketing strategies, very few empirical researches have been conducted in the Egyptian setting, resulting in a gap in the literature that needs to be filled. Because of the limited application of theory in green marketing strategies, academia and managers have provided insufficient reasons when employing green marketing techniques. Furthermore, previous research has yet to study the benefits of the environmental campaign on behavioural intention by modifying attitudes, perceived behavioural control, and subjective norms to improve green marketing strategy. As a result, this research aims to fill that vacuum by investigating the influence of the environmental campaign "Be civilised to the green" on green consumer behaviour via attitude, perceived behavioural control, and subjective norms.

LITERATURE REVIEW

Green Marketing

Following Henion and Kinnear's introduction of the green marketing concept, various approaches have been created (1976). Environmental concerns should be addressed by marketing actions that alleviate rather than intensify them (Rajapaksha and Tilakasiri, 2019). Green marketing, for example, is defined by Heath and McKechnie (2019, p. 141) as the comprehensive management process responsible for recognising, predicting, and serving the demands of consumers and society financially and sustainably. Given the benefits of green marketing, several businesses have adopted this method to increase revenues while reducing pollution.

A green marketing strategy is a novel approach to gaining a competitive advantage and success (Sharma, 2021). Although no single marketing strategy is appropriate for every organisation, numerous scholars have identified three dimensions of green marketing tools influencing consumers' green purchasing behaviours: environmental advertising, eco-labelling, and eco-branding (Rizqiyana and Wahyono, 2020). This study uses environmental advertising to make perception easier and boost consumer awareness of green behaviour. Implementing this green marketing technique is critical for changing customer purchasing habits toward environmentally friendly items and minimising the negative environmental impact of synthetic products.

Environmental Advertisement

Environmental advertising is also considered green commercialising. As a result, Banerjee et al. (1995) proved that organisations should assure an obvious or implicit link between a service or a product and the natural environment. Over the last few decades, the growing interest in green ads has dramatically increased public environmental consciousness, increasing demand for green-labelled items (Matthes, 2019).

As the green strategy is gaining consumer interest, many organisations have chosen environmental ads through showing media or printed newspapers (Ackerstein and Lemon, 2017; Soutter and Boag, 2019). Green advertising appeals to clients' environmental preservation interests (Haseeb et al., 2019), and it promotes a company by emphasising the environmentally friendly qualities of its products (Lim et al., 2020). Green advertising incorporates promotional messages that appeal to customers' needs and desires (Dangelico and Vocalelli, 2017; Schmuck et al., 2018).

"Be Civilised to The Green."

Previously, Egyptian customers were unfamiliar with green products, organic and recyclable brands, and green manufacturing techniques. Government efforts to protect the environment have grown in recent years. According to the Egyptian Ministry of Environment, the "Be Civilised to The Green" campaign aims to protect the environment and turn it green, a shared dream of living in a healthy environment and ensuring the sustainability of all-natural resources

and wealth. This dream will only be realised with the participation of all citizens in government sectors, civil society, and the private sector.

The campaign is aimed to target all social groups in all governorates. In 2020, the campaign focused on the areas of (afforestation - increasing the efficiency of natural resource usages such as water, energy, soil, and biodiversity- minimising food waste and, as a result, agricultural productivity - recycling all types of trash - lowering consumption - Establishment of natural reserves - Reduction of air pollution sources - Protection of marine life and coastal areas - Climate change).

Consumer Behaviour

One of the essential theories in consumer behaviour is the Theory of Planned Behavior; it explains and predicts human behaviour (Ajzen, 1991). The theory of Planned Behaviour comprises three fundamental components: attitude, subjective norm, and perceived behavioural control (Ajzen and Fishbein, 1988).

Green Attitude

An attitude is a positive or negative thought that supports a desire to engage in a specific behaviour (Ajzen and Fishbein, 1988). Individual behavioural ideas and result evaluations inform the concept of attitude. How one evaluates situations determines one's attitude toward the behaviour (Ajzen, 1991). An individual is more likely to have a green attitude when he or she has a favourable attitude about utilising environmentally friendly products if he or she believes that doing so maintains the environment for future generations while meeting his or her requirements. Individually good attitudes, in turn, lead to a rise in the use of green marketing products.

Individuals who cared more about environmental issues were more likely to buy more environmentally friendly products, according to Chan (1996). However, despite the large number of consumers who express concern about environmental issues, many people are only willing to act if there are no hard "costs," such as making a financial investment or lifestyle sacrifice (Laroche et al. 2002). However, some customers are more cautious in their purchase selections, scrutinising factors such as product composition, packaging, and materials (Chowdhury et al. 2012).

According to Cherian and Jacob (2012), the efficacy of green marketing depends on consumers' views toward the environment. Thus, a "green customer" is someone who acts, buys, and consumes of the need for environmental preservation, refusing to use environmentally detrimental products (Akehurst et al. 2012). Green consumerism leads to several acts, including recycling, energy conservation, resource conservation, contributing to community cleanliness, and the development of environmental legislation (Coleman et al. 2011). Evidence reveals that over the last decade, consumers have increasingly begun to change their behaviour, including environmental issues, into lifestyle choices and consuming habits, such as consuming less, saving resources, recycling, and so on (Barber 2010). In this framework, marketing plays an

important role and carries a social obligation to shift consumer behaviour toward more sustainable consumption (Suplico 2009). Hence the following hypothesis was proposed.

H1. Environmental advertisement is positively affecting the green attitude of consumers.

Green Subjective Norm

Subjective norm refers to perceived social pressure regarding specific behaviours that can or cannot be undertaken (Ajzen and Fishbein, 1988). Subjective norms are heavily influenced by persons in an individual's life whom they regard as necessary, such as colleagues, family members, friends, and superiors (Ajzen, 1991). A green subjective norm is social pressure for an individual to act in a green way. It is thought to result from normative belief and motivation from others.

Motivation comes from the opinion of others and influences normative behaviour, which determines how an individual behaves in a particular situation. According to Chan and Lau (2002), cultural factors influence consumers' perceptions of the subjective norm, which is the strongest predictive indicator of green intention. Individuals must comply with outsiders' perceptions and behave differently to adapt to the subjective norm generated by social pressure (La Barbera and Ajzen, 2020). Hence the following hypothesis was proposed.

H2. Environmental advertisement is positively affecting the green subjective norm of consumers.

Green Perceived Behavioural Control

When people do an action, this inclusion makes it easier to measure their behavioural purpose (Ajzen, 2002). Perceived behavioural control is used to analyse an individual's ease of achieving a specific behaviour (Fellnhöfer, 2017). Green perceived behavioural control is known when the buyer must be persuaded that resources are accessible and that the options can promote or impede behaviour. According to Arli et al. (2018), resources and efficiency are two components that assess behaviour management and directly impact behavioural intent and perceived behaviour control (Olya et al., 2019). The purchasing intention for green products can be used to assess an individual's ease and is related to the perceived lack of resources and possibilities for the behaviour (Choi and Johnson, 2019). Hence the following hypothesis was proposed.

H3. Environmental advertisement positively affects consumers' perceived green behavioural control.

Green Buying Behaviour and Mediating Hypotheses

Behavioural intention denotes a person's readiness to engage in expected behaviour. It is a direct behavioural antecedent (Ajzen, 2002). Previous research indicates that the Theory of Planned Behaviour has been employed in many environmentally friendly goods and services, including energy-efficient products (Wang et al., 2018). Green restaurants and hotels are also green-labelled products (Liobikiene et al., 2016; Varah et al., 2021), proving their robustness

and projected potential to measure environmentally beneficial purchasing purpose and behaviour. Nonetheless, in some cases, mainly when Theory of Planned Behaviour variables are considered, there is support for the buyers' motives, and attitudes (Maichum et al., 2016) demonstrate that subjective standard of control of behaviour and attitude may be crucial in deciding customers' green purchasing motive to purchase environmentally friendly goods. Hence the following hypothesis was proposed.

H4: Green attitude mediates the relationship between Environmental advertisements and green purchasing behaviour.

Researchers discovered considerable disparities in how factors influence consumer intentions across cultures. Tang et al. (2018), for example, indicated that subjective norms have a more substantial effect on intention in collectivist cultures (e.g., Arab customers) than in individualistic ones (e.g., USA). Other elements, such as education, relative wealth, and attitude, were discovered to impact customers' purchasing intentions in different nations with diverse cultures (Lee, 2009; Liobikien and Bernatonien, 2017). Few of all prior studies have explored countries in the Western area (Elsantil and Abo Hamza, 2019). More well-founded research is needed to understand green purchasing behaviour (Al-Otoum and Nimri, 2015; Dagher and Itani, 2014). Hence the following hypothesis was proposed.

H5: green subjective norm mediates the relationship between Environmental advertisements and green purchasing behaviour.

Environmental advertising significantly impacts customer Green Purchase Behavior (Baldwin, 1993). Furthermore, environmental messaging in advertising and product labelling may impact sales floor purchases (Chase and Smith, 1992). The brand can also influence consumer views, and appropriate advertising strategies can influence consumers' decisions to purchase environmentally friendly things (Cherian and Jacob, 2012). According to Rahbar and Wahid (2011), various green marketing approaches can influence consumers' green purchasing behaviour. Green marketers emphasise eco-branding, eco-labelling, and environmental advertising as the major Green Marketing Tools. Hence the following hypotheses were proposed. Hence the following hypothesis was proposed.

H6: green perceived behavioural control mediates the relationship between Environmental advertisements and green purchasing behaviour.

The study framework (see Figure 1) is provided based on the Theory of Planned Behaviour assumptions and the previously studied literature:

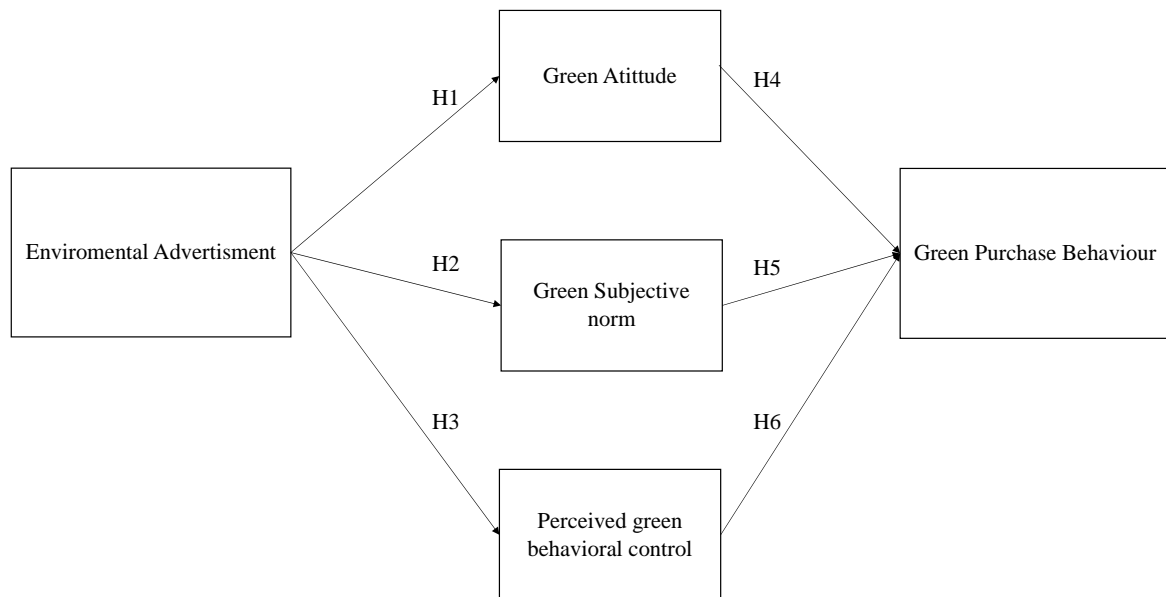


Figure 1 The Study Framework

RESEARCH METHODOLOGY

An online poll was employed to obtain primary data for this study, and a questionnaire with Likert-scale questions was used. The questionnaire included 29 statements scored on a 5-point Likert scale from "1 = strongly disagree" to "5 = strongly agree." The scores were assigned on a scale of 1 to 5. The survey instrument was created based on a literature review and took the form of a structured questionnaire with five sections see Table 1.

The data was collected from May through July 2022. The poll was administered using online tools (Google Forms) and was made public on social media (Facebook), yielding 400 respondents. Researchers have employed this methodology multiple times with various favourable and unfavourable outcomes (Lehdonvirta et al., 2020). This strategy was chosen because it was the most convenient way to reach out to respondents in the case study location.

Table 1 Measurement Scales

Scale	Measurement	Author
Green attitudes	1-I prefer green products because they satisfy my values 2-I prefer green products because it is environment friendly 3-I believe that green products are competitive 4-It is exciting for me to buy green products	Paul et al. (2016); Zhao et al. (2014); Mostafa (2006); Chan (2001); Taylor and Todd (1995); Ajzen (1991)
Green Subjective norm	1-Most people who are important to me want me to be environmentally friendly 2-Most people whose opinions I value think that it is essential to reduce waste 3-Most people whom I respect and admire engage in environmentally friendly behaviours 4-Most people who are essential to me protect the environment 5-It is expected from me to be environmentally friendly 6-My friends think that I have to buy green products	Al-Swidi et al. (2014)
Green Perceived behavioural control	1-Easiness to adopt of green purchasing lifestyle 2-The control over the decision to adopt a green purchasing lifestyle 3-Capability to the greenness of the product in order to protect the environment 4-Knowing how to be friendly with the environment 5-Knowledge of energy and resource-efficient products and actions 6-Ability to lead a green lifestyle	Paul et al. (2016); Mostafa (2006); Taylor and Todd (1995); Chan (2001); Ajzen (1991)
Green Buying Behaviour	1-I try to buy energy-efficient products and appliances 2-I avoid buying products that have excessive packaging 3-When there is a choice, and I choose the product that causes the least pollution 4-I have switched products/brands for ecological reasons 5-I make every effort to buy paper products made from recycled paper 6-I use environmentally friendly soaps and detergent 7-I have convinced members of my family or friends not to buy some products which are harmful to the environment 8-Whenever possible, I buy products packaged in reusable containers 9-I try to buy products that can be recycled	Nine items of the Ecologically Conscious Consumer Behaviour scale of Straughan and Roberts (1999) were used, covering topics such as packaging, energy efficiency, and polluting or recycled products.
Environmental advertisement	1-Government's initiatives to promote environmentally friendly behaviour 2-Due to the government's green campaign, people are becoming environmentally conscious 3-Government's initiatives educate people about the energy-efficient products and services 4-As a result of the government's green efforts, people are becoming more responsible for resource usage	Zhao et al. (2014)

Data collection and Samples

A convenience sampling technique was used to obtain the primary data. The convenience sampling technique is a non-probability technique that allows the researcher to reach out to respondents easily. Emerson (2015) stated that convenience sampling is suitable when the phenomena are little known to the audience and the researchers want to develop new thoughts. Convenience sampling was used to obtain information from the selected population of the study. Table 2 shows the demographic distribution of the respondents.

Table 2 Demographics of Respondents

Variable		N	Percentage
Gender	Female	240	60%
	Male	160	40%
Age	10-19	20	5%
	20-29	100	25%
	30-39	160	40%
	40-49	60	15%
	50-59	40	10%
	60 and more	20	5%
Education Level	High School	80	20%
	University Degree	200	50%
	Postgraduate studies	120	30%
Total		400	100%

Reliability and Validity Analysis of Variables

The measuring items' reliability was evaluated by analysing the loadings and their respective and matching constructs (Fornell and Larcker, 1981). The study results showed internal Cronbach's consistency values (Cronbach's alpha) ranging from 0.652 to 0.974 (Table 3).

Table 3: Reliability of Instruments

Instruments	Number of Items	Cronbach's Alpha
Green Attitudes	4	0.830
Green Subjective Norm	6	0.731
Green Perceived Behavioural Control	6	0.962
Green Buying Behaviour	9	0.790
Environmental Advertisment	4	0.894

Confirmatory Factorial Analysis (CFA) was conducted to confirm which items fit what constructs and test the construct validity of variables. Table Four presents the construct validity results. The AVE for all items is above the recommended value of 0.50 (Fornell and Larcker, 1981), implying excellent convergent validity. The discriminant validity was accomplished as the AVE of each construct is greater than the squared correlations with other constructs. The outcomes from the structural model are presented in Table 4. Generally, the model provides an excellent fit to the data with acceptable absolute, incremental, and parsimonious indices.

Table 4: Measurement of the total construct

Question items	Construct	Factor Loading	CR(t)	Probability	SMCC
1-I prefer green products because they satisfy my values	← Green Attitude	.891	N/A	N/A	.588
2-I prefer green products because it is environment friendly	← Green Attitude	.919	9.454	***	.598
3-I believe that green products are competitive	← Green Attitude	.785	9.431	***	.599
4-It is exciting for me to buy green products	← Green Attitude	.951	9.889	***	.543
Measures: RMSEA: .000; Chisq/df: .981; NFI: 0.895; TLI: 0.906; CFI: 0.895; AVE: 0.557; CR: 0.581					
1-Most people who are important to me want me to be environmentally friendly	← Green Subjective Norm	.692	8.877	N/A	.533
2-Most people whose opinions I value think that it is essential to reduce waste	← Green Subjective Norm	.671	8.423	***	.501
3-Most people whom I respect and admire engage in environmentally friendly behaviours	← Green Subjective Norm	.713	9.919	***	.581
4-Most people who are essential to me protect the environment	← Green Subjective Norm	.735	9.871	***	.514
5-It is expected from me to be environmentally friendly	← Green Subjective Norm	.702	9.361	***	.605
6-My friends think that I have to buy green products	← Green Subjective Norm	.722	9.611	***	.589
Measures: RMSEA: .000; Chisq/df: .981; NFI: .981; TLI: .920; CFI: .991; AVE: 0.521; CR: 0.565					
1-Easiness to adopt of green purchasing lifestyle	← Green Perceived Behavioural Control	.960	7.903	N/A	.629

2-The control over the decision to adopt a green purchasing lifestyle	← Green Perceived Behavioural Control	.941	7.961	***	.627
3-Capability to the greenness of the product in order to protect the environment	← Green Perceived Behavioural Control	.894	7.194	***	.613
4-Knowing how to be friendly with the environment	← Green Perceived Behavioural Control	.963	8.961	***	.672
5-Knowledge of energy and resource-efficient products and actions	← Green Perceived Behavioural Control	.901	8.869	***	.529
6-Ability to lead a green lifestyle	← Green Perceived Behavioural Control	.965	8.103	***	.594
Measures: RMSEA: .000; Chisq/df: .942; NFI: .940; TLI: .906; CFI: .912; AVE: 0.611; CR: 0.591					
1-I try to buy energy-efficient products and appliances	← Green Buying Behaviour	.671	7.722	N/A	.629
2-I avoid buying products that have excessive packaging	← Green Buying Behaviour	.758	7.568	***	.698
3-When there is a choice, and I choose the product that causes the least pollution	← Green Buying Behaviour	.620	6.977	***	.644
4-I have switched products/brands for ecological reasons	← Green Buying Behaviour	.703	7.992	***	.549
5-I make every effort to buy paper products made from recycled paper	← Green Buying Behaviour	.819	7.964	***	.590
6-I use environmentally friendly soaps and deterge	← Green Buying Behaviour	.847	7.860	***	.592
7-I have convinced members of my family or friends not to buy some products which are harmful to the environment	← Green Buying Behaviour	.760	7.864	***	.698
8-Whenever possible, I buy products packaged in reusable containers	← Green Buying Behaviour	.754	7.280	***	.614

9-I try to buy products that can be recycled	← Green Buying Behaviour	.962	7.854	***	.531
Measures: RMSEA: .000; Chisq/df: .913; NFI: .991; TLI: .902; CFI: .942; AVE: 0.581; CR: 0.581					
1-Government's initiatives to promote environmentally friendly behaviour	← Environmental Advertisements	.863	8.974	***	.675
2-Due to the government's green campaign, people are becoming environmentally conscious	← Environmental Advertisements	.897	8.468	***	.634
3-Government's initiatives educate people about the energy-efficient products and services	← Environmental Advertisements	.912	8.981	***	.667
4-As a result of the government's green efforts, people are becoming more responsible for resource usage	← Environmental Advertisements	.941	8.578	***	.679
Measures: RMSEA: .000; Chisq/df: .981; NFI: .981; TLI: .920; CFI: .991; AVE: 0.521; CR: 0.565					
Whole Model Measures: RMSEA: .060; Chisq/df: 1.298; NFI: .940; TLI: .997; CFI: .911; AVE>0.5 CR: >1.97					

Mediation Effect

This research has three mediators: green attitude, green subjective norm and perceived behavioural control between environmental advertisement and green purchasing behaviour. The Sobel test checked the mediation effect (Sobel, 1982). The Sobel test checks whether the indirect effect of the independent variable on the dependent variable through the mediator variable is significant. The findings revealed that an indirect influence is considerable for the three mediators, Green Attitude, Green subjective norm and green perceived behavioural control between Environmental advertisement and Green purchasing behaviour shown in Table five.

Table 5 Multiple-mediation Analysis

	Point Estimate	SE	Percentile 95% LL-UL	BC 95% LL-UL	Sobel Values
The specific indirect effect through mediators					
Green attitude	0.132***	0.032	0.004-0.088	0.004-0.124	2.164 (p<.001)
Green subjective norms	0.151***	0.049	0.048-0.209	0.073-0.237	3.271 (p<.001)
Green perceived behavioural control	0.113***	0.029	0.018-0.172	0.028-0.212	2.790 (p<.001)
TOTAL INDIRECT EFFECT	0.248	0.068	0.194-0.389	0.182-0.389	
Contrasts					
Green attitude vs Green subjective norms	-0.074	0.0496	-0.173-0.024	-0.197-0.014	
Green attitude vs green perceived behavioural control	-0.083	0.637	-0.182-0.024	-0.184-0.050	
Green subjective norm vs green perceived behavioural control	0.068	0.592	-0.068-0.172	-0.083-0.131	
Note. BC=bias corrected; 5000 bootstrap samples, LL=lower level, UL=upper level *** p<.001.					

Furthermore, we have three mediators operating at the same level. Preacher and Hayes' (2008) methodology was used to check for multiple mediations in the case of multiple mediations. To eliminate omitted parameter bias, bootstrapping particular indirect effects was used. In addition, incorporating several mediators into a single model aids in estimating the relative effect of the specific indirect effect linked with all mediators (Preacher and Hayes, 2008, p. 881). The total effect of environmental advertisements on green purchasing behaviour is significant. Further, the direct effect of environmental advertisement on green purchasing behaviour became insignificant, which suggests complete mediation. Table 6 represents the parameter estimates for the total and specific indirect effects on the association between environmental advertisements and green purchasing behaviour as mediated by green attitude, green subjective norm and perceived behavioural control.

The total indirect effect and the specific indirect effects of green attitude, green subjective norm and green perceived behavioural control are all significant, as reflected by confidence intervals, as upper and lower confidence levels do not contain zero (Preacher and Hayes, 2008). Further, an inspection of the contrast revealed a significant difference between the specific indirect effect of green attitude and the green subjective norm, indicating that the green subjective norm had a significantly more significant indirect effect on green purchasing behaviour than green attitude. Therefore, hypotheses 4, 5, and 6 are accepted.

Structural Model and Hypotheses Test

Finally, the entire model through structural equation modelling was assessed using the maximum likelihood method in the AMOS programme. In this integrated model, the strength of the relationship between environmental advertisement and green purchasing behaviour through the mediation of green attitude, green subjective norms and green perceived

behavioural control was assessed. Based on Table 6 indicators, H1 suggested a positive relationship between environmental advertisement and green attitude.

H2 states that environmental advertisement positively affects the green subjective norms. This relationship was also statistically significant.

H3 stated that environmental advertisement positively influences the green perceived behavioural control was significant and supported.

Table 5. Hypotheses Relationship

Constructs	Estimate	S. E	CR	Probability
H1	.133	.094	1.935	***
H2	.112	.085	1.930	***
H3	.128	.091	1.871	***
H4	.132	.032	1.832	***
H5	.151	.049	1.753	***
H6	.113	.029	1.892	***

FINDINGS AND DISCUSSIONS

Managerial Implications

Planetary limits have been breached as a result of the threat that climate change poses to the future of modern societies, and resource stocks are dangerously close to exhaustion. As a result, all levels of society must alter, including, but not limited to, changes in individual consumption (Steffen et al., 2018). This work has significant managerial ramifications. It provides marketers with critical determinants of green purchase behaviour among consumers in developing countries. Marketers should strive to change consumers' views to influence their decision-making and behaviour by introducing new values and focusing on ethical norms (Pickett-Baker and Ozaki, 2008). One crucial issue to highlight here is to raise consumer awareness and concern about acts that may influence the environment (Hildebrandt et al., 2021).

Environmental knowledge necessitates not only awareness of environmental problems and their consequences, but also acceptance and a sense of community duty (Mustafa et al., 2022). In developed countries, people know more about the topic and can respond to it in a more constructive way and are more engaged than those who know less in developing countries. Environmental intelligence can alter consumers' perceptions of their environment, which can influence their behaviour. Furthermore, it has been demonstrated in a number of studies that

customers' environmental awareness and preferences influence their purchase decisions (Sohail et al., 2022).

This awareness is significant because some customers may have favourable sentiments toward the environment, but many are hesitant to pay the increased cost for green items. The findings imply that when customers' impression of environmental concern increases, they participate in more excellent green purchasing activities. It is critical to increasing consumer concern about green shopping and about the consequences the environment will face if the consumers not going green. As a result, social marketing initiatives should concentrate on raising public knowledge about the environment by providing relevant information and supporting green products, allowing companies to supply a greater variety of green options.

Environmental awareness in the Arabic region is far lower than in Western countries (Al Surf and Mostafa, 2017); therefore, this recommendation is needed. According to data, most customers are highly concerned about the state of the environment and have voiced a great desire to safeguard it. As a result, corporate executives should organise workshops and seminars to educate customers on environmental protection and environmental-friendly products.

Limitations and Future Work

While the current study sheds some light on green purchasing patterns in Egypt, it did not focus on a specific type of green product; instead, green purchasing behaviours, in general, were investigated. The study's findings, on the other hand, could help identify green purchasing behaviour for other products, such as mineral water, green construction or electric cars. People's tastes in green products may differ. Furthermore, while an online questionnaire is a good technique for collecting data for analysing actual behaviour, future studies may try to collect data when actual transactions occur. Future research could investigate the influence of ecological logos on green purchasing patterns. These logos can educate potential customers about environmental challenges, provide social signals to others to engage in similar behaviours, and represent a specific social viewpoint.

CONCLUSION

This research adds to the theory of planned behaviour by including an Egyptian green marketing campaign and measuring its impact on Egypt's green purchasing inclination. In order to further implement environmental advertising, which can strengthen green attitudes and green behavioural intention to purchase green products.

Disclosure Statement

The author(s) declare that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

References

- Ackerstein, D. S., & Lemon, K. A. (2017). Greening the brand: environmental marketing strategies and the American consumer. In *Greener Marketing* (pp. 233-254). Routledge.
- Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus of control, and the theory of planned behaviour 1. *Journal of applied social psychology*, 32(4), 665-683.
- Ajzen, I and Driver, BL. 1991. Prediction of leisure participation from behavioural, normative, and control beliefs: An application of the theory of planned behaviour. *Leisure Sciences*, 13: 185–204.
- Akehurst, G., Afonso, C., & Gonçalves, H. M. (2012). Re-examining green purchase behaviour and the green consumer profile: new evidence. *Management decision*.
- Al-Swidi, A., Huque, S. M. R., Hafeez, M. H., & Shariff, M. N. M. (2014). The role of subjective norms in the theory of planned behaviour in the context of organic food consumption. *British Food Journal*, 116(10), 1561-1580.
- Al-Otoun, F. J., & Nimri, R. S. (2015). Antecedents of environmental buying behaviour: the case of the Jordanian market. *International Journal of Business and Management*, 10(9), 240.
- Al Surf, M. S., & Mostafa, L. A. (2017). Will Saudi's 2030 vision raise public awareness of sustainable practices? *Procedia Environmental Sciences*, 37, 514-527.
- Arli, D., Tan, L. P., Tjiptono, F., & Yang, L. (2018). Exploring consumers' purchase intention towards green products in an emerging market: The role of consumers' perceived readiness. *International journal of consumer studies*, 42(4), 389-401.
- Baldwin, D. A. (1993). Early referential understanding: Infants' ability to recognise referential acts for what they are. *Developmental psychology*, 29(5), 832.
- Banerjee, S., Gulas, C. S., & Iyer, E. (1995). Shades of green: A multidimensional analysis of environmental advertising. *Journal of advertising*, 24(2), 21-31.
- Barber, N. (2010). "Green" wine packaging: targeting environmental consumers. *International Journal of Wine Business Research*, 22(4), 423-444.
- Biswas, A., & Roy, M. (2015). Leveraging factors for sustained green consumption behaviour based on consumption value perceptions: testing the structural model. *Journal of Cleaner Production*, 95, 332-340.
- Chan, R. Y. (2004). Consumer responses to environmental advertising in China. *Marketing Intelligence & Planning*, 22(4), 427–437.
- Chan, R. Y., & Lau, L. B. (2002). Explaining green purchasing behaviour: A cross-cultural study on American and Chinese consumers. *Journal of international consumer marketing*, 14(2-3), 9-40.
- Chan, T. S. (1996). Concerns for environmental issues and consumer purchase preferences: A two-country study. *Journal of international consumer marketing*, 9(1), 43-55.
- Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment-friendly products.
- Choi, D., & Johnson, K. K. (2019). Influences of environmental and hedonic motivations on intention to purchase green products: An extension of the theory of planned behaviour. *Sustainable Production and Consumption*, 18, 145-155.
- Chowdhury, K., Khan, S., Karim, R., Obaid, M., & Hasan, G. M. M. A. (2012). Quality and shelf-life evaluation of packaged biscuits marketed in Bangladesh. *Bangladesh journal of scientific and industrial research*, 47(1), 29-42.

-
- Chin, C. H., Chin, C. L., & Wong, W. P. M. (2018). The implementation of green marketing tools in rural tourism: the readiness of tourists. *Journal of Hospitality Marketing & Management*, 27(3), 261-280.
- Coleman, L. J., Bahnan, N., Kelkar, M., & Curry, N. (2011). Walking the walk: How the theory of reasoned action explains adult and student intentions to go green. *Journal of Applied Business Research (JABR)*, 27(3), 107-116.
- Dagher, G. K., & Itani, O. (2014). Factors influencing green purchasing behaviour: Empirical evidence from the Lebanese consumers. *Journal of Consumer Behaviour*, 13(3), 188-195.
- Dangelico, R. M., & Vocalelli, D. (2017). "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production*, 165, 1263-1279.
- Elsantil, Y., & Hamza, E. A. (2019). The impact of self-conscious emotions on willingness to pay for sustainable products. *Humanities & Social Sciences Reviews*, 7(2), 77-90.
- Emerson, R. W. (2015). Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research? *Journal of Visual Impairment & Blindness*, 109(2), 164-168.
- Fellnhöfer, K. (2017). Drivers of innovation success in sustainable businesses. *Journal of Cleaner Production*, 167, 1534-1545.
- Fishbein, M., & Ajzen, I. (1988). Belief, attitude, intention, and behaviour: An introduction to theory and research. *Philosophy and Rhetoric*, 10(2).
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Hasan, M. M., Nekmahmud, M., Yajuan, L., & Patwary, M. A. (2019). Green business value chain: A systematic review. *Sustainable Production and Consumption*, 20, 326-339.
- Haseeb, M., Hussain, H. I., Ślusarczyk, B., & Jermisittiparsert, K. (2019). Industry 4.0: A solution towards technology challenges of sustainable business performance. *Social Sciences*, 8(5), 154.
- Heath, T., & McKechnie, S. (2019). Sustainability in marketing. In *Incorporating Sustainability in Management Education* (pp. 105-131). Palgrave Macmillan, Cham.
- Henion, K. E., & Kinnear, T. C. (1976). *Ecological marketing*. Chicago, IL: American Marketing Association.
- Hildebrandt J., Rizzi C., Birkebaek S., Chalouhi C., Atassi R., Rafih R. (2021). *Are consumers in the Gulf States ready to go green?* BCG Global. <https://www.bcg.com/publications/2021/gulf-state-consumer-sentiment-toward-green-agenda>
- La Barbera, F., & Ajzen, I. (2020). Control interactions in the theory of planned behaviour: Rethinking the role of the subjective norm. *Europe's Journal of Psychology*, 16(3), 401.
- Laroche, M., Tomiuk, M. A., Bergeron, J., & Barbaro-Forleo, G. (2002). Cultural differences in environmental knowledge, attitudes, and behaviours of Canadian consumers. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 19(3), 267-282.
- Lee, K. (2009). Gender differences in Hong Kong adolescent consumers' green purchase behaviour. *Journal of consumer marketing*.

-
- Lehdonvirta, V., Oksanen, A., Räsänen, P., & Blank, G. (2021). Social media, web, and panel surveys: using non-probability samples in social and policy research. *Policy & Internet*, 13(1), 134-155.
- Lim, D., Baek, T. H., Yoon, S., & Kim, Y. (2020). Colour effects in green advertising. *International Journal of Consumer Studies*, 44(6), 552-562.
- Liobikienė, G., & Bernatoniene, J. (2017). Why determinants of green purchase cannot be treated equally? The case of green cosmetics: A literature review. *Journal of Cleaner Production*, 162, 109– 120.
- Liobikienė, G., Mandravickaitė, J., & Bernatoniene, J. (2016). Theory of planned behaviour approach to understand the green purchasing behaviour in the EU: A cross-cultural study. *Ecological Economics*, 125, 38-46.
- Maichum, K., Parichatnon, S., & Peng, K. C. (2016). Application of the extended theory of planned behaviour model to investigate purchase intention of green products among Thai consumers. *Sustainability*, 8(10), 1077.
- Matthes, J. (2019). Uncharted territory in research on environmental advertising: Toward an organising framework. *Journal of Advertising*, 48(1), 91-101.
- Mostafa, M. M. (2006). Antecedents of Egyptian consumers' green purchase intentions: A hierarchical multivariate regression model. *Journal of International Consumer Marketing*, 19(2), 97–126.
- Mustafa, S., Hao, T., Jamil, K., Qiao, Y., & Nawaz, M. (2022). Role of Eco-Friendly Products in the Revival of Developing Countries' Economies and Achieving a Sustainable Green Economy. *Frontiers in Environmental Science*, 1082.
- Olya, H. G., Bagheri, P., & Tümer, M. (2019). Decoding behavioural responses of green hotel guests: A deeper insight into the application of the theory of planned behaviour. *International Journal of Contemporary Hospitality Management*, 31(6), 2509-2525.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using the theory of planned behaviour and reasoned action. *Journal of Retailing and Consumer Services*, 29(1), 123–134.
- Patwary, A. K., Omar, H., & Tahir, S. (2020). A conceptual model of what influences consumers when visiting green hotels in Malaysia. *International Journal of Innovation, Creativity and Change*, 11(11), 11-25.
- Pickett-Baker, J., Ozaki R. (2008). Pro-environmental products: Marketing influence on the consumer purchase decision. *Journal of Consumer Marketing*, 25(5), 281–293.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behaviour research methods*, 40(3), 879-891.
- Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of cleaner production*, 141, 385-393.
- Rajapaksha, R. A. S., & Tilakasiri, K. K. (2019). The impact of green marketing on consumer purchase intention: evidence from Sri Lanka. International Postgraduate Research Conference 2019, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka.
- Rahbar, E., & Wahid, N. A. (2011). Investigation of green marketing tools' effect on consumers' purchase behaviour. *Business strategy series*.

-
- Rizqiyana, I., & Wahyono, W. (2020). The influence of eco-brand, eco-labelling and environmental advertisement on consumer purchasing behaviour through the Brand image. *Management Analysis Journal*, 9(2), 211-220.
- Roy, M Chakraborty, A., & Singh, M. P., (2017). A study of goal frames shaping pro-environmental behaviour in university students. *International Journal of Sustainability in Higher Education*.
- Schmuck, D., Matthes, J., & Naderer, B. (2018). Misleading consumers with green advertising? An affect–reason–involvement account of greenwashing effects in environmental advertising. *Journal of Advertising*, 47(2), 127-145.
- Sharma, A. P. (2021). Consumers' purchase behaviour and green marketing: A synthesis, review and agenda. *International Journal of Consumer Studies*, 45(6), 1217-1238.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology*, 13, 290-312.
- Soutter, A. R., & Boag, S. (2019). Environmental advertising: The effect of imagery on pro-environmental attitudes and pro-environmental behaviour. *Psychology*, 10(1), 88-126.
- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., et al. (2018). Trajectories of the Earth System in the Anthropocene. *Proc. Natl. Acad. Sci. U.S.A.* 115 (33), 8252–8259. doi:10.1073/pnas.1810141115
- Straughan, R., Roberts, J. (1999). Environmental segmentation alternatives: a look at green consumer behaviour in the new millennium. *Journal of Consumer Marketing*. 16(6):558–575.
- Sohail, M. T., Elkaeed, E. B., Irfan, M., Acevedo-Duque, Á., and Mustafa, S. (2022). Determining Farmers' Awareness About Climate Change Mitigation and Wastewater Irrigation: A Pathway Toward Green and Sustainable Development. *Front. - Environ. Sci.* 10, 900193. doi:10.3389/fenvs.2022.900193
- Suplico, L. T. (2009). Impact of green marketing on the student's purchase decision. *Journal of International Business Research*, 8.
- Tang, M., Walsh, G., Lerner, D., Fitza, M. A., & Li, Q. (2018). Green innovation, managerial concern and firm performance: An empirical study. *Business Strategy and the Environment*, 27(1), 39-51.
- Taylor, S., & Todd, P. (1995). Understanding household garbage reduction behaviour: A test of an integrated model. *Journal of Public Policy and Marketing*, 14, 192–204.
- Varah, F., Mahongnao, M., Pani, B., & Khamrang, S. (2021). Exploring young consumers' intention toward green products: applying an extended theory of planned behaviour. *Environment, Development and Sustainability*, 23(6), 9181-9195.
- Wang, G., Wei, Y., Qiao, S., Lin, P., & Chen, Y. (2018). *Generalised inverses: theory and computations* (Vol. 53). Singapore: Springer.
- Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behaviour in a developing nation: Applying and extending the theory of planned behaviour. *Ecological economics*, 134, 114-122.
- Yang, S., Li, S., Sun, L., & Zhang, Y. (2020). Does education level affect individuals' environmentally conscious behaviour? Evidence from Mainland China. *Social Behavior and Personality: an international journal*, 48(9), 1-12.
- Yusof, Y., Awang, Z., Jusoff, K., & Ibrahim, Y. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in the hotel and tourism industry. *International Journal of Green Economics*, 11(1), 1-14.

Zhao, H. H., Gao, Q., Wu, Y. P., Wang, Y., & Zhu, X. D. (2014). What affects green consumer behaviour in China? A case study from Qingdao. *Journal of Cleaner Production*, 63, 143–151.