The Relationship between Green brand positioning and Green Purchase Behavior

(An Empirical Study on green products consumers in Egypt)

submitted by

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ABSTRACT

This research aims to investigate the direct and indirect effects of Green brand positioning on green purchase behavior, in the field green products in Egypt. The thesis adopted the philosophy of positivism,

the deductive approach, and the method of quantitative and qualitative analysis as the research methodology. The instrument utilized for data collection was the questionnaire. Consequently, 386 usable questionnaires were collected electronically through social media channels from green consumers in Egypt .In

addition, using AMOS 26 to explore the causal relationships among the research variables. The findings reveal that green brand positioning has a significant direct and positive effect on green purchase behavior. Furthermore, research results show that there are insignificant differences between the consumers' perceptions towards the research variables (green brand positioning and Green purchase behavior) according to their Demographic Variables (gender, age, income, and education).

Keywords: green product, green brand positioning, green purchase behavior.

الملخص

تهدف هذ الدراسة الي التعرف علي التأثيرات المباشرة وغير المباشرة لمكانة العلامة الخضراء على سلوك الشراء الأخضر في مجال المنتجات الخضراء في مصر .وتبنت الدراسة فلسفة المنهج الوضعي، ونظريتي التحليل الكمي والنوعي كمنهجية للدراسة، كما استخدمت المدخل الاستنتاجي، وكانت الأداة المستخدمة لجمع البيانات هي الاستبانة. ونتيجة لذلك، تم جمع ٣٨٦ استبيانًا قابلاً للاستخدام إلكترونيًا عبر قنوات التواصل الاجتماعي من المستهلكين للمنتجات الخضراء في مصر. واستخدمت الباحثة برنامج AMOS V.26 لقياس العلاقات المباشره وغير المباشره بين متغيرات الدراسة.وكشفت النتائج أن مكانة العلامة الخضراء لها علاقة مباشرة وتاثير إيجابي على سلوك الشراء الأخضر. علاوة على ذلك . أيضا أظهرت نتائج الدراسة فيما يتعلق بالمتغيرات الديموغرافية (الجنس، العمر، الدخل، محل الاقامة والتعليم) عدم وجود فروق معنوية بين آراء عينة الدراسة فيما يتعلق بمتغيرات الدراسة (مكانة العلامة الخضراء، المعرفة بالعلامة الخضراء وسلوك الشراء الأخضر).

Introduction

Efficient green brand positioning for firms is a crucial tactic of differentiation and improves consumers' will to buy what is offered (Mehraj& Qureshi,2022). The increased pressure from all avenues for the organization to go green is forcing the companies to adopt green branding as the main strategy since it involves projecting an image that the product or service offers more benefits to the consumers and the environment and makes use of eco-friendly resources (Ali,2021;Correia et al.,2023)..Several perceptual brand models explain the association between the brand and consumer buying, when green positioning is used in terms of a corporate strategy it can be based on different emotional brand benefits such as selflessness associated with the emotion of wellbeing, benefits including auto-expression that are a result of using socially recognizable green brands and nature-related benefits Khandelwal et al., (2019).

Green purchase behavior is receiving a growing attention in the academic community, as understanding it is crucial for the growing number of companies developing and marketing green products. Especially for large companies from the main reasons for "being green", consumers' perceptions of green products, improving community relations and cost-effective management (Ulun, 2018).

As attempting to study the green purchase behavior of consumers from the perspective of the relationship between humans and nature, in which a commitment to nature reflects the human love for nature (Dong et al., 2020), and they confirmed

that Those who love nature think that green products are in line with their values and can achieve the goal of sustainable social development. Therefore, they have a more obvious purchase tendency for green products (Zhang& Dong ,2020) . As Green branding strategy is employed to encourage and persuade the consumer to decide to buy green products according to Ali (2021), this study will integrate the perspectives both green and brand from green consumer perspectives by focusing on the effect of positioning abrand as agreen brand on the green buying behavior.

1. Literature Review

1/1 Green brand positioning definition

While green products will not be commercially successful if green brand attributes are not effectively communicated (Pickett-Baker & Ozaki, 2008). Ayad et al. (2021) defined brand positioning as the value of green products or the activities that a company use to determine a location in consumer minds by revising information to design the desired brand awareness image, and finally gives consumers a strong reason why they must purchase a certain brand.

Consumer expectations for brand positioning should be fulfilled, according to researchers, so that consumers may identify the brand with its desirable features (Siyal et al.,2021).The purpose of the positioning is to create product differentiation in the mind of consumers and to generate a competitive advantage over other competitor brands based on tangible or intangible product attributes (Keller, 2009; Siyal et al.,2021).

1/2 Green brand positioning dimensions

A) **Functional Positioning** refers to the functions of brand attributes that points the roles of brand features as an intermediary to convey environmentally related messages or ecological values to consumers (Hartmann et al., 2005;Aulina & Yuliati ;2017 Ayad et al.,2021).

B) **Emotional Positioning** is important to transfer affective contents of brand attributes to gain consumers' emotional responses according to Aulina & Yuliati (2017). So, functional aspects appeal to rational minds through in-depth information whereas the emotional aspect deals with pros and cons on the basic level and serves the emotional needs of the consumers (Ali,2021).

C) **Green Positioning** is included as a part of green brand positioning since it is an important factor to support green branding strategy according to Aulina & Yuliati (2017).Green positioning strategy must focus on providing information through environmentally friendly product and brand attributes so that consumers understand the inter-relatedness of the brand and environmental concerns (Rios et al., 2006).So successful green brand identity should provide well green benefits to environmentally conscious consumers (Huang et al., 2014).

1/3 Green purchase behavior

In the case of green products and services, the main concern of the customer is to purchase a product that has been manufactured using environmentally friendly materials and processes, and its consumption does not harm the environment in any way (Wu and Chen, 2014;Ali, 2021).According to Jalees et al .(2021) Consumers' green buying behavior (GBB) refers to buying environmentally friendly products (Jalees et al .,2021). Consumers' green buying behavior is a complex decision-making process. It also refers to socially responsible practices (Chan & Lau, 2000).

GPB also defined as how consumers purchase green products or sustainable products that can be recycled and cannot harm the environment (Mostafa, 2007). Green purchase behavior differs from general purchase, because when the consumer chooses to buy green products, he is concerned with the environment and the human well-being (Dellarmelin et al., 2018).

1/4 Green purchase behavior Dimensions

A) willingness to pay a premium price

Generally speaking, people with higher ecological literacy are more willing to pay more for environmental protection products (Zhang & Dong,2020) .Conventional products are generally cheaper than green products due to the low cost incurred in the production process (Mehraj & Qureshi, 2022). On the other hand, green products obtain a premium price due to the green value (Shi & Jiang 2022).

B) Green purchase satisfaction

Green customer satisfaction defined as an overall pleasurable fulfilment of some customer's needs, goals and desires about environmental or green concerns (Gelderman et al.,2021). According to Jalees et al .(2021) Green satisfaction is "a pleasurable level of consumption-related fulfillment to satisfy a customer's environmental desires, sustainable expectations, and green needs." (Jalees et al., 2021).

C) Green purchase frequency

Dangelico et al. (2021) demonstrated through a survey of Italian population, that the respondents most frequently purchases was green products belonging to a wide variety of goods and green products which use is 'apparent', as hybrid cars, can satisfy the need for social acceptance better than green products used in the home, as food, drink, lightning, paper products or household cleaning products (Dangelico et al. ,2021).

2. Hypotheses Development

2/1 Green Brand Positioning and Green Purchase Behavior

Ali (2021) empirically studied the relationship between marketing initiatives including green brand positioning and green purchase behavior and the conclusion reached was signify that green marketing initiatives using green brand positioning

positively influence consumer buying behavior based on previous research in developing and developed countries (Ali ,2021) . Also Jalees et al .(2021) study based on 415 university students respondents with the aim of studying the direct relationship between Green Brand and Green Buying Behavior (Jalees et al .,2021), the study findings confirmed that Green brand positively influences green buying behavior .

Such researches about customer engagement behavior identified experience and functional attributes of the product as the leading factors for making a purchase decision. (Sharma, 2021). Similarly, it can be argued that when green product knowledge accumulates in the mind of customers through environmental advertising which resulted in brand positioning, the perception and knowledge will grow up for the environmental awareness or eco-friendly products that will eventually influence green buying behaviors (Zameer & Yasmeen ,2022). As per the previous literature, researcher developed hypothesis (1 and 2).

3. Research Gap & Problem

It was noted that there is a big gap and a lake of studies on actual green behavior (Dangelico et al., 2021). And this prompts the need for research characterized by a greater level of interdisciplinary to study this topic (Dangelico et al.,2021).many studies have examined how to motivate green consumption (Vassallo et al., 2016; Dellarmelin et al .,2018), studying this subject on the companies' view .Accordingly,

the researcher concludes that previous studies have overlooked the impact of green brand positioning on green purchase behavior.

4. Research Questions

To develop the research model, the following questions are investigated:

Q1. What is the nature of the correlation relationship between the research variables dimensions (green brand positioning and green purchase behavior)?

Q2. What is the effect of green brand positioning on green purchase behavior?

Q3. What is the nature of the difference in the perception of the green products consumers in Egypt about the research variables (Green brand positioning, green purchase behavior) according to different demographic factors (gender, age, income level, education level , place)?

5. Research objectives

The present study aims to achieve the following main objectives:

O1. Determining the nature of the correlation relationship between the research variables dimensions (green brand positioning and green purchase behavior).

O2. Measuring the effect of green brand knowledge affect green purchase behavior.

O3. Determining the nature of the difference in the perception of the green products consumers in Egypt about the research variables (Green brand positioning, green purchase behavior) according to different demographic factors (gender, age, income level, education level ,place).

6. Research Hypotheses

H1. There is a significant relationship between the research variables (green brand positioning and green purchase behavior).

H2. There is a significant effect of green brand positioning on the dimensions of green purchase behavior among the green products consumers in Egypt.

This Hypothesis is divided in three Sub-hypotheses:

H2/1. There is a significant effect of green brand positioning on willingness to pay a premium price.

H2/2. There is a significant effect of green brand positioning on green purchase satisfaction.

H2/3. There is a significant effect of green brand positioning on green purchase frequency.

H3. There is a significant difference in the perception of the green products consumers in Egypt about the research variables (Green brand positioning, green

purchase behavior) according to different demographic factors (gender, age, income level, education level, place).

Conceptual Framework for the Relationships between Research Variables

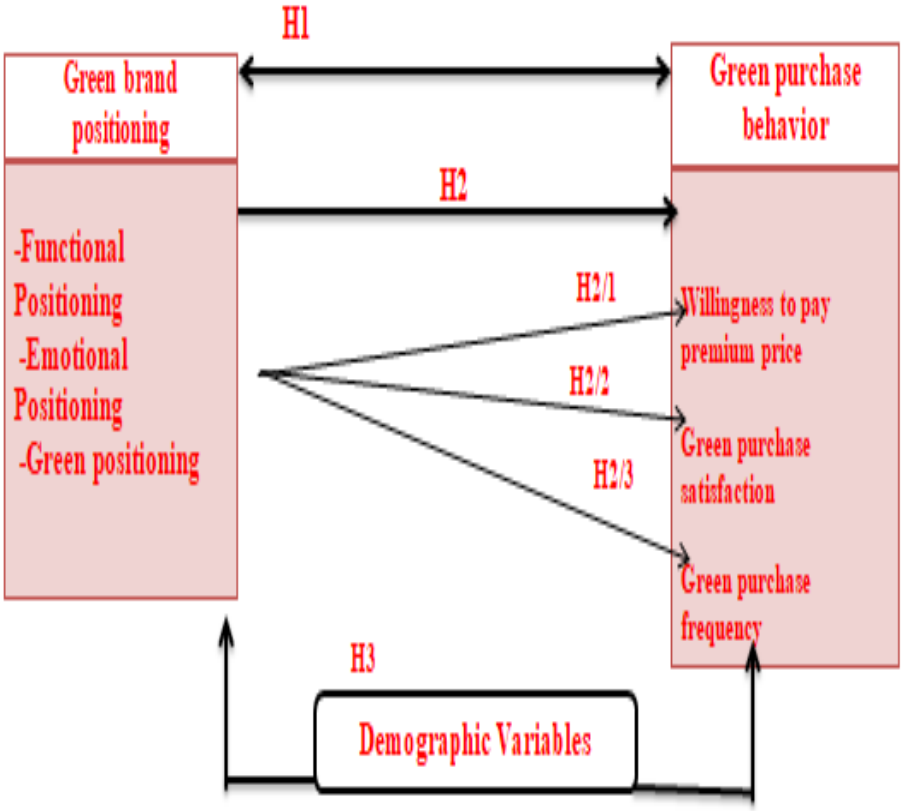

Figure 1 Conceptual Framework for the Relationships between Research Variables.

Source: Prepared by the researcher depending on Literature.

7. Research Methods

This study is compatible with quantitative research since it uses the relationships between variables to test theories that are based on facts. These variables can be measured with a device, allowing numbered data to be examined using statistical program.

8. Data collection According to Saunders et al., (2009), there are two different time horizons for collecting data: snapshot and diary. Snapshot is referred to as cross-sectional, while diary is referred to as longitudinal. And this study depends on a cross-sectional study.

8.1. Questionnaire Survey According to Saunders et al., (2009), there is two main categories of questionnaires are self-administered and interviewer-administered. First, self-administered questionnaires require individuals to respond to questions by mail, the internet, or a delivery and collection survey. Second, the interviewer administered which call for speaking with the target sample over the phone or meeting them in person. This study will depend on self-administered questionnaire, which will be personally delivered and collected.

9. Variables Measurement

The researcher concentrated on several measurement components obtained from various earlier investigations. Also, she made an Arabic form of the questionnaire to make it fully obvious to the whole targeted group using five-point Likert scale with

choices ranging from "1=completely disagree" to "5= completely agree" to assess the measurement items. Green brand positioning was measured by 13 item-scale developed by Mehraj&Qureshi (2022). 5 of the 13 items are to measure functional positioning , 4 items are to measure emotional positioning and the remaining 4 items are to measure green positioning. green purchase behavior Measured using Dangelico et al.(2021) 11-item scale. 4 items to measure green purchase satisfaction .7 items to measure willingness to pay a premium price adapted from Wei et al.(2018); Dangelico et al.(2021); Mehraj&Qureshi (2022), and the third dimension is measured via a question to respondents how frequently they had purchased green products during the past year and which categories of green products they bought using (Dangelico et al.,2021) scale.

10. Population and Sampling

The current study's population consists of all green products consumers .There are two types of sampling strategies, according to Acharya et al. (2013): probability sampling (representative sample) and non-probability sampling. Probability sampling is the most commonly used sampling technique in survey-based research.

10.1 Sampling Unit

The sampling unit used in the current study is the green consumers in Egypt. The questionnaire was directed to the customers because they are assumed to have sufficient knowledge about research constructs and the nature of the study. The

nature of research constructs necessitates directing the questionnaire to the customers.

10.2 Sample Size

The ability to generalize findings to the population is primarily dependent on utilizing a large enough sample size. As a result, the population of this study is geographically spread and surpasses 100,000 items, and the appropriate sample size is 384 observations.

10.3 Sampling Technique the questionnaire was sent to 400 green consumers. Finally, the researcher gathered only 386 completed questionnaires that were statistically valid and free of missing data. The current research depends on the Simple Random Sampling technique (SRS). Using a Google Form, the researcher created an electronic version of the questionnaire, which was distributed to green customers through Facebook Groups, Facebook Pages, and Whats App Groups.

11. Reliability

The following table shows that the value of corrected item-total correlation for all items lies above 0.3 which constitutes good internal consistency. The researcher directed the questionnaire to a sample of 68 consumers who are required to complete it through Google form by internet. The responses were utilized to assess the validity and reliability of the questionnaire. The results of both Cronbach's alpha

and corrected item-total correlation for each construct are summarized in the following table as follow:

Table(1):Corrected Item-Total Correlation and Cronbach's Alpha for all variables.

Variables	Dimensions	Measurement Item	corrected item-total Correlation	Cronbach's Alpha if item deleted	Reliability	
					No. of Questions	Total Cronbach's Alpha
green brand positioning	Functional positioning	FB_1	0.692	0.838	5	0.867
		FB_2	0.619	0.855		
		FB_3	0.659	0.846		
		FB_4	0.673	0.843		
		FB_5	0.805	0.807		
	Emotional Positioning	EP_1	0.587	0.683	4	0.758
		EP_2	0.553	0.706		
		EP_3	0.457	0.749		
		EP_4	0.644	0.658		
	Green Positioning	GP_1	0.550	0.847	4	0.839
		GP_2	0.612	0.822		
		GP_3	0.806	0.737		
		GP_4	0.733	0.768		
The Independent Variable: green brand positioning					**13**	**0.917**
Green purchase behavior	Green purchase Satisfaction	GPS_1	0.831	0.841	4	0.893
		GPS_2	0.820	0.847		
		GPS_3	0.806	0.854		
		GPS_4	0.696	0.918		

Cont. Table (1):Corrected Item-Total Correlation and Cronbach's Alpha for all variables.

Variables	Dimensions	Measurement Item	corrected item-total Correlation	Cronbach's Alpha if item deleted	Reliability	
					No. of Questions	Total Cronbach's Alpha
	Willingness to pay premium price	WTPP_1	0.692	0.927	7	**0.930**
		WTPP_2	0.758	0.921		
		WTPP_3	0.792	0.918		
		WTPP_4	0.822	0.915		
		WTPP_5	0.866	0.911		
		WTPP_6	0.768	0.920		
		WTPP_7	0.752	0.922		
The Dependent Variable: Green purchase behavior					**11**	**0.934**

Source: Prepared by the researcher according to statistical analysis

Table (1) shows some results for all variables as follow: For the Independent Variable green brand positioning the Cronbach's alpha is 0.917 which represents a good indicator of the reliability of this construct. While the Cronbach's alpha is 0.867, 0.758, 0.839 for the three dimensions respectively (Functional positioning, Emotional Positioning and Green Positioning) which also means high level of reliability for all dimensions.

For the dependent Variable Green purchase behavior the Cronbach's alpha is 0.934 which represents a good indicator of the reliability of this construct. While the Cronbach's alpha is 0.893 & 0.930 for the two dimensions respectively (Green purchase Satisfaction and Willingness to pay premium price) which also means high

level of reliability for all dimensions. Additionally, the value of corrected item- total correlation of all items exceeds 0.3 which constituted good internal consistency.

13. Description of the Sample This section describes the sample's characteristics in terms of the Customer's gender, age, education, income, and location of residence. Table (2) displays these characteristics:

Table (2) Demographic statistics of the Sample N(386)

Demographic Characteristics	*Frequency*	*Percentage*
Gender		
Male	*127*	*32.90%*
Female	*259*	*67.10%*
Total	*386*	*100.00%*
Age		
Less than 20 years old	*56*	*14.51%*
From 20 years old to 30 years old	*150*	*38.86%*
From 30 years old to 40 years old	*115*	*29.79%*
From 40 years old to 50 years old	*50*	*12.95%*
More than 50 years	*15*	*3.89%*
Total	*386*	*100.00%*
Income		
Less than 5000	*119*	*30.83%*
From 5000 to less than 10000	*207*	*53.63%*
10000 or more	*60*	*15.54%*
Total	*386*	*100.00%*
Education		
Less than Bachelor	*10*	*2.59%*
Bachelor	*222*	*57.51%*
Postgraduate	*154*	*39.90%*

Demographic Characteristics	*Frequency*	*Percentage*
Total	*386*	*100.00%*
Place of residence		
Urban	*251*	*65.03%*
Rural	*135*	*34.97%*
Total	*386*	*100.00%*

Source: Prepared by the researcher according to statistical analysis.

14. Descriptive analysis: ***Table (3) Descriptive Statistics for Each Item***

Variable	*Dimension*	*Statement*	*Code*	*Mean*	*SD*	*Skewness*	*Kurtosis*
	Functional positioning			4.210	0.656	-1.103	2.434
	Emotional Positioning			4.117	0.729	-0.973	1.807
	Green Positioning			4.139	0.726	-1.317	2.736
total Independent Variable: green brand positioning				4.155	0.646	-1.244	3.150
	Green purchase Satisfaction			4.227	0.676	-1.078	1.847
	Willingness to pay premium price			4.017	0.778	-0.988	0.873
total dependent variable: Green purchase behavior				4.122	0.664	-1.054	1.686

Source: Prepared by the researcher according to statistical analysis.

According to results of **Table 3** Blanca et al. (2013) define normal data distribution as having absolute values of skweness between -2.49 and 2.33 and kurtosis between -1.92 and 7.41. So, none of the respondents gave negative feedback on any of the items.

15. Structural Equation Modelling

Structural equation modelling explores the relationships between one or more independent and dependent variables by calculating the fitness level of hypothetical

structures using data collected .The current study employed path analysis with (Amos V.26).

16.Measurement Model Assessment:

To investigate the significance of the correlations in the structural model, the validity of the measurement model is determined by two factors: model goodness of fit and construct validity (Blunch, 2012).

17. Exploratory factor analysis: The study used EFA to conduct the Kaiser-Meyer-Olkin (KMO) scale, as indicated in table (4) below:

Table (4) KMO & Bartlett's Test for all variables

Variables	*Dimensions*	*Kaiser-Meyer-Olkin*	*Bartlett's Test of Sphericity*	
			Chi Square	*Sig.*
green brand positioning	Functional positioning	0.837	895.077	0.000
	Emotional Positioning	0.826	659.822	0.000
	Green Positioning	0.795	641.863	0.000
The independent variable: green brand positioning		0.940	3135.909	0.000
Green brand knowledge	Green Brand Image	0.866	1123.015	0.000
	Green brand awareness	0.835	1083.554	0.000
The mediator variable: Green brand knowledge		0.919	2587.366	0.000
Green purchase behavior	Green purchase Satisfaction	0.725	767.328	0.000
	Willingness to pay premium price	0.925	1872.500	0.000
The dependent variable: Green purchase behavior		0.919	2949.312	0.000

Source: Prepared by the researcher based on to statistical analysis results

As seen in Table (4), the KMO scale for all variables is more than 0.5. Furthermore, Bartlett's Test is significant for all variables, indicating that the data are good quality and reliable for the structural equation model.

18. The Model Fit of the Measurement Model: According to Byrne (2010), goodness of fit indicates how well the measurement model fits the data gathered from the sample. The study used the most used indices to evaluate model fit, which are provided in table (4.4) as follows:

Table (5) The indices of model fit for the measurement model

Measure	*Estimate*	*Threshold*	*Interpretation*
GFI	0.975	Closer to 1	Accepted
RMR	0.027	Closer to 0	Accepted
CFI	0.978	Closer to 1	Accepted
TLI	0.973	Closer to 1	Accepted
RMSEA	0.031	Less Than 0.08	Accepted

Source: Prepared by the researcher based on to statistical analysis results

The value of CFI is 0.978, which is acceptable because it is greater than 0.95. Furthermore, the value of the RMR index is acceptable because it is less than 0.05. Similarly, RMSEA equals 0.031, which is less than 0.08, as proposed by Byrne (2010). The GFI value of 0.978 is approved because it is greater than 0.8 (Byrnes, 2010). As a result, the measuring model fits the data gathered from green product users.

19.The Construct Validity of the Measurement Model:

To assess construct validity, both convergent and discriminant validity should be considered. Table (6) summarizes all of the factors used to evaluate model validity:

Table (6) The validity and reliability of the measurement model

Variables	*Dimensions*	*Factor Loading and Reliability*			*Convergent Validity*	
		Code	*Factor Loading*	*Cronbach's Alpha*	*AVE*	*CR*
green brand positioning	Functional positioning	FB_1	0.588	0.863	0.522	0.741
		FB_2	0.702			
		FB_3	0.800			
		FB_4	0.742			
		FB_5	0.763			
	Emotional Positioning	EP_1	0.722	0.856	0.555	0.735
		EP_2	0.743			
		EP_3	0.737			
		EP_4	0.777			
	Green Positioning	GP_1	0.726	0.844	0.538	0.715
		GP_2	0.702			
		GP_3	0.774			
		GP_4	0.731			
Green purchase behavior	Green purchase Satisfaction	GPS_1	0.691	0.855	0.564	0.745
		GPS_2	0.804			
		GPS_3	0.745			
		GPS_4	0.760			
	Willingness to pay premium price	WTPP_1	0.759	0.928	0.616	0.874
		WTPP_2	0.753			
		WTPP_3	0.722			
		WTPP_4	0.821			

Variables	*Dimensions*	*Factor Loading and Reliability*			*Convergent Validity*	
		Code	*Factor Loading*	*Cronbach's Alpha*	*AVE*	*CR*
		WTPP_5	0.858			
		WTPP_6	0.791			
		WTPP_7	0.784			

Source: Prepared by the researcher based on to statistical analysis results

According to table (6), Cronbach's alpha values are greater than 0.6, which is acceptable. Furthermore, AVE values better than 0.5 and composite reliability values greater than 0.6 are acceptable, according to Fornell and Larcker (1981). Additionally, discriminant validity is evaluated in table (6). This table displays the correlations between the factors and the square roots of AVEs, as well as the fact that the square root of AVE values are greater than the inter-construct correlations (Fornell and Larcker, 1981). Thus, discriminant validity is established. Finally, the measurement model met all of the criteria used to assess validity and reliability.

Table (7) Construct Correlations and Square Root of Average Variance Extracted

	FB	EP	GP	GPS	WTPP
FB	0.723				
EP	0.633	0.745			
GP	0.585	0.603	0.734		
GPS	0.550	0.579	0.577	0.751	
WTPP	0.635	0.551	0.601	0.649	0.785

Finally, after examining the measurement model's validity and reliability, as well as its model fit, the measurement model was produced. The measuring methodology includes five key constructs: functional positioning, emotional positioning, green positioning, green purchase satisfaction, and willingness to pay a premium price.

20) Correlation nature among variables' dimensions Assessment:

The correlation coefficient is a statistical measure of linear correlation between two sets of data. The ratio between the covariance of two variables and the product of their standard deviations is a normalized measurement of covariance, with a value ranging from -1 to 1. As with covariance, the measure can only indicate linear correlations between variables and ignores many other forms of relationships or correlations.

Table (8) Pearson correlation Matrix

	Functional positioning	Emotional Positioning	Green Positioning	green brand positioning	Green purchase Satisfaction	Willingness to pay premium price	Green purchase frequency	Green purchase behavior
Functional positioning	1							
Emotional Positioning	.772**	1						
Green Positioning	.732**	.779**	1					
green brand positioning	.904**	.930**	.916**	1				
Green purchase Satisfaction	.669**	.666**	.650**	.721**	1			
Willingness to pay premium price	.524**	.579**	.535**	.596**	.666**	1		
Green purchase frequency	.426**	.521**	.358**	.481**	.421**	.436**	1	
Green purchase behavior	.648**	.678**	.644**	.716**	.899**	.925**	.358**	1

Source: Prepared by the researcher based on to statistical analysis results

As shown in table (8), the strongest relationship among the Green brand knowledge dimensions and Green purchase behaviour dimensions is the relationship between

(Green Brand Image & Green purchase Satisfaction, where R = 0.617). Therefore, I can accept the first hypothesis in the alternative form as follow: H1: There is significant relationship between all the research variables (green brand positioning and green purchase behavior).

21) Assessing the structural model and defining direct effects: Structural model is utilized to present the causal relationships between research constructs. It is also used to test the hypothesized research model (Byrne, 2010). Table (9) involves the indices used to test the fit structural model as follow:

Table (9) The indices of model fit for the structural model

Measure	*Estimate*	*Threshold*	*Interpretation*
GFI	0.968	Closer to 1	Accepted
RMR	0.023	Closer to 0	Accepted
CFI	0.975	Closer to 1	Accepted
TLI	0.974	Closer to 1	Accepted
RMSEA	0.031	Less Than 0.08	Accepted

Source: Prepared by the researcher based on to statistical analysis results

The value of CFI is 0.975 which is accepted as it is greater than 0.95. Furthermore, the value of RMR index is also satisfied because it is lower than 0.05. Similarly, RMSEA equals 0.031 which lies under 0.08 as proposed by (Byrne, 2010). The value of GFI which equals 0.968 is accepted as it is higher than 0.8 (Byrne, 2010). Therefore, the measurement model fits the data collected from the consumers of the green product.

22) The Direct relationships: In this section, the results of testing research hypothesis among study constructs are presented. Such hypotheses were tested using SEM with AMOS 26. Hypothesis H2 (a-b-c-d-e-f) proposed that green brand positioning has a direct positive impact on Green purchase behavior, Table(10) illustrates the results of testing these direct research hypotheses as follow:

H2: The direct effect of green brand positioning on the dimensions of Green purchase behavior.

Table (10) The direct effect of green brand positioning on the dimensions of Green purchase behavior

Hypothesis		*Hypothesis direction*		*Estimate*	*Sig.*	*Hypothysis result*
H2	H2a	Functional positioning	Green purchase Satisfaction	0.256	0.000	Accepted
	H2b	Emotional Positioning		0.196	0.002	Accepted
	H2c	Green Positioning		0.180	0.003	Accepted
	H2d	Functional positioning	Willingness to pay premium price	0.053	0.427	rejected
	H2e	Emotional Positioning		0.263	0.000	Accepted
	H2f	Green Positioning		0.088	0.198	rejected
	H2g	Functional positioning	Green purchase frequency	0.059	0.115	rejected
	H2h	Emotional Positioning		0.298	0.000	Accepted
	H2i	Green Positioning		0.411	0.000	Accepted

Source: Prepared by the researcher based on to statistical analysis results

According to table (10), The direct effect of green brand positioning on Green purchase behavior can be tested through, the following sub hypotheses:

H2/1: There is a significant effect of green brand positioning on green purchase satisfaction. According to the results, it is clear that Functional positioning, Emotional Positioning, Green Positioning have significant positive direct effect on Green purchase Satisfaction where (β = 0.256, 0.196, 0.180; Sig. < 0.05) respectively, Consequently this sub hypothesis can be fully accepted.

H2/2: There is a significant effect of green brand positioning on willingness to pay a premium price. The results show that Emotional Positioning has a significant positive direct effect on Willingness to pay premium price where (β = 0.263; Sig. < 0.05). Consequently this sub hypothesis can be partially accepted.

H2/3: There is a significant effect of green brand positioning on green purchase frequency. In this regard, Emotional Positioning and Green Positioning have positive direct effect on Green purchase frequency where (β = 0.298, 0.411; Sig. < 0.05) respectively. Consequently, this sub hypothesis can be partially accepted.

These results indicate that increasing the green brand positioning dimensions lead to increasing in Green purchase behavior. Therefore, H2 was partially accepted as follow: H2 There is a significant effect of green brand positioning on the dimensions of green purchase behavior among the green products consumers in Egypt.

23) The difference in the green products consumers about the Research Variables according to their different demographic variables:

Non-parametric methods such as the Kruskal-Wallis test and the Mann-Whitney test are used by researchers to examine differences in consumer perceptions. Furthermore, using parametric tests such as ANOVA, the researcher can demonstrate these tests as follows:

24) Non parametric tests:

In this regard, the researcher will apply Mann-Whitney and Kruskal-Wallis tests to find differences in consumers' opinions of the Research factors based on their various demographic factors, and the results will be reported in the table below:

Table (11) The results of Non parametric tests

Variables	Dimensions	Gender			Age			Income			Education		
		Mann-Whitney		Result	Kruskal-Wallis		Result	Kruskal-Wallis		Result	Kruskal-Wallis		Result
		Z-Value	Sig.		Chi-Square	Sig.		Chi-Square	Sig.		Chi-Square	Sig.	
green brand positioning	Functional positioning	-0.616	0.538	NS	6.454	0.168	NS	1.729	0.421	NS	0.586	0.746	NS
	Emotional Positioning	-0.142	0.887	NS	8.740	0.068	NS	3.316	0.190	NS	1.960	0.375	NS
	Green Positioning	-0.222	0.825	NS	4.741	0.315	NS	1.856	0.395	NS	0.564	0.754	NS
	green brand positioning	-0.522	0.602	NS	8.215	0.084	NS	2.939	0.230	NS	0.870	0.647	NS
Green purchase behavior	Green purchase Satisfaction	-1.461	0.144	NS	7.547	0.110	NS	0.550	0.760	NS	2.594	0.273	NS
	Willingness to pay	-1.095	0.274	NS	9.598	0.048	***	6.276	0.043	***	6.234	0.044	***

Variables	Dimensions	Gender			Age			Income			Education		
		Mann-Whitney		Result	Kruskal-Wallis		Result	Kruskal-Wallis		Result	Kruskal-Wallis		Result
		Z-Value	Sig.		Chi-Square	Sig.		Chi-Square	Sig.		Chi-Square	Sig.	
	premium price												
	Green purchase frequency	-0.716	0.474	NS	13.587	0.009	***	10.046	0.007	***	4.397	0.111	NS
	Green purchase behavior	-1.324	0.186	NS	10.630	0.031	***	3.499	0.174	NS	5.120	0.077	NS

Source: Prepared by the researcher based on to statistical analysis results.

According to table (11), the researcher can conclude results as follow:

For the gender, age ,income ,education and place variable, there are no significant statistics for all variables, so the researcher concludes that there are no differences among the consumers' perceptions about the Research Variables according to gender for all research variables. Therefore, H3 can be partially accepted.

25) Parametric tests:

Table (12) displays the results of multivariate analysis for demographic characteristics connected to consumers' perceptions and the primary variables of the research.

Table (12) The results of parametric tests

Variables	Dimensions	Gender		Age		Income		Education	
		F	Sig.	F	Sig.	F	Sig.	F	Sig.
green brand positioning	Functional positioning	0.050	0.824	1.539	0.190	0.273	0.762	0.187	0.830
	Emotional Positioning	0.020	0.889	1.673	0.156	0.578	0.562	0.979	0.377
	Green Positioning	0.176	0.675	0.845	0.497	0.316	0.729	0.477	0.621
	green brand positioning	0.081	0.775	1.449	0.217	0.295	0.745	0.447	0.640
Green purchase behavior	Green purchase Satisfaction	1.598	0.207	1.222	0.301	0.279	0.757	1.392	0.250
	Willingness to pay premium price	1.937	0.165	2.278	0.060	1.281	0.279	4.427	0.013
	Green purchase frequency	0.682	0.410	3.788	0.005	5.734	0.004	2.507	0.083
	Green purchase behavior	2.131	0.145	1.944	0.102	0.467	0.627	2.972	0.052

Source: Prepared by the researcher based on to statistical analysis results

According to table (12), the researcher can conclude results as follow:

the results of non-parametric tests of H3 which indicates this hypothesis can be partially accepted because there are insignificant differences between the consumers' perceptions towards the research variables (green brand positioning and Green purchase behavior) according to their Demographic Variables (gender, age, income, and education).

26. Theoretical Implications

The current research contributes to the body of knowledge of the existing literature of green brand positioning, green brand knowledge and green purchase behavior. In addition, the research aimed to fill the knowledge gap focusing on the effect of green brand positioning on green purchase behavior. Therefore, researchers summarize the theoretical implications as follows:

The current Research contributes to a broader and more comprehensive

understanding of green brand positioning and knowing the extent

of its effect on green purchase behavior.

The current research gives deeper analysis for the effect of Demographics' differences on the differences of respondents' opinions about research variables.

27. Practical Implications

The present study results classify GBP into functional positioning, emotional positioning, and green positioning. Notably, this study results suggest that marketing managers should design a GBP strategy to emphasize non green issues, that is, functional and emotional positioning, and focus on green attributes of brand/product. An effective GBP strategy can be seen in this regard as an opportunity for marketers to differentiate their products from existing competitors.

The present study's findings suggest that the GBP strategy of the firms should be considered an essential element in the development of promotional messages that generate positive consumer responses to a firm's green practices.

It is suggested to managers and policy makers to emphasize on cultivating consumer awareness of new green offerings and products.. Hence, greater attention needs to be paid in designing these initiatives to get the message through to the customers, which allows them to make a prudent behavior regarding the products.

28. Research Limitations and recommendations for future research:

This research results are limited to green Egyptian consumers; this limits the generalizability of results, because cultural factors may influence environmental behaviors (Dangelico et al., 2020). Results are limited to a developed country which is Egypt, so cross-country studies are strongly encouraged to compare green consumer behavior across different geographical areas. Also we have considered green products as a general category. However, different behavioral patterns could emerge based on the specific types of green products (Dangelico et al.,2021).

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