

## **The Effects of Green Marketing and Green Corporate Social Responsibility on Customers' Willingness to Patronize a Casual Dining Restaurant**

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### **Abstract**

Despite the growing interest in green initiatives in the hospitality literature, few studies have investigated customers' perceptions regarding green practices in restaurants, especially in developing countries such as Egypt. The purpose of the current study is to discuss the relationships between green marketing, green corporate social responsibility (GrCSR), customers' ecological behaviours, and customers' intentions to dine at green restaurants. The hypotheses of the current study were tested empirically by employing a self-administered questionnaire as the data-gathering instrument. A total of 500 questionnaires were randomly hand distributed to customers who previously dined at a green casual dining restaurant using the convenience sampling method. The structural equation modelling (SEM), independent-sample t test, and one-way independent ANOVA were employed to test the study hypotheses. The results of the current study showed that green marketing had direct and indirect significant effects on customers' intentions to patronize casual dining green restaurants through their ecological behaviours. Demographic characteristics, i.e., gender, age, and income were significantly related to customers' intentions to dine at green restaurants. The findings of the current study provide important practical implications for managers of casual dining restaurants.

**Keywords:** Green marketing, green corporate social responsibility (GrCSR), ecological behaviour, green restaurant.

### **Introduction**

The term green restaurant refers to "one that offers a selection of green food menu items (i.e., locally grown or certified organic food), as well as one that implements green practices, such as the efficient use of energy and water, reduction of solid waste, a recycling programme, and training of employees" (Jang et al., 2011; Chen et al., 2015). According to the National Restaurant Association (2016), a green restaurant must meet the following seven criteria of green practices: sustainable food, sustainable furnishings and building

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materials, water efficiency, energy reduction, waste reduction and recycling, disposables and chemical reduction, and pollution reduction. According to Wang et al. (2013), the concept of green restaurant involves: sustainability (i.e., eco-friendly production and service, using organic food and environmentally friendly products, green building), low-carbon (i.e., energy conservation and carbon reduction, energy efficiency and water-saving), environmental conversation (i.e., waste reduction, low-pollution, and saving resources through concepts such as recycle, reduce and reuse), and environmental management policies (i.e., green education for employees and consumers, GrCSR).

During the past decade the demand for environmentally friendly hospitality products has grown (Jang et al., 2011). Customers have become more ecologically conscious than before (Dewald et al., 2014). Indeed, they become more willing to pay more for green products and services (Han et al., 2009; DiPietro et al., 2013; Susskind, 2014). The increasing demand for environmently friendly hospitality products has several impacts on the hospitality industry (Kim et al., 2015). In particular, hospitality establishments recognize the importance of sustainability and green practices. Accordingly, they devoted massive budgets for green practices and sustainability (Bonn et al., 2016). Nowadays, a large number of restaurants invest in green practices, such as energy-saving equipment and water-saving devices (National Restaurant Association, 2016). In addition, many restaurants offer more local and organic foods on their menus (Bonn et al., 2016). However, a study by Dodds and Kuehnel (2010) showed that many restaurants were lacking in reporting and marketing their environmental corporate social responsibility practices. Accordingly, customers were unaware of such sustainable practices. Therefore, restaurants should promote their green practices and any green certifications they have properly in order to make them more visible to their customers (Schubert et al., 2010).

Despite the growing interest in green initiatives in the hospitality literature, few studies have investigated customers' perceptions regarding green practices in restaurants (Choi & Parsa, 2006; Manaktola & Jauhari, 2007; Dutta et al., 2008; Choi et al., 2009; Hu et al., 2010; Jang et al., 2011; DiPietro et al., 2013). The majority of these studies have focused on green practices on developed countries (e.g., Hu et al., 2010; Kim et al., 2015). Few equivalent studies have been conducted in developing countries such as Egypt (Mostafa, 2006). Few studies have addressed the impacts of green marketing (Punitha & Rasdi, 2013) and GrCSR initiatives in the restaurant industry (Holcomb et al., 2007). Therefore, the current study specifically

discusses the relationships between green marketing, GrCSR, customers' ecological behaviours, and customers' intentions to dine at green restaurants. The following research questions have been addressed for this study:

RQ1. What are customers' perceptions regarding the level of importance of green marketing and GrCSR?

RQ2. What are the relationships between green marketing, GrCSR, customers' ecological behaviours, and customers' intentions to dine at green restaurants?

RQ3. Are there differences between demographic variables, i.e., gender, age, education level, and income related to customers' intentions to dine at green restaurants?

**Literature Review and Hypotheses**

**A Proposed Conceptual Model and its Research Hypotheses**

The current study proposes and tests a conceptual model of the factors influencing customers' intentions to dine at green restaurants. The proposed model was drawn and developed from previous literatures (e.g., Hu et al., 2010; DiPietro et al., 2013; Kwok et al., 2016). The proposed model includes four constructs, i.e., green marketing, GrCSR, ecological behaviour, and patronizing a green restaurant. The proposed conceptual model is illustrated in Figure 1. The following sections discuss the relationships between the four constructs.

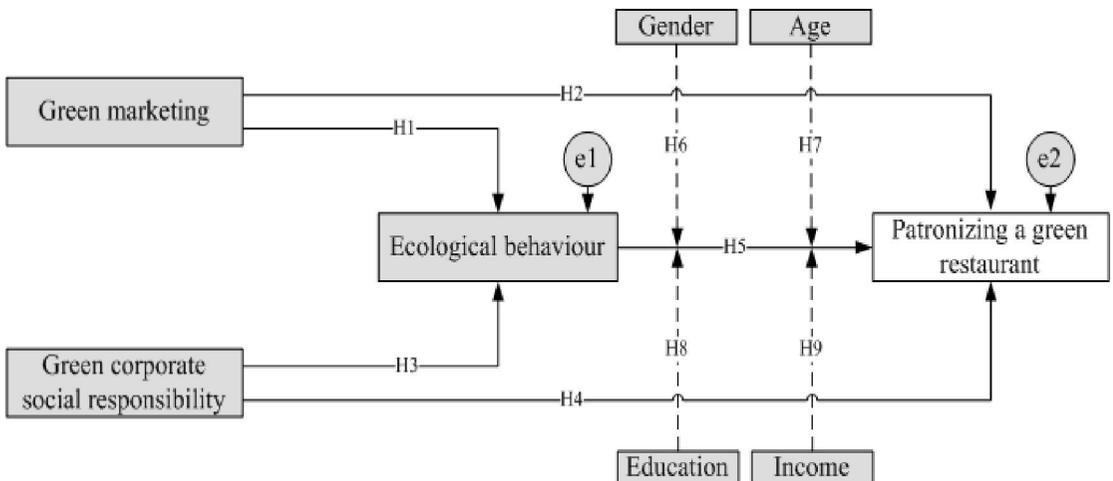


Figure 1: The research conceptual model

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## **Green Marketing**

Soonthonsmai (2007) defined green marketing as “actions carried out by organisations that are concerned about the ecology by providing environmentally friendly goods or services to bring satisfaction among customers and the community”. Green marketing means a business that is operated in a way that decreases waste, saves energy and mostly encourages environmental health and sustainability of the society (Rahman et al., 2011). The development of green marketing evolves throughout the process of planning, pricing, distributing, and promoting of products or services with the objectives to minimize the impact on the natural environment (Punitha & Rasdi, 2013). Because of consumers' increasing awareness of environmental issues, restaurateurs are beginning to introduce green marketing (Duff, 2012). However, Schubert et al. (2010) argued that there has been a lack of information available to customers about restaurants' green initiatives. Kassinis and Soteriou (2003) reported that most of green restaurant initiatives are not noticed by customers because they occur in the production process. Therefore, restaurants should market and promote their green practices to consumers so that consumers can be aware of what is being done in the back-of-the house area and therefore may encourage them to be more willing to pay a premium price (Heung et al., 2006; Schubert et al., 2010; Dipietro et al., 2013).

The relationships among knowledge of green practices, personal ecological behaviour, and the willingness to buy green products has been well documented in the literature (e.g., Mostafa, 2006; Hu et al., 2010; DiPietro et al., 2013; Kwok et al., 2016). Several studies (e.g., Jeong & Jang, 2010; Hu et al., 2010; Schubert et al., 2010; Dipietro et al., 2013) showed that consumers' knowledge of green restaurant practices (i.e., energy efficiency, noise pollution, substantial food, solid waste) was important determinant of customers' intentions to patronize green restaurants. In addition, it was found that customers' knowledge of green practices may influence their intentions to patronize a green restaurant indirectly by their ecological behaviours (Hu et al., 2010). In this regards, previous studies (e.g., Choi et al., 2009; Hsieh, 2012; Dipietro et al., 2013) showed that green marketing could help customers realize the extent of green practices in the restaurant environment which could improve knowledge of these practices. Therefore, the following hypotheses are posited:

H1: Green marketing positively affects customers' ecological behaviour.

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H2: Green marketing positively affects customers' intentions to patronize green restaurants.

### **Green Corporate Social Responsibility**

Green corporate social responsibility (GrCSR) is defined as “a company’s commitment to improve societal well-being through discretionary green practices and contributions of corporate resources” (Du et al., 2010, p. 8). Examples of a restaurant’s GrCSR include: donations to environmental projects, consumer green education, and employees’ training to adopt green practices (Mohr & Webb, 2005; Manaktola & Jauhari, 2007). Restaurant’s GrCSR initiatives can attract environmentally conscious consumers, influence their ecological behaviours and purchasing decisions (e.g., Mohr & Webb, 2005; Manaktola & Jauhari, 2007), and encourage them to pay more (Kwok et al., 2016). However, in a study by Kim et al. (2015), they found that administration-focused green attributes (i.e., GrCSR) had less effects on customers’ dining experiences, compared to food-focused green attributes (i.e., using organic food, local food). They pointed out that customers may not well-informed about a restaurant’s administrative efforts unless the restaurant actively promotes such initiatives. Therefore, this study hypothesizes that:

H3: GrCSR positively affects customers’ ecological behaviours.

H4: GrCSR positively affects customers’ intentions to patronize green restaurants.

### **Customers’ Ecological Behaviours**

Ecological behaviour is defined as personal green practices, i.e., recycling, energy saving, environmental purchasing (Hu et al., 2010). In this regards, several studies (e.g., Dutta et al., 2007; Hu et al., 2010; DiPietro and Gregory, 2012) found that consumers’ ecological behaviours have a strong impact on their intentions to patronize a green restaurant. In other words, customers who are environmentally conscious and who use green practices such as recycling and purchasing green products on a daily basis are more likely to patronize a green restaurant. Hence, this study hypothesizes that:

H5: Customers’ ecological behaviours positively affect their intentions to patronize green restaurants.

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## **Customers' Demographic Characteristics**

In general, several studies have found that demographic characteristics, i.e., gender, age, education, and income are significantly related to customers' ecological behaviours and intentions to dine at green restaurants (e.g., Gronhoj & Olander, 2007; Hu et al., 2010; Schubert et al., 2010), however, the results are not always consistent (DiPietro et al., 2013).

The research related to gender and perception of green practices is not consistent. Some studies (e.g., Gronhoj & Olander 2007; Schubert et al., 2010; DiPietro et al., 2013) found that female customers had higher intentions to patronize green restaurants than male customers. Due to females' social development and sex roles, they more carefully consider the impact of using green practices on their children (Gronhoj & Olander 2007). Other studies (e.g., Hu et al., 2010; Kim et al., 2015) found no significant differences between female and male customers in their intentions to patronize green restaurants. The previous studies have been conducted in different cultures, e.g., USA, Denmark, Taiwan, and Korea; therefore, these differences between female and male customers may be due to cultural differences (DiPietro et al., 2013). Therefore, this study hypothesizes that:

H6: Female and male customers differ in their intentions to patronize green restaurants.

Similar to gender results, the research related to age and perception of green practices is not consistent. In a study by Hu et al. (2010), they found a significant positive correlation between age and customers' intentions to patronize green restaurants. Older customers (i.e., ages forty-one or above) were more environmentally friendly and had higher intentions to patronize green restaurants than younger customers. They suggested that older people more carefully consider the impact of green practices on their health and their children's future (Hu et al., 2010). In another study, Schubert et al. (2010) found a significant negative correlation between age and customers' intentions to patronize green restaurants. Younger customers (i.e., ages 35 years or younger) had higher intentions to patronize green restaurants than older customers. In a study by Han et al. (2011), they found no significant differences between older and younger customers in their intentions to patronize green hotels. Hence, this study hypothesizes that:

H7: Older and younger customers differ in their intentions to patronize green restaurants.

The level of education is another demographic variable that has a significant impact on consumers' intention to patronize green restaurants. In two studies

conducted by Hu et al. (2010) and DiPietro et al. (2013), customers who had higher levels of education showed higher intentions to patronize green restaurants than customers who had lower education levels. They pointed out that more educated customers tend to know more about green practices and place higher value on those green practices (Hu et al., 2010). Therefore, this study hypothesizes that:

H8: More-educated customers differ from less-educated customers in their intentions to patronize green restaurants.

Finally, income also has a significant impact on consumers' intention to patronize green restaurants. In a study by Hu et al. (2010), they found a significant positive correlation between income and customers' intentions to patronize green restaurants. Customers at a higher income levels showed stronger intentions to patronize green restaurants than customers at a lower income levels. Customers at higher income levels can bear the marginal increase in costs associated with green products (Hu et al., 2010). However, in a study by Schubert et al. (2010) customers at a lower income levels were more likely to patronize green restaurants than customers at a higher income levels. Therefore, this study hypothesizes that:

H9: Customers with higher income differ from those with lower income in their intentions to patronize green restaurants.

## **Methods and Procedures**

### **Survey Instrument**

The hypotheses of the current study were tested empirically by employing a self-administered questionnaire as the data-gathering instrument. Items chose for the constructs in the current study were adapted and revised from previous studies (e.g., Hu et al., 2010; DiPietro et al., 2013; Kwok et al., 2016). The survey used in previous studies was reliable with a Cronbach's  $\alpha$  of 0.90. The survey was divided into three parts. In the first part respondents were asked to rate a variety of restaurant selection attributes (i.e., seven items) using a five-point Likert scale ranging from 1 – very unimportant to 5 – very important. In the second part, respondents were asked to indicate their level of agreement with regards to a variety of statements about green

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marketing (i.e., five items), GrCSR (i.e., three items), ecological behaviours (i.e., ten items), and intentions to patronize a green restaurant (i.e., three items) using a five-point Likert scale ranging from 1 – completely disagree to 5 – completely agree. The third part measured demographic characteristics of gender, age, education, and income. The original survey was developed in English and then translated into Arabic by a professional translation centre. In order to ensure content validity, the survey items were reviewed by a panel

of ten hospitality professionals and academics. The participants were explicitly asked to report any ambiguities in the meanings.

### **Sample and Data Collection**

The current study surveyed customers who previously dined at a green casual dining restaurant using the convenience sampling method. In this study, green restaurant refers to one that offers a selection of green food menu items (i.e., locally grown or certified organic food), as well as one that implements green practices, such as the efficient use of energy and water, green marketing, and GrCSR (Chen et al., 2015). Casual dining restaurants are newer restaurants that have a lower check average than fine dining restaurants (DiPietro et al., 2013). This type of restaurant was chosen as it widespread in Egypt. The survey instrument assured customers confidentially as no personal information was asked that could be used to identify participants. A total of 500 questionnaires were randomly hand distributed to customers. Among the questionnaires returned, 312 were usable ones, representing a response rate of 62.4 percent.

### **Data Analysis**

Structural equation modelling (SEM) technique was adopted in this study using AMOS Software. First, confirmatory factor analysis (CFA) was used to test the measurement model. Second, Cronbach's  $\alpha$  and composite reliability (CR) were used to test the construct reliability. Third, maximum likelihood was used to test the conceptual model hypotheses (see Figure 1). Fourth, two variance analysis tests (i.e., Independent-sample t test, one-way independent ANOVA) were employed to test the impacts of four customers demographic characteristics, i.e., gender, age, education, income on their intentions to patronize green restaurants.

## Results

### Analysis of Demographic Characteristics

Table 1 presents the demographic characteristics of the respondents. Among the 312 customers who participated in the study, 59 percent were males and 41 percent were females. They were from various age groups, with the largest group of the respondents (35 percent) aged 31-40 years old. Their educational levels ranged from secondary school graduates, bachelor's degree to postgraduate's degree, with the largest group of the respondents (72 percent) had a bachelor's degree. The largest group of the respondents (41 percent)

had a monthly income 2000-4000 L.E., followed by 30 percent of the respondents who had a monthly income 4001-6000 L.E.

**Table 1: Demographic variables of respondents (n = 312)**

Variable	Number	Percentage
Gender		
Male	184	59
Female	128	41
Age		
Under 20	30	10
21-30	70	22
31-40	109	35
41-50	62	20
51 or above	41	13
Education		
Secondary school graduates	37	12
Bachelor's degree	225	72
Postgraduate's degree (MBA, MSc, PhD)	50	16
Income (monthly)		
Under 2000 L.E.	25	8
2000 – 4000 L.E.	128	41
4001 – 6000 L.E.	94	30
6001 L.E. or more	65	21

### Analysis of Restaurant Selection Attributes

Table 2 presents the selection attributes for casual dining restaurants. The results showed that the top four important attributes in selecting a casual dining restaurant were food quality ( $M = 4.63$ ,  $SD = 0.82$ ), price ( $M = 4.46$ ,  $SD = 0.88$ ), value for money ( $M = 4.39$ ,  $SD = 0.98$ ), and service quality ( $M = 4.24$ ,  $SD = 1.02$ ). On the other hand, the least important attributes in selecting

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a casual dining restaurant were green practices (M = 3.10, SD = 1.25), location (M = 3.41, SD = 1.21), and restaurant ambience (M = 3.88, SD = 1.14).

**Table 2: Customers' perceptions regarding restaurant selection attributes (N = 312)**

Restaurant attributes	Mean (M)	Standard deviation (SD)
Food quality	4.63	0.82
Service quality	4.24	1.02
Price	4.46	0.88
Value for money	4.39	0.98
Location	3.41	1.21
Restaurant ambience	3.88	1.14
Green practices	3.10	1.25

### **Analysis of Restaurant Green Practices**

Table 3 presents customers' perceptions regarding green practices. The highest rated green restaurant practices were "I believe that restaurants should use reward policy, e.g., a discount to encourage customers' green behaviour" (M = 4.56, SD = 1.18), "I believe that it is important that restaurants use posters on the restaurant and restrooms to encourage customers' power, water, and energy saving behaviours" (M = 4.48, SD = 1.34), "I believe that it is important that restaurants promote green food concepts on the package for take out" (M = 4.35, SD = 1.32), "I believe that it is important that restaurants use slogans on the menu to persuade customers to be a green consumer" (M = 4.16, SD = 1.34), "I believe that restaurants should encourage customers to take away uneaten dishes to avoid wasting food" (M = 4.08, SD = 1.38), and "I prefer to purchase services from organizations that practice green initiatives" (M = 4.01, SD = 0.99). The lowest rated green restaurant practices were "I am willing to pay more than 10 percent more for environmentally safe products" (M = 1.94, SD = 1.32), "I am willing to pay up to 10 percent more for environmentally safe products" (M = 2.15, SD = 1.11), "I am willing to pay up to 5 percent more for environmentally safe products" (M = 2.62, SD = 1.15), "I believe that restaurants should participate in activities concerned about the environment and the community more than twice a year" (M = 2.88, SD = 1.39), "I am willing to pay up to 1 percent more for environmentally safe products" (M =

3.11, SD = 1.25), and “I believe that restaurants should hold activities to promote consumer green education more than once a year” (M = 3.26, SD = 1.21).

In summary, the highest rated green practices were green marketing (M = 4.33, SD = 1.31) and intentions to patronize green restaurants (M = 3.68, SD = 1.14). The lowest rated green practices were GrCSR (M = 3.17, SD = 1.24) and ecological behaviour (M = 3.21, SD = 1.17).

**Table 3: Customers’ perceptions regarding green practices in casual dining restaurants (n = 312)**

Green Practices	M	SD
Green Marketing (GrM)	4.33	1.31
I believe that restaurants should encourage customers to take away uneaten dishes to avoid wasting food.	4.08	1.38
I believe that restaurants should use reward policy, e.g., a discount to encourage customers’ green behaviours.	4.56	1.18
I believe that it is important that restaurants use slogans on the menu to persuade customers to be a green consumer.	4.16	1.34
I believe that it is important that restaurants promote green food concepts on the package for take out.	4.35	1.32
I believe that it is important that restaurants use posters on the restaurant and restrooms to encourage customers’ power, water, and energy saving behaviours.	4.48	1.34
Green Corporate Social Responsibility (GrCSR)	3.17	1.24
I believe that restaurants should hold activities to promote consumer green education more than once a year	3.26	1.21
I believe that restaurants should participate in activities concerned about the environment and the community more than twice a year.	2.88	1.39
I believe that restaurants should demonstrate a commitment to socially responsible “green projects” (e.g., donating to environment projects or paying for reduces carbon footprint).	3.38	1.13
Ecological Behaviour (EB)	3.21	1.17
Being environmentally conscious is part of my day to day life	3.79	1.16
I am well informed about environmental issues.	3.82	1.21
I prefer to purchase products that are environmentally friendly.	3.94	1.17
I prefer to purchase services from organizations that practice “green initiatives”.	4.01	0.99
I prefer to purchase environmentally safe products even if they are more expensive.	3.32	1.16
I prefer to purchase environmentally safe products even if they are lower in quality.	3.43	1.17
I am willing to pay up to 1 percent more for environmentally safe products.	3.11	1.25
I am willing to pay up to 5 percent more for environmentally safe products	2.62	1.15
I am willing to pay up to 10 percent more for environmentally safe products.	2.15	1.11
I am willing to pay more than 10 percent more for environmentally safe products.	1.94	1.32
Patronizing a green Restaurant (PGR)	3.68	1.14
I am willing to pay more for a restaurant that uses local products on their menu.	3.52	1.28
I am willing to pay more for a restaurant that uses organic products on their menu.	3.61	1.13
I believe that I would visit a restaurant more often because of my perceptions of the green activities of that restaurant.	3.92	1.02

Note: M, Mean; SD, Standard Deviation

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### **Analysis of Variance**

An independent-sample t test was used to analyze the differences in intentions to patronize green restaurants between female and male customers. The results showed statistical significant differences between female and male customers in their intentions to patronize green restaurants ( $p = 0.025$ ). Specifically, female customers had higher intentions ( $M = 3.90$ ,  $SD = 1.07$ ) to patronize green restaurants than male customers ( $M = 3.46$ ,  $SD = 1.28$ ).

A one-way ANOVA with Tukey post hoc analysis was used to examine the differences between customers' intentions to patronize green restaurants and their age, education levels, and income. The results showed statistical significant differences between customers' age groups and their intentions to patronize green restaurants ( $f = 3.96$ ,  $p = 0.002$ ). Older customers, i.e., ages forty-one or above had higher intentions ( $M = 3.82$ ,  $SD = 1.13$ ) to patronize green restaurants than younger customers, i.e., ages forty or below ( $M = 3.54$ ,  $SD = 1.23$ ). The results revealed no statistical significant differences between customers' educational levels and their intentions to patronize green restaurants ( $f = 1.29$ ,  $p = 0.134$ ). Finally, statistical significant differences were found between customers' income levels and their intentions to patronize green restaurants ( $f = 3.14$ ,  $p = 0.026$ ). Customers at a higher income levels, i.e., 4001 L.E. or above showed stronger intentions ( $M = 3.76$ ,  $SD = 1.14$ ) to patronize green restaurants than customers at a lower income levels, i.e., 4000 L.E. or less ( $M = 3.60$ ,  $SD = 1.17$ ).

### **Analysis of Measurement Model**

A confirmatory factor analysis (CFA) was performed through AMOS to test the reliability and validity of the four constructs (i.e., green marketing, GrCSR, ecological behavior, intentions to patronize green restaurants), as well as the measurement model overall fit. The CR and Cronbach's  $\alpha$  values exceeded the minimum acceptable value of 0.7 (Hair et al., 2010), indicating a good reliability level. The AVE values exceeded the minimum acceptable value of 0.5 (Hair et al., 2010), indicating good convergent validity (see Table 4). The AVE value of each construct was greater than the squared correlation for each pair of constructs, indicating good discriminant validity (see Table 5).

**Table 4: Results of confirmatory factor analysis, validity analysis, and reliability test**

Construct	Factor loading	t-value	Standardized path coefficient	Composite reliability	Cronbach's $\alpha$	AVE
GrM				0.97	0.95	0.85
GrM1	1.00		0.84			
GrM2	0.93	19.86	0.89			
GrM3	1.08	27.57	0.97			
GrM4	1.02	23.18	0.93			
GrM5	1.07	25.72	0.96			
GrCSR				0.93	0.90	0.82
GrCSR1	1.00		0.93			
GrCSR2	0.99	16.94	0.90			
GrCSR3	0.97	14.25	0.89			
EB				0.95	0.94	0.67
EB1	1.00		0.86			
EB2	0.97	12.03	0.87			
EB3	0.92	9.96	0.77			
EB4	0.96	12.37	0.82			
EB5	0.95	11.09	0.79			
EB6	0.98	8.48	0.74			
EB7	0.97	12.89	0.76			
EB8	1.12	16.70	0.89			
EB9	0.98	14.18	0.86			
EB10	0.94	10.15	0.79			
PGR				0.90	0.88	0.75
PGR1	1.00		0.86			
PGR2	0.98	10.88	0.84			
PGR3	1.02	14.99	0.89			

Notes: AVE, average variance extracted; GrM, green marketing; GrCSR, green corporate social responsibility; EB, ecological behaviour; PGR, patronizing a green restaurant

**Table 5: Discriminant validity for the measurement model**

Construct	Variance			
	1	2	3	4
1. Green marketing	0.85			
2. Green corporate social responsibility	0.41	0.82		
3. Ecological behaviour	0.31	0.25	0.67	
4. Patronizing a green restaurant	0.11	0.10	0.23	0.75

Notes: The bold values along the diagonal line are the AVE values for the constructs, and the other values are the squared correlations for each pair of constructs.

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The various measures of the overall model goodness-of-fit suggest a satisfactory model fit. The chi-square ( $\chi^2$ ) value was 186.243 with 67 degrees of freedom,  $\chi^2/df = 2.78$ , lower than the recommended value of 3,  $p = .003$ ; goodness-of-fit index (GFI) = 0.94, adjusted goodness-of-fit index (AGFI) = 0.92, normed fit index (NFI) = 0.95, comparative fit index (CFI) = 0.96, relative fit index (RFI) = 0.91, which were all greater than the recommended level of 0.90; and root mean square error of approximation (RMSEA) = 0.034, lower than the cutoff value of 0.08 (Hair et al., 2010, Arbuckle, 2011). Finally, the t-values for all the parameter estimates were all statistically significant at the 0.1 percent level.

### **Analysis of Structural Model**

After CFA was employed, SEM was used to test path/structural model for customers' intentions to patronize green restaurants. Based on the rules of previous studies (e.g., Hair et al., 2010, Arbuckle, 2011), the final model fit the data well. The  $\chi^2$  value was 106.341 with 39 degrees of freedom,  $\chi^2/df = 2.73$ ,  $p = .001$ , GFI= 0.94, AGFI= 0.92, NFI= 0.93, CFI = 0.96, RFI= 0.94, and RMSEA= 0.042. Table 6 and Figure 2 depict the results of the SEM.

**Table 6: Parameter estimates of the structural model**

Hypotheses	Path	Factor loading	t-value	Standardized path coefficient ( $\beta$ )	Results
H1	GrM $\rightarrow$ EB	0.29	5.98*	0.28	Supported
H2	GrM $\rightarrow$ PGR	0.38	8.58*	0.35	Supported
H3	GrCSR $\rightarrow$ EB	0.02	0.41	0.02	Rejected
H4	GrCSR $\rightarrow$ PGR	0.04	0.58	0.03	Rejected
H5	EB $\rightarrow$ PGR	0.47	9.49*	0.45	Supported

Notes: GrM, green marketing; EB, ecological behaviour; PGR, patronizing a green restaurant; GrCSR, green corporate social responsibility. \*Absolute t-value > 3.29,  $p < 0.001$ .

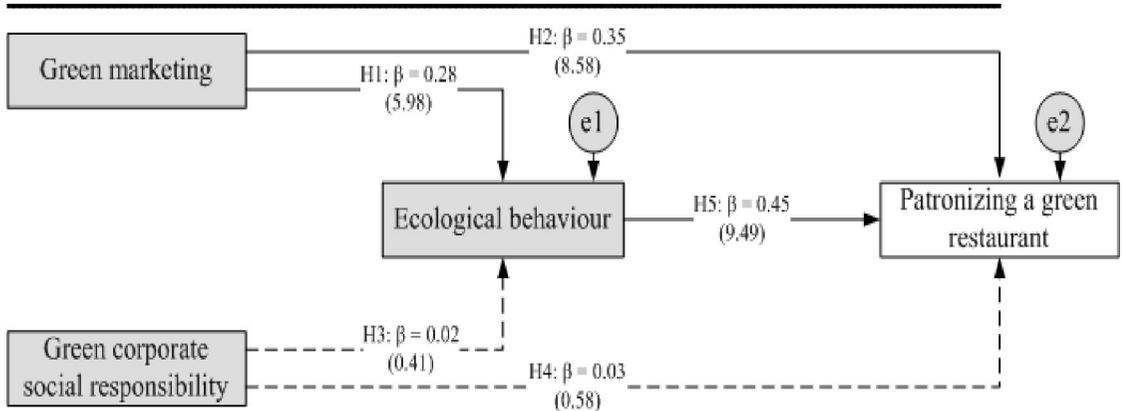


Figure 2: Final structural equation model and standardized estimates  
Notes: t-values in parentheses; bold lines denote significant hypotheses; dotted lines denote nonsignificant hypotheses.

### Results of Hypotheses Testing

The standardized path coefficients ( $\beta$ ) and t-values, presented in Table 6 and Figure 2, were used to test the study hypotheses. Green marketing had significant effects on customers' ecological behaviours ( $\beta = 0.28$ ,  $p < 0.001$ ), and their intentions to patronize green restaurants ( $\beta = 0.35$ ,  $p < 0.001$ ), supporting Hypotheses 1 and 2, respectively. However, GrCSR had insignificant effects on customers' ecological behaviours ( $\beta = 0.02$ ,  $p > 0.05$ ), and their intentions to patronize green restaurants ( $\beta = 0.03$ ,  $p > 0.05$ ), rejecting Hypotheses 3 and 4, respectively. Customers' ecological behaviours had significant effect on their intentions to patronize green restaurants ( $\beta = 0.45$ ,  $p < 0.001$ ), supporting Hypothesis 5.

### DISCUSSION AND IMPLICATIONS

The current study tested whether green marketing has any impact on customers' ecological behaviours and intentions to patronize a green restaurant as part of Hypotheses 1 and 2. Consistent with previous studies (e.g., Jeong & Jang, 2010; Hu et al., 2010; Schubert et al., 2010; Dipietro et al., 2013), the results of this study showed that green marketing had significant effects on customers' ecological behaviours and their intentions to patronize green restaurants. In examining the values of path coefficients (Figure 2), green marketing had a greater direct effect on customers' intentions to patronize green restaurants ( $\beta = 0.35$ ) than its indirect effect on customers' intentions through customers' ecological behaviours ( $\beta = 0.28$ ). Despite the importance of green marketing, there has been a lack of information available to customers about restaurants' green initiatives (Schubert et al., 2010). A possible explanation is that most of green restaurant

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initiatives are not noticed by customers because they occur in the production area (Kassinis & Soteriou, 2003). Therefore, restaurants should market and promote their green practices so that customers can be aware of what is being done in the back-of-the house area. For example, restaurants could use websites, information cards, menu notes, information on coffee cups, or window displays to inform customers about their green practices. Restaurants should use reward policy, e.g., a discount to encourage customers' green behaviours and intentions to dine at green restaurants.

In testing the construct related to whether GrCSR has any impact on customers' ecological behaviours and intentions to patronize a green restaurant as part of Hypotheses 3 and 4. The results of the current study showed that GrCSR had insignificant effects on customers' ecological and their intentions to patronize green restaurants. However, these findings are inconsistent with the results of previous studies (e.g., Mohr & Webb, 2005; Manaktola & Jauhari, 2007; Kwok et al., 2016) which pointed out that Restaurant's GrCSR initiatives can attract environmentally conscious consumers, and influence their ecological behaviours and purchasing decisions. A possible explanation of such contradiction in the findings may be that customers may not well-informed about a restaurant's GrCSR efforts such as donations to environmental projects unless the restaurant actively promotes such initiatives. Therefore, as previously-suggested, restaurants should market and promote their green practices, especially administration-focused green initiatives so that customers can be aware of such initiatives.

The current study tested whether customer ecological behaviours positively impact their intentions to patronize a green restaurant as part of Hypothesis 5. The results revealed that customers' ecological behaviours had strong positive significant effects on their intentions to patronize green restaurants ( $\beta = 0.45$ ). This finding is consistent with previous studies (e.g., Dutta et al., 2007; Hu et al., 2010; DiPietro and Gregory, 2012) which reported that customers who are environmentally conscious and who use green practices such as recycling and purchasing green products on a daily basis are more likely to patronize green restaurants.

The variance analysis results showed that customers' gender, age, and income were significantly related to their intentions to dine at green restaurants, supporting hypotheses 6, 7, and 9, respectively. Consistent with previous studies (e.g., Gronhoj & Olander 2007; Schubert et al., 2010; DiPietro et al., 2013), the results of the current study showed that female customers had higher intentions to patronize green restaurants than male customers. According to Gronhoj and Olander (2007), females more

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carefully consider the impact of using green practices on their children. In this study, older customers (i.e., ages forty-one or above) had higher intentions to patronize green restaurants than younger customers (i.e., ages forty or below). This result is consistent with Hu et al.'s (2010) findings which suggested that older people more carefully consider the impact of green practices on their health and their children's future. However, inconsistent with previous studies (e.g., Hu et al., 2010; DiPietro et al., 2013), the results of the current study revealed no statistical significant differences between customers' educational levels and their intentions to patronize green restaurants. Comparing to the education systems in developed countries, the Egyptian educational system may not promoting the benefits of green practices. In this study, customers at a higher income levels, i.e., 4001 L.E. or above showed stronger intentions to patronize green restaurants than customers at a lower income levels. This is consistent with the findings of Hu et al. (2010) which point out that customers at higher income levels can bear the marginal increase in costs associated with green products. Results of this study provide important implications for restaurant managers. Green casual dining restaurants that have a high proportion of female and older customers should pay attention to promoting green practices, especially in areas that are visible to the guest. Green casual dining restaurants should be very cautious about charging higher prices for green practices, since most customers in the current study indicated that they will not pay more to dine at a green casual dining restaurant.

### **LIMITATION AND SUGGESTIONS FOR FUTURE RESEARCH**

Despite the efforts to provide meaningful suggestions for managers of casual dining restaurants in Egypt to promote the use of green practices, this study has some limitations. First, this study may not be comprehensive enough to represent all customers who dine at green casual dining restaurants in Egypt. The sample may be considered relatively small. Future research may include a comparative study of a larger sample of customers to provide more meaningful results. Second, the current study investigated the impact of two green practices, i.e., green marketing and GrCSR on customers' intentions to patronize green restaurants influence. Other green practices, such as food-related and environment-related green practices should be investigated in the future research. Third, one of the methodological limitations in this study was the use of self-reported questionnaires. Future studies using qualitative methods should provide a broader understanding of factors influencing customers' intentions to dine at green restaurants. Finally, Future research may attempt to extend this study to other restaurant types, such as upscale or

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fast-food restaurants to obtain a generalized view of the situation of patronizing green restaurants.

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