Jun 8th, 12:00 AM - Jun 10th, 12:00 AM

Effects of restaurant green practices: Which practices are important and effective?

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Effects of Restaurant Green Practices:  
Which practices are important and effective?  

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Abstract  
This study attempted to find out the answer to the question whether green practices have strong effects on the image of the company and customers’ behavioral intentions in the hospitality industry. The study results indicate that customers’ perception of green practices (PGP) have a positive effect on the green image of the restaurant and customers’ behavioral intentions to the restaurant. Also, the result indicates that customers’ perceived ecological image of the restaurant (PEI) positively affects customers’ ecological behavioral intention (EBI) to the restaurant. Through testing the mediating role of PEI, this study finds out the important role of PEI in explaining the restaurant customers green purchasing behavior. This study also found the green practices influencing PEI and EBI in different groups of green customers. In green group, the green practices influencing PEI the most are recyclable take-out containers, recycling waste, and energy efficient lighting. Practices affecting EBI are recycling waste and energy efficient lighting. In the less green group, the practice of using recyclable take-out containers has the most significant impact.

Keywords: Green practices; Green image; Ecological behavioral intention; Green purchasing behavior.

Introduction  
As more customers recognize the seriousness of environmental problems, the consumer choices are becoming more ecologically conscious as they purchase products and services that are environmentally friendly (Han, Hsu, & Sheu, 2010). To meet the increasing demand for ‘green’ products and services, marketers throughout all industries invest enormous efforts into developing and promoting eco-friendly goods. The focus on environmentally friendly has urged the restaurant industry to adjust their services as well in order to meet the changing expectations of the customers. Restaurant owners are adopting Green Practice (GP) to their properties by becoming members of green associations, such as Green Restaurant Association (GRA).

In marketing, the impact of corporate image on consumer behavior is well-recognized. Researchers indicated that a good corporate image helps companies establish and maintain loyal relationship with customers (Andreassen & Lindestad, 1998; Nguyen & Leblanc, 2001; Robertson, 1993). Also, one of the main reasons why companies are pursuing green practices is to improve their image and reputation to the public. According to a new study by BDO Seidman, LLP., two-thirds of the CFOs of the top 100 largest retailers indicated that the greatest motivator for company to pursue eco-friendly practices is to improve companies image where 54% for ‘image among consumers’ and 13% of ‘image among shareholders’ (Environmental Leader, 2007). This indicated that industry professionals also recognized the importance of green practice as one of the component contributing to image of the company and that they believe the image of the company can be improved through executing green practices, which in the long-run will contribute to customer loyalty (Ryu, Han, & Kim, 2008).
However, the past studies on green product consumption are mainly focused on demographic and psychological characteristics of green consumers or investigated the relationship between consumers’ behavioral intentions and other antecedents of green purchasing in the decision-making process (Chan & Lau, 2000; D’Souza, Taghian, & Khosla, 2007; Straughan & Roberts, 1999). In this stream of general green product consumption studies, researchers in hospitality industry explored the eco-friendly decision-making processes of hotel customers (Choi & Parsa, 2006; Han et al., 2009). However, not a single study has been done to find out the effects of green practices on the company. Does the green practice affect the image of the company and shape customers’ behavioral intention? Can the improved image of green companies affect behavioral intention? Moreover, a fundamental and practical study of green practices, examining how customers feel about green practice in the restaurant industry has not been done yet. Furthermore, the previous research indicates that green customers are divided into several segments (Gilg, Barr, & Ford, 2005; Hanas, 2007; Straughan & Roberts, 1999). Thus, it would be important to look at the green practices that would affect different customer segments by their perceived images of green restaurants and their behavioral intention. This study would help restaurant owners to design services in a more customer-oriented way regarding green attributes and it would give them an effective guide line to attract more customers to their business as they adopt the key green practices. Throughout this paper, the researchers explained the logic route of customer perception of green practice through ecological image of the company toward final behavioral intention with theoretical background. Also, the study filled the theoretical and empirical gap in green study of restaurant industry.

Therefore, the specific objectives of this study are to (1) identify customers’ perceived importance of green practices in the restaurant industry, and (2) examine customers’ perceptions regarding the performance of green practices in restaurants. Also, it (3) examines the relationship between restaurant customers’ perception of green practices and their perception of green image of the restaurant, along with how this relationship is affecting the customers’ ecological behavioral intentions. This study (4) investigates the differences in the relationship of customer perception of green practice through ecological image of the company toward final behavioral intention, among the different green customer segments. Lastly, it (5) discovers the key green practices influencing customer’ perceived ecological image of the restaurant and ecological behavioral intentions in different customer segments.

**Literature Review**

*Green study in the hospitality industry*

Similar to the stream of general green product consumption studies, examining behavioral and psychological aspects of hotel and restaurant customers’ eco-friendly decision making processes have received attention from researchers in resent hospitality industry studies. Han et al. (2009) examined the formation of hotel customer’s intentions to visit a green hotel using Ajzen’s Theory of Planned Behavior (1991). Their result showed that all of the predictors-attitude, subjective norm, and perceived behavioral control had positive effects on customers’ intention to stay at a green hotel. They also found out that there were no statistical difference of the paths in between eco-friendly activists and non activists. In the study of the restaurant industry, Dutta, Umashankar, Choi, and Parsa, (2008) estimated customers’ green practice orientation in two different countries-India and U.S. by investigating the customers’ psychological factors. The result showed that consumers in the U.S. had a higher degree of involvement in environmentally and socially responsible practices in restaurants, which had the most significant effect on consumers’ willingness to pay up to 10% or higher on menu price for green practices. In contrast, Indian consumers had a higher degree of involvement in health and it led them to pay more than 10% or higher on menu price. This study provides very practical application to a restaurant manager. Also, to maximize the profits, cultural aspect should be considered when restaurant managers adopt the green practices.
Choi and Parsa (2006) focused on the managers’ attitude to engage in green practices. They investigated the relationship between restaurant managers’ psychological attributes, composed by attitudes, preferences and involvement regarding green practice, and their willingness to charge for green practice. Unlike the majority of green studies, this study examined managers’ attitude toward ecological behavior in hospitality management. Also, their study provided a unique point of view as to how pricing decisions regarding green practice can be explained by the level of the managers’ psychological factors. The result suggested that willingness to charge higher prices, for performing a socially responsible practice was significantly influenced by managers’ preferences and their involvement in such practices. However, managers’ attitude toward GP had little or no effect on managers’ willingness to increase prices for performing a socially responsible practice. This study provided a neat conceptual framework for green practices in the restaurant. They contended that green practices were composed with three perspectives: health concern, environmental concern, and social concern. While many marketing studies indicate that green practices can be one of the main components of social concern, non-green social concerns (e.g. fair human resource practices) should not be included in the study of green practices. Researchers should identify what green practices are, and GP categories should be re-addressed for future study.

Gustin and Weaver (1996) studied customers’ intentions to stay in a hotel based on the environmental strategies used by the hotel. By using a modified environmental behavioral model (Hines, Hungerfor, & Tomera, 1987) which included customers’ knowledge about environmental issues, customers’ attitudes toward environmental strategies and their perceived self- efficacy, they measured hotel customers’ intention to purchase a night at the hotel that conducted green practices. Their result showed that three components in the environmental behavioral model had a positive relationship with intention to purchase. The unique thing about this study was that they tried to identify the green practices that could elicit the customers’ behavioral intention. This was the first study that attempted to examine what customers really thought about green practices and their expectations of such practices in the hotel industry. It provided the insight to help operators design services in a more customer-oriented way, but the employed methodological approach of using a single question to estimate a direct positive relationship between favorable attitude toward each green practice and customers’ behavioral intention needs to be proved quantitatively.

Only limited research on the study of green practices has been done in the hospitality industry, especially in the restaurant industry. Studies regarding consumer mental image of green companies in the restaurant industry has not been done yet. Also, despite the fact that many business owners believe that the image of companies can be improved through executing green practices and that improved image can eventually affect the customers approach behavior, there has not been a study that has attempted to examine the image effect of green practices.

**Green Customers**

As people have been recognizing the seriousness of environmental problems, they are becoming more ecologically conscious and seeking to purchase products or services that are environmentally friendly (Han et al., 2009). According to Ryan (2006), Americans are becoming increasingly concerned about the environment. The percentage of Americans who worry about the environment and are concerned about environmental issues has increased from 62% to 77% over two years (between 2004 and 2006). About 80% of Americans are currently buying green products regularly or sometimes. 12 percent of Americans are true greens and 68 percent are light greens (Hanas, 2007).

In the green studies, many researchers have sought to identify ‘green customers’ in demographic, psychographic, and behavioral aspects. The International Institute for Sustainable Development (IISD) describes the common attitude and belief about green customers. According to IISD, green customers are people who commit to green lifestyles, are serious about their own green practices and their impacts, and support the companies incorporating green practice. They tend to overemphasize their green behavior, and they want environmental protection to be easy.
Unexpectedly, they lack knowledge about environmental issues, but they are eager to learn them. The IISD also provided some broad generalizations regarding the demographic characteristics of green customers. They are young adults who are influenced by their young children. Women tend to be more pro-environmental than men, and the best green customers are those with money to spend (Ryan, 2006). Other studies added more demographical characteristics (level of education and place of residence) to distinguish green customers from others. Many studies’ result indicated that the level of education is positively correlated with environmental concerns and behaviors, and people with a high level of education were likely to have more ecological concern and behavior (Schwartz & Miller, 1991; Zimmer, Stafford, & Stafford, 1994). Some researchers have considered the correlation between place of residence and environmental concern (Schwartz & Miller, 1991; Zimmer et al., 1994). People living in urban areas are less likely to show more favorable attitudes to environmental issues.

In Straughan and Roberts (1999) study of environmental segmentation, they emphasized the importance of psychographic measure to identify green customers. Researchers mentioned that psychographic variables provide a stronger and more useful profile of green consumption than demographic variables. Their finding was that perceived customer effectiveness (PCE) toward solving environmental problems was the most important correlate of ecologically conscious customer behavior (ECCB). Perceived customer effectiveness (PCE) is consumers’ attitudes or beliefs that “individuals can positively influence the outcome to such problems” (Straughan & Roberts, 1999, p. 562). It measures the degree that a customer can have an impact on saving the environment. This component is generally accepted as one of the most important components regarding the perdition of green customers’ behavior intention. In green studies, customers who indicate a high level of PCE show greater levels of green purchases (Chan & Lau, 2000; do Paco, Arminda, Raposo, & Lino, 2009; Gilg et al., 2005; Gustin & Weaver, 1996; Straughan & Roberts, 1999).

The extent study result indicates that perceived customer’s effectiveness (PCE) is the most important predictor to identify green customers. This study measures PCE level of customers and uses it as a gauge to identify different green customer segments.

**Green Practices in Restaurants**

As mentioned earlier, there are several green restaurant organizations that provide online resources to help restaurateurs adopt green practices. Based on thorough literature review, this study identified green practices that can be utilized in the restaurant industry.

1) Recycling and composting:
   - There are many waste products which are recyclable in restaurants. They are glass, plastic, metal, cardboard, and aluminum. Composting food waste helps to reduce the amount of waste and it improves the quality of the soil. These are possible green practices in restaurants regarding recycling and composting:
     - Recycle paper, plastic, cardboard, glass, and aluminum at the back of the house
     - Provide recycling bin in store(Self-service restaurant setting)
     - Conduct food waste composting programs

2) Energy and water-efficient equipment:
   - Energy and water efficient equipment can be applied in various areas in a restaurant -kitchen, dining area, and restroom. Here are a few examples:
     - Use flow restrictors on faucets, low-flow toilets, and water-less urinals
     - Only serve customers water upon request
     - Replace incandescent light bulbs with longer lasting CFL light bulbs or LED
     - Replace exit lights with LED’s
     - Use motion detectors for lights in the restroom
     - Use of a system which monitors and controls comfortable temperatures efficiently with the HVAC(Heating, Ventilating and Air Conditioning) system
• Keep the entrance door closed or use a double entrance door

3) Eco-friendly cleaning supplies:
   Non-toxic cleaning supplies are safe for the environment and people in the following examples:
   • Use of environmentally friendly cleaners for dishes, and linen
   • Use of environmentally friendly cleaners for tables and floors

4) Serving ware and packaging:
   Recycle service wares are made of post-consumer waste sources. These wares can reduce the amount of waste. Also, they can save natural resources, such as trees.
   • Use of take-out containers that are biodegradable (paper) or recyclable instead of using Styrofoam

5) Menu sustainability:
   Organic food is raised by non-toxic pesticides and fertilizers and made without genetic engineering. Locally grown foods reduce the amount of air pollution associated with transportation which uses fossil fuels. Therefore, restaurant managers should be sure to:
   • Offer local ingredients on the menu
   • Offer organic food on the menu
   • Offer fish and seafood harvested sustainably and free of harmful pollutants
   • Avoid genetically modified foods

   Green practices from these sources were developed for restaurateurs. Other practices for the back of the house were excluded, for example using energy efficient lighting within storage and kitchens. This study considered green practices that customers are exposed to.

Theoretical Ideology of Green Practices

Miles and Covin (2000) indicated that there are two theories that explain why companies invest in developing superior environmental performance: (1) the “slack resources” theory (Graves & Waddock, 1994) and (2) the “good management” perspective of competitive advantage (Russo & Fouts, 1997). The first theory “slack resources” proposes that the company that has sufficient assets tends to allocate discretionary resources for socially responsible practices, such as environmental enhancements. This investment is designed to develop and enhance competitive advantage through reputation, image, and long term cost savings (Miles & Covin, 2000; Miles & Russell, 1997). In other words, by executing superior green performance, the company attempts to obtain a better image and reputation, which may lead to more successful outcomes in the future. Good management theory suggests that companies that have innovative management tend to seek out emerging sources of competitive advantage such as new environmental practices to better satisfy customers. Managers concern about the realization of superior environmental performance, which indicates customers’ recognition of green image of the company through the company’s green practices (performance) because they believe that gained realization of such performance in public would give a distinctive advantage that intensifies their competitive power.

The two theories indicate that, regardless of the financial condition, the company or the management strategies, the primary reason why companies are engaging in conducting and developing superior environmental performance is to improve the image of the company by conducting green practices and eventually to obtain the competitive advantage.

A more recent study conducted by BDO Seidman, LLP. confirms that two-thirds of the CFO’s of the top 100 largest retailers indicate that the greatest motivator for a company to pursue eco-friendly practices is to improve companies’ images where 54% for ‘image among consumers’ and 13% of ‘image among shareholders’. The study also found that industry professionals recognized the
importance of eco-friendly practices as one of the components contributing to the image of the company (Environmental Leader, 2007). Industry professionals also believe the image of the company can be improved through executing environmentally friendly practices, which in the long-run will contribute to customer loyalty (Ryu et al, 2008).

Image - Green Image of Restaurant Company

A company’s image is important because it reflects the manner in which one organization can be differentiated from another. Various studies have shown that an image affects a customer’s perception of a company (Ryu et al., 2008). The impact of a company’s image is particularly significant in the restaurant industry because the intangible characteristics of a restaurant cannot be evaluated prior to the dining experience. As a result, customers are highly dependent on the image of the restaurant created by tangible cues (e.g. brand name of the restaurant or restaurant attributes).

In psychology, imagery is often described as “mental picturing” and defined as a distinct way of processing and storing multi-sensory information in working memory (MacInnis & Price, 1987). In an early study of store image in marketing, Martineau (1958) found that image is “the way in which the store is defined in the shoppers’ mind, partly by its functional attributes and partly by an aura of psychological factors” (p.47). However, in a later study of store image, researchers focused more on the functional and physical attributes associated with how customers perceived the image of a store. In 1987, Assael mentioned that image is the perception of store attributes. Similar to Assael’s definition of image, Bloemer and Ruyter (1998) later defined store image as a consumer’s perception of a store based on particularly noticeable attributes. Bloemer and Ruyter (1998) further indicated that image is expressed as a function of salient attributes of a particular store that are evaluated and weighted against each other. Likewise, a restaurant’s green image can be described as a customer’s belief about the ecological image of the restaurant. The perceived green image toward a restaurant can be influenced by the function of the green practices of the restaurant that are important for evaluation of greenness of the restaurant (Bloemer & Ruyter, 1998; Ryu et al., 2008).

A study of corporate image in marketing also indicates that the function of green practice is a component of developing the image of a company (LeBlanc & Nguyen, 1996; Miles & Covin, 2000; Schwaiger, 2004). In the study of corporate image in marketing, corporate image is referred to as the overall impression the public has about a firm (Nguyen & Leblanc, 2001). This overall impression of a firm is built on several characteristics of the company and the attributes, such as name and reputation of a firm, its variety of products and services, architecture, and ideology. In 1996, LeBlanc and Nguyen identified the determinants of company image in the service industry from the customers’ prospective. The researchers suggested that there were five factors influencing customer perceptions of corporate image in service firms. These five factors included: corporate identity, reputation, service offering, physical environment, and contact personnel. The results indicated that corporate image was derived mainly from reputation.

Social responsibility policies made evident by green practices have long been considered as an essential component to measure of corporate reputation, a main element of corporate image (Schwaiger, 2004). Also, marketing studies indicate that those practices significantly affect the evaluation of a company’s image, reputation, and even customers’ loyalty (Dutta et al., 2008). Theoretically, green practices may be a small component that composes the overall image of a company. However, considering the current social climate in which customers’ have ecological concerns and demand products and services that are designed to be less harmful to the environment, there has been a concerted effort going green. Companies have also been confronted with the need to become more sensitive to the current state of the environment. As a result of the growing social sensitivity to this issue a company’s image can be greatly affected by a perceived lack of interest in environmental concerns.
Behavioral Intentions—Ecological Behavioral Intention

Olive (1997) defined behavioral intentions as an acknowledged likelihood to engage in a certain behavior. He mentioned that a customer attitude toward purchasing is strongly related to his or her behavioral intentions. He further indicated that customers’ attitudes toward purchasing, which are behavioral intentions, are developed by their prior experience of the product or service. According to Ajzen’s Theory of Planned Behavior (1991), the attitude toward a behavior referred as “the degree that a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (p.188). Because this attitude is believed to be a function of one’s salient beliefs, which represent the perceived consequences of the behavior and his/her evaluation of the significance of the consequences, it can be a reasonable predictor of behavioral intention.

Similarly, customers’ ecological behavioral intentions concerning restaurants are described as an acknowledged likelihood to engage in green purchasing by dining in a green restaurant. The ecological behavioral intentions can be captured by the customers’ attitude toward green purchasing, which is elicited from their prior ‘green’ experience of a restaurant (Olive, 1991). Customers’ green image of a restaurant, which is developed by prior information, can also affect customers’ green behavioral intention. Based on this literature review, ecological behavior intention may be described as a stated likelihood to return to the restaurant, to be engaged in positive word-of-mouth behavior and to recommend the company to relatives in the future, that regarding a restaurants’ green practice and ecological concern. Research conducted by National Restaurant Association, revealed that 44% of customers indicated they were likely to make a restaurant choice based on a restaurant’s conservation efforts regarding energy and water. Sixty percent of customers said that they were more likely to visit a restaurant offering eco-friendly food (Conserve, 2009). If this is the case, why do people have this type of ecological behavioral intention?

There are two motivations for customers’ the ecological behavioral intentions which are altruism toward the environment and status enhancement. Some researchers have discovered that ecological purchasing behavior of customers can be construed as altruistic. Altruism involves the act of doing something good for others without expecting anything in return. People are presumed to engage in conservation primarily because they, at some level, intrinsically care about the well-being of the planet and its inhabitants (Griskevicius, Tybur, & Van den Bergh, 2010; Stern, Dietz, & Kalof, 1993) Even though eco-friendly products often cost more and are lower quality than non-green products, customers purchase such product and services based on their genuine altruism toward the environment and further, next generation. Another motivation is the status-enhancing benefits associated with purchasing environmentally friendly products. Consumers’ desires to have a public recognition as a green customer motivate their pro-environmental behavior (Griskevicius et al., 2010). As mentioned earlier, purchasing ecologically friendly goods requires self-sacrifice on the part of customers. Such altruistic behavior signals one’s willingness and ability to incur costs for others’ benefit. Therefore, by purchasing green products, customers desired to be seen as people who care about the environment (Griskevicius et al., 2010).

With these things understood, restaurant customers’ ecological behavioral intention is influenced by these two motives. Customers’ genuine altruism toward the environment can elicit their behavioral intention toward a restaurant that has a superior environmentally friendly performance reputation. Also, the desire of restaurant customers to obtain status-enhancing benefits through dining in green restaurant (which is the easiest way to get a public recognition as they dine in) can be the major motive of their behavioral intention.
Based on the literature review, the researchers proposed the conceptual framework of the study.

The relationship between customers’ perception of green practice and their perceived image of a restaurant can be explained by empirical evidence in a study of store image. The aforementioned store image is the consumer’s perceptions of a store because of salient attributes and the image is expressed as a function of the salient attributes of a particular store that are evaluated and compared to one another (Bloemer & Ruyter, 1998). Based on this definition of store image, Ryu et al. (2008) argues that the image of a restaurant can be described with the functional attributes of the restaurant that are the most important for evaluation. Likewise, the customers’ green image of a restaurant can be influenced by the environmentally friendly practices of the restaurant that are important for evaluation of how greenness of the restaurant. The tangible green attributes in the restaurant, for example, in-store recycling bins, organic menu options, motion detector lights in the restaurant, and recyclable take-out containers, and how well the restaurant eco-friendly can have an impact on customers’ green image processing for the a particular restaurant. Therefore, customers’ perceptions regarding the performance of the green practice in a restaurant would affect what customers believe concerning the environmental friendliness of the restaurant.

The relationship between perception of green practice (PGP) and perceived ecological image (PEI) of the restaurant can be diverse in different groups of customers. Among the several green segments in market, green customers, who commit to green lifestyles, are serious about their own green practices and their impact on the environment. These individuals may be more concerned about green practices and the positive green image of restaurant than other customers. Also, the green practices influencing green customers’ perceived ecological image of the restaurant might be different from that of less green customers’. The early study of store image proposed that an individual’s behaviors are expressed based on psychological or distorted representation of objective reality that exists in the individual’s mind. In other words, people’s behaviors are more likely to be determined by an image then by objective reality (Martineau, 1958; Myers, 1968) and there are a number of studies conducted regarding effects of images on the future behavior of customers. Ryu et al. (2008) investigated the relationships among overall quick-casual restaurant image, perceived value, customer satisfaction and behavioral intentions. By emphasizing customers’ perceptions of a store’s image in terms of functional attributes, they found out that the restaurant image significantly influences perceived value and also it is a significant predictors of customers’ behavior intentions. Nguyen and LeBlance’s (1998) findings also revealed that the relationship between corporate image and customers’ retention decision was supported. They suggested that customers who form a positive overall impression of the image of the financial institution were more likely to prefer the organization and recommended it to others.
Based on image theory and the literature reviewed, we can conclude that there is a significant relationship with image and customers’ behavioral intention. With this understood, the customers’ relationship with a green restaurant (or company) might be determined by the customers’ favorable green image of a restaurant. The customers’ high recognition of the seriousness of environmental problems makes customers more ecologically conscious and as such they seek restaurants that provide eco-friendly services. Due to the intangible characteristics of the restaurant, customers are highly dependent on the green image of the restaurant and customers would be more attracted by a restaurant that has strong environmentally friendly image.

The relationship between perception of green practice (PGP) and ecological behavioral intention (EBI) are developed by customers’ prior experience of the products or services (Olive, 1997). Similarly, the attitude toward dining in a green restaurant is elicited from a prior ‘green’ experience of a restaurant. The green attributes in the restaurant, such as in-store recycling bins, organic menu options, and recyclable take-out containers, and how well the restaurant undertakes green practices can have impacts on customers’ choice of green restaurant. In addition, customers’ genuine altruism toward the environment or desires to gain status-enhancing benefits might encourage behavioral intention toward the restaurant that has superior environmentally friendly policies. The relationship between perceived green practice (PGP) of the restaurant and ecological behavioral intention (EBI) might also be different between green customers and less green (or non-green) customers. This relationship between PGP and EBI is expected to be stronger for green customers, because green customers believe that “individuals can positively influence the outcome to such problems” (Straughan & Roberts, 1999, p. 562) than those customers who are non-green. Therefore, there might be a distinction in the direct relationship from PGP to EBI in green group.

Methodology

Selecting the sample restaurant

For selecting a sample restaurant of this study, this study considered two main points. First, the sample restaurant should obtain green practice attributes in the store. Also, the sample restaurant should be recognized or certified as a ‘green’ restaurant by a designated green organization or some news media or publication. One of the major restaurant organizations in the green movement is the Green Restaurant Association (GRA). This study searched for a sample restaurant from the list of GRA certified green restaurants. Almost 300 restaurants were on the list of GRA certified green restaurants and they are mostly run by small private business owners. This study first tried to contact several GRA certified green restaurants from the list. However, the accessibility of each restaurant was problematic. Also, since green practices that are executed in restaurants varied in each restaurant, combining different study results to obtain the study objectives seemed to be too difficult for the restraints of this research. Selecting a single restaurant among the list was also considered. However, if a single restaurant was chosen, the potential contribution of this study could possibly be diminished. Therefore, this study decided to look at other sources to find the sample restaurant.

Newsweek (2009), the second largest news weekly magazine in the U.S., published the exclusive environmental ranking of America's 500 largest corporations. Starbucks ranked the first in its industry sector, right above McDonald's. Also, according to Brooks (2009), there were only two restaurant chains indentified by customers when they were asked which companies they saw as environmentally and socially responsible. Starbucks was one of these two restaurant companies (Starbucks and McDonald’s) that has been highly recognized as a ‘green restaurant’ among the customers. Green practices that are executed in Starbucks such as the use of recyclable take-out containers, use of energy-efficient lighting in seating areas, and the use of water efficiency equipments were similar throughout the different locations. Combining multiple studies’ results from different locations was assumed not to be difficult to obtain the study objectives. Lastly, considering the scale of Starbucks’ business the potential contribution of the study would be influential. For these reasons, Starbucks was selected as a study sample.
Measurement

To achieve the study objectives, a self-administered survey questionnaire was developed based on the findings of the literature review. The survey included six parts covering the following issues: (1) perceived customer effectiveness, (2) importance of green practices in a restaurant, (3) performance of green practices in a restaurant, (4) customers’ perceived ecological image of a restaurant, (5) customers’ ecological behavioral intention to a restaurant, and (6) demographic data.

In perceived customer effectiveness (PCE) section, respondents were asked about their attitudes or beliefs which may positively influence the outcome to ecologically problems. A 7-point Likert-scale was utilized to measure the perception, with 1=strongly disagree and 7=strongly agree. Three questions, modified from Straughan and Roberts’s (1999) study, were used. The second section asked respondents to rate the importance of each green practice with regards to any coffee house, using a 7-point Likert-scale, where 1= unimportant, 4= neutral, and 7= very important. A total of 12 green practices for the particular restaurant setting were identified from literature review and categorized into five groups; recycling (2 items), energy & water-efficient equipment (4 items), eco-friendly cleaning supplies (2 items), serving ware & packaging (2 items), and menu sustainability (2 items).

The third section measured respondents’ perceived performance of green practices based on their dining experience in the surveyed restaurant (a Starbucks coffee house), using a 7-point Likert-scale, where 1=poor, 4=neutral, and 7=excellent. Four green practices items that were utilized by the surveyed restaurant were integrated into this section. They were categorized into three groups; recycling (1 item), energy & water-efficient equipment (2 items), and green serving ware (1 item). Next section measured respondents’ perceived ecological image of the surveyed restaurant using a 7-point Likert-scale as well. Based on the studies done by LeBlanc and Nguyen (1996) and Schweiger (2004), four perceived ecological image items were developed and used for this study. The fifth section, respondents were asked to indicate their level of agreement on the perceived behavioral intention to the surveyed restaurant, behavioral intention caused by ecological concern. Four ecological behavioral intention questions, modified from the study done by Olivers (1997), were used with a 7-point Likert-scale employed. The last section of the questionnaire gathered respondents’ demographical information, such as age, sex, education, occupation, and household income.

Data collection and analysis

The data were collected from a Starbucks coffee house located at a Midwestern University in the U.S. A self-administered questionnaire was distributed to randomly selected customers who were waiting in line for coffee orders or dining in the store. The survey was conducted for seven days in the second week of November. Fifteen $10 Starbucks gift certificates were given out to randomly drawn respondents as incentives. A total of 361 responses were collected; 12 were excluded from the analysis due to high percentage of incomplete questions. Therefore, 349 complete questionnaires were used for data analysis.

To analyze the data, Anderson and Gerbing’s (1988) two-step approach was employed. The confirmatory factor analysis (CFA) was performed first to estimate reliability and validity of the measurement variables. Then, using AMOS (Analysis of Moment Structures) program, the structural equation modeling (SEM) with a maximum likelihood method was employed to examine the relationship among three constructs applied in this study. To test mediating effect of customers’ perceived green image of restaurants in the relationship between customers’ perceived green practice of a restaurant and their ecological behavioral intention to a restaurant, analytic procedure suggested by Baron and Kenny (1986) was utilized. To further investigate the moderating effect of perceived customer effectiveness (PCE) toward ecological matters multiple group analyses was performed. Lastly, using SPSS (Statistical Package for the Social Sciences), multiple regressions were performed to discover the key green practices influencing customer’ perceived ecological image and ecological
behavioral intentions in two different green customer segments, namely Green customers and Less Green customers.

Results

Importance of Green Practices in a Restaurant (Coffee House)

Table 1 shows the ranks and the mean values of importance of green practices in coffee house restaurant. Mean values (ranging 6.16 to 5.26) of all 12 green practices exceeded 4 (neutral). It indicates that green practices are important for customers in green restaurant.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Green Practices</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Offer recycling bins for plastic cups, paper cups, and cup sleeves in the store</td>
<td>6.16</td>
<td>1.06</td>
</tr>
<tr>
<td>2</td>
<td>Use of take-out containers that are recyclable</td>
<td>6.10</td>
<td>1.14</td>
</tr>
<tr>
<td>3</td>
<td>Recycle the waste in the back of the store</td>
<td>6.09</td>
<td>1.14</td>
</tr>
<tr>
<td>4</td>
<td>Use of energy-efficient lighting in seating areas</td>
<td>5.91</td>
<td>1.08</td>
</tr>
<tr>
<td>5</td>
<td>Serve beverages in reusable glasses or mugs if customer is dining in</td>
<td>5.89</td>
<td>1.22</td>
</tr>
<tr>
<td>6</td>
<td>Use of environmentally friendly cleaners for tables and floor</td>
<td>5.81</td>
<td>1.15</td>
</tr>
<tr>
<td>7</td>
<td>Use of environmentally friendly cleaners for mugs, glasses, and utensils</td>
<td>5.79</td>
<td>1.19</td>
</tr>
<tr>
<td>8</td>
<td>Use of motion detectors for lights in restrooms</td>
<td>5.76</td>
<td>1.25</td>
</tr>
<tr>
<td>9</td>
<td>Use of a system which monitors and controls comfortable temperatures efficiently with the HVAC(Heating, Ventilating and Air Conditioning) system</td>
<td>5.75</td>
<td>1.15</td>
</tr>
<tr>
<td>10</td>
<td>Use of flow restrictors on faucets, low-flow toilets, and waterless urinals in restrooms</td>
<td>5.46</td>
<td>1.31</td>
</tr>
<tr>
<td>11</td>
<td>Offer locally baked goods and other retail products</td>
<td>5.32</td>
<td>1.47</td>
</tr>
<tr>
<td>12</td>
<td>Offer organic goods (coffee, milk, fruit, and others)</td>
<td>5.26</td>
<td>1.66</td>
</tr>
</tbody>
</table>

The three most important green practices, as reported by respondents, were offering recycling bins for cups and sleeves in the store, using biodegradable or recyclable take-out containers, and recycling the waste in the back of the store. This descriptive information reveals that in a restaurant setting, especially in a coffee house, customers consider recycling and green serving ware and packaging as the most important practices proving a restaurant’s ecological concern. The top three green practices’ standard deviations reveal that respondents had relatively consistent estimation on evaluating the importance of those green practices. Furthermore, the offer of the locally backed food and organic food were ranked as the least important green practices. Considering the standard deviation of the least important green practices, the importance evaluation of these green practices varied among respondents. It is possible to misinterpret the result of importance ranking such as menu sustainability is not important to customers when they consider green practices of a coffee house. This status (rank) should be interpreted as the relative level of importance which means those green practices are simply considered less important in comparison to other 10 green practices on the list.

Starbucks’ Performance of Green Practices

The four green practices conducted by a Starbucks restaurant were identified for the further analysis. Table 2 presents the ranks and the mean values of Starbucks’ performance of green practices. Mean values (ranging 5.12 to 4.30) of those four green practices were exceeding the neutral rate of four. This indicates the respondents think the Starbucks carries out reasonable levels of performance on conducting green practices. Green serving ware and packaging ranked the first on the Starbucks’ performance of green practice. Compared with the rate of importance of green practices, the customers’ evaluation of the performance of the green practices was relatively low. This result
tells us that customers’ expectations for restaurants to participate in each green practice was high, and the restaurants’ green practice performances were not reached to the customers’ expectation.

Table 2. Starbucks’ Performance of Green Practices

<table>
<thead>
<tr>
<th>Rank</th>
<th>Green Practices</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Use of take-out containers that are recyclable</td>
<td>5.12</td>
<td>1.52</td>
</tr>
<tr>
<td>2</td>
<td>Recycle the waste in the back of the store</td>
<td>4.95</td>
<td>1.41</td>
</tr>
<tr>
<td>3</td>
<td>Use of energy-efficient lighting in seating areas</td>
<td>4.57</td>
<td>1.50</td>
</tr>
<tr>
<td>4</td>
<td>Use of flow restrictors on faucets, low-flow toilets, and waterless urinals in restrooms</td>
<td>4.30</td>
<td>1.42</td>
</tr>
</tbody>
</table>

**Measurement Model Test**

According to Anderson and Gerbing’s (1988) two-step approach, confirmatory factor analysis (CFA) was done to examine the reliability and validity of the measurement items. Table 3 shows the detail of the properties of the measurement.

Table 3. Result of Confirmatory Factor Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standardized loading</th>
<th>t-statistic</th>
<th>p-value</th>
<th>Cronbach α</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perception of Green Practices(PGP)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Recycle the waste in the back of the store</td>
<td>.766</td>
<td>9.470</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• Use take-out containers that are biodegradable or recyclable.</td>
<td>.626</td>
<td>8.671</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• Use of low-flow toilets, flow restrictors on faucets, and waterless urinals in restrooms</td>
<td>.700</td>
<td>8.838</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• Use of energy-efficient lighting in seating areas</td>
<td>.734</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Perception of Ecological Image(PEI)</strong></td>
<td></td>
<td></td>
<td></td>
<td>.897</td>
<td>.702</td>
</tr>
<tr>
<td>• Starbucks behaves in a socially conscious way.</td>
<td>.848</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I have the impression that Starbucks is very responsive to environment issue.</td>
<td>.830</td>
<td>17.036</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• Starbucks is concerned about the preservation of the environment.</td>
<td>.842</td>
<td>17.367</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• I have the feeling that Starbucks is not only concerned about the profit but also concerned about the environment and other consumers.</td>
<td>.830</td>
<td>15.532</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td><strong>Ecological Behavioral Intention(EBI)</strong></td>
<td></td>
<td></td>
<td></td>
<td>.938</td>
<td>.774</td>
</tr>
<tr>
<td>• I would like to say positive things about Starbucks because Starbucks conducts eco-friendly practices.</td>
<td>.858</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I would recommend Starbucks to others because I think it is a green coffee house.</td>
<td>.919</td>
<td>22.989</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• I would like to continue to visit Starbucks because of its eco-friendly practices.</td>
<td>.885</td>
<td>21.669</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
<tr>
<td>• I would encourage friends and relatives to visit Starbucks because Starbucks is very responsive to environmental issues.</td>
<td>.856</td>
<td>19.891</td>
<td>&lt;</td>
<td>.001***</td>
<td></td>
</tr>
</tbody>
</table>

*Note: ***p < .001, **p < .01, *p < .05
The reliability of the measurement items was verified using Cronbach’s alpha to assess the internal consistency of three constructs, namely customers’ perception of green practice, perception of ecological image of the restaurant, and ecological behavioral intention. The level of internal consistency of each construct was acceptable with the alpha ranging from .815 to .938. All measurement items had standardized loading estimates of 0.5 or higher (ranging from .626 to .966) at the alpha level of 0.001. This indicated the convergent validity of the measurement model. Construct reliability was verified to estimate convergent validity as well. Each construct had acceptable construct reliability with the estimates ranging from .6 to .7 (Hair, Anderson, Tatham, & William, 1998). Additionally, average variance extracted (AVE) of three constructs exceeded the minimum hurdle of .5 (Hair et al., 1998). To test the discriminant validity among the three constructs, the squared correlations between the constructs were estimated and compared with AVE. Each squared correlation between pairs of constructs was less than the corresponding AVE. Therefore, this result indicated discriminant validity of the measurement model (Fornell & Larcker, 1981).

**Structural Model and Relationship Testing**

A structural model based on maximum likelihood estimation was constructed. The goodness-of-fit statistics showed that the structural model fitted reasonably to the data (see table 4). Figure 2 is a graphic representation of the result of the proposed model. It presents the standardized path coefficients in the applied model. This proposed model indicated that the customers’ perception of green practices positively affected the customers’ ecological image of a restaurant and the customers’ ecological behavioral intention, and the ecological image of the restaurant also positively affected the customers’ ecological behavioral intention.

![Figure 2. Structural Results of the Proposed Model](image)

**Note:** ***p < .001, **p < .01, *p < .05

The two paths that indicated the relationship between perception of green practices and perception of ecological image of the restaurant, and the relationship between perception of ecological image of the restaurant and ecological behavioral intention were statistically significant at the alpha level of .001. Remaining one path indicating the relationship between customers’ perception of green practices and ecological behavioral intention was also statistically significant at the alpha level of .05 (see table 4).
Table 4. Structural Parameter Estimates and Fit Indices

<table>
<thead>
<tr>
<th>Path</th>
<th>Standardized Estimate</th>
<th>t-statistic</th>
<th>P-value</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of ecological image ➔ Perception of Green practices</td>
<td>.543</td>
<td>7.338</td>
<td>&lt;.001***</td>
<td>Significant</td>
</tr>
<tr>
<td>Ecological Behavioral Intention ➔ Perception of ecological image</td>
<td>.691</td>
<td>11.085</td>
<td>&lt;.001***</td>
<td>Significant</td>
</tr>
<tr>
<td>Ecological Behavioral Intention ➔ Perception of Green practices</td>
<td>.182</td>
<td>3.016</td>
<td>.003**</td>
<td>Significant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goodness-of-fits statistics</th>
<th>Structural model</th>
<th>Cut-off Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square =137.84</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Normed Chi-square=2.933</td>
<td>1.0 - 5.0</td>
<td></td>
</tr>
<tr>
<td>NFI = .951</td>
<td>&gt; .90</td>
<td></td>
</tr>
<tr>
<td>TLI = .845</td>
<td>&gt; .90</td>
<td></td>
</tr>
<tr>
<td>CFI = .967</td>
<td>&gt; .90</td>
<td></td>
</tr>
<tr>
<td>IFI = .967</td>
<td>&gt; .90</td>
<td></td>
</tr>
<tr>
<td>RMSEA = .075</td>
<td>0.05 - 0.08: mediocre fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; .05: good fit</td>
<td></td>
</tr>
</tbody>
</table>

Note: ***p < .001, **p < .01, *p < .05

The relationship between customers’ perception of green practices and their green image of the restaurant was significant with $\beta = .543$, $t = 7.338$, and $p < .001$ and the relationship between customers ecological image of restaurant and their ecological behavioral intention was statistically significant with the path coefficient ($\beta$) of .691, $t= 11.085$, and $p < 0.001$. Lastly, customers’ perception of green practices revealed a significant relationship with their green behavioral intention ($\beta = .182$, $t = 3.016$, $p = .003$). Considering the relative impacts of customers’ perception of green practices and their perceived ecological image of restaurant on customers’ ecological behavioral intention to the restaurant, customers’ green image of the restaurant revealed a stronger impact on customers’ green behavioral intention than the direct customers’ perception of green practice impact.

Furthermore, the path coefficient (.543) that indicates the relationship between customers’ perception of green practices and their ecological image of the restaurant tells us that there may be other green image determinants beside the customers’ perception of green practice. Also, the strong relationship between customers’ ecological image of restaurant and their ecological behavioral intention tells us the important role of green image of the restaurant in customers’ ecological behavioral intention.

**Mediating Role of Green Image**

To investigate the mediating role of perceived ecological image (PEI) of the restaurant in the relationship between customers’ perception of green practices (PGP) and their ecological behavioral intention (EBI), additional analyses were performed. According to Baron and Kenny (1986), there are several conditions to be met for being a mediator. First, the variations in levels of the independent variable (perception of green practices) significantly account for variations in the presumed mediator (perceived ecological image of the restaurant). Second, the variations in the mediator (perceived ecological image of the restaurant) significantly account for variation in the dependent variable (ecological behavioral intention). In other words, relationship between PGP and PEI, and the relationship between PEI and EBI should be statistically significant. Third, the relationship between independent variable (perception of green practices) and dependent variable (ecological behavioral intention), by themselves, should be statistically significant (this can be attained by fixing the path $B = 0$ and the model is considered as constrained model). In the original structural model, the effect of
customers’ perception of green practices on ecological image of the restaurant is significant. The effect of ecological image of the restaurant on ecological behavioral intention is significant as well. The relationship between perceived ecological image of the restaurant and ecological behavioral intention is significant. Consequently, the first three conditions are met. The final condition is satisfied when the parameter estimate between perception of green practices and their ecological behavioral intention in the mediating model becomes insignificant (full mediation) or less significant (partial mediation) than the parameter estimate in the constrained model.

Figure 3. Mediating Effect of Green Image (Partial Mediator)

In the constrained model, the path coefficient between green perception and green behavioral intention is .852 at the alpha level of .001. However, the parameter estimate between customers’ perceptions of green practices and their ecological behavioral intention in the mediating model is less significant ($\beta = .852, t = 8.234, p < .001$). This result indicates that green image has a partial mediating effect. The indirect effect of perception of green practices on ecological behavioral intention is calculated by multiplying the two indirect path coefficients ($.543 \times .691 = .375$). It turned out to be stronger than the direct effect (.182). Because of the image construct’s partial mediating effect, the effect of perception of green practice on a customer ecological behavioral intention through the image, turns out to be bigger than the direct effect. This result suggests that rather than this direct effect of perception of green practice on customer ecological behavioral intention, those constructs’ indirect relationship, through image construct, better explain the restaurant customers green purchasing behavior.

The F-test was conducted to determine whether the difference between mediating model ($\chi^2 = 137.84$) and constrained model ($\chi^2 = 249.991$) is statistically significant. The difference in $\chi^2$ ($\Delta \chi^2 = 112.151 > \chi^2_{0.05}(1) = 3.84$) is statistically significant. This result supports the mediating role of perceived ecological image of the restaurants regarding the relationship between customers’ perception of green practice and their ecological behavioral intentions.

**Moderating Effect of Perceived Customer Effectiveness**

A multiple group analysis is conducted to estimate the moderating effect of perceived customer effectiveness (PCE) on ecological matters. Using median value (= 5.33) of PCE the respondents are separated into two groups. The median value of 5.33 is considerably high and this suggests that the overall respondents’ ecological concerns and behaviors are high. One group includes respondents with the average PCE score of less than 5.33 (less green group, $n = 174$) and the other group includes respondents with the average PCE score of higher than 5.33 (Green group, $n = 131$). Respondents with the average PCE score of 5.33 are excluded.
Figure 4. Structural Results of the High PCE Group

Figure 5. Structural Results of the Low PCE Group

Figure 4 is the result of the structural model with the high PCE group. All relationship paths in the model are statistically significant at the alpha level of .001. Figure 5 is the result of the structural model with the low PCE group. Two of the paths indicating the relationship between customers’ perception of green practices and perceived ecological image of restaurant, and the relationship between perceived ecological image of restaurant and ecological behavioral intention, are statistically significant at the alpha level of .001. However, remaining one path indicating the relationship between customers’ perception of green practices and their ecological behavioral intention to the restaurant is not statistically significant at the alpha level of .05 ($\beta=.154, t = 1.604, p$...
The path coefficients in the model of the high PCE group are greater than those of low PCE group. Thus, the relationships of three constructs are explained better with ‘green customers’ (respondents with greater PCE score or the ones who have greater impact on environmentally friendly practices in restaurants).

To statistically test the difference in effects of PCE between high and low PEC groups, the chi-square difference \( \Delta \chi^2 \) between unconstrained and constrained models is estimated (see table 8). Further, the F-test is done to determine if the difference in between unconstrained model \( \chi^2 = 199.655 \) and constrained model \( \chi^2 = 203.439 \) is statistically significant. The difference in \( \chi^2 \) \( \Delta \chi^2 = 3.784 \) \( p < .05 \) \( \chi^2_{.05}(3) = 7.815 \) is not statistically significant at the alpha level of .05. The moderating effect of PCE was not found statistically. This result indicated that the green behavior of high PCE group and low PCE group are the same. To get a better picture, the total effect of perception of green practices on ecological behavioral intention for each group is estimated. For the high PCE group, the total effect of PGP on EBI is .773. It is calculated by indirect effect (.684 \times .687 = .470) plus direct effect (.303). For the low PCE group, the total effect is .260. Since the result of structural model indicates the direct relationship between PGP on EBI is not statistically significant with the low PCE group, the total effect is the same as the indirect effect. This result clearly indicated that in practice, the relationship among the three constructs was different in the different green groups. This result also indicated that the respondents with strong attitudes or beliefs in their ability to positively influence the outcome of ecological problems have a stronger relationship with both the direct and indirect routes to EBI, compared to respondents who have a less strong attitude on such matters. Comparison of structural models’ path coefficient shows the differences in explaining the relationship of three constructs between two groups. However, the statistical evidence to support this assumption was not discovered.

**Green Practices Influencing Perceived Ecological Image & Ecological Behavioral Intention**

To identify the green practices that influence different groups of customers’ perceived ecological image of the restaurants and their ecological behavioral intention to the restaurants, multiple regression analyses are conducted. Table 5 presents regression results of the green practices in terms of their influence on green customers’ (High PCE group) perceived ecological image of the Starbucks and ecological behavioral intention. The participants noted that recyclable take-out containers, recycling the waste and energy efficient lighting are significantly related to green customers’ ecological image of the restaurants.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized coefficients</th>
<th>SE</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Green practices influencing PEI of the restaurant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recyclable take-out containers</td>
<td>.152</td>
<td>.060</td>
<td>.202</td>
<td>2.536*</td>
<td>.011</td>
</tr>
<tr>
<td>Recycling the waste</td>
<td>.215</td>
<td>.073</td>
<td>.300</td>
<td>2.967**</td>
<td>.003</td>
</tr>
<tr>
<td>Water-efficient equipment</td>
<td>.004</td>
<td>.087</td>
<td>.006</td>
<td>.045</td>
<td>.964</td>
</tr>
<tr>
<td>Energy-efficient lighting</td>
<td>.237</td>
<td>.086</td>
<td>.329</td>
<td>2.755**</td>
<td>.006</td>
</tr>
<tr>
<td><strong>Green practices influencing EBI to the restaurant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recyclable take-out containers</td>
<td>.081</td>
<td>.071</td>
<td>.090</td>
<td>1.131</td>
<td>.258</td>
</tr>
<tr>
<td>Recycling the waste</td>
<td>.362</td>
<td>.086</td>
<td>.431</td>
<td>4.226***</td>
<td>.001</td>
</tr>
<tr>
<td>Water-efficient equipment</td>
<td>.052</td>
<td>.108</td>
<td>.057</td>
<td>.481</td>
<td>.631</td>
</tr>
<tr>
<td>Energy-efficient lighting</td>
<td>.237</td>
<td>.094</td>
<td>.275</td>
<td>2.536*</td>
<td>.011</td>
</tr>
</tbody>
</table>

Note: ***p < .001, **p < .01, *p < .05

Based on the parameter estimates, energy efficient lighting and recycling the waste are the most important green practices that elicit green image of the restaurant in green customers’ mind. Recycling the waste and energy efficient lighting are significantly related to green customers’ ecological behavioral intention to the restaurants. Based on the parameter estimates, recycling the
waste is the most important green practices that elicit green customers’ green behavioral intention. Since the results of structural model indicate the direct relationship between PGP on EBI is not statistically significant with the low PCE group, estimating the key practices that influence EBI is meaningless. Therefore, the regression results of the green practices influencing less green customers’ (Low PCE group) perceived ecological image of restaurants is presented (see table 6). The regression results indicate that only the ‘recyclable take-out containers’ is significantly related to less green customers’ perception of ecological image of the restaurants.

Table 6. Green Practices Influencing PEI (Low PCE Group)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized coefficients</th>
<th>SE</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green practices influencing PEI of the restaurants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recyclable take-out containers</td>
<td>.158</td>
<td>.087</td>
<td>.229</td>
<td>2.709**</td>
<td>.007</td>
</tr>
<tr>
<td>Recycling the waste</td>
<td>.084</td>
<td>.058</td>
<td>.101</td>
<td>.960</td>
<td>.337</td>
</tr>
<tr>
<td>Water-efficient equipment</td>
<td>.044</td>
<td>.089</td>
<td>.059</td>
<td>.501</td>
<td>.617</td>
</tr>
<tr>
<td>Energy-efficient lighting</td>
<td>.089</td>
<td>.093</td>
<td>.113</td>
<td>.953</td>
<td>.341</td>
</tr>
</tbody>
</table>

Note: ***p < .001, **p < .01, *p < .05

This result tells us that to respondents who have more ecological concerns and behaviors, a restaurant with more green practices will be more influential in forming an ecological image in the customer’s mind and affecting their behavioral intentions. Also, this result offers further support for the importance of researching GP image effect regarding marketing green to diverse green segments.

Discussion and Conclusions

To elicit customer’ behavioral intention, restaurant managers should focus on improving the restaurant image to show that the company cares about the environment through conducting GP. This goal can be achieved by adopting tangible and observable green practices in the restaurant properties. For example, in the coffee house setting, cups, napkins, or cup sleeves are the most accessible instruments or utensils in customers’ consumption process. Using mugs or glasses instead of disposable cups or using recyclable napkins or cup sleeves which appeal to the customers tangibly would help managers improve the image of the restaurants. In addition, maximizing customers’ involvement in executing green practices can be the key strategy to improve the green image of the restaurant, which in the long-run improves the customers’ behavioral intention to the restaurant. As the study results indicate, ‘offering recycling bins for cups and sleeves in the store’ ranked most important in evaluation of green practices in coffee houses. Thus, managers should establish such green attributes to offer direct experience opportunities to the restaurant customers. Furthermore, managers should train their employees to educate customers on recycling opportunity offer within the store. By putting signs to inform customers on how they can participate in green practice to keep the environment clean, the managers may contribute to the improved the image of the restaurant.

The result of this study may suggest that in reality, customers’ perceived green image of the restaurant can mainly be affected by companies’ green advertisements rather than customers’ perception of green practices in the restaurant. In other words, even though the company performs excellent green practices, the customers may under-perceive the green image of the restaurant and through the companies’ green advertising, customers perceived green image of the restaurant can be formed regardless of the companies’ green practices performance. This suggests that restaurateurs may effectively induce a customer ecological behavior intention by conducting green advertisement. Furthermore, managers should take the company’s resources into account, and maximize the utility of attainable green practices which gives their clients in each segment the most positive behavioral intent towards the company. One of the ways to achieve this purpose, restaurant owners may conduct a survey on the customers to find out the green segments the restaurant is dealing with. Depending on the green segments, the top green strategies effective for the specific restaurant should be executed. For example, a restaurant planning to adopt green practice with limited financial resources can start...
with a green practice of ‘using recyclable take-out containers’, especially if the majority of the customers are in less green segment. Once they have sufficient resources to build more green attributes in the restaurant, they can have the recycling system for the waste and energy efficient equipment.

Despite the significant importance, this study has some limitations. Whether or not customers’ perception of the restaurant’s effectiveness in execution of green practices plays important role in a decision-making process is still questionable. This study did not consider other restaurant attributes such as food, services, atmosphere, and price, which may have direct influence on customers’ perceived image of the restaurant as well as their behavioral intention. Future studies may consider green practices as one of the restaurant attributes and find out the role of green attribute on behavioral intention along with the analysis of other restaurant attributes. Also, this study was focused on a green image determinant which is customers’ perception of green practices in measuring customers’ perceived ecological image of the restaurant. As mentioned in the literature review, other tangible cues such as brand name of the restaurant and décor of the restaurant can also be other determinants in forming green image of the restaurant in a customers’ mind. Therefore, future study should clearly identify other green image determinants and find out the relationship between those determinants and customers’ perception of green image of the restaurant. Data collection is another limitation of this study. Data were collected from a single Starbucks location. Therefore, the study result may not represent all the Starbucks customers’ ecological behavior and the gathered data may not represent the total population. Because the study was conducted in this particular restaurant setting, a coffee house, the results of the study may not be applied to the other type of restaurants as well. Also, the data were collected near a university with college students as the majority of the population sample. Therefore, aforementioned positive correlation between the level of education and the ecological concern and behavior may affect the result of the study. Thus, the generalization of the study findings is not warranted.

Future research should be done to collect data from various Starbucks locations across the country. In this way, future research would include the sample representing diverse age ranges so that it could achieve more generalizable phenomenon of how customers perceive the company’s green practices, green image, and behavioral intention. In addition, as the service gap model indicated, future studies should examine the gap between the restaurant company’s perception of customers’ expectation on green practices (in other words, restaurant company’s green strategy) and customers’ expectation and perception of the green performance of the restaurant. This future study would help restaurateurs to develop an effective strategy to draw out customers’ ecological behavior intention to their properties. Finally, additional testing of the study results is needed to apply the findings in hospitality and tourism settings.

References


