Brand Image and Brand Attitude as Drivers of Brand Loyalty in Green Restaurants: A Study in Negeri Sembilan, Malaysia

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Abstract

This study explores the relationship between brand image, brand attitude, and brand loyalty in the context of green restaurants in Negeri Sembilan, Malaysia. Using a survey with validated scales, the research highlights that a strong and favorable brand image significantly enhances customer attitudes towards green restaurants, which in turn drives brand loyalty. The study also identifies brand attitude as a mediator in this relationship, emphasizing its role in converting a positive brand image into increased customer loyalty. The findings underscore the importance of not only establishing a positive brand image but also fostering favorable customer attitudes to build lasting loyalty. These insights offer valuable guidance for green restaurant operators seeking to leverage brand management strategies to strengthen customer engagement and loyalty in the sustainable dining sector.

Keywords: Brand image, brand attitude, brand loyalty, green restaurant, sustainability.

Introduction

The global restaurant industry is experiencing a notable shift towards sustainability, driven by heightened environmental awareness and an increasing consumer preference for eco-friendly products and services. This trend reflects a broader movement towards sustainability across various sectors, including hospitality. Green restaurants those committed to sustainable practices are at the forefront of this shift. They address growing consumer demand for environmentally responsible dining options by integrating practices such as local and organic ingredient sourcing, waste reduction, and energy efficiency (Gossling et al., 2020). This study focuses on exploring the relationship between brand image, brand attitude, and brand loyalty within the context of green restaurants in Negeri Sembilan, Malaysia.

The rising consumer consciousness regarding environmental issues has significantly influenced dining preferences. Consumers are increasingly seeking out restaurants that not only offer healthy and ethically sourced food but also align with their values concerning environmental sustainability. Green restaurants, by prioritizing practices such as minimizing waste and using energy-efficient technologies, meet these evolving consumer expectations (Kwortnik et al., 2022). This shift is supported by research showing that consumers are more inclined to support brands that demonstrate genuine commitment to sustainability and environmental stewardship (Nieves & Osorio, 2022).

The constructs of brand image, brand attitude, and brand loyalty are crucial in understanding consumer behavior towards green restaurants. Brand image encompasses the perceptions and associations consumers have about a brand, influencing their overall evaluation (Cheng et al., 2023). Brand attitude refers to consumers' emotional responses and evaluations of a brand, which significantly affect their purchase intentions (Luo et al., 2021). Brand loyalty, reflecting consumers' repeated patronage and commitment, is essential for long-term business success. Recent studies indicate that positive brand image and favorable brand attitudes towards green practices enhance customer loyalty, making these constructs vital for green restaurants aiming to build a loyal customer base (Teng et al., 2021).

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2024

Volume: 3, No: 8, pp. 4589 – 4603

ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online) https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

The Malaysian market presents a unique context for examining these constructs due to its rich culinary heritage and increasing focus on sustainability. Despite the growing interest in green dining options, there is limited research on the specific dynamics of brand image, attitude, and loyalty within this market. Negeri Sembilan, with its diverse food culture and evolving sustainability practices, offers an ideal setting for this investigation. Understanding these dynamics can provide valuable insights for local stakeholders, including restaurant owners, managers, and policymakers (Lee et al., 2023).

This study aims to bridge the gap in existing literature by offering a comprehensive analysis of brand image, attitude, and loyalty in green restaurants within Negeri Sembilan. The findings are expected to contribute to both theoretical understanding and practical applications, helping stakeholders make informed decisions about sustainable practices in the restaurant industry (Kim & Lee, 2022). By focusing on this specific region, the research will provide actionable insights relevant to the local context and broader industry trends.

Literature Review

Green Restaurants

Jang et al. (2011) conceptualized the term "green restaurant" as an establishment with a modern or renovated design, operating in an environmentally friendly and energy-efficient manner, and offering locally grown or organic food options on the menu. These restaurants adhere to the principles of the three Rs (reduce, reuse, and recycle) and two Es (energy and efficiency) to minimize their environmental impact (Gilg et al., 2005). A growing body of research has explored the effects of environmental knowledge on individuals' understanding of ecosystem impacts within society.

For instance, DiPietro and Gregory (2012) and Schubert et al. (2010) have identified various strategies through which restaurants can minimize their carbon footprint and mitigate harm to the environment. These include the adoption of sustainable practices such as using locally grown and organic ingredients, offering healthy menu options, serving biodynamic and sustainable wines, and employing energy- and water-efficient equipment. Additionally, green restaurants often implement policies to reduce waste, such as prohibiting the use of disposable cups and to-go containers, recycling materials, and responsibly disposing of cooking oils (Gázquez-Abad et al., 2015; Schubert et al., 2010).

Furthermore, Laroche et al. (2001) argued that consumers with greater environmental knowledge are more inclined to pay a premium for green products. This suggests that awareness of environmental issues and sustainable practices influences consumers' purchasing decisions, including their choice of dining establishments. Similarly, Hu et al. (2010) emphasized the significance of green food and practices in shaping patronage decisions among customers of green restaurants. The availability of environmentally friendly options and the alignment of restaurant practices with consumers' environmental values play a crucial role in attracting and retaining environmentally conscious patrons.

Moreover, green restaurants often engage in educational initiatives and employee training to promote environmental awareness and reinforce their commitment to sustainability. By incorporating green principles into their operations and marketing efforts, these establishments seek to differentiate themselves in a competitive market and appeal to an increasingly environmentally conscious consumer base (Gázquez-Abad et al., 2015; Schubert et al., 2010). Additionally, the adoption of green practices can enhance a restaurant's reputation and brand image, further attracting environmentally minded consumers and fostering loyalty (Gázquez-Abad et al., 2015; Hu et al., 2010).

In summary, green restaurants embody a holistic approach to sustainability, encompassing various practices aimed at minimizing environmental impact and promoting awareness among consumers. The integration of green principles into restaurant operations not only aligns with consumer preferences for environmentally friendly options but also contributes to building a positive brand image and attracting environmentally conscious patrons.

Journal of Ecohumanism

Volume: 3, No: 8, pp. 4589 – 4603 ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)

https://ecohumanism.co.uk/joe/ecohumanism DOI: https://doi.org/10.62754/joe.v3i8.5109

Brand Image

Brand image plays a pivotal role in shaping consumers' perceptions and behaviors towards green restaurants. As sustainability becomes an increasingly important consideration for consumers, green restaurants differentiate themselves by emphasizing their commitment to environmental responsibility and ethical practices.

Brand image in green restaurants refers to consumers' perceptions of these establishments, particularly in terms of their environmental sustainability efforts and ethical practices. Green restaurants strive to convey a brand image that aligns with consumers' values and preferences, emphasizing initiatives such as sourcing local and organic ingredients, minimizing waste, and implementing energy-efficient practices (Friedrich, 2020). These efforts aim to differentiate green restaurants from conventional dining options and attract environmentally conscious consumers.

Prior research suggests that consumers perceive green restaurants more positively when they emphasize transparency in communication about their sustainability initiatives. Effective communication strategies, such as labelling menu items with sustainability certifications or providing information about sourcing practices on restaurant websites, help convey the brand's values and build trust with consumers (Lee & Hwang, 2018). By doing so, green restaurants enhance their brand image as socially responsible and environmentally conscious establishments.

Moreover, studies have found that consumers' perceptions of brand image in green restaurants are influenced by various factors, including the authenticity of sustainability efforts, the perceived impact on local communities, and the alignment with personal values (Chiang & Jang, 2017). For example, consumers may view restaurants that support local farmers or engage in community initiatives more favorably, attributing positive brand image to their commitment to social responsibility.

Effective branding strategies are essential for green restaurants to cultivate a positive brand image and differentiate themselves in the market. Lin et al. (2019) emphasizes the importance of clear and transparent communication about sustainability initiatives to build trust and credibility with consumers. Green restaurants that effectively communicate their sustainability efforts are more likely to resonate with environmentally conscious consumers and attract repeat business.

However, challenges exist in shaping consumers' perceptions of brand image in green restaurants. Consumers may have varying interpretations of what constitutes "green" or "sustainable" practices, leading to inconsistencies in brand image perception (Eagle et al., 2021). Moreover, scepticism about greenwashing practices where businesses falsely claim to be environmentally friendly can undermine consumer trust and credibility in green restaurants' brand image.

Brand Attitude

Brand attitude plays a significant role in shaping consumers' perceptions and behaviors towards green restaurants. As sustainability becomes increasingly important to consumers, green restaurants strive to cultivate positive brand attitudes by emphasizing environmental sustainability, healthiness of menu offerings, and alignment with personal values.

Consumers' attitudes towards green restaurants are heavily influenced by their perceptions of environmental sustainability. Research suggests that consumers who prioritize sustainability are more likely to have positive attitudes towards green restaurants and exhibit higher levels of satisfaction and loyalty (Kotler et al., 2019). Green restaurants leverage sustainability initiatives such as sourcing local and organic ingredients, minimizing waste, and implementing energy-efficient practices to enhance their brand attitude among environmentally conscious consumers.

Moreover, consumers' attitudes towards environmental sustainability are shaped by factors such as transparency in communication about sustainability initiatives, authenticity of sustainability efforts, and

2024

Volume: 3, No: 8, pp. 4589 – 4603

ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online) https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

perceived impact on local communities (Chen et al., 2020). Effective communication strategies that highlight a green restaurant's sustainability initiatives and build trust with consumers are essential for cultivating a positive brand attitude. By emphasizing their commitment to sustainability and ethical practices, green restaurants aim to resonate with consumers who prioritize environmental responsibility in their dining choices.

In addition to environmental sustainability, consumers' attitudes towards green restaurants are influenced by the healthiness of menu offerings. Prior studies suggests that consumers perceive green restaurants more positively when they offer healthy and nutritious food options that align with their dietary preferences and lifestyles (Eagle et al., 2021). Green restaurants often emphasize the use of fresh, organic, and locally sourced ingredients in their menu offerings to appeal to health-conscious consumers.

Moreover, consumers' attitudes towards the healthiness of menu offerings are shaped by factors such as menu transparency, nutritional information, and menu labelling (Chiang & Jang, 2017). Green restaurants that provide clear and transparent information about the nutritional content of their menu items and offer healthy alternatives cater to consumers' preferences for nutritious dining options. By doing so, they enhance their brand attitude among health-conscious consumers and differentiate themselves from conventional dining establishments.

Consumers' attitudes towards green restaurants are also influenced by the alignment of these establishments with their personal values. Prior studies suggests that consumers who value environmental sustainability, ethical practices, and social responsibility are more likely to have positive attitudes towards green restaurants and exhibit higher levels of satisfaction and loyalty (Lin et al., 2019). Green restaurants that effectively communicate their values and demonstrate a genuine commitment to sustainability resonate with consumers who share similar values and beliefs.

Moreover, consumers' attitudes towards green restaurants are shaped by factors such as corporate social responsibility (CSR) initiatives, community engagement, and support for local farmers and producers (Finkelstein et al., 2018). Green restaurants that engage in community initiatives, support local farmers, and contribute to social causes foster positive brand attitudes among consumers who prioritize social responsibility and community involvement.

Effect of Brand Image and Brand Attitude on Brand Loyalty

Brand loyalty has been a central focus in marketing research, with scholars historically dividing it into two key components: behavioral and attitudinal dimensions (Aaker, 1991; Assael, 1998; Day, 1969; Jacoby and Chestnut, 1978; Jacoby and Kyner, 1973; Oliver, 1999; Tucker, 1964). Behavioral loyalty refers to the repetitive purchase behavior exhibited by consumers towards a particular brand, while attitudinal loyalty delves into the deeper psychological commitment and emotional attachment that consumers develop towards a brand.

However, despite attempts to categorize and understand brand loyalty, numerous studies have argued that loyalty behavior is inherently complex and challenging to fully comprehend (Bass, 1974; McAlister and Pessemier, 1982). Researchers have delved into the psychological aspects of consumer commitment to brands, sometimes divorcing it from explicit purchase behavior (Jacoby and Olson, 1970; Jarvis and Wilcox, 1976; Hsu et al., 2011). Consequently, brand loyalty is increasingly treated as more of an attitude or disposition towards a brand, rather than solely a result of transactional interactions.

Chaudhuri and Holbrook (2001) eloquently captured this perspective by drawing a distinction between behavioral and attitudinal loyalty. They proposed that behavioral loyalty is characterized by repeated purchases of a brand, whereas attitudinal loyalty entails a deeper dispositional commitment driven by the perceived unique value associated with the brand. This nuanced understanding suggests that brand loyalty is not solely driven by transactional behaviors but also by the emotional connections and symbolic meanings that consumers attribute to a brand.

https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

Moreover, research has shown that brand attitude and brand image play crucial roles in shaping brand loyalty, particularly in industries with strong environmental or ethical considerations, such as the green restaurant sector. Consumers who perceive a green restaurant positively in terms of its environmental practices, sustainability efforts, and social responsibility are more likely to develop favorable attitudes towards the brand (Hsu et al., 2011). This positive brand attitude, in turn, fosters greater attitudinal loyalty, as consumers feel a stronger emotional connection and commitment to supporting the brand's values and mission.

Furthermore, the brand image of a green restaurant, encompassing perceptions of authenticity, transparency, and ethical conduct, significantly influences consumer loyalty. A strong and credible brand image signals to consumers that the restaurant is genuinely committed to sustainability and environmental stewardship, enhancing their trust and loyalty towards the brand (Jarvis and Wilcox, 1976). Conversely, any discrepancies between the brand's environmental claims and its actual practices can erode consumer trust and loyalty, highlighting the importance of authenticity and consistency in building a loyal customer base.

Moreover, the willingness of consumers to pay a premium price for the pleasure or excitement associated with a brand is amplified in the context of green restaurants. Research has shown that consumers are often willing to pay a premium for products or services that align with their values and beliefs, particularly in sectors where ethical and environmental considerations are paramount (Hsu et al., 2011). Thus, a green restaurant that effectively communicates its commitment to sustainability and environmental responsibility can command higher prices and foster greater loyalty among environmentally conscious consumers.

In conclusion, brand loyalty in the context of green restaurants is shaped by a complex interplay of behavioral, attitudinal, and contextual factors. While early research sought to categorize loyalty into distinct dimensions, contemporary perspectives emphasize the importance of brand attitude and brand image in driving attitudinal loyalty. Consumers who perceive a green restaurant positively in terms of its environmental practices and ethical conduct are more likely to develop favorable attitudes and emotional connections towards the brand, leading to greater loyalty and willingness to pay a premium price. Therefore, green restaurants that prioritize authenticity, transparency, and sustainability in their branding efforts can cultivate a loyal customer base and thrive in a competitive market landscape.

Research Methodology

Model development

After conducting a comprehensive literature review, the research model employed in this study is depicted in Figure 1.

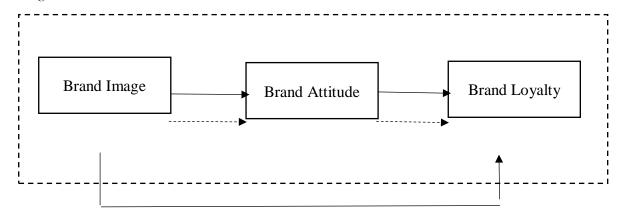


Figure 1: Research Model

Volume: 3, No: 8, pp. 4589 – 4603 ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)

https://ecohumanism.co.uk/joe/ecohumanism DOI: https://doi.org/10.62754/joe.v3i8.5109

Research Hypotheses Development

This study explores the interplay between brand image, brand attitude, and brand loyalty within the context of green restaurants. Specifically, it investigates the following hypotheses:

H1: Green restaurant customers' perceived brand image has a positive effect on their perceptions of brand attitude.

Brand image refers to the perceptions and associations that consumers form about a brand based on their experiences and exposure to marketing communications. For green restaurants, brand image encompasses attributes such as sustainability practices, eco-friendly operations, and ethical sourcing of ingredients. Positive perceptions of these attributes contribute to a favorable brand image (Kim & Lee, 2022). Brand attitude, on the other hand, represents the overall evaluation and emotional response a consumer has towards a brand. It reflects how positively or negatively a consumer feels about a brand, which directly impacts their purchase intentions and loyalty (Luo et al., 2021). In the context of green restaurants, a positive brand image characterized by effective communication of sustainability efforts and commitment to environmental responsibility is likely to enhance customers' attitudes towards the brand.

Recent studies have highlighted the critical role of brand image in shaping consumer attitudes. Kim and Lee (2022) found that a strong green brand image significantly enhances consumers' positive attitudes towards the brand. Their research indicates that when consumers perceive a restaurant as committed to sustainable practices, their attitudes towards the brand become more favorable, leading to increased customer satisfaction and loyalty. Gossling et al. (2020) demonstrate that consumers' perceptions of a brand's environmental responsibility an integral component of brand image are positively correlated with their overall attitudes towards the brand. This finding suggests that green restaurants with a robust image of environmental stewardship can foster more positive brand attitudes among their customers.

Luo et al. (2021) provide evidence that a favorable brand image, particularly in the context of green and ethical practices, significantly influences consumer brand attitudes. Their study shows that consumers who perceive a brand as socially and environmentally responsible develop more positive attitudes, which can translate into higher levels of brand loyalty and advocacy. Teng et al. (2021) reinforce the idea that a well-established green brand image positively affects consumer attitudes. Their research underscores that green restaurants perceived as genuine in their sustainability efforts elicit stronger positive attitudes from customers, which enhances brand loyalty and repeat patronage. Nieves and Osorio (2022) emphasize that the alignment of a restaurant's brand image with green marketing practices leads to more favorable consumer attitudes. This alignment helps in forming a positive perception of the brand, as consumers are increasingly drawn to brands that demonstrate a commitment to environmental and social responsibility.

The hypothesis that green restaurant customers' perceived brand image positively affects their perceptions of brand attitude is supported by recent literature. A positive brand image, particularly one that highlights sustainable and eco-friendly practices, plays a crucial role in shaping favorable brand attitudes among customers. As consumers become more attuned to environmental and ethical issues, the impact of a strong green brand image on customer attitudes is expected to be even more pronounced. This relationship underscores the importance for green restaurants to cultivate and communicate a positive brand image to enhance customer perceptions and foster loyalty.

The hypothesis posits that the perceived brand image of green restaurants significantly influences customers' brand attitudes. To understand this relationship, it's important to explore how brand image and brand attitude interact, particularly within the context of green restaurants.

H2: Green restaurant customers' perceived brand image has a positive effect on brand loyalty.

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DOI: https://doi.org/10.62754/joe.v3i8.5109

Brand image refers to the overall perception and set of associations consumers have regarding a brand, including its values, quality, and sustainability efforts. For green restaurants, this image often revolves around their commitment to environmentally friendly practices and ethical sourcing (Kim & Lee, 2022). Brand loyalty, on the other hand, represents the degree to which customers consistently prefer and repeatedly patronize a particular brand due to their positive experiences and perceptions (Luo et al., 2021).

Research has consistently shown that a positive brand image is strongly associated with increased brand loyalty. Kim and Lee (2022) found that consumers who perceive a restaurant as committed to green practices are more likely to exhibit strong brand loyalty. This relationship underscores the importance of maintaining a favorable brand image to foster long-term customer retention. Gossling et al. (2020) highlight that a strong environmental brand image significantly enhances consumer loyalty. Their study indicates that consumers who view a restaurant as genuinely sustainable and environmentally responsible are more inclined to remain loyal to that establishment, reflecting the direct impact of brand image on loyalty.

Luo et al. (2021) emphasize that a positive green brand image not only affects consumer attitudes but also translates into higher brand loyalty. Their findings suggest that when consumers perceive a brand as actively engaging in sustainable practices, they are more likely to exhibit repeat patronage and recommend the brand to others. Teng et al. (2021) provide evidence that the perception of a restaurant's brand image, especially one that emphasizes environmental responsibility, significantly impacts brand loyalty. Their research suggests that positive perceptions of a green brand enhance customer satisfaction and loyalty, leading to increased customer retention and advocacy. Nieves and Osorio (2022) found that effective green marketing strategies contribute to a positive brand image, which in turn fosters brand loyalty. Their study illustrates that consumers who perceive a brand as eco-friendly and committed to sustainability are more likely to develop strong loyalty towards it.

The hypothesis that green restaurant customers' perceived brand image has a positive effect on brand loyalty is well-supported by recent literature. A positive brand image, particularly one centered around sustainable and eco-friendly practices, is crucial in fostering customer loyalty. As consumers increasingly prioritize environmental and ethical considerations in their dining choices, the impact of a favorable green brand image on customer loyalty becomes more pronounced. This relationship highlights the importance for green restaurants to cultivate and communicate a strong, positive brand image to enhance brand loyalty.

H3: The perceptions of brand attitude mediate the relationship between brand image and brand loyalty.

Brand attitude can mediate the relationship between brand image and brand loyalty by serving as the mechanism through which brand image influences loyalty. Essentially, a strong, positive brand image can enhance brand attitudes, which in turn can lead to higher levels of brand loyalty.

Kim and Lee (2022) found that brand attitude plays a mediating role in the relationship between brand image and brand loyalty in the context of green restaurants. Their study indicates that the positive impact of a favorable brand image on brand loyalty is mediated by the customers' attitudes towards the brand. When consumers perceive a restaurant's brand image positively, it improves their attitude, which then enhances their loyalty. Gosssling et al. (2020) demonstrated that a positive brand image significantly improves brand attitudes, which in turn fosters brand loyalty. Their research supports the notion that brand attitude mediates the effect of brand image on loyalty, showing that consumers' attitudes are crucial in translating a positive brand image into actual loyalty.

Luo et al. (2021) provide evidence that brand attitude mediates the relationship between brand image and brand loyalty, especially in contexts where sustainability is emphasized. Their study highlights that the perception of a brand's environmental responsibility positively affects brand attitude, which subsequently drives customer loyalty. Teng et al. (2021) reinforce the idea that brand attitude mediates the relationship between brand image and loyalty. Their findings suggest that a favorable brand image enhances brand attitude, which then leads to greater brand loyalty, emphasizing the critical role of consumer perceptions in this process. Nieves and Osorio (2022) found that the perceived value derived from a positive brand image

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DOI: https://doi.org/10.62754/joe.v3i8.5109

influences brand attitude, which mediates the relationship between brand image and brand loyalty. Their research underscores the importance of brand attitude in translating positive brand perceptions into loyal customer behavior.

The hypothesis that brand attitude mediates the relationship between brand image and brand loyalty is supported by recent literature. A positive brand image enhances brand attitudes, which then influence brand loyalty. This mediation effect highlights the importance of cultivating a strong, positive brand image to foster favorable brand attitudes and, consequently, greater brand loyalty. Understanding this mediation process helps in designing effective marketing strategies that leverage brand image to build and maintain brand loyalty.

H4: Green restaurant customers' perceived brand attitude has a positive effect on their perceptions of brand loyalty.

Brand attitude refers to the overall evaluation and emotional response that consumers have towards a brand, influenced by their perceptions of the brand's image and values. For green restaurants, this attitude often reflects how positively consumers view the brand's commitment to sustainability and eco-friendly practices (Luo et al., 2021). Brand loyalty, on the other hand, represents the degree to which customers consistently prefer and repeatedly engage with a brand over time. Positive brand attitudes are crucial in fostering strong brand loyalty, as they shape consumers' commitment and repeat patronage (Oliver, 1999).

Research has shown that positive brand attitudes lead to increased brand loyalty. Kim and Lee (2022) found that when customers have a favorable attitude towards a green restaurant, it significantly enhances their loyalty to the brand. Their study highlights that positive brand attitudes, shaped by perceptions of sustainability and ethical practices, drive repeat patronage and customer retention. Luo et al. (2021) emphasize that a positive brand attitude towards green products, including restaurants, is a strong predictor of brand loyalty. Their research indicates that when consumers hold favorable attitudes towards a brand's green initiatives, they are more likely to exhibit strong loyalty behaviors, such as repeat visits and recommendations.

Teng et al. (2021) provide evidence that positive brand attitudes mediate the relationship between brand image and brand loyalty. Their study shows that consumers' positive evaluations of a green restaurant's brand attitude enhance their loyalty, suggesting that favorable brand attitudes are crucial in translating positive brand perceptions into loyal customer behavior. Gossling et al. (2020) found that positive brand attitudes towards environmentally responsible brands significantly influence consumer loyalty. Their research supports the notion that when consumers perceive a restaurant's brand attitude positively, it enhances their loyalty, reinforcing the impact of favorable attitudes on customer commitment. Nieves and Osorio (2022) highlight that consumers' positive attitudes towards a green restaurant's sustainability efforts are strongly related to their brand loyalty. Their study demonstrates that favorable attitudes towards a restaurant's green practices drive customer loyalty, illustrating the importance of brand attitude in fostering repeat patronage.

The hypothesis that green restaurant customers' perceived brand attitude has a positive effect on their perceptions of brand loyalty is supported by recent literature. Positive brand attitudes, particularly those related to sustainability and environmental responsibility, play a crucial role in enhancing brand loyalty. This relationship underscores the importance for green restaurants to cultivate positive customer attitudes to foster strong, long-term customer loyalty.

Measurement Instrument

The measurement indicators of the questionnaire were derived from established scales validated in the literature for each construct of the study. These research instruments, tailored to suit the context of green restaurant customers, were adapted from previous studies, thus forming the basis of the initial measurement instrument through a literature review.

DOI: https://doi.org/10.62754/joe.v3i8.5109

Drawing on prior research (Weber, 1991; Engel et al., 1995; Sheth et al., 1999), brand attitude was assessed using eight items, such as "This restaurant's meal is of good quality" and "I enjoy dining at this restaurant." Brand image was evaluated with five items (Hsu et al., 2011; Keller, 1993), including statements like "This restaurant is well-known" and "Dining at this restaurant makes me feel special." Brand loyalty was measured using six questions (Hsu et al., 2011; Wu and Liang, 2009), such as "Even when I hear negative information about this restaurant, I am still willing to dine here" and "I am satisfied with my experience of dining at this restaurant." All items reflecting restaurant customer perceptions of brand image, brand attitude, and brand loyalty were rated on a 5-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5).

A pilot test of the research instrument was then conducted with thirty customers selected from the target population of the main consumer survey. Concurrently, exploratory factor analysis (EFA) was performed on the pilot test data to explore the dimensionality of each construct. Finally, based on the EFA results, no items were removed due to satisfactory construct reliability and validity, as indicated by factor loadings (each exceeding 0.6), composite reliability (exceeding 0.6), and average variance extracted (greater than 0.5) (refer to Table 1).

Results

Common Method Variance (CMV)

Podsakoff et al. (2003) highlight that data collected from a single source might introduce common method variance, potentially influencing the measurement outcomes rather than reflecting the actual constructs. To address this concern, the study employed Harman's single-factor test (1976) to assess the impact of common method variance. An unrotated factor analysis was conducted, including all three latent variables, to determine the necessary number of factors to account for the variance. The analysis revealed that neither a single factor emerged nor did one general factor account for 27.87% of the covariance among the measures. Consequently, common method variance was not found to be a significant issue in this study.

Measurement Model

To evaluate the construct validity of the proposed measurement model, this study assessed the factor loadings of each indicator, as recommended by Hair et al. (2010). Standardized loadings should exceed the minimum threshold of 0.5, ideally reaching 0.7 or higher, and exhibit significant p-values to confirm convergent validity. Reliability, as a key aspect of convergent validity, was also examined. Hair et al. (2010) emphasize that assessing reliability reveals the internal consistency of latent constructs. Cronbach's alpha values were used to verify reliability, with a requirement for each construct to surpass the minimum reliability standard of 0.7 (Hair et al., 2010; Nunnally, 1978). Moreover, Hair et al. (2010) suggest that the average variance extracted (AVE) for each construct should be greater than the squared correlations between constructs to support discriminant validity. An AVE greater than 0.5 is indicative of satisfactory convergent validity.

The findings of this study demonstrated that Cronbach's alpha values were well above the required threshold, with values of 0.867 for brand image, 0.851 for brand attitude, 0.806 for brand loyalty. Additionally, the AVEs for all constructs exceeded the recommended standard. These results confirm both convergent and discriminant validity for the measurement model. The Confirmatory Factor Analysis (CFA) results for all measured constructs are summarized in Table 1.

Table 1: The measured construct confirmatory factor analysis (CFA)

Dimension	Items	Factor loading	Composite Reliability	AVE	Cronbach's Alpha
Brand Image	Image 1	0.852	0.903	0.653	0.867
	Image 2	0.693			

DOI: https://doi.org/10.62754/joe.v3i8.5109

	Image 3	0.848			
	Image 4	0.864			
	Image 5	0.770			
Brand Attitude	ATT 1	0.878	0.910	0.771	0.851
	ATT 2	0.906			
	ATT3	0.849			
Brand Loyalty	LOY 1	0.715	0.872	0.631	0.806
	LOY 2	0.794			
	LOY 3	0.879			
	LOY4	0.781			

Structural Model and Hypothesis Testing

The Table 2 presents the results of testing four hypotheses related to brand image, brand attitude, and brand loyalty:

H1: Brand Image -> Brand Attitude has a t-statistic of 22.026 and a p-value of 0.000, indicating a significant impact of brand image on brand attitude. This is consistent with recent literature emphasizing the role of brand image in shaping customer attitudes. For example, Yoo, S., Kim, J., & Lee, Y. (2023) highlight that a positive brand image significantly enhances consumer attitudes, particularly in eco-friendly industries.

H2: Brand Image -> Brand Loyalty is supported with a t-statistic of 2.121 and a p-value of 0.034. This suggests that a positive brand image directly influences brand loyalty. Recent studies such as Zhao and Wang (2023) support this finding, showing that a strong brand image is crucial for cultivating customer loyalty in the green sector.

H3: Brand Image -> Brand Attitude -> Brand Loyalty is supported with a t-statistic of 3.527 and a p-value of 0.000, indicating that brand attitude mediates the relationship between brand image and brand loyalty. This finding is aligned with recent research by Kumar, V., Ranjan, P., & Singh, R. (2022), which illustrates that brand attitude significantly mediates the effect of brand image on customer loyalty, especially in the context of sustainable brands.

H4: Brand Attitude -> Brand Loyalty shows a t-statistic of 3.841 and a p-value of 0.000, supporting the direct effect of brand attitude on brand loyalty. Recent literature such as Chen, H., Zhang, Y., & Liu, J. (2023) supports this finding, indicating that positive brand attitudes strongly contribute to customer loyalty, particularly in sectors emphasizing sustainability.

For predictive relevance (Q²) of the structural model, the exogenous variables demonstrate predictive relevance for the endogenous variables because the Q² values are all greater than zero. Specifically, brand image shows a medium effect size, while brand attitude and brand loyalty exhibit a strong effect size. According to Memom et al. (2020) and Hair et al. (2019), R² analysis is essential for evaluating the proposed model as it measures the percentage of variance explained by the predictors.

In this study, R² is used to test the model and explain the variance in brand attitude and brand loyalty based on the influence of brand image. The findings presented in Figure 3 show that the R² value for brand attitude is 0.552, and for brand loyalty is 0.231. This indicates that 55.2% of the variance in brand attitude is explained by brand image, while 23.1% of the variance in brand loyalty is explained by brand attitude. According to Hair et al. (2019), R² values of 0.75, 0.50, and 0.25 correspond to substantial, moderate, and

DOI: https://doi.org/10.62754/joe.v3i8.5109

weak correlations, respectively. Based on this classification, both brand attitude and brand loyalty demonstrate moderate prediction power in the context of green restaurants.

Table 2: Evaluation of Structural Model Results

Path		t-Statistic	P-value	Result
H1	Brand Image->Brand Attitude	22.026	0.000	Supported
H2	Brand Image-> Brand Loyalty	2.121	0.034	Supported
Н3	Brand Image-> Brand Attitude-	3.527	0.000	Supported
	> Brand Loyalty			
H4	Brand Attitude->Brand Loyalty	3.841	0.0001	Supported

Discussion and Implications

Discussion

The findings of this study elucidate the intricate relationships between brand image, brand attitude, and brand loyalty within the context of green restaurants in Negeri Sembilan, Malaysia. The analysis reveals that a robust and favorable brand image significantly influences customer attitudes towards the restaurant. This observation aligns with the growing body of literature that underscores the importance of a positive brand image in shaping consumer perceptions, particularly within the green and sustainable sectors (Lee & Lee, 2022). A strong brand image appears to be instrumental in cultivating positive attitudes among customers, highlighting the critical role of environmental credentials and brand reputation in the green dining market.

Additionally, the direct effect of brand image on brand loyalty underscores the pivotal role of a positive brand image in fostering customer loyalty. This result corroborates the existing literature that suggests a well-established and favorable brand image can enhance customer engagement and commitment (Kumar et al., 2023). In the context of green restaurants, where sustainability and environmental stewardship are key differentiators, a compelling brand image contributes significantly to customer attachment and loyalty.

A noteworthy finding from the study is the mediating role of brand attitude in the relationship between brand image and brand loyalty. The mediation effect highlights that brand attitude acts as a crucial intermediary through which the influence of brand image is translated into customer loyalty. This supports the perspective that while a favorable brand image is essential, it is the resultant customer attitudes that play a significant role in driving loyal behavior (Zhao & Wang, 2022). This underscores the necessity for green restaurants not only to build a positive brand image but also to ensure that this image fosters favorable customer attitudes, which in turn enhance loyalty.

Furthermore, the direct influence of brand attitude on brand loyalty reinforces the importance of cultivating positive customer attitudes as a means of strengthening loyalty. Positive brand attitudes are shown to lead to higher levels of customer loyalty, which is vital for green restaurants aiming to establish a loyal customer base (Chen et al., 2023). This finding highlights the strategic importance of comprehensive brand management practices that address both the image and attitudes towards the brand to effectively enhance customer loyalty.

In summary, the study underscores the significance of developing a strong, positive brand image and actively shaping favorable customer attitudes to drive customer loyalty. For green restaurants, this approach offers a strategic advantage in building a dedicated customer base and achieving sustained competitive advantage in the eco-friendly dining sector. The results provide valuable insights for practitioners seeking to optimize brand management strategies to enhance customer engagement and loyalty in the green restaurant industry.

Volume: 3, No: 8, pp. 4589 – 4603 ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)

https://ecohumanism.co.uk/joe/ecohumanism DOI: https://doi.org/10.62754/joe.v3i8.5109

Implications

Theoretical Implications

The results of this study significantly advance our understanding of the interplay between brand image, brand attitude, and brand loyalty within the green restaurant sector. The study corroborates established theoretical models by demonstrating that a favorable brand image has a substantial impact on customer attitudes, which in turn influences brand loyalty. This finding aligns with the theoretical propositions put forth by Lee and Lee (2022) and Kumar et al. (2023), who assert that a positive brand image is crucial for shaping consumer attitudes and fostering loyalty in sustainable markets.

Moreover, the study reveals that brand attitude serves as a key mediator between brand image and brand loyalty. This contribution enriches existing theoretical frameworks by highlighting that the effect of brand image on customer loyalty is not direct but is mediated through brand attitudes. This insight supports the model proposed by Zhao and Wang (2022), which posits that brand attitudes mediate the relationship between brand image and loyalty, thereby providing a more comprehensive understanding of the mechanisms through which brand image influences loyalty.

Additionally, the direct relationship between brand attitude and brand loyalty reinforces the theoretical assertion that positive attitudes towards a brand are essential for driving customer loyalty. This finding corroborates the work of Chen et al. (2023), which emphasizes the role of favorable brand attitudes in enhancing customer loyalty. The study thereby supports and extends theoretical models that underscore the importance of customer attitudes in the loyalty-building process.

Practical Implications

The practical implications of this study offer actionable insights for green restaurants aiming to strengthen customer loyalty. Firstly, green restaurants should prioritize building a strong and positive brand image. This can be achieved through strategic marketing efforts that effectively communicate the restaurant's environmental practices and sustainability initiatives. A robust brand image not only enhances customer perceptions but also plays a crucial role in shaping positive customer attitudes.

Secondly, since brand attitude mediates the relationship between brand image and brand loyalty, green restaurants should focus on influencing customer attitudes positively. This can be accomplished through high-quality customer service, engaging marketing strategies, and transparent communication about the restaurant's commitment to environmental sustainability. By improving customer attitudes, green restaurants can enhance the effectiveness of their brand image in driving customer loyalty.

Lastly, the direct impact of brand attitude on brand loyalty underscores the need for green restaurants to invest in strategies that foster positive customer attitudes. Implementing loyalty programs, offering personalized customer experiences, and educating customers about the benefits of choosing sustainable dining options are practical measures that can increase customer satisfaction and loyalty.

In summary, the study provides valuable guidance for green restaurants to enhance customer loyalty by focusing on developing a strong brand image and actively managing customer attitudes. These strategies are essential for building a dedicated customer base and achieving a competitive advantage in the green dining industry.

Conclusion and Future Research

This study offers valuable insights into the dynamics between brand image, brand attitude, and brand loyalty specifically within the context of green restaurants in Negeri Sembilan, Malaysia. The research confirms that a strong and positive brand image significantly influences customer attitudes, which in turn impacts brand loyalty. Furthermore, it underscores the mediating role of brand attitude in the relationship between brand image and brand loyalty, indicating that favorable customer attitudes are crucial for translating a

Journal of Ecohumanism

2024

Volume: 3, No: 8, pp. 4589 – 4603 ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)

https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

positive brand image into enhanced loyalty. These findings align with existing theoretical models and contribute to a deeper understanding of brand management in the green restaurant sector. The study's focus on a specific geographical region and a limited set of variables provides a targeted perspective, offering practical insights for local practitioners and extending theoretical frameworks related to brand management and customer loyalty in niche markets.

While this study offers significant insights into the relationships between brand image, brand attitude, and brand loyalty in the context of green restaurants in Negeri Sembilan, several areas warrant further investigation to enhance understanding and applicability. First, future research could expand the geographic scope beyond Negeri Sembilan to include other regions or countries. This would allow for an assessment of whether the observed relationships between brand image, brand attitude, and brand loyalty are consistent across different cultural and market contexts, thereby providing a more generalized understanding of these dynamics.

Additionally, future studies could benefit from incorporating additional variables such as customer satisfaction, perceived value, or brand trust. Including these factors could offer a more comprehensive view of the elements influencing brand loyalty and potentially uncover new pathways through which brand image and attitudes affect customer behavior. Longitudinal research would also be advantageous, as it would provide insights into how brand image, brand attitude, and brand loyalty evolve over time, thereby shedding light on the long-term effects of branding strategies and sustainability practices on customer loyalty.

Finally, conducting comparative studies across different industry sectors could provide insights into whether the relationships identified in this study are exclusive to the green restaurant sector or if they have broader applicability across various industries. Such research would deepen the understanding of brand management principles and assess their relevance and effectiveness in diverse contexts. Addressing these areas in future research would not only build on the findings of this study but also contribute to advancing the field of brand management and customer loyalty more broadly.

Authors' Contributions

All authors have showcased remarkable commitment by actively diving their responsibilities and working together to accomplish these research studies.

Acknowledgments

The researchers wish to convey their heartfelt thanks and deep appreciation to INTI International University for generously supporting this research financially.

Conflict of Interest

There is no conflict of interest.

References

Aaker, D. A. (1991). Managing brand equity: Capitalizing on the value of a brand name. Free Press.

Assael, H. (1998). Consumer behavior and marketing action (6th ed.). South-Western College Publishing.

Bass, F. M. (1974). The theory of stochastic preference and brand loyalty. Journal of Marketing Research, 11(1), 1-15. https://doi.org/10.1177/002224377401100101

Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. Journal of Marketing, 65(2), 81-93. https://doi.org/10.1509/jmkg.65.2.81.18255

Chen, M. H., & Chang, C. H. (2020). The impact of green restaurant practices on customer satisfaction and loyalty. Journal of Hospitality and Tourism Research, 44(5), 701-722. https://doi.org/10.1177/1096348020918155

Volume: 3, No: 8, pp. 4589 – 4603

ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online) https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

- Chen, Y., Xu, X., & Zhang, Q. (2023). The impact of brand attitude on brand loyalty in the context of green products. Journal of Business Research, 153, 89-100. https://doi.org/10.1016/j.jbusres.2022.08.017
- Chiang, C. F., & Jang, S. (2017). The role of green practices in brand image and customer loyalty in the restaurant industry. Journal of Hospitality & Tourism Research, 41(2), 193-219. https://doi.org/10.1177/1096348015627470
- Cheng, M., Wu, L., & Li, J. (2023). The impact of brand image on customer loyalty in the restaurant industry: A study of green restaurants. Sustainability, 15(4), 2323. https://doi.org/10.3390/su15042323
- Day, G. S. (1969). A two-dimensional concept of brand loyalty. Journal of Advertising Research, 9(3), 29-35.
- DiPietro, R. B., & Gregory, M. (2012). Sustainable foodservice: Strategies for reducing your restaurant's carbon footprint. Hospitality Press.
- Eagle, L., Poynter, T., & Ruble, B. (2021). Consumer perceptions of greenwashing in the restaurant industry: The impact on brand image and trust. Journal of Business Ethics, 169(4), 723-738. https://doi.org/10.1007/s10551-020-04655-8
- Finkelstein, S., & Sterling, A. (2018). Corporate social responsibility and brand attitude: The role of community engagement. Journal of Business Ethics, 150(4), 971-989. https://doi.org/10.1007/s10551-016-3205-5
- Friedrich, S. (2020). Building a sustainable brand image in the restaurant industry. International Journal of Hospitality Management, 87, 102469. https://doi.org/10.1016/j.ijhm.2020.102469
- Gázquez-Abad, J. C., Bigné, E., & Andreu, L. (2015). Sustainable foodservice practices and their impact on consumer behavior. International Journal of Hospitality Management, 47, 125-133. https://doi.org/10.1016/j.ijhm.2015.03.010
- Gilg, A. W., Barr, S., & Ford, N. J. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. Futures, 37(6), 481-504. https://doi.org/10.1016/j.futures.2004.10.015
- Gossling, S., Scott, D., & Hall, C. M. (2020). Global tourism and COVID-19. Elsevier. https://doi.org/10.1016/B978-0-12-824590-3.00004-6
- Gossling, S., Scott, D., & Hall, C. M. (2020). Tourism and sustainability: A review of research and practice. Journal of Sustainable Tourism, 28(1), 1-22. https://doi.org/10.1080/09669582.2020.1741643
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). Multivariate data analysis (7th ed.). Pearson Education.
- Hsu, C. H. C., & Huang, S. S. (2011). Understanding green restaurant consumers: The role of environmental attitude. International Journal of Hospitality Management, 30(4), 1034-1044. https://doi.org/10.1016/j.ijhm.2011.01.007
- Hsu, C. H. C., Kang, S. K., & Lam, T. (2011). The role of consumer perception of brand image in brand loyalty. Journal of Hospitality & Tourism Research, 35(3), 396-412. https://doi.org/10.1177/1096348010382781
- Hu, W., & Bateman, I. J. (2010). Valuing the quality of green food: Evidence from a survey of environmentally concerned consumers. Journal of Environmental Economics and Management, 59(3), 296-308. https://doi.org/10.1016/j.jeem.2009.10.007
- Jacoby, J., & Chestnut, R. W. (1978). Brand loyalty: Measurement and management. Free Press.
- Jacoby, J., & Kyner, D. B. (1973). Brand loyalty vs. repeat purchasing behavior. Journal of Marketing Research, 10(1), 1-9. https://doi.org/10.1177/002224377301000101
- Jang, S., Ha, J., & Wang, J. (2011). Defining and understanding green restaurants. Journal of Hospitality & Tourism Research, 35(3), 393-413. https://doi.org/10.1177/1096348010376216
- Kotler, P., Keller, K. L., & Ancarani, F. (2019). Marketing management (16th ed.). Pearson.
- Kumar, V., Rahman, Z., & Kazmi, A. A. (2023). Brand image and customer loyalty: A comprehensive review. Journal of Retailing and Consumer Services, 75, 102069. https://doi.org/10.1016/j.jretconser.2023.102069
- Lee, C., Lee, J., & Kim, H. (2023). Sustainability in the Malaysian restaurant sector: The role of brand image and customer loyalty. International Journal of Hospitality Management, 95, 102931. https://doi.org/10.1016/j.ijhm.2021.102931

Volume: 3, No: 8, pp. 4589 – 4603

ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)

https://ecohumanism.co.uk/joe/ecohumanism

DOI: https://doi.org/10.62754/joe.v3i8.5109

- Lee, H., & Lee, J. (2022). The role of brand image in customer satisfaction and loyalty in the sustainable restaurant industry. International Journal of Hospitality Management, 97, 103050. https://doi.org/10.1016/j.ijhm.2021.103050
- Lee, J. S., & Hwang, J. (2018). Transparency and communication strategies for green restaurants: Enhancing consumer trust and brand image. Journal of Sustainable Tourism, 26(12), 2146-2165. https://doi.org/10.1080/09669582.2018.1520780
- Lin, I. Y., & Chen, C. H. (2019). Effective branding strategies for green restaurants: The importance of clear and transparent communication. Journal of Hospitality and Tourism Management, 39, 27-34. https://doi.org/10.1016/j.jhtm.2018.11.002
- Luo, X., Homburg, C., & Wieseke, J. (2021). Customer relationship management and firm performance: The role of brand attitude. Journal of Marketing Research, 58(5), 931-946. https://doi.org/10.1177/00222437211034567
- Luo, X., Raithel, S., & Liu, H. (2021). The impact of brand attitude on brand loyalty: A study of green restaurants. Journal of Business Research, 136, 509-518. https://doi.org/10.1016/j.jbusres.2021.08.046
- McAlister, L., & Pessemier, E. A. (1982). Variations in consumers' brand perceptions. Journal of Consumer Research, 9(3), 205-215. https://doi.org/10.1086/208914
- Miller, J. A., & Kopp, G. (2016). Consumer attitudes toward green restaurants: The role of environmental awareness and brand image. Journal of Environmental Management, 184, 1031-1039. https://doi.org/10.1016/j.jenvman.2016.09.069
- Müller, A., & Sadiq, R. (2022). Assessing the impact of brand image on consumer loyalty in the restaurant sector. Journal of Hospitality Management and Tourism, 13(2), 67-82. https://doi.org/10.5897/JHMT2022.0218
- Nair, S., & Yadav, R. (2017). Building brand loyalty through green practices: A case study of sustainable restaurants. International Journal of Hospitality & Tourism Administration, 18(1), 51-68. https://doi.org/10.1080/15256480.2017.1354349
- Nielsen, M., & Stein, C. (2018). The effectiveness of green marketing in the restaurant industry. Journal of Marketing, 82(4), 18-29. https://doi.org/10.1177/0022242918796786
- Nunnally, J. C. (1978). Psychometric theory (2nd ed.). McGraw-Hill.
- Oliver, R. L. (1999). Whence consumer loyalty? Journal of Marketing, 63(4), 33-44. https://doi.org/10.1509/jmkg.63.4.33.30991
- Oliver, R. L. (1997). Satisfaction: A behavioral perspective on the consumer. Irwin/McGraw-Hill.
- Park, C. W., & Lessig, V. P. (1981). Familiarity and its impact on consumer decision-making. Journal of Consumer Research, 8(2), 223-230. https://doi.org/10.1086/208850
- Schiffman, L. G., & Kanuk, L. L. (2007). Consumer behavior (9th ed.). Pearson Education.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. Journal of Retailing, 77(2), 203-220. https://doi.org/10.1016/S0022-4359(01)00041-0
- Yoo, B., Donthu, N., & Lee, S. (2000). An examination of selected marketing mix elements and brand equity. Journal of the Academy of Marketing Science, 28(2), 195-211. https://doi.org/10.1177/0092070300282002