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Impact of ESG Performance on Brand Equity of Local Fast-food Chains in Hong Kong

Lam Pik Yi Maggie

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SBS Swiss Business School Flughafenstrasse 3 8302 Kloten-Zurich Switzerland

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ABSTRACT

This paper investigates the link between environmental, social, and governance (ESG) performance and brand equity in the fast-food industry in Hong Kong. Using a mixed-methods approach, data was collected from 388 consumers through an online survey and in-person focus group discussions. A conceptual model was developed based on established frameworks to evaluate ESG performance and brand equity of local fast-food chains. The study found a positive correlation between ESG performance and brand equity, emphasizing the importance of ESG practices in strengthening brand reputation. Gender was identified as a significant moderating factor in this relationship. The results highlight the need for local fast-food businesses to prioritize ESG performance for enhancing brand equity. Practical implications extend to businesses, academia, and policymakers, emphasizing sustainable practices for brand building. This research not only addresses the gap in understanding the connection between ESG performance and brand equity in the Hong Kong fast-food industry but also provides valuable insights for shaping future policies and regulatory frameworks. Future research should consider longitudinal studies, diverse contexts and industry-specific variables to further explore ESG performance and brand equity dynamics in the fast-food sector.

Key words: ESG performance, brand equity, fast-food industry, sustainability practices, gender influence, environmental factor, social factor, governance factor, brand awareness, brand associations, brand loyalty, perceived quality, brand image

1. INTRODUCTION

The global business sector has recently witnessed a rise in the popularity of ESG considerations. Studies indicated that firms emphasizing sustainability tend to generate greater shareholder value by achieving stronger financial results, building a better reputation, fostering stakeholder trust, and boosting employee involvement (Zumente & Bistrova, 2021). Multiple research efforts have demonstrated a positive link between ESG outcomes and financial success (Clark et al., 2015; Dalal & Thaker, 2019; Friede et al., 2015; Peng & Isa, 2020; Saini et al., 2023; Zhao et al., 2018). Under this backdrop, the global fast-food industry has observed an increasing emphasis on ESG considerations as integral components of business practices.

Concurrently, brand equity has remained a critical aspect for fast-food chains, enabling them to make differentiation in a competitive market. Recent research in the fast-food industry explored various dimensions of brand equity, including digital brand equity (Sudirjo et al., 2024), the impact of brand equity on purchase decisions (Putri & Indayani, 2023), the antecedents of brand equity (Wulandari & Rahayu, 2023), and consumer-based brand equity (Akanji et al., 2023).

Locally, the fast-food industry in Hong Kong faces fierce competition and serves a wideranging customer demographic. Well-known local brands such as Café de Coral, Fairwood, Maxim's MX, and Tai Hing have secured significant market positions. To meet changing consumer demands, several of these chains have adopted ESG strategies aimed at improving their sustainability efforts and strengthening their brand reputation.

ESG adoption within the fast-food sector is driven not only by ethical considerations but also by anticipated commercial benefits. According to Lee et al. (2019), firms that emphasize ESG factors often experience enhanced financial performance, suggesting a beneficial link between sustainable practices and profitability.

On the other hand, brand equity influences consumer perceptions and engagement with fast-food brands. Ali and Muqadas (2015) found that strong brand equity significantly affects consumer choices and increases their readiness to pay higher prices. Furthermore, robust brand equity enables companies to distinguish themselves through their heritage, core values, and brand personality-factors crucial in a competitive environment (Aaker, 1996; Keller, 1993). Positive consumer attitudes and loyalty towards a brand increase the likelihood of preference over competitors (Keller, 1998; Yoo et al., 2000). While Keller (1998) emphasized the importance of brand equity in building customer loyalty and driving business performance, Yoo et al. (2000) found that higher brand equity leads to increased customer loyalty and a higher market share.

Investigating the relationship between ESG performance and brand equity among Hong Kong's local fast-food chains is vital, as it fills a notable gap in research concerning how sustainability initiatives influence brand value in this sector.

This study has five main objectives. First, it seeks to assess the ESG performance of chosen local fast-food chains in Hong Kong, emphasizing sustainability efforts, social responsibility, and governance according to the ESG framework. Second, it evaluates the brand equity of these chains by examining consumer views on brand awareness, associations, loyalty, perceived quality, and overall brand image. Third, the research aims to empirically explore and quantify the connections between ESG components and various dimensions of brand equity, utilizing statistical methods to determine the extent to which ESG performance influences brand equity in the fast-food sector. Fourth, despite established links between ESG performance and financial results, its effect on brand equity within the fast-food industry-especially in Hong Kong's distinct market context-has not been thoroughly examined. This study addresses that gap. Finally, the study intends to offer actionable strategies for local fast-food businesses to boost their brand equity by advancing their ESG practices.

This research employs a mixed-methods design, combining quantitative and qualitative data collection. The quantitative phase includes administering structured surveys to patrons of three prominent fast-food chains to test the study's hypotheses. Complementing this, qualitative focus groups with customers of a local chain provide richer context and help validate the findings. By integrating both quantitative and qualitative techniques, the study achieves a thorough comprehension of the intricate link between ESG performance and brand equity in the fast-food sector, blending broad survey data with detailed perspectives gained from focus group discussions.

2. LITERATURE REVIEW

2.1 ESG Performance

ESG performance evaluates how a company performs across environmental, social, and governance dimensions. According to the Global Reporting Initiative, it represents the degree to which an organization transparently and responsibly manages its ESG risks, opportunities, and impacts. Similarly, the United Nations Principles for Responsible Investment describe ESG performance as the extent to which corporate actions address environmental, social, and governance concerns.

Various scholars have offered more concise definitions, describing ESG performance as an organization's effectiveness in meeting its environmental, social, and governance obligations (Ates, 2021), its capacity to balance ESG risks and opportunities (Ooi & Lam, 2020), and how well it manages these aspects in line with stakeholder expectations (Prasad & Prasad, 2020). Others emphasize a company's ability to harmonize financial, social, and environmental duties (Cheng, 2019), the alignment of operations with ESG standards (Fatemi et al., 2018), or the creation of stakeholder value through ESG risk and opportunity management (Zhang & Li, 2018).

Despite variations, these definitions agree on three core components of ESG performance: environmental, social, and governance factors. Ates (2021) explains that the environmental aspect concerns a company's ecological footprint; the social dimension addresses relationships with employees, customers, suppliers, and communities; and governance relates to leadership, organizational structure, and decision-making mechanisms.

2.2 Brand Equity

Since its introduction in the 1980s, brand equity has been pivotal in assessing a brand's worth. Farquhar (1989) described it as the additional value a brand imparts to a product.

According to Keller (2016), brand equity is considered positive when the existence of a brand influences outcomes differently than if the brand were absent (Keller, 2016).

Several key dimensions have been identified as contributing to brand equity. Brand awareness pertains to how well consumers recognize and recall a brand (Keller, 1993). Brand associations involve the attributes, qualities, and benefits linked to a brand by consumers (Aaker, 1991). Customer loyalty is another vital element; loyal customers not only make repeat purchases but also serve as advocates who positively shape others' views and actions (Reichheld & Sasser, 1990). Perceived quality reflects consumers' subjective judgments of a brand's excellence and superiority (Zeithaml, 1988). Finally, brand image, or the overall consumer impression of a brand, significantly influences brand equity (Keller, 1993). Additionally, brand associations play a crucial role in shaping brand equity by representing the various attributes, characteristics, and benefits that consumers associate with a brand (Aaker, 1991). Moreover, loyalty among customers constitutes a vital part of brand equity, as loyal patrons tend to make repeat purchases and serve as advocates who shape others' attitudes and actions toward the brand (Reichheld & Sasser, 1990). The concept of perceived quality is also integral to brand equity, as it reflects the customer's subjective evaluation of a brand's superiority and overall excellence (Zeithaml, 1988). Lastly, brand image, which encompasses the overall impression consumers have of a brand, also plays a pivotal role in shaping brand equity (Keller, 1993).

Following the introduction of brand equity, numerous prominent models have been proposed, including Aaker's Brand Equity Model (Figure 1), Keller's Customer-Based Brand Equity (CBBE) Model (Figure 2), Kapferer's Brand Identity Prism Model (Figure 3), Brand Asset Valuator (BAV) Model (Figure 4), and BrandZ Model (Figure 5). Table 1 summarizes the key components of brand equity identified in past research.

Figure 1: Aaker's Brand Equity Model (Source: Aaker, 1991, p.270)

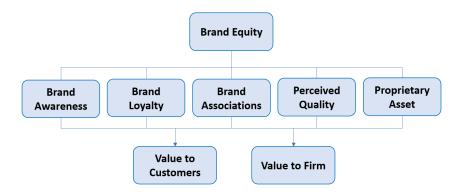


Figure 2: Keller's Customer-Based Brand Equity (CBBE) Model (Source: Keller, 2001, p.7)



Figure 3: Kapferer's Brand Identity Prism Model (Source: Kapferer, 1994)

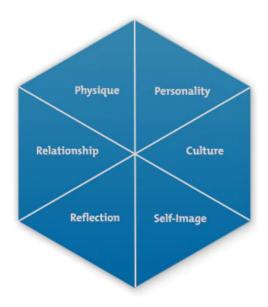


Figure 4: Brand Asset Value (BAV) Model (Source: Author)

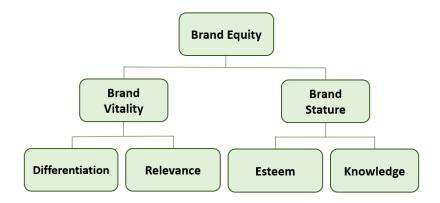


Figure 5: BrandZ Model (Source: Author)

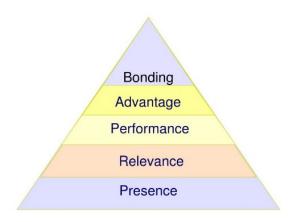


Table 1: Summary of Key Components of Brand Equity in Past Research (Source: Author)

| Research | Key components of brand equity |
|----------------------|--------------------------------|
| Aaker Model | Brand awareness |
| (Aaker, 1991) | Brand loyalty |
| | Brand associations |
| | Perceived quality |
| | Proprietary assets |
| CBBE Model | Brand identity |
| (Keller, 1993) | Brand meaning |
| | Brand response |
| | Brand resonance |
| Brand Identity Prism | Physique |
| (Kapferer, 1994) | • Personality |
| | • Culture |
| | Relationship |
| | Reflection |
| | Self-image |

| BAV Model | • Brand vitality (differentiation and relevance) | |
|----------------------|--|--|
| (by Young & Rubicam) | • Brand stature (esteem and knowledge) | |
| BrandZ Model | • Presence | |
| (Haxthausen, 2009) | • Relevance | |
| | • Performance | |
| | Advantage | |
| | • Bonding | |

2.3 Gap in Literature

While prior research has addressed areas such as job satisfaction and organizational commitment (Lam & Qiu Zhang, 2003), oil and grease management (Yau et al., 2021), mobile ordering (Lin et al., 2024), dietary habits (Kwok et al., 2020; Tsoi et al., 2022; Yu et al., 2020), obesity (Jia et al., 2021; Jiang et al., 2023), food allergies (Leung et al., 2024), and the effects of the Covid-19 pandemic (Liu et al., 2023; Wang et al., 2021b), there is a scarcity of studies investigating how ESG performance influences brand equity among fast-food chains in Hong Kong. Although earlier studies have confirmed a connection between corporate social responsibility (CSR) and consumer trust (Saeed & Zahra, 2019), the particular impact of governance factors on brand loyalty in the fast-food industry remains underexplored.

While direct research on the link between ESG performance and brand equity in Hong Kong's fast-food chains is lacking, related studies in adjacent sectors offer insights. For example, Bae et al. (2023) examined the causal connections among ESG characteristics, consumer trust, and word-of-mouth in food and beverage companies, finding that environmental and social factors significantly enhance brand trust. However, the study was limited to the food and beverage companies on Jeju Island. The scope was also limited to the two companies Samdasoo and Starbucks, which was not representative enough. In addition, verification of differences between groups based on demographic variables or ESG-related attributes of respondents was not performed. Moreover, the assessment of ESG performance

in the study was made from the management perspectives instead of the customer perspective, which may result in some biased views.

In another study by Lam et al. (2020), the impact of environmental sustainability practices on brand equity was explored within the broader context of the hospitality industry, which includes fast-food chains. The research shed light on the positive relationship between environmental sustainability practices and brand equity in the hospitality industry. However, the study did not specifically address the research gap of investigating the relationship between ESG performance and brand equity within the fast-food industry in Hong Kong.

A study by Poon et al. (2019) analyzed the impact of CSR on brand equity in the hospitality industry. The results indicated a positive connection between CSR practices and brand equity, suggesting that brands that actively engage in social responsibility are viewed more favourably by consumers. While the findings offer insights into the relationship between CSR and brand equity in the hospitality sector, they may not fully reflect the specific dynamics and consumer preferences unique to the fast-food segment in Hong Kong.

Similarly, a study by Lai et al. (2017) investigated the connection between CSR initiatives and brand equity in the food service industry in Hong Kong, indicating that consumers perceive brands that actively engage in CSR initiatives as more reputable and trustworthy. However, the study did not involve the comprehensive framework of ESG performance or the unique dynamics of the fast-food sector. While CSR is a key component of ESG, the latter encompasses a broader set of sustainability practices.

Literature review has identified significant research gaps regarding the relationship between ESG performance and brand equity of fast-food chains in Hong Kong. This study seeks to fill these gaps by examining the distinct dynamics within the industry in Hong Kong, considering ESG practices of local fast-food chains and assessing their impact on brand equity.

2.4 Theoretical Framework

To investigate the link between ESG performance and brand equity, this research drew upon three foundational theories: Stakeholder Theory, Corporate Social Responsibility Theory, and the Triple Bottom Line Theory.

Stakeholder Theory

Introduced by R. Edward Freeman in the 1980s, Stakeholder Theory disputes the notion that firms should focus exclusively on maximizing shareholder wealth. Instead, it promotes a wider perspective that accounts for the interests of various stakeholders beyond just shareholders (Freeman, 2010). According to this theory, organizations are expected to take into account the concerns of shareholders, customers, employees, local communities, and environmental factors (Mitchell et al., 1997).

Numerous researchers have applied Stakeholder Theory to examine the interactions between these elements (Lee & Shin, 2019; Liu & Xu, 2019; Marin & Ruiz, 2007; Peng & Isa, 2020). Morrison et al. (2024) recently investigated how oil and gas firms uphold environmental responsibility, utilizing Stakeholder Theory to highlight its relevance to environmental aspects. Drawing from Stakeholder Theory, Ghezal (2024) developed a conceptual framework addressing CSR decision-making, which aligns closely with the social dimension. In their 2024 study, Stoelhorst and Vishwanathan applied Stakeholder Theory within corporate governance contexts, underscoring its importance for governance-related issues. Using a descriptive Stakeholder Theory approach, Du et al. (2024) examined the relationship between CSR initiatives and consumers' intentions to purchase green products, connecting social and environmental elements.

On the other hand, Kim et al. (2021) analyzed the impact of CSR on brand value by applying Stakeholder Theory, demonstrating the theory's applicability to brand equity research.

Adewole (2024) recently employed Stakeholder Theory to link brand reputation with brand equity, highlighting the theory's significance in advancing brand equity studies.

Corporate Social Responsibility Theory

Scholars such as Howard R. Bowen and Archie B. Carroll (Carroll, 1991) were instrumental in developing the concept of Corporate Social Responsibility (CSR) Theory. This theory posits that companies bear responsibilities extending beyond profit maximization, including societal contributions, tackling social and environmental challenges, and maintaining ethical conduct. This approach entails acknowledging the needs and expectations of diverse stakeholders, including customers, employees, communities, and ecological systems.

Academic studies have extensively utilized CSR Theory to investigate how CSR activities influence business outcomes like financial returns (Du et al., 2010), consumer responses (Sen & Bhattacharya, 2001), and both customer satisfaction and firm market value (Luo & Bhattacharya, 2006). When examining how ESG performance affects brand equity among Hong Kong's local fast-food chains, CSR Theory provides a useful framework to understand the effects of incorporating ESG initiatives on brand value.

Prior research has investigated connections between CSR efforts and brand equity, largely based on the core concepts of CSR Theory (Guzmán & Davis, 2017; Esmaeilpour & Barjoei, 2016; Vuong & Bui, 2023; Wang et al., 2021a; Yang & Basile, 2019). Although traditional CSR initiatives primarily focus on social and environmental issues, governance factors tend to receive less attention. This study adopts a holistic perspective on ESG performance, using CSR Theory as a foundational lens to assess its impact on brand equity.

Triple Bottom Line Theory

John Elkington introduced the Triple Bottom Line concept in the 1990s, advocating that businesses should extend their focus beyond financial gains to include social and

environmental impacts. The theory asserts that sustainable development requires companies to balance three key pillars: social responsibility (people), environmental stewardship (planet), and economic viability (profit). The "people" dimension highlights the importance of social accountability and the welfare of employees, customers, and communities. The "planet" dimension stresses environmental sustainability, while the "profit" dimension focuses on maintaining economic health and financial success.

Numerous studies have applied the Triple Bottom Line framework to examine how sustainable practices relate to business outcomes (Henriques & Richardson, 2004; Wagner & Schaltegger, 2003). Additional research has utilized the theory to interpret ESG performance (Cantele et al., 2024; Crace & Gehman, 2023; Cubas-Díaz & Martinez Sedano, 2018). The theory has been extensively employed in studies focusing on brand equity and brand management (Dixon, 2014; Nichols et al., 2023; Štreimikienė & Ahmed, 2021), highlighting the importance of balancing social, environmental, and economic factors to understand how sustainability efforts influence brand equity while maintaining financial performance.

2.5 Conceptual Model

ESG Performance

The literature review on ESG performance has revealed inconsistencies in measuring tools and ESG indices (Clément et al., 2023; Dorfleitner et al., 2015; Li & Polychronopoulos, 2020; Sahin et al., 2022; Zumente & Lāce, 2021). It has become apparent that different rating systems lack convergence of ESG measurement concepts (Dorfleitner et al., 2015), leading to substantial divergence in company ratings (Zumente & Lāce, 2021).

To address this gap and contribute to the existing body of knowledge, this research adopts a customer perspective to measure the ESG performances of fast-food companies. Since the fast-food industry operates within the service sector, which primarily serves its customers, it is appropriate to understand the impact of ESG practices from the viewpoint of those who

directly interact with the companies. This approach recognizes the influence of customers on demand, brand reputation, and companies' sustainability efforts.

In measuring ESG performances from a customer perspective, a comprehensive research methodology will be employed, incorporating relevant aspects of ESG performance: the environmental factor (EF) covers the four aspects of emissions, use of resources, the environment and natural resources, and climate change; the social factor (SF) covers the eight aspects of employment, health and safety, development and training, labour standards, supply chain management, product responsibility, anti-corruption, and community investment; and the governance factor (GF) covers the three aspects of effectiveness of the board of directors, the board committees, and the audit committee. Therefore, the attributes constituting the measurement of ESG performance include the three factors of EF, SF, and GF.

Brand Equity

While there is no consensus on the measurement approach regarding brand equity, a commonality among the past literature is that classical models of Aaker's Brand Equity Model and Keller's CBBE Model were commonly referenced. In measuring brand equity in the fast-food industry, a few attributes adopted in the well-established models were crystallized to form a conceptual model that fits the industry. Among all the different attributes, five key ones were selected: Brand Awareness (BAw), Brand Associations (BAs), Brand Loyalty (BL), Perceived Quality (PQ), and Brand Image (BI).

Brand Awareness (BAw) is a fundamental concept in branding and a key element of brand equity, as highlighted by Aaker (1991), Keller (1993), and Kapferer (1994). They emphasized its importance in building strong brands.

Brand Associations (BAs) play a crucial role in shaping consumer perceptions and brand attitudes, as emphasized in Keller's CBBE model (Keller, 1993) and various academic studies on brand equity (Dada, 2021).

Brand Loyalty (BL) is a well-studied driver of brand equity, impacting customer retention and profitability, as validated in academic research and marketing literature (Dada, 2021; Zia et al., 2021).

Perceived Quality (PQ) directly influences consumer preferences, loyalty, and willingness to pay a premium, as supported by studies and marketing models like the SERVQUAL (Parasuraman et al., 1988) and the Kano model (Kano, 1984).

Brand Image (BI) is a critical aspect of brand equity, shaping consumer attitudes and behaviors towards a brand, as discussed in literature by Aaker (1991), Keller (1993), and Kapferer (1994). Some studies identified brand image as a key determinant of brand equity (Atilgan et al., 2005; Dada, 2021; Yoo & Donthu, 2001; Zia et al., 2021).

Moderating Factors

To establish an evidence-based understanding of the causal relationship between ESG performance and brand equity, considering moderating factors such as gender and age is essential. Academic research has explored the influence of gender and age on the relationship between ESG performance and brand equity by examining gender and age as the moderating factors in the dining or food industry (Garg, 2022; Han & Ryu, 2008; Sharif et al., 2023). Gender can influence individuals' values, preferences, and perceptions, which may in turn shape how they assess the ESG performance of companies and their associated brand equity. A study conducted by Kang and Hustvedt (2020) examined the role of gender in shaping consumer perceptions of brand equity in relation to ESG practices. It found that female consumers tend to place greater importance on ESG factors when evaluating brand equity.

Another study by Boulouta & Pitelis (2014) explored the impact of gender diversity on corporate social performance. The research found that companies with greater gender diversity at the board level tend to have higher corporate social performance.

Similarly, age can influence individuals' attitudes and beliefs, including their views on ESG issues. Research by Loureiro et al. (2019) explored the influence of age on consumer perceptions of CSR and its impact on brand equity. The study revealed that younger consumers tend to attach higher importance to CSR initiatives when evaluating brand equity.

Based on the above, a conceptual model which explains the impact of ESG performance on brand equity of local fast-food chains in Hong Kong is developed as shown in Figure 6.

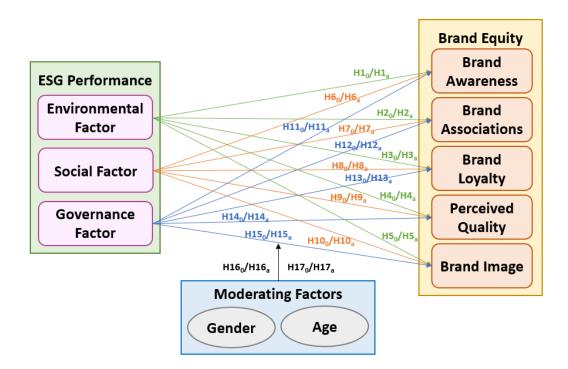


Figure 6: Illustration of the Conceptual Model (Source: Author)

Under the conceptual model, there are 17 sets of hypotheses:

H₁₀: Environmental factor has no significant impact on brand awareness.

H₁_a: Environmental factor has a significant impact on brand awareness.

- H2₀: Environmental factor has no significant impact on brand associations.
- H2a: Environmental factor has a significant impact on brand associations.
- H₃₀: Environmental factor has no significant impact on brand loyalty.
- H₃_a: Environmental factor has a significant impact on brand loyalty.
- H₄₀: Environmental factor has no significant impact on perceived quality.
- H_a: Environmental factor has a significant impact on perceived quality.
- H5₀: Environmental factor has no significant impact on brand image.
- H5_a: Environmental factor has a significant impact on brand image.
- H6₀: Social factor has no significant impact on brand awareness.
- H₆_a: Social factor has a significant impact on brand awareness.
- H7₀: Social factor has no significant impact on brand associations.
- H_a: Social factor has a significant impact on brand associations.
- H8₀: Social factor has no significant impact on brand loyalty.
- H8_a: Social factor has a significant impact on brand loyalty.
- H₉₀: Social factor has no significant impact on perceived quality.
- H₉: Social factor has a significant impact on perceived quality.
- H10₀: Social factor has no significant impact on brand image.
- H10_a: Social factor has a significant impact on brand image.
- H11₀: Governance factor has no significant impact on brand awareness.
- H11_a: Governance factor has a significant impact on brand awareness.
- H12₀: Governance factor has no significant impact on brand associations.
- H12_a: Governance factor has a significant impact on brand associations.
- H13₀: Governance factor has no significant impact on brand loyalty.
- H13_a: Environmental factor has a significant impact on brand loyalty.
- H14₀: Governance factor has no significant impact on perceived quality.

- H14_a: Governance factor has a significant impact on perceived quality.
- H15₀: Governance factor has no significant impact on brand image.
- H15_a: Governance factor has a significant impact on brand image.
- H16₀: Gender does not moderate the impact of ESG performance on brand equity.
- H16a: Gender moderates the impact of ESG performance on brand equity.
- H17₀: Age does not moderate the impact of ESG performance on brand equity.
- H17_a: Age moderates the impact of ESG performance on brand equity.

3. RESEARCH METHODOLOGY

3.1 Research Design

The research design followed a hypothetico-deductive approach based on the post-positivist research philosophy. It involved collecting primary data from participants and secondary data from existing sources, utilizing a cross-sectional design. This study is explanatory and descriptive in nature, aiming to elucidate the relationship between ESG factors and brand equity dimensions through statistical analyses and empirical investigation within this context. An explanatory sequential mixed-methods design was utilized, starting with quantitative data collection through surveys to explore the ESG performance and brand equity relationship, followed by qualitative focus groups for deeper insights into consumer perceptions.

The survey method was used to quantitatively measure the attributes of ESG performance, i.e. the environmental factor, the social factor, and the governance factor, and the five attributes of brand equity, i.e. brand awareness, brand associations, brand loyalty, perceived quality, and brand image. A qualitative case study via focus groups was conducted to validate hypotheses, allowing for a detailed exploration of participant perspectives on ESG performance and brand equity (Krueger & Casey, 2015).

The primary research instrument, a questionnaire, gathered data on ESG performance and brand equity of local fast-food chains from a customer perspective. Questionnaires are efficient for collecting data from a large sample size (Dillman et al., 2014). The questionnaire employed a Likert scale, a common tool in research for assessing respondents' attitudes and perceptions, providing a structured format for indicating agreement or disagreement with statements, aiding in the quantitative analysis of subjective constructs (Likert, 1932).

A pilot test was conducted by distributing the questionnaire to 21 respondents electronically to gather feedback for refining and ensuring the validity and reliability of the questionnaire before administering it to the target population, following guidelines by Dillman et al. (2014).

3.2 Sampling Method

The quantitative assessment of ESG performance and brand equity through questionnaires targeted the customers of fast-food chains in Hong Kong. With a population over 1,000,000, a sample size of 384 is deemed sufficient based on Krejcie and Morgan Table (Krejcie & Morgan, 1970). The same results was obtained when applying the sample size formula based on a confidence level of 95%: $n = N * [Z^2 * p * (1-p)/e^2] / [N - 1 + (Z^2 * p * (1-p)/e^2], where$ N = population, Z = critical value of normal distribution (1.96, for 95% confidence level) p = sample proportion (0.5, with unknown conversion rate), and e = margin of error (0.05). Thus, the target sample size of the questionnaire is 384. According to Baruch (1999), the average response rate in academic research is 55.6% with a standard deviation of 19.7%. As such, the number of questionnaires to be distributed should be at least 690 (384/55.6%). Respondents for the questionnaire were required to be customers of selected fast-food chains, namely Café de Coral, Fairwood, and Maxim's MX, who have visited these outlets in the past year. This ensured participants are familiar with the brands, enhancing the reliability of their responses. Screening questions were integrated into the questionnaire to verify eligibility. The research employed simple random sampling, a method that offers every individual in the population an equal chance of being selected for inclusion in the sample (Babbie, 2016).

3.3 Data Collection

The data collection period was from 19 February 2024 to 3 March 2024. All the data were collected by distributing the online questionnaire via Google form through electronic means.

All the respondents were invited to fill in the questionnaire on a voluntary basis. Informed consent from all respondents was obtained before they answered the questions.

In addition, eight focus groups were conducted during the period from 27 April 2024 to 4

May 2024. The first two focus groups consisted of male and female participants respectively.

Each focus group comprised six participants of different genders and from different age groups, resulting in a total of 48 participants with diverse background. Participants were assured of confidentiality, and informed consent was obtained prior to participation.

3.4 Measurement of Variables

This study encompasses ten variables, comprising three independent variables (environmental, social, governance factors) representing ESG performance, and five dependent variables (brand awareness, brand associations, brand loyalty, perceived quality, brand image) representing brand equity. Additionally, two moderating variables, gender and age, were assessed using the questionnaire.

ESG performance is delineated by the environmental, social, and governance factors. The environmental factor, assessed through 12 questionnaire items, encompasses four aspects. The social factor, evaluated through 24 questions, comprises eight aspects. The governance factor, assessed by nine questions, includes three aspects. Table 2 shows the corresponding questionnaire items that measure the respective ESG factors.

Table 2: Corresponding Questionnaire Items for Measuring ESG Performance (Source: Author)

| ESG Factor | Aspect | Questionnaire Items |
|----------------------|---------------------------------|----------------------------|
| Environmental factor | Emissions | Q7a, Q7b, Q7c |
| Environmental factor | Use of resources | Q8a, Q8b, Q8c |
| Environmental factor | Environment & natural resources | Q9a, Q9b, Q9c |
| Environmental factor | Climate change | Q10a, Q10b, Q10c |
| Social factor | Employment | Q11a, Q11b, Q11c |
| Social factor | Health and safety | Q12a, Q12b, Q12c |
| Social factor | Development and training | Q13a, Q13b, Q13c |

| Social factor | Labour standards | Q14a, Q14b, Q14c |
|-------------------|-------------------------------------|------------------|
| Social factor | Supply chain management | Q15a, Q15b, Q15c |
| Social factor | Product responsibility | Q16a, Q16b, Q16c |
| Social factor | Anti-corruption | Q17a, Q17b, Q17c |
| Social factor | Community investment | Q18a, Q18b, Q18c |
| Governance factor | Effectiveness of board of directors | Q19a, Q19b, Q19c |
| Governance factor | Effectiveness of board committees | Q20a, Q20b, Q20c |
| Governance factor | Effectiveness of audit committee | Q21a, Q21b, Q21c |

Brand equity comprises the five attributes of brand awareness, brand associations, brand loyalty, perceived quality, and brand image, with each assessed through three questionnaire items in the survey. Table 3 shows the corresponding items in the questionnaire that measure the respective attributed of brand equity.

Table 3: Corresponding Questionnaire Items for Measuring Brand Equity (Source: Author)

| Attribute of Brand Equity | Questionnaire Items | |
|---------------------------|---------------------|--|
| Brand Awareness (BAw) | Q22a, Q22b, Q22c | |
| Brand Associations (BAs) | Q23a, Q23b, Q23c | |
| Brand Loyalty (BL) | Q24a, Q24b, Q24c | |
| Perceived Quality (PQ) | Q25a, Q25b, Q25c | |
| Brand Image (BI) | Q26a, Q26b, Q26c | |

3.5 Data Analysis

The Statistical Package for Social Sciences (SPSS) software was utilized to analyze the quantitative data gathered from respondents via the questionnaire. Various descriptive statistical methods including Pearson correlation coefficient and multiple regression analysis were employed in the quantitative analysis.

For the qualitative analysis of data collected from the focus groups, thematic analysis was adopted by coding. The qualitative data were transcribed and coded using NVivo, following Braun and Clarke's (2006) six-step framework for thematic analysis, allowing for the extraction of key themes from the perspectives of the focus group participants.

4. RESEARCH FINDINGS AND DISCUSSION

Among the 396 responses collected during the data collection period, three responses were removed due to inconsistencies in the answers; five responses were discarded because three respondents indicated that they have not visited the local fast-food outlets in the past 12 months and two indicated that they have never visited the local fast-food outlet they prefer the most. This resulted in 388 valid responses, which is an adequate sample size.

4.1 Descriptive Statistics

Among the 388 respondents, 171 (44.07%) are males and 217 (55.93%) are females. In terms of age, 8 (1.80%) are aged 20 or below; 978 (25.26%) fall within the age group of 21 to 30; 112 (28.61%) fall within the age group of 31 to 40; 124 (31.70%) fall within the age group of 41 to 50; 31 (8.25%) fall within the age group of 51 to 60; and 16 (4.38%) are aged over 60. All respondents indicated that they are aware of the three local fast-food brands.

4.2 ESG Performance of Fast-food Chains

Environmental Factor

The mean scores of the four attributes and the overall mean score of the environmental factor were calculated as shown in Table 4. The results indicated that Café de Coral outperformed the other two chains in this factor, followed by Maxim's MX and then Fairwood.

Table 4: Analysis on Environmental Factor of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|--------------|---------------|----------|------------|--------------------|
| EF1 | 4.981 | 4.664 | 4.683 | 4.796 |
| EF2 | 4.981 | 4.664 | 4.683 | 4.796 |
| EF3 | 5.083 | 4.198 | 4.367 | 4.598 |
| EF4 | 4.981 | 3.977 | 4.525 | 4.523 |
| EF (overall) | 5.006 | 4.376 | 4.564 | 4.678 |

Social Factor

The mean scores of the eight attributes and the overall mean score of the social factor were calculated as shown in Table 5. The results demonstrated that Café de Coral surpassed the other two chains in this factor, followed by Maxim's MX and then Fairwood

Table 5: Analysis on Social Factor of the Three Local Fast-food Chains

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|--------------|---------------|----------|------------|--------------------|
| SF1 | 4.853 | 5.031 | 4.525 | 4.827 |
| SF2 | 5.058 | 4.458 | 4.356 | 4.673 |
| SF3 | 4.955 | 4.450 | 4.356 | 4.629 |
| SF4 | 5.051 | 4.344 | 4.673 | 4.714 |
| SF5 | 5.077 | 4.213 | 5.119 | 4.796 |
| SF6 | 5.077 | 4.672 | 5.109 | 4.948 |
| SF7 | 4.962 | 4.221 | 4.089 | 4.485 |
| SF8 | 5.179 | 4.565 | 4.812 | 4.876 |
| SF (overall) | 5.026 | 4.494 | 4.630 | 4.745 |

Governance Factor

The mean scores of the three attributes and the overall mean score of the governance factor were calculated as shown in Table 6. The results indicated that Café de Coral outperformed the other two chains in this factor, followed by Maxim's MX and then Fairwood.

Table 6: Analysis on Governance Factor of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|--------------|---------------|----------|------------|--------------------|
| GF1 | 5.006 | 4.069 | 4.228 | 4.487 |
| GF2 | 4.885 | 3.863 | 3.901 | 4.283 |
| GF3 | 4.782 | 4.099 | 3.911 | 4.325 |
| GF (overall) | 4.891 | 4.010 | 4.013 | 4.365 |

The ranking of ESG performance among the three chains is summarized in Table 7.

Table 7: Ranking of ESG Performance among the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX |
|----------------------|---------------|----------|------------|
| Environmental Factor | 1 | 3 | 2 |
| Social Factor | 1 | 3 | 2 |
| Governance Factor | 1 | 3 | 2 |

4.3 Brand Equity of Fast-food Chains

Brand Awareness

The mean scores of the three attributes and the overall mean score of the brand awareness were calculated as shown in Table 8. The findings indicated that Café de Coral holds the highest level of brand awareness.

Table 8: Analysis on Brand Awareness of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|---------------|---------------|----------|------------|--------------------|
| BAw1 | 5.718 | 4.870 | 5.406 | 5.351 |
| BAw2 | 6.429 | 5.435 | 5.475 | 5.845 |
| BAw3 | 6.173 | 5.382 | 4.861 | 5.564 |
| BAw (overall) | 6.107 | 5.229 | 5.248 | 5.587 |

Brand Associations

The mean scores of the three attributes and the overall mean score of the brand associations were calculated as shown in Table 9. The findings indicated that Café de Coral has established the strongest brand associations.

Table 9: Analysis on Brand Associations of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|---------------|---------------|----------|------------|--------------------|
| BAs1 | 5.865 | 5.145 | 4.980 | 5.392 |
| BAs2 | 5.256 | 4.115 | 4.673 | 4.719 |
| BAs3 | 5.205 | 3.710 | 4.495 | 4.515 |
| BAs (overall) | 5.442 | 4.323 | 4.716 | 4.875 |

Brand Loyalty

The mean scores of the three attributes and the overall mean score of the perceived quality were calculated as shown in Table 10. The findings indicated that Café de Coral has attained the highest level of brand loyalty.

Table 10: Analysis on Brand Loyalty of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|-----|---------------|----------|------------|--------------------|
| BL1 | 5.462 | 4.229 | 5.079 | 4.946 |
| BL2 | 5.897 | 4.878 | 5.158 | 5.361 |

| BL3 | 5.058 | 4.107 | 4.248 | 4.526 |
|--------------|-------|-------|-------|-------|
| BL (overall) | 5.472 | 4.405 | 4.828 | 4.944 |

Perceived Quality

The mean scores of the three attributes and the overall mean score of the brand loyalty were calculated as shown in Table 11. The findings indicated that Café de Coral has provided the highest perceived quality.

Table 11: Analysis on Perceived Quality of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|--------------|---------------|----------|------------|--------------------|
| PQ1 | 5.417 | 4.733 | 5.000 | 5.077 |
| PQ2 | 5.436 | 4.832 | 5.267 | 5.188 |
| PQ3 | 5.109 | 4.969 | 5.158 | 5.075 |
| PQ (overall) | 5.321 | 4.845 | 5.142 | 5.113 |

Brand Image

The mean scores of the three attributes and the overall mean score of the brand image were calculated as shown in Table 12. The findings indicated that Café de Coral has established the strongest brand image.

Table 12: Analysis on Brand Image of the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX | All three combined |
|--------------|---------------|----------|------------|--------------------|
| BI1 | 5.442 | 5.634 | 5.149 | 5.430 |
| BI2 | 5.083 | 5.107 | 4.673 | 4.985 |
| BI3 | 5.442 | 4.718 | 5.099 | 5.108 |
| BI (overall) | 5.323 | 5.153 | 4.974 | 5.174 |

The ranking of brand equity among the three chains is summarized in Table 13.

Table 13: Ranking of Brand Equity among the Three Local Fast-food Chains (Source: Author)

| | Café de Coral | Fairwood | Maxim's MX |
|--------------------|---------------|----------|------------|
| Brand Awareness | 1 | 3 | 2 |
| Brand Associations | 1 | 3 | 2 |
| Brand Loyalty | 1 | 3 | 2 |
| Perceived Quality | 1 | 3 | 2 |
| Brand Image | 1 | 2 | 3 |

4.4 Relationship between ESG Performance and Brand Equity

Café de Coral attained the highest ESG performance and the highest level of brand equity; conversely, Fairwood, with the lowest ESG performance, had the lowest brand equity. This observation underscored the positive correlation between ESG performance and brand equity.

Relationship between Environmental Factor and Brand Awareness

Pearson's coefficient was calculated to examine the relationship between the constructs of the environmental factor and those of brand awareness, which in turn tested H1₀. Pearson's coefficient of the overall environmental factor and the overall brand awareness was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 14.

Table 14: Pearson's Coefficients for Environmental Factor and Brand Awareness (Source: Author)

| Pearson's Coefficient (r) | | | | | | | |
|---------------------------|--------|----------------|--------|--|--|--|--|
| | BAw1 | BAw1 BAw2 BAw3 | | | | | |
| EF1 | 0.7889 | 0.7155 | 0.7396 | | | | |
| EF2 | 0.7889 | 0.7155 | 0.7306 | | | | |
| EF3 | 0.7819 | 0.7586 | 0.7056 | | | | |
| EF4 | 0.7035 | 0.7107 | 0.6495 | | | | |
| r (EF-BAw) | | 0.8379 | | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 73% of the variance in brand awareness can be explained by the environmental factor. The results are presented in Table 15.

Table 15: Multiple Regression Analysis for Environmental Factor and Brand Awareness (Source: Author)

| | Unstandardized Coefficient | Standardized Error | t-value | p-value |
|----------|-------------------------------|-----------------------|---------|---------|
| Constant | 1.10 | NA | NA | NA |
| EF1 | 0.52 | 0.07 | 7.91 | 0.000 |
| EF2 | 0.00 | 0.00 | NaN | 0.000 |
| EF3 | 0.58 | 0.08 | 7.66 | 0.000 |
| EF4 | 0.16 | 0.08 | 2.43 | 0.015 |

| F | 256.76 |
|-------------------------|--------|
| Adjusted R ² | 0.73 |
| df | 4 |
| Sig. (p-value) | 0.000 |

Thus, the null hypothesis H1₀ should be rejected and the alternative hypothesis H1_a supported at a confidence level of 95%.

Relationship between Environmental Factor and Brand Associations

Pearson's coefficient was calculated to examine the relationship between the constructs of the environmental factor and those of brand associations, which in turn tested H2₀. Pearson's coefficient of the overall environmental factor and the overall brand associations was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 16.

Table 16: Pearson's Coefficients for Environmental Factor and Brand Associations (Source: Author)

| Pearson's Coefficient (r) | | | | | | |
|---------------------------|----------------|--------|--------|--|--|--|
| | BAs1 BAs2 BAs3 | | | | | |
| EF1 | 0.6945 | 0.7787 | 0.7728 | | | |
| EF2 | 0.6945 | 0.7787 | 0.7728 | | | |
| EF3 | 0.6459 | 0.6797 | 0.7270 | | | |
| EF4 | 0.6113 | 0.6994 | 0.7320 | | | |
| r (EF-BAs) | | 0.7833 | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 63% of the variance in brand associations can be explained by the environmental factor. The results are presented in Table 17.

Table 17: Multiple Regression Analysis for Environmental Factor and Brand Associations (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|----------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 0.15 | NA | NA | NA |
| EF1 | 0.90 | 0.10 | 9.46 | 0.000 |
| EF2 | 0.00 | 0.00 | NaN | 0.000 |

| EF3 | 0.00 | 0.11 | 0.01 | 0.989 | |
|-------------------------|--------|------|------|-------|--|
| EF4 | 0.60 | 0.09 | 1.69 | 0.092 | |
| F | 163.10 | | | | |
| Adjusted R ² | 0.63 | | | | |
| df | 4 | | | | |
| Sig. (p-value) | 0.000 | | | | |

Thus, the null hypothesis H2₀ should be rejected and the alternative hypothesis H2_a supported at a confidence level of 95%.

Relationship between Environmental Factor and Brand Loyalty

Pearson's coefficient was calculated to examine the relationship between the constructs of the environmental factor and those of brand loyalty, which in turn tested H3₀. Pearson's coefficient of the overall environmental factor and the overall brand loyalty was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 18.

Table 18: Pearson's Coefficients for Environmental Factor and Brand Loyalty (Source: Author)

| Pearson's Coefficient (r) | | | | | | |
|---------------------------|-------------|--------|--------|--|--|--|
| | BL1 BL2 BL3 | | | | | |
| EF1 | 0.8343 | 0.7225 | 0.7088 | | | |
| EF2 | 0.8343 | 0.7225 | 0.7088 | | | |
| EF3 | 0.7769 | 0.7365 | 0.6400 | | | |
| EF4 | 0.7777 | 0.6793 | 0.5846 | | | |
| r (EF-BL) | | 0.8290 | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 70% of the variance in brand loyalty can be explained by the environmental factor. The results are presented in Table 19.

Table 19: Multiple Regression Analysis for Environmental Factor and Brand Loyalty (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|----------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 1.10 | NA | NA | NA |

| EF1 | 0.94 | 0.09 | 9.95 | 0.000 | |
|-------------------------|--------|------|------|-------|--|
| EF2 | 0.00 | 0.00 | NaN | 0.000 | |
| EF3 | 0.41 | 0.11 | 3.73 | 0.000 | |
| EF4 | 0.07 | 0.09 | 0.80 | 0.424 | |
| F | 227.60 | | | | |
| Adjusted R ² | 0.70 | | | | |
| df | 4 | | | | |
| Sig. (p-value) | 0.000 | | | | |

Thus, the null hypothesis H3₀ should be rejected and the alternative hypothesis H3_a supported at a confidence level of 95%.

Relationship between Environmental Factor and Perceived Quality

Pearson's coefficient was calculated to examine the relationship between the constructs of the environmental factor and those of perceived quality, which in turn tested H4₀. Pearson's coefficient of the overall environmental factor and the overall perceived quality was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 20.

Table 20: Pearson's Coefficients for Environmental Factor and Perceived Quality (Source: Author)

| Pearson's Coefficient (r) | | | | | |
|---------------------------|--------|--------|--------|--|--|
| | PQ1 | PQ2 | PQ3 | | |
| EF1 | 0.7542 | 0.8385 | 0.8335 | | |
| EF2 | 0.7542 | 0.8385 | 0.8335 | | |
| EF3 | 0.6912 | 0.7665 | 0.7225 | | |
| EF4 | 0.7257 | 0.7043 | 0.6846 | | |
| r (EF-PQ) | | 0.8368 | • | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 74% of the variance in perceived quality can be explained by the environmental factor. The results are presented in Table 21.

Table 21: Multiple Regression Analysis for Environmental Factor and Perceived Quality (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|--|----------------|--------------|---------|---------|
| | Coefficient | Error | | |

| Constant | 0.40 | NA | NA | NA | |
|-------------------------|--------|------|-------|-------|--|
| EF1 | 0.94 | 0.07 | 13.96 | 0.000 | |
| EF2 | 0.00 | 0.00 | NaN | 0.000 | |
| EF3 | 0.11 | 0.08 | 1.41 | 0.160 | |
| EF4 | 0.07 | 0.07 | 1.06 | 0.292 | |
| F | 270.72 | | | | |
| Adjusted R ² | 0.74 | | | | |
| df | 4 | | | | |
| Sig. (p-value) | 0.000 | | | | |

Thus, the null hypothesis H4₀ should be rejected and the alternative hypothesis H4_a supported at a confidence level of 95%.

Relationship between Environmental Factor and Brand Image

Pearson's coefficient was calculated to examine the relationship between the constructs of the environmental factor and those of brand image, which in turn tested H5₀. Pearson's coefficient of the overall environmental factor and the overall brand image was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 22.

Table 22: Pearson's Coefficients for Environmental Factor and Brand Image (Source: Author)

| Pearson's Coefficient (r) | | | | | | | |
|---------------------------|--------|-------------|--------|--|--|--|--|
| | BI1 | BI1 BI2 BI3 | | | | | |
| EF1 | 0.7061 | 0.6757 | 0.7191 | | | | |
| EF2 | 0.7061 | 0.6757 | 0.7191 | | | | |
| EF3 | 0.6307 | 0.6050 | 0.6631 | | | | |
| EF4 | 0.5564 | 0.6015 | 0.6528 | | | | |
| r (EF-BI) | | 0.7371 | • | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 61% of the variance in brand image can be explained by the environmental factor. The results are presented in Table 23.

Table 23: Multiple Regression Analysis for Environmental Factor and Brand Image (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 1.28 | NA | NA | NA |
| EF1 | 0.83 | 0.07 | 11.29 | 0.000 |
| EF2 | 0.00 | 0.00 | NaN | 0.000 |
| EF3 | 0.31 | 0.08 | 3.64 | 0.000 |
| EF4 | 0.33 | 0.07 | 4.61 | 0.000 |
| F | 151.22 | | | |
| Adjusted R ² | 0.61 | | | |
| df | 4 | | | |
| Sig. (p-value) | 0.000 | | | |

Thus, the null hypothesis H5₀ should be rejected and the alternative hypothesis H5_a supported at a confidence level of 95%.

Relationship between Social Factor and Brand Awareness

Pearson's coefficient was calculated to examine the relationship between the constructs of the social factor and those of brand awareness, which in turn tested H6₀. Pearson's coefficient of the overall social factor and the overall brand awareness was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 24.

Table 24: Pearson's Coefficients for Social Factor and Brand Awareness (Source: Author)

| Pearson's Coefficient (r) | | | | | | | |
|---------------------------|--------|----------------|--------|--|--|--|--|
| | BAw1 | BAw1 BAw2 BAw3 | | | | | |
| SF1 | 0.7057 | 0.6011 | 0.6124 | | | | |
| SF2 | 0.8954 | 0.6781 | 0.7778 | | | | |
| SF3 | 0.8801 | 0.6405 | 0.7427 | | | | |
| SF4 | 0.8221 | 0.6008 | 0.6862 | | | | |
| SF5 | 0.8033 | 0.6045 | 0.6015 | | | | |
| SF6 | 0.7956 | 0.6006 | 0.6003 | | | | |
| SF7 | 0.7918 | 0.7667 | 0.7871 | | | | |
| SF8 | 0.7581 | 0.6072 | 0.6287 | | | | |
| r (SF-BAw) | | 0.8521 | | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 89% of the variance in brand awareness can be explained by the social factor. The results are presented in Table 25.

Table 25: Multiple Regression Analysis for Social Factor and Brand Awareness (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 0.05 | 0.12 | 0.37 | 0.710 |
| SF1 | 0.16 | 0.04 | 4.05 | 0.000 |
| SF2 | 0.67 | 0.08 | 8.56 | 0.000 |
| SF3 | 0.25 | 0.07 | 3.38 | 0.001 |
| SF4 | 0.41 | 0.06 | 6.74 | 0.000 |
| SF5 | 0.70 | 0.06 | 11.80 | 0.000 |
| SF6 | 0.62 | 0.05 | 11.88 | 0.000 |
| SF7 | 0.50 | 0.04 | 13.66 | 0.000 |
| SF8 | 0.03 | 0.04 | 0.64 | 0.524 |
| F | 407.25 | | | |
| Adjusted R ² | 0.89 | | | |
| df | 8 | | | |
| Sig. (p-value) | | 0.000 | | |

Thus, the null hypothesis $H6_0$ should be rejected and the alternative hypothesis $H6_a$ supported at a confidence level of 95%.

Relationship between Social Factor and Brand Associations

Pearson's coefficient was calculated to examine the relationship between the constructs of the social factor and those of brand associations, which in turn tested H7₀. Pearson's coefficient of the overall social factor and the overall brand associations was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 26.

Table 26: Pearson's Coefficients for Social Factor and Brand Associations (Source: Author)

| Pearson's Coefficient (r) | | | | |
|---------------------------|------|------|------|--|
| | BAs1 | BAs2 | BAs3 | |

| SF1 | 0.6108 | 0.6033 | 0.5611 |
|------------|--------|--------|--------|
| SF2 | 0.7808 | 0.8383 | 0.8962 |
| SF3 | 0.7453 | 0.8622 | 0.8895 |
| SF4 | 0.7485 | 0.8854 | 0.9089 |
| SF5 | 0.6084 | 0.7560 | 0.8157 |
| SF6 | 0.6049 | 0.6302 | 0.7043 |
| SF7 | 0.6245 | 0.6723 | 0.6389 |
| SF8 | 0.6275 | 0.7576 | 0.8062 |
| r (SF-BAs) | | 0.8523 | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 94% of the variance in brand associations can be explained by the social factor. The results are presented in Table 27.

Table 27: Multiple Regression Analysis for Social Factor and Brand Associations (Source: Author)

| | Unstandardized | Standardized | t-value | p-value | | |
|-------------------------|----------------|--------------|---------|---------|--|--|
| | Coefficient | Error | | | | |
| Constant | 1.23 | 0.12 | 10.49 | 0.000 | | |
| SF1 | 0.08 | 0.04 | 2.17 | 0.031 | | |
| SF2 | 0.37 | 0.07 | 4.92 | 0.000 | | |
| SF3 | 0.53 | 0.07 | 7.45 | 0.000 | | |
| SF4 | 0.69 | 0.06 | 11.91 | 0.000 | | |
| SF5 | 0.80 | 0.06 | 13.98 | 0.000 | | |
| SF6 | 0.82 | 0.05 | 16.50 | 0.000 | | |
| SF7 | 0.12 | 0.04 | 3.47 | 0.001 | | |
| SF8 | 0.26 | 0.04 | 6.28 | 0.000 | | |
| F | 698.23 | | | | | |
| Adjusted R ² | 0.94 | | | | | |
| df | 8 | | | | | |
| Sig. (p-value) | | 0.000 | 0.000 | | | |

Thus, the null hypothesis H7₀ should be rejected and the alternative hypothesis H7_a supported at a confidence level of 95%.

Relationship between Social Factor and Brand Loyalty

Pearson's coefficient was calculated to examine the relationship between the constructs of the social factor and those of brand loyalty, which in turn tested H8₀. Pearson's coefficient of the

overall social factor and the overall brand loyalty was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 28.

Table 28: Pearson's Coefficients for Social Factor and Brand Loyalty (Source: Author)

| Pearson's Coefficient (r) | | | | |
|---------------------------|--------|--------|--------|--|
| | BL1 | BL2 | BL3 | |
| SF1 | 0.6443 | 0.7032 | 0.7040 | |
| SF2 | 0.9227 | 0.7652 | 0.6861 | |
| SF3 | 0.9015 | 0.6980 | 0.6365 | |
| SF4 | 0.9122 | 0.8854 | 0.6281 | |
| SF5 | 0.8440 | 0.6698 | 0.6984 | |
| SF6 | 0.7663 | 0.6039 | 0.4008 | |
| SF7 | 0.6690 | 0.6009 | 0.6967 | |
| SF8 | 0.8593 | 0.7097 | 0.6006 | |
| r (SF-BL) | | 0.8309 | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 89% of the variance in brand loyalty can be explained by the social factor. The results are presented in Table 29.

Table 29: Multiple Regression Analysis for Social Factor and Brand Loyalty (Source: Author)

| | Unstandardized | Standardized | t-value | p-value | |
|-------------------------|----------------|--------------|---------|---------|--|
| | Coefficient | Error | | | |
| Constant | 2.35 | 0.17 | 13.95 | 0.000 | |
| SF1 | 0.64 | 0.05 | 12.06 | 0.000 | |
| SF2 | 1.27 | 0.11 | 11.89 | 0.000 | |
| SF3 | 0.55 | 0.10 | 5.44 | 0.000 | |
| SF4 | 0.29 | 0.08 | 3.45 | 0.001 | |
| SF5 | 1.20 | 0.08 | 14.63 | 0.000 | |
| SF6 | 1.06 | 0.07 | 14.91 | 0.000 | |
| SF7 | 0.26 | 0.05 | 5.19 | 0.000 | |
| SF8 | 0.45 | 0.06 | 7.73 | 0.000 | |
| F | 401.14 | | | | |
| Adjusted R ² | 0.89 | | | | |
| df | 8 | | | | |
| Sig. (p-value) | | 0.000 | | | |

Thus, the null hypothesis H8₀ should be rejected and the alternative hypothesis H8_a supported at a confidence level of 95%.

Relationship between Social Factor and Perceived Quality

Pearson's coefficient was calculated to further examine the relationship between the constructs of the social factor and those of perceived quality, which in turn tested H9₀. Pearson's coefficient of the overall social factor and the overall perceived quality was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 30.

Table 30: Pearson's Coefficients for Social Factor and Perceived Quality (Source: Author)

| Pearson's Coefficient (r) | | | | |
|---------------------------|--------|--------|--------|--|
| | PQ1 | PQ2 | PQ3 | |
| SF1 | 0.6039 | 0.7529 | 0.8637 | |
| SF2 | 0.7554 | 0.8786 | 0.7543 | |
| SF3 | 0.6874 | 0.8618 | 0.7693 | |
| SF4 | 0.7071 | 0.8355 | 0.7340 | |
| SF5 | 0.6001 | 0.7514 | 0.6005 | |
| SF6 | 0.6025 | 0.6964 | 0.6169 | |
| SF7 | 0.6046 | 0.6534 | 0.6887 | |
| SF8 | 0.6772 | 0.7536 | 0.6522 | |
| r (SF-PQ) | | 0.8303 | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 83% of the variance in perceived quality can be explained by the social factor. The results are presented in Table 31.

Table 31: Multiple Regression Analysis for Social Factor and Perceived Quality (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|----------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 0.15 | 0.16 | 0.94 | 0.000 |
| SF1 | 0.74 | 0.05 | 14.63 | 0.000 |
| SF2 | 0.41 | 0.10 | 4.05 | 0.000 |
| SF3 | 0.15 | 0.10 | 1.50 | 0.134 |

| SF4 | 0.10 | 0.08 | 1,27 | 0.203 |
|-------------------------|--------|------|-------|-------|
| SF5 | 0.97 | 0.08 | 12.45 | 0.000 |
| SF6 | 0.85 | 0.07 | 12.55 | 0.000 |
| SF7 | 0.01 | 0.05 | 0.16 | 0.876 |
| SF8 | 0.09 | 0.06 | 1.67 | 0.097 |
| F | 238.61 | | | |
| Adjusted R ² | 0.83 | | | |
| df | 8 | | | |
| Sig. (p-value) | 0.000 | | | |

Thus, the null hypothesis H9₀ should be rejected and the alternative hypothesis H9_a supported at a confidence level of 95%.

Relationship between Social Factor and Brand Image

Pearson's coefficient was calculated to examine the relationship between the constructs of the social factor and those of brand image, which in turn tested H10₀. Pearson's coefficient of the overall social factor and the overall brand image was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 32.

Table 32: Pearson's Coefficients for Social Factor and Brand Image (Source: Author)

| Pearson's Coefficient (r) | | | | |
|---------------------------|--------|---------|--------|--|
| | BI1 | BI2 | BI3 | |
| SF1 | 0.7561 | 0.7476 | 0.6013 | |
| SF2 | 0.6339 | 0. 9866 | 0.7936 | |
| SF3 | 0.6068 | 0.6772 | 0.7612 | |
| SF4 | 0.6029 | 0.6073 | 0.7706 | |
| SF5 | 0.6009 | 0.6062 | 0.7588 | |
| SF6 | 0.6034 | 0.6066 | 0.6895 | |
| SF7 | 0.6023 | 0.6009 | 0.6018 | |
| SF8 | 0.6077 | 0. 0616 | 0.7731 | |
| r (SF-BI) | 0.7666 | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high

level. The R-squared value indicated 67% of the variance in brand image can be explained by the social factor. The results are presented in Table 33.

Table 33: Multiple Regression Analysis for Social Factor and Brand Image (Source: Author)

| | Unstandardized | Standardized | t-value | p-value | |
|-------------------------|----------------|--------------|---------|---------|--|
| | Coefficient | Error | | | |
| Constant | 1.65 | 0.20 | 8.26 | 0.000 | |
| SF1 | 0.48 | 0.06 | 7.58 | 0.000 | |
| SF2 | 0.73 | 0.13 | 5.73 | 0.000 | |
| SF3 | 0.12 | 0.12 | 1.04 | 0.300 | |
| SF4 | 0.36 | 0.10 | 3.69 | 0.203 | |
| SF5 | 0.46 | 0.10 | 4.77 | 0.000 | |
| SF6 | 0.29 | 0.08 | 3.39 | 0.001 | |
| SF7 | 0.21 | 0.06 | 3.44 | 0.001 | |
| SF8 | 0.05 | 0.07 | 0.76 | 0.446 | |
| F | 99.48 | | | | |
| Adjusted R ² | 0.67 | | | | |
| df | 8 | | | | |
| Sig. (p-value) | | 0.000 | | | |

Thus, the null hypothesis H10₀ should be rejected and the alternative hypothesis H10_a supported at a confidence level of 95%.

Relationship between Governance Factor and Brand Awareness

Pearson's coefficient was calculated to examine the relationship between the constructs of the governance factor and those of brand awareness, which in turn tested H11₀. Pearson's coefficient of the overall governance factor and the overall brand awareness was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 34.

Table 34: Pearson's Coefficients for Governance Factor and Brand Awareness (Source: Author)

| Pearson's Coefficient (r) | | | | | | |
|---------------------------|--------|----------------|--------|--|--|--|
| | BAw1 | BAw1 BAw2 BAw3 | | | | |
| GF1 | 0.7444 | 0.6001 | 0.6190 | | | |
| GF2 | 0.8159 | 0.6038 | 0.7065 | | | |
| GF3 | 0.6190 | 0.7065 | 0.7141 | | | |
| r (GF-BAw) | | 0.7832 | | | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 68% of the variance in brand awareness can be explained by the governance factor. The results are presented in Table 35.

Table 35: Multiple Regression Analysis for Governance Factor and Brand Awareness (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 2.39 | 0.14 | 16.73 | .000 |
| GF1 | 0.62 | 0.10 | 6.10 | .000 |
| GF2 | 0.87 | 0.10 | 8.28 | .000 |
| GF3 | 0.53 | 0.09 | 5.64 | .000 |
| F | 268.97 | | | |
| Adjusted R ² | 0.68 | | | |
| df | 3 | | | |
| Sig. (p-value) | | 0.000 | | |

Thus, the null hypothesis H11₀ should be rejected and the alternative hypothesis H11_a supported at a confidence level of 95%.

Relationship between Governance Factor and Brand Associations

Pearson's coefficient was calculated to examine the relationship between the constructs of the governance factor and those of brand associations, which in turn tested H12₀. Pearson's coefficient of the overall governance factor and the overall brand associations was computed. Almost all the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation, except for the coefficient between GF1 and BAs1. This coefficient demonstrated a slightly strong positive correlation between the governance factor "effectiveness of the board of directors" and brand associations. The results are presented in Table 36.

Table 36: Pearson's Coefficients for Governance Factor and Brand Associations (Source: Author)

| Pearson's Coefficient (r) | | | | | |
|---------------------------------|--|--|--|--|--|
| BAs1 BAs2 BAs3 | | | | | |
| GF1 0.5539 0.6910 0.7840 | | | | | |

| GF2 | 0.6024 | 0.7138 | 0.7955 |
|------------|--------|--------|--------|
| GF3 | 0.6078 | 0.7165 | 0.7776 |
| r (GF-BAs) | | 0.7515 | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 56% of the variance in brand associations can be explained by the governance factor. The results are presented in Table 37.

Table 37: Multiple Regression Analysis for Governance Factor and Brand Associations (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 0.81 | 0.20 | 3.97 | 0.000 |
| GF1 | 0.09 | 0.15 | 0.61 | 0.542 |
| GF2 | 0.45 | 0.15 | 2.99 | 0.003 |
| GF3 | 0.41 | 0.13 | 3.05 | 0.002 |
| F | 167.73 | | | |
| Adjusted R ² | 0.56 | | | |
| df | 3 | | | |
| Sig. (p-value) | 0.000 | | | |

Thus, the null hypothesis H12₀ should be rejected and the alternative hypothesis H12_a supported at a confidence level of 95%.

Relationship between Governance Factor and Brand Loyalty

Pearson's coefficient was calculated to examine the relationship between the constructs of the governance factor and those of brand loyalty, which in turn tested H13₀. Pearson's coefficient of the overall governance factor and the overall brand loyalty was computed. All the coefficients surpassed the threshold value of 0.600, indicating a strong positive correlation. The results are presented in Table 38.

Table 38: Pearson's Coefficients for Governance Factor and Brand Loyalty (Source: Author)

| Pearson's Coefficient (r) | | | |
|---------------------------|--------|--------|--------|
| BL1 BL2 BL3 | | | |
| GF1 | 0.7694 | 0.7921 | 0.7608 |

| GF2 | 0.6087 | 0.6044 | 0.6099 |
|-----------|--------|--------|--------|
| GF3 | 0.6026 | 0.6076 | 0.6191 |
| r (GF-BL) | | 0.7832 | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 52% of the variance in brand loyalty can be explained by the governance factor. The results are presented in Table 39.

Table 39: Multiple Regression Analysis for Governance Factor and Brand Loyalty (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 0.73 | 0.24 | 3.07 | 0.002 |
| GF1 | 0.30 | 0.17 | 1.79 | 0.075 |
| GF2 | 0.45 | 0.17 | 2.58 | 0.010 |
| GF3 | 0.84 | 0.16 | 5.42 | 0.000 |
| F | | 138.61 | | |
| Adjusted R ² | 0.52 | | | |
| df | 3 | | | |
| Sig. (p-value) | 0.000 | | | |

Thus, the null hypothesis H13₀ should be rejected and the alternative hypothesis H13_a supported at a confidence level of 95%.

Relationship between Governance Factor and Perceived Quality

Pearson's coefficient was calculated to examine the relationship between the constructs of the governance factor and those of perceived quality, which in turn tested H14₀. Pearson's coefficient of the overall governance factor and the overall perceived quality was computed. Although several coefficients exceeded the threshold value of 0.600, signifying a strong positive correlation, four coefficients fell within the range of 0.500 to 0.600, revealing a slightly strong positive correlation between the governance factor "effectiveness of the board of directors" and perceived quality, and between the governance factor "effectiveness of the board committee" and perceived quality. The results are presented in Table 40.

Table 40: Pearson's Coefficients for Governance Factor and Perceived Quality (Source: Author)

| Pearson's Coefficient (r) | | | | |
|---------------------------|--------|-------------|--------|--|
| | PQ1 | PQ1 PQ2 PQ3 | | |
| GF1 | 0.5987 | 0.6490 | 0.5425 | |
| GF2 | 0.5748 | 0.6728 | 0.5830 | |
| GF3 | 0.6003 | 0.6961 | 0.6252 | |
| r (GF-PQ) | | 0.6660 | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 46% of the variance in perceived quality can be explained by the governance factor. The results are presented in Table 41.

Table 41: Multiple Regression Analysis for Governance Factor and Perceived Quality (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 2.00 | 0.19 | 10.36 | 0.000 |
| GF1 | 0.06 | 0.14 | 0.43 | 0.669 |
| GF2 | 0.14 | 0.14 | 0.97 | 0.332 |
| GF3 | 0.65 | 0.13 | 5.13 | 0.000 |
| F | 109.04 | | | |
| Adjusted R ² | 0.46 | | | |
| df | 3 | | | |
| Sig. (p-value) | 0.000 | | | |

Thus, it can be concluded that the null hypothesis H14₀ should be rejected and the alternative hypothesis H14_a supported at a confidence level of 95%.

Relationship between Governance Factor and Brand Image

Pearson's coefficient was calculated to examine the relationship between the constructs of the governance factor and those of brand image, which in turn tested H15₀. Pearson's coefficient of the governance factor and the brand image was computed. Although several coefficients exceeded the threshold value of 0.600, signifying a strong positive correlation, four coefficients fell within the range of 0.400 to 0.600, revealing a slightly strong positive correlation between the governance factor "effectiveness of the board of directors" and brand

image, and between the governance factor "effectiveness of the board committee" and brand image. The results are presented in Table 42.

Table 42: Pearson's Coefficients for Governance Factor and Brand Image (Source: Author)

| Pearson's Coefficient (r) | | | | | |
|---------------------------|--------|-------------|--------|--|--|
| | BI1 | BI1 BI2 BI3 | | | |
| GF1 | 0.4492 | 0.5390 | 0.7015 | | |
| GF2 | 0.4553 | 0.5309 | 0.6750 | | |
| GF3 | 0.6027 | 0.6036 | 0.6755 | | |
| r (GF-BI) | | 0.6462 | · | | |

From the multiple regression analysis, the overall p-value of 0.000 is less than the level of significance of 0.05, which means that the results are statistically significant at a very high level. The R-squared value indicated 44% of the variance in brand image can be explained by the governance factor. The results are presented in Table 43.

Table 43: Multiple Regression Analysis for Governance Factor and Brand Image (Source: Author)

| | Unstandardized | Standardized | t-value | p-value |
|-------------------------|----------------|--------------|---------|---------|
| | Coefficient | Error | | |
| Constant | 2.34 | 0.17 | 13.48 | 0.000 |
| GF1 | 0.17 | 0.12 | 1.39 | 0.166 |
| GF2 | 0.18 | 0.13 | 1.45 | 0.147 |
| GF3 | 0.66 | 0.11 | 5.79 | 0.000 |
| F | 102.02 | | | |
| Adjusted R ² | 0.44 | | | |
| df | 3 | | | |
| Sig. (p-value) | | 0.000 | | |

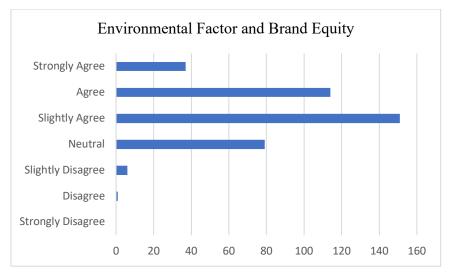
Thus, it can be concluded that the null hypothesis H15₀ should be rejected and the alternative hypothesis H15_a supported at a confidence level of 95%.

Causal Relationship of Environmental Factor and Brand Equity

When the respondents were asked whether they would consider the brand equity of a fast-food chain higher if it has better performance in pursuing environmental protection, 37 (9.54%) strongly agreed; 114 (29.38%) agreed; 151 (38.92%) slightly agreed; 79 (20.36%)

were neutral; 6 (1.55%) slightly disagreed; 1 (0.26%) disagreed; and none strongly disagreed, as shown in Figure 7. This indicated that the casual relationship should be strong.

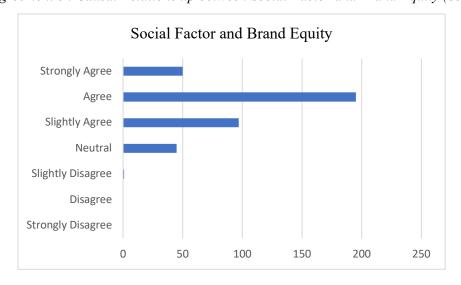
Figure 7: Agreement on Causal Relationship between Environmental Factor and Brand Equity (Source: Author)



Causal Relationship of Social Factor and Brand Equity

When the respondents were asked whether they would consider the brand equity of a fast-food chain higher if it makes more social contributions, 50 (12.89%) strongly agreed; 195 (50.26%) agreed; 97 (25.00%) slightly agreed; 45 (11.60%) were neutral; 1 (0.26%) slightly disagreed; and none disagreed or strongly disagreed, as shown in Figure 8. This indicated that the casual relationship should be strong.

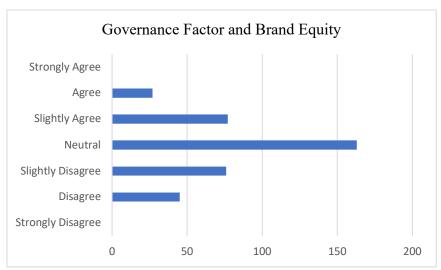
Figure 8: Agreement on Causal Relationship between Social Factor and Brand Equity (Source: Author)



Causal Relationship of Governance Factor and Brand Equity

When the respondents were asked whether they would consider the brand equity of a fast-food chain higher if it enhances its corporate governance, 27 (6.96%) agreed; 77 (19.85%) slightly agreed; 163 (42.01%) were neutral; 76 (19.59%) slightly disagreed; 45 (11.60%) disagreed; and none strongly agreed or strongly disagreed, as shown in Figure 9. This indicated that the casual relationship should be very weak.

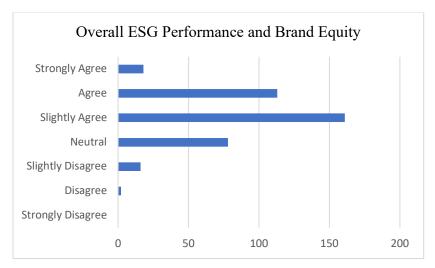
Figure 9: Agreement on Causal Relationship between Governance Factor and Brand Equity (Source: Author)



Causal Relationship of ESG Performance and Brand Equity

When the respondents were asked whether they would consider the overall ESG performance of a fast-food chain significantly contributes to its brand equity, 18 (4.64%) strongly agreed; 113 (29.12%) agreed; 161 (41.49%) slightly agreed; 78 (20.10%) were neutral; 16 (4.12%) slightly disagreed; 2 (0.52%) disagreed; and none strongly disagreed, as shown in Figure 10. This indicated that the casual relationship should be strong.

Figure 10: Agreement on Causal Relationship between ESG Performance and Brand Equity (Source: Author)



Moderating Factor of Gender

To test whether gender moderates the impact of ESG performance on brand equity of local fast-food chains, moderated regression analysis was adopted. Results were shown in Table 44, revealing that the majority of the p-values are below the conventional significance level of 0.05. The overall analysis indicated that the p-value associated with the interaction term "ESG Performance (EF*SF*GF) and gender influencing Brand Equity (BAw*BAs*BL*PQ*BI)" is below 0.05. Consequently, the null hypothesis H15₀ can be rejected, while the alternative hypothesis H15_a is supported. It can be concluded that gender exerts a moderating effect on the impact of ESG performance on brand equity of local fast-food chains in Hong Kong.

Table 44: Results of Moderated Regression Analysis on Gender as Moderating Factor (Source: Author)

| | Unstandardized Coefficient | <i>p</i> -value |
|--------------------|-----------------------------------|-----------------|
| EF x gender => BAw | 1.54 | 0.000 |
| EF x gender => BAs | 1.81 | 0.000 |
| EF x gender => BL | 2.59 | 0.000 |
| EF x gender => PQ | 1.94 | 0.000 |
| EF x gender => BI | 1.49 | 0.000 |
| SF x gender => BAw | -0.98 | 0.001 |
| SF x gender => BAs | -1.32 | 0.000 |
| SF x gender => BL | -1.81 | 0.000 |
| SF x gender => PQ | -1.10 | 0.000 |

| SF x gender => BI | -0.28 | 0.296 |
|-------------------------------|-------|-------|
| GF x gender => BAw | -0.54 | 0.010 |
| $GF x gender \Rightarrow BAs$ | -0.36 | 0.160 |
| GF x gender => BL | -0.71 | 0.012 |
| GF x gender => PQ | -0.81 | 0.000 |
| GF x gender => BI | -1.22 | 0.000 |
| ESG x gender => Brand Equity | 10.26 | 0.000 |

Moderating Factor of Age

To test whether age moderates the impact of ESG performance on brand equity of local fast-food chains, moderated regression analysis was adopted. Results were shown in Table 45. While six *p*-values were below the significance level of 0.05, the *p*-value associated with the interaction term "ESG Performance (EF*SF*GF) x age => Brand Equity (BAw*BAs*BL*PQ*BI)" is above the threshold of 0.05. Therefore, the null hypothesis H15₀ cannot be rejected, and the alternative hypothesis H15_a cannot be supported. It can be concluded that age does not moderate the impact of ESG performance on brand equity of local fast-food chains in Hong Kong.

Table 45: Results of Moderated Regression Analysis on Age as Moderating Factor (Source: Author)

| | Unstandardized Coefficient | <i>p</i> -value |
|---------------------------------|----------------------------|-----------------|
| $EF \times age \Rightarrow BAw$ | 1.11 | 0.013 |
| $EF \times age \Rightarrow BAs$ | -0.04 | 0.512 |
| $EF \times age \Rightarrow BL$ | 0.19 | 0.002 |
| $EF \times age \Rightarrow PQ$ | 0.14 | 0.002 |
| EF x age => BI | 0.02 | 0.667 |
| $SF \times age \Rightarrow BAw$ | -1.12 | 0.023 |
| $SF x age \Rightarrow BAs$ | 0.08 | 0.204 |
| $SF \times age \Rightarrow BL$ | -0.09 | 0.203 |
| $SF \times age => PQ$ | 0.00 | 0.957 |
| $SF \times age \Rightarrow BI$ | 0.04 | 0.449 |
| $GF \times age \Rightarrow BAw$ | 0.06 | 0.033 |
| $GF \times age => BAs$ | 0.01 | 0.738 |
| $GF \times age \Rightarrow BL$ | -0.02 | 0.637 |
| $GF \times age \Rightarrow PQ$ | -0.08 | 0.009 |
| GF x age => BI | -0.02 | 0.575 |
| ESG x age => Brand Equity | 12.38 | 0.374 |

Summary of Research Findings

The findings regarding the testing of the 17 sets of hypotheses are summarized in Table 46.

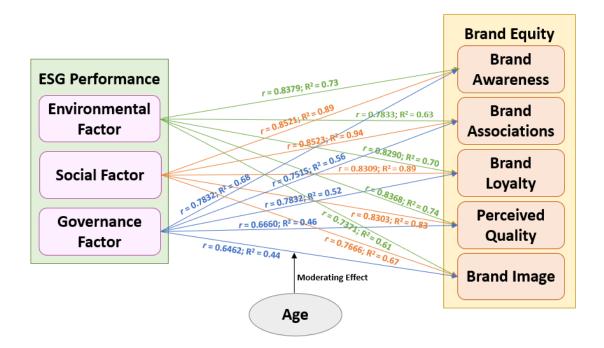
Table 46: Summary of Research Findings (Source: Author)

| Hypothesis | Result |
|---|-----------|
| H1 ₀ : Environmental factor has no significant impact on brand awareness. | Rejected |
| H1 _a : Environmental factor has significant impact on brand awareness. | Supported |
| H2 ₀ : Environmental factor has no significant impact on brand associations. | Rejected |
| H2 _a : Environmental factor has significant impact on brand associations. | Supported |
| H ₃₀ : Environmental factor has no significant impact on brand loyalty. | Rejected |
| H3 _a : Environmental factor has significant impact on brand loyalty. | Supported |
| H4 ₀ : Environmental factor has no significant impact on perceived quality. | Rejected |
| H4 _a : Environmental factor has significant impact on perceived quality. | Supported |
| H5 ₀ : Environmental factor has no significant impact on brand image. | Rejected |
| H5 _a : Environmental factor has significant impact on brand image. | Supported |
| H6 ₀ : Social factor has no significant impact on brand awareness. | Rejected |
| H6 _a : Social factor has significant impact on brand awareness. | Supported |
| H7 ₀ : Social factor has no significant impact on brand associations. | Rejected |
| H7 _a : Social factor has significant impact on brand associations. | Supported |
| H8 ₀ : Social factor has no significant impact on brand loyalty. | Rejected |
| H8 _a : Social factor has significant impact on brand loyalty. | Supported |
| H9 ₀ : Social factor has no significant impact on perceived quality. | Rejected |
| H9 _a : Social factor has significant impact on perceived quality. | Supported |
| H10 ₀ : Social factor has no significant impact on brand image. | Rejected |
| H10 _a : Social factor has significant impact on brand image. | Supported |
| H11 ₀ : Governance factor has no significant impact on brand awareness. | Rejected |
| H11 _a : Governance factor has significant impact on brand awareness. | Supported |
| H12 ₀ : Governance factor has no significant impact on brand associations. | Rejected |
| H12 _a : Governance factor has significant impact on brand associations. | Supported |
| H13 ₀ : Governance factor has no significant impact on brand loyalty. | Rejected |
| H13 _a : Environmental factor has significant impact on brand loyalty. | Supported |
| H14 ₀ : Governance factor has no significant impact on perceived quality. | Rejected |
| H14 _a : Governance factor has significant impact on perceived quality. | Supported |
| H15 ₀ : Governance factor has no significant impact on brand image. | Rejected |
| H15 _a : Governance factor has significant impact on brand image. | Supported |

| H16 ₀ : Gender does not moderate the impact of ESG performance on brand equity. | Rejected |
|--|-----------|
| H16a: Gender moderates the impact of ESG performance on brand equity. | Supported |
| H17 ₀ : Age does not moderate the impact of ESG performance on brand equity. | Supported |
| H17 _a : Age moderates the impact of ESG performance on brand equity. | Rejected |

In summary, the quantitative findings suggested that ESG performance, particularly environmental and social factors, plays a significant role in shaping brand equity in the local fast-food industry in Hong Kong; and gender moderates the impact of ESG performance on brand equity, while age does not. Figure 11 shows the conceptual model that illustrates how the ESG factors influence the brand awareness, brand associations, brand loyalty, perceived quality, and brand image dimensions of brand equity based on the findings.

Figure 11: Conceptual Model with Quantitative Findings (Source: Author)



4.5 Qualitative Study of Focus Groups

Eight focus groups were conducted on 27 April, 28 April, 1 May, and 4 May 2024. The first two groups consisted of male and female participants respectively. The other six were categorized based on age groups: below 20, 21-30, 31-40, 41-50, 51-60, and above 60. Each

group comprised six participants, resulting in 48 participants. Participants were asked a predetermined set of core questions about their perceptions toward the selected fast-food chain Tai Hing. Table 47 summarized the focus group details and the participant profile.

Table 47: Summary of Focus Group Details and Participant Profile (Source: Author)

Focus Group 1

Date: 27 April 2024 (Saturday)

Time: 11:00am - 12:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 93 minutes

| Participant Code | Gender | Age Range | Frequency of Visit |
|------------------|--------|-----------|--------------------|
| P1 | Male | Below 20 | 1-2 days per week |
| P2 | Male | 21-30 | 3-4 days per week |
| Р3 | Male | 31-40 | 5-6 days per week |
| P4 | Male | 41-50 | 3-4 days per week |
| P5 | Male | 51-60 | 5-6 days per week |
| P6 | Male | Above 60 | Every day |

Focus Group 2

Date: 27 April 2024 (Saturday)

Time: 2:00pm - 3:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 102 minutes

| Participant Code | Gender | Age Range | Frequency of Visit |
|------------------|--------|-----------|--------------------|
| P7 | Female | Below 20 | 3-4 days per week |
| P8 | Female | 21-30 | 1-2 days per week |
| P9 | Female | 31-40 | 5-6 days per week |
| P10 | Female | 41-50 | Every day |
| P11 | Female | 51-60 | 5-6 days per week |
| P12 | Female | Above 60 | 1-2 days per week |

Focus Group 3

Date: 28 April 2024 (Sunday)

Time: 11:00am - 12:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 101 minutes

| Participant Code | Gender | Age Range | Frequency of Visit |
|------------------|--------|-----------|--------------------|
| P13 | Male | Below 20 | 1-2 days per week |
| P14 | Male | Below 20 | 5-6 days per week |
| P15 | Male | Below 20 | 1-2 days per week |
| P16 | Female | Below 20 | Every day |
| P17 | Female | Below 20 | 5-6 days per week |
| P18 | Female | Below 20 | 3-4 days per week |

Focus Group 4

Date: 28 April 2024 (Sunday)

Time: 2:00pm - 3:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 90 minutes

| Participant Code | Gender | Age Range | Frequency of Visit |
|------------------|--------|-----------|--------------------|
| P19 | Male | 21-30 | 1-2 days per week |
| P20 | Male | 21-30 | Every day |
| P21 | Male | 21-30 | 5-6 days per week |
| P22 | Female | 21-30 | 3-4 days per week |
| P23 | Female | 21-30 | 5-6 days per week |
| P24 | Female | 21-30 | 1-2 days per week |

Focus Group 5

Date: 1 May 2024 (Wednesday)

Time: 11:00am - 12:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 98 minutes

| Participant Code | Gender | Age Range | Frequency of Visit |
|------------------|--------|-----------|--------------------|
| P25 | Male | 31-40 | 3-4 days per week |
| P26 | Male | 31-40 | Every day |
| P27 | Male | 31-40 | 1-2 days per week |
| P28 | Female | 31-40 | 5-6 days per week |
| P29 | Female | 31-40 | 5-6 days per week |
| P30 | Female | 31-40 | 1-2 days per week |

Focus Group 6

Date: 1 May 2024 (Wednesday)

Time: 2:00pm - 3:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 100 minutes

| P36 | Female | 41-50 | 5-6 days per week |
|-----|--------|-------|-------------------|
| P35 | Female | 41-50 | 3-4 days per week |
| P34 | Female | 41-50 | 1-2 days per week |
| P33 | Male | 41-50 | 5-6 days per week |
| P32 | Male | 41-50 | Every day |
| P31 | Male | 41-50 | 1-2 days per week |

Focus Group 7

Date: 4 May 2024 (Saturday)

Time: 11:00am - 12:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 102 minutes

| P37 | Male | 51-60 | 1-2 days per week |
|-----|--------|-------|-------------------|
| P38 | Male | 51-60 | 5-6 days per week |
| P39 | Male | 51-60 | Every day |
| P40 | Female | 51-60 | 3-4 days per week |
| P41 | Female | 51-60 | 1-2 days per week |
| P42 | Female | 51-60 | 5-6 days per week |

Focus Group 8

Date: 4 May 2024 (Saturday)

Time: 2:00pm - 3:30pm

Venue: The Chinese University of Hong Kong campus, Hong Kong.

Duration: 92 minutes

| P43 | Male | Above 60 | 3-4 days per week |
|-----|--------|----------|-------------------|
| P44 | Male | Above 60 | 5-6 days per week |
| P45 | Male | Above 60 | 1-2 days per week |
| P46 | Female | Above 60 | 5-6 days per week |
| P47 | Female | Above 60 | 5-6 days per week |
| P48 | Female | Above 60 | Every day |

Key Findings of Qualitative Study

After data collection through focus groups, a systematic coding process was employed to categorize the data into meaningful themes. The coding process involved breaking down the data into smaller units, such as phrases, sentences, or paragraphs, and assigning descriptive labels or codes to them (Saldaña, 2016). A total of 11 themes were identified for analysis.

Theme 1: Environmental Factor

While Tai Hing has implemented several environmental initiatives, most participants focused on its Zero2 eco-APP, a mobile application aiming to establish a green ecosystem among its employees, and its recent campaign in which 35,000 cups of "zero-carbon milk tea" were given away to promote a low-carbon lifestyle. When asked to rate the environmental performance of Tai Hing based on a scale from 1 to 7, in which "1" is the lowest and "7" is the highest, the mean score was 4.875. The findings reflected that the ESG performance of Tai Hing in the environmental aspect is considered above average by the participants.

Theme 2: Social Factor

All the focus group participants were able to name and describe one or more social initiatives organized by Tai Hing, the most popular initiative being "Tai Hing Care" Volunteer Team. Other social initiatives such as food donation and charity walk were also raised by different participants. When asked to rate the social performance of Tai Hing based on a scale from 1 to 7, the mean score was 5.60. The findings indicated that the ESG performance of Tai Hing in the social aspect is considered good by the participants.

Theme 3: Governance Factor

A total of 18 participants expressed that the company has good governance with a capable leadership team and that the performances of the three board committees are satisfactory or above satisfactory. When asked to rate the governance performance of Tai Hing based on a scale from 1 to 7, the mean score was 4.33. The findings showed that the ESG performance of Tai Hing in the governance aspect is considered slightly above average by the participants.

Theme 4: Brand Awareness

All the participants were familiar with the brand elements of Tai Hing including its logo and brand color. A high proportion were able to name the spokesperson and describe the past advertisements of Tai Hing. When asked to rate the brand awareness of Tai Hing based on a scale from 1 to 7, 29 participants rated "7", the mean score was 6.54. The findings demonstrated a very high level of brand awareness of Tai Hing among the participants.

Theme 5: Brand Associations

When asked whether they would associate themselves with Tai Hing, 45 participants showed indifferent responses; whereas three participants believed the image of Tai Hing was "consistent with" and "similar to" their own image. When asked to rate the brand associations of Tai Hing based on a scale from 1 to 7, the mean score was 4.13. The findings indicated a slightly strong level of brand associations among the participants.

Theme 6: Brand Loyalty

More than two-thirds of the focus group participants considered themselves loyal customers of Tai Hing, while the remaining did not. When asked to rate the brand loyalty of Tai Hing based on a scale from 1 to 7, the mean score was 5.13. The findings demonstrated a high level of brand loyalty towards Tai Hing among the participants.

Theme 7: Perceived Quality

During the discussion, "the food of Tai Hing is of high quality" was repeated by a number of participants. Some commented that the customer service of Tai Hing is of high quality. A few participants perceived that the food and service quality is fair. When asked to rate the

perceived quality of Tai Hing based on a scale from 1 to 7, the mean score was 5.52. The findings demonstrated the perceived quality of Tai Hing was high among the participants.

Theme 8: Brand Image

The words that focus group participants used to describe the brand image of Tai Hing included "positive", "energetic", "cool", "innovative", "friendly", "approachable", "popular", and "down to earth". These adjectives implied a positive impression and brand image of Tai Hing among the participants. When asked to rate the brand image of Tai Hing based on a scale from 1 to 7, the mean score was 4.90. The findings demonstrated the brand image of Tai Hing was considered slightly positive by the participants.

Theme 9: Causal Relationship between ESG Performance and Brand Equity

For environmental factor, most participants expressed that environmental concerns are not their top-of-mind criteria for selecting fast-food chains; however, 38 out of 48 participants (79.17%) mentioned that they regarded the brand value of a fast-food chain higher if it was more environmental-friendly.

For social factor, most participants expressed that they preferred fast-food chains that launched social initiatives more than those that did not. Some said that they regarded the brand value higher if a fast-food chain launched more initiatives benefiting those in need.

For governance factor, all participants were less active during the discussion. Nevertheless, some expressed that the governance factor should not be neglected and commented that they would rate a brand higher if it has good governance practices.

Overall, the causal relationships between environmental factor and brand equity, between social factor and brand equity, between governance factor and brand equity, and between overall ESG performance and brand equity were evident based on the focus group findings.

Theme 10: Moderating Factor of Gender

The responses of the focus groups indicated that male participants tended to prioritize the economic and financial aspects of ESG performance when evaluating the brand equity of fast-food chains. They also emphasized the importance of convenience and speed of service. In contrast, female participants placed greater emphasis on the social and environmental aspects. They also valued food quality and overall dining experience. The analysis revealed that gender acted as a moderating variable in the relationship between ESG performance and brand equity, which aligns with the results from the quantitative data analysis.

Theme 11: Moderating Factor of Age

Participants across different age groups shared similar views and opinions on the importance of ESG performance in evaluating the brand equity of local fast-food chains in Hong Kong.

The analysis revealed that the factor of age did not emerge as a significant moderating variable in the relationship between ESG performance and brand equity, which aligns with the results from the quantitative data analysis.

4.6 Discussion of the Findings

The analysis of both quantitative and qualitative data revealed that each of the ESG factors – environmental, social, and governance – exerts a statistically significant impact on the five key attributes of brand equity – brand awareness, brand associations, brand loyalty, perceived quality, and brand image, leading to the overall conclusion that ESG performance has a significant impact on brand equity of local fast-food chains in Hong Kong. Notably, the social factor has demonstrated the strongest influence, followed by the environmental factor, while the governance factor exhibits a comparatively weaker impact.

The substantial influence of the environmental factor on brand equity underscores the growing emphasis on sustainability among consumers. Studies by Berens et al. (2005) and Du et al. (2010) highlighted how environmental stewardship can enhance brand reputation and differentiation in competitive markets.

The robust impact of the social factor on brand equity dimensions can be attributed to the increasing consumer demand for socially responsible business practices. Research by Sen and Bhattacharya (2001) emphasizes the pivotal role of social responsibility in enhancing brand value and customer loyalty. Companies that actively engage in social initiatives tend to resonate more with conscious consumers, thereby fostering stronger brand connections. Although the governance factor exhibits a weaker impact on brand equity, its contribution should not be understated. Research by Aguilera et al. (2007) emphasizes the role of governance in shaping corporate reputation. Companies with robust governance frameworks are better positioned to weather crises and uphold their brand integrity.

The findings align with prior research emphasizing the significance of ESG performance in enhancing brand equity. In addition to the literature mentioned (Aguilera et al., 2007; Berens et al., 2005; Du et al., 2010; Sen & Bhattacharya, 2001), the study by Margolis and Walsh (2003) underscored how CSR initiatives positively impact brand reputation and customer loyalty; and the research by Luo and Bhattacharya (2006) highlighted the importance of environmental and social factors in driving brand differentiation and market positioning. However, while some previous research prioritizes governance as a critical driver of brand value (Hillman & Keim, 2001), this research indicates a slightly weaker impact compared to social and environmental factors. As the research by Hillman and Keim (2001) was conducted in 2001, it is essential to consider how changes in regulations and corporate governance standards since then may have influenced the observed impact on brand equity.

In conclusion, the relationships between ESG performance and brand equity are multifaceted, influenced by consumer perceptions, market dynamics, and corporate practices. The dominance of the social factor, coupled with the significance of environmental initiatives and governance frameworks, underscores the holistic approach required for building and maintaining strong brand equity. By aligning with social values, demonstrating environmental stewardship, and fostering transparent governance practices, companies can enhance their brand equity and drive sustainable business growth.

5. CONCLUSION

With a rise in the popularity of ESG considerations in the global business landscape, the fastfood industry is increasingly recognizing the importance of ESG performance. Fast-food companies are adopting sustainable practices to reduce environmental impact, enhance social responsibility, and improve governance standards. Concurrently, brand equity has become a vital component for fast-food chains, allowing them to stand out in a competitive market. However, research on the dynamics between ESG performance and brand equity in the fastfood industry is minimal. To fill the research gap, this research aimed at studying the impact of ESG performance on brand equity of local fast-food chains in Hong Kong. The fast-food industry in Hong Kong is characterized by intense competition with a diverse consumer base. Prominent local chains like Café de Coral, Fairwood, Maxim's MX, and Tai Hing have integrated ESG considerations into their operations to meet consumer expectations. This research examined how ESG performance influences brand equity within this unique business environment. The findings underscored the significant impact of environmental, social, and governance factors on the brand equity dimensions of brand awareness, brand associations, brand loyalty, perceived quality, and brand image. The research adopted a mixed-methods approach, integrating both quantitative and qualitative data. The quantitative component involved distributing structured questionnaires to 388 customers, while the qualitative component included focus group discussions with 48 participants.

The study revealed that environmental initiatives positively influence brand equity.

Consumers are increasingly valuing brands that demonstrate a commitment to sustainability.

Social initiatives were found to have the strongest impact on brand equity. These efforts

resonate deeply with consumers, fostering brand loyalty and positive associations. Although the governance factor showed a weaker impact, it remains crucial for establishing credibility. The study also identified gender as a moderating factor, influencing how ESG performance impacts brand equity. Female consumers tend to place greater importance on social and environmental aspects, while male consumers focus more on economic and financial considerations. Age, however, was not found to significantly moderate the relationship between ESG performance and brand equity.

Overall, the research highlighted the need for fast-food chains in Hong Kong to prioritize ESG performance as a strategic approach to enhance brand equity. By integrating sustainable practices, engaging in social initiatives, and maintaining robust governance frameworks, these businesses can strengthen their brand reputation and foster long-term customer loyalty. Future research should explore the longitudinal effects of ESG performance on brand equity, consider diverse contexts, and examine industry-specific variables, to further understand ESG dynamics and their implications for brand building in the fast-food sector.

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