

Logo Design Characteristics of the Top 50 Most Valuable ASEAN Brands: An Empirical Study of Pre- and Post-Coronavirus Impact

Abdul Rahman Zahari *
Universiti Tenaga Nasional
Email: Rahman@uniten.edu.my

Elinda Esa
Universiti Tenaga Nasional
Email: Elinda@uniten.edu.my

Noor Azlinna Azizan
Prince Sultan University
Email: nazizan@psu.edu.sa

** Corresponding Author*

Abstract

Purpose: This paper aims to provide data and insights about the logo design characteristics of the top 50 most valuable ASEAN countries brands and offer valuable benchmark data useful to business organisations during pre and post Coronavirus impact.

Design/methodology/approach: This study applied a secondary data procedure (content analysis) in assessing the logos of the Top 50 most valuable brands in ASEAN countries displayed in the annual reports by Brand Finance from 2019 to 2020. The data were analysed using IBM Statistical Package for Social Science (SPSS) Statistics for Windows, Version 24.0. Moreover, this study run frequency analyses and the hypotheses were tested using chi-square for goodness of fit.

Findings: The findings show that more descriptive and asymmetric logos are linked to the Top 50 most valuable brands in ASEAN countries. Additionally, there is a significant difference between more descriptive and less descriptive logos and symmetric and asymmetric logos.

Research limitations/implications: Future studies must collect longitudinal data (more than two years) and incorporate consumers' perceptions to analyse the logo characteristics. Additionally, future research should check the other logo characteristics and expand the logo analysis to other countries.

Practical implications: The brand managers of the top brands need to assess their firm's or brands' logo to obtain more benefits from good logo design characteristics.

Originality/value: This paper offers more descriptive vs. less descriptive and symmetric vs. asymmetric logo data analysis of the Top 50 ASEAN countries brand that practitioners can use as a benchmark of logo audit.

Paper type: Research paper

Keywords: ASEAN countries, Descriptive logo, Logo, Most valuable brands, Symmetric logo

Introduction

Logos have long been the most publicly recognisable branding of a firm or a specific brand because a logo is a component of a brand (Keller, 2008). A logo is a graphic design that a

company uses, with or without the brand name, to identify itself or its products that can provide differentiation and influence consumer behaviors or choice (Henderson & Cote, 1998). Schechter (1993) has defined a logo as the official visual representation of a corporate or brand name and the essential component of all corporate and brand identity programs. Park et al. (2013) and Keller (2013) have mentioned that logos are made up of two essential elements such as the brand name (Proton, Malaysia Airlines, etc.) and isotype or often known as a symbol (e.g., yellow tiger head of Proton, the kite of Malaysian Airlines, etc.). These two elements are critical and able to facilitate a firm or brand in several ways, such as to speed recognition of a brand (Keller, 2013; Maria et al., 2015), transmit information (De Marchis et al., 2018), perceived benefits (Park et al., 2013; Songa et al., 2019), satisfaction, trust, and commitment (Japutra et al., 2015), and creating brand loyalty and brand values (Walker, 2017). Nowadays, consumers are bombarded with plenty of choices, and they have been communicated through logos which can be seen on labels, promotion materials, trade dress and employee uniforms, distribution trucks, and business cards by the manufacturers or service owners trying to sell their products through online and offline. These external branding strategies and tactics help firms build brand awareness, corporate identity, and brand persona to differentiate themselves from the competition and brand value (Alnsour & Subbah, 2018; Girard, 2013; Luffarelli et al., 2019a; Park et al., 2014). Due to this, most companies are carefully designing their logo so that the consumer could easily recall their brand and cutting through the advertising clutter to gain consumers' attention, leading to a higher brand value (Luffarelli et al., 2019a). A few authors had mentioned that the design of the logos must be in the form of a more descriptive and symmetric shape to gain greater awareness among the consumers (Luffarelli et al., 2019a; Stamatogiannakis et al., 2020; Torres et al., 2019). Their studies on the international and global brands/logos proved that descriptive and symmetric logos increase brand equity.

During the Coronavirus, most companies aggressively promote their brands or logos through a digital platform to ensure the visibility of the logos or brands to end-users. This new norm has become fundamental during the global health crisis, and companies who succeeded in engaging in digital marketing have a competitive edge in the form of brand awareness, brand loyalty, and brand equity (Dumouchel et al., 2020; Huang et al., 2021). Additionally, the companies can also maintain their spot in the Top 50 or Top 100 most valuable brands in their own country, international or global rankings.

In Malaysia, companies like Petronas, Maybank, Genting, Sime Darby, and Tenaga Nasional Berhad were considered strong brands, and the combined values of these brands in 2019 are USD\$ 25.9 billion (Brand Finance Malaysia 100, 2020). These companies have a harmonious and natural design which are more easily recognised. Importantly, they use the same logo throughout their marketing efforts to communicate one consistent brand image. In ASEAN countries like Malaysia, Singapore, Indonesia, and Vietnam, research on the characteristics of logo and brand equity is at the initial stage (Japutra et al., 2015; Wan Ismail et al., 2016). As the brands become more similar and struggle to gain unique associations in the presence of strong competitors and deal with a global health crisis thus, investigating the relationship of logo and brand equity becomes critical. This is because each company or brand is trying to stand out from the rest (Alnsour & Subbah, 2018; Maria et al., 2015) and sustain the brand equity during turbulence time (Hoekstra & Leeftang, 2020; Meyer et al., 2021).

Due to this, the current study focuses on analysing the characteristics of the Top 50 most valuable ASEAN brands' logos from 2019-2020. Thus, the research question of the recent study is "what are the logo design characteristics of the Top 50 most valuable ASEAN brands during pre and post Coronavirus impact?". The two main characteristics of the logo, such as more descriptive vs. less descriptive logo and symmetric vs. asymmetric logo of the Top 50

most valuable ASEAN brands, were assessed. The logo audit is essential for companies because it could lead the firms to focus on brand building or redesign the logo that opens opportunities or benefits of higher brand recognition, effective commitment from consumers, and future higher brand value. Additionally, managers or owners of small and medium enterprises, start-ups, or future entrepreneurs, and logo developers have an opportunity to learn from logo designs of the Top 50 most valuable ASEAN brands.

Literature Review

Definition of Logo

According to Walsh et al. (2010), a logo can be defined as a graphic representation or image that triggers memory associations of the target brand. Most firms use the logo to transmit their unique identity and the ethos of the brand or company they represent because it is frequently seen by various stakeholders, especially consumers (Luffarelli et al., 2019b; Zu et al., 2017). Due to the many benefits of the logo, the research on logo design is essential because it will affect a company's marketing decisions or tactics (Airey, 2014). Thus, some scholars have focused their attention on studying the impact of logo design characteristics such as dynamism, incompleteness, asymmetry, and descriptive on consumer behavior (Cian et al., 2014; Hagtvedt, 2011, Luffarelli et al., 2019b; Stamatogiannakis et al., 2020). However, the study of logo design characteristics on brand equity is limited (Luffarelli et al., 2019a). The next subsections explain the two main elements of logo design characteristics, such as descriptive and asymmetric, which are the main focuses of the current study. These elements are used to assess the logos of the Top 50 most valuable brands in ASEAN countries.

Descriptive Logo

A descriptive logo can be defined as a logo that includes textual or visual design elements or a combination of the two that clearly communicate the type of product or service of a brand (Luffarelli et al., 2019a). Moreover, Luffarelli's work also proved the impact of a more descriptive logo on brand equity. Another study by Mahmood et al. (2019) demonstrates that more descriptive logos can attract equity crowdfunding. In their study, 2630 respondents have assessed 174 logos of actual ventures raising funds and the results proved that the respondents choose more descriptive than less descriptive logos. Below are examples of a more descriptive logo (Petronas and Air Asia) and a less descriptive logo (Proton and MB Bank).



Figure 1: More Descriptive vs. Less Descriptive Logo

Symmetric Logo

Due to intense rivalry in the marketplace and digital platform, each firm needs to carefully design logos with or without its name to identify itself or its products. Since then, past and recent studies have found various elements of logos such as simplicity, memorability, distinctiveness, versatility, complexity, used by many firms (Henderson & Cote, 1998; Kilic et al., 2011; Mahmood et al., 2019; Siyanbola, 2021). Nowadays, a few studies have been executed to investigate the role of symmetric logos on brand equity (Alnsour & Subbah, 2018; Bettels & Wiedmann, 2019; Stamatogiannakis et al., 2020). According to Wagemans (1997),

symmetry is the level of reflection of an image around its vertical axis. Figure 2 shows the example of the symmetric logo (KOSSAN) and asymmetric logo (MSC).

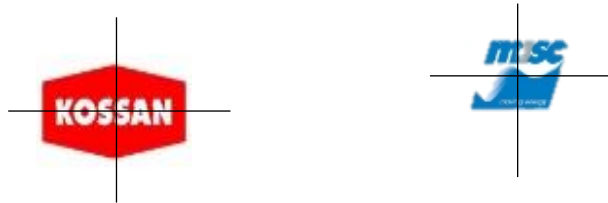


Figure 2: Symmetric and Asymmetric Logo

Brand Equity

Aaker (1991) and Keller (2003) have defined brand equity as the marketing effects or outcomes that accrue to a product's brand name compared with those that would accrue if the same product did not have the brand name. Brand equity can be measured by two approaches, either consumer-related or financially. In brief, customer-based brand equity can be analysed using constructs like brand awareness, brand loyalty, perceived quality, and brand associations (Aaker, 1996). In the context of financial-based brand equity, various studies from Ourusoff (1993), Simon and Sullivan (1993), and Belo et al. (2011) have developed a valuation model to estimate a firm's brand equity. However, past scholars like Choi et al. (2017) and Hendratama and Huang (2021) have suggested using Simon and Sullivan's approach because this approach is considered the most objective and superior method to measure financial-based brand equity. Revenue enhancing and cost-saving and the expected value of future returns are among the elements in Simon and Sullivan's financial-based brand equity model. In addition, Kamakura and Russell (1993) have included price as one of the financial-based brand equity metrics.

To conclude, there are many definitions and metrics used in financial-based brand equity. For this study, the Top 50 most valuable ASEAN brand values were referred to the Brand Finance Group, which is in line with a previous study by Deanna Wang (2010). Ourusoff (1993) has considered that the Brand Finance Group is the expert for the valuation of world brands.

Resource-Based View Theory

The relationship between logo and a firm's brand value performance can be associated with resource-based view theory (RBV). According to Hagtvedt (2011), a logo is a valuable company asset and is omnipresent in the marketplace. Past studies by Luffarelli et al. (2019a), Mahmood et al. (2019), and Bresciani and Del Ponte (2017) proved that the logo design characteristics improved firms' brand equity. According to Barney et al. (2011), RBV offers an important framework for a manager and a firm to describe and predict a firm's competitive advantage and performance. Even though RBV is frequently referred to in the strategic management field, Akio (2005) has mentioned that few researchers have focused attention on the role of marketing as the source of competitive advantage. Since RBV focuses on the firm's internal resources, the role of brand managers in managing the resources for competitive advantage is analysed. A firm's resources include all properties, capabilities, organisational practices, firm characteristics, information, knowledge, and other areas that are controlled and managed by a firm. These resources would help the firm to implement the right strategies that enable the firm to improve its efficiency and effectiveness (Barney, 1991). In addition, Grant (1991) defined resources as that which goes into the production process and includes capital equipment, employees' individual skills, copyrights, patents, brand names, and finance. Due to this, the logo design characteristics are critical to be assessed, particularly during the pre and

post Coronavirus impact. It will facilitate the firms to maintain or redesign their current logo elements.

Hypotheses Development

According to Luffarelli et al. (2019a) and Abbot (2019), most consumers favor more descriptive than a less descriptive logo. They added that more descriptive provides many benefits to companies, such as increasing the brand's authenticity, facilitating buying decisions, and boosting the brand's net sales. Moreover, other past works of Bresciani and Del Ponte (2017), Nishi et al. (2021), Siyanbola (2021), and Eskes (2021) also confirmed that more descriptive is one of the salient logo design characteristics. For instance, Nishi et al. (2021) have conducted a study on 122, 920 famous logos and found 70.0% of the logos are more descriptive. On another note, Mahmood et al. (2019) explained that descriptive logos created more crowdfunding opportunities. Similarly, Bresciani and Del Ponte (2017) tested 288 Switzerland start-up logos on 99 respondents and found that most respondents picked more descriptive than less descriptive logos.

However, not all descriptive logos bring positive impacts to the brands. For instance, descriptive logos of products or services related to sad or unpleasant things like palm oil, funeral homes, and bug repellents bring a negative association to consumers' minds like deforestation, death, and bug bites (Luffarelli et al., 2019b). Thus, the proposed hypothesis is:

H1: Proportion of more descriptive logos among the top 50 most valuable ASEAN countries brands are the same.

Henderson et al. (2004) have conducted a cross-sectional survey and found that western consumers prefer abstract and asymmetric logo designs. In contrast, eastern consumers prefer natural and harmonious logo designs with more rounded features. On another note, Bettels and Wiedmann (2019) have conducted research among students in a major German university and confirmed that most respondents have more awareness of symmetric than asymmetric logos. Additionally, a past study from Bajaj and Bond (2018) has demonstrated that symmetric logos can create arousal and excitement perceptions, which are very important in brand management. Kaur and Kaur (2019) have studied the impact of branded apparel logo design characteristics and found that 816 respondents in India choose to vote for symmetric logos. They also added that symmetric logos lead to brand image and loyalty.

Furthermore, Boosten (2020) has studied the famous international and global brands' logos and identified that 804 logos are symmetric and 832 logos are asymmetric. Similarly, Stamatogiannakis et al. (2015) found that 15000 United States of America consumers choose the asymmetric than symmetric logos. Their study involved 100 brands listed on the 2011 Interbrand ranking. Another survey from Luffarelli et al. (2019c) proved that most respondents (306) at Turkish universities indicate that logo asymmetry makes the brands appear less sincere, competent, and rugged. Thus, the proposed hypothesis is:

H2: Proportion of symmetric logos among the top 50 most valuable ASEAN countries brands are the same.

Methods

This study has conducted brand logo image analysis on the Top 50 most valuable ASEAN countries brands in 2019 and 2020. The idea of choosing these two years is to analyse the brands' logos that are consistently in the ranking of the Top 50 most valuable brands in four ASEAN countries even though the world is facing global health issues (Coronavirus). Thus,

2019 represents the year without Coronavirus, and 2020 is affected by Coronavirus. The Top 50 most valuable brands in ASEAN countries from 2019 and 2020 were gathered from the Brand Finance reports. Analysing these two years (pre and post-Coronavirus) is critical because it will determine which brands (logos) are strong and able to retain their ranking in the Top 50 most valuable brands. Unfortunately, Brand Finance is not producing reports of all ASEAN countries, which justifies why this research only focuses on the four ASEAN countries. The countries are Malaysia, Singapore, Indonesia, and Vietnam. Thus, a total of 200 brand logos of the Top 50 most valuable brands from four ASEAN countries have been analysed.

For the first step, the researchers must identify that only brand logos that are consistently existed in the Top 50 most valuable brands in 2019 and 2020 are considered to be analysed. Due to this, the researchers have to identify the Top 50 most valuable brands in 2020 and make sure the same company or brand also existed in 2019 as the Top 50 most valuable brands. Next, each logo is classified as more descriptive or less descriptive. Thus, the researchers assign (1) for more descriptive logos and (2) for less descriptive logos. The second logo analysis is reflected in symmetry and asymmetry logo characteristics. The researchers give this type of logo characteristics (1) symmetry logos and (2) asymmetry logos. All measures are adopted from Luffarelli et al. (2019c). Data were analysed using frequency tests and chi-square for goodness of fit tests using IBM Statistical Package for Social Science (SPSS) Statistics for Windows, Version 24.0.

Findings

Figure 3 depicts the number of more descriptive and less descriptive logos for ASEAN countries like Malaysia, Singapore, Indonesia, and Vietnam. The results show that all countries have above 40 more descriptive logos. For instance, 48 out of the Top 50 most valuable Malaysia brands logos are more descriptive. Additionally, Singapore's Top 50 most valuable brands have a greater number of less descriptive logos. The 200 most valuable brands from the four ASEAN countries are from various sectors such as banks, telecoms, insurance, logistics, retails, real estate, foods, oil and gas, beers, airlines, automobiles, and tobacco.

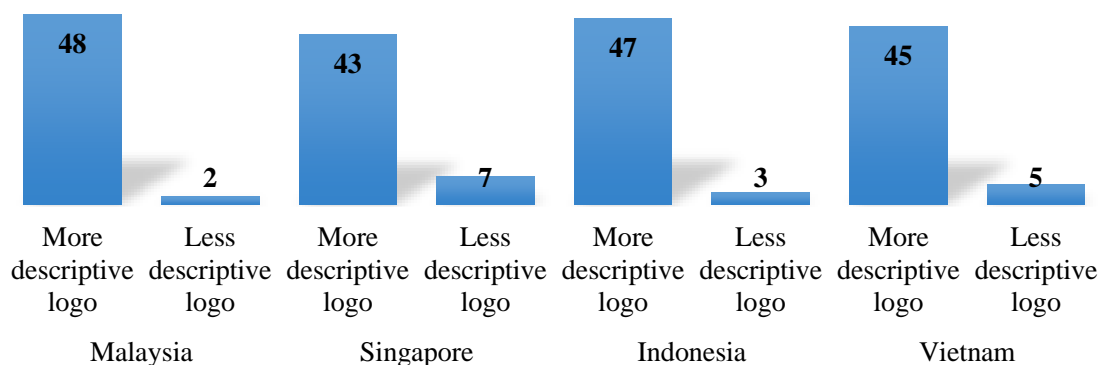


Figure 3: Top 50 Most Valuable Malaysia, Singapore, Indonesia, and Vietnam Brands 2019-2020 (More Descriptive vs. Less Descriptive Logo)

On top of that, Figure 4 displays the number of symmetric and asymmetric logos among the four ASEAN countries. It indicates that the Top 50 most valuable brands for each ASEAN country are most likely categorise as asymmetric logos. For example, only 21 of Singapore's Top 50 most valuable brands logos are symmetric. Similar results can also be found in Indonesia and Vietnam. Malaysia's top 50 most valuable brands have the least number of symmetric logos.

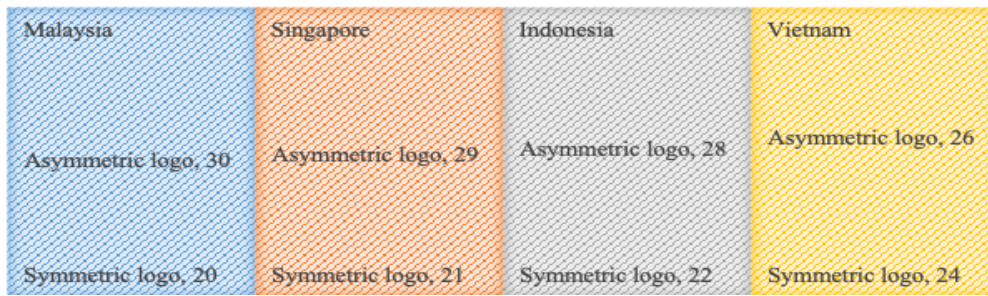


Figure 4: Top 50 Most Valuable Malaysia, Singapore, Indonesia, and Vietnam Brands 2019-2020 (Symmetric vs. Asymmetric Logo)

Figure 5 shows that most of the Top 50 most valuable brands logos in the ASEAN countries are more descriptive than less descriptive logos. In detail, 91% or 183 logos are more descriptive compare to only 17 less descriptive logos.

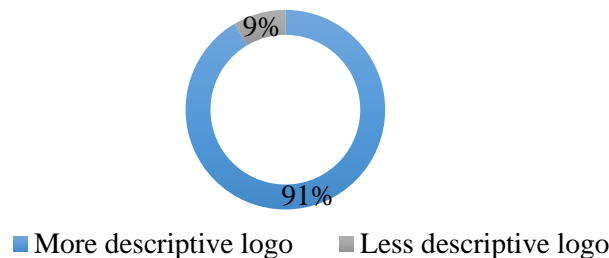


Figure 5: Top 50 Most Valuable ASEAN Countries Brands Logo 2019-2020 (More Descriptive vs. Less Descriptive Logo)

Figure 6 displays the logo characteristic (symmetry and asymmetry) of the 200 brands in the four ASEAN countries. It indicates that most of the logos are asymmetric with 113 or 56.5%, while 87 logos are classified as symmetric. The findings are much related to the past study of Stamatogiannakis et al. (2015). They found that the United States of America consumers are more aware of asymmetric logos, leading to brand loyalty and enhanced firm's brand equity.

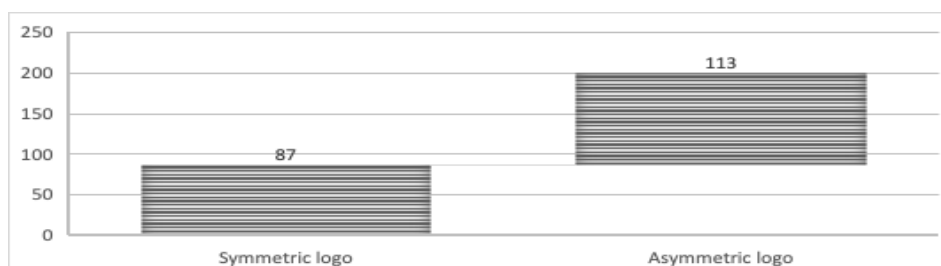


Figure 6: Top 50 Most Valuable ASEAN Countries Brands Logo 2019-2020 (Symmetric vs. Asymmetric Logo)

In addition, Table 1 posits the results of Hypothesis 2 testing. Table 1 shows that 87 out of 200 (43.5%) were symmetric logos, and 113 logos (56.5%) were categorised as asymmetric logos. Results from chi-square for goodness of fit indicate that there was a significant difference in the proportion of symmetric logos, $\chi^2(1, n = 200) = 9.303, p < .05$. Thus, Hypothesis 2 is supported.

Table 1: Symmetric vs. Asymmetric Logos

Logo characteristic	Observed N	Expected N	Chi- Square	degrees of freedom	Asymp. Sig.
Symmetric logo	87	66.7	9.303	1	.002
Asymmetric logo	113	133.3			

Discussion and Conclusion

This study examines the logos design characteristics among the top 50 most valuable ASEAN countries brands in 2019 and 2020. Two logo characteristics, descriptive and symmetric, were analysed to the top 50 most valuable Malaysia, Singapore, Indonesia, and Vietnam brands. These two characteristics have proved to contribute to the firm's brand equity (Bettels & Wiedmann, 2019; Luffarelli et al., 2019b; Mahmood et al., 2019; Stamatogiannakis et al., 2020). The findings show that most of the Top 50 most valuable ASEAN countries brands logos are more descriptive and asymmetric. The results are in line with past works of Nishi et al. (2021), Mahmood et al. (2019), Kaur and Kaur (2019), and Bajaj and Bond (2018).

On another note, the findings proved that the Top 50 most valuable ASEAN have more descriptive than less descriptive logos and show a significant difference. The results of Hypothesis 1 are consistent with the past studies by Luffarelli et al. (2019a) and Siyanbola (2021). Past studies have revealed that most descriptive logos give more benefits such as satisfaction, trust, and authenticity, facilitating buying decisions, and increasing the brand's net sales (Eskes, 2021; Japutra et al., 2015; Luffarelli et al., 2019a; Park et al., 2013). Moreover, Hypothesis 2 of this study is also supported even though the number of companies using symmetric logos is quite low than asymmetric logos. The findings align with past studies of Boosten (2020) and Stamatogiannakis et al. (2015). These works reported that most of the top brands' logos design characteristics are asymmetry. Thus, this study can conclude that asymmetric logo design characteristics can contribute to brand equity together, particularly in the context of the Top 50 most valuable ASEAN countries brands.

Theoretical Implications

This research adds to the growing knowledge on the topic of brand management regarding brand logo characteristics. The current research offers three key main contributions. First, the researchers expand Luffarelli et al.'s (2019a) study that brand logo characteristics (descriptive and symmetry) lead to brand equity in pre and post-Coronavirus impact. The findings show that the logo characteristics can sustain the firms or brands in the Brand Finance most valuable brand ranking, particularly in ASEAN countries. This indicates that the RBV theory is well supported. Thus, the brand managers must take advantage of these logo designs or redesign their firm's logo based on the findings from this study.

Second, this study can confirm and extend past findings by demonstrating the positive role of more descriptive logos on brand equity, especially in the context of the Top 50 most valuable brands in the four ASEAN countries. This is because most consumers are more aware and associate with more descriptive logos, which contributes to purchase decisions, leads to satisfaction and brand loyalty and increases the firm's brand equity (Bresciani & Del Ponte, 2017). Third, the findings of this study display that the majority of the brand logos of the Top 50 most valuable ASEAN countries brands are asymmetric. The results contrast with a past study by Henderson et al. (2004) recorded that Eastern consumers are much associated with logos' circle/round shape. The current results are much related to Western consumers which they perceived asymmetric logos have more benefits.

Practical Implications

This study confirms the importance of a thorough understanding of logo design elements as a tool to increase awareness and preferred brand associations, leading to buying association and brand loyalty among consumers. Importantly, it also helps sustain or increase brand equity in a normal economic situation and during trying times like global health crisis (Coronavirus). Thus, the brand managers of the top brands need to analyse their firm's or brands' logo to ensure more benefits from having good logo design characteristics. Also, owners of start-ups, small and medium enterprises, future entrepreneurs, and logo developers should notice that descriptive and symmetry logo design characteristics are essential.

Limitations and Suggestions for Future Research

The present study highlights an advance in understanding the relationships between brand logo characteristics (descriptive and symmetry) and brand equity among the Top 50 most valuable ASEAN countries brands from 2019 and 2020. However, it is not without its limitations. Even though the data are cross-sectional data analysis, it is important to collect longitudinal data to review the pre and post-Coronavirus impact by reviewing more than two years of observation. In addition, this study applied logo analysis from Brand Finance (secondary data). Therefore, future research should be incorporated consumers' perceptions to analyse the logo design characteristics. Next, future research should check the other logo characteristics that bring benefits to brand equity. Finally, it would also be worthwhile to expand the logo analysis to other countries (e.g., Asian or Western top brand logos) because the current study only concentrates on ASEAN countries.

Acknowledgment

This research was supported by the Universiti Tenaga Nasional Bold Research Grant (BOLD 2021) of J510050002/2021021

References

- Aaker, D. (1991). *Managing brand equity*, The Free Press, New York.
- Aaker, D. (1996). *Building strong brands*, The Free Press, New York.
- Abbot, P. (2019). Logo designs - what's the big deal. *Logo design - what's the big deal?* DesignStreet. <https://www.designstreet.com.au/logo-designs/>
- Akio, T. (2005). The critical assessment of the resource-based view of strategic management: The source of heterogeneity of the firm. *Ritsumeikan International Affairs*, 3, 125-150.
- Airey, D. (2014). *Logo design love: A guide to creating iconic brand identities*. Berkeley, CA: New Riders.
- Alnsour, M.S., & Subbah, M.L. (2018). Impact of brand elements on brand equity: An applied study on Jordanian corporations. *African Journal of Marketing Management*, 10(3), 17-27. <https://doi.org/10.5897/AJMM2016.0493>
- Bajaj, A., & Bond, S. D. (2017). Beyond beauty: Design symmetry and brand personality. *Journal of Consumer Psychology*, 28(1), 77-98. <https://doi.org/10.1002/jcpy.1009>
- Barney, J., Ketchen, D., & Wright, M. (2011). The future of resource-based theory: Revitalisation or decline? *Journal of Management*, 37(5), 1299-1315. <https://doi.org/10.1177/0149206310391805>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Belo, F., Lin, X., & Vitorino, M.A. (2011). Brand capital, firm value and asset returns. Working paper. University of Minnesota, USA.

- Brand Finance Malaysia 100 (2020). The annual report on the most valuable Malaysian brands 2019. <https://brandfinance.com/knowledge-centre/reports/brand-finance-malaysia-100-2019/>.
- Bresciani, S., & Del Ponte, P. (2017). New brand logo design: Customers' preference for brand name and icon. *Journal of Brand Management*, 24(5), 375–390. <https://doi.org/10.1057/s41262-017-0046-4>
- Choi, S., Choi, K., Lee, S., & Lee, K. (2017). A financial approach-based measurement of brand equity in the restaurant industry, *Tourism Economics*, 23(7), 1515-1522. <https://doi.org/10.1177/1354816616688104>
- Cian, L., Aradhna K., & Ryan S. E. (2014). This logo moves me: Dynamic imagery from static images. *Journal of Marketing Research*, 51(2), 184-97. <https://doi.org/10.1509/jmr.13.0023>
- Deanna Wang, H-M. (2010). Corporate social performance and financial-based brand equity, *Journal of Product and Brand Management*, 19(5), 335-345.
- De Marchis, G. P., Reales-Avilés, J. M., & Rivero, M. del P. (2018). Comparative values of variables related to brand logos. *Measuring Business Excellence*, 22(1), 75-87. <https://doi.org/10.1108/mbe-12-2016-0062>
- Dumouchel, L., Kahn, Z., Burton, C., & Hupp, O. (2020). Brand growth in times of crisis: Revisiting brand-building during the COVID-19 pandemic IPSOS VIEWS. Retrieved March 28, 2021, from <https://www.ipsos.com/sites/default/files/ct/publication/documents/2020-04/ipsos-growing-brands-times-crisis.pdf>
- Eskes, M. (2021). A logo that speaks for itself: The interplay between logo designs and textual elements - Unpublished Student Theses. University of Twente *Utwente.nl*. <https://doi.org/http://purl.utwente.nl/essays/85505>
- Farhana, M. (2012). Brand elements lead to brand equity: Differentiate or die. *Information Management and Business Review*, 4(4), 223-233. <https://doi.org/10.22610/imbr.v4i4.983>
- Girard, T., Anitsal, I., & Anitsal, M.M. (2013). The role of logos in building brand awareness and performance: implications for entrepreneurs. *Entrepreneurial Executive*, 18, 7-16.
- Grant, R. M. (1991). The resource-based theory of competitive advantage: Implications for strategy formation. *California Management Review*, 33(3), 114-135. <https://doi.org/10.2307/41166664>
- Hagtvedt, H. (2011). The impact of incomplete typeface logos on perceptions of the firm. *Journal of Marketing*, 75(4), 86-93. <https://doi.org/10.1509/jmkg.75.4.86>
- Henderson, P. W., & Cote, J. A. (1998). Guidelines for selecting or modifying logos. *Journal of Marketing*, 62(2), 14-30. <https://doi.org/10.1177/002224299806200202>
- Henderson, P.W., J.L. Giese and J. A. Cote (2004). Impression management using typeface design. *Journal of Marketing*, 68(4), 60-72. <https://doi.org/10.1509/jmkg.68.4.60.42736>
- Hendratama, T.D., & Huang, Y.-C. (2021). Corporate social responsibility, firm value and life cycle: Evidence from Southeast Asian countries. *Journal of Applied Accounting Research*, 22(4), 577-597. <https://doi.org/10.1108/JAAR-09-2020-0194>
- Hoekstra, J. C., & Leeflang, P. S. H. (2020). Marketing in the era of COVID-19. *Italian Journal of Marketing*, 2020(4), 249-260. <https://doi.org/10.1007/s43039-020-00016-3>
- Huang, Y., Yang, S., & Zhu, Q. (2021). Brand equity and the Covid-19 stock market crash: Evidence from U.S. listed firms. *Finance Research Letters*, 101941. <https://doi.org/10.1016/j.frl.2021.101941>

- Japutra, A., Keni, K., & Nguyen, B. (2015). The impact of brand logo identification and brand logo benefit on Indonesian consumers' relationship quality. *Asia-Pacific Journal of Business Administration*, 7(3), 237-252. <https://doi.org/10.1108/APJBA-10-2014-0124>
- Kamakura, W.A., & Russell, G.J. (1993). Measuring brand value with scanner data. *International Journal of Research in Marketing*, 10(1), 9-2. [https://doi.org/10.1016/0167-8116\(93\)90030-3](https://doi.org/10.1016/0167-8116(93)90030-3)
- Kaur, H., & Kaur, K. (2019). Connecting the dots between brand logo and brand image. *Asia-Pacific Journal of Business Administration*, 11(1), 68-87. <https://doi.org/10.1108/APJBA-06-2018-0101>
- Keller, K. L. (2003). *Strategic brand management: Building, measuring, and managing brand equity* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Keller, K. L. (2008). *Strategic brand management: Building, measuring, and managing brand equity* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Keller, K.L., (2013). *Strategic brand management*, (4th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.
- Kilic, O., Miller, D. W., & Vollmers, S. M. (2011). A comparative study of American and Japanese company brand icons. *Journal of Brand Management*, 18(8), 583-596. <https://doi.org/10.1057/bm.2011.1>
- Luffarelli, J., Mukesh, M., & Mahmood, A. (2019a). Let the logo do the talking: The influence of logo descriptiveness on brand equity. *Journal of Marketing Research*, 56(5), 862-878. <https://doi.org/10.1177/0022243719845000>
- Luffarelli, J., Mukesh, M., & Mahmood, A. (2019b). *A study of 597 logos shows which kind is most effective*. Harvard Business Review. <https://hbr.org/2019/09/a-study-of-597-logos-shows-which-kind-is-most-effective>
- Luffarelli, J., Stamatogiannakis, A., & Yang, H. (2019c). The visual asymmetry effect: An interplay of logo design and brand personality on brand equity. *Journal of Marketing Research*, 56(1), 89-103. <https://doi.org/10.1177/0022243718820548>
- Mahajan, N. (2014). An exploration of impact of logo redesign on brand image. *Global Journal of Finance and Management*, 6(3), 209-216.
- Maria, S., Elis, V.D.H., Ruth, M., & Nicolien, V.R. (2015). How exposure to logos and logo varieties fosters brand prominence and freshness. *Journal of Product & Brand Management*, 24(7), 736-744. <https://doi.org/10.1108/JPBM-06-2014-0648>
- Meyer, B. H., Prescott, B., & Sheng, X. S. (2021). The impact of the COVID-19 pandemic on business expectations. *International Journal of Forecasting*. <https://doi.org/10.1016/j.ijforecast.2021.02.009>
- Muller, B., Kocher, B., & Crettaz, A. (2013). The effects of visual rejuvenation through brand logos. *Journal of Business Research*, 66, 82-88. <https://doi.org/10.1016/j.jbusres.2011.07.026>
- Nishi, S., Kadota, T., & Uchida, S. (2021). Famous companies use more letters in logo: A large-scale analysis of text area in logo. ArXiv.org. Retrieved August 25, 2021, from <https://arxiv.org/abs/2104.00327>
- Ourusoff, A. (1993). Who said brands are dead??. *Brand Week*, 34(32), 20-33.
- Park, C. W., Eisingerich, A., Pol, G., & Park, J. W. (2014). The power of a good logo. *MIT Sloan Management Review*, 55(2), 10-12.
- Park, C.W., Eisingerich, A.B., Pol, G., & Park, J.W. (2013). The role of brand logos in firm Performance. *Journal of Business Research*, 66(2), 180-187. <https://doi.org/10.1016/j.jbusres.2012.07.011>
- Schechter, A. H. (1993). Measuring the value of corporate and brand logos. *Design Management Journal*, 4(1), 33-39. <https://doi.org/10.1111/j.1948-7169.1993.tb00124.x>

- Simon, C.J., & Sullivan, M.W. (1993). The measurement and determinants of brand equity: A financial approach. *Marketing Science*, 12(1), 28–52. <https://doi.org/10.1287/mksc.12.1.28>
- Siyanbola, A. B. (2021). An assessment of the appropriateness of selected logos of renowned and small-scale brands. *Yildiz Journal of Art and Design*, 8(1), 1-11.
- Songa, G., Slabbinck, H., Vermeir, I., & Russo, V. (2019). How do implicit/explicit attitudes and emotional reactions to sustainable logo relate? A neurophysiological study. *Food Quality and Preference*, 71, 485–496. <https://doi.org/10.1016/j.foodqual.2018.04.008>
- Stamatogiannakis, A., Luffarelli, J., & Yang, H. (2020). *What does the symmetry of your logo say about your brand?*. Harvard Business Review. <https://hbr.org/2020/03/what-does-the-symmetry-of-your-logo-say-about-your-brand>
- Stamatogiannakis, A., Luffarelli, J., & Yang, H. (2015). How to use visual design to boost brand equity. In book: *The psychology of design: Creating consumer appeal* (pp.121-132). Taylor & Francis. <https://doi.org/10.4324/9781315714806-19>
- Walker, R. (2017). *How logos became the most important quarter-inch in business*. Fortune; Fortune. <https://fortune.com/2017/06/16/business-logos-evolution-importance/>
- Wagemans, J. (1997). Characteristics and models of human symmetry detection. *Trends in Cognitive Sciences*, 1(9), 346–352. [https://doi.org/10.1016/S1364-6613\(97\)01105-4](https://doi.org/10.1016/S1364-6613(97)01105-4)
- Wan Ismail, W.R., Othman, M., Abdul Rahman, R., Kamarulzaman, N.H., & Ab. Rahman, S. (2016). Halal Malaysia logo or brand: the hidden gap. *Procedia Economics and Finance*, 37, 254-261. [https://doi.org/10.1016/S2212-5671\(16\)30122-8](https://doi.org/10.1016/S2212-5671(16)30122-8)
- Zhu, Z., Cao, H., & Li, B. (2017). Research on logo design and evaluation of youth education brands based on visual representation. *Journal of Product & Brand Management*, 26(7), 722-733. <https://doi.org/10.1108/JPBM-08-2016-1287>