Enhancing Brand Image in the Digital Era: Evidence from Small and Medium-sized Enterprises (SMEs) in Indonesia

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Abstract: This study aims to validate the essential antecedents of brand image enhancement in the digital era, based on a schematic theory. This study involved 400 respondents from four capital cities in Java, Indonesia, which comprise Surabaya, Jakarta, Bandung, and Yogyakarta, based on a quota sampling technique. The findings indicate that the quality of websites and social media sites may have no direct effects on brand image; any effects are transmitted through a serial mediation of brand awareness and E-WOM. Explicitly, the effect of a website’s quality on brand image is fully mediated, while social media’s quality effect on brand image is partially mediated through brand awareness and E-WOM. This study extends the current literature related to SMEs’ brand image. Also, this study offers practical recommendations for several stakeholders interested in empowering SMEs, including the government, entrepreneurship-based universities, and the SMEs themselves, who are all seeking strategies to enhance brand image while utilizing digital platforms such as social media and websites.

Keywords: website quality, social media quality, brand awareness, E-WOM, brand image

JEL Classification: M30, M31
Introduction

Brand image has an essential role in influencing customer behavior (Zhang, 2015; Chovanová, Korshunov and Babčanová, 2015). A positive brand image can improve brand performance (Barreda et al., 2016) which subsequently influences customer purchasing decisions (Ur Rehman and Ishaq, 2017). As one of the most influential attributes for business success, a strong brand image can affect customers’ intentions to purchase, give a company’s a competitive advantage, and support successful market penetration (Aranda, Gómez and Molina, 2015). In this regard, it is necessary to understand which media is presently advantageous for enhancing brand image amid the rapidly changing digital landscape.

Changes in the digital landscape have rendered traditional media ineffective and inefficient at exposing brands to customers, owing to the customers’ increasing reliance on digital media. According to We Are Social and HootSuite (2021), the internet, as the backbone of digital advancement (websites and social media), has reached more than half of the global population (59.6 percent) and has shifted customers’ preferences in terms of media consumption. This trend is consistent with the adage “If a company cannot be found in Google, it does not exist,” which accurately describes how customers behave today. It also emphasizes the importance of companies utilizing digital channels, such that small and medium-sized enterprises (SMEs) must keep up with the advancements in digital technology to remain competitive (Taiminen and Karjaluooto, 2015).

Although SMEs are increasingly aware of the strategic value of these digital channels for conducting digital marketing activities, and particularly for enhancing their brand image, they have been unable to leverage the media fully (Malesev and Cherry, 2021). This occurs because SMEs face several barriers, including a lack of access to information about the latest technology (Kergroach, 2020), a lack of investment and necessary training to plan, monitor, and maintain the use of effective digital media (Halim et al., 2020; Malesev and Cherry, 2021), which makes it difficult for SMEs to maximize their business operations through the use of digital media (Raharja et al., 2019). Furthermore, SMEs must understand that having a website and social media presence is critical, but how they manage the quality of these two digital channels is even more critical, as poor management of these two channels has a significant negative impact on consumers’ perceptions concerning the company’s image, which can result in decreased consumer purchasing interest (Zhou and Jia, 2018; Suryani, Fauzi and Nurhadi, 2021).

The mentioned issue above has become so prevalent in recent years that it has attracted the attention of numerous researchers, some of whom have addressed the issue by examining the effect of websites’ quality (Muller, 2008; Hutter et al., 2013; Barreda et al., 2016; Wilson, Keni and Tan, 2019) and social media’s quality (Michaelidou, Siamagka and Christodoulides, 2011; Bruhn, Schoenmueller and Schäfer, 2012; Cham et al., 2016; Seo and Park, 2018; Poulis, Rizomyliotis and Konstantoulaki, 2019; Suryani, Fauzi and Nurhadi, 2021) on increasing brand awareness and companies' images in the consumers’ minds. Regrettably, most of the extant literature discusses the impact of digital media’s use by large companies, while studies focusing exclusively on SMEs are few and far between (Matarazzo et al., 2021). Furthermore, while digital marketing strategies
for developing a solid brand and increasing brand equity are becoming increasingly crucial for conducting business and securing growth in SMEs, there are deficient studies on the relationship between the use of digital marketing tools and the brand equity of SMEs (OECD, 2010; Dumitriu et al., 2019; Renton and Richard, 2019).

In this respect, this research plays a strategic role in bridging the existing theoretical gap by conducting an empirical study into the critical role of the quality of websites and social media in enhancing SMEs’ brand image in the digital era, and intending to empower SMEs to leverage digital channels effectively to enhance their brand image. It is an essential need for SMEs because even though SMEs contribute significantly to economic growth in almost every country on Earth, particularly in developing countries (The World Bank, 2020), SMEs endure sluggish business development, as was the case in Indonesia (Panjaitan, Timur and Sumiyana, 2020). Therefore, the strategic efforts aimed at identifying the factors and mechanisms that contribute to the SMEs’ brand image enhancement in the digital era are expected to enable them to expand their central importance, which will create more job opportunities (Rahayu and Day, 2017), contribute to increased gross domestic product (GDP) (Iramani et al., 2018), and help to alleviate poverty (Nursini, 2020).

Furthermore, the mechanism proposed in this research for enhancing the brand image of SMEs in the digital era is based on a well-established theory, namely the schematic theory (Bartlett and Burt, 1933). We believe that this theory is appropriate and capable of underpinning this research’s framework because it is concerned with how customers perceive brand information, in which customers’ perceptions toward a particular brand are determined by the interaction between external stimuli from the environment and what customers bring to the environment (Halkias, 2015). In this respect, brand image will come up in a customer’s mind in two ways. First, brand image can be directly derived from environmental exposures (such as websites and social media) toward a particular brand. Second, website and social media exposures can indirectly boost brand image by improving the customer’s brand awareness, leading to customers exchanging knowledge about the brand using a website and social media under the framework of electronic word of mouth (E-WOM). Thus, websites and social media potentially play an important role in building a brand’s image from two different directions, which directly or indirectly involve brand awareness and E-WOM.

Based on the preceding discussion, this study theoretically contributes to the body of knowledge about the brand image of SMEs by validating the critical role of both websites’ and social media’s quality in enhancing SMEs’ brand image. Meanwhile, this study has significant managerial implications for a variety of stakeholders interested in empowering SMEs, including the government, entrepreneurship-based universities, and the SMEs themselves, who are all looking for strategies to enhance their brand image while utilizing digital technology platforms, because SMEs lack the skills necessary to identify the best technology options for managing change (Kergroach, 2020).

**Literature Review**

**Theoretical Foundation**

**Schematic Theory**

The conceptual framework for this study, as illustrated in Figure 1, is founded
on the schematic theory (Bartlett and Burt, 1933). The schematic theory explains how customers process information through learning (Kocyigit and Ringle, 2011; Mothersbaugh, Hawkins and Kleiser, 2020). Furthermore, Halkias (2015) emphasized that learning occurs due to external environmental stimuli and customers’ communications with their environment. At this point, we assume that external stimuli from the environment in the digital era come from two digital channels: websites and social media.

Nowadays, companies use websites and social media platforms as strategic communication tools to communicate not only their companies’ profiles but also the offered products or services to their intended market (Liao, To and Shih, 2006; Galati et al., 2016; Suryani, Fauzi and Nurhadi, 2021). Customers may receive stimuli regarding products, services, and brands via company-managed websites and social media platforms. On the other hand, both websites and social media platforms, such as Facebook and Instagram, are classified as social networking sites (SNSs), as they enable users to gather information about brands, communicate with one another, and share their experiences, including their perceptions of different brands, with their social circle through the use of E-WOM (Chu and Kim, 2011). At this very point, the two directions described in the schematic theory provide essential insights into how websites and social media can currently enhance the learning processes that contribute to brand image enhancement in our social environment.

**Brand Image**

Brand image is a subset of the customer-based brand equity (CBBE) concept (Keller, 1993). Webster and Keller (2004) defined brand image as the characteristics and benefits of a brand that distinguish it from its competitors. In this regard, brand image is critical in influencing customer buying behavior (Zhang, 2015; Chovanová et al., 2015), as customer buying decisions are based on the perceived image of the brand (Cronin and Taylor, 1992). In other words, customers with a positive image of the brand may have a higher propensity to purchase, whereas customers with a negative image of it may have no propensity to purchase (Luong, Vo and Le, 2017). Given that websites and social media have been viewed as hybrid marketing communication channels for establishing a solid relationship with customers (Chu and Kim, 2011), examining the pivotal roles of websites and social media in the development of a brand’s image is essential for businesses to remain competitive in today’s tight business.

**Electronic Word of Mouth (E-WOM)**

Electronic word of mouth (E-WOM) is an expanded definition of word of mouth (WOM) in a digital channel. It is defined as the exchange of customer statements about a product or company that are made available online and accessible to a large number of people and institutions via online channels (Hennig-Thurau et al., 2004) such as blogs, websites, emails, and virtual customer communities (Chu and Kim, 2011). As described in the schematic theory (Bartlett and Burt, 1933), E-WOM may occur when customers communicate and share their opinions about a product or company with their social circle through websites and user-generated social media. Consequently, the E-WOM process significantly impacts brand image and customer purchase intentions (Jalilvand and
Saamie, 2012). Thus, we assume that E-WOM plays an indispensable role in promoting websites and social media to enhance brand image.

**Brand Awareness**

Along with brand image, Keller (1993) included brand awareness as a sub-concept of CBBE. Hutter et al., (2013) defined brand awareness as the degree to which a brand is perceived as having a solid presence in customers’ minds. According to the hierarchy of effects (HOE) (Lavidge and Steiner, 1961), customer purchasing decisions are developed in six stages: awareness, knowledge, liking, preference, conviction, and purchase. Awareness is the critical entry point that leads a customer to purchase products or services. Clow and Baack (2018) discussed how an advertisement is designed to influence three aspects—cognitive, affective, and conative—beginning with awareness (cognitive), followed by liking, choosing, and belief (affective), and actual purchasing at the end of the process (conative). Therefore, we assume that websites and social media, as contemporary digital media, are critical marketing instruments for companies seeking to increase the brand awareness of their products or services.

**Website Quality**

Website quality has been defined as a reflection of the website’s overall excellence, based on user evaluations of any website features that satisfy users’ needs (Aladwani and Palvia, 2002). In practice, Hsu et al., (2014) asserted that several shopping websites gain and retain more buyers than others due to their websites’ superior design features, easy-to-use experience, and stable system. As a result, website quality plays a vital role in distinguishing a brand and is an essential factor that determines business success (Shin et al., 2013).

Given the critical role of superior electronic service quality in online business success via website quality (Noorshella, Abdullah and Nursalihah, 2015), several studies on website quality have been conducted, but the findings were inconsistent. According to research conducted on companies that cater to the B2B (business-to-business) market, the quality of a website is associated with its reliability, privacy, efficiency, value-added services, and usefulness of information (Janita and Miranda, 2013). Meanwhile, hospitality services demonstrate that website quality is significantly influenced by the ease of use, functionality, security, privacy, and perceived flow (Ali, 2016). Other studies have demonstrated that the quality of a website is determined by the quality of information, the system, and service (DeLone and McLean, 2004; Hsu, Chang and Chen, 2012). These characteristics are also consistent with Tsao, Hsieh, and Lin’s (2016) research, according to which the quality of the website is determined by its information quality, system quality, and e-service quality (consisting of seven constructs, such as efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact). According to Jeon and Jeong (2017), a website’s quality is determined by its functionality, customization, and reputation. Apart from inconsistent findings in previous studies regarding the website quality dimension, this study employs a straightforward construct that takes into account several key factors of website quality, including ease of use of the interface, easiness of finding products or services, well-organized information, and system availability (Tsao, Hsieh and Lin, 2016).
Social Media Quality

In addition to the website, another type of internet media that web users are increasingly utilizing is social media (Figueiredo et al., 2013). According to Michaelidou et al., (2011), social media provides new ways for individuals to communicate with their social circle, and companies to communicate with and promote their target market’s products, services, or brands. Surprisingly, Bang Digital (2018) reported that 97 percent of companies consider social media a strategic marketing communication tool. Numerous previous studies have demonstrated that social media is vital for current business success because marketing communications via social media can increase brand equity (Schivinski & Dabrowski, 2016; Langaro, Rita, and Salgueiro 2018), brand attachment (Panigyrakis, Panopoulos and Koronaki, 2020) and brand perception (Helal, Ozuem and Lancaster, 2018). Additionally, social media usage has been validated as a significant factor in enhancing relationships, growing the number of new customers, reaching customers on a global scale, and enhancing the image of companies in their region (Jones, Borgman and Ulusoy, 2015).

Given social media’s significant role in business, as previously stated, it is critical to ensure its quality, as higher quality social media could result in more substantial business performance (Tajvidi and Karami, 2021). Several previous studies have partially validated some aspects of social media’s quality, including ease of use; interaction opportunities; perceived enjoyment; ease of communicating and credibility (Khatib, 2016); information quality (Kim et al., 2017); image quality; content-design quality; and content relevance to its product and audience (Helal, Ozuem and Lancaster, 2018). Since some companies, particularly SMEs, lack access to and knowledge about cutting-edge technology (Ibrahim and Shariff, 2016; Kergroach, 2020), the more straightforward construct of social media’s quality, consisting of content clearness, content quality (Salomon, 2013; Teo, Leng, and Phua 2019), contact availability (Tsao, Hsieh and Lin, 2016) and content relevance (Helal, Ozuem and Lancaster, 2018) are adopted to help companies in improving the quality of their social media.

Hypotheses Development

Website and Social Media Quality on Brand Awareness

When customers recall and recognize a brand, they have the highest awareness of the brand (Ratriyana, 2016). Kotler, Armstrong, and Opresnik (2017), citing HOE (Lavidge and Steiner, 1961), asserted that one marketing communication goal is to increase customer brand awareness. Nowadays, websites and social media platforms have gained widespread recognition as marketing communication tools for introducing brands and increasing brand awareness (Michaelidou, Siamagka and Christodoulides, 2011; Shin et al., 2013). A company can increase its online brand awareness by developing a website. According to Barreda et al., (2016), a website can increase positive brand awareness among customers by creating a user-friendly platform that makes users feel at ease searching for information on the website. In this respect, a company website can serve as an online information resource for customers seeking information about the company’s profile or product details, all of which contribute to the customers’ brand awareness enhancement.
Along with a website, social media also plays a vital role in increasing a company’s brand awareness (Hutter et al., 2013; Bilgin, 2018; Poulis, Rizomyliotis and Konstantoulaki, 2019; Hootsuite 2021). If the company can present relevant and exciting information, it can increase the engagement with its social media platforms, thereby increasing customer brand awareness. Given that social media is categorized as inexpensive media that requires few technical components (Ferrer et al., 2012), companies hope to raise customer awareness about the brands of the products they are offering, including their relevance and opportunities for interaction, in the hope that customers will visit their social media sites. The more frequently customers receive exciting information from a company’s social media; the greater awareness of the product will develop. Therefore, companies can shape brand awareness as a component of brand equity through the quality of their website and social media sites. As previously stated, the quality of websites and social media sites is determined by the overall perception of customers toward the website’s and social media’s features. If the features used by customers are truly necessary for obtaining information about the company’s profile or the offered product, customers return visits to the company’s website and social media sites become important and enhance the customers’ brand awareness. Thus, the first two hypotheses are as follows:

\[ H_1: \text{Website quality significantly enhances customer brand awareness.} \]

\[ H_2: \text{Social media quality significantly enhances customer brand awareness.} \]

**Website Quality and Social Media Quality on Brand Image**

Marketing activities conducted on social media platforms can impact how a company’s brand image is shaped. According to Bruhn, Schoenmueller and Schäfer (2012), traditional and social media communications significantly impact brand equity, including brand awareness and image. Furthermore, Bruhn, Schoenmueller and Schäfer (2012) noted that communication stimuli carried out through websites and social media are triggers that positively affect customers’ perceptions, thereby influencing brand awareness and image. In line with Bruhn, Schoenmueller and Schäfer (2012), social media is suspected of influencing brand equity perceptions (Seo and Park, 2018) and customer purchasing decisions (Hutter et al., 2013).

A product’s brand image can also be shaped by the quality of the company’s website (Rosen 2000; Barreda et al., 2016). For instance, educational institutions with informative websites can provide clear information to prospective students, and are more effective at persuading students to enroll in the university. The critical reason for utilizing a website to enhance the brand image is that websites are more effective at influencing students’ decision-making than traditional mass media (Kim & Eik, 2014). In other words, when a company develops an excellent website and social media presence by deploying the customer-requested features, it enables the company to stimulate customers’ return visits to the company’s website and social media, to shape customers’ positive perception toward the company, and to increase both brand awareness and brand image simultaneously. Hence, the following hypotheses are suggested:
$H_3$: Website quality significantly enhances customer brand image.

$H_4$: Social media quality significantly enhances customer brand image.

**Brand Awareness on E-WOM and Brand Image**

According to the schematic theory (Bartlett and Burt, 1933), customer brand image can be established in two ways: through external environmental stimuli and through what customers communicate or share with their environment. In other words, these two directions encourage customer interactions and the exchange of information, including information about products or services. Initially, the exchange process could be initiated by establishing brand awareness, as it is critical knowledge that will be shared with other customers via E-WOM.

Customers who have a certain level of brand awareness have experience with the brand, they remember and know the brand’s characteristics well (Ratriyana, 2016). Subsequently, when interacting with other customers associated with the brand, customers will share their knowledge about the brand acquired through the E-WOM mechanism with their social circle via websites, social media, or other marketing communication tools (Hennig-Thurau et al., 2004). Lim and Chung (2014) asserted that customers familiar with certain brands are more likely to share their knowledge with other customers, whether through product reviews, website comments, or social media updates (Chu and Kim, 2011). Furthermore, other customers will view E-WOM as a critical reference when defending a brand’s credibility and might forward the information to friends. A positive E-WOM generated by customers will increase a positive perception of a brand’s image, whereas a negative E-WOM will decrease the perception of the brand’s image, implying that E-WOM plays a significant role in shaping the perception of the brand’s image (Jalilvand and Samiei, 2012). Thus, the next hypotheses are formulated as follows:

$H_5$: Brand awareness has a positive correlation with customer E-WOM.

$H_6$: E-WOM produced by the customers significantly enhances customer brand image.

**The Serial Mediation Effect of Brand Awareness and E-WOM**

As previously explained, the direct relationship of websites’ and social media’s quality to brand image enhancement is compelling. However, theoretical arguments based on the schematic theory suggest that brand awareness and E-WOM play serial mediation roles. External environmental stimuli resulting from customers’ perceptions of websites’ and social media’s quality can increase customer brand awareness of a brand. Furthermore, the resulting brand awareness creates both positive and negative perceptions of a product, which customers can share with others in their social circle via various digital channels, such as product reviews, website comments, or social media updates (Chu and Kim, 2011). Simultaneously, customer-led E-WOM activities can further help to strengthen a brand’s or product’s image. If the shared perception is positive, the impact of the brand’s image enhancement is also positive; conversely, if the shared perception is negative, the impact of the brand’s image enhancement is negative. Hence, the following hypotheses are formulated:
Methods

The Development of the Research Instrument

In developing the research instrument, we conducted an in-depth literature review of the related previous studies such as electronic service quality, electronic word of mouth, and brand equity management. From this we retrieved several relevant research instruments. As presented in Table 1, 18 research items have been adapted from several sources that fitted with the context of this study, namely Tsao, Hsieh and Lin (2016) for websites’ quality constructs; Salomon (2013), Tsao, Hsieh and Lin (2016), Teo, Leng and Phua (2019), and Helal, Ozuem and Lancaster (2018) for social media’s quality construct; Gvili and Levy (2018) for the electronic word of mouth construct; Langaro, Rita and Salgueiro (2018) and Poulis, Rizomyliotis and Konstantoulaki (2019) for the brand awareness construct, and Aaker (1996) for the brand image construct. The research construct was scored using a 5-point Likert-type scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree). Additionally, considering that the targeted respondents are Indonesian, the final questionnaire’s research items were first translated into Bahasa Indonesia. Furthermore, to provide a clear understanding regarding what constructs we measure, we elaborate the constructs’ definitions of our current research in Table 1.

Sampling

The population of the research was customers, with a minimum age of 19 years old,
in Surabaya, Jakarta, Bandung, and Yogyakarta, who had purchasing experiences with several products, such as fashion; beauty; processed food; crafts; agriculture; and others, marketed by small and medium-sized enterprises (SMEs) through websites and social media. In this case, by deciding the specific criteria, we assumed that the customers with those experiences could evaluate the service performance of the SMEs in promoting their products or services to their intended customers through websites and social media. Unfortunately, we could not find any sources or references about the exact number for the population to calculate the minimum sample size. Therefore, we considered a recommendation proposed by Hair et al., (2017), who suggested a power analysis using G*Power analysis software. By running the software as clearly instructed by Memon et al., (2020), we concluded that the required minimum sample size for research that used four predictor variables should be 129, to gain the effect size $f^2$ value of 0.15 with the level of significance being 0.05 and statistical power $\beta$ of 95 percent.

Quota sampling was applied in the current research to collect the data. The technique was implemented because the respondents were conveniently chosen from the targeted group to match some predetermined number or quota (Sekaran and Bougie, 2016). Then, we chose four major cities in Java, comprising Surabaya, Bandung, Jakarta, and Yogyakarta, as the primary locations for the data's collection, having considering that Java makes the greatest contribution to Indonesia's gross domestic product (GDP), at 58.46 percent (Indonesian Central Bureau of Statistics, 2019). In other words, the data shows that Java produces more than half of the number of products and services in Indonesia so that it also has numerous transactions for those products and services. Therefore, the selection of four major cities, three of which are also provincial capitals and one the nation's capital would represent the complexity of the public's transaction activities. Moreover, we assumed no significant socio-cultural or economic differences existed among the residents in those cities because we believed that they have something in com-

| Construct                | Test Item | Construct Definition                                                                 | Reference                                      |
|--------------------------|-----------|--------------------------------------------------------------------------------------|------------------------------------------------|
| Website Quality (WQ)     | Four      | The perceptions of customers toward the quality of SMEs' websites.                    | Tsao, Hsieh and Lin (2016)                    |
| Social Media Quality (SMQ)| Five      | The perceptions of customers toward the quality of SMEs' social media.                 | Salomon (2013); Tsao, Hsieh and Lin (2016); Teo, Leng and Phua (2019); Helal, Ozuem and Lancaster (2018) |
| Electronic Word of Mouth (E-WOM) | Three | The willingness of customers to provide reviews, share their previous purchasing experiences and perform intensive communication toward other customers. | Gvili & Levy (2018) |
| Brand Awareness (BA)     | Three     | The ability of customers to recognize particular products, services, or brands compared to other related brands. | Langaro, Rita and Salgueiro (2018); Poulis, Rizomyliotis and Konstantoulaki (2019) |
| Brand Image (BI)         | Three     | The perceptions of customers related to the brand, including positive responses, product quality and other information about the brand. | Aaker (1996) |
mon, as residents of either the capital or big
cities in Java. Therefore, it will help us min-
imize the generalization issue for this study.

**Data Collection Procedure**

In collecting the data in Surabaya, Ja-
karta, Bandung, and Yogyakarta, we were
assisted by a professional surveyor agency,
*Mobile Statistics*. Technically, we initially held
a coordination meeting with the *Mobile Statis-
tics* crew to inform them of some general in-
formation and also the research objective, to
ensure the proper implementation of a single
standard in the data collection process, and to
minimize response bias. Then, the *Mobile Sta-
tistics* crew visited several places where many
people gather, such as universities, city gar-
dens, shopping malls, traditional markets, and
street vendors, to find the targeted respon-
dents. The crew invited some respondents to
join the survey, if they were willing to, and
asked them whether they had purchasing ex-
periences of SMEs’ products through web-
sites and social media, by showing them the
SMEs’ websites and social media sites. The
information from the respondents about the
SMEs’ websites and social media accounts
was critical to validate the SMEs who in-
teracted with the respondents, based on the
regulation of the Republic of Indonesia,
Number 20 (2008) about Micro, Small, and
Medium-sized Enterprises (MSMEs). Finally,
referring to both the criteria’s appropriateness
and the willingness of the respondents
to join the survey, the crew handed over a
survey form and gave souvenirs to show our
appreciation to them after completing the
survey.

**Statistical Analysis Technique**

The current research employed the
PLS-SEM approach using WarpPLS soft-
ware to analyze the conceptual research
framework. The three primary reasons to
use PLS-SEM were: (1) The PLS-SEM ap-
proach is relatively robust for both explor-
atory and confirmatory study (Gefen, Straub
and Boudreau, 2000). (2) It is a more flexi-

| Step of Analysis         | Analysis Unit                                      | Basic Threshold | Reference         |
|--------------------------|---------------------------------------------------|-----------------|------------------|
| Measurement model        | Indicator reliability:                            | ≥0.70           | Hair et al., (2019) |
| evaluation               | Indicator loadings                                |                 |                  |
|                         | Internal consistency reliability: Composite      | 0.70-0.90       |                  |
|                         | reliability                                      |                 |                  |
|                         | Convergent validity: average variance extracted (AVE) | ≥0.50           |                  |
|                         | Discriminant validity: HTMT                       | <0.85           |                  |
| Structural model         | p-value                                           | p<0.05          |                  |
| evaluation               | R² value                                          | 0.75, 0.50, 0.25 |                  |
|                         | Q² value                                          | >0 (small); >0.25 (medium); >0.50 (large) |                  |
|                         | f² (effect size)                                  | >0.02 (small); >0.15 (medium); >0.35 (large) |                  |
|                         | Model fit                                        | Classic and additional indices (various) | Kock (2019)      |
ble approach with high statistical power and is suitable for confirmatory theory testing (Hair, Ringle and Sarstedt, 2011). (3) Compared to the CB-SEM approach, which is provided by AMOS and LISREL software, to achieve an acceptable good fit of the model, PLS-SEM does not require removing many indicators, and it provides either greater composite reliability or convergent validity (Hair Jr. et al., 2017). Then, there are two critical stages of statistical analysis using PLS-SEM: the measurement model’s evaluation and the structural model’s evaluation (Hair et al., 2019). Furthermore, Table 2 presents the steps involved in conducting a PLS-SEM analysis and the rule of thumb for each analysis unit.

Results

Overview of the Respondent

During the period of the data’s collection, 402 respondents completed the survey form. However, among those 402 items of collected data, there were only 400 items of data which could be categorized as an ac-

| Demographic Overview | Category | Frequency | Percentage (%) |
|----------------------|----------|-----------|----------------|
| Gender               | Male     | 138       | 34.5           |
|                      | Female   | 262       | 65.5           |
| Domicile             | Surabaya | 100       | 25             |
|                      | Bandung  | 126       | 31.5           |
|                      | Jakarta  | 84        | 21             |
|                      | Yogyakarta | 90   | 22.5           |
| Age                  | 19-30 years old | 340 | 85       |
|                      | 31-40 years old | 46    | 11.5          |
|                      | 41-50 years old | 10   | 2.5            |
|                      | 51-60 years old | 4    | 1             |
| Types of products bought from SMEs through websites | Fashion product | 261 | 65.25 |
|                      | Beauty product | 28  | 7             |
|                      | Processed food product | 64  | 16           |
|                      | Craft product | 1   | 0.25          |
|                      | Agriculture product | 11  | 2.75         |
|                      | Others | 35 | 8.75 |
| Types of products bought from SMEs through social media | Fashion product | 271 | 67.75 |
|                      | Beauty product | 22  | 5.5          |
|                      | Processed food product | 50  | 12.5        |
|                      | Craft product | 15  | 3.75         |
|                      | Agriculture product | 4   | 1            |
|                      | Others | 21 | 5.25 |
| Last shopping experience for SMEs products through websites or social media | <3 months | 207 | 51.75 |
|                      | 3 to <6 months | 80  | 20          |
|                      | 6 months to <1 year | 64  | 16         |
|                      | ≥1 year | 49 | 12.25 |

Table 3: The overview of the respondent
ceptable data set after conducting an outlier checking procedure. Table 3 presents an overview of the respondents who were involved.

**Controlling Common Method Bias (CMB)**

Considering that survey research potentially suffers from common method bias (CMB), we considered applying two essential statistical remedies, which were Harman’s single-factor test, suggested by Podsakoff, MacKenzie, Lee, and Podsakoff (2003), and a full collinearity assessment approach proposed by Kock (2015). Harman’s single-factor test showed that the total variance extracted from the test of the collected data was lower than 50 percent (32.4 percent) (Eichhorn, 2014). Meanwhile, referring to Table 9, a full collinearity assessment was represented by the VIF score, which was 1.657 < 3.3. In this respect, according to those two techniques for controlling CMB, CMB was not a substantial problem in this study.

**Measurement Model Evaluation**

The measurement model’s evaluation focused on assessing the reliability and validity of each construct, as exhibited in Table 2. Regarding the reliability of the constructs, the focus was on the indicator loadings’ values which reflect the indicator reliability and composite reliability values that indicate the internal consistency reliability of the constructs. Referring to Table 4, the value of all indicator loadings for each construct exceeding the minimum rule of thumb > 0.70, except WQ2 (0.694); WQ4 (0.621); SMQ1

| Construct                        | Test Item | Reliability Test | Validity Test |
|----------------------------------|-----------|------------------|---------------|
|                                 |           | Indicator Loadings | Composite Reliability | Convergent Validity (AVE) | Discriminant Validity (HTMT) |
| Website Quality (WQ)            | WQ1       | 0.779            | 0.831          | 0.745   | Valid           |
|                                  | WQ2       | 0.694            |                |         |                |
|                                  | WQ3       | 0.864            |                |         |                |
|                                  | WQ4       | 0.621            |                |         |                |
| Social Media Quality (SMQ)      | SMQ1      | 0.686            | 0.831          | 0.705   | Valid           |
|                                  | SMQ2      | 0.762            |                |         |                |
|                                  | SMQ3      | 0.670            |                |         |                |
|                                  | SMQ4      | 0.711            |                |         |                |
|                                  | SMQ5      | 0.694            |                |         |                |
| Electronic Word of Mouth (E-WOM)| E-WOM1    | 0.742            | 0.833          | 0.754   | Valid           |
|                                  | E-WOM2    | 0.754            |                |         |                |
|                                  | E-WOM3    | 0.766            |                |         |                |
| Brand Awareness (BA)            | BA1       | 0.884            | 0.833          | 0.792   | Valid           |
|                                  | BA2       | 0.768            |                |         |                |
|                                  | BA3       | 0.713            |                |         |                |
| Brand Image (BI)                | BI1       | 0.765            | 0.798          | 0.791   | Valid           |
|                                  | BI2       | 0.791            |                |         |                |
|                                  | BI3       | 0.815            |                |         |                |

Note(s): AVE (Average Variance Extracted); HTMT (Heterotrait-Monotrait Ratio of Correlations)
(0.686); SMQ3 (0.670); and SMQ5 (0.694). However, Hair et al., (2017) asserted that although several indicators may have loadings that are below the minimum threshold of 0.70, those indicators can still be retained for further analysis because the composite reliability of each construct is acceptable. As seen in Table 4, the composite reliability value of each construct is 0.831 (WQ); 0.831 (SMQ); 0.833 (E-WOM); 0.833 (BA); and 0.798 (BI), which also exceeds the minimum threshold of 0.70 (Hair et al., 2019). In other words, the reliability of the research construct was strongly well-established.

Table 5. The summary of the discriminant validity test (HTMT)

| Construct | WQ   | SMQ  | BA   | BI   | E-WOM |
|-----------|------|------|------|------|-------|
| WQ        | 0.741|      |      |      |       |
| SMQ       |      | 0.779|      |      | 0.791 |
| BA        | 0.722| 0.619| 0.808|      |       |
| BI        | 0.503| 0.474| 0.621| 0.569|       |
| E-WOM     | 0.425|      |      |      |       |

Meanwhile, in response to the validity issue of the research construct, another focus investigated the convergent and discriminant validity. The value of the convergent validity can be seen in the average variance extracted (AVE) scores, in which the AVE value of each construct was 0.745 (WQ); 0.705 (SMQ); 0.754 (E-WOM); 0.792 (BA); and 0.791 (BI). In other words, the value of the convergent validity of each construct exceeded the minimum threshold of 0.50 (Hair et al., 2019). Likewise, the discriminant validity of the construct referred to the heterotrait-monotrait ratio of correlations (HTMT), in which the value of HTMT for each correlation should be below 0.85 (Henseler, Ringle, and Sarstedt 2014; Hair et al., 2019). Then, according to Table 5, it can be inferred that the HTMT values were highly accepted, which simultaneously indicates a high level of discriminant validity.

To sum up, the results of both convergent validity and discriminant validity confirmed that the validity of the research construct had been well-established.

**Structural Model Evaluation**

**Direct effect Relationship**

In the structural model’s evaluation, the authors focused on hypotheses testing and the goodness of fit of the structural model used in the current research. The evaluation of the research hypotheses refers to the significance level of the relationship among the variables. For example, as presented in Table 6 and Figure 2, it can be observed that the p-values of all direct relationships from H1 to H6 are WQ→BA (p<0.01); SMQ→BA (p<0.01); WQ→BI (p<0.01); SMQ→BI (p<0.01); BA→E-WOM (p<0.01); E-WOM→BI (p<0.01). In other words, all the hypotheses in the current research are highly accepted.

Additionally, the next discussion observes the effects of the predictor variables on brand awareness, E-WOM, and brand image by referring to the path coefficient value (β). According to Table 6 and Figure 2, the path coefficients among the six relationships are WQ→BA (β=0.32, t=6.344); SMQ→BA (β=0.40, t=7.952); WQ→BI (β=0.20, t=3.932); SMQ→BI (β=0.25, t=4.955); BA→E-WOM (β=0.42, t=8.480); E-WOM→BI (β=0.25, t=5.082) indicating that all the predictor variables of the six relationships
would significantly influence each dependent variable by as much as WQ→BA (32 percent); SMQ→BA (40 percent); WQ→BI (20 percent); SMQ→BI (25 percent); BA→E-WOM (42 percent); E-WOM→BI (25 percent). At this point, it can be inferred that among the predictor variables of the six relationships, the most impactful relationship is the one between brand awareness (BA) and electronic word-of-mouth (E-WOM).

Then, we evaluated the score of the variances on the dependent variables, explained by all the independent variables, by referring to the value of $R^2$. According to Figure 2, the $R^2$ values of brand awareness (BA), electronic word-of-mouth (E-WOM), and brand image (BI) are 0.40, 0.18, and 0.30, respectively. In short, the $R^2$ values of all the dependent constructs of the research were categorized as weak to moderate (Hair et al., 2019). In other words, the level of brand awareness (BA) could be influenced by the quality of the website and social media, by as much as 40 percent. Then, the willingness of customers to engage in E-WOM may possibly be influenced by brand awareness, by as much as 18 percent. Lastly, the brand image of particular products, services, or brands was strongly influenced by their websites’ quality, social media’s quality, brand awareness, and E-WOM, by as much as 30 percent.

After evaluating the $R^2$ values as a criterion of predictive accuracy, it was also vital to examine Stone-Geisser’s $Q^2$. Hair et al., (2019) mentioned that a $Q^2$ value that is more significant than zero for a specific reflective-independent latent variable indicates the path model’s predictive relevance for a particular dependent construct. Similar to the $R^2$ value, the $Q^2$ values of brand awareness (BA), electronic word-of-mouth (E-WOM), and brand image (BI) were 0.410, 0.183, and 0.302, respectively. In other words, the $Q^2$ values depicted that the path model’s predictive relevance for the dependent variable of brand awareness (BA) and brand image (BI) were medium, while predictive relevance for electronic word-of-mouth (E-WOM) was small (Hair et al., 2019). Another criterion for assessing the structural model is $f^2$ (effect size). This analysis is essential to evaluate how removing a particularly independent variable influences the $R^2$ value of a dependent variable (Hair et al., 2019). As seen in Table 7, it can be inferred that the effect size of all the construct relationships in this study ranged from a small to a medium effect.

**Indirect Effect Relationship**

We employed the approach proposed by Hayes (2018) to evaluate the serial mediation relationship in this research model. As shown in Table 8, the first model is a serial multiple
mediation model that examined the extent to which brand awareness and E-WOM mediated the effect of the websites’ quality on brand image. Meanwhile, the second model examined the extent to which brand awareness and E-WOM mediated the effect of social media’s quality on brand image. Table 8 shows two significant indirect effects: (1) The websites’ quality on the brand image through brand awareness, and E-WOM ($\beta=0.0132$, CI95=0.0105 to 0.0614); considering that the inclusion of the mediators in this model made the direct relationship between website quality on brand image insignificant ($t$-value=1.5249, $p=0.1281$), brand awareness and E-WOM provided full mediation on the relationship between websites’ quality and brand image, in support of H7. (2) Social media’s quality on the brand image through brand awareness and E-WOM ($\beta=0.0120$, CI95=0.0115 to 0.0587); although the mediators were included in the model, the direct relationship between social media’s quality on brand image remained significant ($t$-value

| Construct Relationship | $f^2$ (Effect Size) Score | Effect |
|------------------------|----------------------------|--------|
| WQ $\rightarrow$ BA    | 0.173                      | Medium |
| SMQ $\rightarrow$ BA   | 0.231                      | Medium |
| WQ $\rightarrow$ BI    | 0.082                      | Small  |
| SMQ $\rightarrow$ BI   | 0.112                      | Small  |
| BA $\rightarrow$ E-WOM | 0.180                      | Medium |
| E-WOM $\rightarrow$ BI | 0.104                      | Small  |

Figure 2. The output of the structural model evaluation
ue=3.5094, \( p<0.001 \), suggesting that brand awareness and E-WOM offered partial mediation on the relationship between social media’s quality and brand image, in support of \textbf{H8}.

### Model Fit Evaluation

Finally, we also considered observing the goodness of fit based on several criteria from both classic and additional indices proposed by Kock (2019). As presented in Table 9, all the scores of the classic indices are completely satisfying, according to the basic threshold. Specifically, the scores of AVIF (1.435<3.3) and AFVIF (1.657<3.3) are ideal, which indicates that this study did not suffer from a collinearity problem. Then, this study has a rigorous exploratory power, as presented by the noteworthy score of GoF (0.411). Furthermore, the fit between the model-implied and empirical indicator correlation metrics is very well-established, symbolized by the gratifying scores of all the additional indices. Generally, following both classic and additional indices, this current study has an excellent model fit.

### Discussion

#### Theoretical Contributions

Given the constraints facing SMEs in maximizing their use of websites and social media to improve their brand image in the minds of consumers (Kergroach, 2020; Halim et al., 2020; Malesev and Cherry, 2021), as well as the dearth of empirical research on the relationship between the use of digital marketing activities and brand equity among SMEs (OECD, 2010; Dumitriu et al., 2019; Renton and Richard, 2019), this study has attempted to address the gap by offering empirical evidence

| Path | Effect | SE | 95% CI | \( p \)-value | \( p \)-value |
|------|--------|----|--------|---------------|---------------|
| Total Effect | 0.3608 | 0.0468 | 0.2688 | 0.4529 | 7.7064 | 0.0000*** |
| Direct Effect | | | | | | |
| WQ\( \rightarrow \)BI | 0.0725 | 0.0475 | -0.0210 | 0.1660 | 1.5249 | 0.1281 |
| Indirect Effect | | | | | | |
| WQ\( \rightarrow \)BA\( \rightarrow \)E-WOM\( \rightarrow \)BI | 0.0306 | 0.0132 | 0.0105 | 0.0614† |
| Total Effect | 0.4990 | 0.0495 | 0.4016 | 0.5963 | 10.0789 | 0.0000*** |
| Direct Effect | | | | | | |
| SMQ\( \rightarrow \)BI | 0.1890 | 0.0539 | 0.0831 | 0.2949 | 3.5094 | 0.0005*** |
| Indirect Effect | | | | | | |
| SMQ\( \rightarrow \)BA\( \rightarrow \)E-WOM\( \rightarrow \)BI | 0.0326 | 0.0120 | 0.0115 | 0.0587† |

Note(s): *** \( p<0.001 \); † the significance of the indirect effects was calculated with bias-corrected intervals (0.95) bootstrap analysis with a bootstrap sample of 5,000.
based on the schematic theory through investigating the essential roles of the websites’ quality, social media’s quality, brand awareness, and essential role in bringing the impacts of the quality of the website and social media to the brand image in the digital era. Furthermore,

| Indices | Score | Basic Threshold | Notes |
|---------|-------|-----------------|-------|
| **Classic Indices** | | | |
| APC | 0.306, p<0.001 | p<0.05 | Acceptable |
| ARS | 0.294, p<0.001 | p<0.05 | Acceptable |
| AARS | 0.290, p<0.001 | p<0.05 | Acceptable |
| AVIF | 1.435 | ≤5, Ideally ≤3.3 | Ideal |
| AFVIF | 1.657 | ≤5, Ideally ≤3.3 | Ideal |
| GoF | 0.411 | Small ≥0.1, Medium≥0.25, Large ≥0.36 | Large |
| SPR | 1 | ≥0.7, Ideally 1 | Ideal |
| RSCR | 1 | ≥0.9, Ideally 1 | Ideal |
| SSR | 1 | ≥0.7 | Acceptable |
| NLBCDR | 1 | ≥0.7 | Acceptable |
| **Additional indices** | | | |
| SRMR | 0.087 | ≤0.1 | Acceptable |
| SMAR | 0.065 | ≤0.1 | Acceptable |
| SchS | 4.214, p<0.001 | p<0.05 | Acceptable |
| STDCR | 0.948 | ≥0.7, Ideally 1 | Acceptable |
| STDSR | 0.820 | ≥0.7, Ideally 1 | Acceptable |

Note (s): APC=average path coefficient, ARS=average R-squared, AARS=average adjusted R-squared, AVIF=average block VIF, AFVIF=average full collinearity VIF, GoF= Tenenhaus GoF, SPR=Sympon’s paradox ratio, RSCR=R-squared contribution ratio, SSR=statistical suppression ratio, NLBCDR=nonlinear bivariate causality direction ratio, SRMR=standardized root mean squared residual, SMAR=standardized mean absolute residual, SchS=standardized chi-square, STDCR=standardized threshold difference count ratio, STDSR=standardized threshold difference sum ratio.

E-WOM in enhancing SMEs’ brand image. In estimating the research model, we invited 400 respondents from four major cities in Java, Indonesia. Therefore, this study offers valuable theoretical contributions to the SMEs’ brand image literature as follows.

This study confirms that environmental exposures can be derived from the social media and website managed by a company. However, the website’s and social media’s quality may have no direct effects on the brand image; the effects are transmitted through a serial mediation of brand awareness and E-WOM. In other words, brand awareness and E-WOM sequentially play an

The digital environment is similar to the natural environment, which potentially provides (input) stimuli to customers (in building brand image directly). At the same time, it allows customers to share and communicate
their thoughts to others (building customer brand awareness that leads to E-WOM and brand image). Unlike websites, user-generated social media, such as Instagram, Facebook, and Twitter, has gained in popularity among customers globally (We Are Social and Hootsuite, 2021). This phenomenon supports the current findings in which social media offers broader access for users to communicate with either companies or their communities, leading to a substantial direct impact on the perceptions about brand image.

Although social media’s quality directly affects brand image, the findings of this study suggest a mechanism of brand image enhancement in the digital environment through brand awareness and E-WOM sequentially. Customers use social media and websites to look for information regarding products or services they may buy, while companies utilize social media and websites to communicate their products or services and brands to potential customers. Thus, the communications by companies through social media and websites becomes an input (stimuli) for the customers. In this respect, social media and websites play essential roles in building the brand awareness of customers toward particular brands. At the same time, after gaining brand awareness from their exposure to a company’s social media and website, customers are likely to share their experiences (positive or negative) toward particular brand performances with their social circle (E-WOM) through giving post-purchase reviews, recommendations, or ratings. Accordingly, the consecutive flow of brand awareness to E-WOM enriches the exchange of information among customers that promote the brand image of particular brands. Therefore, based on the elaboration of the theoretical perspective above, companies are highly motivated to enhance their brand image toward their intended market by improving their social media’s and website’s quality sequentially.

Practical Contributions

This study offers several practical managerial recommendations for various stakeholders interested in empowering SMEs, including the government, entrepreneurship-based universities, and the SMEs themselves. For the government, the findings of this study encourage the government’s strategic role in setting up regular training programs to assist SMEs in improving the quality of their digital channels’ management, as SMEs’ understanding of how to maximize their use of digital channels remains extremely limited. For entrepreneurship-based universities, the findings of this study can be used as valuable material for developing an entrepreneurship curriculum, particularly in the area of managing digital marketing activities, to ascertain that students acquire the necessary skills to grow their businesses in the digital era. Additionally, universities can use the findings of this research to conduct community service activities that are synergistic with government training programs aimed at empowering SMEs, in terms of their websites’ and social media’s quality management.

Lastly, this study offers an integrated model for companies, mainly SMEs, to develop an integrated marketing communication strategy in the digital era that enhances their brand image. In enhancing their brand image in the current digital era, we recommend that companies improve the quality of their social media and website sequentially. Social media’s quality can be improved by ensuring four essential points, involving: (1) clarity of content; (2) content quality; (3) business contact availability; and (4) content
relevance of the social media account. Meanwhile, a website’s quality can be improved by addressing four key issues: (1) customizing a user-friendly website interface; (2) ensuring easiness to search for products or services on the website; (3) providing well-organized information; and (4) ensuring excellent system availability. Moreover, considering that the impact of social media’s and websites’ quality on brand image can be established indirectly through customer brand awareness and E-WOM, we strongly suggest companies actively monitor the E-WOM referring to their brands. This is necessary because the information delivered by cynical customers can be neutralized by presenting positive information through official sources of the company, or other customers, and by encouraging customers to provide positive information when commenting on product excellence, or providing testimonials and product reviews. Companies that neutralize any negative E-WOM while successfully improving their social media’s and websites’ quality will simultaneously enhance their brand image.

Limitations and Future Research Directions

Despite its significant contributions, this study has at least two limitations, and these limitations provide fertile grounds for future research. First, this study was conducted exclusively in Indonesia; expanding the study to include additional countries with diverse cultural backgrounds could yield different results. At this point, the study’s findings could suffer from a generalization issue. Thus, future researchers are encouraged to replicate the current research model using a larger sample size and a wider geographical location to validate the current findings. Second, this study does not examine the critical consequences of brand image, especially for the customers’ purchasing decision-making. On the other hand, the authors believe that shaping customer purchasing decisions is vital through improving the websites and social media. Hence, future researchers need to capture a broader impact of the websites’ and social media’s quality on brand image’s consequences, especially regarding customer purchasing decision-making.

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### Appendix 1. The measurement items

| Variable                  | Code | Measurement Item                                                                 | Reference                                                      |
|---------------------------|------|----------------------------------------------------------------------------------|----------------------------------------------------------------|
| Website Quality (WQ)      | WQ1  | SMEs’ websites have easy-to-use interfaces.                                     | Tsao, Hsieh and Lin (2016)                                    |
|                           | WQ2  | SMEs’ websites make it easy to find what customers need.                        |                                                                 |
|                           | WQ3  | The information on the SMEs’ websites is well-organized.                        |                                                                 |
|                           | WQ4  | The SMEs’ websites are stable when used (they do not suddenly stop or crash when  |                                                                 |
|                           |      | used).                                                                           |                                                                 |
| Social Media Quality (SMQ)| SMQ1 | The contents of SMEs’ social media accounts are clearly visible.                | Salomon (2013); Teo, Leng and Phua (2019)                      |
|                           | SMQ2 | SMEs’ social media accounts display good quality content.                        |                                                                 |
|                           | SMQ3 | SMEs’ social media accounts provide information about the location of the stores | Tsao, Hsieh and Lin (2016)                                    |
|                           | SMQ4 | SMEs’ social media accounts are fascinating because they always display the latest | Helal, Ozuem and Lancaster (2018)                             |
|                           | SMQ5 | SMEs’ social media accounts are fun because they try to display product content  |                                                                 |
|                           |      | that matches the offered original products.                                     |                                                                 |
| Electronic Word of Mouth  | E-WOM1| I want to share my shopping experiences with friends on the website or social    | Gvili & Levy (2018)                                            |
| (E-WOM)                   |      | media.                                                                           |                                                                 |
|                           | E-WOM2| When I receive valuable information about products or services, I usually forward |                                                                 |
|                           |      | it to others.                                                                    |                                                                 |
|                           | E-WOM3| I usually read recommendations about products and services from friends on the    |                                                                 |
|                           |      | website or social media.                                                         |                                                                 |
| Brand Awareness (BA)      | BA1  | I am familiar with SMEs’ products.                                               | Langaro, Rita and Salgueiro (2018); Poulis, Rizomyliotis and    |
|                           | BA2  | I know the brand of products made by SMEs.                                       | Konstantoulaki (2019)                                          |
|                           | BA3  | I can explain to others about SMEs’ product brands.                              |                                                                 |
| Brand Image (BI)          | BI1  | SMEs’ products are known for their excellence.                                   | Aaker (1996)                                                   |
|                           | BI2  | Many people find that the SMEs’ products are interesting.                        |                                                                 |
|                           | BI3  | SMEs’ brands have meaningful value.                                              |                                                                 |