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To cite this article: Blend Ibrahim (2021): Social Media Marketing Activities and Brand Loyalty: A Meta-Analysis Examination, Journal of Promotion Management, DOI: [10.1080/10496491.2021.1955080](https://doi.org/10.1080/10496491.2021.1955080)

To link to this article: <https://doi.org/10.1080/10496491.2021.1955080>



Published online: 25 Jul 2021.



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Social Media Marketing Activities and Brand Loyalty: A Meta-Analysis Examination

Blend Ibrahim 

Department of Tourism, School of Tourism and Hospitality Management, Girne American University, Kyrenia, North Cyprus, Turkey

ABSTRACT

This research investigates the robustness of the relationship between social media marketing activities (SMMA) and brand loyalty (BL). This relationship is examined based on six contextual factors classified into three categories: methodological, economic, and social variables. A quantitative meta-analysis is conducted to test the study hypotheses, and 11 effect size from the article published between 2010 and 2019 are examined for the final sample size ($n = 3,535$). The meta-analysis results indicate a positive correlation between SMMA and BL at the cumulative level of 0.49, demonstrating a medium to large effect size. Potential moderating effects have been investigated for three types of study characteristic variables; the methodological (sample type and survey type), social (human development index [HDI] and level of globalization), and economic variables (country brand ranking and connectivity level). These relationships are moderated by sample type, survey type, and the country's brand ranking, among other factors. However, the levels of globalization and connectivity, and the HDI, have no significant moderating effects on the SMMA–BL link. More importantly, the study indicates the factors that moderate these relationships. No prior meta-analysis of this fundamental relationship has been conducted

KEYWORDS

Social media marketing; social media marketing activities; brand loyalty; meta-analysis; meta-regression analysis

Introduction

In today's competitive global market, managers strive to improve marketing effectiveness by identifying new marketing metrics linked to business performance. Marketing campaigns on social media platforms (e.g., Facebook, Instagram, and Twitter) are considered to be one of the metrics used to promote corporate products, build strong brand awareness, and strengthen the relationships between companies and customers (Boyd & Ellison, 2007; Chan & Guillet, 2011; Erdoğan & Çiçek, 2012). Marketing through social media is defined as the process of using social media platforms to create, communicate, deliver, and exchange corporate offerings that have value for

CONTACT Blend Ibrahim  blendibrahim@gau.edu.tr  Department of Tourism, School of Tourism and Hospitality Management, Girne Amerikan Universitesi, Kyrenia, North Cyprus, Turkey.

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corporate stakeholders (Tuten & Solomon, 2016). Furthermore, social media is a communication tool: it enables users and their peers to communicate and add networks of friends, particularly among their peer groups (Filo et al., 2015; Ho, 2014; Whitla, 2009; Zhang & Daugherty, 2009).

As a result of the approximately 3.2 billion active social media users, marketing on social media platforms is one of the most powerful growth tools in contemporary marketing (Hootsuite, 2019). Consequently, approximately 70% of small businesses rely on it to target new customers (Infusionsoft, 2018). This growing dependence on social media for marketing has forced marketers to differentiate themselves from their competitors on social media, in turn, leading them to avoid traditional marketing methods when boosting their brand image and customer loyalty (Erdoğan & Çiçek, 2012). The idea of social media marketing activities (SMMA) was first introduced by Kim and Ko (2010, 2012), who surveyed customers of luxury fashion brands and concluded that SMMA comprises five activities: entertainment, interaction, trendiness, customization, and word of mouth (WOM). Their study suggests that corporate brands and their customers communicate more directly and interactively through two-way communication on social media. SMMA is considered a component of social media marketing (SMM) tools; it coincides with the objectives of SMM because it is used as a communication tool to connect and cooperate with customers to shape customer relationships (Chan & Guillet, 2011; Erdoğan & Çiçek, 2012). This study constitutes meta-analytic research on the individual quantitative studies of the relationship between SMMA and brand loyalty (BL). A meta-analytic approach is advantageous in the many fields in which multiple studies have yielded inconclusive or conflicting results (Gooding & John, 1985; Hedges, 1987; Rosenthal & DiMatteo, 2001; Schmidt, 2017). Individual studies examining the relationship between SMMA and BL have differed in various ways, such as the strength of the relationships among the study variables, application the relationship between SMMA and BL's in different contexts, and the data collected from a more diverse sample. Marketing literature has delivered inconsistent findings on the effects of SMMA on customer brand equity (Ural & Yuksel, 2015). Some studies have suggested that SMMA strongly correlates (r) with BL (more than $r = 0.50$; Bilgin, 2018) while other studies have found only a weak relationship (more than $r = 0.05$; Algharabat, 2017; Ibrahim & Aljarah, 2018; Yadav & Rahman, 2018). In addition, the different contexts and the data collected from a more diverse sample in individual studies on the relationship between SMMA and BL are as follows: the hospitality industry (Ibrahim & Aljarah, 2018), fast fashion goods (Salem & Salem, 2019), an e-commerce context (Yadav & Rahman, 2018), a student context (Algharabat, 2017; Ismail, 2017), and different sectors (household linens,

airline, automotive, jewelry, and communication) (Bilgin, 2018). The conflicting results of previous studies on the relationship between SMMA and BL demonstrate that the effects of SMMA are diverse and that the existing literature and managerial procedures are theoretically unreliable. This discrepancy, which is due to correlation levels or diverse contexts, raises the question of what study characteristics cause the inconsistencies and conflicts in findings among studies. These inconsistencies and conflicts can be seen in the diverse methodologies applied in several contexts with specific aspects, such as the sample size (Hedges & Olkin, 1985), the sample type (Pan & Zinkhan, 2006), and the cultural characteristics (Hofstede, 2011).

Motivated by a lack of understanding of the reasons for conflicting results, this research presents a meta-analytic study by synthesizing the conflicting findings on SMMA and BL's relationship to fill the gaps among conflicting findings on SMMA. This study is also supported by the results of a recent systematic literature review (Alalwan et al., 2017) that called for the need to review statistical evidence using meta-analysis in SMM. This present study assessed the full text of 221 articles that met the inclusion criteria and evaluated them for suitability. From the total of 221 articles eligible for the study, our meta-analysis study examined the effects of SMMA in 11 studies that had not been previously synthesized by meta-analysis.

Kim and Ko (2012) model of SMMA has recently become significant in marketing research because various studies have applied the five dimensions of SMMA with different customers responses (Athwal et al., 2018; Chen & Lin, 2018; Cheung et al., 2020; Godey et al., 2016; Koay et al., 2020; Moslehpour et al., 2020; Panigyrakis et al., 2019; Zollo et al., 2020). A recent meta-analysis explored the relationship between SMMA and customer responses (brand equity and purchase intention) with 20 effect sizes (Ibrahim et al., 2020). In the present study, we respond to the recent call by Ibrahim et al. (2020) for using meta-analysis to research the relationship between SMMA and the dimensions of customer-based brand equity (CBBE) (in our study, BL is the dimension). Accordingly, the robustness of the SMMA-BL linkage remains questionable, because no effort has been made to achieve an aggregate finding that demonstrates its strength, and a comprehensive review of prior studies is necessary. Individual SMMA-BL results are arguably compromised by limited sample sizes or demographic preferences (Algharabat, 2017; Ibrahim et al., 2020; Ibrahim & Aljarah, 2018; Ismail, 2017). However, keeping in mind that meta-analysis “refers to the analysis of analyses—the statistical analysis of a large collection of analysis results from individual studies to integrate the findings” (Wolf, 1986), a meta-analysis collects data from a more diverse sample than individual studies. Therefore, we discovered a need to conduct meta-analytic research

on the relationship between SMMA and BL to gain a comprehensive view of the role that SMMA plays in determining BL.

Additionally, potential moderators have been identified due to the inherent variations evident in the studies that have reviewed the methodological (sample type and survey type), social (human development index [HDI] and level of globalization), and economic variables (country brand ranking and connectivity level) (Aljarah et al., 2018; Aljarah & Ibrahim, 2020; De Oliveira Santini et al., 2018; Fern & Monroe, 1993; Ibrahim et al., 2020; Santini et al., 2016; 2019). Our study considered not just from the first paper that examines the moderator role of SMMA; however, the paper is the first empirical effort to observe these moderators' confines situations. Primary studies have yet to examine the moderating forces that might affect the SMMA–BL relationship (Ibrahim & Aljarah, 2018; Ismail, 2017; Salem & Salem, 2019; Yadav & Rahman, 2018). This issue has not gone unobserved by scholars, and several authors have pointed to the necessity for moderating roles to be measured in future research in the SMMA area (Algharabat, 2017; Ibrahim et al., 2020; Ibrahim & Aljarah, 2018; Torres et al., 2018; Yadav & Rahman, 2017, 2018). For example, Arora and Sanni (2019) have pointed to the essential to examine the moderating effects of cultural and international sides in SMM research.

Our research contributes to the SMMA literature in several ways. First, we purpose to add a statistical component to the accumulated research that addresses the effects of SMMA on BL. Second, we propose discourse the contentious outcomes in the SMMA field by showing a meta-analysis. This pervious point is important because the literature on SMMA and BL (Bilgin, 2018; Ibrahim & Aljarah, 2018; Ismail, 2017; Yadav & Rahman, 2018) offers inconclusive or conflicting results findings regarding the strength of the SMMA–BL relationship. Third, we aim to investigate the role of six contextual factors that may explain the mixed results in the literature and enrich our understanding of the nature of the SMMA–BL relationship in different contexts.

Literature review

Social media marketing activities

Based on observation of the previous studies, the current direction of traditional marketing in the coming years, marketing activities (e.g., promotion, advertising, and campaigns) will be fully dominated and controlled by social media platforms (Appel et al., 2020; Dwivedi et al., 2020; Ibrahim et al., 2020). Notably, social media platforms are considered a rich target for companies seeking to market their goods and services and one of the best choices for marketers to reach potential customers. Seo and Park (2018)

define social media as an online application program or platform that eases interactions, joint work, or content sharing, especially in marketing activities. Akar and Topçu (2011) note that marketers are beginning to recognize the value of what Miller et al. (2009) and Okazaki and Taylor (2013) refer to as SMM. They include SMM as a component of their marketing strategies and operations because it has increased commercial and marketing activities for their organizations. Chi (2011, p. 46) defines SMM as forming “meaning and connection between brands and customers and offers a personal channel and currency for user-centered networking and social interaction”.

Kim and Ko (2010, 2012) created a new SMM framework, referred to as SMMA (entertainment, interaction, trendiness, customization, and WOM). Their study concluded that SMMA enhances customer equity dimensions (value, relationship, and brand) equity for customers in the luxury fashion industry. Therefore, Kim and Ko (2012) consider it an active marketing communication approach. Ibrahim et al. (2020, p. 548) define SMMA as “promotional and relational communication tools that complement organizational marketing strategies’ application by offering enhanced interactivity through online relationships between organizations and consumers”. Also Koay et al. (2020, p. 3), define SMMA as “how consumers perceive a company or brand engagement in various social media marketing activities”. While some studies have addressed SMMA in different contexts and industries, most have examined it in the luxury industry (Gautam & Sharma, 2017; Godey et al., 2016; Kim & Ko, 2010; Zollo et al., 2020). Different contexts within which SMMA has been explored include education on Facebook pages (Spackman & Larsen, 2017), among smartphone users (Cheung et al., 2020), the hospitality industry (Moslehpour et al., 2020; Seo & Park, 2018), and the service industry (Torres et al., 2018). Moreover, the SMMA model has been partially examined by Moslehpour et al. (2020) which reported a positive influence of dimensions of SMMA (entertainment and interaction) on trust and perceived value for airline products in Indonesia. In comparison, others have examined the impact of SMMA (trendiness, customization, WOM) on brand equity and brand trust among followers of social media platforms for telecommunications companies (Ebrahim, 2019). In this study, our operational definition for SMMA will be based on the five dimensions of SMMA proposed by Kim and Ko (2010, 2012).

Brand loyalty

The loyalty concept has long been a prominent topic of interest among marketing researchers (Li James Petrick, 2010; Rundle-Thiele, 2005).

Loyalty can be defined as the attachment or feelings of customer toward a brand and/or company (Jain et al., 2018; Kotler & Gertner, 2002). Oliver (1999, p. 34) has defined BL as “a deeply held commitment to re-buy or re-patronize preferred product/service consistently in the future”. The most commonly used definition of BL is a procedure of repeat buying behavior that involves a conscious decision to continue purchasing the same brand (Jacoby & Chestnut, 1978). For BL to occur in a clearer sense, a frequent buying style must be consistent with a positive attitude to the brand (Merisavo & Raulas, 2004). BL specifies a customer’s motivation to be loyal to a brand, and it is reproduced when customers select the brand as their primary choice (Yoo & Donthu, 2001). Therefore, BL is conceptualized based on a framework composed of three components: behavioral (e.g., Chaudhuri & Holbrook, 2001; Ehrenberg & Goodhardt, 2000), attitudinal (e.g., Dick & Basu, 1994; Jacoby & Kyner, 1973), and a combination of behavioral and attitudinal (e.g., Day, 1976; Dick & Basu, 1994; Jacoby & Kyner, 1973). Behavioral loyalty is centered on the repurchase process, which attracts a customer and encourages loyalty to a specific brand (Ehrenberg & Goodhardt, 2000), while attitudinal loyalty is defined as “the client’s tendency toward the brand as a result of a psychological stimulus” (Mellens et al., 1996). Rauyrueen and Miller (2007) define attitudinal loyalty as “the level of [a] customer’s psychological attachments and attitudinal advocacy toward the service provider or supplier”. The third type of loyalty is composite loyalty, a combination of behavioral loyalty and attitudinal loyalty. Dick and Basu (1994) model are among the most well-known models that explain the relationship between attitudes and behavior loyalty. Their study provided a conceptual framework of loyalty and argued that a highly positive attitude as well as repeated patronage are required to determine true loyalty. In this study, we will measure BL by using a framework incorporating all three of these measures.

Theoretical background

Social media marketing activities and Brand loyalty

BL has been addressed in SMMA literature either as attitudinal loyalty (Algharabat, 2017) or encompassed behavioral loyalty and attitudinal loyalty (Ibrahim & Aljarah, 2018). The relationship between SMMA and BL has been examined by Ismail (2017), who indicated that SMMA has a positive effect on BL based on a sample of students and that this effect is mediated by the customers’ brand and value consciousness. Similarly, positive results were reported for customers of hotels Facebook pages (Ibrahim & Aljarah, 2018). Moreover, Algharabat (2017) found that SMMA positively

affects consumers' BL by increasing the brands' inner and social self-expressiveness and, in turn, consumers' loyalty toward them.

SMMA is an interactive tool that enables direct two-way communication between consumers and brands (Kim & Ko, 2012). SMMA enables marketers to communicate with customers (Ismail, 2017) actively and form a source of easy access, thereby facilitating their search for information about brands (Laroche et al., 2013; Merisavo & Raulas, 2004). Subsequently, if the customer replies favorably to a company's advertisements and promotions through social media, the relationship will develop between the consumer and the corporate brand (Fournier, 1998). Consequently, a strong customer-brand relationship resulting from SMM will enhance consumer loyalty toward the corporate brand (Fournier, 1998). In detail, as customers appreciate regular communication from the brand, it can further enhance their BL (Merisavo & Raulas, 2004). As a result, SMMA is essential in building relationship equity and BL (Ibrahim et al., 2020; Ismail, 2017; Kim & Ko, 2012). In other words, the more effective interaction and connection with effective customers, the stronger the existence of customer-brand relationships, which may lead to stronger BL. Therefore, we expect a positive relationship between SMMA and BL across undertaken studies.

Therefore, we expect a positive relationship between SMMA and BL across the published studies. Thus, we hypothesized:

H1: SMMA have a positive impact on brand loyalty

Potential moderators

Moderators in meta-analysis studies have been defined as variables that, if added, may account for or help to explain the heterogeneity of the results of different studies examining the relationships between the same constructs (Arthur et al., 2001). The current study evaluates the moderating effect of several variables that may explain the effect sizes variances for the relationship between SMMA and BL. This investigation is significant because methodological (Aljarah et al., 2018; Aljarah & Ibrahim, 2020; Hedges & Olkin, 2014), economic (Zarantonello et al., 2013) and social variables (De Oliveira Santini et al., 2018, 2020) may play a role in the inconsistencies between SMMA and BL. The classifications and analysis of moderators proposed by prior scholars (De Oliveira Santini et al., 2018; Santini et al., 2019) have been used: methodological, economic, and social variables. The methodological moderators include sample type and questionnaire type. The social moderators included HDI and level of globalization, and the economic moderators include country brand ranking and connectivity level (see Figure 1). Scholars have used these methodological

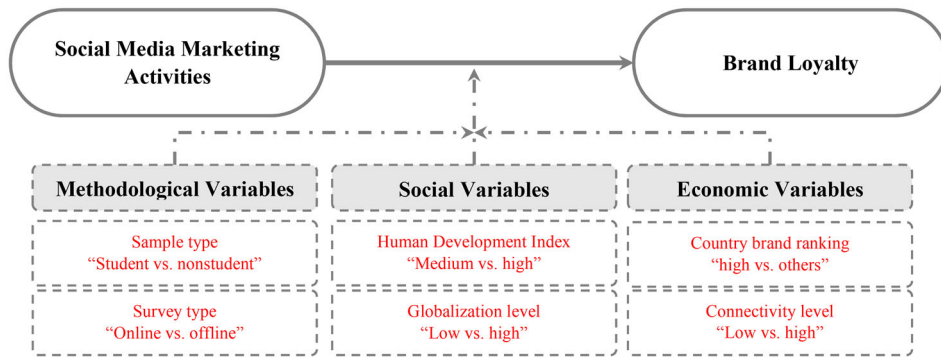


Figure 1. The conceptual framework of the research.

moderators to overcome the limitations of effect-size estimation (De Oliveira Santini et al., 2018; Fern & Monroe, 1993; Lipsey & Wilson, 1993).

Methodological moderators

Sample type

Regarding the sample type, we used a student-versus-nonstudent. In this study, we depend on Peterson's (2001) definition to clarify the non-student sample. The non-student sample "is defined as non-college students and includes adults, consumers, the general public, and people in general, older than 22 or 23 years of age. Elementary, middle, or high school students are not included in this definition and were excluded from the non-student subjects studied" (Peterson, 2001, p. 450). Using a student sample has often debated in SMMA research (Algharabat, 2017; Ismail, 2017; Ismail et al., 2018; Yadav & Rahman, 2017). We focus on sample type (students/non-students) because using homogeneous student-based sample (Pan & Zinkhan, 2006) might improve outcome in a bias to stronger effects than would be established in the general population (Johnson & Eagly, 1989). Beside using student sample can lead to limited ranges and weakened effect sizes (Pedhazur & Schmelkin, 1991). The student-based sample is more homogeneous because of the similar characteristics of age or education (Peterson, 2001) and will reply similarly to questionnaire items (Fern & Monroe, 1993). We expect that studies using students as a sample can determine an effect size more accurately than studies using nonstudent-based samples. The logic behind this expectation is that in the student-based sample, respondents may be more biased toward strong effects than in nonstudent-based samples (Brown & Stayman, 1992). Prior meta-analytic studies showed that student-based samples had an average to the high level of correlation among study constructs (Brown & Stayman, 1992; Chae et al., 2019). Thus, we hypothesized:

H2. The impact of SMMA on brand loyalty is stronger in student sample than it is in non-student sample.

Questionnaire type

The survey employed has been classified as either online or offline. In an online survey, the participants can respond almost immediately via email or through social network platforms, and the data are collected automatically (DeFranzo, 2012). However, the main concern is that different outcomes are formed by the same survey posted online and offline (paper) (Morrel-Samuels, 2003). The online survey is more ease, attractive, and competent than an offline survey (Davidov & Depner, 2011). An offline survey enables a higher response percentage, greater representativeness of the total population, and less measurement error (Davidov & Depner, 2011; Shih & Xitao Fan, 2008). Some previous studies in marketing also indicated that offline surveys would yield a stronger effect size than online surveys (Aljarah & Ibrahim, 2020; Wang et al., 2018). Therefore, using an offline survey may produce a larger sample size, and we expect an offline survey to have a stronger effect size than an online one. Thus, we hypothesized:

H3. The impact of SMMA on brand loyalty is stronger in an offline survey than in an online survey.

Economic and social development moderators

The economic and social development moderators are verified through four moderators: the HDI, globalization level, connectivity level, and country brand ranking. Earlier scholars confirmed that the social and economic variables influence individuals' ideals and symbolic beliefs regarding brands (Belk et al., 1982; De Oliveira Santini et al., 2018; Zarantonello et al., 2013). Therefore, we argue it is pertinent to examine these moderators and explore their influence on SMMA and BL's relationship.

Human development index

The HDI measures countries' development levels through their life expectancy, education, and living standards (UNDP, 2018). The HDI was a basis for examining the relationship between SMMA and BL. A stronger relationship was predicted based on the research showing that high-HDI countries in our study generate stronger effects than medium-HDI countries. This assumption is based on the results of prior studies that have shown that high-HDI countries are deemed to have more mature communities in terms of their online communication capabilities, such as using social

media platforms; they have greater confidence in and a more positive attitude toward this online transaction channel (Kim & Peterson, 2017). Innovative economies are developing in technology and digital knowledge determined with a high human capital level (Becker, 1964). In our study, the medium –HDI countries are India, Pakistan, and Indonesia. In India, for example, Technology users are aware of any changes that may arise from using the communication tools (Dwivedi et al., 2017). Small and medium companies are usually reluctant to adopt SMM, especially if using social media marketing is cheaper than traditional marketing tools (Dixon & McAllister, 2002; Misirlis & Vlachopoulou, 2018). Thus, we hypothesized:

H4. The impact of SMMA on brand loyalty is stronger in High HDI countries than medium –HDI countries

Level of globalization

The globalization index measures the globalization level of countries through them the economic, social and political dimensions of globalization (KOF, 2018). In the same vein, countries were classified into two groups: high-global and low-global. This classification was based on the origin of works' collection and the KOF Globalization Index's median value. Depending on previous criteria, the high- global countries in our study classified as following: (Indonesia- Jordan- Malaysia- Northern Cyprus- Turkey) and the low-global countries can be: (India- Iran – Pakistan). We expected stronger relationships for research conducted in high-global countries than low-global countries related to SMMA and BL. This is because the former has better skills and awareness regarding social media platforms (Kim & Peterson, 2017). The business corporations in high-global countries will be faster to implement social media tactics and achieve effective strategy internationally (Brown, 2016). The high level of globalization for countries allows customers to select a different type of business; this creates the business' ability to customize the appropriate business services (Abuhashesh, 2014). Moreover, highly globalized countries create the technologies and knowledge that enable this development process to occur and be more readily available. Thus, we hypothesized:

H5. The impact of SMMA on brand loyalty is stronger in high-global countries than low-global countries

Country Brand ranking

In our study, the moderating effect of country brand ranking has been examined by classifying studies that have been carried out in countries with a high brand-ranking level and others published in countries with a lower brand-ranking level. A stronger relationship is expected in research

conducted in countries with a very high brand ranking because these countries have more capabilities regarding online communications (Kim & Peterson, 2017). In our study the countries with a high brand-ranking level have more sophisticated markets that make the advancement of the brand a beneficial source of products/services for the shareholders, purchasers, and society (i.e., by creating the impression of a real or imagined higher standard of living); this, creates well-known strong brands that are linked with loyal customers (Akademia Leona Kozłmińskiego & Saykiewicz, 2009). Thus, we hypothesized:

H6. The impact of SMMA on brand loyalty is stronger in high brand-ranking level than the lower brand-ranking level

Connectivity level

Finally, countries have been classified as low and high connectivity. We expect a stronger SMMA–BL linkage in the studies that have been carried out in countries with a high level of connectivity because the high-connectivity countries have customers who have a greater ability and stronger expertise regarding online digital platforms (Yamagishi & Yamagishi, 1994). In our study, the countries with a high level of connectivity have more accessible and affordable for the Internet (Dataforgood, 2020). In high connectivity countries, the Internet’s availability gives the customer ease of use from different ways, like, (i.e., paying the bills, buying or selling the goods) (The Inclusive Internet Index, 2020). However, in lower connectivity countries, where traditional infrastructure is likely to be less developed, customer ability to use the Internet to buy or sell is little compared to the high connectivity countries (The Inclusive Internet Index, 2020). This expectation is based on our prior arguments that Table 1 includes detailed information about our potential moderators and each one’s source. Thus, we hypothesized:

H7. The impact of SMMA on brand loyalty is stronger in high connectivity countries than in lower connectivity countries

Methods

Advantages of meta-analysis

We conduct meta-analytic research on the relationship between SMMA and BL. The using meta-analysis approaches considering the different advantages of, such as the generalizability of the findings, larger and more diverse sample sizes (Field & Gillett, 2010; Hunter & Schmidt, 2004; Walker et al., 2008), and uniqueness of showing marketing research across different countries (Deshpandé & Farley, 1999).

Table 1. Potential moderator effects

Variable	Descriptions	Coding
The Methodological Variables		
Sample type	The sample type could be students or non-students. This classification was approved in the methodological report of the studies	0 =Student 1 = Non-student
Survey type	The sample type could be an online or offline survey. This classification was approved in the methodological report of the studies	0 =Online 1 = Offline
The Social Variables		
Human development index	We used the Human Development Index (HDI) that was issued by the United Nations (UN) in 2017. For this, the median values acquired for each country that approved the study were again acquired.	0 =Medium HDI countries 1 = High HDI countries
Globalization level	We used the Globalization Index that was established by Konjunkturforschungsstelle (KOF) Globalization Index in 2018 of the 209 countries in the world. For this, the median values gained from each country in the study are acquired.	0 =Low global country 1 =High global country
The Economic Variables		
Country brand ranking	We used the Country Brand Ranking Index (Bloom, 2017). In this case, the median of the country brand ranking indices of each country of the study was obtained.	0 = high 1 = Others
Connectivity level	We applied the Inclusive Internet Index 2019 that was issued by The Economist (2019) for 100 countries, the median value of the connectivity indices of each country of the study was acquired	0 = Low connectivity 1 = High connectivity

The meta-analytical study offers an opportunity to assimilate findings, thus generating a generalizable understanding of a phenomenon (Lipsey & Wilson, 2001). In the same vein, the advantage of a meta-analysis is that it compares and integrates consequences across individual research studies. It helps govern the consistency of the results while explaining the differences in the observed effects, as it is important to outline what we know and, more importantly, do not understand (Palmatier et al., 2018).

When conducting a meta-analysis, some researchers claim that if there are only two studies and equal, statistically significant effects in the same direction, perhaps the intervention is operative (Cooper, 2003; Valentine et al., 2010). An Introduction to Meta-Analysis, Borenstein et al. (2009) confirmed that it is logical to conduct a meta-analysis as soon as there are two studies. In the same vein, meta-analyses conducted on few studies or small effect sizes between two variables have been reported extensively. They state that there are no excellent options when the number of studies is small.

Search strategy

A two-stage data collection method was used. In the first state, we generate a search string that contained most of the variables under-study in the different databases (Scopus; ISI Web of Science; and ProQuest Dissertations

and Thesis Global). Our search string has depended on skimming literature by looking for literature on two main boundaries; 1) Social media marketing activities -related keywords such as social media marketing activities, social media marketing, and 2) Brand loyalty related keywords such as brand loyalty, customer loyalty, behavior loyalty, attitudinal loyalty, and loyalty. We applied our strategy string was to object three key measures in the possible articles “the article title, the abstract, and the keywords somewhat than the complete manuscript of the article”. Neither time nor language restrictions were applied. Our first stage search strategy accounts for articles. The second stage involved conducting a manual search of related articles on Google Scholar. The second screening procedure was undertaken to select studies; the other keywords were SMMA, SMM, and social network marketing to search for more articles. The resulted in an additional four articles that meet our inclusion criteria.

Inclusion criteria

The theoretical model measured by Kim and Ko (2010, 2012) to explore the SMMA was based on five major aspects, and this has been used in this investigation as the crucial pointer to SMMA. As we know, there are many types and names of social media marketing variables that are examined in marketing research; for this, we focus on the model of Kim and Ko (2010, 2012) with five dimensions. We search in all databases to catch the articles which depend on the same model of SMMA. Studies were also designated to include in the meta-analysis based on these criteria. First, observed studies were comprised if they reported the correlation coefficient. Second, just articles available from the start of 2010 to April 4-2019 have been encompassed because the year 2010 coincides with the initial presence of the SMMA framework by Kim and Ko (2010, 2012). For the SMMA-BL relationship, the first article was undertaken in 2015. All the selected articles in this research were published from 2015 to 2019. The exclusion criteria for articles can be: first, studies did not report the correlation coefficient or studies that did not report the SMM in qualitative methods. Second, studies focused on SMM with other concepts (not SMMA) or link between SMMA and different consumer responses (not brand loyalty). Third, studies link SMM with other brand equity dimensions (not brand loyalty). [Figure 2](#). exemplifies the study collection procedure categorized in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2009). Afterward, implementing our search progression based on the study presence standards in April 2019, we acquired 11 articles with 11 effect sizes assembling all the investigation presence standards (see [Table 2](#)).

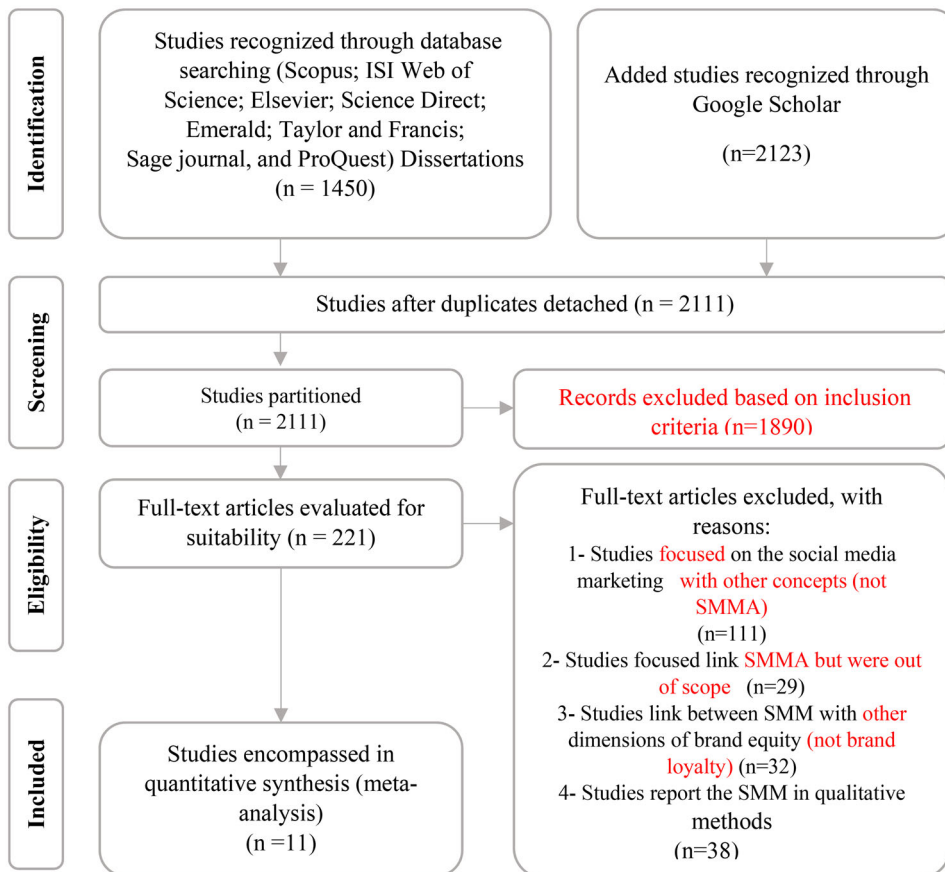


Figure 2. Study selection process. Modified from the PRISMA. Source: (Moher et al., 2009).

Table 2. Study Data Used in Meta-Analysis.

No.	Author	Year	n	r	Location
1	Salem and Salem	2019	240	0.41	Malaysia
2	Khan (2019)	2019	241	0.37	Saudi Arabia
3	Ibrahim and Aljarah	2018	389	0.26	Northern Cyprus
4	Yadav and Rahman	2018	371	0.09	India
5	Laksamana (2018)	2018	286	0.38	Indonesia
6	Bilgin	2018	547	0.63	Turkey
7	Ahmed and Hussain (2018)	2018	250	0.40	Pakistan
8	Ismail	2017	346	0.43	Malaysia
9	Algharabat	2017	400	0.24	Jordan
10	Karamian et al. (2015)	2015	315	0.80	Iran
11	Tariq (2015)	2015	150	0.25	Pakistan
	The final sample size		3535		

Coding procedure

Data extraction was accomplished by the author based on an established standardized table using Microsoft Excel 2016. A clear definition of the study constructs, representative items, and some of the representative scales have been provided to ensure validity and reliability concerns deliberated

by Grewal et al. (2018). The full text of papers has been labeled: Authors, study sample size, effect sizes, the year of publication, country. The list of included studies in our meta-analysis is listed in Table 2. All samples were coded independently by a doctoral student and the author. They then compared their individual codes, discussed apparent differences, and corrected them by referring to the respective studies.

Meta-analysis procedure

The effect sizes have been synthesized across the primary studies by applying the Hunter and Schmidt meta-analysis methods (Hunter & Schmidt, 2004) and followed a recent study by Aljarah and Ibrahim (2020) to conduct the meta-analysis result. Depending on these approaches, there are several relics we must consider when combining the total effect. We have only corrected for sampling error and measurement error. We classified the matter of the sampling error by allowance the effect sizes according to the sample size of the individual study, and then we found the whole effect size by combining them. Next, we modified the effect sizes for measurement error. By applying the individual correction methods, the following formula was used to correct measurement error (Hunter & Schmidt, 2004);

$$r_c = r_{xy} / (\sqrt{r_{xx}} * \sqrt{r_{yy}})$$

Where r_{xx} and r_{yy} represent the SMMA and BL's measurement reliability, respectively, and r_{xy} is equal to the correlation between the contracts. The Cronbach's alpha values stated in the individual study were used as the core pointer of reliability estimations for the paper concepts recommended by Hunter and Schmidt (2004). If the value of Cronbach's alpha is not reported in the individual study, the regular reliability in other studies has been used in the state. To inspect our contextual factors moderating effect, we first conduct a subgroup analysis for the respective moderator to find the differences between the groups. To determine whether the differences were statistically significant, we initially found the inverse Fisher Z-transformation of each subgroup's mean effect sizes (Rosenbusch et al., 2011). In the third step, we ran the meta-regression model, including all moderators' effects as recommended by Hunter and Schmidt (2004). In our meta-regression model, the effect sizes between SMMA and BL represent the dependent variable, while the methodological, social, and economic moderators represent the independent variable. Then, we competed the meta-regression model, counting some moderators' influence, considering that examining each moderator separately might lead to deceptive outcomes (Hunter & Schmidt, 2004). Studies that did not report evidence about the moderators were omitted.

Table 3. Bivariate analysis of studies and subgroup analysis.

Variables	K	$\sum n$	r	ρ	95 % conf. int.		r to Z-transform	I ²	Q	N _{FS}
					Low	High				
H1:SMMA and BL	11	3535	0.39	0.49	0.32	0.65	–	94.62	145.28**	43
H2:Sample type										
Students	5	1517	0.27	0.33	0.10	0.57	–10.30**	87.78	35.15**	23
Non- Students	6	2018	0.49	0.60	0.34	0.84		95.60	78.57**	30
H3:*Survey type										
Offline	7	2097	0.37	0.45	0.20	0.70	–4.49**	95.10	106.58**	25
Online	3	1197	0.45	0.57	–0.06	1.22		96.28	49.79**	14
H4:Human Development Index										
High HDI	7	2478	0.45	0.55	0.33	0.77	7.79**	95.48	97.54**	32
Low HDI	4	1057	0.26	0.32	–0.01	0.67		88.92	31.47**	9
H5: Level of Globalization										
High	6	2208	0.40	0.49	0.28	0.70	0.35 ^{ns}	94.21	60.46**	24
Low	5	1327	0.38	0.48	0.05	0.92		97.42	112.34**	19
H6:Country Brand Ranking										
High	5	1834	0.36	0.44	0.10	0.78	–3.91**	96.02	94.24**	17
Other	6	1701	0.43	0.54	0.29	0.79		93.42	60.76**	26
H7:Connectivity Level										
High connectivity	6	2163	0.40	0.49	0.28	0.70	0.37 ^{ns}	92.65	57.18**	24
Low connectivity	5	1372	0.38	0.48	0.06	0.90		96.56	105.43**	19

$\sum n$ = total sample size, k = number of independent samples.

*Survey type one study removed because it unknown if they use online or offline survey.

Finally, publication bias has been addressed using Orwin's fail-safe N (N_{fs}) (Orwin, 1983) methodology. The following equation has been used to compute N_{fs} : $N_{fs} = k_0 (r_0 - r_c)/(r_c - r_{fs})$ Where k_0 is the number of studies included in the meta-analysis, r_0 is the mean effect size of included studies, and r_c is the criterion value selected as a target for the N_{fs} and, r_{fs} is the assumed effect size of each added study, typically set to 0. Table 3 shows that no issues regarding publication bias have been found since the number of studies used to calculate the effect sizes is less than the number of studies that needed to be added to make the mean effect size insignificant.

Results

Our bivariate meta-analysis's outcomes exhibited a strong positive correlation between SMMA and BL at the cumulative level of 0.49, demonstrating a medium to the large effect size of the SMMA–BL linkage based on Cohen's rule of thumb. As shown in Table 3, the confidence interval (CI) does not comprise the value zero (95%-CI [.32, .65]), so SMMA has a significant effect on BL. Hence, our assumption about the positive impact of SMMA on BL is strongly supported. Thus, Hypothesis 1 is accepted.

Tables 3 and 4 report our findings of the subgroup analysis and meta-regression. Our selected moderators (methodological, social, and economic variables) could clarify 73% of the variance in the relationship between SMMA and BL. For the moderating effect of sample type, the result of our subgroup analysis revealed that studies that comprised nonstudent-based samples reported large effect size ($\rho = .60$) compared to those that used

Table 4. Meta-regression (standardized coefficients presented).

Independent variables	β	SE	95 % confident.		p-value
			Low	High	
Constant	-0.2209	0.3119	-0.8323	0.3905	0.4788
Sample type	0.4481	0.1312	0.1909	0.7054	0.0006
Survey type	-0.1627	0.0637	-0.2876	-0.0378	0.0107
Level of globalization	-0.0881	0.1379	-0.3583	0.1821	0.5227
Country brand ranking	0.2769	0.11	0.0612	0.4926	0.0119
Human development index	0.085	0.211	-0.3285	0.4985	0.6871
Level of connectivity	-0.0755	0.2561	-0.5775	0.4264	0.7681
R-Square	.74				
Adjusted R-Squared	.73				

student-based samples, which stated small effect size ($\rho = .33$), based on Cohens' rule of thumb. The r-to-Z conversion result showed significant differences between the studies with student-based and nonstudent-based samples. Moreover, our meta-regression analysis exhibited a significant moderating effect of sample type on the SMMA-BL linkage. Thus, Hypothesis 2 is accepted. The corrected correlation coefficient of the studies that used an offline-based survey showed a more substantial value ($\rho = .57$) than that of the studies that used an online-based survey ($\rho = .45$). The outcome of our initial r-to-Z conversion and the meta-regression showed a significant moderating effect of survey type on the relationship between SMMA and BL. Thus, Hypothesis 3 is accepted.

Concerning the moderating role of the HDI, the result of the subgroup analysis exhibited a larger effect size for studies that were published in countries with a high HDI level ($\rho = .55$) compared with studies that were published in countries with a low HDI level ($\rho = .32$). However, r-to-Z transformation outcomes exposed significant differences between SMMA and BL. The meta-regression results exhibited no significant moderating effect of HDI on the SMMA-BL linkage. Thus, Hypothesis 4 is rejected.

There were trivial differences in our subgroup analysis regarding the level of globalization. However, the r-to-Z transformation and meta-regression results showed a non-significant moderating effect of globalization level on the SMMA-BL linkage. Thus, Hypothesis 5 is rejected. We found a similar result about the moderating effect of connectivity level. Thus, Hypothesis 6 is rejected. Finally, the studies published in countries with a high brand-ranking level reported smaller effect size ($\rho = .44$) than the studies published in other countries ($\rho = .54$). Furthermore, the meta-regression analysis outcome established the moderation effect of country brand ranking on the SMMA-BL relationship. Thus, Hypothesis 7 is accepted.

Discussion

The present research employed the meta-analysis approach to evaluate the relationship between SMMA and BL. Therefore, an analysis of 11 studies

published between 2010 and 2019, with a cumulative sample of 3,535, was carried out. Additionally, the role of six contextual factors was examined as potential moderators. These were classified into three groups that could influence the strength of SMMA and BL's relationship and explain the inconsistencies in previous studies on the SMMA–BL linkage.

Several contributions were presented in this study. Ours was the first comprehensive body of research that used psychometric meta-analysis to aggregate the effect sizes of studies about the SMMA–BL relationship. Our findings revealed that SMMA has a medium to strong effect on brand loyalty and corporate brands. While some studies showed a small effect size between SMMA and BL (Ibrahim & Aljarah, 2018; Yadav & Rahman, 2018) and others reported a large effect size between SMMA and BL (Bilgin, 2018; Karman, 2015), our findings rectified the inconsistencies in the results of the previous studies.

SMMA, as an active communication implement, offers more possible communication relations among customers and businesses. This two-way relationship provides wide-ranging information about brands easily accessible to users or customers. Consequently, SMMA provides good opportunities for marketers to have a wider reach and to build effective long-term relationships with consumers (Gautam & Sharma, 2017). As a result of developing these long-term relationships between customers and brands, the consumers (or followers) on social media platforms are more loyal and committed to corporate brands (Bagozzi & Dholakia, 2006; Ismail, 2017) and have opportunities to repurchase these brands. This argument follows our indicated position that BL can be built by achieving consumers' commitment to continually re-buy the brands.

Pancer et al. (2019) predicted and noted that different efforts in liking, commenting, and sharing increase the level of customer engagement with online brand communities through social media; marketers can also use these communities dynamically to change brand perceptions (Hakala et al., 2017). Customers in social media platforms can engage with companies to obtain the most recent news about their products or services. They also expect the next products and services have opportunities to share their voices in the brand communities, which they can then reliably use to build BL.

Today, social media is pervasive in our everyday lives. Giant social media platforms, such as Facebook, Twitter, Instagram, and YouTube, have countless users; therefore, companies are likely to find an abundance of customers and followers on these platforms. Many social networks offer continual promotional opportunities. For firms to succeed, they must listen to their customers on social media. On the other side, to create BL, brands have dedicated community managers on social media to monitor and listen to

people who talk about their brands. Social media is advantageous because using social media is cheaper than launching offline marketing campaigns. Securing new customers is also easier because of the vast number of social media users. Besides, content-sharing networks, such as Facebook, which use content-marketing strategies, rely on creating and sharing different online tools, such as videos, blogs, and social media posts. These efforts are intended to attract potential customers and provide them with information about products or services. In the same vein, people (customers or followers) might include tags to indicate specific brands in their posts, reach out, and interact with others expecting and even awaiting this interaction. Social media networks help firms maintain successful relationships with existing customers and turn them into lifelong (loyal) customers.

However, the customer wants to buy, use, or interact via social media platforms. The customer has expectations about social media and uses this source to satisfy their needs for a product or service. The SMMA comprises different efforts (entertainment, interaction, trendiness, customization, and WOM), considered communication-based opportunities to satisfy the customer's needs and create value. The extent to which the customer's needs are satisfied increases as more interaction occurs between the customer and the firm in the social media platforms. In our study, SMMA is considered a standard form of communication that carries value to a brand's users by providing them with the appropriate information, thus reducing their search for information accepted and desired by consumers. While these efforts may help marketers retain the customers interested in their brands. Satisfies customers' needs and leads to the appearance of new needs or expectations that begin with their interaction through social media platforms.

In our study, we examined the moderator's role. Based on previous studies, the sample type is one factor that can affect the strength of the relationship between SMMA and BL. However, our basic assumptions were that studies with student-based samples reported a larger effect size than nonstudent-based studies because the student sample is homogenous and may be biased toward a strong effect (Pan & Zinkhan, 2006). Our study findings revealed that such an assumption was not sustained. We found that the studies that did not use students as the sample reported larger effect sizes than the studies that used students for their sample. The meta-regression analysis findings confirmed a significant moderating influence from the sample type, and the logic behind these unexpected results could be explained as students being generally compulsive social media users contrary to non-students. The active use of social media-based brand communities is not defined as the active use of social media for marketing. The non-students, who were not enrolled at a university or were older than the cutoff age, may have strong robustness regarding the SMMA-BL

relationship. This sample may be comprising real customers with the power to purchase the goods and services advertised on these platforms. Besides, the non-student sample participants are generally older than those in the student sample. The former sample comprises long-term corporate customers, with the primary role of value creation (Bourne & Szmigin, 1998) and are inclined to base their loyalty on relational equity. This, in turn, makes them highly sensitive to corporate marketing efforts.

An additional implication of this research is that our meta-regression analysis showed a significant moderating effect of survey type on the relationship between SMMA and BL. Inconsistent with our theoretical argument, an online-based survey yielded a larger effect size than an offline-based survey. The logic behind this result might be that the online-based survey sample can respond almost immediately via social media or emails (DeFranzo, 2012); this could increase the response rate and positively influence the effect sizes between the constructs study. Although our subgroup analysis results indicated a more substantial effect size for primary studies conducted in high-HDI countries compared with those carried out in low-HDI countries, the meta-regression results did not show a significant moderating effect of HDI on the relationship between SMMA and BL. Similarly, contrary to our expectations, the studies conducted in high-global countries reported a greater effect size than those conducted in low-global countries. However, our meta-regression result did not support the significant effect of globalization level on the relationship between SMMA and BL.

One more contribution of this research is that our meta-regression analysis confirmed the moderating role of country brand ranking in the relationship between SMMA and BL. Consistent with our theoretical argument, studies published in countries with a very high brand ranking showed a weaker effect size between SMMA and BL than those published in other countries. Such an interesting result might be due to the included countries' nature. In this study, countries with low brand rankings were Jordan, Malaysia, Iran, and Pakistan. Inconsistent with Kotler's (2016) argument that emerging countries have greater flexibility and connectivity because of their younger and more productive populations, such emerging countries are considered developing and have a lower level of performance and competition regarding the expansion of potential brands worldwide. These countries are continuously striving to attain a higher level of economic development by improving their marketing strategies, relying on the service sector, developing the marketing environment, and creating new skills. Therefore, companies in these countries are more motivated to use social media platforms as promotional tools for branding or marketing purposes. Regarding consumer connectivity level, the results slightly

contradicted our expectation that studies undertaken in countries with a high level of connectivity would have a stronger effect size between SMMA and BL than those conducted in countries with a low level of connectivity; the difference was minuscule.

Implications for practitioners

The findings of this paper have numerous implications that should help practitioners comprehend the effect of SMMA on BL through social media platforms and eventually advance companies' business performance or marketing effectiveness. Table 5 shows a summary of the key findings and the theoretical and practical implications. Marketers and executives can use the results of this meta-analytic research to increase their efficacy based on their knowledge that SMMA generally increases customer loyalty. However, they also should know that this effect's strength depends on several contextual factors.

SMMA has been considered an effective tool in developing the consumer-company relationship (Ismail, 2017). Firms should work to build SMMA as a way of encouraging greater BL. Marketers can create marketing plans for their products or services through social media platforms to increase their marketing effectiveness. SMMA has several advantages. First, it is considered an approach that attracts customers by offering enjoyable experiences and entertainment. Second, it provides an easy interaction method via sharing and exchanging content and opinions with other users. Third, it supports customers by providing customized information; and fourth, it stimulates customers to spread positive WOM. Furthermore, the study asserts that marketing managers should enhance social media-based brand communities' content and match different age groups. For instance, our results showed that the nonstudent-based samples had greater sensitivity regarding SMMA and BL's relationship, so they comprise the real customers who have purchase power.

Managers should be not focusing their content solely on students or younger age groups; they should also try to adjust the content to match different age groups. Young age groups are more active on social media sites; however, other age groups are also important. Firms should share and generate different content types on social media platforms to encourage customers to interact more with the platforms, products, and services. Beside, marketing managers in countries with high brand rankings could benefit from the results. Based on our findings, in countries with high brand rankings, customer loyalty is less affected by SMMA.

Companies need not invest in more long-term loyalty programs through social media platforms. Perhaps they should invest in loyalty programs by

Table 5. Summary of key findings and theoretical and practical implications.

Key Findings	Theoretical Implications	Implications for Practitioners
<p>Direct relationship</p> <p>1- The findings of our bivariate meta-analysis revealed a strong positive correlation between SMMA and BL at the aggregate level of 0.49, representing a medium to large effect size of the SMMA–BL relationship.</p>	<p>SMMA plays an important and positive role in BL formation. This is a first comprehensive study to aggregate the effect sizes of SMMA and BL studies using psychometric meta-analysis.</p>	<p>Firms should work to build SMMA as a way to encourage greater BL. Consequently, marketers might create marketing plans for their products or services through social media platforms to increase their marketing campaigns' effectiveness. They would benefit from the advantage of SMMA as an approach that is used to attract customers by offering enjoyable experiences and entertainment, providing easier interaction methods by sharing and exchanging content and opinions with users, supporting customers by providing customized information, and stimulating customers to spread positive WOM.</p>
<p>Subgroup analysis</p> <p>2- The nonstudent-based sample for the large effect size ($r = .60$) boosted the SMMA effects on BL, compared to the low student-based sample, which reported small effect size ($r = .33$).</p>	<p>Students are generally heavy users of social media. However, social media's active use is not generally for marketing purposes. This sample may be considered as comprising real customers who have the purchasing power to use social media platforms. The sample comprises long-term corporate customers who have the main role in value creation (Bourne & Szmigin, 1998).</p>	<p>Managers should not focus their content solely on students or younger age groups; they should try to adjust the content to match different age groups.</p>
<p>3- Inconsistent with our theoretical argument, the online-based survey yielded a larger effect size than the offline-based survey regarding the relationship SMMA and BL.</p>	<p>The sample participants in the online-based survey can respond almost immediately via social platform or emails (DeFranzo, 2012), which may increase the response rate and possibly positively influence the effect sizes between the study constructs.</p>	<p>To gain greater loyalty, firms should focus primarily on finding ways to keep customers more connected with the online environment.</p>
<p>4- The studies published in countries that had obtained a very high brand-ranking level reported smaller effect size ($r = .44$) compared with the studies published in countries with a lower brand-ranking level ($r = .54$) regarding the relationship between SMMA and BL.</p>	<p>Companies in these countries with a low-level brand ranking (emerging countries) are continuously attempting to achieve a higher level of economic development by improving their marketing strategies, relying on the service sector, developing the marketing environment, and creating new skills. Therefore, they are more motivated to use social media platforms as promotional tools for branding or marketing purposes.</p>	<p>Managers or firms in countries with low-level brand rankings can invest in long-term loyalty programs with unrelated rewards that need to be obtainable to be attractive. Firms should focus more on comprehensive promotion strategies because countries with low-level brand rankings are not yet mature regarding social media marketing.</p>

engaging in promotional activities with immediate rewards to boost repeat purchases and loyalty-building (Thompson et al., 2015). Also, managers in countries with a low-level brand ranking can invest in long-term loyalty programs with unrelated rewards; these would need to be obtainable for

them to be attractive. Firms should focus more on using effective promotion strategies because countries with a low-level brand ranking are not yet mature regarding marketing via social media. Concerning online surveys, firms should focus primarily on finding ways to keep customers connected with the online environment to increase their loyalty. However, some moderator effects (HDI, globalization level, and connectivity level) were not significant regarding the SMMA–BL linkage. These moderators do not differ in creating plans and enhancing the relationship between SMMA and BL.

Limitations and future studies

This study should have the scientific benefit of advancing the understanding of the relationship between SMMA and BL. However, it is not without limitations. Although our meta-analysis results were satisfactory and enabled its sufficient completion, the small sample size, in terms of the number of studies on the constructs in our research, is a limitation that impacts the generalizability and statistical power meta-regression analysis of the moderators. They were noticeably inadequate for subgroup analysis. Due to the diverse but common SMMA and BL measurements of these 11 studies, the problem of common method bias was significant; however, this problem is ingrained and cannot be resolved using meta-analysis. Our study, which is the first of its kind to undertake a meta-analysis of the SMMA and BL, was needed to analyze the relationship's nature and contribute to our understanding of SMMA and BL's mechanism based on different conditional factors (moderators).

Future studies should involve a more in-depth examination of a greater number of relationships with other variables. Such an undertaking was impossible in this study because the number of obtainable articles was too small to enable sufficient determination and examination of more relationships between SMMA and different types of consumer responses (e.g., customer satisfaction, customer equity, and customer trust). Therefore, we were restricted to the specific consumer response—namely, BL. The study was also constrained in data availability and relied on existing studies' data. There were fewer effect sizes for the SMMA–BL relationship in the data than for other relationships. We recommend conducting a meta-analytic review or quantitative study of the relationship between SMMA and (CBBE). Several moderators were explored in this study; however, future researchers are encouraged to replicate this research by adding more contextual factors (moderators) that have not been examined in our research (e.g. cultural difference, country development, and type of product). Meta-analytic structural equation modeling can be explored in a future study for the proposed stimulus–organism–response (SOR)-SMMA model. The

stimuli are, for example, relationship equity as an organism and, for instance, BL and brand equity being a response. Finally, future studies can also discuss the antecedents and consequences of SMMA through a systematic review or meta-analytic review.

ORCID

Blend Ibrahim  <http://orcid.org/0000-0002-2410-765X>

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