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MARKETING | RESEARCH ARTICLE

Social media integration: An opportunity for SMEs sustainability

Emmanuel Bruce¹, Solomon Keelson², John Amoah³ and Sulemana Bankuoru Egala^{4*}

Abstract: The changing trend in the circular economy has pushed most firms to be competitive in their business activities using emerging technology. SMEs in recent times are increasingly leveraging technologies such as social media to enhance their interactions with their customers, increase their reach and become competitive. Despite this, SMEs in the manufacturing sector in developing economies are often underexplored in literature in their resolve to leverage social media to improve their performance and sustainability. This research explores the integration of social media in SME manufacturing firms' activities toward their performance and sustainability in developing countries. Drawing on relevant literature and the social media engagement theory, we employed a questionnaire survey to collect data from 417 managers/staff of SME manufacturing firms in Ghana, using PLS-SEM techniques for the analysis. Research findings revealed that social media integration proved a direct positive correlation with SME manufacturing firms' performance. Additionally, it was revealed that social media utilization has a positive and significant effect on SME manufacturing firms' performance. The findings further show that social media usage assists SME firms' performance and fosters their sustainability. It is concluded that SMEs should incorporate social media marketing strategies for firms'-customer relationships and internal and external collaboration. By implication, this study offers practitioners and researchers knowledge regarding social media integration among SMEs in emerging economies.

Subjects: Business, Management and Accounting; Industry & Industrial Studies; Information Technology

Keywords: social media; integration; SMEs; firm sustainability; social media engagement theory

PUBLIC INTEREST STATEMENT

Scholars and practitioners in the field of digital marketing have recently become interested in the integration of social media. Even though social media also function as a digital entertainment platform and a channel for marketing communication. Once more, the impact of technology and the fierce competition among organizations in the modern era of marketing cannot be understated. The current study investigates how SMEs integrate social media into their business performance, and its impact on sustainability in emerging economies, particularly Ghana. The study's findings should serve as a wake-up call to practitioners of current and new enterprises about the importance of integrating social media in the 21st century for diverse purposes for medium to long-term business operations. The research not just adds to the literature but also serves as a reminder to experts about the importance of developing countries integrating social media for digital marketing.

1. Introduction

Internet advancements have impacted the activities and interactions of both businesses and society. For instance, the advent of the internet has enabled business processes and operations to engender operational excellence (Sohail et al., 2020). Again, e-commerce has also brought about boundless commercial activities creating new business opportunities and creating customer intimacy. Yet, the demand by customers keeps changing given the complex nature of consumer demands. Moreover, getting to know consumers' preferences and behavior at a face value becomes a daunting task. As a remedy, several businesses are leveraging social media to aggregate consumers' comments and tailor-made their products and services to meet the demands of the customers (Amoah et al., 2021). To respond to customer demand and stay competitive, businesses have adopted social media as a marketing tool for their customer intimacy (Boyd, 2007). Social media as described by Kaplan and Haenlein (2010) is "a series of Internet-based applications that expand on the theoretical and technological foundations of Web 2.0 and allow the creation and sharing of content and ideas and exchange of user-generated content". Since its emergence, several business enterprises have adopted social media as an effective marketing tool to conduct business activities (Jibril et al., 2019; Mason et al., 2021; Qalati et al., 2021). Kaplan and Heinlein (2010) evidenced that social media have been used by firms to manage relational activities. It also facilitates communication between companies and customers (firm-customer relationship).

Undeniably, Small and Medium Enterprises (SMEs) have felt the impact of social media (Jussila et al., 2014), though very few SMEs have adopted and utilized this essential tool (Abed, 2020; Zamberi et al., 2019). In developing countries, SMEs are considered the mainstay of the economy (Amoah, 2018; Tiwary et al., 2021). According to Rauniar et al. (2014), SMEs play a key stimulant to strengthen the economy via job creation, social cohesion, source of income, and stability to a country's economy. Consequently, providing a significant step in poverty reduction especially in developing countries (Kumar, 2017; Singh & Thakar, 2018). From the background of Oliveira and Martins (2011), globalization and trade liberalization have diverse effects on SME performance. Scholars have pointed out that SMEs are often enterprises with limited marketing and advertising resources (Maduku et al., 2016; Ur Rahman et al., 2020; Amoah, Jibril & Akram 2021). Prior studies have also indicated that SMEs are averse and prudent about technology adoption (McCann & Barlow, 2015). This limitation can be associated with technical capacities and financial constraints (Dahnil et al., 2014; Trawnih et al., 2021). In this regard, Bruce et al. (2022) suggested that SMEs must strive for new opportunities, continuously focusing on technological innovation. Therefore, incorporating innovation, mainly in social media marketing into SME business activities becomes pivotal in gaining competitive advantage and long-term business growth (Kumar & Ayedee, 2018; Tajudeen et al., 2018; Wamba & Carter, 2016).

To compete and be sustainable, Kaplan and Haenlein (2010) argued that social media provide platforms for SMEs to interact with customers and other potential investors (Ali Abbasi et al., 2022). Previous studies regarded social media as an essential ingredient of conducting business among SMEs in intense global competition and have resulted in significant benefits (Kang & Park, 2018; Taneja & Toombs, 2014; Chatterjee & Kumar Kar, 2020). In this regard, evidence has been found that very few SMEs have adopted and utilized social media to gain a competitive advantage, increased sales, and customer relationship, and improve business performance, which in turn lead to SMEs sustainability (Jibril et al., 2019; Jin & Hurd, 2018). Additionally, evidence suggests that social media usage creates benefits for SME customers leading to sustainability (Mason et al., 2021; Amoah et al., 2021). Scholars have described sustainability as well-balanced firms' financial, environmental, technological, and social-economic resources (Garbie, 2014). For Kuhlman and Farrington (2010) sustainability refers to maintaining the welfare and well-being of firms within a specific period or indefinitely. Luthra et al. (2015) observed that SMEs can achieve sustainability through increased social media usage. Similarly, Raut et al. (2019) report that social media usage positively influences SMEs' business sustainability.

Despite the compelling nature of social media, prior studies have focused on business-to-consumer (B2C) and larger enterprises' integration of social media for business performance and growth (Rapp et al., 2013; Abuhashesh, 2014; Barczyk & Duncan, 2012). However, limited research studies have been conducted on the integration of digital marketing communication tools, particularly, social media on firms' sustainability in the context of SMEs (Dutot & Bergeron, 2016; Kumar et al., 2017; De Vries et al., 2017). For instance, Fraccastoro et al. (2021) evidenced that integration of social media allows SMEs to engage international prospects and proposed that SMEs should embrace social media marketing as a holistic marketing strategy in their business operations. Similarly, Brink (2017) submits that incorporating social media into SME activities leads to sustainability. Olayah (2019) further evidenced the use of social media for SMEs, since it has become a valuable information tool for achieving organizational effectiveness and called for future studies to explore how social media can be integrated into SMEs' business operations for sustainability from emerging countries' perspective. Moreover, the integration of social media into SME's sustainability remains under-explored in the context of developing countries (Ogwu et al., 2022; Rakshit et al., 2021). To fill this research gap, the current study investigates how SMEs integrate social media into their business performance, and its impact on sustainability in emerging economies, particularly Ghana. This study attempts to advance the current knowledge of social media applications integration and SMEs' sustainability, especially from emerging economies perspective. Moreover, the study would have strong implications for both managers and policymakers aiming to improve SMEs' sustainability. The rest of the paper is arranged as follows: literature review, methodology, findings/results, discussions, and conclusion.

2. Literature review and hypotheses development

2.1. Social media engagement theory (SMET)

Social media channels encourage users to increase their number of followers and prospective customers (Pralhad & Ramaswamy, 2004). In this context, customer engagement research has bolstered the social engagement theory applicable to boosting the performance of businesses (Oliveira et al., 2020). SMET theory holds that social media applications enable organizations to communicate with customers and meet organizational goals. According to Prahalad & Ramaswamy, (2004), technology plays a crucial role in generating the underlying platform required to facilitate social interactions between geographically and temporally dispersed users. The rise of social media is due in large part to the evolution of technology to provide a unique user experience that enables users to connect in previously impossible ways. This study applies the definition of experience as the content of direct observation or participation in an event to the user experience under consideration. According to the tenet of the SMET, social interactions shape the user experience by fostering a personalized relationship between users, providing a transparent means of communication, providing access to social resources such as friends, acquaintances, and family members, and defining the potential benefits and costs of engaging in social media (Gangi & Wasko, 2016).

Leveraging the SMET, Grover and Kar (2020) examined how service advertisement and promotional tweets on Twitter enable businesses' profitability. The study proffers that, content type, type, and time of marketing campaigns help build a strong brand. de Oliveira et al. (2020) aver that customer engagement has a significant value for businesses, having a direct impact on firm performance, behavioral intention, and word-of-mouth. Furthering this, Cao et al. (2021) add that, hedonic consumption produces nearly three times greater customer engagement to firm performance effects than utilitarian consumption. In effect, a significant effect is actualized by utilizing social media with substantial effects on the engagement behaviors of consumers. Dwivedi et al. (2021) reinforce that, B2B companies have a lot to benefit from integrating social media in their marketing strategies adding that, social media has a positive effect on customer satisfaction, acquisition of new customers, sales, stakeholder engagement, and fostering customer relationships. Moreover, the sustainability of companies positively correlates with the use of social media through a successful transformation of constant customer engagement. From the forgone, we

argue that customer engagement as an intrinsic motivation or a psychological state plays a direct role in the performance and sustainability of companies. Moreover, customer activities, such as transactions, are required, as are perhaps social media behaviors that elaborate on brand-related social media content as a form of advertising.

2.2. Social media

According to Kaplan and Haenlein (2010), social media has become an effective business platform upon which individuals share information and build networks. Peters et al. (2013) identified social media as “dynamic, interconnected, egalitarian, and interactive organisms”. Consequently, these social media’s distinctive features have brought a significant shift in the current market situation (Li et al., 2020). The dynamic nature of social media applications has generated different cyberspace for sharing information and sentiment (Jibril et al., 2019; Kaplan & Haenlein, 2010). For instance, Google+, Twitter, LinkedIn, Facebook, WeChat, and Instagram are among the well-known social network platforms (Al-Emran, 2015). Muller and Peres (2019) observed that social networks such as Facebook, Twitter, Instagram, WeChat, WhatsApp, and YouTube have facilitated social interactions which have measurable value for organizations. Principally, social media are considered an innovative marketing tool that stimulates client participation and interaction in the context of marketing (Bai & Yan, 2021; Guha et al., 2018). Thus, social media is seen as evolving way of conducting business, empowering firms to create a mutual relationship with customers and stakeholders (Ali Qalati et al., 2020; AL-Mashrafi & Khan, 2022; Li et al., 2020). Prior studies have acknowledged the significance of social media in consumer buying decisions (Katona et al., 2011; Chen et al., 2011; Nair et al., 2010). Gnizy (2019) observed that social media is a new strategic tool for generating new ideas, customer analysis, and market research. In this context, social media as a new technological tool has become more significant for SME sustainable performance (Basri & Siam, 2019; Harmeling et al., 2017). With the increasing benefit of social media, firms can use social media to assist intra and inter-organizational activities; such as collaborative learning (Ansari & Khan, 2020; Knowles & Cooner, 2016); knowledge sharing (Y. A. Ahmed et al., 2019; Oostervink et al., 2016), brand management strategies (Bilro et al., 2022; Moro & Rita, 2018; Sadh, 2019); and collaborative product development (Piller et al., 2012; Yenicioğlu & Suerdem, 2015). A recent study by Sompolgrunk et al., (2022) proved that social media usage has a positive effect on SME business performance.

2.3. Social media usage and SMEs firm performance

The study’s findings have highlighted the significant impact of social media usage on SME performance in emerging economies (Amoah et al., 2021; Ogilvie et al., 2018; Borah et al., 2022; Eze et al., 2021). A study conducted by Bakar and Zaini (2022) evidenced that social media is an essential innovative tool for achieving SMEs sustainability. A paper published by Basri and Siam (2019) reports that the effectiveness of social media allows SMEs to convey information to customers, and engage them, which leads to better customer relationship management. Particularly, Borah et al. (2022) explain that SMEs receive feedback from customers through social media, which positively influences business communication and performance. Furthermore, Casalo et al. (2021) concluded that social media usage has a strong and positive effect on SME performance. Ali Qalati et al. (2020) examined the adoption of social media and its impact on SMEs’ performance. Their findings revealed a positive significant relationship between social media usage and SME business growth. In addition, Amoah et al. (2021) evidenced a positive relationship between social media usage and SME productivity. Similarly, Öztamur and Karakadılar (2014) study on social media’s role in SME performance reported a positive influence of social media usage on SMEs performance. Besides, the findings of Dutot and Bergeron (2016) maintained that social media usage has a positive correlation with SMEs’ performance in competitive advantage, effective internal communication, and customer relationship management. Moreover, Qalati et al. (2022) recently observed a significant influence of social media usage on SME performance. We argue that SMEs must utilize social media to facilitate customer service, and create value, which is crucial for a firm’s sustainability. The authors proposed that social media should be assessed

extensively, emphasizing social media platforms as a tool for achieving SMEs' sustainability. Accordingly, we hypothesized that:

H1: Social media usage directly and positively relates to SME firms' Performance.

2.4. Integrating social media into SME's Firm performance

A study conducted by Bashir et al. (2017) advanced an integrated framework of social media for SMEs' development. The study further submits that SMEs should incorporate comprehensive social media marketing into their overall marketing objectives for sustainability (Du et al., 2016; Deborah et al., 2017). Previously, several studies have shown a significant connection between social media integration and SME performance in emerging economies (Amoah et al., 2021; Atanassova & Clark, 2015; Hitchen et al., 2017). Cheng et al. (2018) observed that SMEs adopt social media because of its effectiveness and visibility. Azemi and Ozuem (2015) advocated that competing in current globalization drives SMEs' adoption of technology, particularly social media. A similar study on the integrated usage of social media reported a significant influence of social media integration on SME performance through increased sales and customer satisfaction (Khan et al., 2019). Wardati and Mahendrawathi (2019) also indicated that social media integration increases SMEs' visibility to the target audience, hence increasing sales. Moreover, Rakshit et al. (2021) examined social media integration on SME new product development and concluded that social media integration enables SMEs to focus more on customers. In the context of SME manufacturing firms, A. Ahmed et al. (2022) studied how social media integration affects emerging manufacturing SMEs. Utilizing data from emerging market manufacturing SMEs, the study found a positive connection between social media and SMEs' sustainability. However, integrating social media is affected by technological, environmental, and organizational factors (Effendi et al., 2020; Nguyen et al., 2021; Qalati et al., 2022). Other studies have proven that social media integration in SME manufacturing firms' operations has resulted in identifying new market opportunities, increased brand awareness, and increased market share (Bruce et al., 2022). Therefore, this study argues that incorporating social media by SMEs into their business operations can contribute positively to business performance and sustainability. Hence, we hypothesize that:

H2: Integrating social media into SME manufacturing firms will positively affect their Performance.

2.5. Social media usage and firms' sustainability

Nowadays, firms are increasingly adopting and integrating social media to connect with stakeholders and share valuable information to be competitive (Benitez et al., 2020; Salim et al., 2020). Njiku and Nyamsogoro (2019) define sustainability as "the firm's ability to achieve its goals and maintain consistency over a long period". From a SMEs perspective, sustainability is comprised of accomplishing a balance between social, economic, and financial resources (Ur Rahman et al., 2020). According to Vesal et al. (2020), sustainability is one of the essential criteria for attracting customers and stakeholders. By integrating social media usage into corporate marketing strategies, firms can foster good relationships with sustainability-oriented customers. Recent studies have shown that firms' sustainability can be attained via social media usage due to its interactive nature (Amoah et al., 2021; Hu et al., 2019; Jha & Verma, 2022; Mason et al., 2021). The published research also indicated the positive link between social media usage and SME sustainability (Bruce et al., 2022; Borah et al., 2022; Dressler & Paunovic, 2021). Salim et al. (2020) for instance, evidenced that effective utilization of social media positively affects SME sustainability. According to the works of (Purwanto et al., 2022; Russo et al., 2021), SMEs used social media as a valuable resource to interact with customers and other potential investors on their sustainability initiatives and environmental goals. Thus, social media enable SMEs to manage profitable customers, thereby increasing customer-based profit performance (Ur Rahman et al., 2020; Lu et al., 2009). Additionally, Baird and Parasnis (2011) reported that social media improves SMEs' financial

performance, and reduces internal operations, decision-making efficiency, and innovative business processes, which in turn leads to sustainable performance. Based on the literature, this study argued that social media play a significant role in SME sustainability, Therefore, we proposed that:

H3: Social Media Usage has a positive effect on SME firms' sustainability.

2.6. Relationship between social media usage and SMEs manufacturing firms performance

The manufacturing sector is the sector with high social media usage (Jukić & Merlak, 2017; Parveen et al., 2015; Uyar & Boyar, 2015). Social media plays a significant role in empowering firms to achieve effectiveness (Ayokunmi et al., 2022; Hartono & Sheng, 2016). In this context, manufacturing firms can utilize social media to achieve organizational success; for instance, social media usage contributes to firm sustainable performance (Abbas et al., 2019; Jibril et al., 2019; Korcsmáros & Csinger, 2022; Rialp-Criado & Rialp-Criado, 2018). Therefore, it is crucial to explore the association between social media and SME manufacturing firms' performance (Wang et al., 2016; Foltean et al. 2019). According to Braojos-Gomez et al. (2015), social media must be a fundamental part of an organization's strategy due to its innovativeness, which ultimately leads to improved business performance. Previously conducted research works have examined the social media usage relationship with manufacturing firms' performance (Si, 2015; Allan & Nimer Ali, 2017; Mishra, 2016; Syaifullah et al., 2020). Hassani and Mosconi (2022) reports that SME manufacturing firms share information and ideas on social media platforms. Accordingly, an empirical investigation by Arcuri (2021) concluded that social media positively affect SME manufacturing firms' performance in the context of developing countries. Braojos-Gomez et al. (2015) used 100 small U.S. firms from the 2013 Forbes America's Best Small Companies ranking and reported that social media capabilities enable manufacturing firms to achieve sustainability. A study conducted by Cabiddu et al. (2014) findings indicated that social media have positive effects on SME manufacturing performance. Furthermore, Syaifullah et al. (2021) confirmed a positive relationship between social media usage and SME manufacturing firms' performance. Salim et al. (2020) sampled 211 manufacturing firms and found that social media usage has a significant influence on SME performance in the context of Malaysia. In addition, Lam et al. (2016) study on social media usage on manufacturing performance and reported that social media utilization assists organizational information flow and knowledge sharing. The author's findings further submit that social media positively affect SME manufacturing firms'-customer interaction and internal and external collaboration. However, an empirical study by Mishra (2016) found an insignificant effect of social media utilization on the performance of SMEs in the context of India. The study further proposed the incorporation of social media marketing in SME manufacturing firms' activities for effectiveness and flexibility. Recently, several studies have evidenced a positive relationship between social media usage and SMEs manufacturing firms' performance (Cepeda-Carrion et al., 2022; Gaglio et al., 2022; Jha & Verma, 2022; Opara & Onye-Chinedu, 2022) which ultimately affect firms' sustainability. Thus, we argue that social media usage has a direct link to SME performance:

H4: Social Media Usage relates positively to SMEs Manufacturing Firms Performance

3. Methodological approach

3.1. Sample, data collection, and analytic techniques

The research employed non-random sampling techniques, specifically snowball sampling. This method of sampling is employed when the researcher selects the sample's participants. To begin, the study objective was to assess the relationship between social media, firm performance, and firm sustainability of SMEs in Ghana's manufacturing industry. The purposive and snowball sampling techniques were adopted in choosing the targeted respondents from five Ghanaian

regions particularly: Greater, Central, Ashanti, Western and Eastern respectively. These types of sampling are deployed when it is critical in choosing participants who have a thorough understanding of the subject given the study's focus on social media usage and a firm's performance. Using good judgment, scientists believe they can gather a representative sample while also saving time and money as revealed (Al- Buraiki & Khan, 2018; Black, 2019; Etikan et al., 2016). The questionnaire was administered to both employees and managerial staff of the selected SMEs in the manufacturing sector. The selection of the manufacturing sector for data collection is a result of its contribution to the growth of the economy (Gusmerotti et al., 2019). The snowball method was used to help reach a target number of social media network participants. In this case, participants may recommend others to participate in the current survey. The structured questionnaire was divided into two sections. Section A of the questionnaire contains the demographics of the respondents while the second part contains questions on the study constructs. Data collection was done with caution due to Covid-19 protocols. The data collection process used both hard copy and soft copy questionnaires at the same time. The hard copy questionnaire was distributed to the premises of the selected SMEs in the manufacturing via intercept, while the soft copy (link) was distributed to participants upon request. A pilot study was conducted with 35 SME firms who are using the technology (social media users) before the main data collection to clarify the variables (or constructs) under study. Regardless, Cronbach alpha values were used to assess the reliability and validity of the selected constructs. The main data collection took four months on average (May-August 2022). After invalid replies were eliminated from the data set due to anomalies such as duplication, empty fields, incomplete assessments, and overly ambitious evaluations (Elgabry, 2019), 417 legitimate responses remained, representing 81.76 percent of the total 510 responses. The final data set's characteristics of the respondents are shown in Table 1, (see Appendix B for the article questionnaire and measurement). In terms of data analytics, the conceptual framework and accompanying hypotheses were tested using the PLS-SEM (Partial least squares and structural equation modeling) technique. This was made possible by utilizing the ADANCO software version 2.2.1. (Henseler, 2017). SPSS software was used for the descriptive statistics. The researchers advised the respondents not to provide any specifics. As revealed by Amoah et al. (2021), this is to ensure a high ethical standard of research. According to a preliminary finding from the profiles of the respondents, there were more male respondents to the poll (85.5 percent) than that female (19.5 percent) respondents. Again, in terms of the age range, most participants (44.7%) are under the age of twenty-six to thirty-five, indicating that most of them are undergraduate students (bachelor's).

3.2. Measurement of the constructs and test of common method variance (CMV)

In determining the constructs' validity, the researchers drew on previous research. Sustainability (Amoah et al., 2021, Patma et al., 2021), firms' performance (de Oliveira et al., 2020; Tarsakoo & Charoensukmongkol, 2019), social media integration (Abuhashesh, 2014; Javaeed et al., 2020; Killian & McManus, 2015), and the predictor construct social media usage (Perrin, 2015; Tajudeen et al., 2018; Praveen et al., 2015) were thus used as study constructs. The study constructs were measured using a five-point Likert scale (Completely Disagree (1), Disagree (2), Neutral (3), Agree (4), and Completely Agree (5) as used in current works like (Allen & Seaman, 2007; Derrick & White, 2017). Since the data for the current study were collected independently, the likelihood of common method variance is relatively high. In addition, the study's participants were guaranteed that their information would be kept private and advised that there was no right or incorrect response to any of the survey's questions. According to the findings of Bagozzi, (1998), the presence of Common Method Bias (CMB) was discovered, prompting the researchers to design the questionnaire with the description on the title page and to treat respondents or participants with the utmost confidence. To identify the presence of Common Method Bias, the researchers first conducted a multicollinearity test involving the VIF (variance inflation factor) (CMV). According to the findings of the post-hoc analysis, CMV only exists to a very limited extent based on VIFs where the thresholds are fewer than ten (10) as shown (see, Kock & Hadaya, 2018; Podsakoff et al., 2003; Salmerón et al.,

Table 1. Profile of Respondents' Information

Details		Frequency	Percentage (%)
Gender	Male	336	80.50
	Female	81	19.50
Age	18-25 years	33	7.90
	26-35 years	186	44.70
	36-45 years	142	33.90
	45-55 years	35	8.5
	Above 55 years	21	5.00
Educational Level	SSSCE	67	16.10
	Diploma/HND/Bachelor	121	28.90
	Masters/Post Graduate Diploma	164	39.40
	Others	65	15.60
Organizational Size	Medium 1-10 employees	63	15.00
	Small (11-50 employees)	125	30.00
	Medium (51-100 employees)	152	36.50
	Large (100 above)	77	18.50
Company Websites	Yes	323	77.40
	No	94	22.60
SM Platforms Used	Facebook	150	35.80
	Twitter	46	11.10
	Instagram	102	24.50
	LinkedIn	56	13.50
	All the above	63	15.10
How often SM platforms are used	Daily	184	44.00
	Once a week	87	20.90
	More than a week	88	21.20
	Once a month	58	13.90
SM Platforms Used	Facebook	124	29.60
	Twitter	32	7.70
	Instagram	40	9.70
	LinkedIn	32	7.60
	All the above	189	45.40
Sample Size Used		417	100

Source: Field data (May-August 2022), retrieved from google form and hard copy

2020). Finally, the CMB issues in this survey are regarded as minor, so the CMB is of less concern.

4. Model measurement

The Dijkstra-Henseler rho and Cronbach alpha coefficients were used to rigorously assess the constructs' reliability and validity because the PLS-SEM application literature of scholarly works (Hair et al., 2017, 2019) served as the researchers' motivation. Because the coefficient values are all greater than 0.5 (see, Table 2 below), it indicates that the constructs have the strongest coefficients as defined by (Bagozzi, 1998; Hair et al., 2019). The ADANCO 2.0 version was used to assess the psychometric properties of the underlying items of the research constructs. Again, the

Table 2. Construct Reliability and Validity, Variance Inflation Factors (VIFs), and factor loadings

Constructs/ Indicators	VIF	Factor Loadings	Dijkstra- Henseler's rho (pA)	Jöreskog's rho (pc)	Cronbach's alpha(α)	The average variance extracted (AVE)
SMI			0.922	0.934	0.917	0.668
SMI1	2.054	0.768				
SMI2	2.054	0.759				
SMI3	2.513	0.823				
SMI4	3.014	0.857				
SMI5	3.420	0.863				
SMI6	2.953	0.833				
SMI7	2.540	0.813				
SMU			0.917	0.910	0.886	0.568
SMU1	1.316	0.657				
SMU2	1.507	0.601				
SMU3	2.316	0.789				
SMU4	2.467	0.821				
SMU5	2.743	0.848				
SMU6	2.971	0.866				
SMU7	2.521	0.831				
SMU8	2.192	0.793				
SFP			0.924	0.935	0.920	0.643
SFP1	1.995	0.728				
SFP2	2.050	0.744				
SFP3	2.322	0.809				
SFP4	2.579	0.837				
SFP5	2.796	0.838				
SFP6	2.680	0.837				
SFP7	2.497	0.820				
SMP8	2.267	0.795				
FIRM SUST.			0.924	0.936	0.921	0.647
FS1	1.760	0.695				
FS2	1.804	0.696				
FS3	2.592	0.839				
FS4	2.880	0.857				
FS5	2.628	0.837				
FS6	2.731	0.832				
FS7	2.665	0.823				
FS8	2.983	0.840				

Source: Authors' processing from ADANCO 2.0 version

Note: SFP = SME Firm Performance, SMI = Social Media Integration, SMU = Social Media Usage, FS = Firm Sustainability

Jöreskog's rho (pc) and Dijkstra-rho Henseler's (pA) composite reliability of constructs as indicated in (Table 2) recorded 0.7 and 0.9 minimum and maximum thresholds, which satisfies the fundamental requirements. A minimum threshold of 0.5 was noted for the average variance extracted

Table 3. Test of Discriminant Validity

	Firm Sustainability	SME Firm Performance	SM Integration	SM Usage
Firm Sustainability				
SME Firm Perf.	0.610			
SM Integration	0.673	0.765		
SM Usage	0.524	0.664	0.522	

Source: Authors' processing from ADANCO 2.0 version

(AVE), which stands for convergent validity, and Dijkstra-Henseler rho (ρ_A) reliability coefficients of 0.910 and 0.936, respectively, as shown in (Table 2).

Finally, a minimum threshold of 0.5 was noted for the average variance extracted (AVE), which stands for convergent validity. According to Bagozzi (1998), every factor loading for each of the constructs was carefully evaluated and loaded to the appropriate locations, meeting the threshold of 0.6 and demonstrating how effective the indicators are. The coefficients of the corresponding constructs were all over 0.6 in (table below 2), with 0.601 serving as the minimum loading and 0.866 serving as the maximum loading, respectively. shows the details of the research constructs and their corresponding loadings. Also. The researchers were concerned about multicollinearity, which was detected using common method variance (CMV) through scale measurements of variance inflation factor (VIF). According to the works of (Owusu-Kwarteng et al., 2020; Amoah et al., 2021), CMV is not an issue because the VIF is less than five, as opposed to a maximum threshold of ten. As a result, the factor loadings of the research constructs are shown in Table 2 below.

Nevertheless, Henseler et al. (2015) provided the researchers with the inspiration to assess the latent variables' discriminant validity using Fornell- Larcker's (1981). All the values in the diagonal form (bold) exceed the minimal criteria of more than 0.5, revealing the average variance extracted (AVE) of the measured constructs, as demonstrated by experts such (Hair et al., 2019; Henseler et al., 2015) (see, Table 3 below). The basic and strict assumptions of the study constructs were defined once each AVE had to have higher coefficients (both column and row position) than the other constructs, according to Fornell-criterion Larcker's of discriminant validity (HTMT).

4.1. Structural Modeling-Path analysis

In this current study, which concerns model fit, the researchers saw the essence of path analysis, also known as structural modeling. This analysis is important because it reveals the causal effect of the research constructs. As a result, the study's findings indicate that perceived infrastructure deficit (PID) has a potential effect or impact on current research constructs such as social media usage (SMU), Social media Integration (SMI), SMEs Firms' Performance (SFP), and Firms' Sustainability (FS). As a result, Table 4 below displays the regression coefficients of Beta (β), significant values; T-values >1.96 (or P-values 0.05) for the research model. Furthermore, the predictive power of the regression model's research model of value determination was evaluated. As a result, the R2 of the predictive variables (Firm sustainability (FS) and SMEs' firm Performance (SFP) was set at 34% and 59%, as shown in the table and figure 1 below.

5. Discussions and implications

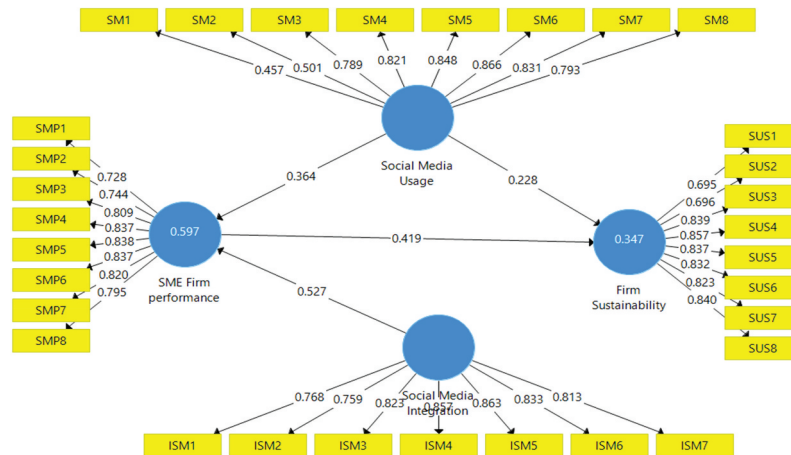
Since the inception of social media, scholars and researchers have accorded significant value to the technology in helping various companies and organizations for sustainability (Amoah et al., 2021; Bruce et al., 2022; Abed et al., 2016). This is attributed to the fact that customers are nowadays found in assessing firms' products and services through social media platforms or applications (Facebook, Twitter, LinkedIn, etc.), creating common social interactions between firms and their customers (Gangi & Wasko, 2016; Patma et al., 2021). Businesses can utilize social

Table 4. Hypothetical path coefficient -PLS-SEM

Relationship	Beta (β)	Standard bootstrap results			P-value	Decision	
		Mean value	SD error	T-value			
H1: SFP->FS	0.419	0.419	0.058	7.276	0.000	Supported	
H2: SMI->SFP	0.527	0.530	0.045	11.651	0.000	Supported	
H3: SMU->FS	0.228	0.226	0.057	3.991	0.000	Supported	
H4: SMU->SFP	0.364	0.360	0.048	7.541	0.000	Supported	
Coefficient of determination (R)							
Firm Sustainability	0.347					Adjusted R2	0.344
SME firm Performance	0.597						0.595

Source: Author's processing from ADANCO 2.2.1 version

Figure 1. Empirically Tested Research Model.



media to support intra- and inter-organizational operations, such as customer relationship management, collaborative learning, knowledge sharing, brand management strategies, and collaborative product development, thanks to social media’s growing range of advantages (Knowles & Cooner, 2016; (Moro & Rita, 2018; Sadh, 2019). Considering these, the goal of this study was to determine how social media could create opportunities for SMEs’ sustainability. As a result, this study used a quantitative approach to test the impact of social media on long-term SME growth and sustainability. The current study proposed that (H1): *social media usage directly and positively relates to SME manufacturing Firms’ Performance*. In response to this hypothesis, the studies of (A. Ahmed et al., 2022; Belás et al., 2021; Civelek et al., 2020) on SMEs in developing countries confirmed the hypothesis (H1). Our findings revealed that two concepts are significant, buttressing that social media usage has a pivotal role in augmenting SME performance. Due to social media’s rapid and adaptable nature for both customers and business owners, it has become a modus operandi that most SMEs are currently adopting. Social media’s current accessibility has considerably boosted the performance and expansion of small and medium-sized businesses (Ghezzi & Cavallo, 2020; Seiler et al., 2020; Tarsakoo & Charoensukmongkol, 2019). As a result, most of today’s customers are engaged via social media platforms by both SME management and employees which has resulted positively in the firms’ performance of most companies and had a favorable impact on the economy, profitability, growth, and sustainability of SMEs in general (Acquisti & Fong, 2020; Apenteng et al., 2020; Fedorko et al., 2021).

Moreover, the results obtained also confirmed the second hypothesis: *integrating social media into SME manufacturing firms will positively affect their Performance*. Existing studies (Du et al., 2016; Deborah et al., 2017; Eid et al., 2019) therefore correlate with this hypothesis. Thus, the integration of social media had a significant association with social media performance, supporting H2. This means that social media integration comprehensively contributes to SMEs’ sustainability thereby helping in the achievement of the overall marketing objectives of the firm which transcend or reflect in the firm’s performance (Rauniar et al., 2014). The integration remedies SMEs’ utilization of social media to increase brand exposure, learn about consumer behavior and post-purchase communication, and ultimately assess how consumers make decisions on firms’ products and services (Potjanjaruwit et al., 2019). Adding more to the above assertion, Fraccastoro et al., (2021) in their current study on the integrated use of social media, digital, and traditional communication tools in the B2B sales process of international SMEs also affirmed that the manner in that organizations communicate, and sell has undergone a paradigm shift as a result of the ongoing development of digital tools. Business-to-business (B2B) selling and marketing have been transformed using social media tools, search engine marketing, and web analytics, particularly in cross-border transactions. SMEs may now precisely target the most lucrative global business possibilities and manage client relationships more effectively because

of direct online access to vast amounts of data and accurate understanding of consumers' preferences enhancing firms' performance which invariably affects SMEs' long-term sustainability (Cheng & Shiu, 2019; Hassani & Mosconi, 2022).

Again, the study proposed that social media usage will positively influence SME firms' sustainability is strongly affirmed by the results obtained (H3). This means that SME firms stand the chance of using social media as an innovative tool in the 21st century to intensify their sustainability (Hu et al., 2019; Borah et al., 2022). Results affirmed that social media in its present form will help SME firms mitigate the challenge of sustainability. Confirming the existing works, (Russo et al., 2021; Salim et al., 2020) retaliated that to stay competitive, businesses have recently adopted and integrated social media. This helps them communicate with stakeholders, and customers and exchange useful information. Businesses can build strong connections with clients that care about sustainability by incorporating social media use into their corporate marketing strategies (Patma et al., 2021; Amoah et al., 2021). Mason et al. (2021) and Belás et al. (2021) discovered that social media, as a powerful tool, assists both customers and organizations in identifying needs and providing possibilities for SMEs to stay competitive and innovate. Additionally, businesses can constantly educate their clients and other possible investors on their sustainability projects and environmental policies by using social media (Russo et al., 2021).

The studies also showed that social media gives SMEs a chance to add value to their sustainability which correlates with the proposed hypothesis: *social media usage relates positively to SMEs manufacturing firms' performance*. As a result, the findings indicate a positive relationship between social media usage and SMEs Manufacturing firms' performance, supporting the (H4) hypothesis. Existing research has supported and verified this claim (Nguyen et al., 2021; Si, 2015; Ali Abbasi et al., 2022; Syaifullah et al., 2020). Utilizing social media facilitates the process by which businesses investigate untapped business potentials in line with their operational needs to increase their competitiveness and sustainability. Business-to-business (B2B) and business-to-consumer (B2C) networking are one of the social media's primary advantages. This interconnection promotes quick communication and minimal bandwidth between SMEs and their clients, especially when it comes to the accessibility of information for prospective and new clients (Sambo & Musundire, 2020; Bruce et al., 2022; Moghadamzadeh et al., 2020). Social media usage fosters networks that result in higher performance for SMEs' sustainability in emerging nations. These prior results are valuable to SME managers in Ghana and other developing countries since social media usage is limited among SMEs.

6.1. Theoretical Implications

This study has several theoretical implications given that social media is driving the sustainability of firms in a circular economy and the need to synthesize its affordances with new knowledge. While we agree that, extant studies have utilized the social media engagement theory in varied fields of social media studies, this study adds to the understanding of the theory by elucidating its construct to explore the social interactions between SMEs and their stakeholders. It is empirically proven that social media provide a unique experience by enabling users to have an unceasing interaction with their customers. The current followed the social media engagement theory (SMET), which reinforces using social media applications to interact with customers and to achieve organizational objectives. We applied the theory because we explored the SME's integration of social media for business growth and sustainability. This theory enables us to recognize the significance of social media on SMEs' sustainable performance. This helps for introspection into the myriads of processes that go to improve customer relationships and satisfaction. Thus, making this study adds to the existing literature on social media integration in SMEs. Furthermore, this study adds to the understanding of firms' preferences when deciding on which social media tool to use and for what activity. It is imperative to also mention that literature on social media and customer engagement abound but, studies that purposely exploit the capabilities of social media for the sustainability of SMEs are limited. For this reason, this study adds to the literature on

factors that stimulate the sustainability of firms that leverage technology in their marketing and promotional activities.

6.2. Managerial implications

In practice, this study contributes immensely to the development of SME firms, particularly efforts at making them sustainable. Given the increasing nature of SMEs across the globe, their activities keep inching making them very competitive. The story is not different for developing economies where the situation may be different given the lax resource availability. While there is contention about the affordances of social media towards the sustainability of SMEs, the study provides to managers of SMEs that, social media usage directly relates to the positive performance of firms. Practically, this study will assist the manager to probe the social media integration association with SMEs' sustainable performance. Thus, managers are better informed about their choice of technology, particularly social media applications to drive their competitive strategy. That is not all, the study proffers that, social media integration into SME manufacturing firms will significantly improve their performance. This is instructive in the face stem competition among firms. Thus, managers of SMEs can strategize to keep up with their peers and compete favorably. Following the fact that integrating social media stimulates the performance of the firms, it sought to suggest that firm's sustainability is affirmed since performance is tied to sustainability. Firms' performance and sustainability are symbiotic and frequently driven by emerging technology. This study has proven that social media has the propensity to drive the needed performance toward the sustainability of firms. In effect, the performance of SME firms correlates with the integration of social media. For this reason, managers of firms could leverage the capabilities of social media as a mechanism to improve their performance and sustainability.

6. Conclusion

The current study's primary focus was on the integration of social media by SME manufacturing firms in Ghana as an opportunity for positive performance and sustainability. Social media is still a useful tool for today's small and medium-sized enterprises, helping to increase brand awareness, and firms' performance and finally enhancing their sustainability. The use of social media in achieving SMEs' sustainability, however, has received relatively little research with developing countries as a test case. According to the current study, all four proposed hypotheses confirmed that social media usage positively correlates with SMEs in the manufacturing sector. A total of 417 responses were used in the empirical data processing/analysis through Partial Least Square Structural Modeling Equation (PLS-SEM), specifically the ADANCO 2.2.1 statistical software version. Interestingly, the main findings of the study revealed that social media in its current frame (social media integration) has a favorable impact on manufacturing firms of SMEs within the context of Ghana. Additionally, this research demonstrates that social media integration and usage directly and significantly affect the firms' performance that fosters sustainable SMEs in Ghana. The research findings also imply that SMEs in developing nations can connect with other stakeholders by using social media effectively. Moreover, the results of the study showed that the integration of social media by SMEs helps in customer relationship management, new opportunities identification, and cost reduction. The research also provides an in-depth understanding of social media integration and its relationship with SME sustainability. The current study provides numerous theoretical and practical implications. The study gives some useful advice for SMEs on how to use social media and achieve sustainability, as well as an empirical understanding of how social media affects the sustainability of enterprises. The study's findings also offer a thorough grasp of social media use and how it relates to the sustainability of SMEs (Amoah et al., 2021).

6.1. Limitations of the study

The investigation are constrained. We concentrated on SMEs in the Ghanaian economy, which could have biased the results. Of course, we agree that there may be some context-specific differences. Furthermore, due to the sample size, it is prudent to exercise caution when generalizing the outcomes, therefore future studies should employ a cross-cultural approach to analyze the integration of social media applications on SME sustainable performance. We also realize that using social media as a tool for marketing has drawbacks. Future research could therefore examine a few negative effects of social media usage. To better understand how social media

affects SMEs' sustainability agendas, future research might compare and analyze data from SMEs in separate sectors, in addition to the manufacturing sector, which was the study's exclusive focus.

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