Research Article

Enhancing Small and Medium Enterprises' Performance through Social Media Integration: Embedding the Diffusion of Innovation Theory in the Technology-Organization-Environment Framework

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Social media integration within small and medium enterprises (SMEs) has gained significant attention recently. This uptake is due to the growing recognition of the potential benefits of convergent digital technologies in enhancing customer information searching and improving customer experience. The research analyses how SMEs in developing countries use social media and identifies factors that affect its integration. Given the diversity in organisational performance, the research gap is attempting to understand how to integrate digital platforms in these contexts effectively. The study base theories are the technology-organisation-environment and diffusion of innovation. The technological aspects focus on the relative benefits, presence qualities, visibility, linkages, and interactivity. The organisational factors involve interdependent decision-making roles for support of operations and innovation. Competitive pressure and uncertainty increase are the study's environmental aspects. The study used a cross-sectional online survey to collect data from 938 business owners/managers in Harare, Zimbabwe. Thus, SmartPLS 4.0 software allows for data analysis and structural equation modelling. The results show no significant impact of social media integration and factors related to technology and organisation on small and medium-sized enterprises' performance. The empirical findings reveal that external pressure and environmental uncertainty affect social media integration in SMEs. There is still no clear evidence that social media integration significantly affects performance. The argument is that external environmental features

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are essential in predicting outcomes. We discuss the implications of this finding for theory, practice, and policy.

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1. Introduction

Social media technologies have become valuable for small and medium-sized enterprises (SMEs). They provide a basis to create innovations that support business activities that ensure cost-effective communication and competitive responsiveness. These businesses can quickly adopt and integrate social media platforms without additional resources due to their low cost and minimal technical requirements. Companies utilise platforms like WhatsApp, Twitter, Facebook, YouTube, and Threads to share information about their products and services and engage with their clients. Social media integration (SMI) has enabled organisational innovation to become global, with multinational companies like Coca-Cola and Nando's boasting a substantial online following. These companies prioritise client engagement over promotional content, using social media to support their innovativeness as they sell a wide range of products and expand their global market reach. Technology, mainly social media tools, is equally essential for SMEs to improve performance through enabled creative innovations. SMEs are crucial for sustainable national competitiveness, economic growth, and employment creation, and they have the potential to drive digital platforms to support innovations across all sectors. This study evaluates effective tactics and strategies for maximising the benefits of social media integration and utilisation at the business level in a developing nation context.

SMEs are increasingly integrating information communication technologies (ICTs), such as social media, and transitioning towards technology-driven management (de Mattos et al., 2023)[1]. SMEs exhibit slower adoption of disruptive technologies related to Industry 4.0, such as utilising social media platforms for supporting business objectives (Ghobakhloo et al., 2022)[2]. Among the many social media platforms, Facebook is the dominant social media platform worldwide and has a substantial user presence in Zimbabwe. Zimbabwe's population exceeds 15 million, with an internet penetration rate of 55.7 per cent (InternetWordStats, 2023)[3]. This statistic presents an opportunity for SMEs to utilise social media as a

strategic, tactical, and operational tool for promoting their brands and expanding their domestic and global market presence. This trend showcases the potential advantages that SMEs can gain.

Despite limited resources and low costs, social media has become a valuable tool for SMEs to communicate and compete in the market. However, extensive research on the correlation between SMEs and their performance when using social media platforms is lacking (Chudu et al., 2022[4]; Klein &Todesco, 2021[5]; Cardoni et al., 2020[6]; Jere & Ngidi, 2020[7]). Information sharing and access through social media can impact SMEs' performance by providing real-time data for insights into customers and competitors. The challenge lies in understanding how social media can support business core competence for improving competitiveness among SMEs (Qalati et al., 2021[8]; Effendi et al., 2020[9]; Ur Rahman et al., 2020[10]). Additionally, numerous obstacles hinder SMEs' integration of social media tools in developing nations, such as expensive access, inadequate government policies, reliance on outdated technologies, and limited digital literacy (Mukherjee et al., 2023[11]; Ghobakhloo et al. (2022)[2]; Effendi et al., 2020[9]; Ali Qalati et al., 2020[12]; Karedza & Govender, 2020[13]; Moodley, 2019 [14]; Clohessy & Acton, 2019[15]).

The use of social media in businesses, particularly in developing nations, has been the focus of numerous studies (Makanyeza et al., 2023[16]; Chudu et al., 2022[4]; Levy et al., 2021[17]; Jere & Ngidi, 2020[7]; Ahmad et al., 2019)[18]). The primary concern for developing entrepreneurship in developing countries is the environment, which includes factors like industry structure, competition, governmental regulations, and supplier chain integrations. Emerging industries in developed nations generally adopt social media to enable creativity and innovations more frequently than declining or established ones. Applying the same analogy to companies in less developed economies is impossible. Government rules and policies significantly impact how SMEs use new technology, like social media. When generalising results, it is essential to consider the contextual distinctions between SMEs in developed and developing countries that widen the use of social media to facilitate innovations in product and service development (Mukherjee et al., 2023[11]; Antoni et al., 2020[19]; Bhimani et al., 2019[20]; Roberts & Piller, 2016[21]). Business size indicators may not be applicable globally due to variations in national policies (Aichner et al., 2021[22]; Chatterjee & Kar, 2020[23]). It is now essential to talk about business and entrepreneurship clusters due to social media's impact on SMEs (Saeed & Shafique, 2020[24]).

Numerous studies have examined the utilisation of social media in business-to-customer (B2C) settings. Antoni et al. (2020)[19] contend that social media has dramatically altered traditional processes and

improved the shopping experience for consumers. Consumers can access and share their friends' adventures in real time, influencing their decision-making process before purchasing. Consumer feedback and involvement have a significant impact on marketing strategies, leading to positive effects on sales volume, profitability, and market share for companies (Lal et al., 2020[25]; Drus & Khalid, 2019[26]; Reddy & Karimikonda, 2019[27]; Bakker, 2018[28]). Could social media integration be essential for improving the performance of SMEs? In Zimbabwe, SMEs can utilise social media as a digital transformation tool for supporting business activities due to limited resources and capabilities in traditional management practices (Chudu et al., 2020[4];. Kajongwe et al., 2020[29]).

The research gap in the literature on social media integration (SMI) among SMEs in Harare, Zimbabwe, can be substantiated through proper citations from academic research. Chudu et al. (2022)[4] and Kajongwe et al. (2020)[29] have highlighted the need for more comprehensive studies to understand the specific benefits and limitations of social media integration in this context. These studies have shown that social media platforms can improve SMEs' visibility, brand awareness, customer relations, and productivity in Zimbabwe. However, there is still a lack of research that examines the factors driving social media integration and usage among SMEs in Harare, Zimbabwe, and how it affects SME performance in this region.

Chudu et al. (2022)[4] and Kajongwe et al. (2020)[29] have previously examined social media usage levels and metrics in Zimbabwe SME contexts. However, their suitability and efficacy in elucidating social media integration among SMEs in Harare, Zimbabwe, have not yet been investigated. There is a need to understand the extent to which the technology-organisation-environment framework (TOE) and the diffusion of innovation theory (DIT) explain SMEs' adoption and usage of social media in this specific context. Additionally, there is a lack of research that explores the implications of the findings for SMEs in Harare, Zimbabwe and provides practical recommendations on how they can leverage social media integration to improve their performance.

The significance of this research gap lies in the challenges SMEs face in Zimbabwe, such as limited skills and resources for effective marketing and attracting customers. Makanyeza et al. (2023)[16] have identified that integrating social media is a cost-effective solution to address these challenges. Therefore, further research is needed to bridge the gap in the literature and provide valuable insights for SMEs in Harare, Zimbabwe. The proposed study aimed to examine the factors that drove the integration and usage of social media tools for supporting business activities and the potential impact of this integration

on SME performance in Harare, Zimbabwe. This study aimed to fill the identified research gap in this area by constructing a research model using the TOE and embedding the DIT. Using structural equation modelling, we analysed the data collected from a cross-sectional survey of SMEs in Harare.

Therefore, the study filled a research gap and added to the existing knowledge on integrating social media in SMEs. It provided valuable insights for SMEs in Harare, Zimbabwe, on effectively using social media for business purposes. However, it is essential to note that the findings may be limited in generalizability to other regions or countries. Based on the preceding discussion, we propose four potential research inquiries for this study:

- **RQ1.** What factors drive social media tools integration and usage among SMEs in Harare, Zimbabwe?
- **RQ2.** How does social media integration impact the performance of SMEs in Harare, Zimbabwe?
- **RQ3.** To what extent do the technology-organisation-environment framework (TOE) and the diffusion of innovation theory (DIT) explain SMEs' adoption and usage of social media in Harare, Zimbabwe?
- **RQ4.** What are the implications of the findings for SMEs in Harare, Zimbabwe, and how can they leverage social media integration to improve their SMEs' performance?

The paper's subsequent sections begin with a literature review on the impact of social media integration on SMEs' performance. We present the methodology and findings of the quantitative study in the following sections. The research shows the results and limitations and proposes potential areas for future investigation.

2. Literature Review

SMEs performance

Numerous studies have demonstrated the positive impact of integrating social media on SMEs' performance. Ghobakhloo et al. (2022)[2] and Effendi et al. (2020)[9] emphasise the advantages of expanding reach, enhancing customer interaction, and promoting products. Effendi et al. (2020) [9] identified increased visibility, customer loyalty, and sales growth as benefits of integrating social media.

The impact of social media integration on SMEs' performance is determined by active participation and customer engagement (Ali Qalati et al., 2020[12]). Businesses can leverage social media platforms to

collect customer feedback and insights, enabling them to make informed decisions and enhance overall performance (Karedza & Govender, 2020) [13].

However, concerns exist regarding social media integration and its impact on performance. Bakker (2018)[28] argues that social media can distract employees, reducing productivity and a lack of focus on essential business tasks. Frequent notifications and updates from social media platforms can distract employees, leading to decreased productivity and performance.

Another concern is the potential adverse effect on customer relationships. Social media enables businesses to engage with customers but can also result in misunderstandings, negative reviews, and public relations crises (Ghobakhloo et al., 2022)[2]. Inappropriate or insensitive posts, viral customer complaints, and online conflicts can harm a company's reputation, undermine customer trust, and impact SMEs' performance.

Moreover, integrating social media may not be appropriate for every type of business. Specific industries, such as healthcare and finance, face stringent regulations and privacy considerations that impose restrictions on the utilisation of social media platforms (Effendi et al., 2020)[9]. In certain situations, the drawbacks and regulatory concerns of incorporating social media integration may surpass the advantages, diminishing its efficacy in enhancing SMEs' performance.

Social Media Integration

Social media (SM) platforms have become integral to online communication, allowing individuals to create profiles, connect with others, and share content (Emmanuel et al., 2022[30]; Lin, 2022[31]). These platforms offer opportunities for self-expression, interaction, and networking (Rakhimova et al., 2022[32]; Murthy, 2018[33]). Moreover, businesses can leverage social media for marketing communication, extending their traditional marketing efforts (Banerjee et al., 2023[34]; Bist et al., 2022[35]).

The popularity of social media platforms like Twitter, Facebook, YouTube, and WhatsApp, with billions of active users, enables organisations to participate in global conversations (Statista, 2023[36]). Many businesses use social media as their primary communication tool, allowing consumers to interact with companies, products, or brands and enhancing SMEs' performance (Banerjee et al., 2023[34]; Antoni et al., 2020[19]). In Zimbabwe, social media has significantly improved the accessibility of SMEs, leading to

better productivity, customer base and relations, brand awareness, and business strategy (Kajongwe et al., 2020[29]).

Integrating social media into a brand's website, known as social media integration, can enhance marketing efforts by attracting potential clients (Sundararaj & Rejeesh, 2021[37]; Lal et al., 2020[25]; Drus & Khalid, 2019[26]). It facilitates sharing ideas and information, creating an engaged online community. Effective social media marketing can increase product awareness, motivate the target market to purchase and use the product and promote brand loyalty (Dwivedi et al., 2021[38]; Sundararaj & Rejeesh, 2021[37]). Immigrant entrepreneurs in South Africa have leveraged social marketing as a powerful tool for technological advancement and broad appeal (Chidau & Khosa, 2022)[39].

Integrating social media into business processes can enhance growth opportunities and create a global network of businesses (Dwivedi et al., 2021[38]; Fraccastoro et al., 2021[40]). However, there is a lack of conviction among SME managers regarding the importance of social media integration (Qalati et al., 2022[8]; Dwivedi et al., 2021[38]). Previous literature has identified various determinants and organisational conditions to explain this paradox. Understanding how social media usage can drive business processes and enhance firm performance is crucial (Marconatto et al., 2022[41]; Khan et al., 2021[42]; Ali Qalati et al., 2020[12]).

The literature suggests that social media platforms positively influence market and share value (Emmanuel et al., 2022)[30]. Studies highlight the impact of social media on customer relationships, satisfaction, advertising, and overall SME performance (Fraccastoro et al., 2021[40]; Lin et al., 2021[43]; Jacobson et al., 2020[44]; Ahmad et al., 2019[18]). Businesses across various domains have experienced advantageous outcomes by incorporating social media platforms (Amoah & Jibril, 2021[45]; Fan et al., 2021[46]; Hanafizadeh et al., 2021[47]; Muslim et al., 2020[48]). These studies emphasise the strategic approach businesses should adopt when utilising social media platforms and the marketing tools and analytics firms employ to assess the influence of social media usage on their business operations (Yang et al., 2022[49]; Garg et al., 2020[50]; Olanrewaju et al., 2020[51]; Tajudeen et al., 2018[52]).

However, there are opposing views on the impact of social media platforms on market and share value. Some researchers suggest that social media usage may not necessarily lead to positive outcomes for established organisations that lack proper planning, investment, and execution (Jacobson et al., 2020[44]; Ahmad et al., 2019[18]). Thus, firms need to use social media analytics tools to assess the actual influence of social media usage on their business operations (Garg et al., 2020[50]). Additionally, caution is advised

in adopting a strategic approach when utilising social media platforms, as it may not always guarantee a sustained competitive edge in the marketplace.

Thus, the authors opine that social media platforms have become essential for individuals and businesses. They offer self-expression, interaction, and networking opportunities while providing unique marketing communication opportunities for businesses. Integrating social media into business processes can enhance growth opportunities and create a global network of companies (Ghobakhloo et al. (2022)[2]; Effendi et al., 2020[9]; Ali Qalati et al., 2020[12]; Karedza & Govender, 2020[13]). However, the impact of social media integration and usage on market and share value is not always straightforward, and careful planning and execution are necessary for businesses to reap the benefits.

Hence, SMI refers to incorporating social media platforms into various aspects of a business's operations. Thus, this study considers SMI a composite construct of social media marketing SMM, customer relationship systems (CRS), and information accessibility (IA). SMM involves creating and sharing content on platforms like Facebook, Instagram, and Twitter to engage with customers and drive traffic to a business. CRS are technological and organisational constructs that help companies manage customer interactions and relationships. IA is crucial in ensuring that relevant and valuable information is readily available to customers.

The present study aims to develop a conceptual framework that examines how integrating social media influences the performance of small and medium-sized enterprises (SMEs). The framework considers the impact of technological, organisational, and external environmental factors on SMEs by combining the diffusion of innovation theory (DIT) and the technology-organisation-environment framework (TOE).

Technology Characteristics

Technological factors play a significant role in adopting and utilising social media platforms for marketing purposes in Zimbabwe. The Internet has revolutionised business practices, shifting from traditional media to social media platforms. Companies and non-governmental organisations can now access diverse markets and engage with customers through platforms like WhatsApp, Facebook, Twitter, and LinkedIn (Chudu et al., 2022)[4].

One of the critical technological factors driving the adoption of social media platforms is the rise of serial social media platform users. The increasing number of individuals using these platforms has created a highly responsive audience that companies can target with their marketing strategies (ITU, 2021)[53].

Chigombe et al. (2022)[54] assert that companies in Zimbabwe are developing effective marketing strategies to engage these audiences, particularly those in the middle class with a reasonably stable income.

However, there is still a limited presence of SMEs utilising social media for business purposes in Zimbabwe. This scenario is due to SMEs' limited use of information systems, including social media platforms. Compared to their international counterparts, who prioritise investments in information systems, Zimbabwean SMEs lack competitiveness in utilising social media for marketing (Makanyeza et al., 2023[16]; Al-Hattami, 2022[55]).

The effectiveness of social media platforms as information systems for business process optimisation and decision support systems for performance improvement among SMEs in Zimbabwe remains inconclusive (Al-Hattami, 2022[55]; Chigombe et al., 2022[54]; Kajongwe et al., 2020[29]). Some companies still rely on traditional media for marketing due to limitations in internet access in the country (Chudu et al., 2022)[4]. However, research has shown that social media platforms can improve SMEs' visibility, brand awareness, customer relations, and productivity in Zimbabwe (Kajongwe et al., 2020)[29].

As Zimbabwe's internet presence and usage grow, there are favourable opportunities for business-to-consumer (B2C) interactivity through social media platforms (Statista, 2023)[36]). This development highlights the importance of considering interconnectivity in selecting social media integration. Companies anticipate three critical components from a particular platform: relative benefit, observability/visibility, and connective interactivity.

Thus, technological factors, such as the rise of serial social media platform users and the growing internet presence in Zimbabwe, support social media integration in SMEs' business activities. The authors contend that a crucial social media integration selection criterion of three DIT components—relative benefit, observability/visibility, and connective interactivity—is what a company anticipates from a particular platform as influential.

The first hypothesis (H1) is, therefore:

- H1. Technological characteristics have a positive influence on social media integration by SMEs.

Organisational Characteristics

Integrating social media within SMEs depends on crucial organisational factors (Tornatzky & Fleischer, 1990)[56]. The overall organisational context is influenced by factors such as the organisation's size, level

of formalisation, centralization, staffing, and management issues like staff networks and relationships. The level of support from the owner/management for social media indicates the overall organisational environment, as proposed in the individual characteristics of DIT by Rogers (2003)[57]. Mohammadian (2022)[58] emphasises the importance of promoting innovation and assessing SMEs' entrepreneurial orientation level. Entrepreneurial-oriented firms are more inclined to enter new or existing markets with innovative products or services despite the inherent uncertainty and risk(Alam et al., 2022[59]; Fan et al., 2021[46]). This view implies that adopting an entrepreneurial orientation can positively affect social media integration and improve SMEs' performance.

In developing economies like Zimbabwe, SMEs' use of social media is underdeveloped due to various challenges SME managers face. Despite the widespread use of social media at a personal level, there is a lack of sufficient research on SMEs' use of social media in developing nations. However, studies conducted in the Southern Africa region have examined the role of managers in decision-making related to the integration of social media and their innovativeness in extending products/services offerings to a broader market (Makanyeza et al., 2023[16]; Mataruka, 2022[60]; Chudu et al., 2022[4]; Jere & Ngidi, 2021[7]).

The individual characteristics of senior managers and the size of the business are important factors that influence social media integration. Previous studies have found a positive correlation between SME managers' knowledge of the benefits of integrating mission-critical information systems and their ability to use these technologies in an entrepreneurial-oriented manner (Mohammadian, 2022[58]).

.One fascinating insight is the potential tension between managers' personal use of social media and its use within the business context. Managers' personal experiences and the influence of others may increase their likelihood of integrating social media for innovative purposes and reduce their perception of risks associated with using social media for business purposes (Fan et al., 2021[46]; Kwon et al., 2021[61]; Effendi et al., 2020[9]). This creative and risk-attitudinal mindset finds support in the existing literature (Chiu et al., 2016[62]; Schaupp & Bélanger, 2014[63]).

However, existing research does not adequately address the issue of personal perceptions, such as risk-attitude and innovativeness, in integrating social media in a business context (Kwon et al., 2021[61]; Effendi et al., 2020[9]). Therefore, a significant criterion for social media decision-making is the balance between risk-attitudinal, entrepreneurial orientation, and innovativeness that a business expects from a given platform, relying on management support.

Despite the available background and determinants of social media integration, there is still an incomplete understanding of the role of senior managers' perception in integrating social media in business (Makanyeza et al.,2023[16]; Mataruka et al.,2023[64]; Kajongwe et al., 2020[29]). Studies have shown a positive relationship between social media and the business strategy of SMEs in Zimbabwe, emphasising the importance of senior management endorsement and technological preparedness for successful integration (Kajongwe et al., 2020)[29].

The second hypothesis (H2) is, therefore:

- H2. Organisational characteristics have a positive influence on social media integration by SMEs.

Environmental Characteristics

Environmental factors play a crucial role in shaping the integration of technological advancements in organisations. These factors include the industry's structure, competition, government incentives and regulations, and external suppliers. The external environmental context of an organisation is influenced by these external factors, as highlighted by various studies (Bagale et al., 2021[65]; Cao & Chen, 2019)[66]; Tornatzky & Fleisher, 1990 [56]).

Integrating social media tools in emerging industries tends to be more prevalent than in established or declining industries. Emerging industries must adopt innovative practices to maintain a competitive edge. On the other hand, government laws and policies significantly impact technology integration in small and medium-sized enterprises (SMEs). These regulations can either facilitate or hinder the integration of new technology.

Taking the example of Zimbabwe, the government has shown a commitment to policy by prioritising ICT infrastructure development (Karekwaivanane & Msonza, 2021[67]). This commitment has led to a remarkable expansion of mobile cellular usage and internet penetration in the country. Such government support reduces uncertainty and creates opportunities for businesses to improve their information systems and responsiveness.

Furthermore, social media development and use vary across countries, influenced by external environmental factors known as facilitating conditions (Qalati et al., 2021[8]; Dahnil et al., 2014[68]). In the case of Zimbabwe, these external factors provide additional insights into social media integration trends among SMEs. The increased government regulations and global competitiveness have created borderless

markets, leading to external pressure from critical stakeholders. Overall, environmental factors play a crucial role in shaping integration.

The third hypothesis (H3) is, therefore:

- H3. Environmental characteristics positively influence social media integration by SMEs.

Social Media's Effects on company performance

Research studies have shown that technology can significantly improve business operations (Hendriarto, 2021[69]; Qalati et al., 2021[8]; Meng et al., 2020[70]). A survey by Ainin et al. (2015)[71] found that incorporating social media into corporate strategies is linked to improved SME performance. Using social media in business practices can improve performance. Research studies have shown that social media platforms positively impact business operations. Rodriguez and Boyer (2020)[72] and Ferrer et al. (2013)[73] have found that social media positively affects customer-facing activities, sales performance, organisational social capital, and overall performance.

Integrating digital innovations with traditional business methods benefits all stakeholders. Businesses must adopt strategies to take advantage of new opportunities and improve performance. Studies conducted by Kraus et al. (2021)[74], Sivarajah et al. (2020)[75], and Muninger et al. (2019)[76] support this assertion. Studies have shown that technology-focused businesses must use information and communication technology (ICT) tools and promote innovation to succeed in the uncertain economy (Chatterjee et al., 2022[77]; Zhang & Watson, 2020[78]). Hu et al. (2019)[79] argue that incorporating and expanding ICT applications can bring substantial economic benefits to businesses. The benefits include increasing market share, boosting sales volumes, and reducing costs. Zhang and Watson (2020)[78] found that companies using technology for innovation see higher profits and market share growth. These firms outperform competitors who don't embrace advancements.

However, other studies argued that there is no significant relationship between social media integration and performance advantages (Bhimani et al., 2019[20]; Roberts & Piller, 2016[21]). However, these studies suggest that additional organisational factors may influence this relationship. The inconsistent results may be due to the lack of consideration for intermediary organisational factors (Mataruka et al., 2023[64]; Asri, 2021[80]; Gupta et al., 2020[81]; Ahmad et al., 2019[18]; Ravichandran & Lertwongsatien, 2005[82]). Therefore, it is essential to consider these factors when examining the impact of technology integration on SMEs' performance. Social media integration can impact SMEs' performance directly and indirectly

significantly. First, the immediate effect would be the social media integration composite construct on SMEs' performance. Second, the argument is the direct effect is that social media integration antecedents impact SMEs' performance. Third and otherwise, social media integration indirectly mediates between social media antecedents and SMEs' performance.

The study hypotheses relating to social media integration composite stated as H4 therefore:

- H4. SMEs can benefit significantly from social media integration to enhance SMEs' performance.

Other studies on ICTs, like social media integration, show a direct influence on performance (Mataruka et al., 2023[64]; Meng et al., 2020[70]; Qalati et al., 2021[8]). Therefore, we claim that technology factors as H5:

- H5. SMEs can benefit significantly from social media integration's technological determinants to enhance SMEs' performance.

Social media uptake in SMEs is crucial for developing countries, with challenges faced by SME managers in Zimbabwe. Further research is needed to explore managers' decision-making, individual traits, business size, and entrepreneurial ability to utilise information systems (Chatterjee et al., 2022[77]; Zhang & Watson., 2020[78]). Following other studies (Makanyeza et al.,2023[16]; Mataruka et al.,2023[64]; Kajongwe et al., 2020[29]) we suggest that the H6 statement for organisational factors managerial support and innovativeness be:

- H6. SMEs can benefit significantly from social media integration's organisational determinants to enhance SMEs' performance.

Environmental factors such as industry structure, competition, government regulations, and external suppliers substantially impact SMEs' performance. These characteristics can help or hinder a company's integration of social media and reduce the capabilities of the users, enabling beneficial innovations. Furthermore, stakeholder pressure and rising government regulations might force enterprises to improve their information systems and responsiveness, resulting in borderless marketplaces (Ghobakhloo et al. (2022)[2]; Effendi et al., 2020[9]; Ali Qalati et al., 2020[12]; Karedza & Govender, 2020[13]). Thus, we hypothesise H7 stating that:

- H7. SMEs can benefit significantly from social media integration's environmental determinants to enhance SMEs' performance.

Second, SMI indirectly mediates the relationship between social media determinants and SMEP. Studies by Mataruka et al. (2023)[64], Asri (2021)[80], Gupta et al. (2020)[81], Ahmad et al. (2019)[18], and Ravichandran & Lertwongsatien (2005)[82] have shown the mediating role of social media integration as a relationship between information systems management and firm performance. The study suggests that social media integration mediates social media antecedents (technological, organisational, and external environmental factors) and SMEs' performance. This approach leads to formulating hypotheses 8, 9, and 10. Therefore:

- H8. SMEs can benefit significantly from social media integration, meditating between technological factors to enhance SMEs' performance.
- H9. SMEs can benefit significantly from social media integration, meditating between organisational factors to enhance SMEs' performance.
- H10. SMEs can benefit significantly from social media integration, meditating between external environmental factors to enhance SMEs' performance.

The literature has used DIT and TOE to explain how technology integration in SMEs affects SMEs' performance (Mukherjee et al., 2023[11]; Effendi et al., 2020[9]; Jere & Ngidi, 2020[7]; Pateli et al., 2020[83]; Chiu et al., 2017[62]). This study is grounded in the TOE theory with seven constructs. The TOE incorporates elements from the DIT, such as relative advantage, observability/visibility, and compatibility/interactivity. Additionally, it considers organisational factors such as senior management support and entrepreneurial orientation. It also includes environmental qualities from TOE theory, such as competitive pressure, environmental uncertainty, and competitive intensity. Therefore, Figure 1 below shows the theorised relationship.

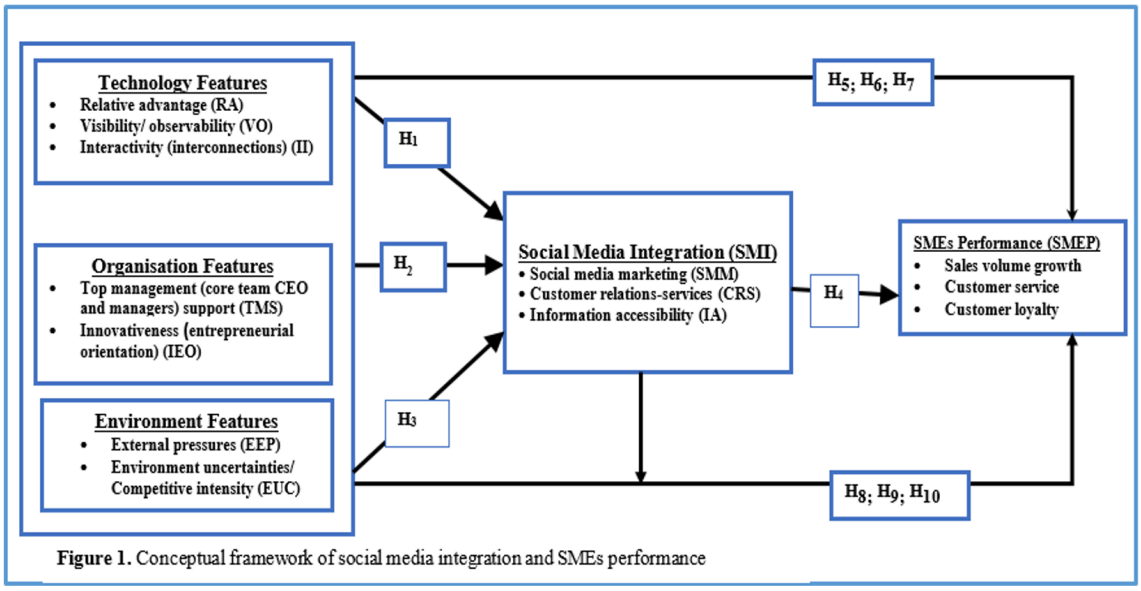

Figure 1. Conceptual framework of social media integration and SMEs performance

Figure 1.

3. Research methods and materials

Research Design

This study utilized a cross-sectional research design to examine the relationship between social media integration and the performance of SMEs in Zimbabwe's multi-industrial sector. The researchers employed a joint stratified and purposive sampling method to select participants from different industry types within the SME sector. The strata in this study were industry types within Zimbabwe's SME multi-industrial sector. The study specifically focused on businesses in the Harare Central Business District, known for its high footfall and modern IT infrastructure. This choice of location serves to overcome the constraints associated with cross-sectional data and enhances the significance and applicability of the research findings.

The sampling frame purposively selected individuals from SMEs that had already integrated social media into their operations (Sharma et al., 2020[84]; Salleh et al., 2018[85]; Bergeron et al., 2001[86]). This approach aimed to overcome the limitations of cross-sectional data by focusing on businesses already adopting social media technology. The study specifically targeted managers of SMEs who held ownership or top managerial positions, as they were considered critical decision-makers in the integration of social media technology (Yaseen et al., 2022[87]; Wulf et al., 2021[88]). All potential participants in the study were

made aware of the study's goals and assured that their responses would remain confidential (Memon et al., 2023)[89].

To address potential non-response bias, the researchers compared early and late respondents and found no significant differences in their answers. This step helped ensure that the data collected was representative of the target population. This finding is further supported, therefore enhancing its validity. The data collection process lasted approximately three months, during which the selected participants completed 938 questionnaires.

The study employed Partial Least Squares (PLS) Structural Equation Modelling (SEM) to examine the proposed hypotheses. The authors used PLS-SEM to purify, analyse, and present the data. The statistical technique explored the connections between social media integration and SMEs' performance.

Measurements

This study classifies technological and organisational construct measurements based on Rogers (2003) [57] and adapts the category of external environmental measures from Tornatzky & Fleisher (1990)[56]. The variables in the research model, all dimensions, use multiple questions on a five-point Likert-type scale. Each item has a score on a five-point Likert scale ranging from strongly disagree (1) to agree (5) strongly. All measurement items used had three indicators and are in Appendix A.

The critical explanatory construct for the study is technology factors, organisational factors, external environmental factors and social media integrations. Technological factors (TF) in this context refer to the various aspects of technology that influence the adoption and integration of social media in SMEs in Zimbabwe. These factors include relative advantage, visibility, and interconnectedness. Organisational factors (OF) include top management support and innovativeness or entrepreneurial orientation, which impact the adoption and integration of social media within the company. External environmental factors (EEF), such as competitive pressure and industry competitiveness, also play a role in integrating social media. Finally, social media integration (SMI) encompasses aspects such as social media marketing, customer relationship systems, and information accessibility. Table 1 below shows the study measurement items and their sources.

Constructs	Measurements	Description	References
Technological Factors (TF)	Relative Advantage (RA)	RA refers to the competitive advantage gained by utilising social media.	Pateli et al., 2020[83]; Grandon & Pearson, 2004[90]; Moore & Benbasat, 1991[91]
	Visibility or Observable (VO)	Due to social media, VO indicates that the company is visible on the global e-business map.	Pateli et al., 2020[83]; Sin Tan et al., 2009[92]; Hsu et al., 2007[93]; Moore & Benbasat, 1991[91]
	Interconnectedness (II)	II implies the use of social media in retaining loyal customers.	Pateli et al., 2020[83]; Al-Qirim, 2007[93]; Moore & Benbasat, 1991[91]
Organisational Factors (OF	Top Management Support (TMS)	TMS refers to the executive leadership's encouragement and support for social media integration.	Pateli et al., 2020[83]; Covin et al., 2020[94]; Thong, 2001[95]; Thong & Yap, 1995[87]; Yap et al., 1994[96]; Moore & Benbasat, 1991[91]
	Innovativeness or Entrepreneurial Orientation (IEO)	IEO implies that the company develops innovative services and packages to remain competitive	Pateli et al., 2020[83]; Covin et al., 2020[94]; Thong, 2001[95]; Moore & Benbasat, 1991[91]
External Environmental Factors (EEF)	Competitive Pressure (EEP)	EEP reflects the adoption of social media due to rival companies' integration	Pateli et al., 2020[83]; Gutierrez et al., 2015[97]; Yap et al., 1994[96]
	Environmental Uncertainty (EUC)	EUC relates to the intense competition the company faces.	Pateli et al., 2020[83]; Thong & Yap, 1995[98]
Social Media Integration (SMI)	Social Media Marketing	SMM refers to using social media platforms to promote products or services.	Pateli et al., 2020[83]; Cesaroni and Consoli, 2015[99]
	Customer Relationship Systems (CRS)	CRS refers to SMEs using tools and technologies to manage	Pateli et al., 2020[83]; Cesaroni and Consoli, 2015[99]

Constructs	Measurements	Description	References
		and enhance customer relationships.	
	Information Accessibility (IA)	Information Accessibility (IA) refers to the ease with which individuals can access and obtain information.	Pateli et al., 2020[83]; Cesaroni and Consoli, 2015[99]

Table 1. Constructs, Measurements, Descriptions and References

Sampling and data collection

The research employed a stratified sampling methodology and an online questionnaire to collect the necessary information from SMEs operating in multi-sectors as the strata. Purposively, the unit of analysis targeted SMEs already using social media to inform the study. The process of selecting managers who responded used the directory of the SME Association of Zimbabwe's LinkedIn platform as its sampling frame. Subsequently, the authors, using a sampling frame of the professional association, disseminated the digital survey via forums and social networking platforms.

The survey's unit of analysis was the individuals responsible for overseeing the social media strategies in their organisations, typically the owner-manager or someone entrusted with overall business managerial oversight (Bergeron et al., 2001)[86]. There were 2,000 online surveys distributed. We excluded 1,104 cases out of 1,250 returned data collection instruments due to missing data or not meeting the research criteria, a 62.5% responsive rate. The study analysed and concluded 938 accountability data cases, an effective, responsive rate of 46.7%. Hair et al. (2017)[100], Akram et al. (2017)[101] and Kufandirimbwa et al. (2012)[102] opine that it is possible to generalise the results of the accountable data from such a responsive rate.

To address the potential impact of common method bias, the researchers provided all potential participants with a clear understanding of the study's goals and promised confidentiality. While guaranteeing the anonymity of all respondents, they were briefed on the study's objectives and concurred. The assessment of non-response bias entailed ascertaining that the responses garnered from respondents who replied early and those who responded late did not manifest any noteworthy

dissimilarities. The authors are, therefore, reasonably confident that non-response bias does not pose a significant problem.

4. Results

Descriptive information

Table 1 presents the descriptive statistics of the participant's demographic information: age, gender, position and experience.

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	Frequency (N=109)	Percentage (%)
Age		
<25 years	1	0.1
25-35 years	124	13.2
36-45 years	289	30.8
46-55 years	305	32.5
> 55 years	219	23.4
Gender		
Male	223	23.8
Female	715	76.2
Position		
ICT Manager	347	37.0
Senior Manager	412	43.9
Executive	179	19.1
Education		
Degree	372	39.7
Masters	270	28.8
PhD	163	17.4
Advanced level	46	4.9
Diploma	35	3.7
Other	52	5.5

Table 1. Demographic data of all the participants

The descriptive information for the 938 respondents shows the age group with the highest representation is individuals aged 46-55, closely followed by those aged 36-45. In contrast, individuals below 25 years and aged 25-35 years were relatively fewer in number. The results reveal a gender imbalance within the population, with females comprising 76.2 percent and males accounting for 23.8 percent. Thus, the higher proportion of females in the population suggests a dominance of the female gender in SMEs in Zimbabwe. Regarding educational qualifications, the largest segment comprises Degree individuals, representing 39.7 percent of the population. The second-largest group includes individuals with a Master's degree, followed by a PhD, representing 28.8 and 17.5 percent of the target population. Other qualifications, A-level holders, and diploma holders follow in descending order, representing 5.52 percent, 4.9 percent, and 3.7 percent of the population, respectively. This demographic profile suggests that decision-makers in SMEs using social media tend to be younger and better educated. They may also be more aware of business developments in the industry and beyond.

	Frequency (N=109)	Percentage (%)
Sector		
Manufacturing	191	20.4
Agriculture	48	5.1
Tourism and Leisure	63	6.7
Mining and Quarrying	78	8.3
Professional services	71	7.6
Retail and Wholesale	194	20.7
Financial Services	156	16.6
Information Technology	81	8.6
Health	56	5.9
Experience		
Less than one year	58	6.2
1-5 years	351	37.4
6-10 years	270	28.8
11-15 years	141	15
Above 15 years	118	12.6

Table 2. Profile of respondents by sector and experience

The selected firms exhibited reasonable representativeness concerning the broader population of business sectors within the Harare SME area. Consequently, the sectors show a degree of interdependence. The manufacturing sector, encompassing furniture and metal fabrication, commands the most significant portion of the market, representing 23.4 percent. Following closely behind is the retail and wholesale sector, comprising 20.7 percent. The financial services sector is the third-largest category, accounting for 16.6 percent of the overall sectors. The sectors of Information Technology,

Mining and Quarrying, Tourism and Leisure, Health, and Agriculture account for 8.6%, 8.3%, 6.7%, 5.9%, and 5.1% of the total, respectively. The distribution of positions within the organisation reveals that the most significant proportion is occupied by owner-managers, accounting for 43.9 percent. Non-owner managers constitute the second largest group, comprising 37 percent of the positions, while executive functions include the remaining 19 percent. The authors express a high confidence level in the sample's representativeness, consisting of SMEs in the Harare Business District in Zimbabwe.

Empirical analysis

The data cleaning was done before the empirical analysis to evaluate the accuracy and dependability of the measuring tools. The research employed PLS-SEM version SmartPLS 4.0, known as partial least squares structural equation modelling, to analyse and test the hypotheses. The application of PLS-SEM stems from the difficulty that academics and business professionals have in locating acceptable data sets for covariance-based structural equation modelling (CB-SEM) (Kono & Sato, 2023)[103].

Data purification

The statistical study used t-test comparisons to assess the differences in group means for each analysed component. The data showed no fundamental changes between owner-managers, non-owner managers, and other executive positions. The results for the means and standard deviations of the measurement items shed light on the data's average and variability by revealing the responses' central tendency and dispersion. Table 3 below displays the centrality and dispersion measures of the measurement items for the study variables. The results indicate we achieved similar average responses and low variability across the indicators.

Construct	Variable	Mean range	Standard Deviation-Range	Implication
Technological Factors	RA	3.000 to 3.378	1.2040 to 1.2910	• similar average levels of responses • low degree of variability
	VO	3.118 to 3.316	1.2630 to 1.3780	
	II	3.159 to 3.303	1.2520 to 1.3030	
Organisational Factors	TMS	2.651 to 2.850	1.111 to 1.9100	
	IEO	3.150 to 3.414	1.213 to 2.1733	
Environmental Factors	EEP	2.699 to 2.810	1.0170 to 1.146	
	ECU	2.677 to 2.753	1.0880 to 1.124	
Social Media Integration	SMM	3.376 to 3.431	1.2620 to 1.319	
	CRS	3.059 to 3.488	1.1790 to 1.261	
	IA	3.636 to 3.758	1.1570 to 1.198	

Table 3. Measurement Items Mean and Standard Deviation Ranges

Based on the recommendations of Ahmad et al. (2019)[18], we self-developed a composite variable to capture multiple dimensions of SME performance (SMEP). The composite measure included three variables: (1) sales volume growth, (2) customer service, and (3) customer loyalty. The item measurements relate to the quality of service six (6) items from Rehman et al. (2012)[104]. SMEP indicators' data analysis reveals that the variables have relatively consistent mean values between 2.518 and 2.668, indicating similar average levels of responses, accompanied by a narrow range of standard deviation values from 1.013 to 1.091, suggesting a low degree of variability or dispersion in how participants responded.

Further, the measurement items also assessed each hypothesis's convergent validity and internal consistency. Composite Reliability (CR) and Cronbach's Alpha (CA) evaluate the internal consistency

reliability in this study. The convergent validity (CV) assessment was through the Average Variance Extracted (AVE) and factor or outer loadings. A summary of the key findings is presented in Table 4, providing an overview of the results obtained from the analysis.

Variable	Cronbach's alpha	Composite reliability	The average variance extracted (AVE)
AI	0.925	0.947	0.817
SMEP	0.805	0.860	0.506
CRS	0.902	0.926	0.679
EEP	0.783	0.848	0.530
EUC	0.727	0.830	0.550
IEO	0.888	0.916	0.650
II	0.927	0.945	0.775
RA	0.872	0.905	0.617
SMM	0.943	0.955	0.779
TMS	0.726	0.828	0.547
VO	0.906	0.934	0.781

Table 4. Descriptive statistics

In Table 4, the AVE values range from 0.506 to 0.817, indicating that the measurement constructs have convergent validity as they surpass the recommended threshold of 0.5. The CR values range from 0.828 to 0.955, meeting the recommended threshold of 0.7, suggesting that the measurement constructs demonstrate good internal consistency. The CA values, ranging from 0.726 to 0.927, further support the presence of internal consistency within the measurement items. We excluded items with factor loadings below 0.5 from the analysis.

Table 5 presents the results of the Fornell-Larcker criterion, a commonly used technique for assessing the discriminant validity of measurement models (Hair et al., 2017[100]). This analysis provides insights into

the measurement constructs' distinctiveness and ability to capture unique aspects of the underlying latent variables.

	AI	SMEP	CRS	EEP	EUC	IEO	II	RA	SMM	TMS	VO
AI	**0.904**										
SMEP	0.026	**0.712**									
CRS	0.504	0.099	**0.824**								
EEP	-0.002	0.561	0.102	**0.728**							
EUC	-0.004	0.533	0.120	0.521	**0.742**						
IEO	0.316	0.044	0.413	0.075	0.066	**0.807**					
II	0.360	0.038	0.367	0.065	0.054	0.742	**0.880**				
RA	0.385	0.095	0.558	0.141	0.158	0.360	0.341	**0.785**			
SMM	0.205	0.062	0.309	0.036	0.059	0.111	0.128	0.536	**0.882**		
TMS	0.037	0.270	0.104	0.299	0.381	0.126	0.113	0.151	0.074	**0.740**	
VO	0.325	0.024	0.356	0.065	0.057	0.750	0.872	0.355	0.106	0.092	**0.884**

Table 5. Fornell-Larcker criterion results

Note: *The number in bold is the square root of AVE.*

Based on the results of the Fornell-Larcker criterion, it is evident that discriminant validity exists among all the measurement items. This criterion is supported by observing that the square root of each factor's Average Variance Extracted (AVE), represented by the bolded values on the diagonal, is higher than the corresponding correlation coefficients. This result indicates that each factor is more strongly related to its indicators than other factors' elements, confirming the measurement constructs' distinctiveness.

In addition to the Fornell-Larcker criterion, the study employed the Heterotrait-Monotrait Ratio of Correlations (HTMT) technique to further assess the discriminant validity of the measurement models. The analysis results are presented in Table 6 and provide additional insights into the distinctiveness of the measurement constructs.

	AI	**SMEP**	**CRS**	**EEP**	**EUC**	**IEO**	**II**	**RA**	**SMM**	**TMS**	**VO**
AI											
SMEP	0.042										
CRS	0.544	0.119									
EEP	0.047	0.718	0.131								
EUC	0.044	0.699	0.158	0.713							
IEO	0.340	0.058	0.458	0.099	0.084						
II	0.389	0.045	0.408	0.080	0.066	0.810					
RA	0.428	0.118	0.660	0.181	0.199	0.397	0.378				
SMM	0.219	0.072	0.356	0.062	0.072	0.120	0.136	0.592			
TMS	0.047	0.355	0.133	0.396	0.527	0.152	0.135	0.192	0.093		
VO	0.354	0.039	0.401	0.078	0.069	0.829	0.852	0.398	0.115	0.111	

Table 6. Heterotrait-Monotrait Ratio of Correlations (HTMT) results

The Heterotrait-Monotrait Ratio of Correlations (HTMT) results confirm discriminant validity, as all the values presented are below 0.90. This ratio indicates that each construct in the suggested model meets the requirements for structural equation modelling and exhibits distinctiveness from other constructs.

To examine common method bias (CMB), a method proposed by Kock and Lynn (2012)[105] was employed to test for multicollinearity. The test results, which provide variance inflation factors (VIFs) for all latent variables in the model, are presented in Table 7. The VIF values can help assess the potential presence of CMB and multicollinearity in the data.

Variable	AI	SMEP	CRS	EEP	EUC	IEO	II	RA	SMM	TMS	VO
VIF	3.183	1.528	2.552	1.555	1.371	2.31	3.126	1.367	3.147	1.386	2.849

Table 7. Full collinearity statistics (VIF) results

Table 7 indicates that all the VIFs for the latent variables in the model are below 3.3, which aligns with the recommendation by Kock and Lynn (2012)[105] and suggests the absence of multicollinearity. This result implies that the variables in the model are not highly correlated, enhancing the analysis's robustness. Furthermore, the lack of multicollinearity indicates that the model is free from common method bias (CMB), which could have otherwise affected the validity of the results.

Structural model fitness

The structural model illustrated the causal pathways and hypothesised associations between the constructs in the study. The data analysis employed the Partial Least Squares (PLS) approach using SmartPLS 4.0 software to explore the relationships between the measurement items. All factor loadings are above 0.50 regarding convergent validity, implying a good model. The results reported a 26.7 per cent of the total variability in SMEP derives from the effects of EFF, SMI, OF and TF. In addition, 17.5 per cent of the total variability in SMI is due to the explanatory variables EFF, OF and TF.

Goodness of fit

The predictive relevance of the Stone-Geisser (Q^2) test measures, the coefficient of determination (R^2) values, and the size of the path coefficients are used to evaluate the structural model in PLS-SEM (Hair et al., 2017[100]). Using nonparametric bootstrapping with resamples makes it possible to determine the statistical significance of estimates (t-statistics) (Helm et al., 2010[106]; Henseler et al., 2009[107]; Chin, 1998[108]). This method runs counter to modelling approaches for covariance structure analysis that assess the structural model using goodness-of-fit metrics. Briones-Penalver et al. (2018)[109] recommend that the model's informative metrics R^2 and Q^2 should be greater than zero. Table 8 provides the goodness of fit measures for further analysis and interpretation.

Endogenous latent variable	R^2	Q^2	Standardised root mean square residual	Normed Fit Index
SMEP	0.267	0.257	0.076	0.907
SMI	0.175	0.169		

Table 8. Goodness of fit results

The findings demonstrate that the path model exhibits predictive significance for each dependent construct, as evidenced by the R^2 and Q^2 values exceeding zero. According to the results in Table 8, 26.7 per cent of the total variability in SMEP relates to explanatory variables EFF, SMI, OF and TF. In addition, 17.5 per cent of the total variability in SMI is due to the effects of EFF, OF and TF. A standardised root mean square residual (SRMR) value of 0.076 supports the model's acceptability, which falls below the recommended threshold of 0.08 (Hu & Bentler, 1999[110]). Furthermore, the Normed Fit Index (NFI) value of 0.907 surpasses the recommended threshold of 0.90, indicating a good fit between the model and the data. An additional advantage of utilising the SRMR index in research is its capacity to offer robust insights while less influenced by sample size considerations (Chen, 2007)[111].

Structural Model Results

The study employed structural equation modelling (SEM) to assess the research model. This method is considered more comprehensive and effective than stepwise regression analysis as it enables the simultaneous testing of all paths rather than a gradual approach (Hair et al., 2017)[100]. The study's hypotheses were evaluated using Partial Least Square (PLS-SEM) path modelling facilitated by the statistical software Smart PLS 4.0. It is recommended to utilise the PLS path modelling variance-based technique to examine and authenticate exploratory models during the initial stages of theoretical development (Hair et al., 2017[100]; Becker et al., 2012[112]). The selection of PLS was based on its ability to offer three advantages. Firstly, it is a nonparametric method that does not make assumptions about the normality of the data and utilises iterative least squares estimation. Secondly, it exhibits strong performance even with limited sample sizes. Lastly, it possesses a predictive function that facilitates future planning and decision-making, as evidenced by sources (Hair et al., 2017[100]; Becker et al., 2012[112]). The sample requirements for Partial Least Squares (PLS) are comparatively less stringent compared to covariance-based techniques. According to scholarly sources (Kono & Sato, 2023 [103]; Hair et al., 2017[100]; Kock & Lynn, 2012[105]), a minimum of 30 to 100 examples is recommended for conducting PLS analysis. For a more accurate assessment, it is recommended to perform a power analysis on the model component with the highest number of predictors, as suggested by sources (Kono & Sato, 2023) [103]. Our study determined that a minimum sample size of 500 cases was necessary (Hair et al., 2017) [100], and we achieved 938 study cases for analysis. This was based on our assumption of a significant effect size (R^2 equal to or greater than 0.26) and using first-order predictors to determine the value of the dependent variable (Kock & Lynn, 2012)[105].

SmartPLS 4.0 software enabled data analysis and applied the partial least squares (PLS) approach to discover the correlations between the measurement elements in Figure 2 below.

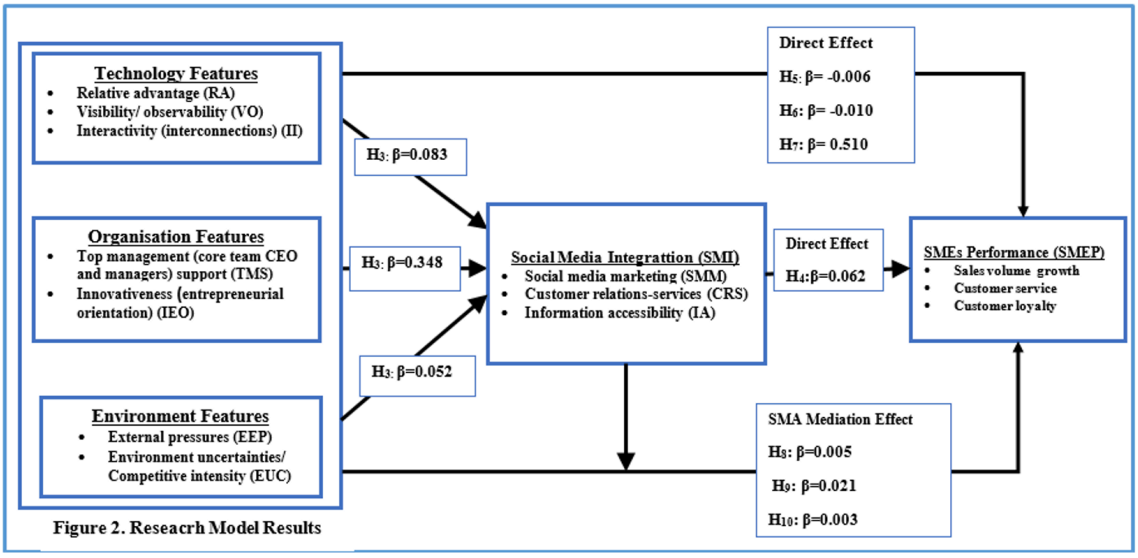

Figure 2.

The following hypotheses are tested:H1, H2, H3, H4, H5, H6, H7, H8, H9, and H10 as per the conceptual framework in Figure 2 above. Table 9 presents the PLS results for the structural model.

Hypothesis	Relationship	Coefficient (β)	SE	T	P-values	Decision
H_1	TF -> SMI	0.083	0.041	2.037	0.042	Supported
H_2	OF -> SMI	0.348	0.039	8.949	0.000	Supported
H_3	EEF -> SMI	0.052	0.030	1.741	0.082	Not Supported

Table 9. Structural model's PLS results for SMI

*Note that: *** p< 0.01, ** p < 0.05, * p < 0.1*

The results for the decomposite measure of social media integration in Table 9 indicate that TF had a significant positive impact on SMI (β = 0.083, t=2.037, p=0.042), OF had a significant positive effect on SMI (β = 0.348, t=8.949, p <0.001). EEF had an insignificant positive impact on SMI (β = 0.052, t=1.741, p =0.082). These results suggest that H_1 and H_2 are supported while H_3 is not.

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Hypothesis	Relationship	Coefficient (β) (β)	SE	T	P-values	Decision
H_4	SMI -> SMEP	0.062	0.029	2.140	0.032	Supported
H_5	TF -> SMEP	-0.006	0.038	0.166	0.868	Not Supported
H_6	OF -> SMEP	-0.010	0.040	0.252	0.801	Not Supported
H_7	EEF -> SMEP	0.510	0.027	18.790	0.000	Supported

Table 10. Structural model's PLS results for SMEP

*Note that: *** p< 0.01, ** p < 0.05, * p < 0.1*

The results in Table 10 indicate the composite measure for social media integration (SMI) significantly positively affected SMEP (β = 0.062, t=2.140, p=0.032). TF had an insignificant negative effect on SMEP (β = 0.006, t=0.166, p =0.868). OF had a negligible negative impact on SMEP (β = -0.010, t=0.252, p =0.801), and EEF had a significant positive effect on SMEP (β = 0.510, t=18.790, p <0.001). These results suggest that the disaggregate measure for EEF of SMI (H_7) and the composite measure for SMI (H_4) are supported. While the remainder of the disaggregated extent TF and OF represented by H_5 and H_6 are not supported.

Mediating effect

By including a mediator in a framework, researchers gain valuable insights into fundamental aspects, which is necessary for understanding how an independent variable influences a dependent variable (Rasoolimanesh et al., 2021)[113]. Table 11 presents the results of the mediation hypotheses H_8, H_9, and H_{10}, which examine the significance of direct and indirect effects. The mediation investigation utilised a 95% confidence interval (CI) and 5000 bootstrapping samples.

Hypothesis	Relationship	Coefficient	CI Bias-corrected				
		Beta (β)	SE	T	P-value	2.50%	97.50%
H_8	TF -> SMI -> SMEP	0.005	0.004	1.414	0.157	0.000	0.015
H_9	OF -> SMI -> SMEP	0.021	0.011	2.032	0.042	0.003	0.044
H_{10}	EEF -> SMI -> SMEP	0.003	0.003	1.268	0.205	0.000	0.011

Table 11. Mediating effects

*Note that: *** p< 0.01, ** p < 0.05, * p < 0.1*

The study found that SMI insignificantly mediates the relationship between TF and SMEP, as indicated by the p-value, above the recommended value of 0.05, in addition to the 95 per cent confidence interval (CI) including zero. Additionally, SMI is not a significant mediator in the relationship between EEF and SMEP since the 95 per cent confidence interval (CI) includes zero, and the p-value of 0.889 is above the recommended value of 0.05. However, SMI significantly mediates the relationship between OF and SMEP, as indicated by the p-value of 0.042, below the recommended value of 0.05, and the 95 per cent confidence interval (CI) excluding zero. Therefore, hypotheses H_8 and H_{10} are all not supported, while H_9 is supported.

5. Discussion

This paper examines integrating technology tools as a catalyst for enhancing SMEs' performance. A study conducted in Zimbabwe reveals the country's increasing economic significance of SMEs. Staying updated with the latest technologies can significantly benefit SMEs by enhancing their business momentum and expanding global networking opportunities. The findings from Table 9 and Table 10 of the study reveal several essential relationships and implications within the Zimbabwean context regarding technology factors (TF), organisational factors (OF), enterprise environmental factors (EEF), social media integration, and SME performance (SMEP). Previous research studies in the field of

information systems in the Zimbabwe industry have primarily explored and stressed the importance of technological elements (Mataruka et al., 2023[64]; Chundu et al., 2022[4]; Mataruka, 2022 [60]).

Based on the social media integration, antecedents TF implied that their direct impact on SME performance was insignificant. Similarly, AlSharji et al. (2018)[114] showed that the technology construct had no significant effect on social media integration. The technology construct is irrelevant to SMEs' decision to use social media, as the literature about the most influential factors is inconclusive. Internal characteristics of complexity and investments remain barriers to integrating complex IT systems such as ERP systems. SMEs are more affected by incorporating a specific technology (Roffia & Mola, 2022[115]; Ndekwa & Katunzi, 2016[116]; Buonanno et al., 2005[117]). However, social media is consumer-oriented and more likely to be perceived as a realised benefit. The respondents' age range of 36-55 and consequent relative indifference to social media due to their being technological migrants rather than younger users with better familiarity may be reasons for the study's unimpressive connection. Despite the sample's generally more significant levels of education, this may have decreased their capacity to use it successfully, negating the significance of relative advantage, visibility and interactivity in influencing behavioural intention. This view supports the resource-based idea, highlighting the importance of implementing social media integration initiatives at lower levels of an organisation rather than solely relying on top management.

Similarly, the effect of OF on SMEP is minor and does not play a significant role in enhancing SMEs' performance. This study highlights the insignificance of senior management engagement in integrating social media and inconsistencies in Zimbabwe's literature. The findings are dissimilar to the claim of other scholars (Makanyeza et al., 2023[16]; Chudu et al., 2022[4]; Mataruka, 2022[60]; Mohammadian, 2022[58]; Jere & Ngidi, 2021[7]) that found support. Thus, the integration of social media SMEs can have a significant impact on their performance. AlSharji et al. (2018)[114] found that the organization's construct is crucial in social media integration. Additionally, Mohammadian (2022)[58] emphasizes fostering innovation and evaluating entrepreneurial orientation in SMEs. Entrepreneurial orientation is critical to SMEs' success in integrating social media and improving performance. Alam et al. (2022)[59] and Fan et al. (2021)[46] discovered that firms with an entrepreneurial mindset are more likely to introduce innovative products or services. While some studies, such as AlSharji et al. (2018)[114], emphasize the importance of organizational factors in social media integration, others, like Mohammadian (2022)[58],

highlight the significance of fostering innovation and evaluating entrepreneurial orientation. These differing perspectives further contribute to the inconsistencies in the literature.

The authors suggest that senior management in SMEs enforces social media use in tactical and marketing operations. As such, Schaupp and Bélanger (2014)[63] conclude that technology competence could indicate the value of integrating social media, which relies on management support for lower operational levels in the case of SMEs. Senior managers might be constrained by their inseparability role in their businesses, making them the sole strategic decision-makers. The respondents' young age and high level of education suggest that they use social media for personal reasons, which may have influenced their interest in using it for non-strategic business purposes. Chigombe et al. (2022) [54] contend that managers should facilitate their staff's effective implementation of social media projects. This assistance may involve financial investments in IT infrastructure (Qalati et al., 2021)[8] and IT training to facilitate the organisation's integration of social media (Chigombe et al., 2022[54]; Chudu et al., 2022[4]; Schaupp & Bélanger,2014[63]).

Social media integration depends on top management's financial allocation of resources. Idemudia et al. (2017)[118] show that females have more assertive and more significant perceptions of ease of use, compatibility, relative advantage, and risk when using social media than males. The high level of female participation in this study, at 76.2 per cent, may have contributed to the social media integration decisions. Zimbabwean culture exhibits significant female involvement in entrepreneurial endeavours. Historically, women in the Shona and Ndebele cultures have depended on home-based micro-businesses for economic sustenance. Their economic activities demonstrate these risk-taking behaviours and attitudes toward resource allocation. Given their strong communication skills, it is logical for business leaders in this study to integrate social media into their operations with lesser strategic intent. Schaupp and Bélanger (2014)[63] identified that social media value encompasses various dimensions, including its perceived impact on internal processes, marketing, customer service, and sales. Hence, the gender effect in this study could concur with Idemudia et al. (2017)[118] assertions that males (23.8%) have a more vital perception of satisfaction and information quality when using social media than females (76.2%).

In contrast, the results imply that the environment in which an organisation operates impacts SMEs' performance, in concurrence with Shahadat et al. (2023)[119]. AlSharji et al. (2018)[114] results showed that the environmental constructs were significant. The study did not specifically examine how SMEP and the factors affecting EEF, competitive pressure, and intensity reacted. These elements were, however, blended

to create a composite build. Reading these variables has produced a range of results in earlier studies. Ahmad et al. (2019)[18] found that the variable of competitive intensity had no significant impact on the intention to adopt social media in the UAE, which contradicts previous research findings. In their study, Lertwongsatien and Wongpinunwatana (2003)[120] discovered a direct relationship between competitive intensity and the implementation of e-commerce in SMEs in Thailand. The Ahmad et al. (2019)[18] study found that competitive pressure significantly impacted the intention to adopt social media. Ahmad et al. (2019)[18] found that SMEs are motivated to embrace social media due to competitive pressure in their business environment. This finding could be consistent with prior research conducted by Schaupp and Bélanger (2014)[63] and Lertwongsatien and Wongpinunwatana (2003)[120], highlighting discrepancies in the existing literature.

Further, the perceived amount of competition, which relates to environmental uncertainty, has also been recognised as having an impact, albeit a minor one, on the integration of social media within organisations (Mataruka, 2022 [60]; Pateli et al., 2020[83]). There is likely a positive relationship between competitive pressure and social media integration at the firm level in Zimbabwe, specifically in increasing social media usage. In Zimbabwean, business entities are slow to adopt technology tools to enable their innovation management due to poor economic performance and lack of foreign financial resources (RBZ, 2023[121]; Nyoni & Bonga, 2018[122]). The bandwagon effect influences SMEs' social media integration, as they perceive it as a convenient way to reach customers, given its widespread usage in the general market, as Ahmad et al. (2019)[18] found in UAE. A well-developed ICT infrastructure in this Harare district may be a significant factor in integrating social media, primarily due to its easy accessibility rather than actual usage. However, in this study, it seems to have been an influencing condition. Schaupp and Bélanger (2014)[63] conclude that mobile environment characteristics are essential antecedents of social media usage. SMEs' level of awareness and comprehension regarding the potential advantages of social media is contingent upon their firm's expertise and experience (Chudu et al., 2022)[4]. These findings can help managers and decision-makers in the SME sector stay informed about research on social media use to enhance innovation, which could apply to optimise internal and external resources. This knowledge will empower individuals to capitalise on the growing prevalence of social commerce.

Table 10 provides an entirely similar and affirmative view of the results to those in Table 9 and Table 10 discussed above. Overall in Table 11, we are taking social media integration as a mediating construct

between TF, OF, and EFF, all on SMEP, as the results show insignificant and fragile support. The weak significant acceptance is the organisation factors related to the path (OF ◊ SMI ◊ SMEP), which may be due to some top management support and innovation/ entrepreneurial orientation being competitively distinctive for SMEs performance.

The direct effect of Environment Features (EFF) on SMEs performance (SMEP) is significant (P-value = 0.000). However, if we look at the impact of EEF on SMEP through SMI, the result is insignificant (P-Value = 0.205). Overall, the findings on the relationship between EEF, SMI, and SMEP are divergent and contrary. The results could be due to variations in sample sizes or compositions, specific industry or geographical contexts, and mediating or moderating factors. Additionally, differences in measurement methods and operationalisation of social media integration across studies may contribute to the divergent findings. Thus, further investigation is needed to understand the potential causes of these inconsistencies.

Based on the findings, top management should prioritise and invest in social media to support innovation and entrepreneurial orientation within the organisation. This focus includes providing resources and support for utilising social media as a platform for innovation. By doing so, the company can gather valuable consumer insights, co-create ideas, and support the launch of new products. This data-driven innovation can lead to faster ideation and commercialisation of client-centric innovations, ultimately driving SMEs' performance and competitiveness in the digital age (Bhimani et al., 2019[20]; Roberts & Piller, 2016[21]).

This study examined the impact of social media usage on the performance of SMEs. Nevertheless, the results indicated no statistically significant effect, implying that companies did not experience any advantages from their investments in this domain. Ahmad et al. (2019)[18] and Nair (2011)[123] suggest that treating social media as an experiment rather than subjecting it to immediate evaluation is worth considering. Mataruka et al. (2023)[64] contend that companies must consider information systems, like social media tools, as resources and capabilities that build core competencies that ensure sustainable competitive advantages over time, internally at the lower operational level. Thus, top management support should merely guide and provide the enabling environment to nurture a collective culture of experiential entrepreneurial orientation. Companies' social media investments and the methods used to evaluate their need within their strategic intent framework. Organisations should engage in technological experimentation until that point (Ahmad et al., 2019)[18]. Different companies measure performance differently, and this lack of a measurement standard makes it difficult for organisations to

directly assess the financial impact of integrating and performing on social media (Perera, 2021[124]; Abu Bakar & Ahmad, 2019[125]; Ahmad et al., 2019[18]) Measurements are subject to interpretation and can vary among parties (Owyang & Toll, 2007)[126]. McCann and Barlow (2015)[127] contend that success indicators should be consistent with the initiative's original objectives, such as integrating social media. Rather than choosing between blogging and tweeting, the focus should be on determining the key objectives and selecting the best tools and metrics, as argued by Hoffman and Fodor (2010)[128]. Ho and Wang (2020)[38] and Stockdale et al. (2012)[129] recommend companies develop a social media strategy and assess how well it will align with their objectives. This outcome is consistent with Blanchard's (2011)[130] and Ahmad et al.'s (2019)[18] conclusions. The authors emphasised integrating social media use with current business objectives and tactics.

6. Implications and conclusion

Theory Implications

This study examines the factors influencing management decisions to implement and use social media in SMEs. It aims to contribute to existing research by highlighting the importance of social media capabilities, such as relative advantage, presence-visibility, and interconnections. The study emphasizes that these capabilities are most effective when combined with a supportive organizational environment, innovative culture, and top management support. Additionally, the study highlights how competitive pressures in the external environment can impact SMEs' adoption of social media.

One of the key findings of this study is the identification of a gap in the current literature regarding the impact of technology tools on the performance of SMEs. The study suggests that keeping up with the latest technologies can benefit SMEs by improving their business growth and expanding global networking opportunities. However, the study also highlights that in developing countries like Zimbabwe, SMEs may face challenges due to a lack of necessary infrastructure, which hinders their effective use of social media.

Furthermore, the study reveals that technology and organisational factors do not directly impact the performance of SMEs through social media integration. Instead, the study suggests that the use of social media in SMEs can significantly impact their performance, with top management support and innovation/entrepreneurial orientation playing crucial roles in facilitating this integration. The study

also investigates and posits how environmental factors, such as competitive pressure and uncertainty, affect social media integration.

Therefore, this study contributes to the existing literature by providing insights into the factors influencing SMEs' decisions to adopt and use social media extensively. Emphasising the value of fully integrating social media can close the SMEs' performance gap. This integration can help with marketing, customer relationship systems, and accessing information. The study recommends further examining the challenges SMEs face in Zimbabwe when using social media.

Practical Implications

The practical implications of integrating social media into business operations are significant. Firstly, it can enhance SMEs' performance by increasing reach, customer engagement, and product promotion. This claim can improve visibility and customer loyalty and drive sales growth. However, employees must exercise caution when using social media, as it can distract and reduce productivity. Adequate management is crucial to avoid adverse customer relationships and harm to reputation.

Furthermore, businesses should thoroughly evaluate the advantages and disadvantages of incorporating social media before implementation. While it can provide momentum and global networking opportunities, the direct influence of technology and organizational factors on social media integration and SMEs' performance may be negligible. Therefore, businesses should view social media integration as an ongoing experiment to support core competencies and gain sustainable competitive advantages through innovation.

To adopt and accept innovation through social media integration, practitioners must prioritize experimentation and experiential open-access sharing with internal and external stakeholders. This approach requires support from upper management and an innovative/entrepreneurial mindset. Senior management must understand the significance of social media capabilities and resources in fostering innovation and overall performance.

Integrating social media into business operations can have practical implications for improving SMEs' performance. However, it is crucial to consider the specific context and objectives of the organization, as profitability may not always be the sole focus. By carefully evaluating the advantages and disadvantages and prioritizing experimentation and innovation, businesses can harness the benefits of social media integration and gain a competitive edge.

Government Policy Recommendations

SMEs' growth is a concern for many countries, especially developing countries. This study's findings have implications for government policies regarding social media integration. Government support is crucial for SMEs to adopt, integrate and utilise current technologies, such as social media, to support their business activities. Fiscal policies can offer financially targeted grants or incentives to SMEs, enticing them to spend on technology equipment to support their innovations in product and market development and education initiatives. The government should incentivize senior management in SMEs to allocate resources for integrating social media platforms. They should also provide support for the implementation process. To achieve this objective, implement awareness campaigns and training programmes highlighting the benefits of using social media platforms to improve SMEs' performance. In formulating policies related to social media integration, the government needs to consider the SME sector's unique characteristics, including the significant female participation and the impact of the competitive environment. The government should encourage SMEs to embrace social media as a resource for long-term competitive advantage by fostering a culture of technological experimentation and innovation.

Conclusion

Small firms in Zimbabwe increasingly use social media platforms to communicate and interact with their stakeholders effectively. Only a few companies have experienced enhanced SME performance due to this technological innovation. This study seeks to elucidate the correlation between factors influencing social media usage and its impact on business activities and overall firm performance. The study sample provides limited evidence of benefits for businesses that have embraced social media. While previous studies in Zimbabwe have predominantly used a descriptive approach, this study deviates from that by employing the TOE framework in conjunction with the DIT theoretical foundation and structural equation modelling for analysing the factors influencing firm performance. The results presented in Table 9 suggest that both TF and OF play a significant role in influencing the integration of social media (SMI). SMEs prioritise technological and organisational factors over environmental factors (EEF) when making decisions regarding SMI. Table 10 presents contrasting findings, showing that EEF positively impacts SMEs' performance, while TF and OF are unsupported. Table 11 demonstrates that SMI mediates OF and SMEP, while SMI's mediation of EEF and TF on SMEP is insignificant. This paradox highlights the

contradiction in the impact of social media integration on SMEs' performance. As a result of the paradox, the authors opine that the integration of social media did not impact the performance of SMEs.

Regarding social media integration, it would be wiser to consider internal factors (resources) other than human resources. This study contributes to developing a validated nomological framework utilising latent constructs. Future studies can build upon this study by using longitudinal research methods to investigate the latent and observable factors that influence the performance of firms.

7. Limitations and Future Research

This study is limited to SMEs in the Harare Central Business District. It may not accurately represent all businesses in Zimbabwe's multi-industrial sector and may not show consistent patterns in technology integration and innovation management. The sampling frame used SMEs already integrating social media, which could introduce bias and restrict the generalizability of the findings. The study assumes that organisations need top-level management (CEOs) endorsement and technological readiness for integrating social media. However, not all organisations may have these requirements. Relying solely on CEOs for analysis may overlook the perspectives and contributions of other employees. The study's use of Partial Least Squares (PLS) Structural Equation Modelling (SEM) may have limitations regarding statistical power and establishing causal relationships.

Therefore, the study did not collect data on usage patterns and intensity of social media integration in SMEs, limiting the ability to compare with other sources and identify specific social media applications used. Future research should consider incorporating classification systems to understand better the factors influencing social media usage in different organizational sub-sectors. Additionally, future studies should explore the bandwagon effect and focus on specific social media sites to gain further insights into social media integration and performance enhancement.

Appendix A

Construct	Variable	Item	Questionnaire items
Technological Factors	Relative advantage	RA1	Our firm achieves its strategic goal more efficiently by integrating social media.
		RA2	The firm wants to improve its provided services through social media integration.
		RA3	Our firm gains a competitive advantage by exploiting social media attributes.
	Visibility/ Observability	VO1	Our firm has a presence in the global markets of Harare and Zimbabwe through social media.
		VO2	Social media helps our business gain more clientele.
		VO3	Social media exploitation enables our business to draw in new clients.
	Interconnectedness/ Interactivity	II1	Our firm uses social media to strengthen customer loyalty.
		II2	Using social media associates our firm with other firms.
		II3	Exploiting social media expands our firm's network and contacts.
Organisational Factors	Top management support	TMS1	Our social relationship management policy covers customers of our company.
		TMS2	The senior management of our company prefers taking risks.
		TMS3	The top management of our company supports the use of social media.
	Innovativeness/ Entrepreneurial Orientation	IEO1	Our company produces innovative products, services and deals.
		IEO2	Our company incorporates fresh innovations.

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Construct	Variable	Item	Questionnaire items
		IEO3	Our business has specialised human staff that facilitates the adoption of new IT.
External Environmental Factors	Environmental uncertainty	ECU1	Over the last five years, our company has frequently had to change its services.
		ECU2	Over the past five years, our company has had intense competition.
		ECU3	Our firm's political, legal, and economic environments have significantly changed within the past five years.
	Competitive pressure	EEP1	Since other businesses in our industry have already started using social media, our company has followed suit.
		EEP2	Our company has embraced social media out of concern for losing its competitive edge.
		EEP3	Our company uses social media because its use is wide in the close-knit business community of Harare.
Social media integration	Social media marketing	SMM	Over the past two years, our company has integrated various social media platforms for marketing strategies.
	Customer relationship	CRS	Our company has used several social media tools in an integrated process over the past year to improve customer relationships.
	Information Access	IA	Our company participates in any social media platforms to share and access customer information.
SME performance	Sales volume growth	SMEP1	Since integrating different social media platforms two years ago, our business has seen a rise in sales.
	Customer service	SMEP2	Over the past year, our business has improved customer service delivery by integrating several social media tools.

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Construct	Variable	Item	Questionnaire items
	Customer loyalty	SMEP3	Participation by our business in social media platforms has improved client retention.

Questionnaire Items

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Conflicts of Interest

The authors declare no conflict of interest

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