



An integrated social network marketing metric for business-to-business SMEs

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ABSTRACT

Social networks have been extensively studied in business-to-consumer (B2C) studies, but their effects in a business-to-business (B2B) marketing context are under-theorized. The study develops an integrated social network marketing metric (SNMM) for B2B small- and medium-sized enterprises (SMEs). Using the framework, the study establishes a theoretical link between behavioral reasoning theory (BRT) and marketing accountability theory (MAT). Data was collected from 254 B2B SME marketers in India through a structured questionnaire survey and semi-structured interviews. At first glance, the missing link between SME performance and SNMM appears to be time, knowledge, and financial resources. SMEs that embrace innovation, proactiveness, and risk-taking can benefit from social media technologies. Thus, social networking has a direct, positive effect on SME growth. The implications for B2B SMEs' SNMM studies are also discussed. Furthermore, the rationality of B2B marketing metrics has a tremendous influence on business success. Although the study has found a positive impact of SNMM on B2B SMEs success, further research is needed.

1. Introduction

The conventional marketing metrics framework is founded on the traditional marketing measurement paradigm (Budler, Župić, & Trkman, 2021). Therefore, the conventional marketing analytics model may not be practical for SMEs' due to its high cost; and consequently SMEs face the difficult task of lowering marketing costs (Chatterjee & Kar, 2020). SMEs may, however, encounter the key obstacle of conventional marketing metrics throughout numerous phases and with a diverse set of stakeholders. Due to the recent social network marketing trend, business markets have seen significant shifts in consumers' purchasing habits. According to a recent survey, 82% of B2B buyers claimed that social networks had an impact on their purchasing decisions (Tiwary, Kumar, Sarraf, Kumar, & Rana, 2021). In the B2B marketing domain, social networking has emerged as a contemporary marketing strategy with much promise (Behera, Bala, Rana, & Kizgin, 2021). At the same time, nascent practices and research in the field of B2B have emerged. In an ever more interconnected environment, B2B organizations are increasingly using social network marketing to improve their reputation and gain a competitive advantage (Bachmann, Ohlles, & Flatten, 2021). Although there are many ways to utilize social network marketing, in

the B2B context, social networks have primarily been viewed as platforms that allow firms to find new business opportunities or partners, create new relationships, and strengthen existing ones through continuous communication (Peruchi, de Jesus Pacheco, Todeschini, & ten Caten, 2022). Despite the many potential benefits of using social media for B2B, the industry's SME marketers struggle with the implementation and often find social networks meaningless. Several factors—both internal and external—complicate the inclusion of social network marketing metrics in company strategies among SMEs.

B2B SME marketers cannot use social networks because they lack the power of correspondence and are often flawed in their handling of sensitive information. This paper aims to develop a social network marketing metric (SNMM) in a B2B SME marketing context. Such a metric could help SMEs to achieve success by developing key performance indicators. According to the literature, social media has evolved as a popular networking platform that enables businesses to better access consumers' belief systems. This study proposes a typical utilization of dialects to characterize measurements and present the B2B SME marketing metrics framework. A major test for social network marketing is demonstrating its business esteem. We believe that B2B SMEs would be more competitive if they change their focus from a market-oriented to

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a stakeholder-oriented approach to better understand their primary performance metric. That is, businesses need to manage partnerships with a variety of stakeholders, including social network activity (ACT) (Goldsmith, Pagani, & Lu, 2013); social network reach (REA) (Baruffaldi, Di Maio, & Landoni, 2017); social network engagement (ENG) (Grover & Kar, 2020); social network acquisition (ACQ) (Iankova, Davies, Archer-Brown, Marder, & Yau, 2019); social network conversion (CON) (Gupta, Saha, Kaur, Kathuria, & Paul, 2020); social network retention (RET) (Zhan, Han, Tse, Ali, & Hu, 2020); social network awareness metrics (AWA) (Mini & Jacob, 2014); social network performance metrics (PER) (Scuotto, Del Giudice, & Peruta, 2017); and social network key performance indicators (KPI) (Hamali, Mahdaoui, & Podatharapu, 2017) to understand how to collaborate with and engage stakeholders.

Since SNMM affect many different stakeholders, businesses need to consider their relationships. Secondly, it is important to identify which singular metrics are the most important and correlated to one another and, thus, critical for developing a framework. These provided compelling motives for the study. In seeking to create a framework, we first evaluated companies that all operated in the same fast-paced economic situation. Second, B2B SMEs allow the entire social network phenomenon to thrive through incremental changes in connectivity. Third, there is the widespread belief in the SMEs environment that social networks are relevant to industrial marketing (Dwivedi et al., 2020). The B2B SMEs used in this study are based in India because social media has extended SMEs there at a higher rate than large firms (Paul, 2020).

Although SNMM are not without fault, they may be increasingly valuable if individuals comprehend the various estimates they provide (Hoffman & Fodor, 2010). For this reason, this study specifically analyzes B2B SME social network marketers promoting SNMM in estimating their marketing performance in India, alongside influences and impacts (Salo, 2017). It investigates the impacts and relative significance of two factors—the area where individual B2B SMEs work and market dynamism—and connects them to various metrics. An additional aim of the research is to examine how KPI play an important role in marketing functions. This study, in particular, builds on BRT and MAT ideas and B2B SMEs' strategic approaches to social network marketing.

There is in-existent literature that characterizes the social media marketing metrics, the stakeholders' role, and the information exchange mode. The literature shows insignificant research addressing the issues relevant to the social media marketing metrics, emphasizing the challenges SME marketers face and the possibilities for B2B marketers to benefit from SNMM. This study expects to formulate key questions that can drive forward B2B SMEs' SNMM. The study's findings contribute to the current body of knowledge and fill a research gap in providing a perspective from a developing country. Thus, this study may assess the utility of integrating new technology (i.e., SNMM) as a promotional tool for developing SMEs in India. Additionally, the outcome will assist B2B SMEs' participants in making strategic decisions about utilizing the results to accomplish their objectives.

Given this context, the research aids managers and practitioners in achieving three goals; First, determine the importance of SNMM deployment within B2B SMEs. Second, create an interpretive structural model to explain the complexities of SNMM system architecture for the B2B SMEs. Third, explore how such metrics could help SMEs succeed by developing KPI. Three research questions guide this work: 1) Using multiple social network constructs, how can an integrated marketing metrics framework for B2B SMEs be developed? 2) How do KPI improve the performance of B2B SMEs in India? 3) How can a recommended framework be formulated for an integrated SNMM model for B2B SMEs?

We addressed the research questions in three stages. First, we conducted a thorough literature review to ascertain past social network activity, reach, engagement, acquisition, conversion, retention, social network awareness metrics, social network performance metrics, and social network KPI. Second, we employed an exploratory mixed-methods research technique to contextualize the application of ACT,

REA, ENG, ACQ, CON, RET, AWA, PER, and KPIs in B2B SMEs to establish an Integrated Social Network Marketing Metrics (ISM) framework. Qualitative data were gathered through focus group discussions and interviews, while quantitative data were gathered through a structured questionnaire survey. Third, we developed and empirically tested hypotheses about the KPI for B2B SMEs by implementing the aforementioned dimensions.

The study makes four significant contributions: First, it is the first report to use SNMM in the context of B2B SMEs. Second, it contributes to the sparse literature by providing an ISM model for the context of B2B SMEs. Third, it is based on sample data from India, the world's second-most populous country, but within an under-researched sector in regard to SNMM and SMEs. Fourth and finally, this work develops a system architecture by connecting nine predominant concepts, and each of these paradigms (ACT, REA, ENG, ACQ, CON, RET, AWA, PER, and KPI) produces and influences B2B SME research and practice. Therefore, SNMM-integrated SMEs, lay the groundwork for future research into the factors that influence the success of future SMEs.

The remainder of the article is organized as follows: The next section presents the arguments that social media marketing is the best way to promote B2B SMEs. This argument considers the significant possibilities for social networking and the existing policy deficiencies. Section 2 establishes a new research agenda for the behavioral reasoning theory (BRT) (Westaby, 2005) and marketing accountability theory (MAT) (Drechsler, Natter, & Leeflang, 2013) frameworks, which university researchers, decision-makers, and SME marketers will follow collaboratively. It summarizes recent review articles on the theoretical structure and proposed SNMM model. Section 3 provides an in-depth examination of the study's testing methodology. The results and discussion are presented in Section 4, while Section 5 compiles the conclusions with their theoretical and practical implications, as well as limitations.

2. Theoretical framework and hypothesis development

In the last three decades, behavioral science contributions to B2B marketing metrics (Hsiao et al., 2020a, 2020b) have changed how we think about marketing analytics. These new ideas have allowed us to extend marketing theory to a growing range of inter-organizational purchasing circumstances. Behavioral reasoning theory (BRT) (Westaby, 2005) is a modern marketing theory that develops seminal technology adoption theories like TPB. It defines the link between beliefs or principles, motives (for and against), instrumental purposes (attitude, subjective standard, and perceived behavioral control), intents, and user behavior measurements. The purpose of this study is to compile, analyze, and synthesize existing research on how various Social Network Marketing Metrics contribute to the formation of B2B partnerships. The study uses a time-honored systematic assessment of the literature to find 254 SMEs that have handled B2B partnerships in the various business domain (Madanaguli, Dhir, Talwar, Singh, & Escobar, 2021). The study discusses several types of SMEs and their motivations of participating in B2B interactions within this theme. While several evaluations analyze the state-of-the-art survey on B2B connections, relatively few have done it from the perspective of Social Network Marketing Metric. The move from economic to behavioral research and the current widening of B2B's applicability to other marketing sectors, such as service marketing and e-business, are envisaged in this paper as an exciting possibility for both future practice and research. Contributions to BRT (Westaby, 2005) may expose new information on its applicability to B2B SMEs' marketing metric framework (Kouropalatis, Giudici, & Acar, 2019).

2.1. Theories

2.1.1. Behavioral reasoning theory

Recognizing the intricacy and multifaceted character of Social Network Marketing behavior, we propose conceptualizing the linked relationships using the theoretical model of BRT (Talwar, Talwar, Kaur,

Islam, & Dhir, 2021a). BRT is highly successful in explaining context-dependent behavior (Talwar, Talwar, Kaur, Tripathy, & Dhir, 2021b). It implies that individuals, motivated by their values, assess the advantages and disadvantages of participating in a certain behavior, hence influence their attitude and intentions toward that behavior. We suggest three research questions based on the preceding discussion to assist us in hypothesizing the link explaining SMEs' Social Network Marketing Metric-related behavior. The BRT theory enables researchers to perceive and forecast the relationships between variables. Widely acclaimed research indicates that the theory is a set of numerous interlinked concepts, steps, and opinions that express a systemic perspective to describe a jointly given phenomenon. It also facilitates the checking and validation of the phenomenon's relationships. A modern theory in the marketing field (Gupta & Arora, 2017), BRT (Nicholls & Schimmel, 2017) is a research model (Claudy, Garcia, & O'Driscoll, 2014) of consumer behavior (Kumar, Talwar, Murphy, Kaur, & Dhir, 2021; Sahu, Padhy, & Dhir, 2021) used here to describe the relations between individuals' values, global motivations (such as behaviors, subjective norms, and perceived behavioral influence) and behavior (Dhir, Koshta, Goyal, Sakashita, & Almotairi, 2021; Sreen, Dhir, Talwar, Tan, & Alharbi, 2021). As a conceptual model (Sahu, Padhy, & Dhir, 2020; Tandon, Dhir, Kaur, Kushwah, & Salo, 2020), it helps academics and practitioners to examine the relative effect on any invention of each the 'reasons for' and 'reasons against' intentions (Westaby, 2005). BRT is linked to many other behavior theories, but it has multiple advantages (Sharma, Dhir, Talwar, & Kaur, 2021). The main connections in BRT are shown visually in Fig. 1. BRT varies from the other technology acceptance theoretical models, since the latter only takes the 'reasons for' involvement in any breakthrough into account (see Fig. 1).

2.1.2. Marketing accountability theory

With the marketing function's presence within companies reducing, it faces a significant survival task. Marketing transparency has been described as a predictor of marketing's impact within organizations in previous studies (Arslanagić-Kalajdžić & Žabkar, 2017). The current literature on marketing accountability offers a wide variety of marketing metrics but limited direction. Research is also underdeveloped on marketing accountability and associated structures (Gaskill & Winzar, 2013a). The literature descriptions of marketing accountability are not consistent (Hsiao et al., 2020a, 2020b). Marketing productivity and performance will be the consequence of marketing accountability, while one of its components should be marketing metrics (Muninger, Hammedi, & Mahr, 2019). The theory starts by presenting an overview of the state of existing marketing accountability practice. It then addresses the significant position of standards and standardized metrics and reflects on several marketing metrics (McDonald & Mouncey, 2011). The study describes how marketers need to be more responsible and provides little guidance on marketing professionals' metrics to describe marketing accountability. The study's main outcome is that marketers should become more responsible and creative to gain more influence.

Using social networks also produces a significant rise in consumer insights, including those about how people engage with each other and the goods and services they purchase. Blogs, customer reviews, chat forums, product scores, and other data are powerful new knowledge sources that explain how consumers gather information, evaluate that information, and how that data is used in decision-making, purchasing behavior, and post-purchase actions (Shen, 2021). BRT and marketing accountability theory (see Fig. 2) plays a critical role in developing the framework for SNMM in B2B SMEs.

2.2. The relevance of BRT and MAT theories in the SNMM context

Much present research has incorporated BRT as a baseline framework for establishing a research model to understand ISM (see Fig. 1). BRT seems to have four major components: behavioral motives, attitude, reasons, and value systems. This paper discusses a revised theoretical structure in BRT and MAT settings and ISM framework development. Thus we have included India's numerous growing small and medium-sized enterprises. We deliberately chose SMEs because their level of marketing operations and their operational capacities and expertise are more demanding than those of large corporations.

Successful marketing has numerous dimensions. Companies seem to have as many metrics as goals, which are the most important for short-term survival and long-term development. Social network utilization has become a part of many promoting procedures in the current business world. The development of online life as a specialized apparatus in showcasing activities has become a significant element of web-based business rehearsing in this time of innovation. This study discusses the various metrics to evaluate social network marketing. These measurements are commitment measurements for improving the network's mindfulness and enthusiasm about the brand and assessment measurements for improving the reputation and positive picture of the organization. Finally, the paper discusses social network promoting methodologies to expand social network marketing campaigns.

Traditional marketing metric frameworks depend on accounting and marketing reports: for example, balance sheets and income statements. Different financial and marketing-related instruments have been created to evaluate financial and marketing information. Yet since conventional metrics do not fully attend to context, scholars and professionals have been tasked with growing better metrics to facilitate strategic management and control (Yeniyurt, 2003). For this new phase of marketing development, another metric framework is required; a more extensive arrangement of SNMM measures—including social network activity, social network reach, social network engagement, social network acquisition, social network conversion, social network retention, social network awareness metrics, social network performance metrics, social network key performance indicator—should be considered. Thus, an SNMM framework which incorporates these factors is proposed in the following report.

This study will help B2B SMEs recognize the key SNMM for following

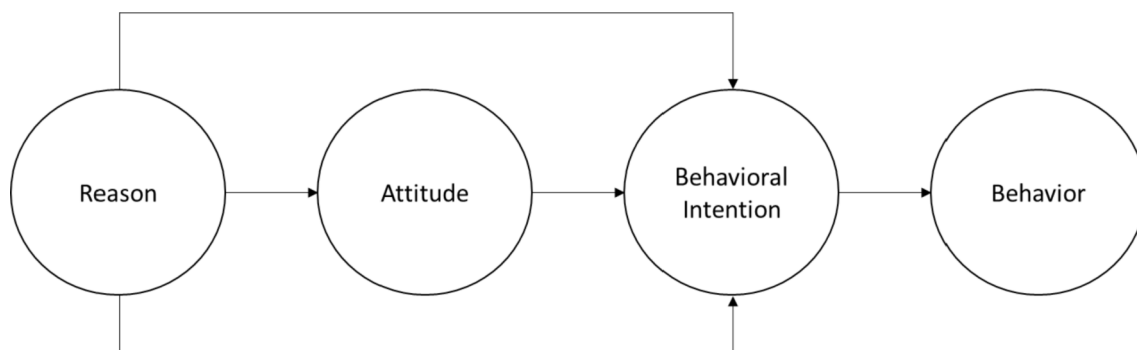


Fig. 1. Behavioral reasoning theory framework.

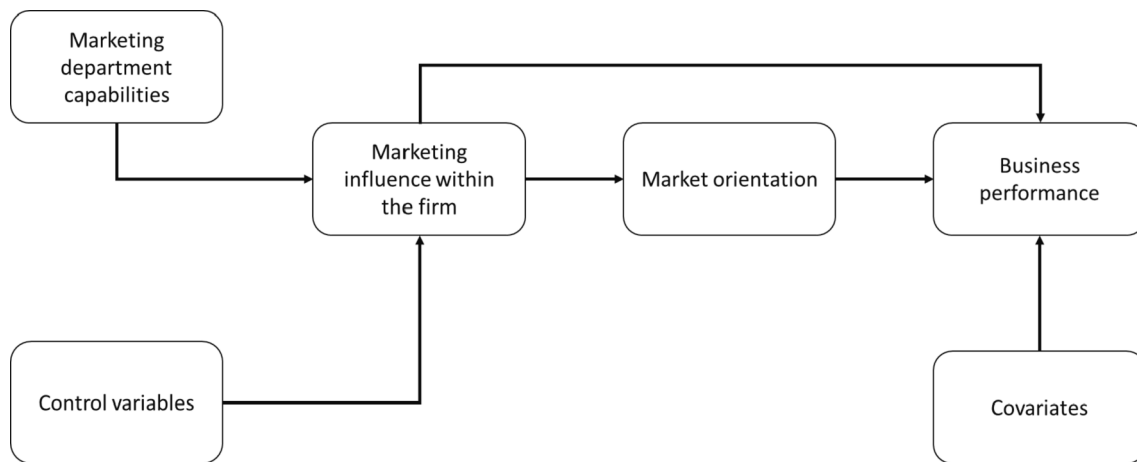


Fig. 2. Marketing Accountability Theory.

and checking the estimation of one's brands, items, and administrations within social network channels (Sheth & Sinha, 2015). After identifying SNMM, B2B SMEs can select the correct apparatus to gauge measurements (Nyadzayo, Casidy, & Thaichon, 2020). This would help B2B SMEs improve or upgrade their showcasing and operational business methodologies by utilizing the social network channels' force and reach (Fleming, Lynch, & Kelliher, 2016). We advance this aim by providing a strong basis in the selection and definition of each construct, building on a review of literature in advertising, marketing, human resources, financing, and organizational behavior alongside conversations with 10 CEOs and other officials who transformed their SME's association, capacity, and/or industry. Given its explicit interest in the operationalization of metrics, the research does not provide an account for calculating marketing metrics. Much research in the analysis of the impact of B2B SMEs does not include marketing metrics (Brink, 2017; Hadjikhani & LaPlaca, 2013; Kumar, Sharma, Vatavwala, & Kumar, 2020; Siamagka, Christodoulides, Michaelidou, & Valvi, 2015). Only ten reports mentioned in Table 1 have utilized SME marketing metrics.

2.3. The extended effect of BRT & MAT theories: Conceptual framework

The principle of marketing accountability is vital to the prominence of marketing within organizations, as it has been shown to contribute greatly to impact (Verhoef & Leeflang, 2009). Marketing metrics are used by upper management as success benchmarks to track and measure the progress of a company or business entity, particularly marketing performance (Gaskill & Winzar, 2013b). Various studies indicate that many current marketing metrics are available for marketing professionals. Identifying marketing accountability metrics that are easy to enforce will help an SME's social network marketing professionals (Gaskill & Winzar, 2013b). For marketers who want to improve their level of accountability, they should use marketing influence theory (Woods, Galbraith, & Hewitt-Dundas, 2019).

Notably, none of the studies presented in Table 1 integrated multiple SNMMs in SMEs. This article assesses a few of the best-known marketing metrics (such as social network activity, social network reaches, social network engagement, social network acquisition, social network conversion, social network retention, social network awareness metrics, social network performance metrics, social network key performance indicator, and others) and proposes a comprehensive model for SNMM in SMEs (Fig. 3). To understand how managers view popular SNMMs, we directed meetings with marketers and administered surveys to SMEs' social network executives.

2.4. Development of constructs for SNMM in SMEs

This section is critical in defining constructs identified in the literature and creating things that represent their manifestations. Constructs were latent variables, meaning they cannot be directly quantified. Each representation is quantified in a field investigation using a scale item. When the items on a scale adequately span the construct's domain, the scale has content validity. To ensure content validity, a thorough literature analysis was conducted to identify the constructs and representative items. Following is a full examination of these constructs with their associated scales: (Table 2).

2.5. Development of hypotheses

This study has captured social network marketing constructs that can enhance social network evaluation among SMEs. An investigation of a dataset of 254 SMEs in India lends support to our hypotheses. Our findings provide significant theoretical and practical suggestions for SNMM in SMEs and SME stakeholder management.

2.5.1. Construct 1: Social network activity (ACT)

Social network platforms have been established to facilitate individuals' psychological wellbeing by bonding and bridging communication and enabling users to participate in a range of networking events with strong and weak links (Kim & Shen, 2020). The study examines if online social network activity movement might predict SMEs' marketing success. The expanding estimation of online social network communities underlines the need to comprehend online social networks' effect on SMEs' client conduct and decision-making measurement (Goldsmith et al., 2013). The points of this examination are to investigate the co-selecting and empowering role of SMEs in marketing advancements and to reveal the aberrant effect of client cooperation through its influence on circumstance acknowledgment and abuse (Chen & Liu, 2019). Yadav and Rahman (2017) developed 15 items on a five-dimensional scale for measuring social network marketing activities (SNMA) of web-based enterprises. Following from this is the first hypothesis:

H1: Social Network Activity (ACT) positively affects Social Network Awareness metrics (AWA).

2.5.2. Construct 2: Social network reach (REA)

Social network marketing is a simpler way to target millions of consumers than previous marketing models, and it can be done at a lower expense. Since the business cases are in the B2B industry, they must reach out to consumers via social media networks that people in the B2B market use. Social network reach is an expected number of

Table 1
Marketing metrics literature.

Study	Results	Data Sources	Focus of Study (SMEs/ Large Cap.)	Marketing Metrics
Yoo and Donthu (2001)	Construction of a multidimensional assessment of brand equity in the context of consumers	Data from South Korea and the USA – two nations with an acceptable variety of cultural differences	Student consumers from South Korea and the USA	Brand loyalty, perceived quality, awareness, and association
Barwise and Farley (2004)	The majority of large and medium-sized businesses followed one or more marketing metrics, in particular share of the market and perceived quality	Top five global markets: the USA, Japan, Germany, the UK, and France	Large and medium-sized businesses in these top five economies	Market share, perceived quality, customer loyalty, segment profitability, and segment value
Ambler et al. (2004)	Brand value is commonly measured but rarely incorporated into a systematic measurement framework	Survey tool distributed to 1014 management workers and 1180 top finance managers in the UK	Much of the segment is clarified by big companies working in more than one market	Financial, direct customer, competitive, consumer, behavior, innovativeness, and other factors
Jacobson et al. (2018)	Usage of social network in marketing, and identify a disparity in recognizing customer satisfaction	Census-balanced survey of adolescents online (n = 751) to classify the view of customers utilizing social network data	Data are from a cross-national survey based on the internet panel	Opinion mining, targeted advertising, and customer relations
Mintz et al. (2013)	Business-focused companies use more marketing metrics but not financial metrics	A fair combination of top- and bottom-level managers from the list of 500 American Marketing Association leaders	Large capital-based and SME mixed industries	Market share, recognition, value, responsibility, choice, desire to suggest, commitment, product price viewed, concern collection, total consumers, consumer wallet share, voice share, and other factors
Mintz and Currim (2015)	Improve performance of marketing mix decisions	Marketing decisions made from the USA	Lower- and higher-level managers	Market orientation, organizational involvement, recent business performance, and other factors
Bendle et al. (2016)	Marketers can get better if they implement metrics	Theoretical model— no model validation with data.	Large capital-based industries.	Market share, net promoter ranking, consumer loyalty value,

Table 1 (continued)

Study	Results	Data Sources	Focus of Study (SMEs/ Large Cap.)	Marketing Metrics
Izvercian et al. (2016)	Study of marketing practices that SME executives follow in order to meet their corporate targets in terms of revenue	Data collected from SME executives in Romania and Malta	Romanian and Maltese SME executives	investment return, and other factors Strategic marketing planning budget, distinct budget for marketing activities, allocated resources, turnover, and other factors
Sridhar et al. (2017)	In the face of imperfect metrics, it determines optimum advertisement expenditure and marketing scheduling.	Analysis of the marketing practices of a big haircare company in India	Major consumer products firms	Optimum advertisements where inadequate metrics are present
Nath (2020)	Identify relationship between metrics as a marketing organization's design feature and marketing adaptation.	The survey of respondents reflected several potential business sizes (excluding small companies with under 20 employees) and industries (excluding the services and legal sectors)	SME firms, industries, and respondents	Marketing exploration, financial metrics, market orientation, and other factors

online networking clients who could contact a web-based post. Online social networks reach several followers, fans, endorsers, and associations, and they have varying visibility rates. Whether networks made by social media can help experts work together has become a hot topic in research on social networks (Zhang, Gao, & Li, 2020). Colicev, O'Connor, and Vinzi (2016) suggest that using social networks has a big impact on a company's brand value, approving many metrics to measure social network activities and using social network marketing to spread information for academics and professionals. Lund, Cohen, and Scarles (2017) recommend a novel understanding of how these informal online social networks function to produce commitment and animate a course of brand stories by offering an applied system dependent on the sociological ideas of storytelling, execution, performativity, and portability. To have the best outcome from the SNMM stage, the marketer must ensure that all social networking optimization requirements are met at the preparation and reach stages, thus improving the quality of the user experience.

Is it feasible to meet future clients or collaborators in SNMM? This is one of the sub-questions that aids the key research issue. The research aims to include ways for the B2B business to use social media more effectively in their communications and reach out to more future clients or collaborators. As a result, the primary goal is to determine which social network platforms better target decision-makers within the target group's clients, allies, and service providers, and then develop an action

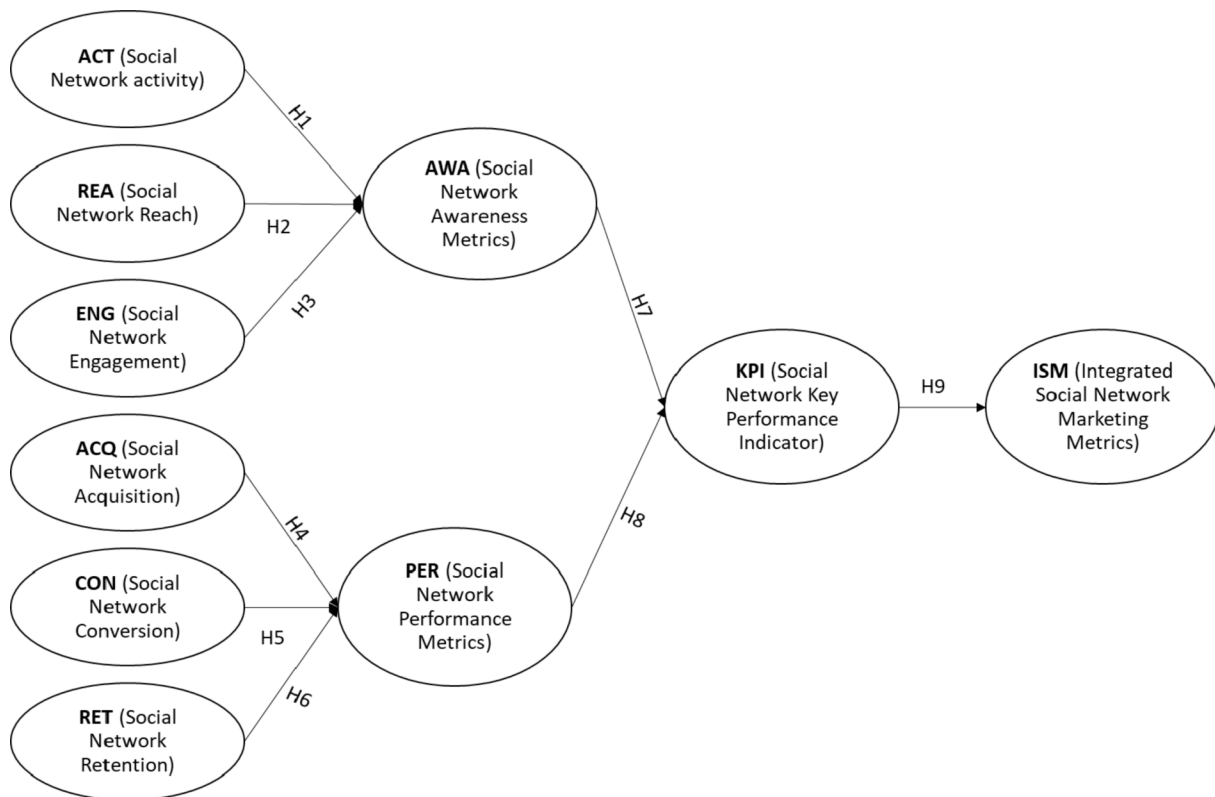


Fig. 3. A Conceptual Framework for SNMM in SMEs.

plan for using those channels. Subsequently, the accompanying theory is hypothesized:

H2. Social Network Reach (REA) has a positive effect on Social Network Awareness metrics (AWA).

2.5.3. Construct 3: Social network engagement (ENG)

Engagement has been a typical measurement for assessing social network performance; however, it does not mean deals. Social engagement (likewise social association, social support) alludes to one's level of cooperation in a network society. [Rather and Sharma \(2017\)](#) investigated the relationship between customer engagement measurements and loyalty for assessing client connections in the hotel business. In addition, the investigation assessed the level and impact of new clients and repeat customer segments. [Barwise and Farley \(2004\)](#) investigate potential connections between the utilization of measurements and firm attributes (size, area, and proprietorship), incorporating potential collaborations with the nation. The study builds up a benchmark of the genuine and arranged utilization of chosen measurements in every one of the five nations. A series of multivariate regressions have been performed for network interaction activities that could be influenced by the experiences of social network awareness metrics (AWA) ([Yoshioka-Maxwell & Rice, 2020](#)). Subsequently, the accompanying theory is hypothesized:

H3. Social Network Engagement (ENG) has a positive effect on Social Network Awareness metrics (AWA).

2.5.4. Construct 4: Social Network Acquisition (ACQ)

Social network acquisition is making and keeping connections with each customer so that they can have better relationships with each client ([Grover & Kar, 2020](#)). It is not limited to an online network, yet the social network is a suitable spot to begin. Non-social client-obtaining strategies are on their way out. [Kujur and Singh \(2018\)](#) propose a hypothetical model of how content-related components, social variables, and perceptual elements impact consumer engagement in brand social

networking sites (SNSs) pages and how consumer engagement conduct impacts their relationship. [Aaker \(1991\)](#) explains that brand equity encompasses the many resources and liabilities connected to a brand. The advantages and liabilities on which brand value is based will vary from context to context. These factors can be conveniently gathered into five classes: brand loyalty, name awareness, perceived quality, brand associations, and other restrictive brand resources, such licenses, trademarks, and channel connections. [Castronovo and Huang \(2012\)](#) develop a conceptual model for integrated alternative marketing communication that mechanical specialists can use to assist them in achieving their marketing objectives. Subsequently, the accompanying theory is hypothesized:

H4: Social Network Acquisition (ACQ) has a positive effect on Social Network Performance metrics (PER).

2.5.5. Construct 5: Social Network Conversion (CON)

The social network conversion rate is the percentage of visits to an online store that end in a purchase within a given timeframe. The conversion rate is one of the most important primary success metrics in e-commerce. Social network engagement is extraordinary, yet social network conversions are better ([Hsiao et al., 2020a, 2020b](#)). Online social networks can be a powerful asset for lead generation. There are different ways social network life can improve social network conversions ([Meire, Ballings, & Van den Poel, 2017](#)). Social network conversion rates are determined by taking the number of conversions and dividing that by the number of complete promotion associations that can be tracked to a conversion during a similar timeframe. According to a prior study, the conversion rate is calculated as the proportion of conversions to clicks, and click-through rate is calculated as the fraction of clicks for a given advertisement to the number of impressions of the advertisement. [Ambler, Kokkinaki, and Puntoni \(2004\)](#) present a structure for classifying metrics. In the SNMM paradigm, the click-through rate and conversion rate are distinct. They reflect customers' thin-slice judgments in the realm of search-engine advertising. The

Table 2
Development of constructs and identifier variables from the literature.

Constructs	Variable	Item sources & year
1. ACT (Social Network Activity)	Customer meeting frequency	(Chen & Liu, 2019)
	Customer consultation length	(Yadav & Rahman, 2017)
	Personalized joining invitation	(Chen & Liu, 2019)
	Increased customer engagement	(Yadav & Rahman, 2017)
	Visit frequency	(Colicev et al., 2016)
2. REA (Social Network Reach)	Frequency of post	(Colicev et al., 2016; Lund et al., 2017)
	Frequency of profile visit	(Colicev et al., 2016; Lund et al., 2017)
	Frequency of individual status updates	(Colicev et al., 2016)
3. ENG (Social Network Engagement)	Frequency of likes	(Barwise & Farley, 2004; Rather & Sharma, 2017)
	Frequency of comments	(Barwise & Farley, 2004; Rather & Sharma, 2017)
	Frequency of sharing	(Barwise & Farley, 2004; Rather & Sharma, 2017)
4. ACQ (Social Network Acquisition)	Frequency of page clicks	(Rather & Sharma, 2017)
	Uses mentoring	(Aaker, 1991; Kujur & Singh, 2019)
	Uses teamwork	(Aaker, 1991; Kujur & Singh, 2019)
	Uses incentives	(Castronovo & Huang, 2012; Kujur & Singh, 2019)
5. CON (Social Network Conversion)	Uses various training programs	(Kujur & Singh, 2019)
	Lead generation	(Ambler et al., 2004)
	New customer acquisition	(Ambler et al., 2004; Leland, 2016)
	New customer conversion	(Ambler et al., 2004; Leland, 2016)
	Frequency of new customer generation	(Ambler et al., 2004; Leland, 2016)
6. RET (Social Network Retention)	Tracking new customer conversion	(Ambler et al., 2004; Leland, 2016)
	Tracking comment conversion rate	(Ambler et al., 2004; Leland, 2016)
	This is a wonderful brand	(Machado et al., 2019)
	The brand makes one feel good	(Dawley, 2009; Machado et al., 2019)
	The brand makes one feel happy	(Dawley, 2009; Machado et al., 2019)
7. AWA (Social Network Awareness Metrics)	Passion for the brand	(Machado et al., 2019)
	Particular brand awareness	(Sasmita & Mohd Suki, 2015)
	Brand comparison	(Park & Cho, 2012; Sasmita & Mohd Suki, 2015)
	Particular brand looks	(Basco et al., 2019)
	Features of brand	(Park & Cho, 2012; Sasmita & Mohd Suki, 2015)
8. PER (Social Network Performance Metrics)	Symbols or logo of brand	(Park & Cho, 2012; Sasmita & Mohd Suki, 2015)
	Sales transaction frequency	(Ainin et al., 2015)
	Sales volume	(Basco et al., 2019)
	Sales queries	(Ainin et al., 2015)
9. KPI (Social Network Key Performance Indicator)	Customer number increment	(Basco et al., 2019)
	Customer growth rate	(Peters et al., 2013)
	Customer satisfaction rate	(Hamali et al., 2017; Peters et al., 2013)
	Customer post reaches intended target	(Hamali et al., 2017; Peters et al., 2013)
	Increased customer inquiry	(Hamali et al., 2017; Peters et al., 2013)

Table 2 (continued)

Constructs	Variable	Item sources & year
10. ISM (Integrated Social Network Marketing Metrics)	Increased long-term profitability	(Peters et al., 2013)
	Increased growth prospects	(Peters et al., 2013)
	Increased employee job satisfaction	(Hoffman & Fodor, 2010; Peters et al., 2013)
	Increased productivity	(Hoffman & Fodor, 2010; Kujur & Singh, 2019)
	Increased goodwill in the market	(Kujur & Singh, 2019; Peters et al., 2013)
	Increased the quality of the product or service	(Peters et al., 2013)

conversion rate is calculated as the ratio of the number of transactions made by users as a proportion of the number of times they clicked on the advertisement (conversion rate = conversions/clicks).

This is utilized in two experimental investigations of metrics utilization, the first for those classifications and the second for singular metrics. A conversion is registered when a customer orders goods or services from the company’s website. Click-through rate and conversion rate are the two most common metrics for measuring search engine optimization success. Leland (2016) devised the Marketing Mastery Pyramid to see how this procedure fits the brand’s structure and advances. According to this study, discount codes, e-shop certification and seals of quality, free recycling, free refunds, personalization, product ratings, and alternate product recommendations, among other things, all boost social network conversion rates. This contribution examines various performance drivers and concludes that consumer, business, and data-driven online stores yield higher conversion rates and revenues. Subsequently, the accompanying theory is hypothesized:

H5: Social Network Conversion (CON) has a positive effect on Social Network Performance metrics (PER).

2.5.6. Construct 6: Social Network Retention (RET)

Customer retention involves development of a relationship with the clients (Jarvis, MacKenzie, Podsakoff, Boyle, Esch, Langner, & Parameters, 2017). When clients trust and like a company’s image, they are likely to remain loyal to it. Building a relationship with followers is a continuous procedure. Social network marketing aims for customer retention, utilizing social availability to create and maintain associations with the current client base. With clients becoming increasingly mindful of their purchasing behavior, the social network can be a profoundly powerful instrument to construct a brand network and retain customers. Machado, Vacas-de-Carvalho, Azar, André, and dos Santos (2019) clarify this in their exploration of RET; they confirm the benefits of clear gender positioning and extend earlier research by recommending that brands with a solid gender identity character will support customer-brand commitment (CBE) and brand love (BL). Dawley (2009) recognizes and investigates the elements of an emerging form of instructing and learning (social network knowledge construction) associated with interpersonal organizations’ utilization, especially 3D virtual world conditions like those in Second Life. Hence, the following hypothesis is postulated:

H6: Social Network Retention (RET) positively affects Social Network Performance metrics (PER).

2.5.7. Construct 7: Social Network Awareness metrics (AWA)

Consumer awareness is how purchasers associate the brand with the specific item they expect to possess (Dabbous & Barakat, 2020). The purchaser gets brand awareness through effective marketing channels such as television media, mobile phones, and social networks. Sasmita and Mohd Suki (2015) inspect brand association’s impacts, brand loyalty, brand awareness, and brand picture on young customers’ brand value. Experiments utilizing multiple regressions confirmed that brand

mindfulness transcendentally influences brand value among young buyers. Park and Cho (2012) explore how interpersonal organization in online networks influence information seeking and decision-making behavior among customers in the clothing sector. These outcomes affirmed the positive connection between a pledge to an interpersonal organization's online network and information-seeking behavior at the network. Since consumers make buying choices based on information, understanding, or familiarity with a particular brand, social network awareness is critical in establishing a core success metric in their minds. As a result, consumers are more likely to buy again because they are confident in its consistency. This means that social network knowledge is linked to network loyalty when evoking customers' feelings. In addition, as consumers grow more conscious of social media, the degree of core success metric increases. This research highlights the importance of social network knowledge in consumer decision-making as a key tool for selection among customers with limited prior experience. From here, advertisers may use repeated exposure and ads to raise consumer perception of social networks, resulting in a long-term success metric. This leads to an accompanying hypothesis:

H7: Social Network Awareness metrics (AWA) have a positive effect on Social Network Key Performance Indicator (KPI)

2.5.8. Construct 8: Social Network Performance Metrics (PER)

Any technology must be used successfully in order to be competitive and have an impact on an organization's social network efficiency metrics. As a result, investigating the different purposes of social media success indicators and their effects on corporate success is important to appreciate the potential of social media. The social network performance metrics obtained defined the performance of posts in a variety of ways. Many were intuitively generated from associations with blogs, including the number of views, likes, and post shares (Moro, Rita, & Vala, 2016). Ainin, Parveen, Moghavvemi, Jaafar, and Shuib (2015) explore the variables that impact Facebook use among SMEs. The study looks at the effect of Facebook use on SMEs' financial and non-financial performance and shows that Facebook utilization has a substantial positive effect on the financial performance of SMEs. Basco, Hernández-Perlines, and Rodríguez-García (2019) analyze entrepreneurial firm direction across various settings. As a result, the following concerns arise: "Why do companies use social network efficiency metrics?", "What is the effect of social network success metrics on organizational development?", and "What is the impact of social network performance metrics on organizational development?" To answer these questions, the research will investigate organizations' use of social network success indicators and their efficacy. Respondents from different organizations discussed how PER has helped boost their organizations' efficacy in various areas, including better consumer communication and support, increased brand awareness, improved knowledge exchange, and increased access to information about consumers and competitors.

From prior enterprise and institutional theory literature, the study - assumes that the environment in which firms operate determines the significance of each measurement in the multidimensional idea of business direction, affecting company performance. Hence, the following hypothesis is postulated:

H8: Social Network Performance Metrics (PER) have a positive effect on Social Network Key Performance Indicators (KPI).

2.5.9. Construct 9: Social Network Key Performance Indicators (KPI)

For B2B SMEs previously utilizing SNMM, social network key performance indicators (Hamali et al., 2017) are the main solid determinant of utilizing this promoting innovation, with the measure of involvement in SNMM fortifying this relationship. On one level, organizations are obligated to utilize key performance indicators (KPIs) (Langen, 2021), significant measurements that help firms compare actual performance against their objective targets. Peters, Chen, Kaplan, Ognibeni, and Pauwels (2013) recommend adjusting theoretical contemplations with pragmatism when planning and actualizing social network dashboard

measurements. These structural components underline a great deal that brand supervisors can extract from existing theories. Hamali et al. (2017) create three major classifications of KPIs. The primary class has a place with general KPIs utilized for estimating execution in interpersonal organization destinations. The subsequent classification has a place with KPIs characterized for business forms gatherings. Hence, in order to test the relationship, the following hypothesis is proposed:

H9: Social Network Key Performance Indicators (KPI) positively affect Integrated Social Network Marketing metrics (ISM).

2.5.10. Construct 10: Integrated Social Network Marketing metrics (ISM)

In a first methodology, managers might be enticed to apply traditional media metrics to the estimation and investigation of social media marketing. Notwithstanding, social network marketing is generally not the same as other forms of media marketing. Peters et al. (2013) build up a system by first characterizing what comprises a social medium, a metric, and a dashboard. In a subsequent advance, the examination gets a comprehensive structure from hypothetical contemplations and bolsters it with references from ongoing writing via online social networks. Hoffman and Fodor (2010) clarify that estimating client interests in an online networking relationship uncovers the probability of a drawn-out result, not simply momentary outcomes. Instead of figuring out how much money the company made from its project, managers should look into why customers use social networks and how they use their social networks to connect with brands.

3. Methodology

It is easy to imagine that research initiatives that combine the qualities of two or more approaches will yield more than either method could provide alone. This option becomes much more tempting when qualitative and quantitative methodologies are combined, as the ability to combine disparate skills within the same research topic is maximized. We contribute to the mixed-methods research by explaining the challenges that developed during the SNMM framework construction. These choices influenced when and how qualitative and quantitative approaches are combined, which may have implications for mixed-methods research.

3.1. Research process

The framework for SNMM was developed using a combination of qualitative and quantitative methodologies. As illustrated in Fig. 4, the research process was divided into five parts. We screened major elements affecting the SNMM for B2B SMEs. A small-scale poll of B2B SME professionals and academics was conducted to identify additional factors to examine, and we reviewed the evaluation process to ensure that all critical problems were covered. Experts were contacted via email and asked to share (at least) seven points that occurred to them while considering the future of SNMMs. Finally, the questionnaire was pre-tested by four scholars and six SME experts with substantial conceptual and/or subject-specific knowledge in this field, who reviewed it for correctness, consistency, logic, and theoretical applicability to ensure the results were reliable.

The effectiveness of the survey results is highly dependent on the selection of appropriate interviewees. The SME marketer/expert panel was recruited systematically on this criterion to ensure a high degree of heterogeneity and minimize cognitive bias among the many participants. Heterogeneity was achieved by including experts from various SME sectors, including engineering, information technology, automobiles, agriculture, and others; and through the integration of qualified experts from academia and SME marketers/experts. To ensure that the trustworthy jury comprised professionals, participants with expert knowledge of SMEs were chosen. Before the interview, participants were appropriately instructed about the research background and assured of the confidentiality of their information. Additionally, the

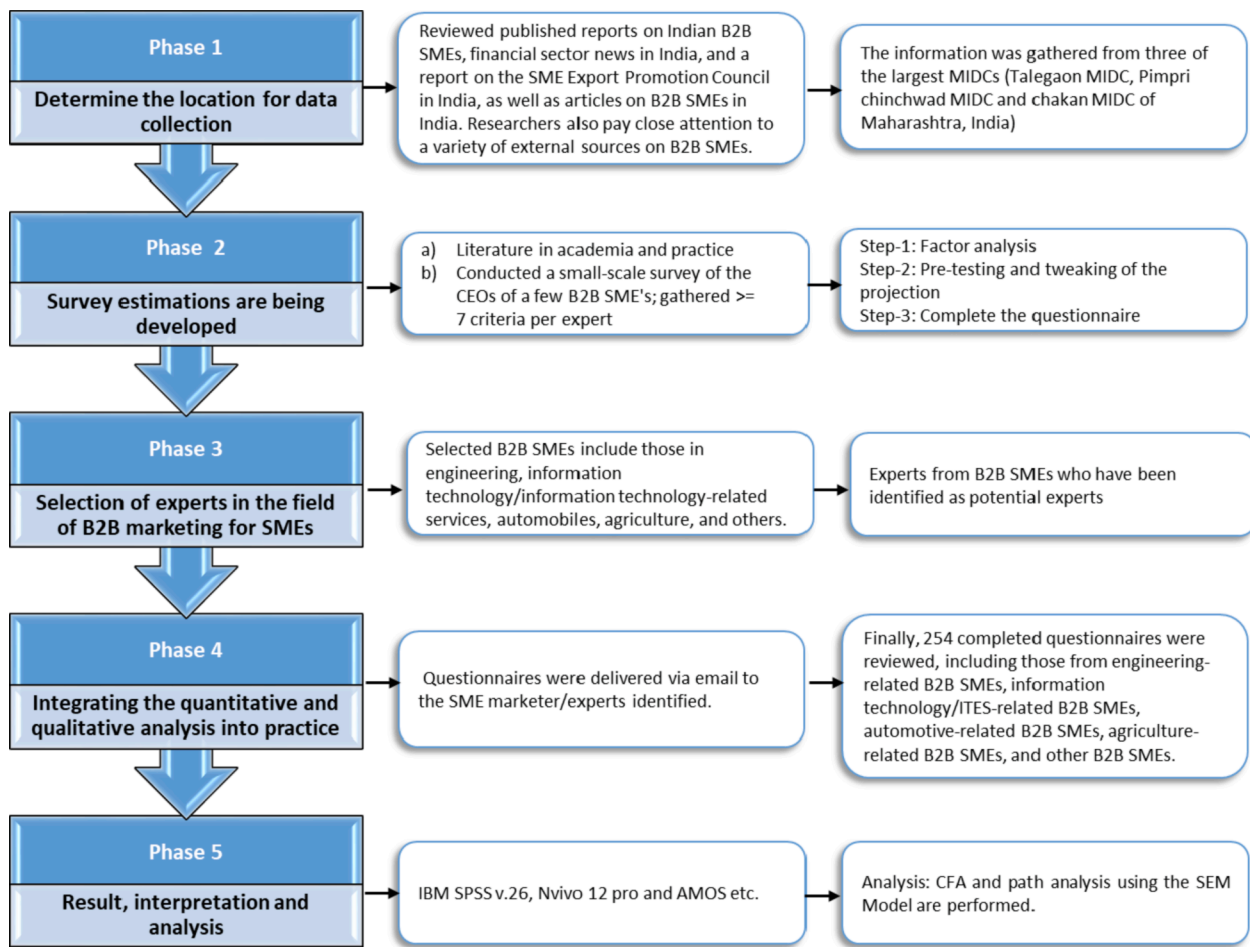


Fig. 4. Five-Phase Research Process.

Mann–Whitney U-Test was performed to check for non-response bias. When the differences in reaction to all predictions were compared, no significant variances ($p < 0.05$) or non-response bias could be identified. This research employed the questionnaire survey method, which enables panelists to submit quantitative judgments quickly. Appointments were set in advance to enhance response time.

Various quantitative and subjective studies have emphasized different stakeholders’ effects and outcomes of SNMM in B2B SMEs. It likewise endeavors to distinguish the promoting of SNMM utilized by B2B SMEs’ interpersonal organization. The study initially formulates a new SNMM model that addresses two challenges: developing/controlling various metric constructs and combining numerous measurements (Sridhar, Naik, & Kelkar, 2017). The study describes the parameter estimation and develops a comprehensive SNMM model for B2B SMEs. Table 3 shows the sample distribution, their demographic characteristics, and industry type.

3.2. Qualitative data collection

Table 4 presents a feasible way to systematically examine B2B SMEs’ marketing measurements (Rossolatos, 2019). The discussion transcripts were analyzed via thematic analysis to recognize, interpret, and evaluate trends or themes originating from the field study. The methodological paradigm sensitized the thematic study, emphasizing the managers’ representations of events, realities, interpretations, and experiences incorporating social networks into marketing campaigns. Conversation with different B2B SME partners and audits finds a deep understanding of SNMM (Siccama & Penna, 2008). Gaining insights from B2B SMEs’ stakeholder reviews could give B2B SME administrators

Table 3
Demographic profile of sample study SMEs.

Selected Industrial Areas (MIDCs)	Type of the SMEs	Number of visited B2B SMEs	Percentage
Pimpri-Chinchwad MIDC	Engineering	15	05.91
	IT	27	10.63
	Automobile & Automobile components industry	59	23.23
	Agro-based industry	07	02.76
	Others	02	0.79
	Engineering	39	15.35
Chakan MIDC	IT	04	1.57
	Automobile & Automobile components industry	17	6.70
	Agro-based industry	11	4.33
Talegaon MIDC	Others	01	0.39
	Engineering	38	14.96
	IT	03	1.18
	Automobile & Automobile components industry	19	7.48
	Agro-based industry	10	3.94
	Others	02	0.78
Total number of B2B SMEs: 254			

important managerial information and help them distinguish the qualities and shortcomings of their B2B SME’s marketing (Rouhi, Stirling, & Peta, 2020). The term co-occurrence analysis can help B2B SMEs

Table 4
Constructs Identification Using Thematic Analysis.

Discussion Group	Most Frequently Mentioned Parameters
B2B SMEs Marketer, B2B SMEs Owner, B2B SMEs CEO, B2B SMEs Executive, etc.	Engagement, Performance, Retention, Conversion, Reach, Acquisition, Awareness, and Activity

distinguish top concerns and to know which part of their marketing needs more attention (Olaleye, Ukpabi, Karjaluo, & Rizomyliotis, 2019; Paliwoda, 2004). The integrated SNMM that mirrors these sorts of web-based social networking practices is significant, not just because they let marketers measure the main concern of their social network efforts, but additionally because they concentrate on web-based networking media methodologies that consider the objectives of both the brand and the online consumers (Fig. 5).

3.3. Measurement scale development

This study's questionnaire was developed from experience, literature review, and critical observations. A few alterations were made to better fit the study's. Each question and item was created and adjusted depending on the previous literature survey and estimated on a five-point Likert scale. Social network activity was estimated using four adapted items from Yadav and Rahman (2017) and Chen and Liu (2019). Social network reaches were measured through four items adapted from Colicev et al. (2016), Lund et al. (2017), and others. Social network engagement was estimated through four items adapted from Barwise and Farley (2004) and Rather and Sharma (2017). Social network acquisition-related factors were measured through four items adapted from Aaker (1991), Castronovo and Huang (2012), Kujur and Singh (2019), and others. Social network conversion was measured through six items adapted from Ambler et al. (2004), Leland (2016), and others. Social network retention-related factors were estimated through four items adapted from Dawley (2009), Machado et al. (2019), and others. Social network awareness metrics were measured using five items adapted from Park and Cho (2012) and Sasmita and Mohd Suki (2015). Social network performance metrics were measured using four items adapted from Ainin et al. (2015) and Basco et al. (2019). Social network key performance indicators were measured through four items adapted

from Peters et al. (2013), Hamali et al. (2017), and others. ISM were measured through six items adapted and modified from Peters et al. (2013), Kujur and Singh (2019), and others. For characterizing each construct, at least three items were utilized for guaranteeing and ensuring adequate reliability.

3.4. Quantitative data collection

The study then considered 634 SMEs in the west of India, mostly from the three biggest MIDC: Talegaon MIDC, Pimpri-Chinchwad MIDC, and Chakan MIDC. Inclusion criteria were that the B2B SMEs must: a) have an extant social network marketing department, and b) be at least three years old with the goal that they generally have well-developed processes and frameworks to deal with their social network marketing. Only 417 SMEs consented to take part and conveyed physical copies of the questionnaire to the CEO (President), the social network marketing manager, and the proprietor from their companies. We collected filled-in questionnaires from each of these three individuals (CEO [President], the social network marketing manager, and the proprietor) for 417 SMEs. Nevertheless, 5 percent of respondents left incomplete surveys. We excluded these responses and utilized the remaining 254 sets to examine our hypotheses.

Given these figures, the response rate was 51 percent. It is worth mentioning that sorting the information from these three groups out from the B2B SMEs was a troublesome and tedious process. There were two general aspects of the interview guide. The first one reflected the perception of social network marketing practices by the managers. The second segment related to the activities of managers in the metric domain of social network marketing. Before continuing with the actual data collection, we piloted the overview survey on 15 specialists to build up the estimation instruments' legitimacy, meaningfulness, and usefulness. To avoid common method biases, the information was gathered from three distinct sources from each participating B2B SME. This survey contained many inquiries which speak to various theories created from the investigation. A broad writing survey has demonstrated a list of forty-five critical SNMM factors mentioned under the 10 constructs list. The review incorporates 45 inquiries, which are all deliberate on five-point Likert scales. A pilot study was led with the point-by-point conversation of 10 specialists from B2B SMEs, the scholarly world, and the industry to confirm the questionnaire's substance legitimacy. They fundamentally analyzed and agreed each parameter and remarked that no further alterations were required.

A five-point Likert scale was used with five decisions—strongly agree (5), agree (4), neutral (3), disagree (2), strongly disagree (1)—to permit respondents to report the degree to which they concurred (or did not) with each of the 45 SNMM factors on the questionnaire. According to Westland (2010), normally distributed data are vital to structural equation modeling (SEM) results. All measuring items across the study were normally distributed as the absolute values for skewness, and kurtosis coefficients were below 3 and 8, respectively. The theoretical model and its numerous hypotheses were evaluated using the two-step method suggested by Anderson and Gerbing (1988). In the first step, the measurement model's quality was evaluated using model fit indices, and various forms of instrument validity and reliability were assessed. The structural model was accessed in the second phase to address the numerous study hypotheses.

4. Data analysis and results

The study uses SPSS version 26 in conjunction with AMOS software for analyzing data. The impact of independent factors on dependent variables is examined using descriptive and inferential statistics, confirmatory factor analysis, multiple regression, and structural equation modeling.



Fig. 5. Word Cloud of Constructs from Thematic Analysis.

4.1. Multicollinearity

We then studied multicollinearity by producing tolerance & variance inflation factor (VIF) values similar to those employed in prior research (Talwar et al. 2021a). Tolerances were >0.1, and VIFs were fewer than the suggested cut-off of 5, indicating that the data gathered did not exhibit multicollinearity (Talwar et al., 2021b). Correlations between constructs were smaller than 0.80, confirming the absence of multicollinearity.

4.2. Common method bias

Normal distribution was validated for the cross-sectional dataset based on skewness, kurtosis, and Mardia’s criteria (Kaur, Dhir, Talwar, & Ghuman, 2020). The data has no outliers. The Harman one-factor analysis was used to measure technique bias (Talwar, Dhir, Kaur, & Mäntymäki, 2020). The common technique component explained 37.76% of the variation, just below the 50% criterion. Common method bias would not be a serious problem.

4.2.1. Assessment of the measurement model

This examination gathered information from various respondents with a recently evolved questionnaire. The skewness and kurtosis

estimation of the dataset exists in the specified scope of ±3 and ±10, respectively (Kline, 2011) (Table 5), demonstrating that data are normally distributed. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is 0.938, which characterizes high-shared change and a generally low uniqueness in fluctuation (Kaiser & Cerny, 1979).

Bartlett’s test for sphericity (testing that the correlation matrix has an identity matrix) unequivocally approves test size ampleness (Chi-square = 12494.016, df = 990) that affirms the appropriateness of EFA for this data (Cooper & Schindler, 1998). The Cronbach’s alpha $\alpha > 0.7$ (Nunnally & Bernstein, 1994) for all the 10 constructs (Table 5), which demonstrates internal consistency is satisfactory. Confirmatory factor analysis (CFA), a multivariate factual methodology, is utilized to test how well the deliberate factors speak to the number of constructs.

The measurement model speaks to a good number of indicators for each construct. At least three factors are required for estimating every construct, evaluated standard loadings must be higher than 0.70 (Hair, Anderson, Black, & Barry, 2016), and for testing the convergent validity, average variance extracted (AVE) for all constructs must be more prominent than 0.5. This shows that each construct’s composite reliability (CR) is more noteworthy than 0.70 (Table 5).

Table 5
Result of CFA, AVE and CR.

Dimensions	Items	Factor Loading	Skewness	Kurtosis	α^*	AVE	CR
Social Network Activity(ACT)	ACT1	0.924	-1.55	1.135	0.957	0.853	0.921
	ACT 2	0.913	-1.434	0.875			
	ACT 3	0.912	-1.435	0.846			
	ACT 4	0.935	-1.521	0.986			
REA (Social Network Reach)	REA1	0.886	-1.344	0.405	0.958	0.852	0.958
	REA 2	0.942	-1.366	0.551			
	REA 3	0.935	-1.337	0.475			
	REA 4	0.931	-1.229	0.146			
ENG (Social Network Engagement)	ENG 1	0.872	-1.063	-0.267	0.938	0.793	0.939
	ENG 2	0.915	-1.326	0.428			
	ENG 3	0.925	-1.224	0.231			
	ENG 4	0.847	-1.169	0.118			
ACQ (Social Network Acquisition)	ACQ 1	0.929	-1.692	1.855	0.948	0.821	0.948
	ACQ 2	0.871	-1.562	1.595			
	ACQ 3	0.912	-1.729	2.076			
	ACQ 4	0.911	-2.111	3.267			
CON (Social Network Conversion)	CON 1	0.886	-1.508	1.064	0.958	0.793	0.958
	CON 2	0.897	-1.52	1.223			
	CON 3	0.903	-1.506	1.219			
	CON 4	0.888	-1.479	1.218			
	CON 5	0.917	-1.56	1.233			
	CON 6	0.851	-1.312	0.518			
RET (Social Network Retention)	RET 1	0.821	-1.301	0.679	0.925	0.752	0.924
	RET2	0.831	-1.067	0.111			
	RET 3	0.887	-1.521	1.097			
	RET 4	0.929	-1.574	1.389			
AWA (Social Network Awareness Metrics)	AWA 1	0.854	-0.981	-0.674	0.946	0.781	0.947
	AWA 2	0.858	-0.986	-0.551			
	AWA 3	0.913	-0.866	-0.724			
	AWA 4	0.885	-0.752	-0.927			
	AWA 5	0.903	-0.923	-0.707			
PER (Social Network Performance Metrics)	PER 1	0.911	-0.686	-1.008	0.950	0.827	0.950
	PER 2	0.922	-0.842	-0.69			
	PER 3	0.908	-0.675	-0.816			
	PER 4	0.898	-0.701	-0.827			
KPI (Social Network Key Performance Indicator)	KPI 1	0.818	-1.661	2.121	0.915	0.735	0.917
	KPI 2	0.877	-1.408	1.513			
	KPI 3	0.859	-1.31	0.926			
	KPI 4	0.870	-1.311	1.031			
ISM (Integrated Social Network Marketing Metrics)	ISM 1	0.852	-1.764	2.744	0.924	0.672	0.925
	ISM 2	0.772	-1.959	3.501			
	ISM 3	0.830	-1.974	3.478			
	ISM 4	0.809	-1.709	2.192			
	ISM 5	0.851	-1.577	1.809			
	ISM 6	0.796	-1.485	1.756			

α^* = Cronbach’s α .

4.3. Discriminant and convergent validities

Internal reliability, as well as convergent and discriminant validity, were calculated using the model. The composite reliability coefficients for the research constructs were more than or equal to 0.70, indicating that internal reliability and convergent validity were present. Convergent validity was further confirmed because its average variance explained (AVE) values exceeded 0.50 and the item loadings of the measuring items exceeded the suggested predefined threshold of 0.50 (Hair et al., 2016). Discriminant validity was demonstrated as the AVE values for the research constructs were larger than the corresponding average shared variance (ASV) and maximum shared variance (MSV) values. Additionally, the correlation coefficients between research variables were smaller than the AVE’s square root.

4.4. Structural model and model validity

Considering the field study and CFA results, a structural model was hypothesized for this examination, as shown in Fig. 6. The model is used AMOS v. 25.0. Finally, the standardized regression weight was obtained, and the likelihood esteems exhibit the basic way. To test the associations between the different components, this assessment evaluated the structural model. Then, this examination coordinated an SEM assessment of the constructs. The fundamental condition exhibiting this examination relied upon covariance. The value of Chi-square to degrees of freedom ($\chi^2/df = 1.752$), comparative fit index (CFI = 0.943), root mean square error of approximation (RMSEA = 0.055), Tucker-Lewis index (TLI = 0.940), normed fit index (NFI = 0.878) and incremental fit index (IFI = 0.944) indicate the model is a good fit (Hair et al., 2016; Hu & Bentler, 1999) as shown in Table 6, and the results of the structural model are shown in Table 7.

We present our framework, which gives a diagram of integrated SNMMs. This diagram shows various social network marketing constructs relationship communication through a structural model. More specifically, this study mines various social network marketing constructs from the literature review and discussion with several related groups of people to form the dataset to examine the predictive power for

Table 6
Goodness-of-Fit indices of structural model testing using AMOS.

Fit Indices	Goodness-of-fit Index Statistics	Recommended range of values for a good fit	Resultant Value
Absolute Fit Measure	Chi-square test (χ^2)	$p > 0.05$ (Marsh & Hocevar, 1985)	1629.308
	Degree of Freedom (df)	$df > 0$ (Bentler, 1990)	930
	Chi-square/Degree of Freedom (χ^2/df)	$\chi^2/df < 3$ (Marsh & Hocevar, 1985)	1.752
	Goodness-of-Fit Index (GFI)	$GFI \geq 0.90$ (Chau, n. d.)	0.775
	Adjusted Good-of-Fit Index (AGFI)	$AGFI \geq 0.90$ (Chau, n. d.)	0.750
	Root Mean Square Error of Approximation (RMSEA)	$RMSEA < 0.08$ (Byrne, 2013)	0.055
	Increment Fit Measure	Tucker Lewis Index (TLI)	$TLI \geq 0.95$ (Kline, 2016)
Normed Fit Index (NFI)		$NFI \geq 0.95$ (Hu & Bentler, 1999)	0.878
Comparative Fit Index (CFI)		$CFI \geq 0.90$ (Segars & Grover, 1993)	0.943
Relative Fit Index (RFI)		$RFI > 0.90$ (Hu & Bentler, 1999)	0.870
Incremental fit index (IFI)		$IFI > 0.90$ (Hooper et al., 2008)	0.944
Parsimonious Fit Measure		Parsimonious Normed Fit Index (PNFI)	$PNFI > 0.50$ (Hooper et al., 2008)
	Parsimonious Good-of-fit Index (PGFI)	$PGFI > 0.50$ (Hooper et al., 2008)	0.697

social network marketing metric development model for SMEs.

This area speaks to the survey information investigation technique, results, and reports. The information was first screened for anomaly checking and missing, worth recognizable proof before the investigation. After that, an overall information cleaning process was utilized. Then SEM was used to demonstrate the constructs.

The investigation is also concerned with looking at, using, and sharing data by social network marketers and platforms. Other SNMM apparatuses impact social networks on media marketer perspectives

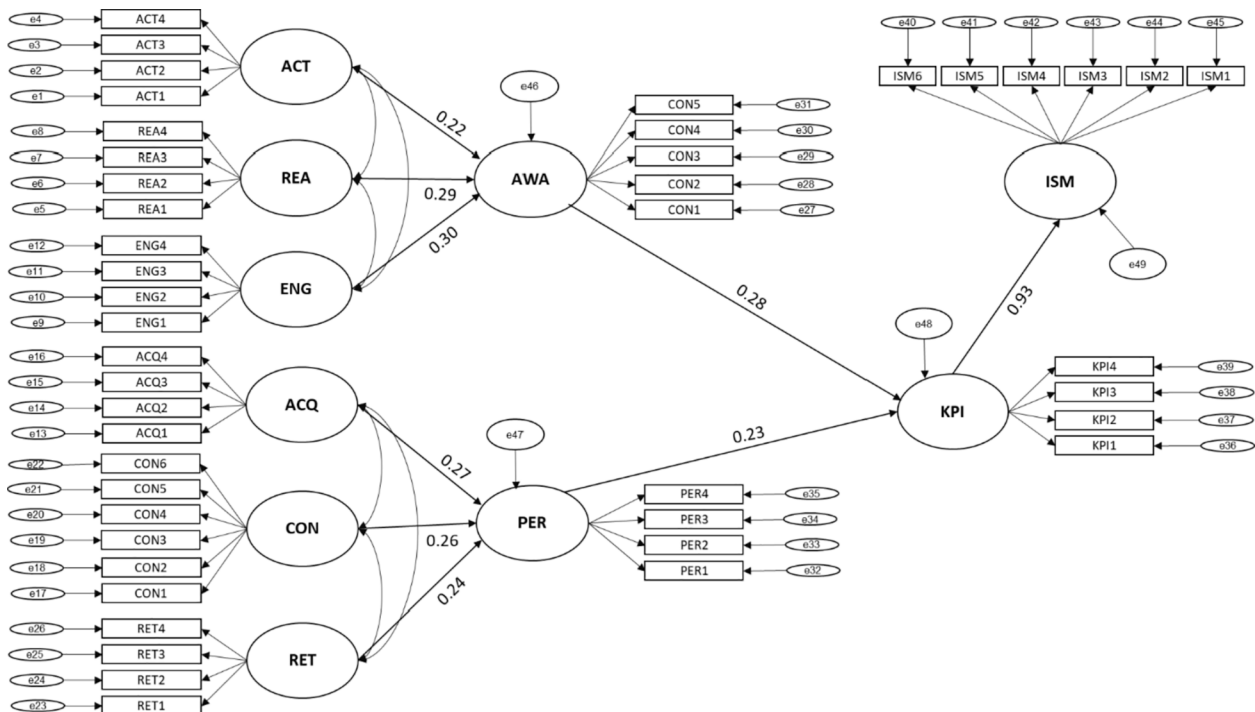


Fig. 6. Hypothesized model showing the relationship between constructs.

Table 7
Structural model results.

Hypothesis	Structural Equations	Coefficients (β)	t-value	p-value	Result
H1	ACT → AWA	0.223	3.402	***	Supported
H2	REA → AWA	0.286	3.450	***	Supported
H3	ENG → AWA	0.296	3.468	***	Supported
H4	ACQ → PER	0.268	3.896	***	Supported
H5	CON → PER	0.259	3.535	***	Supported
H6	RET → PER	0.237	3.356	***	Supported
H7	AWA → KPI	0.285	4.413	***	Supported
H8	PER → KPI	0.228	3.597	***	Supported
H9	KPI → ISM	0.931	14.913	***	Supported

toward brands and the social network effect on buyers' expanded utilization. The basic social network metrics paired with social showcasing have appeared in the accompanying outcomes, graphs, and outlines. In recent decades, critical commitment has been made during statistical analysis. In particular, SEM has offered strong gauges and handles an enormous number of dormant factors in a single platform. Improving a hearty research model with a scope of factors and their investigation may offer SNMMs.

5. Discussion and conclusions

This study looked into the marketing implications of using social media, primarily social networks, in SMEs. Our findings corroborate ACT, REA, and ENG's hypothesized effect on AWA and SMEs' key performance indicators. Simultaneously, ACQ, CON, and RET are thought to affect PER and SME's KPIs positively. These data demonstrate that social media marketing is truly effective in various ways for SMEs and large businesses. In this regard, our findings imply that research on the antecedents and implications of the SNMM should take firm-specific factors into account.

Additionally, the industry appears to be a critical variable in the SNMM context. At first sight, it appears as though the missing link between SNMM and SME success is caused by a lack of time, knowledge, and financial resources. Social media technology application can result in company growth only if the SME embraces innovation, proactiveness, and risk-taking.

On the other hand, we observe a positive effect of social networking on large-firm growth. This effect is exacerbated by manufacturing enterprises operating in B2B industries. Although other writers have discovered a beneficial effect of social network usage on company performance in B2B settings, this conclusion needs additional research. The same holds for our finding that assessing the SNMM appears to lessen the influence of ISM in both the SME and large-firm contexts. SMEs contribute to creating jobs, increasing wealth, alleviating poverty, and generating revenue. SMEs in low-income nations, on the other hand, suffer various hurdles, including a lack of money, a lack of business expertise, and a dearth of operating space. Local governments, the private sector, and civil society should improve their support for SMEs to influence local economic development. Estimating the effect of SNMM on B2B SMEs' viewpoints is a complex issue. At the very least, bringing further clarity and value to this aspect of understanding B2B requires reliable aggregate market information from outside sources, similarly to how attitude information was drawn from studies in the present work.

As to the role of SNMM in B2B SMEs' model for execution, the following broad highlights can be extracted: the importance of (1) linkage to key administration measurements like social network key performance indicators; (2) having a mix of routine and on-request execution data like social network awareness metrics and social network performance metrics; (3) arrangements of individuals' conduct with organizational goals like social network activity, social network reach, social network engagement, social network acquisition, social network conversion, social network retention, and other factors. The

conversation reveals that social network brand marketers trust that proper utilization of SNMM develops huge markets for B2B SMEs. They perceive the requirement for improving benefit by utilizing models and information and have effectively looked for our direction on the ideal financial plan and distributions within sight of unreliable metrics.

The findings of this study indicate that when B2B organizations begin to participate in relational growth through SNMM, various methods and styles emerge, all of which impact how relationships and business networks are formed. The development of a new paradigm describing different forms of SNMM policy has emerged from this study of B2B SMEs. The B2B SME managers who took part in the study were well aware of the importance of improving their business via this SNMM business model. First, B2B social network marketing practitioners used SNMMs to position themselves as "market pioneers" in order to gain a market-leading status in the sector; second, B2B social networks were primarily used to create partnerships with a variety of stakeholder groups and construct a metric marketing framework (Kumar et al., 2020).

This study aimed to enhance the application of an integrated framework of SNMMs for B2B SMEs by incorporating BRT and MAT, an aspect that has previously received only limited attention in academic contexts. The effect of ACT, REA, and ENG on AWA (H1, H2, H3) is consistent with previous research. The findings also suggest the reasons ACQ, CON, and RET can potentially impart a positive attitude (supported by H4, H5, H6) in social network performance metrics (PER) and stimulate their decision to utilize social network key performance indicators (KPI) (supported by H7 and H8). Increased ISM against KPI was also a viable option for integrated SNMMs (H9). This recognition of prevalent methods does not imply that organizations are stagnant but rather that various techniques may transition later.

5.1. Theoretical implications

In being the first to empirically test the BRT (Westaby, 2005) and MAT (Verhoef & Leeflang, 2009) paradigms, this study has many theoretical contributions. First, we chronicled the developmental trajectory and conceptual framework of SMMM literature by providing nine important paradigms: the ACT, REA, ENG, ACQ, CON, RET, AWA, PER, and KPI. Second, a complete framework has been proposed to aid in comprehending SNMM research and practice. This experimental investigation significantly advanced both the theory and its implications. The findings add to expanding prior research in marketing analytics, on SMEs, and on social networks and carried theoretical development forward. Third, this research implemented and validated a thorough model based on both BRT and MAT theoretical structures. Thus, the analytical results lend support for the use of BRT and MAT in the context of SNMM.

5.2. Practical implications

Practicing managers should use internationally influential social networks to make a global association with customers through open communication channels supported by online networking technologies. This subsequently encourages more grounded, impactful, and significant customer-to-shopper, purchaser-to-firm, firm-to-purchaser, and firm-to-firm communications (Bianchi & Andrews, 2015). In many ways, the social network offers meaning for marketers, but competition continues to validate or quantify its value in terms of KPI metrics (De Silva, Al-Tabbaa, & Khan, 2019). SME stakeholders should choose an ideal number of metrics and evaluate their progress toward them (Fronzetti Colladon, 2018). Metrics ought not to be considered in isolation but rather framed in terms of cause-impact connections. Subsequently, the B2B SME marketer should have the option to think about how much resource weighting to assign to marketing exercises.

There are three direct practical implications of these findings: (1) the conceptual structure and comprehensive framework established in this

study enable B2B SME marketers to gain a deeper understanding of the influence of SNMM strategies, (2) The detailed grasp of the various facets of SNMM outlined here enable B2B SME marketers to develop an SNMM strategic vision and more productive methodologies for executing the various elements of SNMM, and (3) Stakeholders will gain guidance for developing B2B SME marketing policies due to the current study's feedback. As social networks have a cost associated with them, this notion is useful to implement here, and understanding how to assess KPIs can influence marketers' perceptions of whether or not social media can be successfully integrated into marketing strategies in B2B SMEs.

5.3. Limitations and future research

A number of the study's constraints could be addressed in future research. The first limitation owes to the sample's cross-sectional nature. Second, while the response rate was comparable to other similar studies, it was low, considering the results. Third, when interpreting the study's findings, the nature of the industry and the geographical region used in this study must be considered. Fourth, this study focused on a single point of view (i.e., that of SME marketers), whereas in B2B settings, mutual understanding between internal and external stakeholders is critical to the relationship's success. The fifth limitation is related to the study's context. Another limitation of this study is the small number of variables considered (both dependent and independent). Without a doubt, the study may be expanded by considering additional elements that could influence SNMM. Our selection of the professional services sector narrows our focus to providers of pragmatic services. A couple of other factors constrain the current research outcomes: (1) Because of global organizations' complex structure on developing the SNMM, the strategic level is more complex than B2B SMEs, and (2) Even though we utilized literature from elsewhere, notably the US and the UK, the observational work was led in India.

This study is dependent upon various limitations that might be tended to in future research. The results identify a few areas of interest for further investigations: First, a future direction to stretch out this work is to investigate heterogeneity over social network decision-makers' choices in the research's assortment of settings. Right now, on metric-use drivers, we center around building up a proposed framework for SNMM in B2B SMEs. Second, even though this strategy is often utilized in investigations, gathering information based on the perspectives on multiple individuals would improve the exactness and unwavering quality of the information assortment. Individuals can't make SNMM happen in B2B organizations and improve marketing at the same time. This data should be shared with all divisions and with the top-level administration of SMEs, as it stands to impact all firm procedures—from technique improvement to day-to-day exercises. Future examinations can contribute by taking up this part of the subject. The present study makes an important contribution to literature in SNMM, considering these limitations. Therefore, it provides academics and professionals with crucial insights into SNMM, pushing forward the research agenda in the B2B SNMM domain. Future studies could include various sizes with various strategic orientations, such as countrywide versus local markets, to investigate potential preconditions for B2B SNMM.

CRedit authorship contribution statement

Sandip Rakshit: Writing – original draft, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Nazrul Islam:** Writing – review & editing, Validation, Supervision, Investigation, Conceptualization. **Sandeep Mondal:** Writing – original draft, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Tripti Paul:** Writing – review & editing, Software, Formal analysis, Data curation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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