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# Social media and entrepreneurship research: A literature review



Abdus-Samad Temitope Olanrewaju, Mohammad Alamgir Hossain\*, Naomi Whiteside, Paul Mercieca

School of Business IT and Logistics, RMIT University, Melbourne, VIC 3000, Australia

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#### ABSTRACT

The rise of social media has led to changes in how entrepreneurs carry out their day-to-day activities. Studies on social media and entrepreneurship are relatively new and fragmented in their focus, however there is increasing interest from academia and practitioners for further research and investigation within this area. This study systematically reviews research carried out in the domain of social media and entrepreneurship. A total of 160 papers, published between 2002 and 2018 were synthesised to identify critical theories and research methods used in the domain. Based on the extent review, an integrative framework was developed to identify relationships amongst elucidated constructs. While most papers investigated the factors that drive social media adoption and use by entrepreneurs, it was found that the use of social media by entrepreneurs had transcended marketing and it is now used in business networking, information search and crowdfunding for their business. This has led to significant impact with improved firm performance and innovation enhancement being the essential outcomes. The literature review and framework further understanding of social media and entrepreneurship research, providing a useful basis for future studies and informs practice in this area.

#### 1. Introduction

Social media (SM) as defined by Kaplan and Haenlein (2010, p. 61) is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of user-generated content". SM has altered the way people interact with each other. By exploiting SM functionalities, entrepreneurs have been using it in managing their business activities, e.g. marketing (Alalwan, Rana, Dwivedi, & Algharabat, 2017; Misirlis & Vlachopoulou, 2018). As reported by Lister (2018), over 50 million businesses use Facebook business pages including 2 million who use it for direct advertising. A similar trend can be observed in other dominant social media platforms like Instagram, where half of users follow a business page (Pickard-Whitehead, 2018).

Both academics and practitioners have explored social media in recent years. Entrepreneurs use social media for several reasons and purposes which is vital to their business activities. Social media's openness and connectivity overcomes the inability or difficulty entrepreneurs experience in identifying and reaching out for expert advice (Kuhn, Galloway, & Collins-Williams, 2016; Nylander & Rudström, 2011). This is particularly crucial in the early stages of entrepreneurship where there is a need for information and support on setting up

and running a business which is essential to its survival. Furthermore, entrepreneurs use social media mainly to market their product/services. The ability to interact and network with co-entrepreneurs is another vital factor. To a considerable extent, SM has allowed entrepreneurs to connect and establish relationships based on similar interests (e.g. Quinton & Wilson, 2016) which allows for partnerships that drives co-creation and innovation (Bhimani, Mention, & Barlatier, 2018; Rathore, Ilavarasan, & Dwivedi, 2016). Usage of these platforms has been shown to improve their firm performance (Alarcón-del-Amo, Rialp-Criado, & Rialp-Criado, 2018; Franco, Haase, & Pereira, 2016; Tajvidi & Karami, 2017) which is essential to the growth of the entrepreneur's business.

Due to the importance of social media to entrepreneurs and the benefits it offers them; it has attracted attention from diverse discipline areas including information systems and management. This is demonstrated by the increasing number of scholarly articles that are being published yearly. A systematic review of literature relating to social media and entrepreneurship can inform research in the domain. While there have been previous review papers on social media, they are not directly linked to entrepreneurship. Instead, these papers tend to be allinclusive (i.e. generic) (e.g. Kapoor et al., 2017; Ngai, Tao, & Moon, 2015) or specific to a particular domain like marketing e.g. (e.g.

E-mail addresses: abdus-samad.olanrewaju@rmit.edu.au (A.-S.T. Olanrewaju), mohammad.hossain@rmit.edu.au (M.A. Hossain), naomi.whiteside@rmit.edu.au (N. Whiteside), paul.mercieca@rmit.edu.au (P. Mercieca).

<sup>\*</sup> Corresponding author.

Alalwan et al., 2017; Dwivedi, Kapoor, & Chen, 2015; Misirlis & Vlachopoulou, 2018), innovation and co-creation (e.g. Bhimani et al., 2018; Rathore et al., 2016) or country specific (e.g. Abed, Dwivedi, & Williams, 2015a).

Although literature suggests that entrepreneurs actively use SM, no systematic review presents the state of SM and entrepreneurship research. Such a study is essential to understand how much ground entrepreneurship and SM research had covered and what should be done to take our knowledge further (Ngai et al., 2015). Meanwhile, Filo, Lock, and Karg (2015) stress concern on the lack of consistency in theoretical frameworks in SM research. Therefore, based on the existing SM and entrepreneurship studies, this study will develop an integrated research model that explains the antecedents and consequents of SM use by entrepreneurs. In other words, the model explains what leads entrepreneurs to use social media and what the impact of such use is. The review and the framework are expected to guide academics and practitioners to understand the current state of the research and support future research in the domain.

The remaining sections of the paper are arranged as follows. The methodology details the steps involved in carrying out the literature search. The succeeding section reports the key findings of the reviewed literature that leads to a research framework. The paper concludes by highlighting the contribution of this research, the limitations of the study and directions for future research.

#### 2. Methodology

Social media use by entrepreneurs requires cross-domain analysis in the areas of information systems and entrepreneurship to explore its use for business management. Therefore, we used two prominent business/management databases to source literature; Business Source Complete (EBSCO) and Scopus, replicating the approach used by Bhimani et al. (2018). These databases provide a focus on business management, but also index a range of journals. Conference papers, book chapters, theses and reports were excluded as refereed journal articles represent state-of-the-art research output with high impact (Chan & Ngai, 2011; Podsakoff, Mackenzie, Bachrach, & Podsakoff, 2005). This approach is consistent with previous review papers on social media that have also limited scope to journal articles (e.g. Bhimani et al., 2018; Ngai et al., 2015).

In identifying the keywords to be used in investigating SM and entrepreneurship a broad statement was initially used ("Social media" and entrepreneur\*). However, entrepreneurship studies tend to refer to social media using the name of specific platforms such as Facebook or they use the more generic term, social networking sites. This led to the inclusion of keywords reflecting specific platforms which included "Facebook", "Twitter" and "Instagram" as well as "social networking sites". Alternate terms for entrepreneurship were also used including "SME", "small business", "small and medium". The final search string was:

Keyword ("social media" OR "Facebook" OR "Twitter" OR "Instagram" OR "social networking sites") AND (entrepreneur\* OR "SME" OR "small business" OR "small and medium")

The search was limited to the abstract to focus search results. While a full text article search could have been completed, such an approach can lead to irrelevant results as the search terms are drawn from across the article text. As stated earlier, only journal articles were included, with articles published in other languages apart from English were removed. Based on this search criteria, 131 articles were returned from EBSCO and 405 articles from Scopus. Duplicate articles were removed which left a total of 458 articles from both databases. The abstracts of articles were then reviewed to ensure their relevance to the focus of entrepreneurs' use of social media. This resulted in 223 articles. These articles were then read in full to determine which articles focused on factors influencing social media usage, what it is used for and its impact



Fig. 1. Distributions of the articles in publishing years.

on the entrepreneurial business. This led to a final sample of 160 articles that were reviewed in this study. The distribution of the selected papers in terms of publishing year is presented in Fig. 1, which shows an increase in research in this domain in recent years based on the articles reviewed (i.e., 2016, 2017, 2018).

The bibliographic details of the individual articles are listed in Appendix A. Appendix B presents the articles by journal name. Appendix C tabulates methods used in journal articles and Appendix D tabulates theories used in journal articles.

Following Ngai et al. (2015) as a guide, articles were analysed to identify the research methods, theories, frameworks and constructs evident in the SM and entrepreneurship literature reviewed. We then developed an integrative casual-chain framework from our analysis of the reviewed articles. Based on the framework, a number of propositions were developed following the approach of Hughes et al. (2019) and Duan, Edwards, and Dwivedi (2019), to guide future research on SM and entrepreneurship.

#### 3. Analysis and results

This section analyses the literature identified as part of our review. It begins with a discussion of the research methods used in the reviewed literature and then focuses on the theories and models that were evident these papers. This is followed by an analysis of the constructs used in the SM and entrepreneurship research. This analysis informed the development of the integrative framework presented at the close of this section.

#### 3.1. Research methods used in the reviewed literature

We first examined the research methods used by the reviewed papers; most of the papers use a single analytical approach: quantitative (n=77) or qualitative (n=54). Only seven studies applied mixed methods (see Appendix C). Quantitative research as defined in this study uses empirical assessment based on numerical measurements while qualitative methods involve the interpretation of text or other materials without relying on numerical measurement (Zikmund, Babin, Carr, & Griffin, 2013). Within the quantitative methods, survey was the most used data collection process. As would possibly be expected, interviews and case studies were the most applied method within the qualitative method. The mixed method studies applied survey along with several qualitative approaches.

#### 3.2. Theories and models used in the reviewed literature

The reviewed studies used several theories and models, mostly from the domains of management and technology adoption (see Appendix D). On further review, we found that the literature placed significant emphasis on entrepreneur behaviour, the theories that explain their social behaviour and the mechanism of how entrepreneurs derive value from SM. Theories that appeared at least in two articles are briefly outlined here.

Most of the research was carried out from the viewpoint of management and entrepreneurship. Among these, *resource-based view theory* was used to explaining adoption and the extent of SM use (Kacker &

Perrigot, 2016), resource acquisition on SM (Sigfusson & Chetty, 2013) value derived from SM (Schaupp & Bélanger, 2014), and firm performance (Tajvidi & Karami, 2017). Researchers argued that SM can be used to create dynamic capabilities that lead to better performance and competitive advantage when SM is combined with available resources (Dutot & Bergeron, 2016; Guha, Harrigan, & Soutar, 2018; Harrigan & Miles, 2014; Odoom & Mensah, 2018). Similarly, institutional theory was used in understanding how SM helps to establish legitimacy (Kacker & Perrigot, 2016; Laurell & Sandström, 2014; Perrigot, Kacker, Basset, & Cliquet, 2012) and adopting foreign practices (Mohajerani, Baptista, & Nandhakumar, 2015). Knowledge-based view theory (KBV) helped in identifying how knowledge derived from customer involvement can drive innovation (Candi, Roberts, Marion, & Barczak, 2018; Cheng & Shiu, 2018). Alternatively, signalling theory was used to discuss the role played by SM during the initial public offering Mumi, Obal, and Yang (2018)) and crowdfunding process (Kromidha & Robson, 2016).

Behavioural theories have also been used, mostly to examine how entrepreneurs use SM platforms. *Technology-organisation-environment (TOE) framework* was the most studied due to its ability to look at different dimensions of factors that drive SM adoption and usage. Constructs from the *diffusion of innovation (DOI)* (Rogers, 1995) were frequently used in the technological factors with *compatibility* and *cost* being identified as a consistent and critical factor in social media adoption and use (Odoom et al., 2017). *Organization demographics* (age, size) and *external pressure* are other crucial factors identified other the TOE framework.

Using the Unified Theory Of Acceptance And Use Of Technology Model (UTAUT), facilitating conditions (Nasir, Nawi, Mamun, Fazal, & Raston, 2017) and performance expectancy (Nawi et al., 2017) were identified as factors that drive SM adoption usage. Under the technology acceptance model (TAM), perceived ease of use and perceived usefulness was found not to influence SM adoption amongst Latino entrepreneurs (Gavino, Williams, Jacobson, & Smith, 2018) while Pentina, Koh, and Le (2012) reported that perceived usefulness does not influence intention to continuous use of SM. Furthermore, social behaviour theories such as social capital theory have been used in investigating social capital accumulation (Smith, Smith, & Shaw, 2017), crowdfunding (Kang, Jiang, & Tan, 2017) and entrepreneurial success (Srinivasan & Venkatraman, 2017), while social network theory was used to explain how entrepreneurs build and use network relationships in SM platforms (Quinton & Wilson, 2016; Sigfusson & Chetty, 2013).

### 3.3. Adoption frameworks developed in the reviewed literature

Prior studies proposed frameworks that explain adoption and use of SM by entrepreneurs, which can be divided into customer-oriented or business-oriented. The customer-oriented adoption framework puts customer engagement as the foci of SM use. For example, Durkin, McGowan, and McKeown (2013) proposed customer-centric bottom-up model whose strength lies in its flexibility to different customer-base which is crucial to the adoption of SM by any business (Shih, Lin, & Luarn, 2014). On the other hand, the entrepreneur-oriented adoption frameworks centre on how to implement SM within the business. Within the latter, Burgess (2016) presented a web presence pyramid model that aimed at explaining adoption of digital platforms including SM by entrepreneurs. Studies emphasized on organization culture, especially the leadership as critical for SM adoption and usage (Brink, 2017; Guinan, Parise, & Rollag, 2014; Sasatanun & Charoensukmongkol, 2016; Toombs & Harlow, 2014). Meanwhile McCann and Barlow (2015) proposed a SM adoption model consisting of planning, implementation, and evaluation stages, which are directed towards measuring and maximizing ROI gained from SM use. Barcoe and Whelan (2018) suggested the use of key performance index (KPI's) while Virtanen, Björk, and Sjöström (2017) recommended following users SM accounts to enhance entrepreneur marketing strategies. These studies concentrated either on adoption or (continued) use as discrete events. Exceptionally,

He and Negahban (2017) developed an integrated model that takes into consideration the factors related to both adoption and continued use while Lashgari, Sutton-Brady, Solberg Søilen, and Ulfvengren (2018) proposed a framework that spans the selection process of the required SM type, to the adoption and integration of SM to the business-to-business (B2B) firm.

#### 3.4. The antecedents

The antecedent factors identified are categorised into four groups: user platform perception, technological characteristics, organization and individual factors, and environmental factors.

Technological factors of SM platforms have been studied to understand how they influence SM adoption and use. Accordingly several theories including TOE, TAM, DOI, Delone and Mclean success model and UTAUT have been used; they found that effort expectancy (i.e., perceived ease of use/complexity), facilitating conditions (i.e., compatibility), performance expectancy (i.e., perceived usefulness/relative advantage), and perceived enjoyment increase SM adoption and use while perceived risk hinders it. Interestingly, some studies (e.g. Taiminen & Karjaluoto, 2015) found the negative impact of perceived usefulness, which can be attributed to lack of knowledge of using the platforms (Taiminen & Karjaluoto, 2015). In addition, cost has been highlighted to be crucial for SM adoption and use which is consistent with IS research (Tornatzky & Klein, 1982). Interactivity of SM platform is crucial to its adoption and use as it is vital to building client relationships (Shih et al., 2014). However, AlSharji, Ahmad, and Abu Bakar (2018) combined the constructs of DOI into a single formative construct called technological context which was found to have no effect on SM adoption.

Organizational and individual factors have been well-studied in SM and entrepreneurship literature. The important organizational variables include business size, business age, business complexity, business innovativeness and the business industry. Dutot and Bergeron (2016) reported that organization strategic orientation influences SM use through entrepreneurial, customer and technological orientation. The entrepreneurial orientation of the organization drives their SM use when they are receptive to new innovations (Fosso-Wamba & Carter, 2014; Michaelidou, Siamagka, & Christodoulides, 2011) and are able to utilize available resources for SM use. Regarding customer orientation, Ha, Kankanhalli, Kishan, and Huang (2016) highlighted the critical role of customer endorsement and promotion information for SM marketing. Customer engagement which is vital to customer orientation has also been highlighted to drive SM adoption (Harrigan & Miles, 2014; Shih et al., 2014). The technological orientation of the organization such as the technology competence (Schaupp & Bélanger, 2014) and the IT knowledge of the employees (Ahani, Rahim, & Nilashi, 2017) plays a crucial role in SM adoption and use.

As individual attributes, entrepreneurs' personality traits have been studied with conscientiousness, openness and extraversion been the most vital in driving SM use (Mandal, McQueen, Dillon, & Rastrick, 2017). Obschonka, Fisch, and Boyd (2017) investigated the effect different personality (e.g., super manager vs. super entrepreneur) using SM. Similarly Tata, Martinez, Garcia, Oesch, and Brusoni (2017) explored the differences between entrepreneurs and general populace on SM. Other individual characteristics affecting entrepreneur interaction on SM are perceived time affordability (Fischer and Reuber (2011), knowledge, resource availability, and motivation (Bakri, 2017; Bernhard & Grundén, 2016; Michaelidou et al., 2011). Finally, entrepreneurs' demographic attributes such as age, gender and experience have been studied but without significant effect (Fosso-Wamba & Carter, 2014).

Studies on **environmental factors** on SM adoption by entrepreneurs are scarce. Nevertheless, a few studies identified *external pressure* including *competitive pressure* (e.g. Ahani et al., 2017; Sasatanun & Charoensukmongkol, 2016), *customer pressure* (e.g. Ahani et al., 2017; Schaupp & Bélanger, 2014), *stakeholder pressure* (e.g. Schaupp &

Bélanger, 2016), and social influences (e.g. Pentina et al., 2012; Turan & Kara, 2018) as crucial to SM adoption and use. Other factors identified includes *legal procedures* (Jambulingamis, Sumathi, & Rajagopal, 2015; Schaupp & Bélanger, 2016), *legitimacy of the entrepreneur venture* (e.g. Kacker & Perrigot, 2016) and *mobile environment* (e.g. Schaupp & Bélanger, 2014).

#### 3.5. Areas of social media usage

Entrepreneurs use SM platforms for various purposes (expecting different outcomes). Our review categorised the distinct usage areas of SM including marketing, information search, business networking, and crowdfunding. Other uses were identified in the literature such enhancing organizational internal cohesiveness (Toombs & Harlow, 2014), hiring prospective employees (Kaur, Sharma, Kaur, & Sharma, 2015) and learning (Vivakaran & Maraimalai, 2016) but these will not be discussed as very few papers talked about them.

#### 3.5.1. Marketing

The earliest studies on SM and entrepreneurship have investigated the role of SM primarily in entrepreneur marketing (e.g.Bulearca & Bulearca, 2010; Hensel & Deis, 2010; Jones, 2010). The role of SM on entrepreneur marketing is well studied which has led to the publication of review papers specifically on SM marketing (e.g. Alalwan et al., 2017; Misirlis & Vlachopoulou, 2018) and thus this will be discussed briefly. SM is altering the marketing landscape by allowing entrepreneurs to advertise their products on several SM platforms (Cant, 2016) achieving a cost advantage over traditional advertising and marketing processes (Brink, 2017; Michaelidou et al., 2011). The use of SM marketing is more pronounced in business to customers (B2C) than business to business (B2B) organizations (Kantorová & Bachmann, 2018). Marketing on SM has been documented to entail several activities such as customer relationship management (Guha et al., 2018; Harrigan & Miles, 2014), brand management (Ahmad, Ahmad, & Bakar, 2018; Ananda, Hernández-García, & Lamberti, 2017) and advertising (Cole, DeNardin, & Clow, 2017; Jones, 2010). Marketing of products on SM platforms enhances their product visibility which in turn drives their sales (Dutot & Bergeron, 2016; Taneja & Toombs, 2014). SM marketing also focuses on improving customer relationships (Michaelidou et al., 2011; Nobre & Silva, 2014). This is done through activities on the entrepreneur SM platforms like posting messages such as customer endorsements, promotion information, and business activities (Shih et al., 2014) that trigger a consumer engagement process via sharing, commenting, and liking (Kudeshia, Sikdar, & Mittal, 2016).

However, recent studies on SM marketing have called for a more strategic approach. This is exemplified by Fink, Koller, Gartner, Floh, and Harms (2018) who conducted a longitudinal study and found that celebrity endorsement on SM influences purchase intention via the brand image and is moderated by brand differentiation. Studies such as de Vries, Veer, and de Vries (2018) and Setiaboedi, Sari, and Prihartono (2017) identified a series of best strategic practices to be adhered to for maximal influence of entrepreneur social media campaign.

#### 3.5.2. Information search

Social media has modified the way entrepreneur seek, search and gather information. This is enabled by several SM affordances (Smith et al., 2017). SM has been used by entrepreneurs to support their information needs due to factors such as lack of funds to hire an expert, lack of expertise in their geographical area, presence of people willing to help, fear of competitors, and ease of access to weak ties (Kuhn et al., 2016; Quinton & Wilson, 2016). On SM, information is sought and gathered by entrepreneurs regarding how to run their business (Fernandes, Belo, & Castela, 2016; Kuhn et al., 2016; Quinton & Wilson, 2016). Previous studies have emphasized that communication and information sharing is an important factor for SM use (Drummond, McGrath, & O'Toole, 2018; Gümüs & Kütahyali, 2017). Information

seeking and gathering on SM is done via active search or demand-side narratives (DSN) from clients (Fernandes et al., 2016; Mack, Marie-Pierre, & Redican, 2017; Nambisan & Zahra, 2016). Recent studies have started to highlight the crucial roles played by SM in fulfilling entrepreneur information needs. This includes the exchange of tacit and non-tacit knowledge (Wang, Mack, & Maciewjewski, 2017) which can be achieved for early-stage entrepreneurs by following more users on SM platforms (Motoyama, Goetz, & Han, 2018). In addition, SM aids in searching and interacting with other people on the platforms to solve problems (Drummond et al., 2018; Mohajerani et al., 2015; Wang et al., 2017). Entrepreneurs often seek advice on SM platforms from altruistic information providers (Kuhn et al., 2016; Quinton & Wilson, 2016).

In addition, social media is used by entrepreneurs to manage knowledge in their business. Crammond, Omeihe, Murray, and Ledger (2018) proposed the research, concept, institutionalise, develop, target and assess (RCITDA) model for managing knowledge derived from social media use by entrepreneurs. This includes knowledge acquisition and sharing which has been vital to organization learning (Assis-Dorr, Palacios-Marques, & Merigó, 2012) and the innovation and productivity of entrepreneurial businesses (Candi et al., 2018; Scuotto, Del Giudice, & Obi Omeihe, 2017).

#### 3.5.3. Business networking

The use of SM has gone beyond maintenance of personal connections for entrepreneurs. SM use for networking has been well documented (see Table 1). Entrepreneurs now use it in creating, enlarging and strengthening networks (Ahmad et al., 2018; Fischer & Reuber, 2011; Quinton & Wilson, 2016) which is facilitated by its affordances (Mohajerani et al., 2015; Smith et al., 2017). This allows for networking and interaction with people from a different geographical location with similar or diverse socioeconomic and demographic profiles (Fischer & Reuber, 2011; Wang et al., 2017). Fischer and Reuber (2014) reported that social networks allow for communication which increases differentiation of the firm. Song (2015) found that entrepreneurs use diverse social media platforms with an overlap (between 19-29% on several platforms) in their social network contacts which allows to them to have high network connectedness. In creating relationships, entrepreneurs accumulate strong and weak ties (Quinton & Wilson, 2016; Sigfusson & Chetty, 2013). While weak ties are prevalent, Quinton and Wilson (2016) suggests that these are only offering a transactional value and not leading to new opportunities. According to Sigfusson and Chetty (2013) the weak ties play similar roles to strong ties by preventing opportunism. Quinton and Wilson (2016) in their study discovered that networks created are either strategic or emergent.

In addition, networking on SM has been found to play vital roles in the entrepreneurial development process where it influences entrepreneur effectuation process (Fischer & Reuber, 2011). It allows them to accrue social capital (Barnes & Mattsson, 2016) which Smith et al. (2017) suggests is formed differently through SM due to the affordances of SM. This social capital helps in the identification and capitalization of opportunities (Quinton & Wilson, 2016), gathering of information (Kuhn et al., 2016), increasing entrepreneurial success (Srinivasan & Venkatraman, 2017), identifying and allocating of scarce resources and resource mobilization (Drummond et al., 2018; Sigfusson & Chetty, 2013).

#### 3.5.4. Crowdfunding

Social media has been found to play crucial roles in entrepreneur crowdfunding. As identified by Datta, Sahaym, and Brooks (2018), an entrepreneur innovation orientation in itself, does not suffice in explaining crowdfunding success on SM. Rather, there is a need to use SM platforms strategically. Strategic use involves the use of audio-visual aids (Fietkiewicz, Hoffmann, & Lins, 2018; Roedenbeck & Lieb, 2018) and the social network characteristics. The audio-visual aids were highlighted by Kromidha and Robson (2016) who stressed the importance of the entrepreneurs identifying with their projects on SM.

# Table 1 Constructs used in SM and entrepreneurship research.

Constructs used in SM and entrepreneurship research.	
Constructs	Reference
Antecedents: the inputs that serve as stimulus for behaviour Technological factors	
1 Cost 2 Facilitating conditions (compatibility)	Ahani et al. (2017); Derham et al. (2011); Taiminen and Karjaluoto (2015)  Adam et al. (2016); Ahani et al. (2017); Nasir et al. (2017); Odoom et al. (2017); Shaltoni (2017); Shokery et al.
3 Performance expectancy (perceived usefulness/ relative advantage)	(2017) Adam et al. (2016); Ahani et al. (2017); Gavino et al. (2018); Michaelidou et al. (2011); +Nasir et al. (2017); Nawi et al. (2017); Shaltoni (2017); Shokery et al. (2017); a Taiminen and Karjaluoto (2015); Turan and Kara (2018)
4 Effort expectancy (perceived ease of use/complexity)	Adam et al. (2016); Ahani et al. (2017); Bakri (2017); Gavino et al. (2018); +Nasir et al. (2017); +Shaltoni (2017); Shokery et al. (2017); Turan and Kara (2018)
5 Perceived risk	Beier and Wagner (2016); Jambulingamis et al. (2015); Nasir et al. (2017); Nawi et al. (2017); Shokery et al. (2017); Wang et al. (2016)
6 Perceived trust	+ Ainin et al. (2015); Nasir et al. (2017); Nawi et al. (2017); Shokery et al. (2017); Vongsraluang and Bhatiasevi (2017)
7 Perceived enjoyment	Nawi et al. (2017); Shokery et al. (2017)
8 Interactivity	Ainin et al. (2015); Odoom et al. (2017)
9 System quality	Vongsraluang and Bhatiasevi (2017)
10 Service quality	Vongsraluang and Bhatiasevi (2017)
11 Information quality	+ Vongsraluang and Bhatiasevi (2017) Soto-Acosta et al. (2017)
12 IS integration (with this) 13 Quality of SM technologies	+Schaupp and Bélanger (2016)
14 Technological context	+ AlSharji et al. (2018)
-	
Organizational factors 1 Size	Fosso-Wamba and Carter (2014); Kacker and Perrigot (2016); Perrigot et al. (2012); Taiminen and Karjaluoto (2015); +Toker et al. (2016)
2 Age	Gümüs and Kütahyali (2017); Kacker and Perrigot (2016); Parveen et al. (2016); +Perrigot et al. (2012)
3 Industry	Gümüs and Kütahyali (2017)
4 Innovativeness (Xtics)	Fosso-Wamba and Carter (2014); Michaelidou et al. (2011); Shaltoni (2017)
5 Technology competence	Schaupp and Bélanger (2014)
6 Complexity	Kacker and Perrigot (2016); Michaelidou et al. (2011)
7 Top management support	Ahani et al. (2017)
8 Strategic orientation 9 Commitment-based HR practices	Dutot and Bergeron (2016) Soto-Acosta et al. (2017)
10 Organizational constraints	+Schaupp and Bélanger (2016)
11 Organizational context	AlSharji et al. (2018)
12 Self-efficacy	Adam et al. (2016)
13 Manager characteristics	Fernandes et al. (2016); Fosso-Wamba and Carter (2014)
Individual factors	
1 Demographic attributes	Kuhn et al. (2016); Mack et al. (2017)
2 Personality trait/characteristics	Mandal et al. (2017); Obschonka et al. (2017); Tata et al. (2017)
3 Resource availability	Bakri (2017); Bernhard and Grundén (2016); Fischer and Reuber (2011); Michaelidou et al. (2011); Sumathi et al. (2015)
Environmental factors	
1 External pressure	Ahani et al. (2017); Schaupp and Bélanger (2014)
I Customer pressure	Jones (2010); Sasatanun and Charoensukmongkol (2016); Shaltoni (2017); Taiminen and Karjaluoto (2015)
Competitive pressure	Dutot and Bergeron (2016); Kudeshia et al. (2016); Schaupp and Bélanger (2016); Shaltoni (2017); +Soto-Acosta et al. (2017); Toker et al. (2016)
Stakeholder pressure	Schaupp and Bélanger (2016)
<ul> <li>Social influences</li> <li>2 Government regulations and legal procedures</li> </ul>	Adam et al. (2016); Pentina et al. (2012); Shokery et al. (2017); Turan and Kara (2018) Jambulingamis et al. (2015); +Schaupp and Bélanger (2016)
3 Environmental context	AlSharji et al. (2018)
4 Others (others)	Ahani et al. (2017); Kacker and Perrigot (2016); Schaupp and Bélanger (2014)
Usage	The activities that the entrepreneurs use social media to perform
Marketing	Ahani et al. (2017); Ahmad et al. (2018); Ananda et al. (2017); Au and Anthony (2016); Bulearca and Bulearca
	(2010); Charoensukmongkol and Sasatanun (2017); Cole et al. (2017); de Vries et al. (2018); Dutot and Bergeron (2016); Fink et al. (2018); Guha et al. (2018); Gümüs and Kütahyali (2017); Ha et al. (2016); Harrigan and Miles
	(2014); Hensel and Deis (2010); Jones (2010); Jones et al. (2015); Kudeshia et al. (2016); Michaelidou et al. (2011); Nobre and Silva (2014); Rambe (2017); Setiaboedi et al. (2017); Stankovska et al. (2016); Taiminen and Karjaluoto
Information coarch	(2015); Taneja and Toombs (2014)  Fernandes et al. (2016); Kubn et al. (2016); Mack et al. (2017); Quinton and Wilson (2016)
Information search Networking	Fernandes et al. (2016); Kuhn et al. (2016); Mack et al. (2017); Quinton and Wilson (2016) Fischer and Reuber (2011); Fischer and Reuber (2014); Mohajerani et al. (2015); Quinton and Wilson (2016);
Networkilly	Sigfusson and Chetty (2013); Smith et al. (2017); Song (2015)
Crowdfunding	Aprilia and Wibowo (2017); Datta et al. (2018); Fietkiewicz et al. (2018); Kaminski et al. (2018); Kang et al. (2017);
· ·	Kromidha and Robson (2016); Li et al. (2017); Roedenbeck and Lieb (2018); Yang and Berger (2017)
Outcomes	The impact of social media usage on the entrepreneurial business.
Value creation	Derham et al. (2011); Hopkins (2012); Lehmkuhl and Jung (2013); Schaupp and Bélanger (2014); Stockdale et al.
	(2012)
Entrepreneurial business process	Beninger et al. (2016); Drummond et al. (2018); Fischer and Reuber (2011); Jones et al. (2015); Kuhn et al. (2016);
	Mack et al. (2017); Nambisan and Zahra (2016); Nord et al. (2017); Quinton and Wilson (2016); Smith et al. (2017)
Performance	

1 Firm performance

Ainin et al. (2015); Alarcón-del-Amo et al. (2018); Charoensukmongkol and Sasatanun (2017); Dong and Yang (2018); Franco et al. (2016); Odoom and Mensah (2019); Odoom et al. (2017); Parveen et al. (2016); Pratono (2018); Saridakis et al. (2018); Tajvidi and Karami (2017); Wang et al. (2016)

(continued on next page)

#### Table 1 (continued)

Constructs	Reference
2 Business process performance	Franco et al. (2016); Parveen et al. (2016); Wang et al. (2016)
3 Crowdfunding performance	Kang et al. (2017); Kromidha and Robson (2016); Li et al. (2017)
4 Innovation performance	Cheng and Shiu (2019); Pérez-González et al. (2017); Scuotto, Del Giudice, Carayannis et al. (2017); Soto-Acosta et al. (2017)
Innovation	Barnes and Mattsson (2016); Candi et al. (2018); Cooke (2017); Crammond et al. (2018); Duarte Alonso and Bressan (2016); Hitchen et al. (2017); Papa et al. (2018); Raman and Menon (2018); Scuotto, Del Giudice, Peruta et al. (2017); Soto-Acosta et al. (2017); Wang et al. (2016)
Moderators	
1 Experience with SM	Pentina et al. (2012)
2 Social skill competency	Charoensukmongkol and Sasatanun (2017)
3 SM sales intensity	
4 Social media capability	Odoom and Mensah (2019)
5 Innovation capability	
6 Social customer relationship management (CRM)	Cheng and Shiu (2019)
7 Social media use	Park et al. (2017)
8 Type of SM platform	Candi et al. (2018)
9 Community characteristics	Fischer and Reuber (2011)
10 Demand articulation	Nambisan and Zahra (2016)
11 Resource mobilization capability	
Mediators	
1 Communication performance	Wang et al. (2016)
2 Trust	Pratono (2018)
3 Selling capability	
4 Marketing capabilities	Tajvidi and Karami (2017)

<sup>&</sup>lt;sup>a</sup> Means negative support while + means no support found.

Similar findings were reported by Li, Chen, Kotha, and Fisher (2017) where an entrepreneur displaying passion in their crowdfunding introductory video on SM was found to be critical on the amount of funds raised.

On the other hand, social media metrics have been vital to crowdfunding. Yang and Berger (2017) stressed that crowdfunding on SM is enhanced by focusing on specific metrics across different SM platforms like network size on Twitter and active friends on Facebook. The findings for Facebook were strengthened by several studies. Fietkiewicz et al. (2018) singled out Facebook as having the greatest impact on crowdfunding success even with minute activities on other platforms like YouTube and LinkedIn. The number of friends (Aprilia & Wibowo, 2017), the number of comments on the platform (Kaminski, Hopp, & Lukas, 2018) and the social capital accrued (Kang et al., 2017) were identified as key drivers of crowdfunding on SM platforms. The important factors that drive crowdfunding on SM were both qualitative (e.g. animated videos/image and prototyped components) and quantitative (e.g. network size and number of updates) (Roedenbeck & Lieb, 2018). Meanwhile, Mumi et al. (2018) reported that the initial public offering (IPO) value of a firm was positively related to their social media use.

## 3.6. Outcomes of social media use

Entrepreneurs use SM expecting several benefits and outcomes. Some studies examined the perceived benefits (e.g. Quinton & Wilson, 2016; Schaupp & Bélanger, 2014) of SM use while other studies discussed the expected outcomes (e.g. Alarcón-del-Amo et al., 2018; Nambisan & Zahra, 2016) or impact (e.g. Hitchen et al., 2017; Scuotto, Del Giudice, Peruta, & Tarba, 2017) – all these variables are perception based rather than observed. In this study we combined the factors using the term 'outcomes'. The outcomes can be categorised in four groups: value creation, enhancing entrepreneurial business process, improved performance, and driving business innovation.

#### 3.6.1. Value creation

Entrepreneurs use SM to create business values to its relatively low cost and low skill required (Nakara, Benmoussa, & Jaouen, 2012; Stockdale, Ahmed, & Scheepers, 2012). Schaupp and Bélanger (2014)

identified several ways that entrepreneurs gain value from SM which include perceived impact on internal operations, marketing, customer service and sales; Hopkins (2012) reported similar findings. Generally, values can be derived through transactional and relational exchanges (Quinton & Wilson, 2016). SM has the potential to create business value by reducing transaction costs, enhancing information access and transmission through better communication channels (Lehmkuhl & Jung, 2013) and improving marketing strategies (Hitchen et al., 2017; Scuotto, Del Giudice, Peruta et al., 2017).

#### 3.6.2. Enhancing entrepreneurial business process

SM affects entrepreneurial business processes starting from idea exploration through to running the business. SM has been found to affect entrepreneur effectuation and opportunity recognition (OR) processes (Fischer & Reuber, 2011; Gustafsson & Khan, 2017; Mack et al., 2017). OR as highlighted by entrepreneurship literature is fundamental in business creation (Butler, Doktor, & Lins, 2010; Shane & Venkataraman, 2000). SM has helped in the identification and enactment of the opportunities (Nambisan & Zahra, 2016; Park, Sung, & Im, 2017; Quinton & Wilson, 2016). This has led to the creation of new businesses by supporting innovation and networking (Hatammimi & Sharif, 2015; Mohajerani et al., 2015; Quinton & Wilson, 2016). SM has allowed for business creation, especially amongst women in developing countries where it helps to achieve social and economic development (Beninger, Ajjan, Mostafa, & Crittenden, 2016; Nord, Riggio, & Paliszkiewicz, 2017; Steel, 2017). Its role was further addressed by Delacroix, Parguel, and Benoit-Moreau (2018) who identified that subsistence entrepreneurs use SM as a means to support their business via the social capital derived from the platforms. It plays an important role in the running of the business venture, especially when the venture is in the growth phase (Bocconcelli, Cioppi, & Pagano, 2017; Mack et al., 2017). This is done based on its ability for marketing, accruing demand side narratives from clients, networking and social capital accumulation (Drummond et al., 2018; Nambisan & Zahra, 2016; Smith et al., 2017).

# 3.6.3. Improving business performance

Early studies tend to argue whether SM improves business performance (Michaelidou et al., 2011). Such confusion was largely due to the

vagueness and inability to measure the impact(s) (Fernandes et al., 2016) given that no unified metrics have been developed capturing varied SM platforms (Durkin et al., 2013; McCann & Barlow, 2015). However, recent studies have started measuring the impact with self-reported measures (e.g. Charoensukmongkol & Sasatanun, 2017; Parveen, Jaafar, & Ainin, 2016). A stream of studies have found a significant positive relationship between SM usage and business performance. Alarcón-del-Amo et al. (2018) suggest that higher use of SM (e.g., involvement of the owner/manager) leads to higher business performance, both financial as well as non-financial (e.g., business process enhancement) (Franco et al., 2016). Dong and Yang (2018) reported that the interaction of social media diversity and big data analytics positively influences market performance which is more significant for SME's than large firms.

In contrast, recent studies have started to identify that the adoption and use of social media platforms does not necessarily influence the business performance (Ahmad, Abu Bakar, & Ahmad, 2019) or the revenue generated by the entrepreneurial business (Gavino et al., 2018). Even in a longitudinal study conducted by (Grimmer, Grimmer, & Mortimer, 2018), social media use as an information source had a negative influence on business performance. However, the findings attributed this to the relative young age of the businesses (Grimmer et al., 2018) and a smaller investment in social media (Gavino et al., 2018). Overall, the majority of the findings point to the positive role of SM on business performance, namely for firm performance (e.g., cost reduction, market expansion) (Sasatanun & Charoensukmongkol, 2016), business process performance (e.g., customer relationship management) (Ainin, Parveen, Moghavvemi, Jaafar, & Shuib, 2015), crowdfunding performance (Kang et al., 2017; Li et al., 2017) and innovation performance (Pérez-González, Trigueros-Preciado, & Popa, 2017; Scuotto, Del Giudice, & Carayannis, 2017).

#### 3.6.4. Driving business innovation

The effect of SM use in entrepreneurial innovation has been documented in the literature. Raman and Menon (2018) reported that less than 10% of SME's (family business) strategically use SM to drive innovation. Some entrepreneurs use of SM is a form of innovation due to it driving innovation via costs and resources Duarte Alonso and Bressan (2016). Innovation on SM can also be achieved through co-creation with customers (Barnes & Mattsson, 2016; Hitchen et al., 2017). Scuotto, Del Giudice, Peruta et al. (2017) identified that innovation is supported on SM by legitimization of ideas, interactions, and knowledge search and transfer. In another study Wang, Pauleen, and Zhang (2016) discussed the role of business-client interaction on SM in fine-tuning products that lead to innovation. Mohajerani et al. (2015) further reinforced the role of SM by highlighting that innovation is achieved by discovering practices from different institutional contexts and legitimizing ideas through SM.

The role of knowledge in driving innovation has also been identified in some studies. For example, Wang et al. (2017) emphasised the exchange of tacit and non-tacit knowledge, which is key in driving open innovation. Soto-Acosta, Popa, and Palacios-Marqués (2017) stressed the need for knowledge sharing on SM as a key driver of innovation in manufacturing SME's. This was empirically strengthened by Candi et al. (2018) where knowledge derived from customer involvement on SM drove innovation. This was echoed by Papa, Santoro, Tirabeni, and Monge (2018) who found that knowledge creation processes on social media helped to foster innovation. Finally, Hitchen et al. (2017) proposed an innovation strategy on SM which is built on the coevolution of resources, conveying innovation aims, and using an appropriate innovation framework.

#### 3.7. Moderators

Several moderating variables have been investigated in SM literature. For example, on adoption Pentina et al. (2012) found that the user

experience on SM strongly moderates the relationship between social influence and the intention to adopt SM platforms. For business performance, Charoensukmongkol and Sasatanun (2017) found that social skill competency and SM sales intensity moderate the relationship between SM use (for CRM) and business performance. While customer involvement positively influences innovation performance on SM, it is strongly moderated by social customer relationship management (Cheng & Shiu, 2018).

In investigating differences between a small and medium business, Odoom and Mensah (2019)) found that the relationship between an enterprise brand orientation and brand performance was significantly moderated by both innovation and social media capabilities. However, at the firm level, *innovative capability* had a positive and negative effect on medium and small enterprise respectively; whereas social media capability was significant for medium enterprises only. Regarding innovation, it was found that the type of social media platform moderated the relationship between customer involvement and knowledge generation for innovation (Candi et al., 2018). In another domain, Park et al. (2017) reported that SM use had varied effect on the relationship of prior knowledge and alertness on opportunity recognition. Furthermore, at least two studies suggested moderators, but these were not validated. For example, Fischer and Reuber (2011) suggest that SM community characteristics may positively moderate the relationship between SM interaction and entrepreneur effectuation process. Similarly, Nambisan and Zahra (2016) suggest investigating two moderators (demand articulation and resource mobilization capability) between DSN acquisition and opportunity formation/enactment.

#### 3.8. Mediators

Mediating variables have been sparingly used in SM and entrepreneurship literature. Of these, Wang et al. (2016) found that SM capabilities enhance communication performance, which ultimately improves business performance. Similarly, Pratono (2018) investigated the mediating effect of trust selling and capabilities between social media usage and firm performance. Finally, marketing capabilities (i.e., branding and innovation) were a positive mediator between SM use and firm performance, with branding having stronger effect (Tajvidi & Karami, 2017). Our analysis of the constructs used in SM and entrepreneurship research is summarised in Table 1.

# 3.9. Framework mapping

Based on the review conducted in the preceding sections, we developed the following framework (depicted in Fig. 2 below) which integrates the variables used in the SM and entrepreneurship literature. The model was developed by building on the technology, organization, and environment (TOE) framework. However, our literature review highlighted that the adoption/use of social media by individual business owners is influenced by a range of different factors and thus an individual dimension was included.

In the technology section, factors from the DOI (compatibility, complexity, relative advantage,), TAM3 (perceived usefulness, perceived ease of use, perceived enjoyment), UTAUT (performance expectancy and effort expectancy) were identified. Other constructs such as perceived trust, perceived risk, interactivity, cost, quality of SM technologies and IS integration were uncovered. Previous literature has reported that constructs such as perceived usefulness and relative advantage is similar to performance expectancy. Similarly, effort expectancy comprises the definition of perceived ease of use and complexity (Rana, Dwivedi, Williams, & Weerakkody, 2016; Venkatesh, Morris, Davis, & Davis, 2003). Also, facilitating conditions capture the concept of compatibility from the DOI (Rana et al., 2016) which is similar to the IS integration of Soto-Acosta et al. (2017) and were thus grouped together. System quality, service quality and information quality were all derived from the Delone and Mclean success model

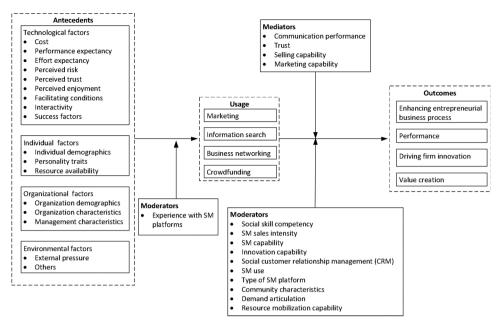


Fig. 2. Integrated framework for social media and entrepreneurship research.

(Delone & McLean, 2003), also quality of SM factors (Schaupp & Bélanger, 2016) was considered to be vital to the success of social commerce, and were thus classified as success factors.

The organization factors were mapped into three different constructs; organization demographics, organization characteristics and management characteristics. The organization size, organization age and organization industry were grouped as the organization demographic construct. The organization characteristics which is similar to organization culture of Schilke, Hu, and Helfat (2018) consists of the organization innovativeness, organization complexity, strategic orientation and the organization collective efficacy. The collective efficacy (Bandura, 2000) as operationalized in the review includes the individual self-efficacy/IS knowledge of the employees and the technological competency of the organization. The management characteristics includes the management support, the manager characteristics and their human resource practices. The individual factors were made up of the individual demographic attributes (e.g. age, gender), their personality traits and resource availability as identified in the review of literature. The environmental factors were the least studied in the literature. Related literature investigated pressure from customers, competitors, and people who can influence entrepreneur behaviour (social influences); they were all grouped under external pressure. This is similar to the operationalization of external pressure by Gibbs and Kraemer (2004) which consisted of the competitor and customer pressure only. Other factors such as mobile environment, entrepreneur venture legitimacy and legal procedures were rarely studied and were consequently grouped under 'others'. Different usage was also identified and the outcomes on the entrepreneurial business were included.

The resulting integrative framework is different with other recent frameworks developed in the field of social media such as the causal-chain framework developed by Ngai et al. (2015). Our integrative framework focuses on social media and entrepreneurship research whereas Ngai et al.'s (2015) causal-chain framework is generic, focusing on social media more broadly. In addition, our framework documents social usage which in-turn impacts business outcomes. While it is acknowledged that several factors that serves as antecedents in the integrative framework can also serve as mediators and moderators, we present the current research constructs and how they were used.

#### 4. Discussion, implications, and future research direction

#### 4.1. Discussion

The aim of this study was to conduct a systematic review of the literature on social media and entrepreneurship. SM has been shown to wield a significant influence on entrepreneur behavior. Social media adoption and use by entrepreneurs has been influenced by several factors which have been broadly categorised under the technological, organizational, individual and environmental factors. We found that the research was more focused the technological and organizational factors. However, there is the need to understand the role of individual factors for sole or small businesses (< 20 employees) because uptake of social platforms is on the rise. For instance, in Australia, there was 73% increase in small businesses on social media between 2011 and 2018 compared to 57% of medium and 41% of large businesses in the same period (Yellow, 2018). Environmental factors received less attention with external pressure (competitive and customer) being the only one investigated by more than a single study.

The use of social media by entrepreneurs has been largely been with respect to marketing (e.g. Alalwan et al., 2017; Misirlis & Vlachopoulou, 2018). Studies agree that social media marketing had been vital to the survival and growth of the entrepreneur's business. This literature touches on several aspects of marketing such as customer relationship management, advertisement, visibility and sales. The prevalence of negative comments (eWOM) on SM have been shown as an essential reason to be on the platforms (Derham, Cragg, & Morrish, 2011; Shih et al., 2014). However, beyond marketing which seems like the primary usage; recent studies (2016–2018) have started to document use for crowdfunding, networking, information search and knowledge management. This usage has been vital to drive entrepreneurial activities with recent highlights being co-creation and innovations (Quinton & Wilson, 2016; Wang et al., 2016).

Social media impact has largely been evaluated by studies on the value it creates and its role on entrepreneurial business processes such as business creation, survival and growth. However, studies between 2014–2016 were more focused on its role in firm performance which has led to the identification of several vital factors such as strategy and leadership (Brink, 2017; Fernandes et al., 2016). Whereas, studies between 2017–2018 were more focused on the impact of SM on innovation which is vital for business growth and competitive advantage

(Bhimani et al., 2018).

#### 4.2. Implications and opportunities for further research

The integrated framework for social media and entrepreneurship research developed in this study synthesizes the antecedents, uses, and impacts of SM for entrepreneurial businesses; providing the complete picture in one frame. In doing this, an understanding of entrepreneur perception of SM was derived.

The framework can be used to explore SM use within other business contexts to further understand the effect of SM use on different types of individual and organizational behaviour. For emerging entrepreneurs, the framework may determine factors that influence both the usage and outcomes of SM use, and thus it suggests that entrepreneurs can manipulate the moderating factors to drive better impacts. The mediating factors have also been identified to improve firm performance.

The literature review and framework can support further research. Firstly, although prior studies identified several antecedents of SM adoption and use, a contextualized and generalized framework combining entrepreneurial business attributes (e.g., resource mobilization capability) and personal characteristics (e.g., leadership) is essential. Moreover, the overuse of fundamental adoption and usage theories have led to the call by recent studies for the use of emergent/new perspectives to explore technology usage (Rad, Nilashi, & Dahlan, 2018) to develop a holistic understanding of social media drivers.

Secondly, mere adoption does not ensure full utilization of SM. A recent study revealed that 2% of small business removed their social media presence in 2015 and 2016, which is even higher (8%) in 2017 (Sensis, 2017). Although return on investment (ROI) has been identified as one of the major factors for discontinues use of SM (He, Wang, Chen, & Zha, 2017; Sensis, 2017), in order to get a comprehensive picture, it is essential to identify other critical factors. Such studies will support better-tailored practices.

**Proposition 1.** Researchers need to investigate the factors that drive the (dis)continuous use of social media platforms by SMEs by focusing on both the business (organization) and the founder (individual).

Thirdly, as observed by Bocconcelli et al. (2018), more studies are needed explaining the impact of social media on entrepreneurs' business performance. As an intertwined agenda, we need to reach consensus on how to measure impact (especially in diverse platforms e.g., Twitter, LinkedIn) and performance. Instead of using self-reported usage and performance data, actual business figures would provide better understanding. Accordingly, longitudinal studies are needed to truly establish the effect of SM usage on firm performance (using pre and post use figures). Grimmer et al. (2018) reported a negative impact of SM use on firm performance, however they admitted that some factors that might possibly influence their result and thus more studies are critical to establish the claims.

**Proposition 2.** SME performance on social media needs to be explored holistically and longitudinally to understand the interplay that exists between SME performance and ROI.

Social media has been reported to influence firm innovation. Stanko, Fisher, and Bogers (2017) proposed that data from SM could allow for understanding communication and interaction over time which is vital to innovation (Wang et al., 2016). Despite the recent advances, there is need to understand how information on SM is translated to useful knowledge that can drive innovation. Recent studies have started to emphasize on the importance of big data business analytics to business (Božič & Dimovski, 2019; Stieglitz, Mirbabaie, Ross, & Neuberger, 2018) where it is vital to firm performance (Ashrafi, Ravasan, Trkman, & Afshari, 2019; Dong & Yang, 2018) and opportunity recognition (Olanrewaju, Hossain, Mercieca, & Whiteside, 2018). Studies such as Çiçek (2018) have emphasized on the role of social media entrepreneurship which is primarily based on recognizing

opportunities. However, there are few studies that empirically test the relationship of SM usage and its several capabilities on the opportunity recognition processwhich is essential to shed more light on business creation driven by social platforms. Moreover, it will be interesting to see if the process is different in large organizations that are not constrained by resources like most entrepreneurs, but are less capable of identifying and implementing radical innovation (Hitchen et al., 2017).

**Proposition 3.** To further social media-innovation discourse, studies need to examine how social media data analytics and social interaction features spur innovation through implicit and explicit iterations between different phases of the innovation cycle; and how this differs between SMEs and large organizations.

**Proposition 4.** To advance social media-opportunity recognition discourse, researchers need to explore and empirically validate how platform capabilities interact with individual characteristics to support the entrepreneur opportunity recognition process.

Social media is widely used in all countries due to its pervasiveness. The reviewed literature on SM and entrepreneurship has mostly been conducted in single locations or regions with the exception of a few studies (e.g., Fosso-Wamba & Carter, 2014; Scuotto, Del Giudice, Peruta et al., 2017). These studies did not consider cultural dimension apart from Gavino et al. (2018). Previous studies in social media e.g. Pookulangara and Koesler (2011) and entrepreneurship (e.g. Ma, Huang, & Shenkar, 2011) have identified the role played by culture. Smith et al. (2017) suggested the possibility of SM use to be influenced by location and culture due to the difference in norms. Because SM crosses geographical barriers, it will be crucial in understanding how culture affects an entrepreneur's decision to adopt and use SM and its impact on their entrepreneurial business processes such as opportunity recognition, innovation, and business performance.

**Proposition 5.** Research should investigate cultural differences (individualist and collectivist) and development differences (developed and developing countries) and how they influence the adoption and use of the platforms and shape the entrepreneurial business process on social media over time.

The majority of the studies reviewed focused on single SM platforms with a couple of exceptions (e.g., Bakri, 2017; Odoom et al., 2017). Most of these studies have highlighted similar limitations to their study which involved studying their concept on other platforms. This has led to little development with respect to consideration of difference that might ensue with regard to the type of platforms. SM platforms have been identified to serve different purposes (Abed, Dwivedi, & Williams, 2016; Ngai et al., 2015) and used by entrepreneurs differently (Olanrewaju, Whiteside, Hossain, & Mercieca, 2018). Accordint to Fernandes et al. (2016), SM platforms can be classified into knowledge/ professional oriented (LinkedIn, Twitter) and social/personal oriented (Facebook/Instagram) platforms. Some research has tried to explain the differences in the use of these SM platforms and their effect on innovation (Candi et al., 2018), opportunity recognition, innovation, and business performance. There are anticipated differences due to the variations that exist in their mode of use which affects the way they are deployed. Therefore, future research is needed applying the variables we developed in Fig. 2 across platforms.

**Proposition 6.** To fully understand the intricacies of social media independencies, studies need to explore how different social media platforms influence organization innovation and performance via their functions and characteristics.

#### 5. Conclusion

This paper presents the systematic review of 160 papers in the field of social media and entrepreneurship. The findings of the review were analysed to identify evident theories, methods and constructs. This informed the development of our integrative framework for social media and entrepreneurship research in a bid to understand and drive development in social media use by entrepreneurs. Based on the review some key conclusion can be reached:

- 1 Focus has been heavily placed on factors that drive social media usage amongst entrepreneurs with recent studies investigating the impact of social media use
- 2 Firm performance has been the fundamental yardstick in studying the impact of social media amongst SME's
- 3 Social media is primarily used by entrepreneurs to market their products; however, there is a paradigm shift towards co-creation and innovation on the platforms has evidenced by papers published between 2016-2017
- 4 There is consensus on the role of social media for searching and networking by entrepreneurs; but it is now being harnessed by them

to create value for their business

- 5 Facebook has been the dominant social media platform investigated; with Twitter and Instagram receiving less attention
- 6 While there are studies on the antecedents of social media adoption/ use, developing countries have been largely understudied

Despite the effort to provide a synthesis of published literature on social media entrepreneurship, the study has its limitations. Firstly, the review of the literature is not exhaustive, with the exclusion of conference papers and book chapters. This means that some significant literature and findings may have been excluded. Secondly, while care was taken to select a relevant range of search terms rapid advancements in the domain of social media may mean that some terms were overlooked. However, it is believed that the review conducted, and integrative framework developed will provide a useful foundation for future research in the domain.

#### Appendix A Journal articles reviewed

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#### Appendix B. Articles by journal name

Reference	Journal name	
Durkin et al. (2013); Dutot and Bergeron (2016); Jones, Borgman, and Ulusoy (2015); Kuhn et al. (2016); McCann and Barlow (2015); Morris and James (2017); Nawi et al. (2017); Shemi and Procter (2018); Taiminen and Karjaluoto (2015); Virtanen et al. (2017)		10
Delacroix et al. (2018); Laurell, Sandström, and Suseno (2018); Mohajerani et al. (2015); Saridakis, Lai, Mohammed, and Hansen (2018); Scuotto, Del Giudice, Peruta et al. (2017)	Technological Forecasting and Social Change	5
Brink (2017); Drummond et al. (2018); Michaelidou et al. (2011); Quinton and Wilson (2016); Wang et al. (2016) Beninger et al. (2016); Bernhard and Grundén (2016); Fietkiewicz et al. (2018); Nakara et al. (2012)	Industrial Marketing Management International Journal of Entrepreneurship and Small Business	5 4
Hatammimi and Sharif (2015); Nasir et al. (2017); Setiaboedi et al. (2017); Shokery, Nawi, Nasir, and Raston (2017)	Advanced Science Letters	4
Geho, Smith, and Lewis (2010); Geho and Dangelo (2012); Hensel and Deis (2010); Lacho and Marinello (2010)	The Entrepreneurial Executive	4
Gustafsson and Khan (2017); Nambisan and Zahra (2016); Obschonka et al. (2017); Tata et al. (2017)	Journal of Business Venturing Insights	4
Dirgiatmo (2015); Ukpere, Slabbert, and Ukpere (2014) ; Ukpere, Slabbert, & Ukpere (2014)	Mediterranean Journal of Social Sciences	3
Ahani et al. (2017); Kudeshia et al. (2016); Tajvidi and Karami (2017)	Computers in Human Behavior	3
de Vries et al. (2018); Harrigan and Miles (2014); Mandal et al. (2017)	Small Enterprise Research	3
Fischer and Reuber (2011); Fischer and Reuber (2014); Smith et al. (2017)	Journal of Business Venturing	3
Jones (2010); Roedenbeck and Lieb (2018); Turan and Kara (2018)	Journal of Research in Marketing and	3
	Entrepreneurship	
Gavino et al. (2018); Odoom and Mensah (2019); Pratono (2018)	Management Research Review	3
Bocconcelli et al. (2017); Lashgari et al. (2018); Shaltoni (2017)	Journal of Business & Industrial Marketing	3
Guinan et al. (2014); Shih et al. (2014)	Business Horizons	2
Franco et al. (2016); Hopkins (2012)	Journal of Systems and Information Technology	2
Guha et al. (2018); Motoyama et al. (2018)	Journal of Small Business & Entrepreneurship	2
Dong and Yang (2018); Kang et al. (2017)	Information & Management	2
Crammond et al. (2018); Papa et al. (2018)	Baltic Journal of Management	2
Pérez-González et al. (2017); Scuotto, Del Giudice, Obi Omeihe et al. (2017)	Information Systems Management	2
Grimmer et al. (2018); Kacker and Perrigot (2016)  Oji, Iwu, and Haydam (2017); Oji, Iwu, and Tengeh (2017)	Journal of Retailing and Consumer Services	2
Datta et al. (2018); Perrigot et al. (2012)	African Journal of Hospitality, Tourism and Leisure	2
Duarte Alonso and Bressan (2016); Raman and Menon (2018)	Journal of Small Business Management International Journal of Innovation Science	2
Nobre and Silva (2014); Olvera-Lobo and Castillo-Rodríguez (2018)	Journal of Transnational Management	2
Taneja and Toombs (2014); Toombs and Harlow (2014)	Academy of Marketing Studies Journal	2
Cant (2016); Rambe (2017)	Problems and Perspectives in Management	2
Hitchen et al. (2017); King (2016)	Journal of Business Strategy	2
Fosso-Wamba and Carter (2014); Schaupp and Bélanger (2016)	Journal of Organizational and End User Computing	2
Scuotto, Del Giudice, Carayannis et al. (2017); Soto-Acosta et al. (2017)	The Journal of Technology Transfer	2
Adam, Jizat, and Noor (2016)	Advances in Business-Related Scientific Research Journal	1
Parveen et al. (2016)	Management Decision	1
Yang and Berger (2017)	Journal of Science and Technology Policy Management	1
Bakri (2017)	International Journal of Business Innovation and Research	1
Sumathi, Jambulingam, and Rajagopal (2015)	Research Journal of Applied Sciences, Engineering and Technology	1
Lehmkuhl and Jung (2013)	International Journal of Cooperative Information Systems	1
Assis-Dorr et al. (2012)	Journal of Organizational Change Management	1
Basri and Siam (2017)	International Journal of Economic Perspectives	1
Kiselicki (2013)	Journal of Sustainable Development	1
Jose (2018)	International Journal of Emerging Markets	1
He, Wang, and Zha (2014)	New Review of Hypermedia and Multimedia	1
Ahmad et al. (2019)	International Journal of Entrepreneurial Behavior & Research	1
Gümüs and Kütahyali (2017)	International Journal of Business and Information	1
Vivakaran and Maraimalai (2016)	Gender and Education	1
Abed et al. (2015a)	International Journal of Business Information Systems	1
Khajeheian (2018)	International Journal of E-Services and Mobile Applications	1
Samuel and Sarprasatha (2016)	Asian Social Science	1

aurell and Sandström (2014)	International Journal of Innovation Management	1
Augar and Zeleznikow (2014)	Australasian Journal of Information Systems	1
Bulearca and Bulearca (2010)	Global business and management	1
He et al. (2017)	Information Technology and Management	1
Pentina et al. (2012)	International Journal of Internet Marketing and	1
	Advertising	
Candi et al. (2018)	British Journal of Management	1
Au and Anthony (2016)	International Journal of Mobile Computing and	1
	Multimedia Communications	
Misiak-Kwit and Wiścicka (2016)	International Journal of Business and Globalisation	1
asatanun and Charoensukmongkol (2016)	International Journal of Technoentrepreneurship	1
Kadam and Ayarekar (2014)	SIES Journal of Management	1
Shin (2014)	International Journal of Technology Management	1
Crinivasan and Venkatraman (2018)	Strategic Entrepreneurship Journal	1
Ananda et al. (2017)	International Journal of Web Based Communities	1
Mack et al. (2017)	Telecommunications Policy	1
Musa, Ab Rahim, Azmi, Shibghatullah, and Othman (2016)	International Review of Management and Marketing	1
Song (2015)	Informatica Economică	1
Cheng and Shiu (2019)	International Small Business Journal	1
Oker et al. (2016)	Journal of Organizational Computing and Electronic	1
	Commerce	
Kaur et al. (2015)	IUP Journal of Brand Management	1
Kantorová and Bachmann (2018)	Information	1
i et al. (2017)	Journal of Applied Psychology	1
Burgess (2016)	European Journal of Information Systems	1
Aprilia and Wibowo (2017)	The South East Asian Journal of Management	1
/ongsraluang and Bhatiasevi (2017)	Information Development	1
Barcoe and Whelan (2018)	WIT Transactions on Ecology and the Environment	1
Ainin et al. (2015)	Industrial Management & Data Systems	1
Sigfusson and Chetty (2013)	Journal of World Business	1
Fink et al. (2018)	Journal of Business Research	1
Alarcón-del-Amo et al. (2018)	International Business Review	1
Oteel (2017)	Africa	1
Elghannam, Escribano, and Mesias (2017)	New medit: Mediterranean journal of economics,	1
	agriculture and environment	
Wang et al. (2017)	Annals of The American Association Of Geographers	1
Ajjan, Beninger, Mostafa, and Crittenden (2014)	Organizations and Markets in Emerging Economies	1
Stankovska, Josimovski, and Edwards (2016)	Economic research	1
Barnes and Mattsson (2016)	Prometheus	1
Abed, Dwivedi, and Williams (2015b)	The Marketing Review	1
Cole et al. (2017)	Services Marketing Quarterly	1
ingelbach, Patino, and Pitta (2012)	Journal of Consumer Marketing	1
Mumi et al. (2018)	Small Business Economics	1
Atanassova and Clark (2015)	Journal of customer behaviour	1
Mokhtar, Hasan, and Halim (2016)	Social sciences	1
Odoom et al. (2017)	Journal of Enterprise Information Management	1
Park et al. (2017)	Sustainability	1
AlSharji et al. (2018)	Journal of Entrepreneurship in Emerging Economies	
Pernandes et al. (2016)	Technology in Society	1
Schaupp and Bélanger (2014)	Journal of Information Systems	1
Ahmad et al. (2018)	Telematics and Informatics	1
fambulingamis et al. (2015)	Journal of Internet Banking and Commerce	1
/alos, Polonsky, Mavondo, and Lipscomb (2015)	Journal of Marketing Management	1
Charoensukmongkol and Sasatanun (2017)	Asia Pacific Management Review	1
Cromidha and Robson (2016)	Entrepreneurship and Regional Development	1
Ahmad et al. (2018); Nord et al. (2017)	Journal of Computer Information Systems	1
Roy, Maxwell, and Carson (2014)	Journal of Business and Behavioral Sciences	1
Kaminski et al. (2018)	Journal of Business Economics	1
cummon et al. (2010)	Continue of Dubilicas Econolilica	1

# Appendix C. Methods used in journal articles

References Frequency

## Quantitative

Ahani et al. (2017); Ahmad et al. (2019); Ainin et al. (2015); Alarcón-del-Amo et al. (2018); Alsharji et al. (2018); Assis-Dorr et al. (2012); Bakri (2017); Burgess (2016); Candi et al. (2018); Cant (2016); Charoensukmongkol and Sasatanun (2017); Cheng and Shiu (2019); Cole et al. (2017); Datta et al. (2018); Dong and Yang (2018); Duarte Alonso and Bressan (2016); Dutot and Bergeron (2016); Fernandes et al. (2016); Fink et al. (2018); Fosso-Wamba and Carter (2014); Franco et al. (2016); Gavino et al. (2018); Geho et al. (2010); Grimmer et al. (2018); Gümüs and Kütahyali (2017); Harrigan and Miles (2014); Hatammimi and Sharif (2015); Jambulingamis et al. (2015); Kacker and Perrigot (2016); Kadam and Ayarekar (2014); Kantorová and Bachmann (2018); Kaur et al. (2015); Kudeshia et al. (2016); Kuhn et al. (2016); Li et al. (2017); Mack et al. (2017); Michaelidou et al. (2011); Musa et al. (2016); Nasir et al. (2017); Nord et al. (2017); Odoom and Mensah (2019); Odoom et al. (2017); Oji, Iwu, Haydam et al. (2017), 2017b; Papa et al. (2018); Parveen et al. (2016); Pentina et al. (2012); Pérez-González et al. (2017); Pratono (2018); Raman and Menon (2018); Rambe (2017); Sasatanun and Charoensukmongkol (2016); Schaupp and Bélanger (2016); Scuotto, Del Giudice, Carayannis et al. (2017), 2017c; Soto-Acosta et al. (2017); Stankovska et al. (2016); Tajvidi and Karami (2017); Toker et al. (2016); Turan and Kara (2018); Vongsraluang and Bhatiasevi (2017)

Aprilia and Wibowo (2017); Fietkiewicz et al. (2018); Kaminski et al. (2018); Kang et al. (2017); Kromidha and Robson (2016); Li et al. (2017); Mumi et al. (2018); Obschonka et al. (2017); Olvera-Lobo and Castillo-Rodríguez (2018); Perrigot et al. (2012); Saridakis et al. (2018); Tata et al. (2017); Yang and Berger (2017)

Ahani et al. (2017) Neural Network (1) Dirgiatmo (2015); Vivakaran and Maraimalai (2016) Experiment (2) Motoyama et al. (2018); Song (2015) Social Network Analysis (2) Oualitative Ahmad et al. (2018); Au and Anthony (2016); Barnes and Mattsson (2016); Beninger et al. (2016); Bulearca and Bulearca (2010); Delacroix et al. (2018); Interview Fischer and Reuber (2011); Guha et al. (2018); Guinan et al. (2014); He et al. (2017); Jose (2018); Mandal et al. (2017); McCann and Barlow (2015); (19) Mohaierani et al. (2015); Mokhtar et al. (2016); Quinton and Wilson (2016); Shemi and Procter (2018); Smith et al. (2017); Steel (2017) Ananda et al. (2017); Augar and Zeleznikow (2014); Barcoe and Whelan (2018); Bernhard and Grundén (2016); Bocconcelli et al. (2017); Brink (2017); de Case studies (25) Vries et al. (2018); Drummond et al. (2018); Durkin et al. (2013); Fischer and Reuber (2014); He et al. (2014); Hitchen et al. (2017); Hopkins (2012); Jones et al. (2015); Kiselicki (2013); Lashgari et al. (2018); Misiak-Kwit and Wiścicka (2016); Morris and James (2017); Nobre and Silva (2014); Roedenbeck and Lieb (2018); Roy et al. (2014); Scuotto, Del Giudice, Obi Omeihe et al. (2017); Shih et al. (2014); Sigfusson and Chetty (2013); Virtanen et al. (2017); Wang et al. (2016) Delacroix et al. (2018); Laurell and Sandström (2014); Quinton and Wilson (2016); Sigfusson and Chetty (2013) Netnography (4) Valos et al. (2015) Focus groups (1) Content analysis (1) Gustafsson and Khan (2017) Delacroix et al. (2018) Observation (1) Laurell et al. (2018); Wang et al. (2017) Social Network Analysis Khajeheian (2018) Ethnographic research (1) Mixed methods Quantitative method used Crammond et al. (2018); Nakara et al. (2012); Park et al. (2017); Schaupp and Bélanger (2014); Shaltoni (2017); Sumathi et al. (2015); Taiminen and Survey (7) Karjaluoto (2015) Qualitative method used Nakara et al. (2012) Netnography (1) Schaupp and Bélanger (2014) Case Study (1) Crammond et al. (2018); Nakara et al. (2012); Park et al. (2017); Shaltoni (2017); Taiminen and Karjaluoto (2015) Interview (5) Sumathi et al. (2015) Survey (1)

# Appendix D. Theories used in journal articles

Theory	References
Technology Organization Environment Model (TOE)	Ahani et al. (2017); Ahmad et al. (2019); AlSharji et al. (2018); Mokhtar et al. (2016); Schaupp and Bélanger (2014, 2016); Shaltoni (2017); Soto-Acosta et al. (2017)
Dynamic Capabilities Theory (DCs)	Atanassova and Clark (2015); Cheng and Shiu (2019); Dutot and Bergeron (2016); Guha et al. (2018); Harrigan and Miles (2014); Odoom and Mensah (2019)
Resource Based View Theory (RBV)	Dutot and Bergeron (2016); Kacker and Perrigot (2016); Schaupp and Bélanger (2014); Sigfusson and Chetty (2013); Tajvidi and Karami (2017)
Unified Theory Of Acceptance And Use Of Technology Model (UTAUT)	Adam et al. (2016); Nasir et al. (2017); Nawi et al. (2017); Shokery et al. (2017)
Institutional Theory	Kacker and Perrigot (2016); Laurell and Sandström (2014); Mohajerani et al. (2015); Perrigot et al. (2012)
Social Network Theory	Cheng and Shiu (2019); Quinton and Wilson (2016); Sigfusson and Chetty (2013)
Diffusion Of Innovation Theory (DOI)	Ainin et al. (2015); Odoom et al. (2017)
Social Capital Theory	Kang et al. (2017); Pratono (2018); Smith et al. (2017)
Effectuation Theory	Fischer and Reuber (2011); Lingelbach et al. (2012); Mumi et al. (2018)
Theory Of Reasoned Action (TRA)	Alarcón-del-Amo et al. (2018); Turan and Kara (2018)
Technology Acceptance Model (TAM)	Gavino et al. (2018); Pentina et al. (2012)
Knowledge Based View (KBV)	Candi et al. (2018); Cheng and Shiu (2019)
Signalling Theory	Kromidha and Robson (2016)
Feminist Pedagogy Model	Vivakaran and Maraimalai (2016)
Emotional Contagion Theory	Li et al. (2017)
Industrial Marketing and Purchasing approach	Bocconcelli et al. (2017)
E-Business Intensity–Readiness–Impact Framework	Augar and Zeleznikow (2014)
Expectancy-Value Theory	Alarcón-del-Amo et al. (2018)
DeLone and McLean IS success model	Vongsraluang and Bhatiasevi (2017)
Triple Helix Model	Shin (2014)
Information Integration Theory	Fink et al. (2018)
Contextualism Theory	Shemi and Procter (2018)
Social Identity Theory	Kromidha and Robson (2016)
Social Presence Theory	Ahmad et al. (2018)
Systems Theory	Dong and Yang (2018)
Agency Theory	Perrigot et al. (2012)
RCIDTA Model	Crammond et al. (2018)
Theory of Innovation	Duarte Alonso and Bressan (2016)
Elaboration Likelihood Model Of Persuasion	Li et al. (2017)
Transaction Cost Economics	Saridakis et al. (2018)
Value Chain Theory	Parveen et al. (2016)
Media Naturalness Theory	Charoensukmongkol and Sasatanun (2017)
Media Synchronicity Theory	Wang et al. (2016)
Organizational ecology theory	Odoom and Mensah (2019)

<sup>\*</sup>it should be noted that majority of the case study research used interview as part of their data collection method

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