

# Social media tools adoption and use by SMEs: An empirical study

## ABSTRACT

Despite the recent increase in the adoption and use of social media tools to support firm operations, very little empirical research focusing on small- and medium-sized enterprises (SMEs) has been conducted to-date. The aim of this study is to fill this knowledge gap by investigating SME adoption of social media tools. In particular, we assess the impact of organizational, manager and environmental characteristics on SME utilization of the Facebook Events Page. To test our proposed research model, we administered a survey to 453 SME managers. Results of a hierarchical logistic regression indicate that firm innovativeness, firm size, manager's age and industry sector all have a significant impact on social media adoption. Implications for research and practice are discussed.

**Keywords:** Technology adoption, Small- and Medium-sized enterprises (SMEs), Social media tools, Firm innovativeness, Facebook, Facebook Events Page.

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## INTRODUCTION

Social media enabled value co-creation is emerging as an important area of interest for scholars and practitioners from various fields. Some scholars even suggest that social media will facilitate the widespread diffusion of “social commerce”, which is “a form of Internet-based social media that allows people to participate in the marketing, selling, comparing, and buying of products and services in online marketplaces and communities” (p. 215) (Stephen & Toubia, 2010). In 2011, the social commerce market represented about US\$5 billion, with the potential increase to about US\$30 billion by 2016 (Zhou, Zhang, & Zimmerman, 2011).

The rapid growth of social commerce is mainly due to the rapid diffusion of social media tools and channels such as Facebook and Twitter. Indeed, these tools can radically transform traditional firm processes by providing a better customer shopping experience (e.g., access to friends purchasing experiences, real-time sharing of purchase actions with friends before final purchase decisions) (Fisher, 2011; Zhou et al., 2011). Social media tools can also provide improved communication and collaboration between the firm and its stakeholders (e.g., customers, suppliers, business partners) (Burke, Fields, & Kafai, 2010; Culnan, McHugh, & Zubillaga, 2010), an innovative way for firms to identify products with high selling potential (Liang & Turban, 2011), and a better channel for attracting and retaining online customers (IBM, 2009). In the context of business-to-business (B2B) commerce, firms can use social media tools such as Facebook and LinkedIn to communicate with customers and suppliers, build relationships and trust, and identify prospective business partners in terms of B2B selling (Michaelidou, Siamagka, & Christodoulides, 2011). For example, Facebook, one of the main platforms for social commerce with around 800 million active users (Facebook, 2011), can allow firms to “harness social capital”, in a context where “retailers are eager to tap into the tremendous word-of-mouth potential of fans liking products, making purchases, and sharing with friends” (p. 1) (Olso, 2011).

Against this background, the emerging literature on social media-enabled organizational transformation has been demonstrated through the adoption and use of these tools by big organizations (e.g., Westpac Bank Corporation in Australia, Starbucks and Dell in the U.S.) (Gallaughier & Ransbotham, 2011; Husin & Hanisch, 2011; Sandsmark, 2011). However, few studies have explored the

adoption and use of social media by SMEs (P. Cragg, Caldeira, & Ward, 2011; Shang, Li, Wu, & Hou, 2011), which represent a significant part of various Western economies. For example, SMEs account for about 99% of firms in the European Union, generating more than 70% of employment (Nieto & Santamaría, 2010). In the U.S., SMEs produce around 39% of the country's gross national product (GNP) and generate about the two-thirds of all new jobs (Bruque & Moyano, 2007). In short, "SMEs are the engine of the economies of many countries" (p. 241) (Bruque & Moyano, 2007).

Several IS researchers have explored technology use in SMEs (P. B. Cragg & King, 1993; Igarria, Zinatelli, Cragg, & Cavaye, 1997; Raymond, 1985). Regarding social media use, there is an emerging literature on its benefits and challenges. However, few of these studies focus on the use of social media tools by SMEs. Garnett (2010) highlights the benefits of social media tools for SMEs and calls for more use of these tools by SMEs. Given the unique needs of SMEs (Anonymous, 2012), we propose a study of the factors that impact the utilization of social media tools by SMEs. Kinra (2012) states "besides conventional marketing practices, SMEs should also adopt online marketing strategies to promote their business in the social media space, which already has a huge and potential consumer base". Roberts (2012) states "SMEs with profiles on the social networking site have experienced an increase in traffic to their main site (p. 1)" He found that 47 percent of the SME managers that he polled noticed that a "significant" amount of traffic to their business website came from their Facebook page (Roberts, 2012).

Therefore, this research is an initial effort towards bridging the existing knowledge gap in the literature. More specifically, this research examines the following research question:

*What are the roles of organizational, manager and environmental characteristics of SMEs in the adoption of the social media tools?*

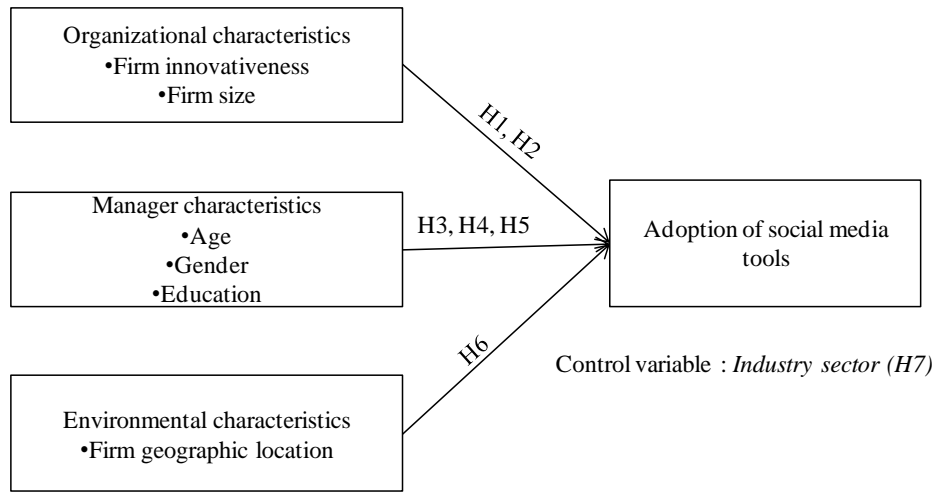
To address this question, we draw on the emerging literature on social commerce, social media, and the diffusion of innovation theory with an emphasis on the adoption and use of innovation by SMEs. The remainder of this paper is structured as follows: first, we present the conceptual model and hypotheses; next, we discuss the research methodology; the following section presents the results; then we present the discussion, implications, limitations and future research perspectives; finally, we present a synopsis of the study in the conclusion.

## CONCEPTUAL DEVELOPMENT AND HYPOTHESES

In this study, we define an innovation as “any idea, practice, or material artifact perceived to be new by the relevant unit of adoption” (p. 10) (Zaltman, Duncan, & Holbeck, 1973). Consistent with this definition, we consider both social media tools and their adoption and use to support intra- and inter-organizational operations as innovation. When dealing with the adoption and use of an innovation, the current dominant paradigms of the diffusion-of-innovation theory have identified a set of characteristics that may influence such an adoption and use in terms of: innovation characteristics (e.g., relative advantage, compatibility, complexity), organizational characteristics (e.g., organizational readiness, organizational size, organizational innovativeness), and environmental characteristics (e.g., intensity of competitive pressure, position in the business network, geographic position of the firm) (Fichman, 2000; Rogers, 2003).

However, a growing number of scholars criticize this dominant paradigm and suggest it would be inappropriate to study all the types of innovations because of “the fundamental differences between the different types of innovations” (p. 3) (Hadaya & Pellerin, 2007). For example, if we view the “Facebook Events Page” as a technological innovation, its features—including an effective way of building B2B relationships and brand awareness, real-time sharing of customers choices, active engagement of users with firm products and brands, access to a colossal pool of users, effective crowd sourcing tool for testing new products and services before marketing—considerably differentiate this technology from other electronic communication tools. This is especially true for SMEs which are known to have limited resources.

In this study, we follow an approach similar to the one used by Hadaya and Pellerin (2007) and bound our study to a set of determinants related to the firm’s organizational characteristics (e.g., firm innovativeness, firm size), manager characteristics (e.g., age, gender, education) and environmental characteristics (e.g., firm geographic location). More precisely, we evaluate how the adoption of “Facebook Events Page” is directly influenced by the adopting firm’s innovativeness and size (organizational characteristics), the age, gender, education of executives (manager characteristics) and the firm’s geographic location (environmental characteristics) (Fig. 1). The following sections present the conceptual development for the proposed model.



**Figure 1. Proposed Research Model**

### **Organizational Characteristics : Firm Innovativeness and Firm Size**

Previous studies on IT adoption and use have identified a set of organizational characteristics that may explain why a firm will adopt or reject a given innovation. Among these characteristics, firm innovativeness—which is defined as the “capability of a firm to be open to new ideas and work on new solutions” (p. 817) (Kunz, Schmitt, & Meyer, 2011)—and firm size or the organizational slack resources, organizational structure and decision-making flexibility (Zhu, 2006) are undeniably the most discussed by scholars. Regarding firm innovativeness, several studies have explored its impact organizations. Lefebvre & Lefebvre (1992) examine the relationship between CEO characteristics and the degree of firm innovativeness in small manufacturing firms. The results indicate that both the personal characteristics of the CEO and elements of the decision-making process are important. (Calantone, Cavusgil, & Zhao, 2002) posit that firm innovativeness is indicative of an organization that is committed to continuous learning and improvement. Tuominen, Rajala, & Möller (2004) posit that innovativeness is an important characteristic of firms that are able to adapt to new technologies.

In the specific context of SMEs, early results found that SMEs are characterized by limited financial and human resources (Angela, 2005) and a limited access to IT knowledge, and that they will consequently face incredible challenges when assessing and implementing new technologies (Bruque & Moyano, 2007; Strüker & Gille, 2010). In addition, compared to large organizations, SMEs have a less hierarchy-based organizational structure and lack a close relationship between managers and consumers,

which is considered an enabler of greater firm innovativeness (Angela, 2005); as a result, this may well trigger the SME willingness to explore innovation. Therefore, we hypothesize the following:

*H1: Firm innovativeness will be positively related to the adoption of Facebook Events Page.*

*H2: Firm size will be positively related to the adoption of Facebook Events Page.*

### **Manager Characteristics: Age, Gender and Education**

Previous studies on IT adoption and use by SMEs suggest that manager characteristics such as age, gender and education help to explain why SMEs decide to delay or move forward with an investment in any given innovation. Within SME organizational structures, the manager (e.g., CEO or Owner) is usually the main decision maker. She or he drives the overall management style of the firm (Thong, 1999); so she or he plays a pivotal role in the adoption process of IT innovation by the firm (Boumediene, Lorenzo, & Kawalek, 2009; Kitchell, 1997). Some scholars suggest that the manager's age will have a negative impact on IT adoption and use as well as on initiatives related to firm reengineering. For example, Damanpour and Schneider (2009) argue that "older managers have been socialized into accepting prevailing organizational conditions and routines and have greater psychological commitment to them; hence, they will be less willing to commit to changing them" (p. 499). On the other hand, "younger managers usually have greater learning capabilities and more recent education, and are therefore likely to be more risk-taking and flexible." (p. 113) (Kitchell, 1997).

Regarding gender, prior studies indicate that gender plays "a critical role in influencing behaviors in a wide variety of domains" (p. 116) (Venkatesh & Morris, 2000). For example, a study by Davis et al. (2010) on the influence of CEO gender on market orientation and performance in SMEs showed that even if males and females may work within comparable organizational settings at the identical hierarchical level, with comparable responsibilities, "it continues to be suggested that female-led and male-led businesses will tend to perform differently on a variety of measures, such as growth and profit"(p. 479). Likewise, a study on gender differences on Internet adoption and use shows that "one-half of the 'digital divide' between men and women on the Internet is fundamentally gender-related" (p. 868) (Bimber, 2000). Similarly, when studying gender differences in Internet usage and task preferences, Teo and Lim (2000) concluded that men were more likely to use game web sites than women. Indeed, "men have long been associated with technology while women have often been depicted as somewhat passive users" (p.

83) (Slyke, Comunale, & Belanger, 2002). For example, a study on gender differences in perceptions of web-based shopping by (Slyke et al., 2002) shows that gender was a significant predictor of users intention to conduct online buying transactions. The authors found that male participants in their study were more likely than female participants to buy services and/or products online. In short, “gender plays a vital role in shaping initial and sustained technology adoption decisions by today’s knowledge workers” (p. 129) (Venkatesh & Morris, 2000).

In addition to gender and age, the manager’s education level is considered to be a key enabler of manager openness and receptivity to innovations. Managers with higher levels of education also have the ability to create a favorable atmosphere for the adoption and implementation of innovation. Previous research has found that educated executives are more likely to use a plethora of multifarious approaches to solve problems, make decisions and lead the company (Damanpour & Schneider, 2009). In light of the significance of manager demographics, Angela (2005) posits that “any effort to understand the innovativeness of small businesses must look at the characteristics (e.g., age, gender, education) of these individuals” (p. 777) (Angela, 2005). Therefore, we formulate the following hypotheses:

*H3: Younger managers will be more likely to adopt Facebook Events Page.*

*H4: Managers’ gender (male) will be positively related to the adoption of Facebook Events Page.*

*H5: Managers’ education will be positively related to the adoption of Facebook Events Page.*

### **Environmental Characteristic: Firm Geographic Location**

Prior studies on IT adoption have identified a set of environmental characteristics that may have an impact on the decision of a firm to invest or delay its investment in any given innovation. These characteristics include: the applicable standards and regulations, the intensity of competitive pressure within the sector, the nature of business relationship (Fichman, 2000; Zhu, 2006), as well as the firm geographic location (e.g., metropolitan area vs. non-metropolitan area). A study by Kelley and Helper (1999) shows that both firm-specific capabilities and place-specific external economies have an impact on the firm decision to adopt or reject a new technology. Prior studies on agglomeration economies argue that in addition to firm-specific characteristics, the firm geographic location will drive the expected profitability of a given IT innovation adoption (Kelley & Helper, 1999). For example, when analyzing the adoption and use of e-business tools, Harland et al. (2007) found that urban clustered SMEs were more likely to use e-business tools than rural SMEs (p. 1238). While Internet technologies allow firms to

compete worldwide regardless of the geographic location, recent studies suggest that the impact of the firm geographic location on the adoption of social media tools is significant. For example, a study by Fosso Wamba & Carter (2013) on the adoption of Twitter shows that geographic location has a significant impact on Twitter adoption by SMEs. Based on this discussion, we propose the following hypothesis:

*H6: Firm geographic location (metropolitan) will be positively related to the adoption of Facebook Events Page.*

### **Control Variable: Industry Sector**

Early studies on IT adoption and use have identified a link between the sector of a firm and the firm's decision to adopt and use an innovation. For example, studies on e-business adoption and use indicate that the engagement of SMEs in the adoption and use of e-business tools and applications is tremendously variable across sectors, thus "reflecting the heterogeneity of this type of enterprise" (p. 1238) (Harland et al., 2007). In addition, Tiago and Martins (2009 / Jan 2010) explored the adoption of e-business patterns by European firms and found the following: (a) the technological context was more important for the manufacturing industry than for the tourism sector; and (b) the most important to "characterize e-business adoption is the industry and their specific characteristics and not the country to which the firms belong" (p. 53). Following this discussion, we formulate the following hypothesis:

*H7: Industry sector (manufacturing) will be positively related to the adoption of Facebook Events Page.*

## **METHODOLOGY**

Our sample includes the current members of a B2B small business panel maintained by Research Now, a leading B2B and B2C panel provider and data collection services company. Data were collected in Australia, the U.S., the U.K. and India with equal distribution. This deliberate choice was driven by the fact that English is the main language in all these countries. Moreover, they are from various geographic regions and represent different economic and cultural backgrounds (e.g., developed and developing countries).

For this study, we administered a web-based survey to SME managers. The survey methodology is considered as one of the predominant research strategies for IS research (C.-P. Lee & Shim, 2007).



According to (Babbie, 2004), “Survey research is probably the best method available to the social researcher who is interested in collecting original data for describing a population too large to observe directly. Surveys are also excellent vehicles for measuring attitudes and orientations in a large population” (p. 238). Moreover, this methodology is a viable means to test hypotheses, describe populations, develop measurement scales, and build theoretical models in research across a wide variety of domains (C.-P. Lee & Shim, 2007).

More specifically, an invitation to participate in the study was sent to a random sample of 13,314 members of the B2B small business panel. An incentive of \$2 was offered for qualification and completion of the study. A reminder to participate in the study was sent one week later and the survey was closed the following week. A total of 1997 members agreed to participate to the study (570 from Australia, 450 from the U.S., 338 from the U.K. and 639 from India, resulting in a response rate of 15%. After a careful analysis of the responses, 453 surveys were identified as being properly filled out and appropriate for analysis (Table 1). Seventy-one percent of the sample were males. The average age of the respondents was 49 years old; the age range was 18 – 71 50 (with a standard deviation of 12.86). Fifty-five percent of the managers attended college.

We tested the adoption of a specific social media tool, the “Facebook Events Page” tool. Respondents were asked to explain how their firm was engaging with the tool using a 4-levels scale: (1) Not aware of this, (2) Do not have, but aware, (3) Have but do not regularly use, and (4) Have and regularly use for marketing purposes. For analysis purposes, we grouped the first two categories as non-adopters and the remaining as adopters. This classification is consistent with previous studies on IT adoption (e.g., ecommerce) (Thompson & Ranganathan, 2004). We measured all employees as the sum of part-time, full-time, and casual (seasonal). Principle Component factor analysis was used to assess the validity of firm innovativeness. The Cronbach Alpha value is 0.890, which is well above the recommended 0.70 cut-off (see table 2). The instrument is presented in Appendix A. A list of the industry sectors included is presented in Appendix B.

*Table 1. Number of participants per country*

| Country   | Respondents |
|-----------|-------------|
| Australia | 114         |
| USA       | 117         |
| UK        | 111         |
| India     | 111         |
| Total     | 453         |

## RESULTS

The data were analysed using hierarchical logistic regression. Since our dependant variable is measured as a nominal variable (adoption and non-adoption), we use regression analysis to test our hypotheses (McDonald, 2008; Patrick & Kar Yan, 1997). Logistic regression is used when the dependent variable is nominal and when there is more than one independent variable. Four of the seven proposed hypotheses were supported. Firm innovativeness, firm size, manager's age and industry sector all have a significant impact on the adoption of social media tools by SMEs. Table 2 highlights the results of the regression analysis and Table 3 summarizes the results of hypotheses testing.

*Table 2. Results of Logistic hierarchical regression (n=453)*

|   | Model 1 |       |         |       |        | Model 2     |       |        |       |        |  |
|---|---------|-------|---------|-------|--------|-------------|-------|--------|-------|--------|--|
|   | B       | Sig.  | S.E.    | Wald  | Exp(B) | B           | Sig.  | S.E.   | Wald  | Exp(B) |  |
| Industry sector                                   | 0.929*  | 0.510 | 3.322   | 2.532 |        | 1.185**     | 0.576 | 4.231  | 3.270 |        |  |
| Firm innovativeness<br>(Cronbach Alpha:<br>0.890) |         |       |         |       |        | 0.645****   | 0.182 | 12.598 | 1.906 |        |  |
| Firm size   |         |       |         |       |        | 0.155***    | 0.059 | 6.852  | 1.168 |        |  |
| Firm geographic<br>location                       |         |       |         |       |        | -0.159      | 0.311 | 0.262  | 0.853 |        |  |
| Gender  |         |       |         |       |        | 0.069       | 0.379 | 0.033  | 1.071 |        |  |
| Age   |         |       |         |       |        | -0.033**    | 0.013 | 6.280  | 0.968 |        |  |
| Education   |         |       |         |       |        | 0.157       | 0.132 | 1.419  | 1.170 |        |  |
| -2log likelihood                                  |         |       | 332.930 |       |        | 283.229     |       |        |       |        |  |
| Cox & Snell R2                                    |         |       | 1%      |       |        | 13%         |       |        |       |        |  |
| Nagelkerke R2                                     |         |       | 1%      |       |        | 22%         |       |        |       |        |  |
| Overall predicted<br>percentage                   |         |       | 84.7%   |       |        | 85.5%       |       |        |       |        |  |
| Hosmer &<br>Lemeshow Test                         |         |       | Sig. -  |       |        | Sig. 0.3635 |       |        |       |        |  |

\* p < 0.1; \*\* p < 0.05 ; \*\*\* p < 0.01 ; \*\*\*\* p < 0.001

Table 3. Results of hypothesis testing

| Hypotheses  | Supported  |
|---|------------|
| <b>H1: Firm innovativeness will be positively related to the adoption of social media tools.</b>              | <b>Yes</b> |
| <b>H2: Firm size will be positively related to the adoption of social media tools.</b>                        | <b>Yes</b> |
| <b>H3: Younger managers will be more likely to adopt social media tools.</b>                                  | <b>Yes</b> |
| H4: Managers' gender (male) will be positively related to the adoption of social media tools.                 | No         |
| H5: Managers' education will be positively related to the adoption of social media tools.                     | No         |
| H6: Firm geographic location (metropolitan) will be positively related to the adoption of social media tools. | No         |
| <b>H7: Industry sector (manufacturing) will be positively related to the adoption of social media tools.</b>  | <b>Yes</b> |

## DISCUSSION

Social networking continues to grow in popularity. Facebook has more than 800 million active users (Facebook, 2011). Over half of these users log onto the site every day (Z. W. Lee, Cheung, & Thadani, 2012). According to Wright and Hinson (2009), social networking sites are now the number one tool on the Internet. For the sake of simplicity and accessibility, SMEs may benefit substantially from implementing social media tools (Zeiller & Schauer, 2011). Although reports suggest that social media tools really enhance the development of SMEs, there is little empirical research on their adoption and usage by this category of firms (Dixon, 2010). Despite the fact that SMEs are usually characterized by limited resources, they enjoy a flatter hierarchy than larger organizations, which enhances their innovativeness (Angela, 2005).

The results of this study indicate that firm innovativeness (H1), firm size (H2), manager's age (H3) and industry sector (H7) all have a significant impact on the adoption of social media tools by SMEs. As aforementioned, the literature suggests that firm innovativeness has a significant impact on the adoption of new technologies. The results of this study indicate that Hypothesis 1 is supported, implying that the firms that are open to new ideas and tools are more likely to utilize Web 2.0 technologies. Hypothesis 2 is also supported—firm size has a significant impact on the use of social media tools by SMEs. Larger SMEs are more likely to use social media tools than smaller SMEs; larger firms have resources (more employees, larger budgets, etc.) that may enable them to devote more attention to recent technological

developments. The results of this study also support hypothesis 3—younger managers are more likely to adopt social media tools than older managers, a finding which is consistent with the relevant, extant literature; in the same light, younger generations are more likely to use Internet-based innovations than older generations. Finally, hypothesis 7 is supported: industry sector has an impact on the adoption of social media tools. In particular, manufacturing companies are more likely to implement these tools than the companies from other sectors. According to the literature, key stakeholders in this sector typically advocate the implementation of technological advancements to improve efficiency and reduce costs.

Surprisingly, three hypotheses were not supported: manager's gender (H4), manager's education (H5), and firm geographic location (H6) did not have a significant impact on the adoption of social media tools. Manager's gender did not influence the adoption of social media tools by SMEs. Hence, male and female managers did not exhibit a significant difference in their use social media tools. Hence, the literature on the importance of gender is mixed. Future research should continue to evaluate this path so as to corroborate such findings. Hypothesis 5 was also not supported, meaning that manager's education did not influence the adoption of social media tools. Perhaps education is significant for some innovations, but not for others. This path should still be explored by future researchers. Finally, hypothesis 6 was not supported—firm geographic location does not impact the adoption of social media tools by SMEs. Since social media tools enable organizations to reach customers, suppliers and other stakeholders no matter their geographic area, both metropolitan and non-metropolitan SMEs can capitalize on social media tools.

### **Implications for Research**

The growing popularity of social media makes adoption extremely attractive for SMEs. Firms can use social networking sites to build relationships with both existing customers and new customers. Social media tools can be used to gauge customer perceptions of new products and promotions. In many cases, they can enhance a company's brand by allowing consumers to send feedback and share their experiences with potential customers. A better understanding of the unique challenges of SMEs will help researchers to explain and measure the relationship between social media tools and firm innovativeness. This relationship is supported by a variety of stakeholders because of the large time commitment required to track customers, competitors and business domains (Dixon, 2010).

This study identifies salient predictors of social media adoption by SMEs. Although research on social media utilization is increasing, to-date there are few studies on the use of social media tools by SMEs. This study is an initial attempt to highlight the factors that significantly impact social media adoption among SMEs. We present a parsimonious, but explanatory model that illustrates the fundamental predictors of social media tool utilization among small- and medium-sized enterprises. While such a model can be used to advance our understanding of social media adoption among SMEs, future research should continue to explore other facets of this issue. In particular, it may of interest to identify additional predictors and antecedents of social media tool adoption within SMEs.

### **Implications for Practice**

The results indicate that there is a statistically significant relationship between firm innovativeness and the adoption of social media tools. In light of this relationship, organizations should do more than just encourage social interactions among employees and business units. SMEs should foster social capital within their organizations. Stronger social connections can help enhance the flow of knowledge and ideas within the organization. For example, SMEs can leverage informal groups such as affinity networks to enhance IT selection and implementation.

Firm size also had a statistically significant impact on the use of social media tools. Currently, larger SMEs are more likely to utilize social media tools. Small firms should follow the same path in order to increase the number of potential clients, engage customers and promote customer co-creation—as customer co-creation should allow small firms with limited resources to tap into a larger knowledge-base. SMEs should utilize contests and promotions that inspire consumers to share experiences via product or service ratings or video clips. These promotions can be used to generate business ideas and attract new customers.

Results show that younger managers are more likely to adopt social media tools. However, the manager's gender is not positively related to the adoption of social media tools. This means that SMEs with younger managers will be more likely to use social media, and that they should consequently implement programs of manager rejuvenation. Rejuvenating the management team could positively influence the decision of the organization to adopt social media tools. Several companies provide

internships and co-ops designed to prepare recent college graduates for management positions. SMEs should consider implementing similar programs.

Industry sector (manufacturing) is positively related to the adoption of social media tools. As predicted, the manufacturing industry has been already taking advantage of social media tools to enhance efficiency and effectiveness. Other industries should identify and implement social media's "best practices" based on the successful experiences of the manufacturing industry. By implementing lessons learned from the manufacturing industry, the other sectors could better benefit from social media tools.

Finally, the firm's geographic location and manager's education did not have a significant impact on the adoption of social media tools. Future studies should explore other demographic variables that may affect social media utilization. For instance, the manager's involvement in social media networks outside of the office could be an interesting characteristic to explore. SME managers who participate in social media outside of their office or after working hours could be more likely to promote the adoption of social media tools within SMEs.

The proposed research model highlights the importance of both the organizational level and individual level of adoption. At the organizational level, firm innovativeness and firm size have a significant impact on the adoption of social media tools by SMEs. At the individual-level, manager's age is a salient predictor of adoption. This study also indicates that in addition to the organizational and individual factors, industry sector has a significant impact on the adoption of social media tools by SMEs. It is important for organizations to understand that multiple factors at multiple levels impact social media acceptance.

### **Limitations and Suggestions for Future Research**

There are a few limitations associated with this study. Like in many other survey-based projects, there is a risk for self-report bias. Occasionally, participants will provide responses that they believe are desired or ideal instead of reporting their actual behaviour. In this study, we obtained quantitative responses from 453 participants. Future research could focus on acquiring qualitative data from key stakeholders. For instance, the controllers of social media initiatives (e.g. Chief Information Officers, marketing executives) could be targeted. By surveying key players in SMEs, future researchers could

obtain insightful, outstanding results. Future studies should also empirically testing the role that limited resources and the flat hierarchy of the SMEs willing to adopt social media tools as well as looking at other factors including organizational strategy, business processes, management style, leadership and culture. Furthermore, assessing the importance of external factors such as customers, suppliers, government, law, regulation and market represent a promising research avenue. Finally, future research could focus on finding ways to help SMEs cope with their limited resources could trigger their desire to adopt and use social media initiatives.

## CONCLUSION

In the light of the increasing diffusion of social media tools within organizations, it is imperative that we understand the benefits and challenges associated with their adoption and use. This study has attempted to understand social media adoption among a unique group of organizations, that of small- and medium-sized enterprises (SMEs). Our study offers a parsimonious model that can be used to explore the roles of organizational and environmental characteristics on the adoption of social media tools by SMEs. The results of a survey administered to citizens in four countries indicate that firm innovativeness, firm size, manager's age and industry sector constitute the factors that impact significantly the adoption of social media tools within organizations. The proposed model is an initial effort towards filling a pertinent gap in the existing literature, as it highlights the salient predictors of social media tools in SMEs.

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## Appendix A – Survey Items

**How many employees do you have?**

- (a)..... full-time
- (b)..... part-time
- (c)..... casual

**Is your business head office located in a metropolitan or non-metropolitan area?**

- (1) Metropolitan Area
- (2) Non-Metropolitan Area

**What is the gender of the Owner / CEO?**

- (1) Male
- (2) Female

**What is the age of the Owner / CEO?**

.....Years

**What is the highest education qualification of Owner / CEO?**

- (1) No formal qualification
- (2) Primary qualification
- (3) Secondary qualification
- (4) College qualification (diploma/certificate)
- (5) Undergraduate degree
- (6) Postgraduate degree (Master/Ph.D.)
- (98) CAN'T SAY

**How would you describe your company based on its relationship with new technologies?**

|   | <b>Strongly disagree</b> | <b>Disagree</b>          | <b>Neither disagree or agree</b> | <b>Agree</b>             | <b>Strongly agree</b>    |
|---|--------------------------|--------------------------|----------------------------------|--------------------------|--------------------------|
| a) My company is usually among the first to try out a new technology. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/> |
| b) My company likes to experiment with new technologies.              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/> |
| c) My company tries to stay current with technological trends         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/> |

**Recent technological developments have brought about new innovative tools that companies can use to promote products and engage with customers and suppliers. How does your company engage with Facebook Events Page?**

|                          |                               |                                      |  |
|--------------------------|-------------------------------|--------------------------------------|--|
| Not aware of this<br>(1) | Do not have, but aware<br>(2) | Have but do not regularly use<br>(3) | Have and regularly use for marketing purposes<br>(4) |
| ○                        | ○                             | ○                                    | ○  |

**APPENDIX B – Distribution of Participants by Industry**

| <b>Industry Sector</b>   | <b>Frequency</b> | <b>Percent</b> |
|--|------------------|----------------|
| Accommodation and food service activities                            | 16               | 3.5            |
| Administrative and support service activities                        | 19               | 4.2            |
| Agriculture, forestry and fishing                                    | 11               | 2.4            |
| Arts, entertainment and recreation                                   | 14               | 3.1            |
| Construction   | 33               | 7.3            |
| Education  | 29               | 6.4            |
| Electricity, gas, steam and air conditioning supply                  | 4                | .9             |
| Financial and insurance activities                                   | 37               | 8.2            |
| Human health and social work activities                              | 34               | 7.5            |
| Information and communication  | 35               | 7.7            |
| Manufacturing  | 27               | 6.0            |
| Professional, scientific and technical activities                    | 46               | 10.2           |
| Real estate activities   | 10               | 2.2            |
| Transportation and storage   | 11               | 2.4            |
| Water supply; sewerage, waste management                             | 1                | .2             |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 29               | 6.4            |
| Other service activities   | 97               | 21.4           |
| <b>Total</b>   | <b>453</b>       | <b>100.0</b>   |