Forecasting social CRM adoption in SMEs: A combined SEM-neural network method

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ABSTRACT

The growth of social media usage questions the old-style idea of customer relationship management (CRM). Social CRM strategy is a novel version of CRM empowered by social media technology that offers a new way of managing relationships with customers effectively. This study aims to forecast the predictors of social CRM strategy adoption by small and medium enterprises (SMEs). The proposed model used in this study derived its theoretical support from IT/IS, marketing, and CRM literature. In the proposed Technology-Organization-Environment-Process (TOEP) adoption model, several hypotheses are developed which examine the role of technological factors, such as Cost of Adoption, Relative Advantages, Complexity, and Compatibility; organizational factors, such as IT/IS knowledge of employee, and Top management support; environmental factors such as Competitive Pressure, and Customer Pressure; and process factors such as Information Capture, Information Use, and Information Sharing; all having a positive relationship with social CRM adoption. This research applied a following two staged SEM-neural network method combining both structural equation modelling (SEM) and neural network analyses. The proposed hypothetical model is examined by using SEM on the collected data of SMEs in Kuala Lumpur, the central city of Malaysia. The SEM approach with a neural network method can be used to investigate the complicated relations involved in the adoption of social CRM. The study finds that compatibility, information capture, IT/IS knowledge of employee, top management support, information sharing, competitive pressure, cost, relative advantage, and customer pressure are the most important factors influencing social CRM adoption. Remarkably, the results of neural network analysis show that compatibility and information capture of social CRM are the most significant factors which affect SMEs’ adoption of this form of customer relationship management. The outcomes of this research benefit executives’ decision-making by identifying and ranking factors that enable them to discover how they can advance the usage of social CRM in their firms. Furthermore, the findings of this study can help the managers/owners of SMEs assign their resources, according to the ranking of social CRM adoption factors, when they are making plans to adopt social CRM. This study differs from previous studies as it proposes an innovative new approach to determine what influences the adoption of social CRM. By proposing the TOEP adoption model, additional information process factors advance the traditional TOE adoption model.

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1. Introduction

The adoption, use, and performance of social Customer Relationship Management (CRM) strategy have emerged as an active research area in the scholar and professional environment particularly for Small and Medium Enterprises (SMEs) with limited resources. Social media technology introduces social CRM as a new version of CRM strategy (Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013). Drawing on the literature, this study defines social
CRM as using at least one kind of social media technology to manage the relationship with customers (Abedin, 2016; Ainin, Parveen, Moghavvemi, Jaafar, & Mohd Shuib, 2015; Harrigan & Miles, 2014; Thong, 1999). Nowadays organizations through the world are more and more adopting social media for different business goals such as worker cooperation, business intelligence, and customer relationships management (Abedin, 2016; Ainin et al., 2015; Bharati, Zhang, & Chaudhury, 2015). In fact, the growth of social media technology questions the old-style concept of CRM. Rather than focusing on traditional CRM technologies in the form of packages such as Sage CRM or Salesforce CRM, the focus of social CRM is on social media technology. Social media technology introduces social CRM as a new version of CRM strategy (Malhousse et al., 2013).

Today, social media technology has become a crucial part of social life as customers produce content, share photos, choose to ‘like’, or interact in the social media environment. Indeed, social media technology not only affects customer behavior but also it significantly impacts organization behavior. Social media technology has presented new customer-centric resources that allow customers to interact with businesses (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Since SMEs have a lower collection of financial resources to compete in the market effectively, social media technology as a cost-effective resource can become more significant for SMEs than big firms (Ainin et al., 2015; Braojos-Gomez, Benitez-Amado, & Llorens-Montes, 2015; Parveen, Jaafar, & Ainin, 2015). Also, SMEs usually face some challenges such as information system management, financial resources, and marketing strategy (Curran & Blackburn, 2000; Dwivedi, Papazafeiropoulo, Ramdani, Kawalek, & Lorenzo, 2009) to achieve the anticipated performance. However social media technology as a holistic marketing and information system resource makes it possible for SMEs to manage the relationship with their customers cost-effectively.

Social CRM research is significant because of advantages of social CRM on country’s development through improvement of SMEs performance. In Malaysian SMEs shape 99.2% of all business foundations, granted about 32% of gross domestic product (GDP), and 59% of total recruitment of the country (Ramayah, Ling, Taghiadze, & Rahman, 2016). On the other hand, the number of 10–15% technology adoption among Malaysian SMEs (Ramayah et al., 2016) has created a big gap between 20,650,133 Malaysian social media users (http://www.malaysiandigitalassociation.org.my/wp-content/uploads/2016/08/Malaysia-Digital-Landscape-August-2016.pdf) and SMEs services and products. Social CRM can fill this gap through using social media technology as it allows two-way communication with customers for cost-effective marketing, promotion, and sales (Parveen et al., 2015).

While social CRM is important for SMEs, CRM studies in SMEs context are uncommon. In contrast, social media usage has distinguished CRM research in SMEs environment (Ainin et al., 2015; Harrigan & Miles, 2014; Wittkuhn, Lehmkühl, Küpper, & Jung, 2015). Although social media can be used by SMEs to develop social CRM to improve their performance (Abedin, 2016; Ainin et al., 2015) the existing literature may not have provided enough information regarding the significant factors that organizations need to consider when assigning their resources for social CRM adoption. Furthermore, conceptualization of social CRM adoption is essential for organizations as the lack of a mutual conceptualization cannot create the predicted outcomes. Researchers have demonstrated that technology alone rarely provides value to firms, and, instead, these technologies are most effective when combined with other firm resources (Chang, Park, & Cha, 2010; Jayachandran, Sharma, Kaufman, & Raman, 2005; Payne & Frow, 2005). Social CRM is not just technology, as the proper employment of a CRM strategy requires a combined and balanced approach to technology, process, and people (Chen & Popovich, 2003; Malthouse et al., 2013; Payne & Frow, 2005). Social media technology is important while running social CRM, but it is not enough as there is a need to focus on social media technology in combination with other organizational resources (Cambra-Fierro, Centeno, Olavarria, & Vazquez-Carrasco, 2016; Chen & Popovich, 2003; Trainor, Andzulis, Rapp, & Agnihotri, 2014).

Hence, it seems that identifying a research model regarding social CRM adoption is desirable for researchers and professionals. However, there is no research to explain neither how SMEs adopt social CRM through a combination of social media technology usage and other organization resources nor how important are social CRM adoption factors. Therefore, the objective of this study is to fill the gaps in the existing research literature by developing a new research model for social CRM adoption at the firm level that considers all involved components and resources. Furthermore, in the previous studies, the importance level of adoption factors has not been investigated. Therefore, it is essential to provide enough information about the importance level of factors which influence the social CRM adoption by the organizations. The ranking of factors helps the organization to focus on the most critical adoption factors when assigning their resources through the adoption process (Fu & Chang, 2016). Accordingly, the aim of this research is to identify and rank the adoption factors of social CRM through the lens of the Structural Equation Modelling (SEM)-neural network by addressing the following research questions:

1. How do SMEs adopt a social CRM strategy?
2. What are the main factors of social CRM adoption?
3. How do SEM-neural network approaches help to identify social CRM adoption factors?

To answer these questions, we identified the main factors through a comprehensive literature review and further analyzed these based on SME owner/manager perspective using the SEM-neural network approach.

This article is arranged as follows: Section 2 presents a review of the literature regarding CRM, social CRM, and social CRM adoption. Hypotheses and model development are presented in Section 3. Section 4 illustrates the solution methodology of the study. The applied two-stage SEM-neural network is described in this part. Section 5 discusses the findings of the study and implications. Finally, Section 6 describes limitations of the study and future research.

2. Literature review

2.1. CRM

CRM is as old as the business. CRM is a strategic method to marketing supported by relationship marketing theory (Morgan & Hunt, 1994).

CRM has been defined as ‘a comprehensive strategy that enables an organization to identify, acquire, retain and nurture profitable customers by building and keeping relationships with them’ (Sin, Tse, & Yin, 2005). Nowadays, CRM is recognized as a customer-oriented strategy to manage the relationship with customers (Kumar & Reinartz, 2012). Unfortunately, CRM has dissimilar meanings for different people. There is no standard meaning of CRM as there are different viewpoints from which this term can be addressed; however, CRM is nothing more than a strategy that needs to generate a new business atmosphere, which provides a real management of relationships with customers (Soltani & Navimipour, 2016).
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