

# **An Empirical Study of Factors Affecting S-Commerce Adoption among Micro and Small- and Medium Sized Enterprises in a sub-urban and rural economic area: Evidence from Kelantan**

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**Abstract** - Social Commerce (S-Commerce) is the new wave of e-commerce in which it is mediated by social media and social networking services in order to promote online business and shopping-related information exchange. The aim of this study is to investigate the factors affecting S-commerce adoption among micro and Small- and Medium Sized Enterprises (SMEs) in suburban and rural areas in Kelantan. This study adopts Ahmad et al. (2015) S-Commerce Adoption Model (SCAM) to examine the relationship between technology, organizational and environmental elements toward S-Commerce adoption among micro and SMEs in Kelantan. Although there are many studies on factors affecting e-commerce adoption, there is little attention given on S-Commerce adoption. Insights on factors affecting S-Commerce is crucial for Micro and SMEs' strategic planning in widening the target market and eliminating excessive cost and wasted time. In achieving the objectives of study, a quantitative approach is used. A random sampling technique is employed and a set of quantitative analyses has been used to analyse the data. A total of 381 micro businesses and SMEs have been selected for the sampling. From the findings, the study concludes that three factors (i.e. technology context, organization context and environment context) have correlations on the inclination of S-Commerce adoption among enterprises in sub-urban and rural areas in Kelantan.

**Keywords:** Micro business, Small and Medium Enterprise (SMEs), S-Commerce, Sub-urban and rural economy.

## **1 Introduction**

E-commerce or electronic commerce refers to business conducted via online (Wang and Zhang, 2012). Currently, E-commerce has become the primary approach in conducting businesses. Many new businesses regardless of their types have adopted the e-commerce concept and most existing businesses have transformed their traditional and conventional dealings into e-commerce transactions. Moreover, the current trend shows that social media has been used for business transactions in which this is considered as an innovation in e-commerce.

S-commerce or social commerce refers to the process of selling, buying, transferring, or exchanging products, services and information through social media platforms (Wang and Zhang 2012). In real business practice, s-commerce has become a more popular approach among new businesses. This is due to the many benefits available to both sellers and buyers like less frilled online shopping processes and positioning of products or services which are closer to the more accurate target market. Furthermore, s-commerce helps to create more business opportunities among social media users by providing the opportunity to deliver products sold on social media. It also helps producers or sellers to advertise their goods or services to a wider audience of customers and to employ social media influencers to promote their products or services through the paid reviews.

This study has discovered that there have been many studies conducted on many aspects of e-commerce. However, there is limited research work done on s-commerce. Hence, to fill in this gap, this study will investigate the factors affecting S-commerce adoption among micro and Small- and Medium Sized Enterprises (SMEs) in suburban and rural areas in Kelantan.

In many developing countries, micro businesses and SMEs have evidently become the one of largest economy's stimulators. Both have recorded the highest percentage in terms of economic contributions including those in Malaysia. Compared to larger corporations or multinational companies, these micro businesses and SMEs have been using s-commerce approach more than them. The use of s-commerce has been crucial in which the micro and SMEs have experienced prosperous development and contributes significantly to the overall economic growth in the country.

Most studies conducted on micro businesses and SMEs in urban areas show there are many factors that contribute to their success and on the other hand, very few focus on success factors in suburban and rural areas. For example, Saleem (2017) discovers that people who are not in urban areas are less skilful in conducting business, lack of managerial skill and no knowledge of modern business techniques. This discovery is not totally unacceptable as there is inadequate number of research work that show find out

how micro businesses and SMEs located in rural and suburban areas manage to survive, grow and become part of national economic stimulators. Thus, this study aims to provide more insights and knowledge to the existing research works in this area.

## **2 Literature Reviews**

### *2.1 Social commerce*

Recent advancement in Web 2.0 applications and information and communication technologies has brought about new opportunities to electronic commerce or e-commerce (Hajli, 2015). Social commerce is a new trend of e-commerce in which traditional e-commerce is mediated by social media and social networking services in order to promote online transactions and shopping-related information exchanges (Wang and Zhang 2012).

Current literatures have provided a variety of social commerce definitions. Stephen and Toubia (2010) define it as a way of internet-based social media that allows people to actively participate in marketing and selling of products and services among online communities and markets. According to Liang and Turban (2011), the social commerce websites have three major attributes: the presence of social media technologies, community interactions and commercial activities, making it possible for the exchange of information on products before the actual purchase. Generally, there are two primary practices of social commerce. The first one is categorized by sites of social networks like Facebook, LinkedIn and YouTube that offer space for advertisement and transactions such as buying and selling products and services in which the opening interfaces and borders facilitate these. The second is categorized by traditional e-commerce websites that use social networking proficiencies to take advantage of its power of reach and trust, like Amazon.com, Walmart, eBay, Alibaba, etc.

Social commerce brings the real shopping experiences to the virtual world. It adopts for e-commerce the techniques that marketers have deployed in the real world for decades to make the shopping experience more informative and enjoyable for customers. Businesses know the importance of building relationships with their customers. A social commerce strategy for businesses is to develop virtual groups and motivate the members to share information, knowledge and experiences about their products and services. Therefore, this study will examine whether social commerce adoption can be influenced by technology, organization, and environment.

### *2.2 The Technology-Organization-Environment (TOE) Theory*

The Theory of *Technology-Organization-Environment* was developed by Tornatzky et al. (1990), and has been confirmed by several studies from the time it was introduced. Generally, TOE contains technology, organization, and environment adoption. Extensive research works have demonstrated that the TOE model is widely applicable and has explanatory power in a variety of technical, industrial, and national contexts. For instance, this theory has been utilized to explain the adoption of innovations in a host of industries, including manufacturing (Mishra et al. 2007), health care (Lee and Shim 2007), retail, wholesale, and financial services (Zhu et al. 2006). Different types of invention have different factors that affect their adoption.

The proposed research framework is adapted from the theoretical theory based on three components that are technology, organization and environment. This study would contribute to the expansion of the theory of TOE in understanding the factors that contribute in the context of S-commerce adoption. The additional determinant of relationship quality could enhance the predictability of the theory toward S-commerce adoption. Therefore, this study is expected to cover the gap in the area of S-commerce adoption among micro and small and medium sized enterprises in suburban and rural areas in Kelantan. Figure 1 demonstrates the research framework of this study.

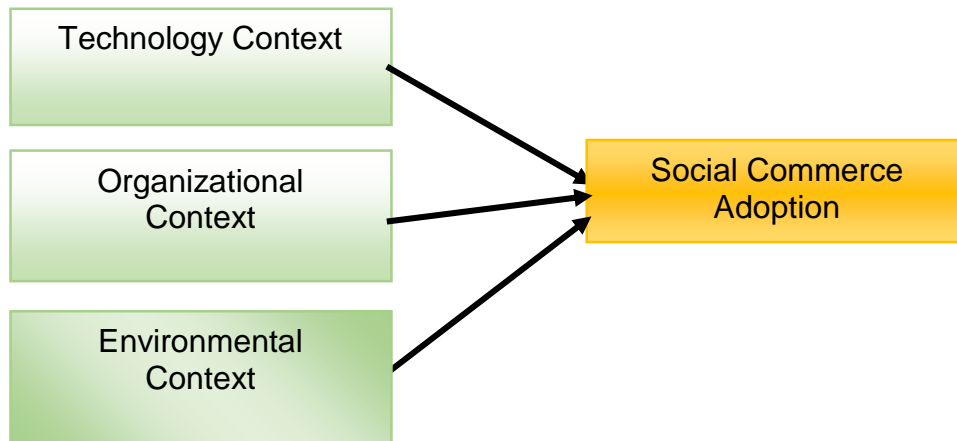


Figure 1: Adopt and adapted from Ahmad et al (2015)

### 2.3 Factors that influence the adoption in S-Commerce

#### 2.3.1 Technology

The technology context is defined as an integration of technologies available for companies to adopt. According to (Tornatzky & Fleisher, 1990), the decision to adopt technology depends not only on what is available in the market, but also on how such technology would fit into the existing technology that a company has already been using. Technology use in businesses has changed from functioning as a tool to exchange information electronically to tools for business strategy such as marketing, sales and customer service. According to Tiago & Maria (2010), the perceived benefit refers to the level of acceptance of the possible advantages that commerce technology can provide for the organization. The probability of the company allocating resources such as managerial resources and financial resources to adopt social commerce would be greater when the management fully understands the benefits that e-commerce adoption would bring to their companies or firms. Perceived benefits or relative advantage is one of the most regularly used characteristics in the e-commerce adoption studies (Kuan & Chau, 2001). The examples of benefits that are associated with e-commerce adoption are increased revenues and profit, reduced cost, improved customer service and development of new market segments.

#### 2.3.2 Organization

Management is an important part of any organization. Management uses all physical & human resources in a productive way for the betterment. Management provides limited resource needs by choosing the best alternative use in the industry from a variety of uses. It uses these experts, professionals and services to use the right skills, knowledge, and uses and avoid degenerative. According to Ngoc Tuan Chau et al. (2018), organizational context is closely related to organizational characteristics in the use of innovation. It represents internal factors that will impact the use of technology innovations. The organizational factors refer to the characteristics and resources of an organization in the adoption of technology. For this study, it will focus on the entire element in organization and not just for employees. The management also should have knowledge about social commerce.

### *2.3.3 Environment*

Environment context plays an important role in the adoption of social commerce among micro and SMEs in suburban and rural areas in Kelantan. The environmental factors focus on areas which SMEs manage their business operations with the precedence given to external factors. This context greatly influences industries and the kind of government incentives that they receive and the regulations that they have to adhere to. Environmental context is also defined as the area in which an organisation establishes its activities (Tornatzky et al, 2009) or in other words it is defined as the concerns of an organisation's environment (Scupola, 2009). An organisation may be under competitive pressure when it sees more enterprises in the industry adopting social commerce as a business tool and need to be adapted to remain competitive in the marketplace (Kaun and Chau, 2001). Competitors have the power to pressure SMEs to adopt a technology innovation. Therefore, the greater the pressure from competitors perceived by SMEs, the more they will adapt to technology innovations in order to compete effectively (Duan et al, 2012).

## **3 Research Design and Methodology**

This study employs quantitative approach in obtaining the perception of micro businesses and SMEs in using social media to promote and sell their products or services to the target group. In doing this, a questionnaire is used to obtain respondents' perceptions on the items asked. A survey using questionnaire has been selected in catering the distribution of a large number of targeted respondents in different places at one time (Ronald, 2002). Hence, this fits well into this study which seeks the perceptions of respondents of micro business and SME operators in Kelantan who are from the suburban and rural areas in Kelantan and they become the unit of analysis for the study.

To obtain the number of population, the data was retrieved from the website of the Department of Statistics Malaysia (DOSM) which provided a list of micro businesses and SMEs that have been currently active and operating. The questionnaires were distributed to 400 micro business and SMEs in rural and suburban areas in Kelantan. Out of 400 questionnaires distributed, 294 responded which was equal to 74 percent response rate.

The questionnaire was divided into four sections. Three sections represented the three independent variables and one section represented a dependent variable. Each item used a 5 point Likert Scale, and all of the measured items passed the value of Cronbach Alpha Coefficient larger than 0.70. Pearson’s Correlation Coefficient was used to investigate the strength of the association between independent and dependent variables.

## 4 Result & Discussion

### 4.1 Reliability analysis

To restate, all items that represented the independent and dependent variables were measured to ensure reliability. Table 1 depicts four sections listed in the questionnaire. According to Griethuijsen et. al. (2014), measurement items with Cronbach alpha ( $\alpha$ ) higher than 0.70 is considered as acceptable and reliable.

| Variables            | Number of Items | Cronbach’s Alpha before item deletion item. | Number of items after item deleted. | Cronbach’s Alpha after item deleted. |
|----------------------|-----------------|---|-------------------------------------|--------------------------------------|
| S-commerce adoption  | 5               | 0.824                                       | 5                                   | 0.824                                |
| Technology Context   | 5               | 0.811                                       | 5                                   | 0.811                                |
| Organization Context | 5               | 0.796                                       | 5                                   | 0.796                                |
| Environment Context  | 5               | 0.699                                       | 4                                   | 0.703                                |

Table 1: Results of Reliability Test Using Cronbach’s Alpha

Table 1 shows the measures for the dependent variable that is s-commerce. It was found to be very reliable (5 items;  $\alpha = 0.824$ ). Besides, the first item of the independent variable which was technology context also showed very reliable (5 items;  $\alpha = 0.811$ ). The second item of the independent variable that was organizational context showed an acceptable reliability (5 items;  $\alpha = 0.796$ ) and the third item of the independent variable that was environmental context too showed an acceptable reliability (4 items;  $\alpha = 0.703$ ). However, one item (E3) with the Cronbach’s Alpha (5 items;  $\alpha = 0.699$ ) was deleted during the data analysis stage because it was not considered reliable. The removal of the variable was to avoid confusion and inaccurate responses from the respondents.

## 4.2 Hypothesis Testing and Correlation Analysis

Table 4.2 Summary of hypotheses

| Research Questions  | Hypothesis   | Finding  |
|---|--|--|
| RQ 1: Does technological context is associated to s-commerce adoption by micro business and SME's?  | There is high association between technology context and s-commerce adoption by micro business and SME's     | r= 0.397<br>(p<0.01)<br>There is an association between technology context and s-commerce adoption by micro business and SME's     |
| RQ 2: Does organizational context is associated to s-commerce adoption by micro business and SME's? | There is high association between organizational context and s-commerce adoption by micro business and SME's | r= 0.249<br>(p<0.01)<br>There is an association between organizational context and s-commerce adoption by micro business and SME's |
| RQ 3: Does environmental context is associated to s-commerce adoption by micro business and SME's?  | There is high association between environmental context and s-commerce adoption by micro business and SME's  | r= 0.069<br>(p<0.01)<br>There is an association between environmental context and s-commerce adoption by micro business and SME's  |

Table 2 shows that for hypothesis 1, there is an average association between technology context and s-commerce adoption by micro business and SMEs. In other words, 40 percent of s-commerce adoption by micro businesses and SMEs in the rural and suburban areas in Kelantan was explained by factors from the technology context. For hypothesis 2, there is an average association between organizational context and s-commerce adoption by micro businesses and SMEs. In other words, 25 percent of s-commerce adoption by micro businesses and SMEs in the rural and suburban areas in Kelantan was explained by factors from the organizational context. Finally, for hypothesis 3, there is a low association between environmental context and s-commerce adoption. This means only seven per cent of s-commerce adoption by micro businesses and SMEs in the rural and suburban areas in Kelantan was explained by factors from the environmental context.

## 5 Conclusion

This study achieves the research objective successfully, and able to answer the research questions by providing insights on the association that exists between all the variables. In conclusion, based on the findings, it is interesting to note although the micro businesses

and SMEs were located in the rural and suburban areas in Kelantan, the environmental context is the lowest to be associated with the businesses' successful performance which is only around seven percent. This phenomenon can be explained by looking at the percentage of the association between the technological context and the s-commerce adoption. The finding shows that 40 percent of successful performance of micro businesses and SMEs in these areas is contributed by the technological context. This proves that regardless of geographical areas that the businesses are located at and their sizes and types, they can still be sustained and successful with the implementation of s-commerce.

## **6 Acknowledgment**

This paper and the research behind it would not have been possible without the exceptional support of my family, research project team and friends. I would like to thank my daughter, Princess Siti Iman Safiya Binti Muhamad Tasmin; my mother, Hajjah Rahaizan Binti Yusof; and my dad, Haji Zainuddin Bin Yakkob for their support, encouragement and understanding. I am also thankful to all eleven individuals in my research team, Siti Rohana Mohamad, Dr Tahirah Abdullah, Siti Salwani Abdullah, Nur Farahiah Azmi, Siti Nurul Shuhada Deraman, Dr Nur Izzati Mohamad Anuar, Dr Wan Farha Wan Zulkiffli, Nik Alif Amri Nik Hashim, Dr Ahmad Ridhuan Abdullah, Aikal Liyani Mohd Rasdi and Dr Hazriah Hasan. Besides, I will not successful completing this paper without contributions and supports from my colleagues, which their names are not mentioned here, thank you very much. Finally, this paper would not be successful without opportunity given by these both parties which are UMK and ISEB 2020. I am really thankful and appreciate for organizing this event and accepting this paper.

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