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Adoption of Mobile Commerce in Small- and Medium-sized Businesses

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ABSTRACT

The emergence of mobile commerce (M-commerce) has created new opportunities for businesses because of the development of new paths of information spread and exchange. Furthermore, the advent of mobile communication caused the emergence of online trade relations that allow consumers to receive information and buy products long distance. However, M-commerce is still on the rise because few research studies can provide sufficient explanation on how it contributes to consumer behavior, organizational performance, and productivity. The current study seeks to define the influence of M-commerce on consumer behavior and perception and to analyze the factors affecting the adoption and utilization of M-commerce, as well as factors contributing to the spread of M-commerce among small and medium-sized businesses. The review of literature and qualitative analysis have focused on issues, such as technological progress, employee engagement, customer satisfaction, M-commerce development, and innovation in the context of business activities carried out through mobile devices. The studies have revealed that M-commerce has become a valuable contribution to the development of online commerce in the sphere of traditional business management and in the context of small- and medium-sized businesses.

Keywords: Adoption and diffusion of new ICT by businesses and consumers, Mobile Commerce, Electronic Commerce, Small- and Medium-sized Businesses
INTRODUCTION

The adoption of mobile commerce (M-commerce) has become a widespread phenomenon because of the increasing role of mobile technology in promoting marketing activities. Mobile business is guided by different values, such as marketing and sales, procurement, and internal operations. Mobile technologies are highly valued at an organizational level because they contribute to immediate information exchange. Mobile business is closely associated with electronic commerce (E-commerce); however, the former is underexplored because the way by which M-commerce contributes to marketing activities is unclear. To understand how M-commerce fosters organizational and business activities, emphasis should also be placed on theoretical frameworks that relate to technology, innovation diffusion, and resource distribution.

This paper aims to explore the definition of M-commerce; its difference from other definitions, such as E-commerce; and the values and approaches it creates for traditional businesses, particularly for small- and medium-size businesses. In addition, this paper seeks to analyze the major variables that contribute to the development of M-commerce, as well as how these variables are essential in promoting or challenging traditional business at an organization level. Finally, the major characteristics and factors defining the role of mobile communication in shaping organizational success are defined.

OVERVIEW OF LITERATURE

Factors Affecting the Use and Adoption of M-commerce

Bhatti (2007) emphasized on adopting an extended technology acceptance model (ETAM) that relies on innovation diffusion theory to explore the issues determining a user’s mobile business acceptance. The research also highlights several factors, including personal innovativeness, perceived usefulness and ease of use, behavioral control, subjective norms,
and intension to adopt M-commerce. The model is evaluated according to the data gathered from a survey of consumers that use mobile technologies. The empirical data introduces the ease of use effect on consumer behavioral intention to employ M-commerce. The results of the study focus on subjective and behavior controls that affect perceived ease of use, which in turn influences adoption intention.

Adoption of M-commerce provides new perspectives in understanding how organizational activities can benefit and how mobile technologies can be used with Internet connection. Specifically, Einav, Levin, Popov, and Sundaresan (2014) have dedicated their research to analyze the role that mobile technologies play in increasing access to the World Wide Web. These researchers have emphasized the role of mobile adoption in increasing the activities of corporations such as eBay. The invention of mobile applications that permit users to buy products online with the help of their smart phones has significantly contributed to sales rate. In addition, they indicated that “consumers using eBay on mobile devices – even if they are at home – find products through the app, rather than through general Internet search” (Einav, et al., 2014, p. 494). In other words, marketing and advertising differ significantly on mobile devices, and thus, consumer behavior can change as well. One way or another, massive adoption of mobile technologies can foster the development of new technologies that can provide additional benefits in a competitive landscape. Many technologies are already on the market. However, competitiveness can be much slower because of the impact of external factors.

The concept of usability and adoption of innovation and mobile technologies has also been explored by Jakimoski (2014). Specifically, the researcher has introduced the analysis of mobile E-commerce to define its usability issues and requirements. According to the researcher, “usability of the mobile applications has improved significantly in the past few years enabling the users to carry out more jobs in the mobile context” (Jakimoski, 2014, p.
13). Thus, the importance of mobile devices is evidently growing along with the communication needs of users. More importantly, the authors have pointed out that the importance of M-commerce differs in terms of E-commerce because of specific features and limitations related to wireless networks and mobile devices. At this point, E-commerce is presented in the context of buying and selling products and services through the internet. In fact, various ways of integrating mobile systems of communication and interaction in a business context are available. For instance, Pan, Nam, and Ogara (2013) have demonstrated the value of mobile chain systems in improving such aspects as information accuracy, information exchange, customer service issues, scheduling, and reduction of operational costs. The diffusion of innovation by a company cannot bring in significant benefits. However, if M-commerce is introduced in a supply chain, the system can work much more efficiently. In this context, Pan et al. (2013) have concluded that “firms need to pay more attention to consumers because customer pressure is the biggest driver of mobile and table shopping initiatives which affect company to adopt mobile technology” (p. 184). Customer relationships can be improved with the adoption of relevant mobile technologies, which can establish effective supply chain.

Zhou (2011) has provided evidence regarding the necessity of introducing mobile internet applications in China. He analyzed the frequency of using mobile communication technologies and how this trend affects the rapid increase in M-commerce adoption worldwide. To address the opportunity of integrating wireless technologies in business, companies should adjust to new techniques in handling business activities. In addition, Zhou (2011) has asserted that the quality of mobile technology integration should rely on information quality, service quality, and system quality to contribute to user commitment and satisfaction. To expound on this issue, the researcher concludes that “these factors affect users’ evaluations of the difficulty and utility associated with using mobile sites” (Zhou, 2011, p.
For instance, if the level of system effectivity is low, users may encounter problems with service use. They will also have to spend more time retrieving information because of insufficient navigation. Consequently, the difficulty in usage can negatively affect perceived usefulness and effectiveness. Furthermore, the difficulty of using mobile resources can decrease the level of trust in the system and service quality.

The above-presented research studies are related to the analysis of difficulties in using and adopting mobile devices in computer-mediated and traditional businesses. The evaluation of the different aspects related to mobile technology integration in different environments and the internal and external use of mobile communication tools can promote new opportunities to extend the value of Internet communication. Integrating mobile application can contribute to more Internet access. In other words, users will be able to buy products from a distance when they have mobile connection. Overall, the patterns of adopting telephone communication are currently on the rise in many countries.

**Influence of M-commerce Adoption on Consumer Behavior and Perception**

To define the success of adopting M-commerce in small- and medium-size businesses, the extent to which a company’s consumer base takes advantage of mobile technologies must be defined. The current study studied the way by which M-commerce has been integrated into internet commerce and analyzed the perception of consumers and their extended use of mobile applications.

Chan and Choong (2013) comprehensively defined M-commerce in the context of its application to E-commerce. Small- and medium-sized businesses are currently creating their websites and online portals through which they attract more consumers and promote their products and services to these consumers. However, M-commerce is a new step in E-commerce because it offers greater opportunities for advertising on online websites. M-commerce creates new platforms for operations in the business world. In this respect, an
organization should invest on the development and integration of mobile technologies. Thus, additional financial support should be provided for a software designer to promote new mobile applications. Distinguishing between E-commerce and M-commerce is also important. As such, Chan and Choong (2013) asserted that “classifying M-commerce as an extension of E-commerce is too narrow as it is solely based on the network medium and device. Unlike E-commerce, M-commerce offers new business opportunities due to its mobility and reachability characteristics” (p. 445). Therefore, M-commerce has more potential in comparison with e-commerce because of the integral features of M-commerce, such as personalization, flexibility, ubiquity, and dissemination. M-commerce contributes to the advantages of the Internet and develops unique services and benefits compared with e-commerce. This advantage should be reasonably integrated in traditional small- and medium-sized businesses.

Choi, Seol, and Lee (2008) have acknowledged that the development of the World Wide Web has created new opportunities for exchanging information and carrying out transactions through E-commerce expansion. More importantly, they have also agreed that mobile communication devices expand the power of Internet transactions. Specifically, Choi et al. (2008) argued that “belonging only to a specific individual, a mobile device allows users to access service more conveniently as well as to have more personalized services than those of the existing wired Internet” (p. 314). To understand the current effectiveness of M-commerce, the researchers have explored its characteristics when used in a number of companies in Korea. The analysis has revealed several distinct features. First, products and services are offered on payment with extra fees for mobile connection. Second, a mobile portal creates access to M-commerce because navigation, connection, and transaction are carried out through mobile devices. Finally, M-commerce can create customer service, presence, location, and context-based services because of the portability of mobile devices.
The difference between M-commerce and traditional commerce are determined by technological aspects. The differences also relate to E-commerce because the latter does not relate to the use of mobile application. In this respect, portability and use of different media platforms is the key distinction. Mobile technologies simplify commercial relationships, thereby increasing customer satisfaction level.

Different variables can be used in deliberating the influence of M-commerce on customer satisfaction. Li and Dong (2012) analyzed of the experiential dimensions of consumption. They specifically focused on consumption experience and considered experience view and information processing, which are affected by variables (convenience, subjective norms, self-efficacy, media richness, emotion, and consumption). In addition, they have concluded that “the organism of consumer behavior is understood from two perspectives: information process view and experiential view. The former is more about rational choice and the latter is more about irrational buying needs and the latter is more related to the process and hedonistic motivation” (Li and Dong, 2012, p. 126). The nature of mobility is essential along with the difficulty of use. Finally, variables such as accessibility, flexibility, and convenience are delivered by mobile devices and defined as crucial factors promoting M-commerce.

In response to the expansion of M-commerce, an analysis of E-commerce, which results in certain peculiarities of delivering information to the clients, is also important. At this point, Dogac and Tumer (2002) discussed E-commerce issues that can be helpful for advancing the role of mobile technologies. For instance, attention should be given to the analysis of approaches, such as performance analysis, resources management, and spread of mobile clients with Internet access. In addition, the authors have concluded that E-commerce and application of mobile devices lead to the personalization of business. Moreover, Dogac and Tumer (2002) introduced an architecture that aims at providing personalized information
to mobile users through e-mail servers, content providers, and Web servers. This architecture can serve as a foundation or guide for small- and medium-sized business to develop their mobile network. Certain rules apply for acting in such situations. However, issues such as consumer demand, technical support, employee competence, and information exchange are prioritized.

On one hand, E-commerce is often considered separately from M-commerce. On the other hand, some studies support the idea that M-commerce is an extension of E-commerce. The mobile revolution contributes to the advances in computing and wireless technologies, which have led to the spread of mobile devices and smart phones. Consequently, consumers have become dependent on mobile platforms, particularly on the functions and applications they proposed. In response to this popularity, mobile producers have started thinking over the possibility of exploring and enhancing the potential of smart phones as an efficient tool for carrying out mobile business. Specifically, Malik, Kumra, and Srivastava (2013) have carried out a study on consumer behavior and attitudes toward technological advances. They have discovered that perceived usefulness affect the acceptance of M-commerce, but the presence of financial risks does not contribute to satisfaction among mobile users. In addition, Safeena, Hundewale, and Kamami (2011) have also introduced their perspective regarding customer satisfaction and determinants of M-commerce success. They have paid specific attention to mobile banding, which is a step forward in the sphere of financial services. Their results have shown that factors such as perceived ease of use, subjective norm, consumer awareness, and usefulness have a positive influence on customers and in the successful promotion of mobile banking system.

The customer-centered approach is also analyzed in the studies conducted by Sharif, Shao, Xiao, and Saif (2014). Specifically, emphasis has been given on the psychological dimensions that influencing consumer trust in adopting M-commerce. The researchers also
recognized that mobile technologies have different features compared with previous studies on other technologies. Therefore, previous studies must be extended to describe the stages of M-commerce adoption. In the system of M-commerce, Sharif, Shao, Xiao, and Saif (2014) have singled out three major elements, namely, mobile network, technology, and consumers. The triad, however, is also used in small- and medium-sized businesses, but in a different context. Specifically, mobile network is often used for interaction and communication with clients. However, by means of technologies, a company can provide consumers with greater freedom to show them that the company can effectively define how mobile applications can restructure the business and reduce the costs.

Certainly, a review of customer satisfaction is an essential issue in the context of mobile application. However, this question should also be analyzed through the prism of the specifics of carrying business in small- and medium-sized firms. At this point, attention should be given to internal processes and partnerships, stakeholders, and customer segments, which create the conditions for integrating M-commerce opportunities. Furthermore, establishing certain terms and underpinnings for introducing new training and technical support to the personnel is also important. These opportunities must be reconsidered to define the extent to which small- and medium-sized businesses are ready to enter the new sphere of commercial relations.

Factors Contributing the Spread of M-commerce Among the Users of Small and Medium Businesses

To understand how mobile technology works in a business environment, exploring the conceptual model, defining the factors that contribute to the success of mobile devices in small and medium business environment, and understanding the factors that drive firms to integrate mobile devices in their business are important. Benou and Vassilakis (2010) focused on M-commerce applications, including their features, qualities, and contextual use. Thus, the
authors assume that “the process of designing and developing M-commerce applications is inherently more complex and demanding, as compared to traditional applications, due to the fact that they are executed in diverse environments, as opposed to ‘traditional applications’ which are typically executed on the relatively stable desktop PC” (p. 140). Individual devices have different features in terms of capacities and qualities, such as battery lifetime, processing power, and communication capabilities. In addition, the properties of network infrastructure and the property of natural environment should also be taken into account in developing M-commerce applications because image download speed or display may be poor quality, and sometimes, more effective means of spreading information are available. To promote the spread and advancement of M-commerce application, perception of structures and context is essential. Benou and Vassilakis (2010) have proposed the use of mobile devices based on the possibility of integrating mobile technology into traditional commerce. The model identifies the context, external factors, and additional aspects that complicate the process of mobile devices. The development of the model for representing context-related terms and the introduction of the methodological dimension can serve as an effective tool for documenting contextual frameworks presented in the paper, thereby seeking to foster the creation of context-mediated mobile applications. This process can also be the first step in introducing innovative services and promoting higher effectiveness of all business processes. Attention to parameters such as technical capacity, consumer competence, and software effectives is often difficult to predict, but these parameters can be classified to develop new strategies for spreading and exchanging information.

Given multiple studies have been dedicated to the analysis of the advantage of M-commerce integration, the research can be narrowed down to define how small and medium business can benefit from such integration. Kwabena (2013) expresses the need to provide a deeper understanding on specific contexts that promote or ignite the use and promotion of
small- and medium-scale businesses. Specifications regarding the characteristics that are
typical of small and medium businesses are provided, and the factors that affect the positive
integration of mobile technologies are introduced. Specifically, the studies have revealed that
“the usage of ICT among SME progress from the adoption of basic technologies, such as
traditional media and fixed lines to more advanced technologies, such as email, e-commerce,
and information processing systems” (Kwabena, 2013, p. 23). In addition, the research also
suggests that small- and medium-sized enterprises are beyond the application of traditional
media, traditionally adopting personal computers for accounting, word processing, and other
activities that do not require Internet connection. At the same time, small and medium
enterprises that have promoted the use of the internet are more likely to use advanced
communication capabilities, such as websites, E-commerce, e-mail, and file sharing. Finally,
strong correlations among various factors, such as education, usage experience, age, and
decisions of small business managers to employ the Internet, have been pointed out.

Analyzing the factors that contribute to the firm’s performance in the context of M-
commerce is essential because results of analysis prove whether mobile technologies
contribute to a firm’s success. At this point, Martin (2012) explored the correlation between
performance perception and firm engagement in M-commerce to prove that activities such as
technological competence, mobile business, and customer values approve the integration of
mobile technologies. More importantly, the researcher states that “competitive pressure has a
positive impact on the perceived performance of M-commerce” (Martin, 2012, p. 947). All
these opportunities foster technological progress and define further routes for development.
One way or another, technological factors are prioritized because they define the extent to
which organizational and environmental dimensions can be improved. Picoto, Belanger, and
Palma-dos-Reis, (2014) also explored the organizational dimension and how it is affected by
implementation of new technologies and innovation. In particular, scholars argue that “in the
context of m-business, organizational factors would include the technical competence of the organization, the level of technology integration, and managerial obstacles” (p. 573).

Technological competence is therefore an integral component of organizational IT framework and labor force. M-business should encourage firms to employ mobile technologies and develop efficient operations. Technology integration is the responsibility of the organization to improve its capability and integrate M-business application along with existing systems. More importantly, Picoto, Belanger, and Palma-dos-Reis, (2014) conclude that “M-business usage is the extent to which mobile technologies are used along the value chain activities and is measured by the breath of use for different chain activities, and is measured by the breath of use for different business activities and depth of use for each activity using the mobile platform” (p. 574). M-commerce perspective creates a synthesis between traditional commercial relations and mobile applications.

User acceptance is another important feature that encourages small- and medium-scale businesses to adopt M-commerce activities. Sadia (2011) agrees that mobile technologies improve communication and is the key to organizational success. Therefore, small businesses should use mobile communication to sell their products because it is the most cost-effective way of product promotion. The use of smart phones and the attitude of consumers toward them play an important role in the decision of a manager to implement new software developments. However, all the research studies still consider the perceived ease of use as the major component in defining the extent to which M-commerce technology can be accepted. Therefore, research studies have focused on this issue as an independent variable. In response to this study, the research conducted by Shih and Chen (2013) it is can be explored. To enlarge on this issue, scholars have recognized that M-commerce technologies have introduced changes to e-commerce paradigms and allowed clients to buy products without using their personal computers. In this aspect, it is logical that their behavioral patterns have
changed as well. This fact should be considered by managers who strive to adjust to the changes and to introduce changes to the organizational culture. Shih and Chen (2013) have concluded that perceived ease of use along with perceived use lead to the development of corresponding behavioral intention. This framework can be explained by the theory of reasoned action. This theory states that behaviors can be predicted as the extent to which an individual believes that using a specific product can be effective. Thus, computer usage is defining behavioral intention as the foundation for enhancing computer demand and improving the corresponding workplace systems.

Chong (2013) has also used the conceptual model to define the dependence between M-commerce development and advances in wireless technologies. Specifically, the researcher has analyzed the issue by using the Expectation-Confirmation Model, in which users’ pre-adoption and post-adoption attitudes and the satisfaction level along with M-commerce experience can be compared. Previously, the model was used to understand the level of consumer satisfaction and post-buying behavior. In contrast to technology adoption models, the Expectancy-Confirmation model seeks to examine client behavior before and after purchase. Consumers should first shape expectations regarding a specific product, and then gain experience with the product. By evaluating perceived performance, consumers can decide the frame and define re-purchase decisions. Confirmation can only be received when performance meets preliminary expectation. Such a model is an effective means for businesses to define the effectiveness of products and channels in the exchange of information about this product. In addition, Xu (2014) admits that businesses can benefit significantly from the application of M-commerce because of the multiple opportunities they present.
DISCUSSION AND CONCLUSION

The overview of literature has introduced several important assumptions on the influence of M-commerce on business in general and on small- and medium-sized businesses in particular. First, M-commerce has a positive influence on the expansion of E-commerce. Second, consumer perceptions regarding mobile applications should be assessed by measurement tools, such as perceived ease of use and perceived use, to define whether consumers are more determined to use mobile phones in buying products. Third, technology development, subjective norms, consumption demand, and software development are among the major factors that encourage clients to use mobile applications. Finally, M-commerce creates greater opportunities for the development of E-commerce because of technological advances. The perception of clients can be defined by their desire to use mobile gadgets as alternatives to personal computers. Extensive literature review has managed to cover both theoretical and empirical findings supporting the major characteristics and factors affecting the adoption and use of M-commerce. The majority of studies focused on the analysis of consumer behavior in the context of M-commerce; changes must also be introduced to small- and medium-sized businesses to encourage the development of organizational productivity and performance. One way or another, M-commerce as a new form of E-commerce can definitely contribute to organizational performance when a company integrates certain changes. This integration is of particular concern to technical support, training program, and partnership with software developers.

While deliberating on the advantages of spreading M-commerce among small and medium-scale enterprises, managers and private owners should be aware of the fact that mobile marketing is among the quickest and the most effective ways to expand customer base. In this respect, small businesses should establish partnership with software developing companies and introduce new means of attracting new clients and introducing new means of
communication. M-commerce is also a good option to develop supply chain because of the advantages created. First, the spread of M-commerce among supply chains contribute to the establishment of efficient time management. Executives should also realize the importance of time in terms of delivery services and logistics. Therefore, mobile communication can significantly foster operations and promote higher competitiveness of an organization. Further, mobile communication and technology can also contribute to the technical capacity of an organization. In this era of digital advancements and innovation, the constant adjustment to mobile technologies and mobile applications is definitely a great opportunity for entrepreneurs to expand their knowledge on innovation. The advent of smart phone applications and software can be used effectively in many spheres of operation management. More importantly, technological awareness and competence can positively affect customer satisfaction. The above-presented factors can also be regarded as essential criteria for adopting M-commerce tools. However, M-commerce devices are often used for improving and enhancing the effectiveness of previous methods. In particular, smart phones can be used as effective media platforms to access the Internet. With the current advances in technologies, software developers make it possible to access the Internet through specific mobile applications. The majority of clients prefer using smart phones rather than personal computers to access information on products. Such preference is explained by the fact that mobile devices are more portable and can be used by clients regardless of their location.

When it comes to small- and medium-sized businesses, enterprises that specialize in delivery of different services tend to use the Internet for business transactions. The benefits stemmed from the use of online services in business, but substituting conventional media with online service is not an option. Issues on slow access speed, customer communication preferences, and costs are among the major internet use problems. Therefore, financial issues
and quality of internet connection should also be considered by small- and medium-sized enterprises that strive to expand their services through M-commerce.

**RECOMMENDATIONS**

Even in the context of mobile commerce, knowledge is still a powerful asset, particularly when it comes to increasing sales. To achieve this goal, retailers should ensure that they collect and analyze data to adjust to corresponding changes. Customers that seek greater freedom and control in purchasing goods take advantage of mobile platforms because these platforms are more comfortable than personal computers. However, being aware of mobile and online data, managers should adjust to the major features of mobile use, such as personification of customer activities and preferences. Specifically, these managers should target clients with tailored content and trigger these clients to complete purchasing. Managers should not introduce generic offers that are irrelevant to client needs and services.

Mobile applications are all about communication. Therefore, retailers should realize the value of consumer communication and take advantage of these platforms to establish relationships and achieve proximity with their customers. In particular, mobile applications can create a simultaneous connection with consumers, opening access to direct communication and information regarding new offers and interesting products. Thus, applications move beyond and are regarded as a tool for exchanging and transmitting information. It is also an engagement tool with a customer base that rotates and synthesizes data.

Increased popularity of mobile commerce is associated with clients’ growing interest in convenience and speed. Thus, retailers should enhance the mobile commerce experience, promote a simple way to carry out transactions, and reduce the time needed for purchasing a product. Thus, retailers can find the key segment for consumers who want to buy products
and who strive to spend less time doing so. Apparently, a percentage of clients are not
encouraged to use multiple mobile applications because of the various models and mobile
versions. To eliminate the problem, retailers should provide solutions that allow mobile
shopping activity to be integrated and be consistent with a combination of mobile commerce
and mobile technology.
REFERENCES


