Factors influencing the adoption of mobile commerce applications in Cameroon

Silas Formunyuy Verkijika

Department of Computer Science & Informatics, University of the Free State, 205 Nelson Mandela Drive, Bloemfontein, South Africa

ARTICLE INFO

ABSTRACT

As smartphone penetration continues to double in Sub-Saharan Africa, many businesses are looking into this channel for conducting their business activities. In Cameroon, all the top e-commerce giants have deployed smartphone applications to facilitate m-commerce activities. However, little is known about the factors that influence m-commerce adoption in the country. As such, this study had as objective to determine the key factors that influence consumer's adoption of m-commerce applications in Cameroon. Using data from 372 respondents, a modified version of the extended unified theory of acceptance and use of technology (UTAUT2) was validated in the Cameroon context. The findings showed that social influence, facilitating conditions, hedonic motivations, perceived risk and perceived trust were significant predictors of the behavioural intention to adopt m-commerce applications. Also, the results showed that consumers who had a high intention to adopt m-commerce were more likely to recommend the technology to others. For researchers, the study depicts the relevance of extending existing technology acceptance models like the UTUAT2 with appropriate factors in different technological and geographical context. For practitioners, the study identifies customer-specific and environmental factors that m-commerce providers in Cameroon and other regions with similar characteristics could consider when designing and implementing strategies for attracting consumers to use their m-commerce applications.

1. Introduction

Over the past two decades, the world has seen significant advances in the area of mobile and wireless communication systems, which has opened a whole new world of possibilities for ubiquitous solutions for improving different areas of our daily activities. One booming area of such solutions has been in the domain of commercial activities. As electronic commerce activities progressed over the years, businesses became increasingly interested in delivering similar services over mobile devices in a bid to reach a wider customer base. This follows from the growing adoption and use of mobile phones around the world with a penetration rate of about 96.4% (International Telecommunications Union, 2014). Many users now have smartphones which can be used for far more than simple voice communications as users can conduct complex activities like electronic payments, shopping, and mobile marketing services (Ko et al., 2009; Zhang et al., 2012). The phenomenon of using mobile devices for business activities is generally termed as mobile commerce or simple m-commerce.

M-commerce can be broadly defined as a business model that enables consumers to complete business transactions on a mobile device (Chong, 2013; Zhang et al., 2012). Given the growing nature and scope of m-commerce applications, numerous definitions of m-commerce have emerged to suit the specific context of m-commerce applications. As such, the context of this study will focus

mainly on m-commerce applications that facilitate the buying and selling of goods via a mobile device in line with some prior studies (Chong, 2013; Liebana-Cabanillas et al., 2017; Zhang et al., 2012; Sohn, 2017). Albeit m-commerce has been widely seen as an extension of electronic commerce, m-commerce definitely has numerous advantages over electronic commerce especially in its ability to provide localized services, ubiquity, instantaneous services and personalized services (Liebana-Cabanillas et al., 2017; Zhang et al., 2012). Researchers today consider m-commerce as one of the fastest growing business models (Liebana-Cabanillas et al., 2017), however, just a few years ago m-commerce was considered to be in its early stages with little success in many different regions (Alhinai et al., 2010; Zhang et al., 2012). Also, the mobile commerce adoption and development varies significantly across different countries and has been particularly low in developing countries (Zhang et al., 2012).

In Cameroon, E-commerce penetration is very low, barely at about 2%. However, mobile phone penetration in the country reached 80% at the end of 2015 according to the country's Telecommunications Regulatory Board. Internet penetration in the country currently stands at about 21%. Since most people in sub-Saharan Africa access the internet via mobile phones, m-commerce seems to be a logical direction to be taken by e-commerce businesses in the region. As such, it is not surprising to see that almost all e-commerce giants in Cameroon such as Jumia, and Sellam Quick have deployed smartphone apps for carrying out m-commerce activities. However, the download rates of these apps from Google Play store are quite low, suggesting that much still needs to be done to improve user adoption of m-commerce applications in Cameroon. Consequently, identifying factors that influence m-commerce adoption by consumers in Cameroon can be very useful in helping m-commerce service providers in the country to develop better strategies for increasing the uptake of their services by consumers.

Recently, researchers have shown that the extended unified theory of acceptance and use of technology (UTAUT2) by Venkatesh et al. (2012) is a valuable model for understanding consumer adoption of mobile applications, especially mobile payment solutions (Alalwan et al., 2017; Oliveira et al., 2016). Since mobile-payments are extremely valuable as a means of paying for goods purchased via m-commerce apps, there is a high likelihood that the same UTAUT2 factors that influence the adoption of m-payment solutions could have a similar influence on m-commerce apps in general. Consequently, this study will use the UTAUT2 as the theoretical framework for evaluating the factors influencing consumers' adoption of m-commerce in Cameroon.

The rest of the paper is structured as follows: Section 2 discusses the proposed model and development of the hypothesis. Section 3 outlines the methodology used in the study. Section 4 presents an analysis of the data and finding thereof. Section 5 presents a discussion on the outcome of the hypothesis, as well as the implications of the study and its apparent limitations. Lastly, section 6 presents the conclusion of the study.

2. Proposed model and development of hypothesis

In examining the determinants of technology adoption, researchers have often considered behavioural intention as an important part of understanding actual use behaviour. This follows from the growing empirical evidence that has shown that behavioural intention is one of the best predictors of actual use behaviour (Zhang et al., 2012; Venkatesh et al., 2012). Behavioural intention in the context of m-commerce can be defined as a consumer's subjective probability of using an m-commerce application, such as an application for buying and selling of goods via a mobile device (Chong, 2013; Liebana-Cabanillas et al., 2017; Sohn, 2017). Most m-commerce studies (Al-Louzi and Iss, 2011; Chong, 2013; Liebana-Cabanillas et al., 2017) have thus focused only on behavioural intention to adopt without examining the post-adoption behaviour, as m-commerce is considered to be in its early stages. Additionally, those that have gone further to evaluate the post-adoption behaviour of m-commerce users have primarily focused on use behaviour (Zhang et al., 2012) without considering other post-adoption behaviours. One of such post-adoption behaviours that have been widely ignored is the intention to recommend m-commerce applications. The intention to recommend a technology is a valuable post-adoption behaviour often ignored by researchers who place emphasis on use behaviour (Miltgen et al., 2013; Oliveira et al., 2016). Recommending a technology such as an m-commerce app to others can have significant commercial benefits, as consumers often adopt technologies proposed to them by their social and work associates (Oliveira et al., 2016). Thus, consumer recommendations can be valuable in increasing the penetration of m-commerce in Cameroon through peer-to-peer recommendations. In addition to the intention to recommend, this study also proposes extending the UTAUT2 with perceived risk and perceived trust as these two factors have shown to be valuable in the context of m-commerce and technology adoption in developing countries (Liebana-Cabanillas et al., 2017; Wei et al., 2009; Zhang et al., 2012). The proposed model is presented in Fig. 1.

2.1. UTAUT2 variables

2.1.1. Performance expectancy (PE)

Venkatesh et al. (2012) conceptualised performance expectancy as "degree to which using a technology will provide benefits to consumers in performing certain activities." Performance expectancy, therefore, constitutes the different attributes of information systems that can offer benefits to users. This is quite similar to the perceived usefulness dimension of the Technology Acceptance Model (TAM). The general consensus from prior literature is that individuals will be more inclined to adopt and use a new technology if they believe that the technology will be useful to them (Alalwan et al., 2017; Venkatesh et al., 2012). In the context of m-commerce, performance expectancy will entail the extent to which a consumer perceives that using an m-commerce application can be beneficial in completing their business transactions. However, such a view has received mixed findings with some studies supporting the positive influence of perceived usefulness on intention to adopt m-commerce (Chong, 2013; Faqih and Jaradat, 2015; Liébana-Cabanillas et al., 2017), while others found no significant association (Zhang et al., 2012). Nonetheless, since performance expectancy goes beyond simply perceived usefulness to include aspects of relative advantage and extrinsic motivation (Huang and Kao,