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Factors Determining the Use and Acceptance of Mobile Banking in Colombia

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Abstract

The purpose of this paper is to identify the factors that influence the acceptance and use of mobile banking among users in Medellín (Colombia). The factors we propose are built upon on seven constructs (customer service and support, perceived attitude, perceived usefulness, ease of use, perceived trust, intention to use, and perceived security), which were developed based on the Technology Acceptance Model (TAM) and the literature. We collected the data from 220 questionnaires self-administered by mobile banking users in Medellín. Subsequently, we conducted a confirmatory factor analysis to determine the correlation between the set of observed variables and the constructs defined in the proposed acceptance model. We empirically conclude that the use of mobile banking among the population under study is mainly influenced by users' perceived usefulness, perceived trust, and ease of use. The results show a strong correlation between perceived trust and perceived security and between perceived usefulness and intention to use.

Introduction

Companies strive to innovate their products and processes to organize themselves and interact with customers in new ways (Herman, Sulhaini & Farida, 2020 ^[8]). For instance, technological changes and the use of smartphones have transformed the way the banking sector delivers financial products to users, moving from traditional to self-service channels that save time and trips to the branch (Nichkasova & Shmarlouskaya, 2020 ^[9]).

Despite the growing use of mobile devices, there is still a gap between mobile banking users in different countries (Ortiz & Núñez, 2017 ^[10]). In particular, Latin American users still have a hard time to access financial and banking services in spite of the considerable potential demand for such services (Roa, 2013 ^[11]). The use of mobile technologies becomes, thus, an opportunity to bring financial services closer to vulnerable population groups. In Colombia, according to the Private Council of Competitiveness (2017 ^[12]), online access to banking services (especially new e-payment schemes) should be promoted across the country as a relevant and necessary strategy to increase the use of Information and Communication Technologies (ICTs), favour financial inclusion in e-commerce and productive sector practices, and create access channels to reduce transaction costs for agents.

Online banking has emerged as an effective channel to enhance financial inclusion (Avendaño, 2018 ^[13]). In addition, mobile banking (m-banking) offers multiple services and creates new technology-based banking products (Singh & Srivastava, 2020 ^[14]). In the latter, customers interact with the bank via smartphones to transfer funds, check their balance or detailed account information, issue cheques, and pay bills, among other options (Joy & James, 2018 ^[15]). Therefore, this transactional channel makes it possible to overcome the space and time constraints of traditional banking activities conducted at bank branches and offices.

A vast number of studies have investigated the use and acceptance of mobile banking in countries such as Turkey, Iran, South Korea, Pakistan, India, Jordan, and China (Glavee-Geo, Shaikh & Karjaluoto, 2017 ^[16]; Lee & Son, 2017 ^[17]; Altin, Kaya & Ozlu, 2018 ^[18]; Hamidi & Safareyeh, 2018 ^[19]; Singh & Srivastava, 2018 ^[20]; Siadat, Najjar & Nezafati, 2019 ^[21]; Choi et al., 2020 ^[22]; Ibrahim, Khalil & Ahmed, 2020 ^[23]; Kumar et al., 2020 ^[24]; Al-Dmour et al., 2020 ^[25]; Zhu et al., 2021 ^[26]). However, there is no empirical model to understand the factors that influence such acceptance and use in Colombia (Mejía & Quintero, 2017 ^[27]) despite the great importance mobile technology has gained in this country. According to the Colombian Ministry of Information and Communication Technologies (2020 ^[28]), only 43.09% of the country's current demand for mobile Internet services has been met.

In Colombia, electronic transactions have become popular in recent years due to their low costs and multiple access possibilities. Transactions over different channels reflect the development of the national financial system. For instance, by the end of the first half of 2020, there had been 3,517 million electronic transactions for COP 2,351 billion ([Superintendencia Financiera de Colombia, 2020](#))^[29]. Furthermore, the total amount of transactions over the Internet reached COP 1,646 million, which represented the largest share (45.3%) over the total number of electronic transactions; at ATMs, it was 637 million (17.5%); at branches, 82 million (27.6%); and via mobile phones, 2,469 million (9.6%) ([Superintendencia Financiera de Colombia, 2020](#))^[29]. These figures, however, reveal the low acceptance and use of mobile banking compared to other channels regardless of the high demand for mobile devices in the country.

According to previous studies, the success of new channels for delivering financial services and products (e.g., mobile banking) is due to their acceptance among customers ([Tan & Lau, 2016](#))^[30], which depends on their different levels of understanding and skills to use them ([Alkhaldi, 2017](#))^[31]. Keisidou, Sarigiannidis & Maditinos (2011)^[32] claim that multiple factors influence users' acceptance and use of these channels, such as the type of product or service and its characteristics and individuals' perceptions of security, trust, ease of use, and usefulness.

The mandatory preventive social distancing measures imposed by the Colombian government due to the COVID-19 pandemic revealed shortcomings in the country's financial system, especially in terms of financial inclusion. These shortcomings have prompted the country to adopt digital channels as low-cost and simple tools to carry out transactions ([Formento, 2020](#))^[33], making this topic increasingly interesting to scholars. Therefore, motivated by the fact that mobile banking and its low acceptance are difficult to understand, this study poses the following research question: What are the main factors that drive users in Medellín (Colombia) to accept and use mobile banking?

In view of the above, this research aims to identify the main factors that drive users in Medellín (Colombia) to accept and use mobile banking. For this purpose, we adapted the Technology Acceptance Model (TAM) and applied it to a questionnaire self-administered by 220 mobile banking users to determine the way specific factors (perceived attitude, customer service and support, perceived trust, ease of use, intention to use, perceived security, and perceived usefulness) influence the acceptance and use of said service.

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Cite this article as:

Maria Camila Bermeo-Giraldo, Martha L. Benjumea-Arias, Alejandro Valencia-Arias, Iván A. Montoya-Restrepo. 2021. *Factors Determining the Use and Acceptance of Mobile Banking in Colombia* JTDE, Vol 9, No 4, Article 391. <http://doi.org/10.18080/JTDE.v9n4.391>^[36]. Published by Telecommunications Association Inc. ABN 34 732 327 053. <https://telsoc.org>^[37]

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