

Unravelling the Intention to Continue Using Mobile Money Services in Tanzania: The Moderating Effects of Perceived Security

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ABSTRACT

The study focused on identifying the drivers of users' intention to continue using mobile money services and examining the moderating role of perceived security. The study employed Partial Least Squares Structural Equation Modelling to analyze 341 responses. The findings show that system, information, and service quality influence perceived usefulness and perceived ease of use. Additionally, perceived usefulness, perceived ease of use, security, and convenience drive users' intention to continue using mobile money services. However, user satisfaction does not influence users' intention to continue using mobile money services. Moreover, the study found that perceived security moderates the relationship between user satisfaction and intention to continue using mobile money services. The findings validate previous studies while also extending the existing literature on mobile money services. Furthermore, the study provides theoretical and managerial implications for mobile money service providers, the government, and the academic community.

KEYWORDS

Intention, Mobile Money Services, Perceived Security, Moderation Effects, Tanzania

INTRODUCTION

Mobile money services have been available in Tanzania for some time. They were introduced in 2008 by a fintech company called e-Fulusi, followed by M-Pesa in the same year (Ephraim & Mhina, 2018). The future of mobile money and payment systems in the country appears promising and lucrative. The market is dominated by six players: Vodacom M-Pesa, Tigo Pesa, Airtel Money, Halo Pesa, and T-Pesa, with Vodacom M-Pesa holding the largest market share. The number of mobile money subscribers has increased exponentially since its inception. By 2022, the number of subscribers in Tanzania had reached 47.2 million (Statista, 2023). Similarly, the volume of transactions continues to grow. Reports indicate that over 5.4 billion transactions are conducted annually (Tanzania Communications Regulatory Authority [TCRA], 2023), a volume substantial enough to attract the attention of cybercriminals.

Furthermore, mobile money services contributed USD 150 billion, equivalent to 5.9% of East Africa's gross domestic product, over the 10 years from 2013 to 2022. Due to technological advancements, some mobile money service providers, such as Tigo-Pesa, have established strategic

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partnerships with WhatsApp, enabling users to access their mobile money accounts, make payments, send money, and manage their accounts through the platform.

In recent years, Vodacom M-Pesa and Tigo Pesa have also partnered with Visa and Mastercard to offer virtual cards, allowing users to deposit money and make transactions. The introduction of these services enables mobile money users to participate more flexibly in e-commerce, such as purchasing or paying for goods and services on local and international platforms. Users do not need to register separately to obtain a virtual card; instead, the information provided during mobile money registration is used to create the card, eliminating bureaucratic procedures typically required to acquire such cards through banks.

Other significant developments include the integration of mobile money services with government payment systems, such as the Tanzania Instant Payment System and the Government Electronic Payment System, as well as with banking systems and other payment systems operated by businesses and public institutions. This integration has enhanced flexibility and convenience for users in accessing their funds. However, cross-platform information exchange also creates new avenues for attack.

In fact, according to the TCRA, the number of fraudulent incidents increased from 12,603 in 2022 to 21,788 in 2023 (TCRA, 2023; Wambura, 2024). This rise in fraudulent activities may jeopardize the growth of mobile money services and financial inclusion. One approach to curbing fraudulent activities is to invest in security awareness for money services users, strengthen regulatory frameworks, and provide training for system developers.

Drawing on the success and development of mobile money services in Tanzania, it is vital to understand how users perceive and value the technology over time, as well as the factors that contribute to sustained use or eventual discontinuation. Numerous studies have examined the adoption of mobile money services in Tanzania (Abdinooor & Mbamba, 2017; Economides & Jeziorski, 2017; Koloseni & Mandari, 2017; Lema, 2017; Lubua & Semlambo, 2017; Mbukwa, 2023; Mswahili, 2023). However, with the exception of Koloseni and Mandari (2017), most prior studies have focused on factors influencing initial adoption. It is important to note that findings based on initial adoption may not be sufficient to predict the sustainability of mobile money services. Therefore, examining post-adoption (continuance) behavior is necessary to identify the factors that contribute to the sustained use of mobile money services.

Moreover, despite the noteworthy findings of previous studies, users' perceptions of the security and quality of mobile money services, as well as the associated information and platform, have received little attention in the literature. Consequently, the impact of security on the intention to continue using mobile money services in Tanzania remains largely unknown. Additionally, although perceived security has been identified in previous studies as a potential moderating factor, its moderating effect has not been investigated in the context of mobile money services in Tanzania. Furthermore, previous studies have highlighted the importance of convenience in service delivery (Benoit et al., 2017; Berry et al., 2002; Sabine et al., 2009). However, its influence on users' intention to continue using mobile money services has rarely been explored. Therefore, it is important to examine both the direct and moderating effects of perceived security on the intention to continue using mobile money services.

In light of the previous discussion, this study makes several contributions to the information systems (IS) literature. First, it investigates the moderating effects of perceived security in the context of mobile money services, an area that has received little attention despite its relevance. Second, it examines the impact of IS quality attributes on mobile money, a phenomenon that, to the best of my knowledge, has not yet been studied in Tanzania. Third, the study proposes an integrated model that combines the technology acceptance model (TAM), IS success model (ISSM) attributes, perceived security, and convenience.

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