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Factors Influencing Online Banking Continuance Intentions Among Older Adults: Evidence from an Emerging Market

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ABSTRACT

Purpose: This study investigates the factors influencing online banking continuance intentions among older adults in South Africa. It focuses on a demographic within an emerging market whose unique challenges and needs remain under investigated. Drawing from existing literature, a research model was developed to examine the proposed relationships between key variables.

Design/Methodology/Approach: Data was collected from 256 older adult online banking users through an online questionnaire. Partial least squares structural equation modelling (SEM) technique was used to test the proposed model and hypotheses.

Findings: Perceived ease of use, perceived usefulness, facilitating conditions, hedonic motivation, and convenience had a strong influence on continuance intention. Notably, the security and continuance intention revealed an interesting dynamic, highlighting the need for more user-friendly risk management strategies.

Implications/Originality/Value: Bank marketers could consider factors such as perceived ease of use and convenience to influence online banking continuance intentions among older adults. Platforms must be enjoyable, useful, and secure. This study provides valuable insights for banks targeting older adults in South Africa and similar emerging markets, addressing a key gap in in the literature of continuance intention in his demographic.

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Introduction

The challenges of the "digital divide" and "intelligence barrier" have significantly complicated daily life for elderly individuals, capturing the attention of scholars and practitioners alike (Rilantiana & Nugraheni, 2023; Sinha & Singh, 2023; Rajaobelina et al. 2021). Encouraging older adults to adopt disruptive technologies and adapt to rapid technological advancements is increasingly vital for the sustainable development of the banking sector and for broader societal progress (Cui & Xu, 2022). As online banking—characterised by online platforms and mobile applications—becomes central to personal financial management, there is a pressing need to promote its continuance usage among older adults in emerging markets. These markets often display notable disparities in technology use across age groups, with elderly individuals facing unique challenges in online banking engagement (Cui & Xu, 2022). Barriers such as limited technological literacy, heightened security risks concerns, and a preference for traditional banking restrict their full participation in the digital economy (Herring, 2019). This digital exclusion not only limits elderly individuals' access to financial services but also raises critical questions about financial inclusion in regions where online banking has the potential to yield significant social and economic benefits.

For older adults, the perceived complexity of online banking can make it difficult to navigate, reducing their willingness to adopt it. Furthermore, security concerns, such as fears of fraud or cyberattacks, amplify this hesitancy (Lim et al. 2024). Effective risk management strategies can help ease these concerns and promote safer, more confident use (MacDonald et al. 2012). Emerging markets provide a compelling context for studying online banking continuous usage (Jenik et al. 2022), especially among older adults, as these regions often experience significant socio-economic inequalities. In such markets, online banking continuous usage extends beyond individual preferences, shaped instead by broader societal and economic factors.

This study aims to investigate the extent to which these contextual factors influence older adults. By addressing this gap, the study provides insights to help financial institutions to customize their services to also cater for older adults in emerging markets. Recognising the unique challenges faced by this demographic can guide banks in developing inclusive strategies to promote online banking continuous usage. Encouraging online banking continuous usage among the elderly can enhance financial inclusion in emerging markets, enabling broader access to the conveniences and efficiencies of modern financial services. As online banking continues to evolve, understanding the barriers faced by older adults is essential to ensure equitable access to its benefits. Researchers such as Tiong (2020) have examined the factors influencing behavioural intentions towards the adoption of online banking services in Malaysia, while Wu (2005) investigated determinants influencing the internet banking adoption in South Africa.

This study examines factors influencing online banking continuance intentions among older adults of financial institutions. Academic research has largely neglected older adults' needs and motivations regarding online banking (Rajaobelina et al. 2020). Understanding the factors influencing older adults' sustained use of online banking is increasingly important (Rajaobelina et al. 2020; Moal- Sudbury-Riley et al. 2015; Ulvoas & Taylor, 2014). The study aims to achieve the following objectives:

i. To examine the factors that influence continuance intentions for online banking among older adults in South Africa.
ii. To contribute to the limited body of research on older adults in emerging markets and extend existing knowledge of this demographic in consumer behaviour studies.

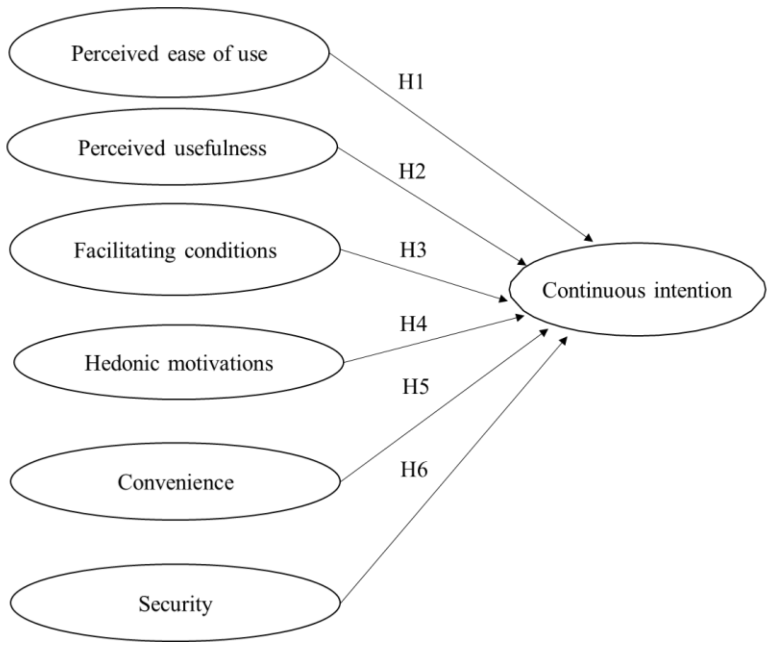
Theoretical Background and Research Hypotheses

The Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) consolidates various technology acceptance theories to predict behavioural intentions through key constructs across social psychology, information systems, and behavioural psychology. UTAUT2 identifies four main factors influencing technology use: Performance Expectancy (belief in technology's ability to enhance performance), Effort Expectancy (ease of use), Social Influence (social pressure to use the technology), and Facilitating Conditions (perceived availability of support for using the technology). These factors are moderated by demographic characteristics like age, gender, experience, and voluntariness, making UTAUT2 valuable for understanding technology continuous usage across diverse groups (Marikyan & Papagiannidis, 2021; Venkatesh et al. 2003).

Proposed Research Model

The study's model extends UTAUT2, examining how perceived ease of use (PEOU), perceived usefulness (PU), facilitating conditions, hedonic motivation, convenience, and security impact older adults' continuance intention to use online banking.

Figure 1. Proposed Conceptual model



Source: (Authors own construction, 2025)

Hypotheses Development

PEOU and Continuance Intention

PEOU is defined as the degree to which the banking application is considered user-friendly. Previous studies (Prayudi et al. 2022; Gupta et al. 2021) support a positive relationship between ease of use and the continuous intention of banking innovations. Based on this, it is hypothesised that:
H1: The relationship between PEOU and continuance intention among older adults is positive.

PU and Continuance Intention

PU relates to the degree which users believe the application will improve their banking experience. Research by Nguyen and Dao (2024) as well as Mamakou (2023), supports the idea that usefulness enhances continuous intentions. We thus hypothesise that:
H2: The relationship between PU and continuance intention among older adults is positive

Facilitating Conditions and Continuance Intention

Facilitating Conditions encompass the perceived availability of resources and infrastructure needed to use the technology (Venkatesh et al. 2003). Studies like Hossain et al. (2019) suggest that adequate support increases the likelihood of technology continuous usage. Based on this, it is hypothesised that:
H3: The relationship between facilitating conditions and continuance intention among older adults is positive.

Hedonic Motivation and Continuance Intention

Hedonic Motivation refers to the satisfaction obtained from utilising the application. Saibaba (2024) and Azka et al. (2023) highlight that enjoyment can significantly drive continued use of digital applications.

We therefore hypothesise that:
H4: The relationship between hedonic motivation and continuance intention among older adults is positive.

Convenience and Continuance Intention
Convenience relates to the time and effort saved by using the banking application. Karunia et al. (2024) indicate that convenient services lead to increased usage and repeat engagement. Based on this, we hypothesise:
H5: The relationship between convenience and continuance intention older adults is positive.

Security and Continuance Intention
Security is crucial for banking clients, as they need assurance against risks associated with digital transactions (Lim et al. 2024; Al-Khalaf & Choe, 2020; Boateng et al. 2016). Studies by Jurnawan & Oktavia (2024) and Hoque et al. (2023) demonstrate that security positively influences continuous usage, particularly when it fosters trust. Based on this, we hypothesise that:
H6: The relationship between security and continuance intention among older adults is positive.

Methodology

Methodology

Target Population
The target population was defined as individuals aged 45-65 years in South Africa who had used online banking in three months prior to the study.

Data Collection
Data was collected through a self-administered online survey over three months, from 1st July to 30th September 2023.

Measurement Instrument
The questionnaire contained two parts. Part I sought basic demographic statistics, gender, age, educational background, income, primary bank of respondents. Part II was designed with questions based on variables of the study. The study measured all constructs using scales adapted from prior research. Perceived ease of use and usefulness included seven items each, based on Pikkarainen et al. (2004). Facilitating conditions and hedonic motivation were measured with items adapted from Venkatesh et al. (2003) and Batra and Ahtola (1991), respectively. Convenience was measured with four items from Pikkarainen et al. (2004), while security was measured with three items from Boateng et al. (2016). A five-point Likert scale was used to rate each item, ranging from “strongly disagree” (1) to “strongly agree” (5).

Data Analysis
Two main phases where followed to analyse the data. Firstly, the measurement model employed Confirmatory Factor Analysis (CFA) to verify the validity and reliability of the constructs, ensuring that the indicators represented the underlying variables. Secondly, the Structural Equation Modeling (SEM) technique was applied to examine the relationships between the variables. SEM combines elements of factor analysis and path analysis, making it ideal for testing theory-driven models involving latent variables (Collier, 2020). A key feature of SEM is that it requires a solid theoretical foundation prior to model development.

Results

Characteristics of the Respondents
The study analysed 256 responses, comprising 36.7% male and 63.3% female participants. The majority were aged 45–50 (55.9%), followed by those aged 51–55 (17.6%), 56–60 (10.2%), and 61–65 (16.4%), In terms of education, 9.8% had qualifications below matric, 15.2% held matric certificates, and 55.5% had post-matric qualifications. From an income perspective, 37.1% reported earning above R20,001 monthly, while 28.9% fell within the R10,001–R20,000 range. Regarding banking preferences, the most commonly used primary bank was Capitec (36.3%), followed by ABSA (23.0%), FNB (16.8%), Standard

Bank (14.5%), and Nedbank (9.4%).

Reliability and Validity

Cronbach alpha values ranged from 0.830 (for facilitating conditions) to 0.960 (for hedonic motivation), all of which exceed the commonly accepted threshold of 0.70 for internal consistency (Kennedy, 2022). All Cronbach's alpha values are well above Kennedy's (2022) recommended cut-off value of 0.70, further supporting the reliability of the survey instrument. Therefore, the measures used in this study are dependable and produce consistent results, indicating a high level of accuracy and minimal measurement error.

The fit indices for the measurement model ($\chi 2$/df = 2.585; CFI = 0.968; GFI = 0.901; RMSEA = 0.039) suggest that the model demonstrates a good fit with the data, indicating the model's appropriateness for the study. For convergent validity, standardised factor loadings, as well as composite reliability (CR) and average variance extracted (AVE) were evaluated. According to established criteria, factor loadings and CR should exceed 0.70, and AVE should be above 0.50. The results revealed that all factor loadings were above the 0.70 threshold, indicating satisfactory convergent validity. Additionally, the lowest CR value (0.835) exceeded the threshold of 0.70 (Sujati & Akhyar, 2020), further supporting the constructs reliability and validity.

The lowest AVE value of 0.777 (continuance intention) exceeded the 0.50 threshold, further confirming the convergent validity of the measurement model. For discriminant validity, the Fornell and Larcker (1981) technique was employed. The finding aligns with the criteria set by Fornell and Larcker (1981), ensuring that each construct is distinct from the others.

Structural Model Analysis

Using IBM AMOS 28.0 version, the structural model was estimated after confirming the measurement model. SEM was applied, following Anderson and Gerbing's (1988) two-step model procedure. This phase focused on analysing the structural pathways and testing the proposed relationships.

Model fit was evaluated using key indices: Tucker and Lewis Index (TLI), Goodness-of-Fit Index (GFI), Confirmatory Fit Index (CFI), and Chi-Square/df ratio (CMIN/df). According to Hair et al. (2019), a model is considered to have a good fit if the TLI, GFI, and CFI values are ≥ 0.90, CMIN/df is ≤ 3, Root Mean Square Error of Approximation (RMSEA) falls between 0.05 and 0.08, and the Standardized Root Mean Square Residual (RMR) is below 0.05 (Hair et al. 2019; Bentler, 1990).

The fit indices demonstrated a good fit, with values χ^2/df = 1.587, NFI = 0.947, TLI = 0.970, CFI = 0.972, IFI = 0.972, GFI = 0.903, and RMSEA = 0.026. These results indicate that the structural model satisfactorily represents the relationships among constructs, aligning well with theoretical expectations. The analysis confirms that the model is both statistically sound and suitable for understanding the hypothesised relationships in the study.

Table 1: Hypotheses Results

Hypotheses	Hypothesised Relationships	Estimates/Path Coefficients	P-value	Outcome
H1	*Perceived ease of use ---> Continuance intention.*	0,828	***	Supported
H2	*Perceived usefulness ---> Continuance intention.*	0,211	***	Supported
H3	*Facilitating conditions ---> Continuance intention.*	0,118	0,004	Supported
H4	*Hedonic motivation ---> Continuance intention.*	0,101	0,005	Supported
H5	*Convenience ---> Continuance*	0,487	***	Supported

	intention.			
H6	*Security---> Continuance intention.*	-0,096	0,008	Supported

Notes: (ns) is not significant at *** p<0.01; **p<0.05; *p<0.1)

Discussion

This study's conceptual model tested six hypotheses on factors influencing elderly users' continuance intention to use online banking. The results, as displayed in Table 1, show significant positive relationships for each factor, confirming their importance in encouraging sustained use of online banking services among older adults.

H1: PEOU of Use and Continuance Intention

PEOU significantly impacted continuance intention to use online banking ($\beta = 0.828$; $p < 0.01$), supporting H1. This aligns with the Technology Acceptance Model (TAM), which identifies ease of use as essential for continued technology use (Davis, 1989). Past studies in online banking (Venkatesh & Bala, 2008; Pikkarainen et al. 2004) have also highlighted that user-friendly interfaces promote continuous usage, making ease of use a pivotal factor for elderly users.

H2: PU and Continuance Intention

The relationship between PU and continuance intention was positive ($\beta = 0.211$; $p < 0.01$), validating H2. Consistent with TAM, perceived usefulness significantly influences sustained online banking use (Davis, 1989; Venkatesh & Bala, 2008). The finding implies that if users find online banking beneficial for managing finances and saving time, they are more likely to continue using it, highlighting the importance of practical benefits for elderly users.

H3: Facilitating Conditions and Continuance Intention

Facilitating conditions, including access to resources, infrastructure, and support, had a significant positive effect on continuance intention ($\beta = 0.118$; $p < 0.004$), supporting H3. Research shows that access to assistance is particularly crucial for older users (Venkatesh et al. 2003). The availability of technical help and user-friendly platforms increases older users' confidence, encouraging ongoing online banking use.

H4: Hedonic Motivation and Continuance Intention

Hedonic Motivation, or the enjoyment derived from using online banking, positively impacted continuance intention ($\beta = 0.101$; $p < 0.005$), supporting H4. This confirms that older users are motivated by engaging and satisfying experiences with technology (Batra & Ahtola, 1991; Holbrook & Hirschman, 1982). Enhancements in online banking, such as user-friendly features and entertainment value, can increase older users' likelihood of continuance intention.

H5: Convenience and Continuance Intention

Convenience also had a significant positive impact on continuance intention ($\beta = 0.487$; $p < 0.01$), supporting H5. The ability to access banking services remotely is a major motivator for elderly users (Pikkarainen et al. 2004). Convenience aligns with the preferences of older adults who value easily accessible banking services, emphasising its role in promoting long-term online banking continuance intention.

H6: Security and Continuance Intention

The results revealed that the Security of using internet banking had a positive impact on continuance intention to adopt online banking among the elderly ($\beta = -0.096$; $p < 0.008$), supporting H6. Despite security being a key factor, its negative coefficient suggests that while security concerns are significant, they may not entirely deter continuous usage if other factors like ease of use and convenience are more compelling. This highlights the balancing act between perceived risks and benefits of online banking.

Discussion

This study highlights key factors influencing older users' continued intention to use online banking in emerging markets. The findings confirm that PEOU, PE, facilitating conditions, hedonic motivation, convenience, and security positively impact online banking continuance intention, aligning with previous technology usage research.

PEOU was a significant factor, supporting the idea that intuitive digital platforms encourage older users' usage. Simple, user-friendly interfaces help reduce barriers and enhance sustained usage. Similarly, perceived usefulness was a critical motivator. Banks are encouraged to emphasise these practical benefits to reinforce older users' continued use.

Facilitating conditions, such as available customer support, were also essential for older users, who are more likely to adopt online banking if they feel adequately supported (Venkatesh et al. 2003). Hedonic motivation, or enjoyment in using online banking, further encourages continuance intention. Integrating features like gamification and rewards could enhance satisfaction, making the experience more appealing.

Convenience was another driver, as online banking's accessibility allows users to manage finances remotely, a strong motivation for older users (Duarte et al. 2018). Lastly, security concerns were paramount, especially for risk-averse older users. Reinforcing security features and effectively communicating these measures can help build trust and alleviate concerns.

In summary, this study suggests that user-centric design, clear benefits, accessible support, engaging experiences, convenience, and strong security measures are crucial for promoting sustained online banking continuance intention among older users.

Theoretical Implications

The study contributes to the online banking literature by providing empirical evidence of the factors influencing continuous intention of online banking among older adults. A key advancement is the extension of UTAUT2, incorporating factors like hedonic motivation, facilitating conditions, convenience, and security; elements vital to understanding online banking continuance intention in older demographics (Venkatesh & Davis, 2000). This extension offers a more comprehensive framework for analysing online banking behaviours, particularly among older adults who may encounter different motivations and barriers than younger users (Alalwan et al. 2018; Rogers, 2003).

Furthermore, the study highlights the significance of user perceptions, particularly those related to PEOU and PU, as fundamental elements in the acceptance of technology (Venkatesh et al. 2003). By focusing on these psychological factors, the research enriches the theoretical discourse surrounding consumer behavior. It suggests that a deeper understanding of how older adults perceive online banking services can provide valuable insights for developing targeted strategies that influence continued use (Venkatesh et al. 2003). Consequently, this study not only enhances the theoretical framework of online banking continuance intention but also encourages further exploration into how these factors interact and influence consumer behaviour within the rapidly evolving digital landscape (Venkatesh & Bala, 2008).

Practical Implications

This study offers insights for banks aiming to improve online banking continuance usage among older adults. Developing intuitive, accessible interfaces can significantly ease navigation, addressing a major continuous usage barrier for older adults and enhancing engagement (Venkatesh & Bala, 2008; Tung et al. 2008). Effective communication of online banking's value is also crucial. Banks should clearly articulate benefits like time savings, increased control over finances, and convenience. This can improve perceived usefulness, motivating elderly users to adopt online banking services (Davis, 1989; Venkatesh et al. 2003). Continuous innovation in online banking apps is essential to keep services relevant to older adults' evolving needs. Regular updates and new features can improve user experience and maintain engagement, which is vital in a competitive market (Alalwan et al. 2018). Additionally, hedonic motivation plays a role in continuance usage. Incorporating gamification elements or rewards for specific actions can increase enjoyment and foster positive attitudes toward online banking (Sharif & Raza, 2017; Salimon et al. 2016). This emphasis on rewarding experiences can help shift older users' perception of digital platforms.

Convenience is a key factor that should not be overlooked. Features like 24/7 service access, faster transactions, and accessible customer support are particularly appealing to older adults who prioritise efficiency (Duarte et al. 2018; Jebarajakirthy & Shankar, 2021). Addressing these aspects can facilitate a smoother transition to online banking. Security remains a top concern. Implementing effective risk management strategies can reduce these concerns and encourage safer, more confident usage. Banks must invest in strong cybersecurity measures and communicate these protections effectively to build trust and alleviate fears of cyber threats (Nel & Boschoff, 2021; Raman, 2019).

In emerging markets, where older populations may be hesitant to adopt digital tools, targeted marketing strategies that address specific barriers and preferences of this demographic can enhance usage rates. By considering the unique needs of older users, banks can foster a more inclusive online banking environment, ultimately supporting financial inclusion and bridging generational gaps in technology use (Rogers, 2003).

Limitations and Areas of Future Research

This study has several limitations. First, its limited sample size and geographic scope may restrict the generalisability of its findings, as older adults' attitudes toward online banking could vary across cultural and socioeconomic backgrounds. Future research could address this by expanding sample diversity and exploring how such factors impact online banking continuous intention globally.

Another limitation is the study's cross-sectional design, which only captures behaviours at a single time point. This approach may overlook changes in continuous usage behaviour over time as digital literacy and security technology improve. Longitudinal studies would offer a more dynamic understanding of how older adults' behaviours evolve with technological advancements and shifting attitudes. The reliance on self-reported data could affect data accuracy, due to participant potential biases, such as social desirability bias. Lastly, the study does not distinguish between mobile and online banking, which may involve distinct influences, including ease of device use and varying security concerns. Future research could examine these differences, exploring specific barriers like digital literacy, privacy, and technological anxiety to develop tailored strategies for older adults and foster wider online banking continuance usage.

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