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BEHAVIORAL BARRIERS TO DIGITAL BANKING ADOPTION IN ARMENIA: THE GAP BETWEEN TECHNOLOGICAL READINESS AND CUSTOMER ACCEPTANCE

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Abstract: The recent pace of digitalization of the banking sector has significantly expanded opportunities for efficiency, accessibility and financial inclusion. However, in Armenia, despite technological readiness, customer adoption remains uneven. A considerable share of customers continues to rely on traditional service channels, indicating a persistent gap between technological capability and actual usage.

This study argues that this gap is primarily behavioral. Leveraging on behavioral economics, innovation diffusion theory and technology acceptance literature, the research examines how cognitive biases, perceived risk, trust and habit persistence influence digital banking adoption.

The paper introduces the concept of a "flattening of the adoption curve," suggesting that in digitally saturated environment characterized by rapid innovation and information overload, adoption becomes more gradual and behaviorally constrained.

Keywords: digital banking, customer behavior, behavioral economics, trust, innovation adoption, customer experience (CX), brand experience (BrandX).

Research aims: examine behavioral factors influencing digital banking adoption in Armenia, assess limitations of technology-driven models, and develop a behaviorally informed framework for managing customer adoption in digital environment.

Research novelty: This study introduces a behavioral perspective on digital banking adoption, proposing a "flattening" of the adoption curve and a CX"BrandX framework explaining the gap between technological readiness and customer behavior.

Introduction

Digital transformation has significantly reshaped the banking sector, enabling the expansion of digital channels, mobile platforms and digital delivery of financial services (McKinsey & Company, 2024). In many markets, including Armenia, digital infrastructure has reached a point where access to banking technologies is no longer the main barrier to usage.

At the same time, increased availability has not led to equally strong adoption. The relationship between technological innovation and customer behavior remains uneven and, in many cases, slower than expected. This disconnect is often illustrated by the statement attributed to Henry Ford: *"If I had asked people what they wanted, they would have said faster horses."* Beyond its metaphorical value, the quote reflects a persistent behavioral pattern: people tend to interpret new solutions through familiar experiences, which can limit their willingness to adopt them.

This observation challenges the traditional assumption that individuals make rational, utility-maximizing decisions based on available information (Simon, 1955). In practice, decision-making is often shaped by behavioral and psychological factors (Kahneman, 2011).

In today's digital environment, this effect is further reinforced by the rapid pace of technological change and the growing volume of accessible information. Rather than accelerating adoption, this can contribute to cognitive overload and lead to more cautious and selective decision-making (Fan et al., 2024).

Based on this, the study advances the hypothesis that digital banking adoption is constrained primarily by behavioral factors rather than technological readiness.

To examine this, the research adopts a qualitative and conceptual approach and leverages on behavioral economics, innovation diffusion theory and customer experience literature, supported by primary and secondary data and contextual analysis of the Armenian banking sector.

The aim of the study is to provide a behaviorally grounded interpretation of digital banking adoption and to outline its implications for managing customer behavior in digital financial environment.

Research Results

Behavioral Nature of Financial Decision-Making

The findings indicate that financial decision-making in the context of digital banking cannot be fully explained through rational choice models. While classical economic theory assumes that

individuals evaluate alternatives based on utility maximization (Simon, 1955; Varian, 2014), observed behavior often deviates from this assumption, reflecting the influence of cognitive and emotional factors (Kahneman, 2011; Thaler, 2015).

In digital banking environment, these effects become particularly visible due to the perceived consequences of user mistakes. Several behavioral mechanisms play a central role.

- ✓ Status quo bias leads individuals to prefer familiar/traditional banking channels, even when digital alternatives offer greater efficiency. This tendency is reinforced by established routines and reduces the likelihood of behavioral change.
- ✓ Loss aversion increases sensitivity to potential financial mistakes. Customers tend to weigh potential losses more heavily than equivalent gains, which discourages experimentation with new digital services.
- ✓ Risk perception significantly influences adoption decisions. Digital transactions are often perceived as riskier than they objectively are, particularly when technologies are unfamiliar. This perception persists even in environments where digital systems are secure.

These findings suggest that adoption behavior is shaped not only by functional value but also by how individuals perceive uncertainty and control. As a result, digital banking adoption should be understood as a behavioral adjustment rather than a purely technological transition.

Changing Dynamics of Innovation Diffusion

The analysis suggests that traditional models of innovation diffusion do not fully capture current adoption patterns in digital banking. According to Rogers (2003), adoption typically follows a relatively smooth progression from innovators to the majority. However, in contemporary digital environment, this process appears less predictable.

One contributing factor is the increasing complexity of the digital environment. Customers are continuously exposed to new technologies, services and information, which often leads to cognitive overload and more selective decision-making (Fan et al., 2024). This shift is reflected in what this study conceptualizes as a "flattening of the adoption curve." Instead of a rapid transition from early adopters to the majority, adoption becomes more gradual and dispersed.

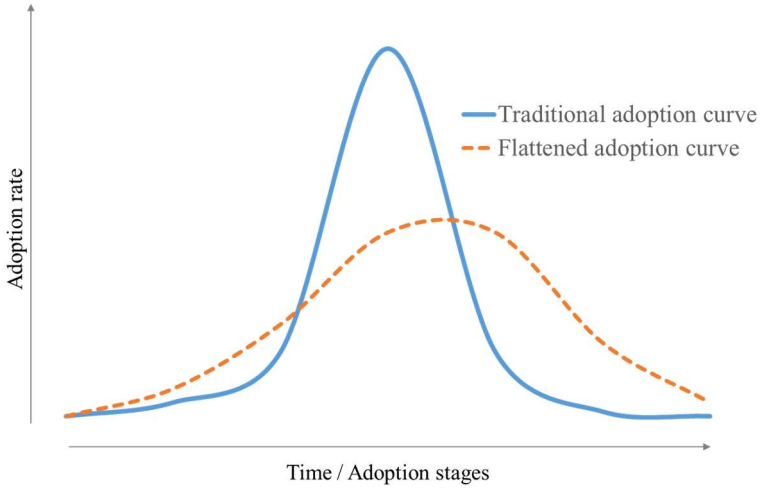


Figure 1. Traditional vs. flattened innovation adoption curve in digitally saturated environment.

In practical terms, this means that the expected momentum of diffusion weakens. The majority does not follow early adopters at the anticipated pace, and adoption becomes increasingly dependent on behavioral readiness rather than technological availability.

Adoption Structure and Segment Imbalance

To further examine this pattern, the study applies the classical segmentation of innovation diffusion (Rogers, 2003) to the Armenian context. Based on this model, the potential user base can be distributed across adoption segments, with the majority (early and late majority) representing the largest share of potential users.

Table 1. Distribution of potential digital banking users by adoption segments

Source: *Author's own work.*

Innovators	Early adopters	Early majority	Late majority	Laggards
2.5%	13.5%	34%	34%	16%
47.5k	256.5k	646k	646k	304k

However, when compared to actual usage, a structural imbalance becomes evident. Mobile banking users in Armenia are estimated at approximately 800,000 by the end of 2025, based on the author's estimation derived from industry data, regulatory insights and market observations. This figure remains significantly below the potential user base, which indicates that adoption slows at the transition from early adopters to the majority.

The majority segments are behaviorally distinct. They are generally more risk-averse, require stronger evidence of reliability

and depend on social validation before adopting new technologies. As a result, adoption does not progress automatically and requires additional behavioral reinforcement. This imbalance provides further support for the concept of a flattened adoption curve, where diffusion is constrained not by access, but by behavioral readiness.

Digital Readiness vs. Adoption Gap

The discrepancy between technological readiness and actual adoption becomes more apparent when comparing key indicators of digital accessibility with mobile banking usage.

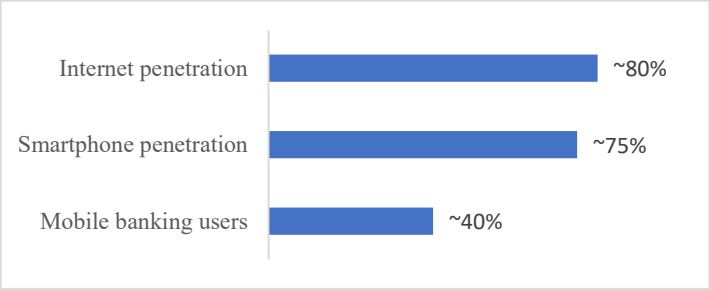


Figure 2. Digital readiness vs mobile banking adoption in Armenia
Source: *Author's own work.*

While internet penetration in Armenia is estimated at around 80%, and smartphone usage ranges between 70% and 85% of the adult population, mobile banking adoption remains at approximately 40-45% (DataReportal, 2026).

The gap between the digital readiness and mobile banking adoption (see Figure 2) highlights a central finding of the study: **access to technology does not automatically lead to adoption**. The difference between capability and usage suggests that

behavioral factors represent the primary constraint on digital banking adoption.

Perceived Risk and Trust as Structural Barriers

A key barrier identified in the analysis is the discrepancy between perceived and actual risk. Customers tend to evaluate digital banking services based on familiarity rather than objective security.

This discrepancy can be illustrated through the introduction of biometric authentication technologies in banking. For example, face-recognition-based payment solutions, while objectively more secure than traditional password-based systems, are sometimes perceived by users as intrusive or risky compared to a more vulnerable password authentication. This reflects a broader behavioral pattern: individuals tend to trust what is familiar rather than what is objectively safer. This observation is consistent with research suggesting that familiarity strongly influences perceived safety, often outweighing objective risk assessments (Gigerenzer, 2014).

Trust plays a central role in this process. While customers may trust financial institutions, this trust does not automatically extend to digital interfaces. Digital channels must independently establish credibility through design, communication and user experience.

Additionally, regulatory requirements which are essential for security, may introduce friction into digital journeys. In some cases, the need for physical verification can disrupt digital processes, thereby reinforcing reliance on traditional channels. These factors

collectively slow adoption and increase dependency on familiar banking behaviors.

Comparative Perspective: Digital Banking vs. AI Adoption

A useful contrast can be observed when comparing digital banking adoption with the rapid uptake of artificial intelligence (AI) tools. Recent global evidence indicates a sharp increase in the use of generative AI technologies, which signals their rapid integration into everyday digital activities (McKinsey & Company, 2024).

Unlike digital banking, which involves direct financial consequences, many AI applications are perceived as low-risk and easily reversible. This encourages experimentation and accelerates adoption. In contrast, digital banking requires a higher level of trust and carries perceived financial consequences, which increases caution and slows adoption.

Table 2. Comparison of Digital Banking, AI Tools, and Social Media Adoption Characteristics

Factor	Digital banking	AI tools	Social media
Perceived risk	High	Low	Low
Reversibility	Low	High	High
Adoption speed	Low	High	Very high
Trust requirement	High	Medium	Low

This comparison reveals a key insight: adoption speed is determined not only by access, but also by perceived risk and behavioral factors.

Behavioral Fragmentation and Declining Loyalty

The findings indicate increasing fragmentation in customer behavior within the Armenian banking sector. Customers are no longer limited to a single financial institution but frequently maintain relationships with multiple banks simultaneously.

Based on the author's estimation derived from market observations and available industry data, approximately 65% of customers use services from more than one bank, with an average of 2–3 banking linkage per user. This reflects a shift away from traditional models of stable, long-term loyalty.

This pattern is consistent with broader changes in digital financial environment, where reduced switching barriers and increased accessibility enable customers to compare and use multiple service providers (Accenture, 2024). As a result, customer relationships become more transactional and situational. The decision to use a particular bank or digital channel is increasingly driven by immediate value, perceived reliability and convenience.

This fragmentation also affects digital adoption. When customers engage with multiple institutions, the use of digital platforms becomes selective, which makes adoption an ongoing behavioral choice.

Implications for Customer Behavior Management

The findings suggest that digital banking transformation should be approached primarily as a behavioral challenge. Technological capability alone is insufficient to drive adoption. Instead, financial institutions must actively manage customer behavior, involving:

- ✓ reducing cognitive effort through simplified interfaces

- ✓ strengthening trust through transparent and consistent communication
- ✓ addressing perceived risk through guidance and reassurance
- ✓ supporting gradual adoption through hybrid service models

The findings also suggest the need to reconsider how customer adoption is managed in digital banking. Broader brand-related perceptions play a critical role in shaping trust, familiarity and repeated behavioral choice. As customer relationships become more fragmented and switching barriers decline, these factors act as a stabilizing mechanism that supports long-term engagement.

This indicates that effective digital transformation requires a dual focus: reduction of friction in interaction while simultaneously reduction of uncertainty in decision-making.

Conclusion

This study examined the relationship between technological readiness and customer adoption in digital banking, using the Armenian context as an illustrative case. The findings indicate that the limited adoption of digital banking services cannot be explained only by technological constraints. Despite high levels of digital accessibility, customer behavior remains selectively resistant to digital channels.

The analysis confirms the central hypothesis of the study: digital banking adoption is constrained primarily by behavioral factors rather than technological readiness. Cognitive biases, perceived risk, trust and habit persistence significantly influence customer decision-making, which slows down the transition from early adopters to the majority.

The findings further suggest that the dynamics of innovation diffusion are evolving. Rather than following a rapid and predictable trajectory, adoption becomes more gradual and fragmented. This phenomenon supports the concept of a flattened adoption curve in digitally saturated environment. In addition, the observed patterns of multi-banking and declining loyalty indicate that customer behavior is becoming increasingly fluid and context dependent.

Overall, the results highlight that successful digital transformation requires a shift from technology-centered approaches toward a deeper understanding of customer behavior. Adoption depends not only on what technologies enable, but on how customers perceive, evaluate and trust them.

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Լիլիթ Մաթևոսյան
Եվրասիա միջազգային համալսարան, ասպիրանտ

Այս հետազոտությունը ուսումնասիրում է թվային բանկային ծառայությունների ընդունման վարքագծային խոչընդոտները Հայաստանում: Չնայած երկրում առկա բարձր տեխնոլոգիական պատրաստվածությանը՝ ներառյալ ինտերնետի լայն հասանելիությունը և սմարթֆոնների տարածվածությունը, թվային բանկինգի կիրառումը մնում է համեմատաբար սահմանափակ:

Հետազոտության արդյունքները ցույց են տալիս, որ խնդիրը պայմանավորված է ոչ թե տեխնոլոգիական հնարավորությունների պակասով, այլ հաճախորդների վարքագծային առանձնահատկություններով: Որոշումների վրա էական ազդեցություն ունեն ռիսկի ընկալումը, վստահության մակարդակը, ձևավորված սովորույթները և ճանաչողական շեղումները:

Աշխատանքում առաջարկվում է «նորարարությունների ընդունման հարթեցված կորի» գաղափարը: Այն ցույց է տալիս, որ ժամանակակից թվային միջավայրում նորարարությունների տարածումը դանդաղում է և ավելի շատ կախված է վարքագծային գործոններից: Ուստի, թվային բանկինգի արդյունավետ զարգացումը պահանջում է ոչ միայն տեխնոլոգիական լուծումներ, այլ նաև հաճախորդների վարքագծի և ակնկալվող փորձառության խորքային ըմբռնում:

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