

# **TECHNOLOGY IS READY, CUSTOMERS ARE NOT: BEHAVIORAL BARRIERS TO DIGITAL BANKING IN ARMENIA**

**Lilit MATEVOSYAN**, Eurasia International University, researcher

<https://orcid.org/0009-0000-6049-5314>

[mvlilit@gmail.com](mailto:mvlilit@gmail.com)

**Abstract:** The rapid digitalization of the banking sector over the past two decades both globally and in Armenia has significantly expanded opportunities for efficiency, accessibility and financial inclusion. In Armenia, strong digital infrastructure, high smartphone penetration, certain economic regulations and active competition among banks have created favorable conditions for digital banking further technological development and adoption by customers.

However, despite this technological readiness, customer behavior has not evolved at the same pace. Many users continue to rely on physical branches and traditional service channels, even when more convenient and less time-consuming digital alternatives are available. This indicates a persistent gap between technological capability and actual usage.

This paper argues that the primary constraint is not technological, but behavioral. Based on behavioral economics and innovation diffusion theory, the study examines how cognitive biases, perceived risk, trust and habit persistence influence financial decision-making. It also introduces the concept of a “flattening” of the traditional innovation adoption curve in digitally saturated environment.

The findings suggest that digital banking transformation should be understood as a behavioral transition rather than a purely technological process. The study provides conceptual insights into more effective customer behavior management strategies in commercial banks.

**Keywords:** Digital banking, customer behavior, behavioral economics, trust, innovation adoption, Armenia, financial decision-making, customer experience (CX), brand experience (BrandX).

**JEL code:** M31

**Research aims:** The primary aim of this research is to examine the behavioral factors that influence the adoption of digital banking services in the

Republic of Armenia and to identify the key challenges faced by commercial banks in managing customer behavior during digital transformation.

The study specifically aims to:

- analyze the role of behavioral biases in financial decision-making;
- explore the impact of trust and perceived risk on digital banking adoption;
- examine the applicability of innovation diffusion theory in the modern digital environment;
- identify the gap between technological readiness and customer behavior;
- provide conceptual implications for customer behavior management in banking.

**Research novelty:** This research contributes a novel integrated behavioral perspective on digital banking adoption by combining insights from behavioral economics, innovation diffusion theory and customer experience management within a modern digital environment.

First, the study contributes to existing literature by highlighting a shift in how innovation spreads over time. Classical models (Rogers, 2003) describe adoption as a gradual transition from early adopters to the majority. However, this research suggests that in today's digital environment, this process is no longer as smooth or predictable. Rapid technological change, constant exposure to new solutions, and information overload make customers more cautious in their decisions. As a result, adoption becomes slower and increasingly influenced by behavioral factors such as trust and perceived risk. This shift is described as a "flattening of the adoption curve."

Second, the research reframes digital banking adoption as a behavioral rather than technological challenge. While prior studies often focus on infrastructure, usability, or technological acceptance, this study emphasizes the discrepancy between technological readiness and actual customer behavior. It demonstrates that even in environments with high digital accessibility, adoption remains constrained by cognitive biases, emotional responses, and habit persistence.

Third, the study contributes a conceptual framework for customer behavior management through the integration of customer experience (CX) and brand experience (BrandX). Unlike traditional approaches that treat CX primarily as a service quality or usability factor, this research positions CX as

a mechanism for reducing friction in interaction, while BrandX is conceptualized as a long-term driver of trust, familiarity, and behavioral commitment. This dual perspective provides a more comprehensive understanding of how financial institutions can actively influence customer behavior in digital environments.

Finally, the research adds contextual value by applying these concepts to the Armenian banking sector, where high levels of digital infrastructure coexist with behavioral resistance to adoption. By incorporating empirical observations on multi-banking behavior and declining loyalty, the study highlights the increasing importance of behavioral differentiation in competitive financial markets. Together, these contributions provide a more nuanced understanding of digital banking transformation and establish a foundation for behaviorally informed strategies in financial services.

## **Introduction**

Digital transformation has become a central driver of socio-economic development in the modern era. In the banking sector, this transformation is particularly evident through the expansion of mobile applications, online platforms and digital financial services. These developments have created significant opportunities for improving operational efficiency and expanding access to financial services.

At the same time, customer behavior has not evolved at the same pace as technological innovation. This gap between technological capability and actual usage remains a critical challenge for financial institutions.

This issue is often illustrated by a statement commonly attributed to Henry Ford: *“If I had asked people what they wanted, they would have said faster horses.”* The statement reflects the tendency of individuals to interpret new possibilities through the lens of familiar experiences. In a similar way, banking customers often continue to rely on traditional channels even when more efficient digital alternatives are available.

In the current digital environment, however, the situation is further complicated by the increasing speed of innovation and the growing volume of information. Customers are continuously exposed to new technologies, which can lead not to faster adoption, but to greater selectivity and caution.

This raises a key research question: **why do customers resist digital banking even when the technology is already available and functional?**

This study is based on the hypothesis that the adoption of digital banking services is constrained more by behavioral factors such as trust, perceived risk, and cognitive biases, than by technological availability. Drawing on behavioral economics and innovation diffusion theory, the research examines how customer decision-making is shaped by psychological and emotional factors rather than purely rational evaluation.

Methodologically, the study combines a review of theoretical literature with the analysis of secondary data on digital infrastructure and banking trends, as well as primary research, including brand tracking surveys and targeted customer behavior surveys conducted in the Armenian market. This multi-source approach allows for both conceptual and empirical examination of digital banking adoption.

The findings suggest that digital banking transformation should be understood not only as a technological shift but also as a behavioral transition. The study contributes to the literature by highlighting the growing gap between technological capability and customer readiness, and by proposing behaviorally informed approaches to customer management in commercial banks.

## **Findings**

### **1. Behavioral Nature of Financial Decision-Making**

Traditional economic theory assumes that individuals act rationally, making decisions that maximize utility based on available information (Simon, 1955; Varian, 2014). However, research in behavioral economics demonstrates that decision-making is often influenced by cognitive biases and emotional factors (Kahneman, 2011; Thaler, 2015).

As Ariely (2008) suggests, individuals are “predictably irrational,” meaning that their behavior follows systematic patterns that deviate from purely rational models. In financial context, these deviations are particularly visible due to the presence of uncertainty, perceived risk and emotional involvement.

Several behavioral mechanisms are especially relevant to the emerging digital banking:

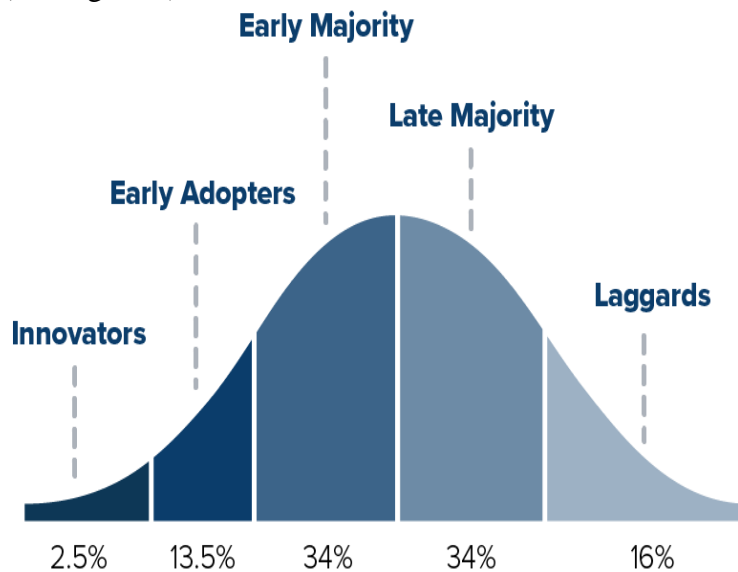
- **Status quo bias**, leading individuals to prefer familiar banking methods;
- **Loss aversion**, resulting in heightened sensitivity to potential financial errors;

- **Risk perception**, particularly related to cybersecurity and system reliability;
- **Trust**, which remains a fundamental component of financial relationships.

These factors help explain why customers may hesitate to adopt digital banking services despite their functional advantages.

## 2. Innovation Adoption and the Changing Diffusion Dynamics

The adoption of new technologies is commonly explained through Rogers' Diffusion of Innovations theory (Rogers, 2003), which categorizes individuals into innovators, early adopters, early majority, late majority and laggards (see Figure 1).



*Figure 1. Innovation adoption lifecycle by based on Everett Rogers' diffusion of innovation model*

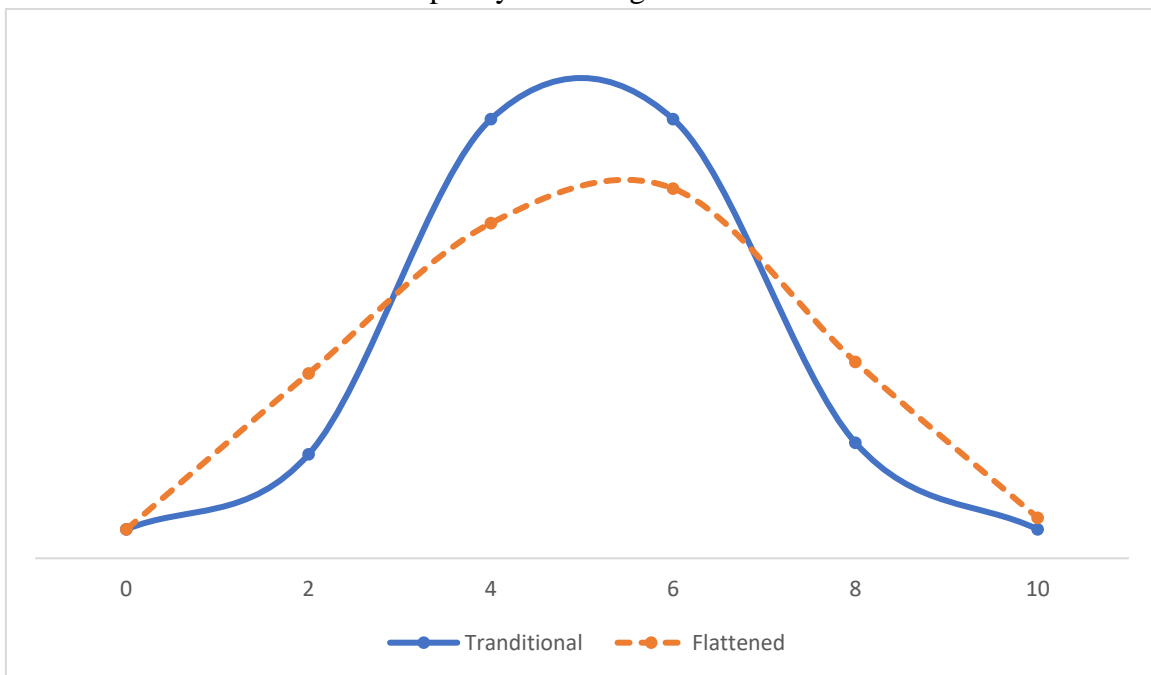
Adoption doesn't happen uniformly. Each segment of the market responds to innovation differently, depending on their risk tolerance, access to information and trust in change. While early adopters focus on what's possible, the early majority wants proof that an innovation works in real-world conditions and addresses their specific needs with easier solutions. What excites visionaries rarely convinces pragmatists.

A key insight into this model is that the majority of the population belongs to the early and late majority segments, which are typically more

cautious and risk-averse. These groups require higher levels of trust, social validation and perceived reliability before adopting new technologies.

In the contemporary digital environment, the dynamics of this process appear to be evolving. The rapid pace of innovation and the constant exposure to new technologies from one side and the overload of ads in all touchpoints have increased cognitive load and reduced the likelihood of immediate adoption. As a result, the transition from early adopters to the majority becomes slower and less predictable.

This phenomenon can be described as a **flattening of the adoption curve** (see **Figure 2**), where diffusion becomes more gradual and dependent on behavioral factors rather than purely technological ones.



*Figure 2. Comparison of traditional innovation diffusion and flattened adoption curve in digitalizing environment*

In the Armenian context, digital banking infrastructure has been developing for more than a decade. Mobile banking applications were first introduced in the early 2010s, with more rapid expansion in recent years. Today, a significant share of banking services including payments, transfers, and product activation, can be performed through mobile applications.

From a regulatory perspective, the environment further supports digital adoption. Cashless transactions are actively promoted, and salary payments for formally employed individuals are predominantly processed through bank

accounts. These conditions create a structurally favorable environment for the transition toward digital banking.

However, adoption levels remain moderate. By the end of 2025, the number of mobile banking users is estimated at approximately 800,000<sup>\*1</sup>, representing around 40–45% of the target population. This contrasts with smartphone penetration, which is estimated at 70–85% of the adult population.

This discrepancy suggests that the key limitation is not access to technology, but the behavioral readiness of customers to actively use digital banking services.

### **3. Perceived Risk vs. Actual Risk**

An important barrier to digital banking adoption is the discrepancy between perceived and actual risk. Customers often evaluate new technologies based on familiarity rather than objective security.

For example, the introduction of biometric payment systems by Amio bank, such as face-recognition-based transactions, which is a significant innovation not only in the country but in the region, has sometimes been met with skepticism and concern. Some users interpret such technologies as intrusive or unsafe, despite the fact that biometric authentication can be more secure than traditional password-based systems.

This pattern reflects a broader behavioral tendency: individuals tend to overestimate risks associated with unfamiliar technologies while underestimating risks associated with familiar ones. Similar reactions have historically accompanied the introduction of major innovations, including electrical appliances and mobile communication technologies. Thus, perceived risk is not solely a function of technological design, but a behavioral construct shaped by experience, trust and cognitive framing.

### **4. Trust and Digital Transformation**

Trust plays a central role in financial decision-making. As Botsman (2017) argues, trust can be considered the “currency” of the modern digital economy. In traditional banking, trust is built through physical presence, interpersonal interaction and long-term relationships. In digital banking, however, trust must be transferred to technological systems and interfaces.

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<sup>1</sup> Author assessment based on relevant nationwide survey data (brand tracking research)

This transition is not automatic. Customers may trust banks as institutions while simultaneously distrusting digital channels. This creates a gap that can significantly slow the adoption of digital services.

In addition to behavioral factors, certain institutional conditions may also contribute to friction in digital adoption. While regulatory frameworks are essential for ensuring security and compliance, they may occasionally require the reintroduction of physical interactions within otherwise digital processes. For example, specific verification procedures or customer categories may still necessitate in-person identification.

Although such measures are justified from a risk management perspective, they can create inconsistencies in the customer journey and reinforce reliance on traditional banking channels. From a behavioral standpoint, even limited interruptions of digital processes may reduce perceived reliability and slow the transition toward fully digital usage.

## **5. Implications for Customer Behavior Management**

The findings suggest that digital banking transformation should be approached as a behavioral challenge rather than solely a technological one.

Commercial banks need to consider:

- simplifying digital interfaces to reduce cognitive effort;
- strengthening trust through transparent communication;
- reducing perceived risk through education and reassurance;
- providing hybrid service models that combine digital and human interaction;
- applying behavioral insights to guide customer decisions.

As Mullainathan and Shafir (2013) emphasize, even small contextual changes can significantly influence behavior. This highlights the importance of behavioral design in financial services.

From a strategic perspective, the findings suggest that traditional approaches to customer management based solely on service quality are no longer sufficient. In increasingly competitive and digitally saturated environments, customer relationships become more fluid, with lower switching barriers and higher exposure to alternative offerings.

This shift highlights the evolving role of customer experience (CX) and brand experience (BrandX). While CX remains essential for ensuring usability and reducing friction in individual interactions, it primarily influences short-

term engagement. In contrast, BrandX plays a more critical role in shaping long-term trust, familiarity, and preference.

As customers increasingly engage with multiple financial institutions simultaneously, differentiation based solely on functional performance becomes less effective. In this context, BrandX serves as a stabilizing mechanism that anchors customer perception and reduces behavioral uncertainty. Therefore, effective customer behavior management requires the integration of both CX and BrandX as complementary tools for guiding adoption and sustaining engagement.

### **Conclusion**

The analysis presented in this study demonstrates that the limited adoption of digital banking services in Armenia cannot be attributed to technological constraints. On the contrary, the country exhibits a high level of digital readiness, supported by widespread internet access, extensive mobile connectivity, and the availability of advanced banking applications.

Despite this, customer behavior remains selectively resistant to digital channels. This highlights a critical insight: the primary barrier to digital transformation is behavioral rather than technological.

Furthermore, the findings suggest that traditional assumptions about customer loyalty are becoming increasingly outdated. Empirical observations indicate that approximately 65% of banking customers use services from multiple banks, with an average of 2–3 banking relationships per user. Additionally, a significant proportion of customers remain open to switching financial institutions depending on specific product offerings. This reflects a shift toward more transactional and less stable customer relationships in the banking sector.

In such an environment, reliance on customer experience (CX) alone is insufficient to ensure long-term engagement. While CX plays a crucial role in facilitating immediate interactions by reducing friction and improving usability, it primarily drives short-term outcomes. As switching barriers decrease and competition intensifies, customer loyalty becomes increasingly fragile.

In contrast, brand experience (BrandX) emerges as a more sustainable mechanism for influencing behavior. Unlike CX, which operates at the level of interaction, BrandX shapes long-term perceptions, trust, and emotional

connection. It transforms digital banking from a functional tool into a psychologically acceptable and familiar environment.

This distinction suggests that effective customer behavior management requires a dual approach. CX reduces friction in transactions, while BrandX reduces friction in decision-making. Together, they form an integrated system that not only enables usage but also drives preference and trust.

From a managerial perspective, this implies that commercial banks must move beyond purely technological and operational strategies. Instead, they should:

- design seamless and intuitive customer journeys to minimize cognitive effort;
- actively manage perceived risk through transparent communication and reassurance;
- build consistent and recognizable brand experiences to strengthen trust;
- segment customers based on behavioral readiness rather than solely demographic characteristics;
- apply behavioral insights to guide customers through gradual digital adoption.

Ultimately, customers do not resist innovation itself, but the uncertainty associated with it. Therefore, successful digital transformation depends not on increasing technological sophistication alone, but on increasing familiarity, clarity, and trust.

**The future of digital banking will be determined not by technological capability, but by the ability to design experiences and brands that people are ready to trust and use.**

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