

CONSUMER BEHAVIOR TOWARDS NEW FINANCIAL TECHNOLOGIES: AN ANALYSIS OF THE ADOPTION OF DIGITAL BANKING SERVICES

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Abstract

This paper examines the determinants of digital banking adoption in light of rapidly evolving technologies and their impact on consumers' financial behavior. The study explores how risk perception, trust in digital security, familiarity with technology and convenience preferences influence the decision to use online or mobile banking solutions. Also discussed are relevant theoretical models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM), which help to explain the factors that influence adoption intentions of new financial technologies.

Keywords: consumer behavior, digital banking adoption, financial technologies, adoption patterns, perceived risk, digital literacy, financial infrastructure.

Classification JEL: D4, O16, F65, F16, M2

1. Introduction

In recent decades, the banking sector has undergone profound transformations driven by the rapid development of financial technologies. These changes are not only having a significant impact on financial institutions, but also on consumer behavior, which is increasingly attracted by digital banking. With the digitization of the economy, consumers have at their disposal innovative solutions that promise efficiency, accessibility and personalization. However, adoption of these technologies is not a uniform process, but is influenced by a range of economic, social and psychological factors. This paper aims to analyze consumer behavior in the face of new financial technologies, focusing on the factors influencing the adoption of digital banking services, the relevant theoretical models and their impact on users' financial behavior.

2. Factors influencing digital banking adoption

The adoption of digital banking by consumers is not only a technological choice but also an economic and social decision. Among the most important factors influencing this adoption are perceptions of benefits and risks, associated costs, confidence in technological security and financial literacy.

First and foremost, the perceived benefits of using digital banking are key to consumers' decisions. Digital services promise time savings through quick access to accounts, instant payments and easy savings management. Digital platforms also allow a greater level of personalization of financial products, tailored to the needs of each user. These economics, such as efficiency and affordability, are strong motivators for users.

On the other hand, risk perception is another critical factor. Although, digital banking technology is becoming increasingly sophisticated, there are still concerns about data security and possible financial fraud. Confidence in the security of digital platforms can be affected by previous experiences with online fraud or lack of familiarity with the protection systems in place.

Confidence in the security of online transactions thus plays a key role in consumers' decision to adopt these technologies.

Moreover, perceived costs are another important element. Although many digital banking platforms are free or have lower costs than traditional banking services, consumers may be deterred by possible hidden fees or the complexity of some digital products that require additional payments to access advanced functionalities. In this respect, transparency and clarity on the cost structure of digital services are decisive factors in attracting a wider audience.

Another key factor is the level of financial and digital literacy of consumers. Users with a better understanding of financial technologies and their benefits are more likely to adopt digital solutions. In contrast, people with a low level of financial literacy or who are unfamiliar with using the internet and mobile apps may perceive digital banking technologies as complicated or risky.

Also, another key factor is the psychological one, where psychological perceptions play a central role in the adoption of new financial technologies, significantly influencing consumers' decisions. In the digital banking context, psychological factors such as risk perception, trust in digital security and familiarity with the technology are key to understanding how users decide to adopt or reject these services. These factors not only shape consumer behavior, but also contribute to defining the barriers and motivations for using new financial solutions.

One of the most important psychological factors is the perception of risk. Consumers may be reluctant to adopt financial technologies because of fears about the security of transactions and the privacy of personal data. Even though financial technologies are in many cases more secure than traditional solutions, uncertainty about the associated risks, such as online fraud, identity theft or cyber-attacks, may lead consumers to avoid these services. For example, the idea of banking via mobile apps may seem risky to some, even if these apps are equipped with advanced security measures such as two-factor authentication or data encryption. The perception of risk is thus closely linked to the consumer's understanding and assessment of possible threats, but also to previous experiences with technology or digital financial services.

Another fundamental psychological factor in the decision to adopt financial technologies is confidence in digital security. In an era where personal data protection and transaction privacy are becoming increasingly important, confidence in the ability of digital banking platforms to protect users' information is essential. Modern encryption and authentication technologies are designed to protect users, but trust in these solutions is not built overnight. Consumers are more likely to adopt digital banking if they perceive that financial institutions implement transparent and effective security measures. Thus, trust depends not only on the technical features of the platform, but also on the consumer's overall perception of the reputation and reliability of the institution providing the financial services. In this context, transparency and education are essential to increase trust and confidence in financial technologies, and banks have a responsibility to clearly and effectively communicate the risks and benefits associated with the use of these platforms.

Familiarity with technology is another psychological determinant. The more familiar consumers are with digital technology and the use of mobile devices, the more likely they are to adopt digital banking. This familiarity is not just limited to the use of devices, but also includes the ability to navigate online platforms, understand the options available, and assess the risks and benefits. People who have a positive previous experience with digital solutions are more confident in their ability to use these technologies, and this reduces the perception of risk associated with their use. On the other hand, users who are less familiar with digital technology may feel a certain reluctance or fear of the unknown, and this may lead to a reluctance to adopt digital banking services. The technological complexity of financial platforms can also be a barrier, and for people less familiar with digital tools, the learning process can seem daunting or even intimidating.

As a consequence, consumer perceptions of risk, trust in digital security and familiarity with technology are interrelated psychological factors that significantly influence the adoption of digital banking services. These perceptions are shaped by personal, educational and experiential factors, and understanding them can help financial institutions develop more effective strategies for promoting and deploying financial technologies. It is essential that bankers and fintech providers

invest in education and increasing consumer confidence to facilitate the transition to a more digitized and accessible banking system.

3. The modern technology adoption model

A useful theoretical framework in understanding the adoption process of digital banking is the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh, Morris, Davis, 2003). This model suggests that technology adoption depends on four main factors: expected performance, expected effort, social influence and conditional facilities. Expected performance refers to users' perception that the technology will improve personal performance or efficiency in managing finances. Expected effort reflects the ease of use of the technology; the more intuitive and accessible a digital banking platform is, the more likely it will be adopted by users. Social influence refers to peer group pressure on consumers' decisions to adopt these technologies, and conditional facilities reflect the availability of the necessary infrastructure to use digital services, such as fast internet access and compatible devices.

Technology Acceptance Model (TAM) is also commonly used to analyze consumers' decision to adopt new technologies. This model focuses on two main components: perceived usefulness and ease of use (Fred Davis, 1986). In the context of digital banking, consumers are more likely to adopt digital platforms if they perceive that these technologies will improve their personal financial management (usefulness) and if the process of use is simple and easy to understand (ease of use).

Technology adoption models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM), play a key role in understanding consumer behavior towards new financial technologies, including digital banking. These economic and psychological theories provide a sound theoretical framework for analyzing how consumers decide to adopt or reject new technologies, such as online banking platforms or mobile payment apps.

The UTAUT model proposed by Venkatesh et al. in 2003 is one of the most comprehensive models for analyzing technology adoption. According to this model, technology usage behavior is determined by four main factors: expected performance, expected effort, social influence, and conditional facilities. Expected performance refers to the users' belief that the use of technology will improve personal efficiency or performance, and expected effort refers to the users' perception that the use of technology will be easy and smooth. Social influence, on the other hand, reflects the impact that the opinions of others (family, friends, peers or influential social groups) have on the decision to adopt technology. Finally, conditional enablers refer to the available infrastructure and resources that support the use of the technology, such as internet access, compatible mobile devices and technical support. In the digital banking context, for example, the perception that online platforms are easy to use and offer a significant benefit (such as saving time and money) is crucial in determining the level of adoption of these technologies.

On the other hand, the TAM model, developed by Davis in 1989, focuses on two key variables: perceived usefulness and ease of use. Perceived usefulness reflects the degree to which a consumer believes that the use of a technology will help improve his or her performance, while ease of use refers to how simple and intuitive it is for the user to adopt the technology. For example, in the case of digital banking, users will be more likely to adopt a mobile banking application if they find it easy to use and if they are convinced that it will save them time or money. These two variables are key to explaining why consumers decide to use digital technologies or, conversely, to reject them. In the case of digital banking, the process of registering and carrying out transactions needs to be simple and offer a clear advantage to the user, either through lower costs or convenience.

Both models complement each other, and applying them to the analysis of consumer behavior in the face of new financial technologies can provide a deeper understanding of the

motivations and barriers behind their adoption. We can also argue that the UTAUT model can explain how perceptions of ease of use and financial benefits influence consumer behavior, while the TAM model focuses more directly on perceptions of personal utility and simplicity of use.

In terms of applying these models to digital banking, studies have shown that expected performance and ease of use are crucial factors for consumers deciding to adopt or reject digital banking platforms. Elsewhere, in a study by Venkatesh and Bala (2008), it was found that users of digital financial services who perceive the technology as useful and easy to use are more likely to adopt these solutions. Conversely, the perception of risk and perceived complexity may be major barriers to widespread adoption of digital banking services, especially among populations less familiar with new technologies.

Moreover, we can say that the UTAUT and TAM models are essential to understand consumer behavior in the face of new financial technologies. These theories not only provide a framework for analyzing the determinants of adoption, but also support the development of marketing strategies and digital literacy policies that facilitate the transition to a digitized and accessible banking system. While both models are already well known, research continues to evolve and influencing factors are diversifying as technology advances and consumer behaviors change.

4.Impact of new financial technologies on consumer behavior

The adoption of new financial technologies has a significant impact on consumer behavior. One of the most notable effects is the change in financial behavior. Instant access to accounts and the ability to make transactions quickly have made consumers more involved in managing their money. In addition, the functionalities offered by mobile banking apps, such as monitoring spending and setting financial goals, have contributed to increased financial literacy and more responsible resource management (Mitra, Karathanasopoulos, 2020).

However, there are also risks associated with the use of financial technologies, particularly for the digitally vulnerable. Moreover, consumers can become overly dependent on banking automation, which can lead to a loss of control over financial decisions or an increase in impulsive spending due to quick and continuous access to funds.

On the other hand, financial innovations have also led to the emergence of new consumer behaviors, such as the frequent use of instant payments or low-cost international transactions. The development of digital financial tools such as online lending or robo-advisors has also democratized access to financial services that were previously only available to a small group of consumers.

New financial technologies have had a significant impact on consumer behavior, transforming the way individuals interact with financial products and services. Digitization and fintech innovations have led to more accessible, faster and customizable financial solutions, as well as significant changes in consumer financial behavior (Sussan, E., & Hajiyev, J.,2019). These changes are being fueled by a number of factors, including preferences for fast and convenient solutions, greater accessibility of financial services and increasing levels of financial literacy, as well as the risks associated with adopting new technologies, which are not necessarily obvious to users.

One of the most noticeable changes in consumer behavior has been the shift from using traditional, physical branch-based banking services to embracing digital banking platforms and mobile apps. In a digitized environment, consumers benefit from instant access to their bank accounts, can make instant payments, transfer funds or access complex financial products such as loans or investments without having to visit a physical branch. This shift in financial behavior reflects consumers' desire to save time, reduce the costs associated with traditional banking services and benefit from a more flexible experience that is more tailored to their needs. In this sense, digital

financial services have contributed to increased banking penetration by enabling access to finance for a wider audience, including those in rural areas or regions with limited banking infrastructure.

Financial innovations, such as mobile payments, cryptocurrencies, robo-advisors for investments and peer-to-peer lending solutions, have been the main driver of change in consumer financial behavior. Mobile payments have revolutionized the way consumers transact, offering a fast, convenient and often cheaper alternative to traditional cash or card payments. Cryptocurrencies have also made a significant change, offering a decentralized alternative to traditional currencies with the aim of reducing dependence on traditional financial systems and promoting financial freedom. Robo-advisors have also changed the investment landscape, allowing even small or novice investors to access investment portfolios managed automatically, based on algorithms and data analytics. These innovations, together with peer-to-peer lending platforms, have democratized access to capital and diversified consumers' financial options, changing their relationship with money and financial institutions.

However, adopting new financial technologies does not come without risks. One of the main risks associated with the use of financial technologies is cyber security. With the majority of financial transactions taking place online, vulnerabilities in digital platforms can lead to data theft or financial fraud. Also, the lack of adequate regulation in some emerging markets or for certain financial instruments, such as cryptocurrencies, can expose consumers to significant risks, such as market manipulation or extreme volatility of digital assets. The risks associated with over-reliance on technology are also relevant. To the extent that more aspects of financial life are automated or digitally managed, consumers become more vulnerable to potential system failures or loss of access to financial information due to technical problems, security alerts or cyber-attacks.

Moreover, there is a significant risk of financial exclusion for certain groups of consumers, such as the elderly or those with low levels of digital literacy, who are not able to navigate digital financial platforms effectively. These consumers may become more vulnerable to financial abuse or fraud and may be excluded from the benefits offered by new financial technologies, deepening existing inequalities in access to financial services.

As a consequence, new financial technologies have profoundly changed consumer behavior, providing consumers with significant opportunities to access and manage financial resources more efficiently, but also exposing them to new risks. While financial innovations have enabled greater financial inclusion and democratized access to capital, it is essential that users are aware of the risks associated with the security and reliability of digital platforms. In this context, the development of an appropriate regulatory framework, together with financial and digital literacy, are essential if the benefits of new financial technologies are to be harnessed safely and efficiently.

5. An empirical investigation on the adoption of digital banking services in different consumer segments

The adoption of digital banking services varies significantly across different consumer segments, and adoption behaviors can be influenced by key demographic factors such as age, geographic location, or level of financial literacy. In this context, the analysis of adoption behavior between distinct demographic groups - such as young versus elderly or urban versus rural users - highlights important differences in the perception and use of digital banking services.

First, young people represent a demographic group where the adoption of financial technologies has been rapid and widespread. Younger generations, in particular millennials and generation Z, are more likely to adopt new technologies, including digital banking, due to their familiarity with the internet and mobile devices. This group of consumers often see digital banking not only as a convenient alternative but also as a necessity, with high expectations in terms of accessibility, speed and ease of use. Online banking platforms and mobile apps are integrated into their daily lives, and their preferences are largely driven by the desire to save time and access personalized and flexible financial services. Moreover, young people are more willing to accept

risks related to digital security, more trusting of modern technologies and less susceptible to fears of online fraud or cyber-attacks compared to other age groups.

In contrast, seniors, especially those in the older age groups, have a much lower adoption rate of digital banking. This consumer group is generally more reserved in their use of financial technologies due to their lower level of familiarity with the internet and mobile devices. Seniors often perceive digital banking platforms as complicated or difficult to use, and their previous experiences with traditional banking services, such as face-to-face interactions with a banking advisor, are more comfortable and safer from their point of view. Seniors are also often more wary of cybersecurity risks, with greater concerns about data privacy and possible financial fraud. This reluctance may also be fueled by a lack of adequate financial or digital literacy, which slows the uptake of digital banking services among this segment of the population.

Another significant difference in digital banking adoption behavior is between urban and rural consumers. In urban areas, access to technology is much wider and the digital infrastructure is usually better developed. Urban users are more exposed to digital banking promotional campaigns, financial innovations and mobile or online payment solutions, which is why take-up is faster. In addition to this easier access to technology, urbanization also brings higher levels of education, and young people in cities are generally more familiar with the use of mobile devices and the internet, which facilitates a quick integration of digital banking services into their lives.

By contrast, in rural areas, access to the internet and digital devices is often limited and the infrastructure needed to use online or mobile banking services may be less developed. Rural consumers are also generally less exposed to and more reluctant to use financial technologies, either because of less digital literacy or a stronger perception of the risks associated with the digitization of financial services. In many cases, people in rural areas continue to prefer physical interactions with banks and financial agencies, which may slow down the uptake of digital banking in these areas.

Urban-rural differences in behavior are also influenced by socio-economic characteristics. Consumers in rural areas, often with lower incomes and more limited access to financial education, may perceive digital banking as a riskier or more costly option, and this can be an additional barrier to adoption. High-speed internet access can also be unstable in many rural areas, limiting the efficiency and reliability of digital platforms.

It can be said that the adoption of digital banking services depends significantly on demographic and geographic factors, and adoption behaviors vary between young urban, senior or rural consumers. Urban youth and consumers are more likely to adopt digital banking solutions due to their familiarity with technology and broad internet access, while seniors and rural residents face challenges related to digital literacy, limited technological infrastructure and reluctance to take associated risks. Financial institutions and governments can help accelerate the uptake of these technologies through financial and digital education, improving infrastructure in disadvantaged areas and developing more accessible and user-friendly banking solutions for all demographics.

6. Comparing traditional banks and fintechs

The comparison between traditional banks and online-only fintechs highlights significant differences in consumer perceptions and behavior, and the choice between the two types of financial institutions depends on a number of factors reflecting both personal preferences and the economic or social context of each individual. While traditional banks have been market leaders over the decades, fintechs have rapidly gained ground in recent years, offering innovative and flexible solutions that are appealing to a growing number of consumers. However, the choice between these two options is not simple and is influenced by economic, technological and psychological factors.

First and foremost, accessibility and convenience play a key role in consumers' decision. Fintechs, by their digital nature, offer a complete online banking experience without requiring

branch visits or physical interactions. These platforms are typically faster and easier to use, as they are designed to be accessible through mobile devices, available 24/7. Fintechs are often perceived as more innovative and agile because they focus solely on technology and are not burdened by traditional bank infrastructure. This means that the processes of opening accounts, making payments or accessing loans can be much faster, and administration and maintenance fees can be lower, another important factor that attracts consumers to fintechs.

On the other hand, traditional banks have a significant advantage in terms of credibility and trustworthiness. They benefit from a long history of providing financial services and a solid reputation built on trusted relationships with consumers. While many traditional banks have integrated digital technologies to enhance their services (through mobile apps, online banking platforms or smart ATMs), they continue to operate on a hybrid model, combining digital and physical interactions. This means that those consumers who need personalized assistance or who want to manage their financial relationship more closely through direct contact with banking advisors can appreciate the added benefit of such a model. Traditional banks are also more tightly regulated and benefit from a better defined legal framework, which can be an important safety factor for users, especially those less familiar with the technological risks of online platforms.

Another significant factor influencing the choice between traditional banks and fintechs is the type of financial services offered. Fintechs are often associated with innovative and personalized financial solutions, such as quick loans, instant payment solutions or automated investments through robo-advisors. They are preferred by consumers who are looking for simple and efficient solutions for their financial needs, without having to deal with the complexity of traditional processes at conventional banks. In contrast, traditional banks offer a wide range of services, including more complex products such as mortgages, savings accounts and investment vehicles, which may be better tailored to the financial needs of a significant part of the population, especially those who prefer financial solutions that require greater security and a more personalized relationship.

Costs are another key factor in choosing between traditional banks and fintechs. Typically, fintechs, due to their smaller structure and digitized model, can offer lower costs for services such as international transfers, online payments or opening a bank account. These cost savings are largely due to the elimination of the physical infrastructure and staff required to operate branches. Traditional banks, on the other hand, may impose higher fees, especially for services related to physical transactions, such as over-the-counter transfers or cash withdrawals from other banks' ATMs.

Another important aspect is the level of financial and technological literacy of consumers. Fintech is particularly attractive to younger consumers, who are more tech-savvy and willing to quickly adopt innovative digital solutions. They are attracted by the flexibility and ease of use of digital financial platforms. In contrast, older consumers or those who are not as comfortable with technology may prefer traditional banks, where they can benefit from face-to-face assistance and feel safer from cyber risks. Traditional banks may also offer more complex financial products that require personalized advice, and this may be a determining factor in their choice.

Security and data protection is another significant factor. Although fintechs are investing heavily in security measures to protect consumer data, cyber risks may seem greater to users who are not familiar with the technology. Traditional banks, on the other hand, benefit from stricter regulation and a well-defined legal framework that guarantees deposit protection and transaction security. This may be a safer option for consumers who are less confident in the security of digital platforms.

Moreover, the choice between traditional banks and fintechs largely depends on consumers' individual preferences, their comfort level with technology, their specific financial needs and their perception of the risks and benefits associated with each option. Fintechs are preferred by consumers who value speed, low costs and innovative solutions, while traditional banks remain a

solid choice for those seeking security, personalized advice and more complex financial products. Whatever the choice, the general trend is that the two types of financial institutions will co-exist and learn from each other to better serve the diversified needs of consumers.

6. Conclusions

The findings of the study suggest that an integrated approach that includes digital literacy, the creation of an appropriate regulatory framework and the development of innovative solutions that respond to the diversity of consumer needs will be essential to maximize the benefits of new financial technologies and stimulate their adoption.

I will also emphasize that the adoption of digital banking will be a complex process, influenced by a range of economic, psychological and social factors. Perceptions of the benefits, risks and costs, together with consumers' confidence in the security of platforms and financial literacy, will be key to understanding their behavior towards financial technologies. Technology adoption models, such as UTAUT and TAM, will provide a sound theoretical basis for analyzing these behaviors and can guide the development of effective marketing and education strategies for banks and fintechs. As financial technologies continue to evolve, it will be essential for financial institutions to be responsive to consumer needs and ensure a balance between innovation and consumer protection.

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