



BRIDGING THE GENERATION GAP: UNDERSTANDING BABY BOOMERS' AND GEN Z'S PERCEPTIONS OF BANKING APPS

SUPERANDO A LACUNA ENTRE AS GERAÇÕES: ENTENDENDO AS PERCEPÇÕES DOS BABY BOOMERS E DA GERAÇÃO Z SOBRE OS APLICATIVOS BANCÁRIOS

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Editorial Details:

Double-blind review system

Memory of a Scientific Event. Fast-Track process (Proceedings of the Grupo Unis International Congress -2022).

Article History: Received: 06 March 2024. Reviewed: 04 April 2024. Accepted: 08 April 2024. Available online: 12 April 2024.

Editor-in-Chief

Rodrigo Frankin Frogeri

Guest Editor Pedro dos Santos Portugal Júnior

Funding: This study was not funded.

Cite as:

Teodoro, D. R., Frogeri, R. F. (2024). Bridging The Generation Gap: Understanding Baby Boomers' and Gen Z's Perceptions of Banking Apps. *Mythos* (*Interdisciplinary*), 21(1), 48–70. https://doi.org/10.36674/mythos.v21i1.834

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Abstract

In 2023, global banking and investment services IT spending surged to \$652.1 billion, marking an 8.1% increase from 2022. Mobile banking, constituting over half of transactions, emerged as the predominant channel. Despite substantial technological investments, understanding the reasons behind mobile app usage remains crucial, particularly among the different generations. The study analyzes the perception of "baby boomer" and "Z" generations regarding the adoption of banking apps. Twenty individuals across generations with varying app familiarity participated in qualitative interviews. The data was analyzed using the Content Analysis technique. Our findings suggest that users value the convenience of app-based transactions, reducing reliance on physical banks. Generation Z favors digital banks, while baby boomers trust traditional ones, citing concerns like connectivity issues, tech knowledge limitations, and cost-benefit considerations. Non-using Generation Z individuals cite age, maturity, security concerns, and lack of social influence as reasons. Apprehensions about using other apps prevail among baby boomer users, echoing non-users' fears, emphasizing the significant role of fear in decisionmaking, possibly linked to reported digital data theft and virtual scams.

Keywords: Baby-Boomer. Digital banks. Fintechs. Gen Z. Technology Acceptance Model. UTAUT2.

Resumo

Em 2023, os gastos globais com TI de serviços bancários e de investimento subiram para US\$ 652,1 bilhões, um aumento de 8,1% em relação a 2022. O mobile banking, que constitui mais da metade das transações, surgiu como o canal predominante. Apesar dos investimentos tecnológicos substanciais, entender os motivos por trás do uso de aplicativos bancários continua sendo crucial, especialmente entre as diferentes gerações. O estudo analisa a percepção das gerações "baby boomer" e "Z" em relação à adoção de aplicativos bancários. Vinte indivíduos de diferentes gerações participaram de entrevistas qualitativas. Os dados foram analisados por meio da técnica de Análise de Conteúdo. Os resultados indicam que os usuários valorizam a conveniência das transações baseadas em aplicativos, reduzindo a dependência de bancos físicos. A Geração Z prefere os bancos digitais, enquanto os baby boomers confiam nos tradicionais, citando preocupações como problemas de conectividade, limitações de conhecimento tecnológico e considerações de custo-benefício. Os indivíduos da Geração Z que não usam apps bancários citam como motivos a idade, a maturidade, as preocupações com a segurança e a falta de influência social. As apreensões quanto ao uso de outros aplicativos prevalecem entre os usuários baby boomers, ecoando os temores dos não usuários, enfatizando o papel significativo do medo na tomada de decisões, possivelmente vinculado ao roubo de dados digitais e aos golpes virtuais.

Keywords: Baby-Boomer. Bancos digitais. Fintechs. Geração Z. Modelo de aceitação de tecnologia. UTAUT2.

1 INTRODUCTION

The banking sector is one of the most affected by the acceleration of digital transformation in recent years. This technological advancement has enabled the emergence of innovative companies such as Fintechs and digital banks. According to the Brazilian Central Bank (2021), Fintechs can be characterized as companies that bring innovations to the financial sector through the intensive use of technology, with the potential to create new business models, operating through digital platforms. Fintechs can offer services in various areas of the financial sector, including payments, financial management, loans, investments, financing, insurance, debt negotiation, currency exchange, and multiservices (BACEN, 2021).

Digital banks are financial institutions authorized by the Central Bank to act as commercial banks, offering the same services as physical banks but without physical branches - all services are provided through mobile applications (Chauhan et al., 2022). There has been a considerable growth of Digital Banks in the Brazilian market (FEBRABAN, 2023).

Thus, with the emergence of these innovative companies, banks following traditional business models have realized that investing in digital technologies is one way to acquire new customers while maintaining satisfaction (Zmoginski, 2019) and helping to minimize the loss of customers to digital banking models (Wewege et al., 2020). With the use of information technologies, bank customers can access most banking services on an electronic device. Therefore, computers and smartphones have become channels of great importance for banks and their customers (Kitsios et al., 2021).

In 2023, global banking and investment services IT spending reached \$652.1 billion, an 8.1% increase from 2022 (Gartner, 2023). Mobile banking (the use of banking applications through a smartphone app) is the dominant channel, responsible for more than half of banking transactions (FEBRABAN, 2019). Despite all this investment in technology, banks need to understand what motivates people to use their mobile applications, especially among the older population, which still resists using apps for banking transactions (Feliciano et al., 2018; Feliciano & Frogeri, 2018). On the other hand, the younger population is willing to try new products and services and uses technology for many of their daily activities (Melnyk, 2023; Windasari et al., 2022).

On one side, there is the "baby boomer" generation, born between 1945 and 1964, a generation that experienced the main and most radical social changes in various areas and also the main technological advances - going through the emergence of various technologies such as television, computers, the arrival of the internet, and mobile phones. "Baby boomers" also witnessed the main technological changes in the financial sector (Martin, 2021) - this generation still resists and views new business models with suspicion, fearing fraud and scams, especially when it involves banking transaction apps. In this sense, mobile banking applications pose a challenge for "baby boomers" (Martin, 2021).

On the other end of the society, there is Generation Z, born between 1995 and 2010, an audience for which banks have a great challenge in redesigning their products to attract and serve them. This is an audience willing to experiment with new technologies; this generation follows a trend of personalizing the digital products they consume/use. Considering the Generation Z's willingness to try new technologies, Zmoginsk (2019) points out that 72% of young people in this generation are willing to install new apps or add new hardware to their daily lives. However, only a third of them have a bank account and think they can "manage" their financial life using only services like Google Wallet or Apple Pay (Lisana, 2024; Srivastava et al., 2024).

In this context of duality between generations, the present research analyzed the perception of "baby boomer" and "Z" generations regarding the adoption of banking apps. To achieve the proposed objective, a qualitative approach, inductive logic, and interpretative epistemology were adopted. A total of 20 people from different generations and with different levels of familiarity with mobile banking apps participated in

the study. The theoretical foundations of the study were based on the UTAUT2 technology acceptance model (Venkatesh et al., 2012).

2 THEORETICAL BACKGROUND

The theoretical background of this study has been organized into two sections: the first discusses the characteristics of technology acceptance models, and the second presents studies that explored the relationship between current generations and the adoption of banking apps.

2.1. Technology Acceptance Model

The Technology Acceptance Model (TAM) serves as a theoretical framework designed to forecast and elucidate user acceptance of technology(Davis et al., 1989a, 1989b). Its primary focus lies in the evaluation of perceived ease of use and perceived usefulness as central determinants influencing technology adoption (Davis et al., 1989a, 1989b).

TAM asserts that the determinants of perceived usefulness and perceived ease of use play pivotal roles in forecasting technology acceptance and subsequent usage behavior (Venkatesh & Davis, 2000). Of the two, perceived usefulness demonstrates a more pronounced correlation with acceptance compared to perceived ease of use (Ma & Liu, 2004; Szajna, 1996). Empirical validation of the model has been successfully conducted across diverse contexts, encompassing fields such as health care (e.g., Holden & Karsh, 2010) and education (e.g., Gama Junior et al., 2024), thereby attesting to its resilience and adaptability across various settings (Granić & Marangunić, 2019; Turner et al., 2010).

In comparative analyses with alternative models like the Theory of Planned Behavior (TPB), TAM has emerged as notable for its simplicity and marginal empirical advantage (Dwivedi et al., 2019), despite both models effectively predicting technology usage intentions. Subsequent revisions and extensions, such as TAM2 (Venkatesh & Davis, 2000), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) and Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) (Venkatesh et al., 2012), have been proposed to integrate supplementary factors such as subjective norms and address discrepancies in empirical findings (Dwivedi et al., 2019; King & He, 2006).

While TAM enjoys widespread application, certain studies propose that its predictive capacity for actual usage may exhibit inconsistency. Consequently, there is a call for its integration into broader models that encompass additional variables pertinent to human and social change processes (Holden & Karsh, 2010; Szajna, 1996).

In summation, the Technology Acceptance Model stands as an extensively employed and validated framework, elucidating a substantial portion of the variance in technology acceptance and usage. It underscores the significance of perceived ease of use and perceived usefulness as foundational elements governing user adoption of technology. Despite its empirical robustness, ongoing research endeavors seek to refine and broaden the model to more comprehensively capture the intricacies of technology acceptance across diverse contexts (e.g. Addy et al., n.d.; Kopplin et al., 2022; Schomakers et al., 2022; Suo et al., 2022).

2.2. Generational Diversity and the Use of Banking Apps

A range of studies have explored the usage of banking apps by different generations. Rodrigues (2023) found that Gen Z primarily uses these apps for transfers, while Gen Y uses them for market exploration and operations, and Gen X values their availability. Koenaite (2021) discovered a strong relationship between attitudes towards and actual use of mobile banking apps among Gen Z in South Africa. Hameed (2023) identified a lack of perceived advantage in using AI-enabled internet banking services among Gen Z in India, despite their comfort with such technology. Karim (2020) highlighted the importance of perceived usefulness, ease of use, trust, and security in influencing the intention to use smartphone banking apps among millennials in Malaysia.

Matar and Alkhawaldeh (2022) investigated users' behavioral intentions concerning the acceptance and adoption of digital payment FinTech services in India, specifically examining variations between Generation Y and Generation Z. Integrating the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM), along with additional elements of financial literacy and customer satisfaction, the research revealed the significant impact of customer satisfaction, effort expectancy, and performance expectancy on behavioral intention. Additionally, perceived enjoyment influences effort expectancy and performance expectancy, while self-efficacy significantly impacts perceived enjoyment. Notably, age moderates relationships between effort expectancy, customer satisfaction, perceived enjoyment, and behavioral intention.

Windasari et al. (2022) identified six significant factors influencing the intention to use digital-only banking. These factors include economic value, perceived ease of use, social influence, firm reputation, product features, and rewards. Lisana (2024) investigated the determinants influencing Generation Z's behavioral intention to use mobile payment in Indonesia. The theoretical model includes seven latent variables: effort expectancy, performance expectancy, social influence, facilitating conditions, promotional activities, perceived security, and behavioral intention. The findings highlight the significance of promotional activities, perceived security, performance expectancy, effort expectancy, and social influence on the acceptance of mobile payment systems among Generation Z. Moreover, gender moderates social influence and promotional activities, while education moderates the impact of perceived security on behavioral intention.

3 METHODOLOGY

The generational extremes were divided between the generations known as "baby boomers", born between 1945 and 1964, and Generation Z, born between 1995 and 2010. The research was conducted through a qualitative and descriptive approach. The obtained information was non-quantifiable and analyzed inductively. Therefore, the interpretation of phenomena and the attribution of meanings were crucial in the process (Urquhart, 2012). Qualitative research follows an interpretative profile, assuming that people's behaviors are influenced by their beliefs, perceptions, feelings, and values. Thus, their behavior always has a meaning that is not immediately apparent, needing to be revealed. Qualitative research has three characteristics: holistic vision, inductive approach, and naturalistic investigation (Creswell, 2010). The holistic vision describes that behavior is a consequence of interrelations within a given context. In the inductive approach, used in this research, the researcher is freer to observe, and it is during the process of data collection and

analysis that their interests will become apparent (Minayo, 2012). In naturalistic investigation, the observer intervenes as little as possible in the context (Alves-Mazzotti & Gewandsznajder, 2004).

In this study, data used for the examination of facts, cases, and opinions were collected through semi-structured interviews (Myers, 2013), employed to gather information not found in records and documentary sources (Myers & Newman, 2007). The interviews were audio-recorded and subsequently transcribed by the researchers for further analysis. Before data collection, the study was submitted for a Brazilian Research Ethics Committee (CEP) and is approved under the number CAAE (Certificate of Submission for Ethical Appraisal) 57036922.7.0000.5111. Data were collected following the interview script available in Table 1.

Table 1

Interview script

Constructs	Description	Questions for users of banking Apps	Questions for non-users of banking Apps
Socio- demographic		How old are you?	How old are you?
questions		Gender	Gender
		Income	Income
		What is or was your profession?	What is or was your profession?
		Do you already use any kind of banking app? If so, which one(s)?	Do you already use any kind of banking app? If so, which one(s)?
Performance expectations	The extent to which the individual believes that the use of technology will help them make gains in the performance of their activities.	How do you think using banking apps can help with your day-to-day performance or with managing your bank details?	How do you think using banking apps can help with your day-to-day performance or with managing your bank details?
Effort expectations	The degree of ease associated with using the system.	When using banking apps, do you experience any kind of difficulty or something that requires more effort to use the app?	Would you associate your non-use of banking apps with some kind of difficulty or greater effort on your part? for you to use mobile applications in general? Have your say!
Social influence	How much the individual is influenced by other people's opinions.	Would you say that you started using banking apps because other people do too? Like family and/or friends?	Would you use a banking app if other people who already use it told you to, such as family and/or friends?

Facilitating conditions	The degree to which the individual believes that the environment supports the use of technology. This degree is moderated by the variables gender, age and experience.	Do you think banking apps are suitable for people your age?	Do you not use banking apps because you think they're not suitable for your age?
		Do you think banking apps are designed or developed for men only?	Do you not use banking apps because you think they're designed for men only?
		Do you think that banking apps are designed or developed for people who have already mastered current technologies?	Do you not use banking apps because you think they are designed for people who have already mastered current technologies?
Hedonic motivation	How pleasurable or fun is the use of certain technology by the individual.	Would you say that the banking app you use is enjoyable? Is it fun?	Do you not use banking apps because you don't find them enjoyable or fun to use?
Price value (cost-benefit)	Value paid for the technology. The relationship between the perceived benefits of using the technology and the amount to be paid for it.	Do you consider it good value for money to use your bank's app?	Do you not use a banking app because you don't think it's cost- effective?
Experience and habit	Experience is characterised by the length of time the individual has used the technology. Habit is the automatic behaviour that	Do you think you have experience with banking apps? For how long? Which apps have you used? When did you start?	Are you in the habit of using or trying out new applications? Even if they're not banking apps?
	tends to develop as a result of learning.	Are you in the habit of using or trying out new applications? Even if they're not banking apps?	

Note. The table outlines various constructs related to users and non-users of banking apps, encompassing sociodemographic questions, performance expectations, effort expectations, social influence, facilitating conditions, hedonic motivation, price (cost-benefit), and experience/habit. Questions for users include inquiries about performance and enjoyment of banking apps, while non-users are asked about potential difficulties and perceptions of suitability. The table explores factors influencing app usage, such as age, gender, and technology mastery, and delves into the perceived value for money and the length of experience with banking apps, considering the habit of trying new applications.

The interview script constructs are based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model (Maria et al., 2021; Venkatesh et al., 2012). Two question groups were employed: the first group targeted users of banking apps from both generations, while the second group addressed non-users of banking apps from both generations (baby-boomers and Gen Z).

Data were analyzed using the Content Analysis technique (Bardin, 2013), where the researcher aimed to uncover implicit meanings within words, striving to comprehend the diverse realities conveyed in the messages. Content analysis thus examines the sense and meanings of words (Bardin, 2013).

Content analysis can be defined as a research methodology used to describe and interpret the content of various document types, leading to systematic, qualitative descriptions and fostering a new interpretation of messages, understanding their meanings beyond common reading (Bardin, 2013).

According to Bardin (2013), Content Analysis comprises five stages: (i) Information preparation: This involves identifying different information samples to be analyzed, recommending an initial reading of all available material and selecting information aligned with the research objective. After identification, the coding process begins, creating a code to identify each element in the collected documents or testimonies; (ii) Unitization or transformation of content into units: After separating the data, a re-reading is performed to define the unit of analysis, the individual content element to be subsequently classified. The units of analysis are defined by the researcher based on the nature of the problem, research objectives, and the type of materials to be analyzed; (iii) Categorization or classification of units into categories: This stage involves classifying message elements according to specific criteria facilitating information analysis. Classification should be based on a precise definition of the problem, research objectives, and elements used in content analysis. Categories should be valid, relevant, or appropriate; (iv) Description: After defining categories and identifying materials within them, this stage involves communicating the results. It is the moment to express the meanings captured and intuited in the analyzed messages; (v) Interpretation: This stage constitutes a deeper understanding of message content through inference and interpretation.

A total of 20 individuals participated in the study. The participants were divided into 4 groups of 5 individuals each. Group 1 consisted of Generation Z individuals who were non-users of banking applications. Group 2, also from Generation Z, comprised users of banking applications. The third group consisted of Baby Boomer individuals who were non-users of banking applications. Lastly, the fourth group comprised Baby Boomer individuals who were active users of banking applications. The number of five individuals per group was determined based on data saturation (Fontanella et al., 2012) from the interviews.

4 ANALYSIS AND DISCUSSIONS

Table 1 presents data on the usage of banking applications among individuals of different generations and professions. The sample includes 20 respondents, among which Baby-boomers and Generation Z each constitute 10 individuals. Notably, among Baby-boomers, various professions such as retired teachers, housewives, taxi drivers, and others are represented, with an equal split between banking app users and non-users. Among the 10 interviewees from Generation Z, there is a total of 5 app users aged 17 to 20 and non-users aged 12 to 17.

Regarding the "Baby-Boomers" generation, there are 10 interviewees, including 5 users aged 62 to 75 and 5 non-users aged 61 to 67. Out of the 20 interviewees, 11 are female, and 9 are male. Concerning income, most Generation Z interviewees have no income and are students. "Baby-Boomers" interviewees have incomes ranging from R\$500.00 to R\$20,000.00 with various professions.

Table 1

Interviewees data group by Generation, Profession and as App banking user

Generation / Profession / Banking app used	Banking ap	Grand Total	
	No	Yes	•
Baby-boomer	5	5	10
Retired teacher		1	1
Banco do Brasil Banco Itaú		1	1
Housewife		1	1
Inter, Caixa		1	1
Taxi driver		1	1
Banco do Brasil and C6 Bank		1	1
Accountant		1	1
Mercantil		1	1
Mechanical engineer		1	1
Banco do Brasil, Banco Itaú, C6 and Safra		1	1
Retired	1		1
Non-user	1		1
Typographer	1		1
Non-user	1		1
Hairdresser	1		1
Non-user	1		1
Retired - Hairdresser	1		1
Non-user	1		1
Electrician	1		1
Non-user	1		1
Gen Z	5	5	10
Student	5	2	7
PicPay		1	1
Non-user	5		5
Nubank, Banco do Brasil and Pic Pay		1	1
Machine operator		1	1
Nubank		1	1
Tourism manager		1	1
PicPay		1	1
Cashier		1	1
Nubank and Inter		1	1
Grand Total	10	10	20

Source: Developed by the authors.

Among Generation Z interviewees who use banking apps, they mentioned using the following apps: PicPay, Nubank, Banco do Brasil, and Inter, with 80% using PicPay, followed by Nubank, used by 60%, and only one mentioned using Banco do Brasil and Inter. In this generation, the majority of users prefer digital banks. On the other hand, "Baby-Boomers" prefer traditional banks, with 80% using Banco do Brasil and 40% using Banco Itaú. Other mentioned banks include Caixa, Safra, Mercantil, C6 Bank, and Inter. Among the digital banks used, 40% use C6 Bank, and only one uses Inter. However, even when using digital banks, this generation still considers traditional banks as their primary bank. Table 1 summarize the interviewees data.

When users from both Generation Z and Baby-Boomers were asked how the use of banking apps could help them in their day-to-day performance or with the management of their banking data, the majority believed that the significant advantage is the ability to conduct banking transactions without visiting a physical bank, saving time, as reported by E6:

It's a game-changer in our daily lives! Prior to using the app, we spent a significant amount of time standing in lines at the bank. Thanks to these apps, nearly all of our transactions are handled through them. I must admit, nowadays, I only visit the bank when it's absolutely necessary, like for a cash withdrawal. Everything else, I take care of through the app. [E6]

Other characteristics mentioned by the "Baby-Boomers" Generation are associated with how apps assist in their daily lives, such as reducing the use of credit cards and cash—PIX was also mentioned.

For Generation Z, in addition to the ability to conduct transactions without the need to travel, it was also mentioned that the app helps in expense management, as described by E1: "I think it's to control my expenses, and I can know exactly how much I have." Some Generation Z interviewees cited the remuneration of their account balances by certain digital banks as a factor assisting in their day-to-day performance, as reported by E4.

So, it's more practical! I find it more convenient, and the advantage is that I don't spend as much. Physical banks usually have fees, but digital banks don't. So, I save money, and it also simplifies the payment process. It's easier for me to pay someone because it's immediate and can be done remotely. Plus, it boosts my income, even though I'm not earning anything, as just having money there increases it bit by bit. [E4]

Some interviewees also pointed out that the app was slow and had challenges in locating specific features. Interviewee E9 emphasized the app's logical sequence of resources, which did not align with user needs.

At times, the logical sequence of the program doesn't align with our needs. I believe this stems from the programmer's perspective—the person developing the program. The focus should be more on the user, not the programmer. [E9]

Regarding the use of apps influenced by family or friends, 60% of Generation Z respondents stated that they would indeed use them based on recommendations. The remainder mentioned initiating app usage independently after conducting research. Interviewee E5 reported initiating the use of digital banking apps and introducing them to his parents, as his parents had initially recommended traditional banks. On the other hand, 80% of Baby Boomers would use banking apps based on

recommendations from family and friends. Only E9 stated otherwise, as he began using the bank out of necessity, subsequently adopting the app that came with the account.

Respondents were also asked whether they consider the apps suitable for their age. Among Generation Z, all of them, 100%, deemed the apps suitable. E1 highlighted that he finds the app very intuitive. Within the "Baby-Boomers" generation, all considered the apps suitable for their age, but some expressed the need for assistance to initiate app usage, as stated by E10:

Look, for people my age with families, with children, and those who are willing to give us guidance on use and everything, yes. Otherwise, no! I, for example, don't have much difficulty, but in the beginning, I had to be guided, and this guidance usually comes from people who master these routes, you know? So, they help us solve our difficulties, but if you don't have support on your side, it's a bit complicated. And the older you get, the more restricted you become. And apart from the distrust it generates on their part. [E10]

Questioned whether the interviewees thought that apps were developed only for men, 100% of them, both Generation Z and "Baby-Boomers," said no. Regarding the question of whether apps are developed for those who already master current technologies, 60% of Generation Z interviewees said yes. Those who disagreed, like E3, said that apps are intuitive, so it's not necessary to have knowledge of current technologies to use them. In the "Baby-Boomers" generation, 60% believe that apps are not developed for those who already master current technologies. Interviewee E9 believes it's easier for those who already master current technologies; E10 highlighted that it depends on what they will use and declared having difficulty with some acronyms used within the apps.

Regarding the question of whether the use of the banking app is pleasurable or fun, 80% of all interviewees said no. Only two Generation Z interviewees disagreed, with E4 taking a neutral position and stating that as it involves money matters, it's risky to say it's fun. E3, on the other hand, said it's fun because they don't have to go to the bank and due to the convenience.

The cost-benefit factor was considered good by 100% of Generation Z interviewees, mainly because the majority, as users of digital banks, have no expenses with fees, and some highlighted that the account earns interest, like E3: "Yes, because of the interest 'running' there, in the savings account, right. So I can leave the money there, earning interest, and I don't have a fee."

Within the "Baby-Boomers" generation, only E1 stated that they consider it a good cost-benefit to use the app because they don't have to leave home and avoid bank queues. The other users of this generation who have accounts in digital banks consider it a good cost-benefit, but users of traditional banks do not observe this cost-benefit relationship. E8, for example, questioned that if they use the app and don't need to use the bank's physical structure, they don't agree with charging fees. E7 and E9 considered the cost-benefit factor as medium and acceptable, respectively.

The time of use of banking apps within Generation Z is from one to two years, and among Baby Boomers, it is from 4 to more than 10 years. Regarding experience, respondents who use banking apps, in general, consider having a good experience despite not considering themselves experts and emphasize that they still have a lot to learn.

Regarding the habit of using or trying new apps, even if they are not banking apps, all Generation Z users said they are accustomed to and like using and trying new apps. In contrast to "Baby-Boomers," 80% of them said they are not accustomed to using new apps. Most highlighted fear of

using new apps and only use them if someone has already used and assured that it is safe. They also emphasized that they only use new apps if they have some usefulness or for professional purposes.

Ten non-app users were also interviewed, five from each generation chosen for the study. Even without using apps, 90% believe that they assist in day-to-day performance. The main assistance mentioned by the interviewees was not having to leave home to perform banking transactions. Ease and practicality were also mentioned. Only interviewee E17 said he does not believe that apps assist in day-to-day performance.

Not for me! I don't trust in Banking apps. No, I don't. We're seeing people going into each other's bank accounts. I don't trust that! Pix business! I don't trust it. It doesn't help! That's my thought! [E17]

We observed that 90% (18) of the interviewees also mentioned that non-use of apps occurs due to difficulty or a greater effort required. Reasons for non-use included age, lack of patience, or lack of interest. Age was only mentioned by Generation Z interviewees, such as E12, who stated being too young and lacking maturity to use apps. Only E19, from the Baby-Boomers generation, mentioned not using apps due to difficulty and dependence on younger individuals to teach him how to use them.

In Generation Z, 100% of the interviewees said they would use banking apps if recommended by family or friends. In the Baby-Boomers generation, 40% said they would use apps based on recommendations. The remaining 60% of this generation said they would not, and the main factors listed for refusal were fear and age.

Regarding age, 90% of Generation Z interviewees said they did not find banking apps suitable for their age. Some mentioned not using them because their parents handle the transactions for them. Another interviewee, E12, highlighted the age and responsibility issue as an obstacle to use, as stated:

In this case, yes, because I'm seventeen, but I think it would be better if I were eighteen because I'd have more responsibility and also because that's when I can start, let's say, working and saving my money for a future college education. So, I think that by putting my money together and storing it in a bank on the app, I'm sure I could be quite safe and responsible as well. Because I don't think that I, at seventeen, especially at this age now that I'm in high school, I'm not sure that I would have the responsibility to keep money, as I can say, in a bank account. I don't believe that at my age, I don't have that responsibility yet. [E12]

Our observation revealed that all respondents belonging to the Baby Boomer generation opine that applications are well-suited for individuals within their age demographic. When queried about their non-utilization of applications in connection to age, respondents cited reasons such as a lack of interest, restricted usage of the bank solely for withdrawals and deposits, a perceived absence of necessity, and a deficit in patience.

Like all application users, 100% (10) of non-users do not believe that applications are developed exclusively for men; therefore, this is not a reason for non-use either. Similarly, all of them assert that the lack of fun or pleasure in using applications is not a reason for non-use.

Non-users were also asked if they avoid using applications because they believe these are developed for those who already master current technologies, and 80% of users from each generation said no.

For instance, E16 stated that a person learning can easily use the application. E12 justified it by saying that applications are intuitive: "I think not, in this case, because if I'm not mistaken, most applications guide people" [E12]. Users who claimed that applications are not developed for those who already master current technologies, like E17, mentioned that due to age (7 years), "dealing with new technologies becomes difficult" [E17].

Among non-users of banking applications, 90% (9) state that they believe these applications have a good cost-benefit for users; therefore, this factor is not seen as a hindrance to non-use. Only E17 considers cost-benefit as a hindering factor because they only use the bank for withdrawals and deposits.

These respondents were also asked if they are accustomed to using other banking applications. In the "Baby Boomers" generation, all of them said they do not use other applications, and the main reasons cited were fear and insecurity. One user, E20, stated that they don't even use a smartphone but rather an old-fashioned cell phone. On the other hand, users from Generation Z stated that they use other types of applications, such as transportation, music, movies, or food delivery apps.

Regarding the constructs of the UTAUT2 model, used for the analysis in this study, the performance expectation construct influences all users and non-users of applications. They believe that using this technology will help them save time by avoiding the need to go out to perform their banking transactions.

The effort expectation construct also influences, as 80% (8) of users said they did not find difficulty, and 100% (10) of non-users said that not using applications is not due to having any difficulty with the use of other applications. Another construct that influenced application use was social influence because 70% of all respondents said they would use applications based on recommendations from family or friends. Age, within this construct, had an impact on "Baby Boomers" respondents, who declared not using the application based on recommendations due to fear and fear of some type of fraud with their banking/financial data.

According to the facilitating conditions construct, three factors were observed: age, gender, and already mastering current technologies. The factor of mastering current technologies did not influence technology use for 65% (13) of respondents. Age influenced only non-users of Generation Z, who associated being too young with a lack of maturity and responsibility to use banking applications. Gender had no influence for 100% of respondents.

The hedonic motivation construct also had no influence on use, as 90% of respondents did not consider the use of banking applications enjoyable or fun. Regarding the price factor, a special influence was observed for Generation Z since most started using digital banking applications that do not charge fees.

Concerning the last construct of the UTAUT2 model, experience and habit, there was some influence according to the age of the respondent. Generation Z respondents, despite having less experience in using banking applications, use and like to try other applications. Baby Boomers, on the other hand, have more experience with the use of banking applications and use them because they find them secure; however, they do not like to use other types of applications due to fear and fear.

Table 2

Variable	Generation Z (Using)	Baby Boomers (Using)	Generation Z (Not Using)	Baby Boomers (Not Using)
Control & Awareness	\checkmark			
Practicality & Speed	\checkmark			
Peer Influence	\checkmark	(Indirect)		
Suitability for all ages	\checkmark	\checkmark		
Time Saving & Convenience		\checkmark		
Recommendation & Familiarity		\checkmark		
User-friendliness		\checkmark	(Perceived difficulty for older adults)	
(all ages)				
Cost-effectiveness		\checkmark		
Security Concerns			\checkmark	
Lack of Social Influence			\checkmark	
Neutral Enjoyment				\checkmark
Internet Connectivity Issues				\checkmark
Limited Tech Knowledge				\checkmark
Non-Entertainment Value				\checkmark
Cost-Benefit Analysis				\checkmark

Reasons for Using/Not Using Banking Apps - Generation Z vs. Baby Boomers

Notes: \checkmark : indicates the reason is relevant to the group. | (Indirect) means the influence comes from family or friends using the app, not direct recommendation for Gen Z users. | (Perceived difficulty for older adults) refers to Gen Z's belief that some older individuals might find banking apps challenging, not their own experience.

Generation Z users primarily value banking apps for their ability to **control expenses and gain financial awareness**, facilitating clear financial management and informed decision-making. Additionally, they appreciate the **practicality and speed** offered by these apps, enabling efficient execution of daily financial tasks such as payments and transfers. Interestingly, **peer influence** also plays a role, with some users adopting due to recommendations from family or friends. Notably, they believe banking apps are **universally suitable**, emphasizing their potential benefit for all age groups, including older adults.

Conversely, some Gen Z individuals refrain from using banking apps due to **security concerns**, fearing potential hacking and data breaches. Additionally, **lack of influence** from their social circle can hinder adoption. While acknowledging the potential for older users, certain Gen Z interviewees perceive **perceived complexity** as a barrier for individuals less familiar with technology. Lastly, they view banking apps primarily as **practical tools** and don't associate them with enjoyment, highlighting their focus on functionality.

Baby boomers, on the other hand, appreciate banking apps for their **time-saving convenience**, reducing reliance on physical bank visits and enabling efficient home-based transaction management. Often, they adopt these apps based on **recommendations** from others or bank managers, demonstrating the importance of familiarity in driving usage. Notably, baby boomers also perceive these apps as **user-friendly for all ages**, emphasizing their accessibility even for individuals with limited technological expertise. Furthermore, they consider banking apps **cost-effective**, highlighting potential savings from reduced fees compared to traditional banking methods.

However, some baby boomers experience **internet connectivity issues** that hinder their app usage, leading to frustration and delays. Additionally, while utilizing the apps, some **acknowledge limited technological knowledge** and require occasional assistance, indicating a potential digital literacy gap. Similar to Gen Z, they view banking apps primarily as **utilitarian tools** for financial tasks rather than sources of entertainment, emphasizing the serious nature of financial transactions. Finally, while acknowledging cost savings, some baby boomers engage in a **cost-benefit analysis**, questioning the value proposition offered by specific bank apps and their associated service fees.

Now we will compare the previous results with the UTAUT2 model used as the theoretical basis for this study. The UTAUT2 model, which examines performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, and price value, can provide a useful framework for further analyzing the findings regarding Gen Z and baby boomer usage of banking apps.

- Performance Expectancy: Both generations value the time-saving convenience, practicality, and efficiency offered by banking apps, aligning with this construct.
- Effort Expectancy: While both groups find the apps generally user-friendly, Gen Z's concerns about perceived complexity for older users and baby boomers' limited tech knowledge highlight potential challenges in this regard.
- Social Influence: This construct plays a distinct role for each generation. Peer influence heavily impacts Gen Z, while recommendations from others or bank managers are crucial for baby boomers.

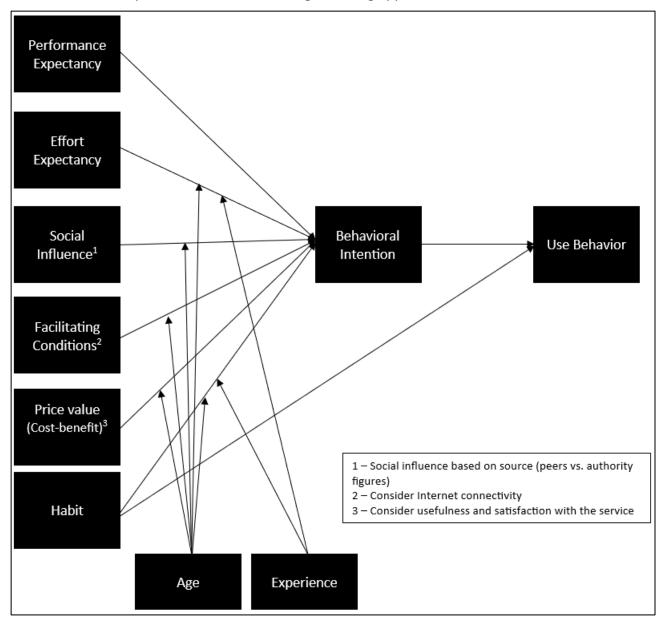
- Facilitating Conditions: Baby boomers' internet connectivity issues suggest a need for improved infrastructure or app features to address this challenge.
- Hedonic Motivation: Both generations view banking apps as utilitarian tools rather than sources of enjoyment, indicating a neutral hedonic motivation.
- Habit: The established habit of visiting physical banks could act as a barrier for some, particularly older adults, highlighting the importance of promoting habit formation around using apps.
- Price Value: Gen Z's neutral stance and baby boomers' cost-benefit analysis suggest that perceived value, not only cost savings, may influence adoption and continued usage.

Based on these findings, an adapted model could be proposed. This model would retain the core UTAUT2 constructs and consider:

- Differentiating social influence based on source (peers vs. authority figures) for a more nuanced understanding.
- Incorporating internet connectivity as a facilitating condition.
- Emphasizing the role of habit formation in promoting sustained app usage.
- Expanding price value to consider perceived value beyond cost savings, encompassing overall usefulness and satisfaction with the service.

Thus, based on the previous analyses, an adapted UTAUT2 model is proposed for the context of mobile banking applications and according to the two extremes of generations (Baby boomers and Z) - see Figure 1.

Figure 1



UTAUT2 model adapted to the context of usage banking apps

Note. The figure represents a model that explains the relationship between usage behavior and behavioral intention. Usage behavior is the type of behavior associated with using a product or service. Behavioral intention, on the other hand, is an individual's intention to perform a certain behavior in the future. The model shows that usage behavior is influenced by various factors, including performance expectations, effort expectations, social influence, facilitating conditions, price-value and habit. These factors, in turn, influence behavioral intention. The figure was developed by the authors.

Our model includes adaptations to the original UTAUT2 model. Initially, we removed the Gender moderator variable due to the lack of evidence regarding its influence on banking app usage. The Hedonic Motivation construct was also excluded, as it does not impact the Behavioral Intention to use the app. We eliminated other relationships involving Age and Experience moderator variables due to the absence of empirical evidence and our study results. Additionally, we incorporated the

moderation of the Experience variable in the relationship between Effort Expectancy and Behavioral Intention. This is attributed to the perceived complexity and limited technical knowledge of the Baby Boomer generation with mobile apps, with this relationship also moderated by age.

We recommend that Social Influence considers the source of influence, as peers significantly impact Generation Z, while recommendations from close acquaintances or bank managers influence Baby Boomers. Internet connectivity was noted as a facilitating or hindering condition for using banking apps. Finally, in the Price Value construct, we propose that perceived utility and satisfaction with the app's features, not just cost savings, can influence the adoption and continuous use of the banking app.

5 CONCLUSION

This research aimed to analyze the perception of "baby boomer" and "Z" generations regarding the adoption of banking apps. We observed that the majority of users and non-users of applications believe that the significant advantage of banking apps is the ability to perform all banking transactions through the app, eliminating the need to visit a physical bank (convenience). It is also noted that among users of banking applications, the majority of Generation Z respondents use digital banks (e.g., NUBANK, INTER, among others), unlike the "Baby Boomer" generation, which still prefers traditional banks (e.g., ITAÚ, Banco do Brasil, Caixa Econômica Federal, among others). These findings may align with previous observations regarding the growth in the use of digital banks by Generation Z (e.g., Feliciano et al., 2018; Feliciano & Frogeri, 2018) and greater resistance from the "Baby Boomer" generation, which, even while using banking apps, appears to associate trust with the physical presence and reputation/history (e.g., (Windasari et al., 2022) of the bank in the financial sector.

Concerning the non-use of banking applications, we observed that the Baby Boomer generation refrains from using these apps primarily due to internet connectivity issues, limited tech knowledge, non-entertainment value, and cost-benefit. In contrast, respondents from Generation Z who do not use banking applications attribute their non-use to age, maturity, security concerns, and lack of social influence.

Furthermore, users of banking apps from the Baby Boomer generation express apprehension about using other applications, a sentiment echoed by non-users of banking apps. The feelings of fear, apprehension, and distrust are frequently cited among the respondents of non-users of banking apps (e.g., Srivastava et al., 2024). Among non-users, fear carries more weight in their decision not to use apps than factors such as age, pleasure or enjoyment, cost-benefit, mastering current technologies, or effort in usage. We believed that this fear of not using banking apps is associated with the potential theft of digital data and/or virtual scams frequently reported in the news (e.g., Srivastava et al., 2024). Conversely, users and non-users from Generation Z enjoy and use various other applications, such as those for food delivery, transportation, music, or movies.

In conclusion, this study has both theoretical and practical implications. On the theoretical front, the research advances discussions on the acceptance of mobile banking apps by involving different user types on these platforms. Our theoretical contribution to academia lies in the development of an adapted model of the UTAUT2 for the context of adopting banking apps. On the practical side, the study presents discussions that decision-makers in traditional or digital banks can use to guide their corporate strategies based on the generation of their users or potential users.

Despite adhering to methodological principles required in scientific studies, limitations should be considered. The research subjects were chosen based on researcher accessibility, which prevents a comprehensive view of the studied phenomenon. The proposed theoretical model has not been statistically tested, and the generalizability of our results is limited.

As a suggestion for future research, statistical validation of the proposed model is recommended. Additionally, other researchers can analyze how traditional banks are positioning themselves to attract new customers to their digital platforms among different generations.

ACKNOWLEDGMENT

We acknowledge the Research Department of the UNIS Group for their support in carrying out this research.

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