
Coronavirus: an empirical study of the pandemic's effect on Albanian online banking services

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Abstract: We analyse how the COVID-19 pandemic has influenced online banking usage in Albania. We started with the online banking environment, its features, and the factors that drive it. Secondary data from the Bank of Albania reveals a substantial spike in online banking transactions in the last decade. Based on an empirical analysis with primary data collected from questionnaires issued to banking clients, we utilised several factors from the technology acceptance model (TAM) to indicate the pandemic influence on online banking service adoption and usage among private banking customers in Albania. The pandemic has resulted in a substantial rise in online banking use. We evaluated the impact on the online banking use of the following factors: age, gender, education, income level, perceived security and safety, perceived usefulness, and perceived ease of use. For the age, education, income level, and security perceptions, we found a positive relation. Gender does not seem to be significant. The convenience, speed, and ease of using online services do not impact online banking use during the pandemic. The findings will be useful to both academics and practitioners looking to understand the issues of the pandemic effect.

Keywords: online banking; technology acceptance model; TAM, pandemic; impact; decision; age.

JEL codes: C1; G21.

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1 Introduction

Electronic financial technology advancements have resulted in new methods of processing financial transactions, especially through internet banking (banking services that allow bank clients or other financial institutions to conduct banking operations from home or the office via an electronic connection). The move toward digital, mobile, and internet banking is now the most obvious in the financial services industry. There have been several studies and empirical research on online banking over the last decade, but the pandemic situation has raised the value of online banking even further. Online banking is a system development from banks that means offering financial services via the internet. Other names for online banking are internet banking, e-banking, mobile banking, virtual banking. In 1981, when the city's central banks offered online banking services utilising the videotex technology, internet banking took its initial steps in New York. Nevertheless, because of the economic collapse of videotex, these banking services have never been popular.

Worldwide, today the most prominent trend in the financial services market is the transition to new, mobile, and online banking. In today's age of unparalleled ease and speed, customers do not want to go to a physical banking branch to conduct their transactions, reducing traditional service requests. More specifically, the Millennials and the older members of Gen Z have started to play a prominent role in the workforce.

The planet experienced an unforeseen pandemic crisis at the beginning of 2020. Pandemic coronavirus is an emerging pandemic of acute respiratory syndrome caused by coronavirus (SARS-COV-2). In Wuhan, China, it was first founded in December 2019. The epidemic was declared a World Health Organisation Public Health Emergency of International Importance in January 2020 and a pandemic in March 2020. According to the World Health Organization's recommendations, preventive interventions include avoiding personal contact, social distancing, and wearing facial masks in public. In several countries around the world, the steps taken to fight the pandemic included the immediate closing of businesses, limits on travel hours, the closure of schools and the passage of online schooling, restrictions on access to hospitals, social distances.

However, these interventions impacted, so more people were experiencing financial problems, increasing the number of people living below the poverty line.

Nevertheless, despite these measures, new opportunities opened up. Most people started to adapt by working remotely using Zoom or Google meetings like the other platform. At the same time, online learning developed, and medical services such as telehealthcare increased. In line with these recommendations, most of the banks and financial services companies, after closing their branches and facing difficulties offering traditional banking during the COVID-19, consequently recommended their customers to use even more e-banking platforms, which seems to be much more critical than before. Many banks have reminded their clients of the value and benefits of using online banking to promote their use during the pandemic. Among the benefits is the ease with which all exchanges can be carried out 24 hours a day, seven days a week, and constant access to all financial information in real-time. The challenge for banks was to promote online banking by increasing the kinds of transactions that consumers would carry out remotely. Another essential factor that increased online banking was also the fear that cash could spread coronavirus. Researchers have also shown that many banks worldwide have seen the change of customers to digital or electronic banking since the pandemic era (Baldwin and Mauro, 2020; Jindal and Sharma, 2020; Wójcik and Ioannou, 2020; Naeem and Ozuem 2021).

Even in Albania, the pandemic situation led to the undertaking of a series of measures by banks to avoid coronavirus risk. Access allowed only with protective measures, waiting in line while respecting social distancing, encouraging online services were primary measures. Banks, on the other hand, increased the services offered online. The question that naturally arises in this situation is whether these changes will be valid and usable only for this situation or this situation will serve as a revolution in this market. Most people in almost every country in the world are concerned about going to their bank because of coronavirus [Lightico Report (2020, March) showed that 82% of respondents in the USA are worried about going to their bank] (https://info.lightico.com/hubfs/Customer_Survey_Impact_of_COVID-19_on-Consumer-Banking.pdf). However, the challenge remains the transition from branch services to online services. This transition cannot be done entirely if many users are elder, which means an age group with a low level of education and low level of technology use.

Furthermore, many customers are still sceptical about the security of getting online bank services. Ulhaq and Awan (2020) have shown that service providers and employees must understand customers' experience and the factors that make them happy and dedicated to e-banking services. Therefore, it is vital to prioritise consumer preferences and concentrate on e-banking services to remain loyal and pleased with online banking channels during the pandemic. This study aims to use an empiric interpretation of primary and secondary data to analyse the online banking services in Albania.

2 Literature review

Financial companies and the digital transition have increasingly increased the range of services offered by combining conventional services with online services. The banking and finance sector is at the forefront of other industries that rely on the internet and technology to connect with customers through e-banking services. The principle of

e-banking relates to the automated distribution of goods and services directly to consumers via electronic communication networks.

2.1 Electronic banking definition

According to Seitz and Stickel (2001), Keyes (1999) and Nixon and Dixon (2000), the services that banks offer through online banking are classified into four types:

- a Informative: To launch its goods and services, the bank uses the internet. The bank advises its presence to their customer via this program and provides an electronic brochure for its services.
- b Communicative: The relation between the client and the banking system allows for this form of structure. For more questions, the customer sends emails and gets responses from the bank about the problems he has addressed about the goods and services of the bank.
- c Interactive with the user: The customer becomes aware of the bank's goods by clicking on each that piques his or her attention, for which he or she also offers specific information. There are also benefits of this style of service as it provides the customer with value. For example, he can measure interest rates electronically if the consumer is interested in a deposit or loan and can even apply online for the product he needs.
- d Transactional: This form of the device facilitates financial operations to be conducted by the customer. The customer will make deposits of funds, apply for debit or credit cards, pay bills. So, it executes all the usual bank counter operations.

Many authors define the online banking concept. For example, Abid and Nooren (2006) described it as the "any use of information, communication and electronic means by a bank to conduct transactions and interacting with stakeholders". Other authors define e-banking as using the internet to offer banking activities such as transferring funds, paying bills, monitoring current account balances and savings, paying mortgages, and purchasing financial instruments and certificates of deposit (Ahasanul et al., 2009). According to Rawwash et al. (2020), online banking can be defined as web-based services such as portals, smartphone apps, or other electrical devices to carry out many banking operations.

Except for cash withdrawals, online banking gives customers access to nearly every type of financial function by just clicking a mouse. Many academic studies in recent years have been focused on mobile banking services offered by banks. Mobile banking is an advance that would become one of the value-added innovations of m-commerce and significantly impact. According to Wang and Shan (2013), people are initially eager to accept mobile banking despite the overall low interest in mobile commerce.

The emphasis of scholarly research has undoubtedly been on the causes or conditions that make such a creation possible, which may indeed be considered 'historical' and can be a different stage in the history of banking operations. Several reports and studies have looked at several factors that affect customers' ability to use internet banking over the last years. In the electronic banking context, the literature review allows us to identify the factors influencing consumers' attraction to e-banking. Stewart and Zhao (2000) stated that with all the advantages of e-banking, its failure is possible. His confirmation is

primarily due to a loss of customer trust in electronic channels. Kumar et al. (2018) and Islam et al. (2020) found that users are more likely to be tempted to use technology that they see is easy to use and requires fewer technological features. People are more inclined to have trust in a product or service that they believe or believe is simple to use, which might eventually drive them to follow the product or service.

2.2 Factors influencing online banking

The review of literature allows us to identify the factors that impact client interest, acceptance, and online banking adoption.

- *Socioeconomic factors such as occupation, education, income level, and residence:* Boshkoska and Sotiroski (2018) assessed that the factors impacting the number of e-banking services used in the Republic of Northern Macedonia are the age of clients, education, and complexity of e-banking services used. More specifically, it was observed that elderly consumers use e-banking services in smaller amounts than the younger demographic. The same result came from Karjaluoto et al.'s (2002) research, which found that consumers of e-banking were younger than those using conventional banking platforms. Al-Ashban and Burney (2001), Stavins (2001), and Karjaluoto et al. (2002) revealed empirical results of a positive impact of income on e-banking adoption.
- *Demographic factors such as gender, age, race, and ethnicity:* Kavitha (2017), based on the findings of the chi-square study, reveals that the demographic profile, such as age, educational qualification, computer knowledge, profession, income, and banking relationship duration, has a positive relationship with the level of satisfaction of bank clients in e-banking. However, gender has no association with the level of satisfaction of e-banking. However, Katz et al. (2001) found that men are more likely than women to use e-banking. Similarly, Karjaluoto et al. (2002) found that men dominated consumers of e-banking. According to the results of this report, gender impacts the availability of e-banking services. Shao et al. (2019) found that mobility and credibility have a more substantial effect on building trust for male clients, while protection and customisation have a more significant impact on confidence for female clients. Elderly consumers use e-banking services in smaller amounts than the younger Karjaluoto et al. (2002).
- *Internet-related technology perception:* According to Hussain et al. (2017), the main concern for Pakistan's banking sector is the extensive use of e-banking-related information technology software, which leads to e-security threats. Among them are cyber-attacks on user accounts, hijacking of funds, misuse of emails and theft, violation of consumer privacy, and confidentiality of financial transactions. Security and privacy are the key features of the Howcroft et al. (2002) report, which hinders the adoption of online banking services. Potential consumers point to internet protection, online banking rules, consumer safety, and banks' credibility as the most critical obstacles for electronic banking implementation in the future (Aladwani, 2001). Indeed, potential customers have described online protection and consumer privacy as the most vital challenges that banks will face in the future in Aladwani's (2001) research. Over the last decades, the growing popularity of e-banking has drawn both legitimate and illegal online banking activities. Prohibited activities

include the theft of internet banking credentials from thieves. It is surprisingly straightforward for hackers to manage and find a combination of username and password and then use it fraudulently to enter a bank account remotely and commit financial fraud. Many academics feel that the perceived simplicity of use of products and services is an important component in consumer acceptance and use of the output (Cheng, 2019; Vukovic et al., 2019; Susanto et al. 2016). Customers will value internet banking more beneficial if it is regarded to be simpler to use. In their study, Guangying (2009) investigated how the perceived ease of use (PEOU) of the internet and the privacy policy offered by internet banking sites affect the view of online banking consumers. Among the variables, it was found that PEOU was less important than privacy and protection. Instead, security is the most significant consideration affecting the acceptance of users.

- *Security and safety perception:* Security is a loss of connectivity in the event of a malfunction of computer networks and repair costs and upgrading data banks. Furthermore, it is the most crucial concern in electronic payment systems. Maeroufi et al. (2015) studied the factors that affected the adoption of e-banking. They identified that confidence, high-quality internet, high-quality operation, lucrative receipts, protection, high-quality networks, personal receipts, and security receipts. Among them found that trust and security were the most critical factors.

Moreover, Liao and Cheung (2002) and Nagar and Ghai (2019) found that reliability was positively associated with electronic banking services. They concluded that the more assured and secure e-banking is perceived by consumers, the more inclined they are to use e-banking. The security element is vital for customers' use of electronic banking services (Polatoglu and Ekin, 2001; Liao and Cheung, 2002; Al-Sharafi et al. 2016). Besides, Gerrard and Cunningham (2003) observed that the security dimension (as secrecy applied to electronic banking) was positively linked to the use of electronic banking services. Adesina et al. (2010) suggested that bank customers who are frequent users of e-banking are using e-banking because it is simple to access, time-saving and valuable for their transaction needs. Network stability and device protection are also the primary user issues in terms of privacy and pose an obstacle to rising usage objectives. Đat and Hang (2021) determined that among the independent factors that have a beneficial influence on the attitude and determination to embrace e-banking services, the most significant impact is innovation in banking, followed by PPU, PE, social influence, attitude, communication, and trust.

- *Environmental factors such as culture, tradition, and technological advancements:* Cultural attributes have been shown to have a significant influence on how users interpret the qualities of the information technology they have embraced (Klein 2004). Hofstede (2001) defined cultural dimensions and stated that people with diverse value orientations interpret and behave differently. When it comes to technological acceptance, culture influences an individual's attitudes and beliefs, proclivity to tolerate uncertainty, and level of innovativeness. Given the importance of culture in shaping people's beliefs, it stands to reason that culture may impact how people view technology (Lee et al., 2007a). According to recent research, Hofstede's cultural dimensions are relevant and useful in investigating the influence of culture on an individual's technological adoption (Tarhini et al., 2017; Teo and Huang

2019). The most significant obstacle affecting bank electronics and service delivery is a lack of trust. The reason for this is that most customers are not well-informed on technological challenges, and for such reason, they showed resistance and anxiety to innovation and new services. Tradition is also an essential consideration. Human interactions have been studied in numerous studies in connection to people's tendency to use the online system and its products and services; this inclination has grown e-commerce use all over the world (Yu et al. 2017).

- *Individual choices and internet engagement:* The spread of online banking services corresponds to customer perception, acceptance, and satisfaction with their services. Perceived behaviour control, as well as a growing need for bill payment management and automation, subjective criteria, and bank account homepage customisation, are all important motivators for using online banking. According to several respondents, the main reasons for using e-banking were time-saving mechanisms, convenience, full-time availability, and cost-effectiveness. When there is no in-person contact, e-banking creates severe privacy issues for users, according to Shankar and Jebarajakirthi (2019). The ease of use of online banking products will increase customer acceptability. According to Stavins (2001), high-status (professional) clients are more likely to utilise electronic banking equipment, showing that job status is connected to e-banking preference. Psychological characteristics such as perceived relative benefits, perceived compatibility, perceived complexity, perceived danger, and perceived cost were discovered to impact online banking adoption (Chuwa, 2015).

3 E-banking environment in Albania

Due to a shortage of information and communication technology infrastructure, the Balkan countries rank among the European countries with the lowest degree of e-commerce readiness. Despite this, Albania is in a stronger position than the rest of the Balkans. The critical factor in the spike of online banking rise is the increasing use of credit and debit cards, the number of payments and transactions made with them, and the growth of ATMs and POS in recent years. In Albania, the American Bank of Albania (Intesa Sanpaolo Bank Albania) provided online banking for the first time in 2003 through the ABA flex product. The 12 banks currently operating in Albania, with domestic and foreign capital, offer their services online.

Table 1 Starting year of delivering e-banking services from Albanian banks

Bank name	Intesa San Paolo	Credins	BKT	Raiffeisen	Procredit	UBA
Year	2003	2008	2008	2008	2009	2009

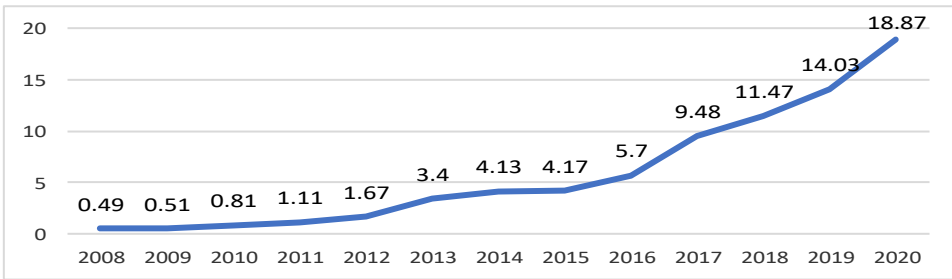
Source: Ministry of Finance

The number of accounts that can be accessed online has enormously expanded; at the end of 2008, it was only 0.7% of the total number of accounts (11,108 accounts accessible online from 1,573,830 accounts in total), in 2012, this number was 2% and 14.79% in 2019 (https://www.bankofalbania.org/Payments/Payment_systems_statistics/). In an empiric analysis in the Shkodra region of Albania, Saraçi and Shterbela (2017) showed that e-banking among clients is minimal. Businesses account for most e-banking service

users. As seen in the graphs illustrating the position of e-banking systems and customers in Albania, the variety of items commercial banks have added as electronic products and services has expanded over the years. Foreign banks operating in Albania were the first to develop electronic services. Even local banks later decided to offer their products and services electronically. However, these services providing level is at an early point compared with developed countries. The primary cause is assumed to be the unnecessary connection of Albanians to traditional banking systems and the lack of awareness of the benefits and disadvantages of this operation. Among the other reasons are the costs of accessing the service, such as technical costs (hardware or device failure), internet access costs, and commissions on financial transfers carried out from bank to bank. Transaction security was one of the critical problems associated with the success of electronic systems in developing countries.

Kripa and Seitaj (2015) assessed that the most important factors influencing the use of e-banking services by customers in Albania are ease of use, efficiency, perceived value, price, transaction security, and bank credibility.

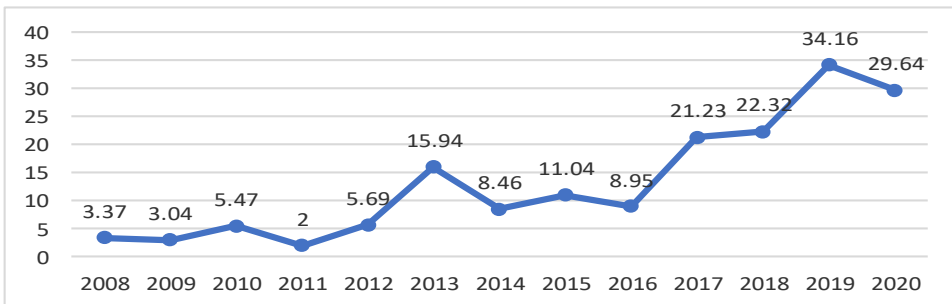
Figure 1 Percentage of Albanian residents accounts accessible online 2008–2020 (see online version for colours)



Source: Bank of Albania

In 2008, Albanian residents had access to 6,958 online accounts, or 0.49% of all accounts; by 2020, the figure had risen to 508,649, accounting for 18.87% of all accounts. This huge growth can be attributed to people’s increased access to technology and the bank’s drive to direct clients to online channels.

Figure 2 Percentage of foreign residents accounts accessible online 2008–2020 (see online version for colours)

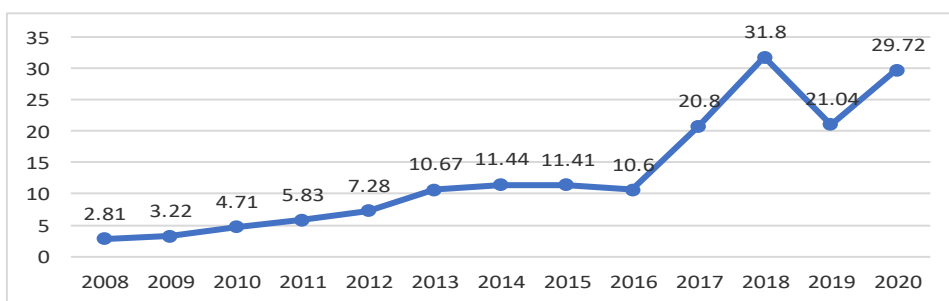


Source: Bank of Albania

Figure 2 depicts statistics from online accounts for overseas residents. In 2008, there were 314 accounts or 3.37% of all foreign resident accounts, and in 2019, 34.16% but in 2020, the data was dwindling, with just 29.64% of all accounts remaining. Foreign residents have greater access to internet banking services, which is likely related to cultural differences and their perception of the benefits of using online services.

The percentage of Albanian companies using online banking has been rising over the years. Bashuri (2016) has shown some of the reasons why Albanian customers hesitate to use online banking. Among them are issues related to the safety level of transactions, indirect costs due to internet lack of knowledge, which could be problematic for older people. Other issues are the cost of internet access subscriptions, lack of cash availability, and direct contact and communication with bank officers. In addition, e-banking raises significant privacy problems for consumers when there is no in-person contact (Shankar and Jebarajakirthy, 2019).

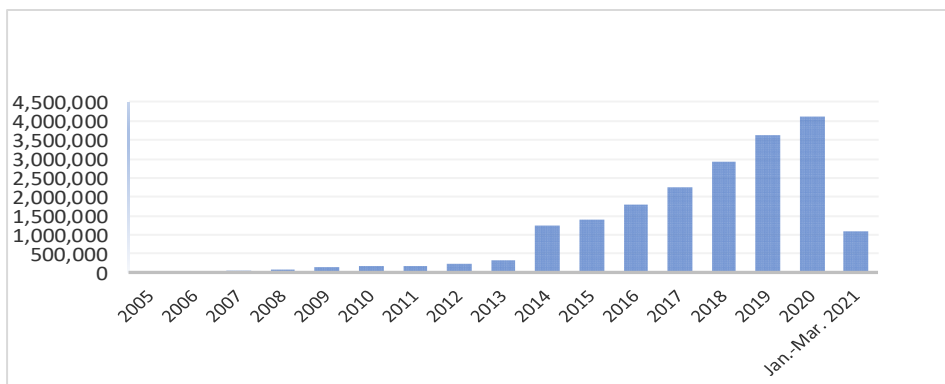
Figure 3 Percentage of Albanian businesses accounts accessible online 2008–2020 (see online version for colours)



Source: Bank of Albania

Figure 4 shows the number of online banking transactions.

Figure 4 The number of online banking transactions in Albania (2005–March 2021) (see online version for colours)



Source: Bank of Albania

There is a significant increase in 2020 (2020 data has exceeded 2019 data), which is explained mainly by the pandemic situation. In addition, customers were obligated for different weeks to use these services online due to the country lockdown.

From 15.706 transactions in 2005 to 4.119.802 transactions by the end of December 2020, the number of online banking transactions has grown dramatically (https://www.bankofalbania.org/Payments/Payment_systems_statistics/HomeBanking). Only for 3 months, January 2021–March 2021 this number is 1,086,485.

Among the other reasons for this increase in online banking, usage is essential to mention paying utility bills. The payment is commission-free for individuals and only a symbolic fee for companies, 24/7 assistance from banks, bonuses, and promotional campaigns offered by banks for those who use online services, technology development, and increasing people's access to the latest technology.

4 Methodology

This study attempts to understand the customer intention to adopt e-banking in Albania before and during the COVID-19 pandemic. We used data from the public institutions to evaluate the e-banking services before the pandemic and we use technology acceptance model (TAM) theory for evaluating the adoption and use during the pandemic. TAM is the most extensively utilised theory for assessing a person's adoption and utilisation of technology. This is because this theory, which focuses on the use of information systems, came from IBM research to explain IBM employees' embrace of word processing technology (Davis et al., 1989).

We employed a mixed-methods study strategy to test our hypothesis. The fundamental purpose of this research is to improve awareness of the use of e-banking services and to track and analyse factors affecting behavioural improvements in account holders during the duration of the pandemic. The quantitative component of the study involves gathering primary data through the distribution and analysis of survey responses.

In the beginning, we prepared a draft survey and distributed it to a small group of colleagues and banking industry specialists. We altered a few questions and corrected a few technical mistakes based on their input. The survey was then piloted by performing 30 field interviews in the next phase. Pilot testing results led to recommendations for additional clarification of several topics. Following the recommendations, the final survey was developed and delivered online, via social media platforms, and via email for data collection. The final stage was quality control on the completed surveys.

The research sample was identified as customers using banking services in Albania. The questionnaire, in the beginning, contains questions relating to the demographic profile of respondents and it includes the respondents' opinions on factors affecting e-banking services during COVID-19 pandemic. For empirical analysis, the data was obtained by 384 online questionnaires (created in Google Forms) that were completed during January 2021.

From the calculations for sample size, it turns out that should be at least 384 questionnaires (<https://www.surveysystem.com/sscalc.htm>) as we have: Albanian population 2,845,955 people (<http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/publikimet/2020/popullsia-e-shqip%C3%ABris%C3%AB-n%C3%AB-1-janar-2020/>), confident level 95% and margins of error 5%

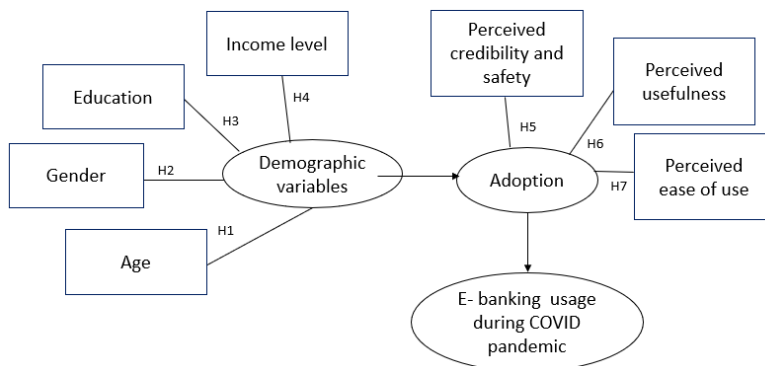
(https://www.researchgate.net/post/What_is_the_permmissible_margin_of_error_when_computing_a_social_research_sample_size).

The answers were ranked on a Likert scale that ranged from strongly disagree (1) to strongly agree (7). The data obtained from the questionnaires are gathered and processed using the statistical database in the Statistical Package for the Social Sciences (SPSS).

4.1 Conceptual framework

TAM has been utilised as an instrument in several empirical studies, owing primarily to its superiority to alternative models for describing attitudes toward adopting an information system (Mathieson, 1991). Prior studies revealed that perceived utility (PU) and PEOU are two criteria that influence how effectively a user accepts information technology. This component shows how people use or do not use an application because they believe it will help them perform better. However, it is insufficient to predict whether or not a user would adopt the technology. We created the research model (Figure 5) to investigate the relationship between the dependent variable, internet banking service usage by customers of Albanian commercial banks during the pandemic, and four demographic variables: age, gender, education, and income level, as well as three other constructs: perceived credibility and safety, PU, and PEOU. The combination of these factors is expected to describe their influence on the customer intentions to use and adopt e-banking during the pandemic.

Figure 5 Proposed model of the study (see online version for colours)



Source: Author’s work

4.2 Empirical analysis

To address the research problems and to achieve the main and specific objectives, this study was performed by testing the following hypotheses:

- H1 Age affects online banking usage; young people use online banking more than older people.
- H2 Gender affects the use of online banking during the pandemic; males use it more than females.

- H3 Education affects online banking usage; the more educated customers are, the more they use it.
- H4 Income level affects online banking; higher-income individuals use online banking often during the pandemic.
- H5 The higher the perception regarding the credibility and safety of online banking, the more customers will use it.
- H6 The higher the perception regarding the convenience and speed (usefulness) of online banking, the more customers will use it.
- H7 The higher the perception regarding the ease of use of online banking, the more customers will use it.

4.2.1 Demographic profile of participants

89% of the respondents answered that they had used online banking services in the last six months and completed the questionnaire, and 11% responded that they had not used online banking services over the previous six months; consequently, with these persons, we interrupted the survey.

The survey shows that they are 174 respondents or 45.3% male and 210 or 54.7% female. In addition, 2.9% of the respondent have primary education, 42.4% have secondary education, 47.1% holders of bachelor's degrees, and 7.5% holder of Master's degrees or PhD. Most of the respondents are young, respectively 42.7% are 18–30 years old, 35.7% are 31–45 years old, 20% are 46–65 years old, and only 1.6% are more than 65 years old

Most of the respondents live in the urban area, 86.7% and only 13.3% live in the rural area. For more details regarding the demographic data of respondents, look at Appendix A.

- *Reliability*: Appendix B offers support for the study's reliability and validity. Internal accuracy within multi-item scales was tested to evaluate reliability by measuring Cronbach's alpha. Typically, an acceptable alpha value is .60 (Churchill, 1979). In this analysis, reliability for the variables under consideration was higher than .80, exceeding the cut-off value.
 - *Statistical testing of hypothesis*: To test the hypotheses, we used chi-square tests with the statistical software SPSS.20.
- H1 Age affects online banking usage; young people use online banking more than older people.
- ah1: 0 cells (0.0%) have an expected count less than 5. The minimum expected count is 21.06.

From the chi-square results table, we see that 0 cells have expected count less than 5, so the assumption has not been violated. Pearson chi-square value is 93.463 degree of freedom is two and p-value is 0.000 is less than 5%, so our results are statistically significant. Age affects the use of online banking during the pandemic. We discovered that younger people are more likely than older people to use online banking services. This result is because they have more access to new technologies and are more open to

them. Because the number of older people who participated in the survey was small, we may have some limitations for this hypothesis.

H2 Gender affects the use of online banking during the pandemic; males use it more than females.

- ah2: 0 cells (0.0%) have an expected count less than 5. The minimum expected count is 70.92.

Table 2 Results of chi-square tests

<i>Hypothesis</i>	<i>Statistics value of chi-square</i>	<i>Pearson chi-square</i>	<i>Likelihood ratio</i>	<i>df</i>	<i>Asymp. sig. (2-sided)</i>	<i>Conclusion (acceptance or rejection of the hypothesis)</i>
H1: age	93.463	93.463 ^{ah1}	100.450	2	0.000	Accepted
H2: gender	0	0.000 ^{ah2}	0.000	1	0.986	Not accepted
H3: education	65.407	60.949 ^{ah3}	65.407	3	0.000	Accepted
H4: income level	64.147	56.956 ^{ah4}	64.147	3	0.000	Accepted
H5: perceived credibility and safety	12.158	10.808 ^{ah5}	12.158	2	0.002	Accepted
H6: perceived usefulness	3.393	2.669 ^{ah6}	3.393	1	0.065	Not accepted
H7: perceived ease of use	2.824	2.436 ^{ah7}	2.824	2	0.244	Not accepted

Source: Author's elaboration

From the chi-square results table, we see that 0 cells have exceeded count less than 5, so the assumption has not been violated. Pearson chi-square value is 0, degree of freedom is 1, and the p-value is 0.986 higher than 5%, so our results are not statistically significant. Gender does not affect the use of online banking during the pandemic. According to gender, men tend to make greater use of e-banking: 56% against 52% of women in the Euro area average [Big Data Economics Web Marketing, (2019), p.9]. The situation in Albania is different because men and women use banking services in the same proportion. The results are similar with France, while in Italy there is the most significant gap between the two sexes where men use more online banking, 39% for males and 29% for females.

H3 Education affects online banking usage; the more educated customers are, the more they use it.

- ah3: 2 cells (25.0%) have an expected count of less than 5. Thus, the minimum expected count is .43.

From the chi-square results table, we see that two cells have exceeded counts higher than 5, so the assumption has been violated. Based on the likelihood ratio, our statistic value is 65.407, the degree of freedom is 3, and the p-value is 0.000, less than 5%, so our results are statistically significant. Education effect use of online banking during the pandemic. We discovered that education has an impact on the use of online banking services. More knowledgeable people are more likely to use internet banking services because of their understanding and familiarity with digital tools and perception of the advantages and costs of using online services. Our results are like data for EU countries when

uneducated individuals tend to use internet banking less, and in this way, they renounce a quick and less expensive way of using them (<https://www.bemresearch.it/wp-content/uploads/2019/03/report-e-banking-2019-BEM-Research.pdf>).

H4 Income level affects online banking; higher-income individuals use online banking often during the pandemic.

- ah4: 2 cells (25.0%) have an expected count less than 5. Thus, the minimum expected count is 1.29.

From the chi-square results table, we see that two cells have expected counts higher than 5, so the assumption has been violated. Based on the likelihood ratio, our statistic value is 64.147, the degree of freedom is 3, and the p-value is 0.000, less than 5%, so our results are statistically significant. Incomes affect the use of online banking during the pandemic. The technical obstacles and internet access fees are two main factors that influence the use of online banking. Individuals with higher income levels who have access to the most effective and reliable internet connection make greater use of e-banking services.

H5 The higher the perception regarding the credibility and safety of online banking, the more customers will use it.

- ah5: 2 cells (33.3%) have an expected count less than 5. Thus, the minimum expected count is 1.29.

From the chi-square results table, we see that two cells have expected counts higher than 5, so the assumption has been violated. Based on the likelihood ratio, our statistic value is 12.158, the degree of freedom is 2, and the p-value is 0.002, less than 5%, so our results are statistically significant. Among the most important factors influencing the use of online banking are safety and security. They usually have trouble adopting mobile banking because they are concerned that their personal or financial information will be exposed and used for fraudulent purposes. Banking consumers must feel comfortable and safe when performing online banking transactions, opening a new account, using a credit or debit card, and so on. Customers must feel safe about privacy matters such as personal information and passwords, as well as the bank's ability to share their information with other firms and accrediting bodies.

H6 The higher the perception regarding the convenience and speed (usefulness) of online banking, the more customers will use it.

- ah6: 2 cells (50.0%) have an expected count of less than 5. Thus, the minimum expected count is .86.

From the chi-square results table, we see that two cells have expected counts higher than 5, so the assumption has been violated. However, based on the likelihood ratio, our statistic value is 3.393, the degree of freedom is 1, and the p-value is 0.065, higher than 5%, so our results are not statistically significant.

Therefore, the convenience and speed of using online services do not affect online banking during the pandemic. In general, in other countries, for those who carry out a work activity, the convenience of using e-banking is found above all in the great versatility of using the service at times more compatible with everyday work (Padhmanabhan, 2008). We could not find a similar result because the survey was done through the lockdown period, and most of the respondents were working remotely or not working.

H7 The higher the perception regarding the ease of use of online banking, the more customers will use it.

- ah7: 4 cells (66.7%) have an expected count less than 5. Thus, the minimum expected count is .43.

From the chi-square results table, we see that four cells have expected counts higher than 5, so the assumption has been violated. Based on the likelihood ratio, our statistic value is 2.824, the degree of freedom is 2, and the p-value is 0.244, higher than 5%, so our results are not statistically significant. The ease of using online services does not affect the use of online banking during the pandemic. Consumers are more likely to use technology if they believe and know that the technology tools are valuable and straightforward to use. As a result, if a customer believes that the bank's system is simple to use, they will be more likely to use online services. The perceived usefulness of traditional banks customers during the COVID-19 outbreak has been found to have a strongly favourable effect on customer inclination to use internet banking. This discovery is consistent with the study of and is comparable to the original TAM concept (Heryani et al., 2020; Kaur and Malik, 2019; Sudarsono et al. 2020). Our results are similar to Al-Sharafi et al. (2017) and Karim et al. (2020). According to Awwad and Shamma (2021), the elements that strongly affected customer intention to use interactive teller machines were convenience, security, and social influence.

Our results confirm the earlier researchers who have analysed factors influencing the usage of online banking. Our study results confirmed other studies such as Flavián et al. (2006) and Alalwan et al. (2018), that age, sex, and income are the main factors influencing online banking usage. Age influenced e-banking usage during the pandemic. Because the majority of young people are students who have access to the internet, it is not difficult for them to take advantage of the IB services offered by banks (Alalwan et al., 2018). Internet banking services may benefit customers not just in terms of business transactions, but also in terms of time and energy savings. Jiménez and Aguiar-Diaz (2019) observed a great correlation between a higher educational level, income level, self-employment, increased banking operations frequency, and adoption of online banking.

Nasri (2011) showed the negative influence of safety perceptions in online banking usage in their studies. Meanwhile, Chuwa (2015) and Szopinski (2016) concluded that education is among the main factors influencing the decision to use online banking. Angelakopoulos and Mihiotis (2011) demonstrated that one of the factors that negatively impact online banking usage is the lack of familiarity with technology. Customers find it simple to use e-banking if the internet banking menu is basic, easy to remember, and tailored to their specific needs (Alalwan et al., 2018). According to Youn and Lee (2019) and Liébana-Cabanillas et al. (2014), perceived utility impacts the choice to embrace a product/service/technology and decisions of future usage based on their preferences for consumption or the usefulness of the services. Kaur and Malik (2019) and Vukovic et al. (2019) provided empirical evidence that PU had a positive impact on the adoption of internet banking. Rashi and Animesh (2021) found that perceived utility, perceived simplicity of use, compatibility, and observability have a substantial relationship with attitude and behavioural intents.

5 Conclusions

The research demonstrates the importance of digital transformation of traditional banking activities in today's world, especially after the pandemic. With the fast advancement of technology in the financial industry, banks must offer electronic banking services to promote simpler management and operation. Alternative channels increase the performance of banking services by allowing customers to do transactions with the bank wherever it is situated and in any location, rather than being limited by physical location. We researched how people used online banking before and during the pandemic and improved after the pandemic crisis. At first, we relied on secondary data from the Bank of Albania, which revealed a substantial rise in the number of online accounts accessed and the number of online transactions, all of which have risen dramatically during the last years. In the following, through the primary data provided by 384 questionnaires completed by individuals, we showed the main characteristics of online banking users, their perception of online banking, and the significant effect that the pandemic has on this service. Gender, age, education, income level, expectations, and perceptions of the service's security level, convenience and simplicity are some significant variables that impact the usage of this service.

6 Managerial implications

Automated services provided through e-banking improve bank performance by increasing profitability, lowering bank operating expenses, and increasing the efficiency of banking activity. To attract and maintain consumers, banks must deliver high-quality internet services based on our analysis, it is worth mentioning the importance of increasing customer security because there is a high percentage of those individuals who do not feel safe using online banking services (increased safety and awareness campaign that offering online services is secure).

We recommend banks execute more comprehensive marketing campaigns to increase client awareness of the advantages and benefits of internet banking services. They must improve client security since many people do not feel safe using online banking services (increased safety and awareness campaign that offering online services is secure).

Also, concerning the e-banking services mentioned earlier in our analysis in Albania, we may infer that the system provides a wide range of services that make it easier for customers to use them, promoting convenience. However, there is room to extend the scope of services offered and the technology to enable non-e-banking users to get motivated to join the e-banking services in the future. Therefore, to increase the number of e-banking customers numbers in the future and increase their confidence level in online services, we recommended that banks maintain a cautious approach to aspects relevant to information safety management and personal training and in the future to improve high-quality e-banking services. Banks must convince and educate clients of all ages and socioeconomic backgrounds that using these channels is no different from using other forms of technology (Vukovic et al., 2019). Because of the lack of face-to-face communication and the prevalence of user-generated material, trust is a critical issue in online service environments. Banks must generate early trust among consumers, emphasise it, and grow trust over time based on usage and acceptance. Bank reputation and brand strength, social influence, honesty, and capacity to offer services are all factors

that might contribute to increased trust. These elements of the initial model impact users' trustworthiness and, as a result, their attitude toward e-banking (Khan et al., 2018). To boost client trust, banks must hire educated individuals who can produce new ideas and build the best innovations for security and technological compatibility while delivering a wide range of services.

Banks must upgrade the infrastructure required to maximise the usage of e-banking. As a result, internet banking should not only provide online banking services, but also simplify online access, offer a range of menus to meet the demands of customers, and introduce more appealing features (Kaur and Malik, 2019). Another essential component is government assistance, and in Albania, government support is provided, and electronic services are encouraged in all economic sectors. Without a doubt, this will encourage the best performance and will bring future progress in the field of information technology of banks; the present usage of these electronic services appears to be highly positive for the future too.

7 Limitations and future research

The sample size is too limited in this analysis, which is a drawback (minimum acceptable). A more detailed open-ended questionnaire would be needed to understand people's perceptions of online banking better. Future studies should consider the frequency of online banking use and the volume and value of transactions for each client to understand the factors that influence its use. However, this article is a starting point for understanding the current situation and studying it in more detail in the future.

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Appendix A*Frequency table of survey respondent demographic characteristics*

<i>Number</i>	<i>Demographic variable</i>	<i>Group</i>	<i>No. of respondents</i>	<i>Percentage of respondents</i>
1	Age	18–30 years old	164	42.7%
		31–45 years old	137	35.7%
		46–65 years old	77	20%
		Over 65 years old	6	1.6%
2	Gender	Male	174	45.3%
		Female	210	54.7%
3	Education	Primary	11	2.9%
		Secondary	163	42.4%
		University	181	47.1%
		Postgraduate	29	7.6%
4	Residential area	Urban	333	86.7%
		Rural	51	13.3%
5	Income level	Under 30 thousand all	72	18.7%
		30–50 thousand all	256	66.7%
		50–99 thousand all	53	13.8%
		Over 100 thousand all	3	0.8%
6	Have you used online banking services in the last six months?	Yes	342	89%
		No	42	11%
7	Before the pandemic, did you use online banking services?	Yes	242	70.7%
		No	100	29.3%
8	Use online banking services compared to the pre-pandemic situation?	Same	0	0%
		More	195	57%
		Less	147	43%
9	Will you use online banking services after the pandemic?	Same	320	93.6%
		More	20	5.8%
		Less	2	0.6%
10	Use online banking services for?	Check of balance	123	36%
		Utility payments	38	11.1%
		Transfers	168	49.1%
		Info about loan	13	3.8%
11	How do you feel based on safety when using banking services?	Branch	67	19.6%
		Online	3	0.9%
		Same	272	79.5%
12	Which method is faster when using banking services?	Branch	0	0%
		Online	340	99.4%
		Same	2	0.6%
13	Which method is easier when you use banking services?	Branch	1	0.3%
		Online	337	98.53%
		Same	4	1.17%

Source: Author's elaboration

Appendix B

Summary table of reliability statistics

Reliability statistics

Cronbach's alpha	Cronbach's alpha based on standardised items	No. of items
.759	.816	8

Notes: Cronbach's alpha should be >0.7 . This means that our variables are reliable.

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
AGE	13.69	7.635	.189	.	.784
GEN	13.73	7.873	.230	.	.767
EDU	12.63	6.041	.518	.	.725
INCOME	13.27	6.379	.588	.	.707
HOWOFTEN	13.70	7.452	.389	.	.745
SAFETY	12.65	5.866	.538	.	.721
SPEED	13.30	7.144	.871	.	.703
EASIER	13.30	7.144	.871	.	.703

Source: Author's elaboration