



**A Comprehensive Look at the Challenges of Mobile Banking
from the Consumer's Point of View**
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Abstract:

Mobile banking is a modern and convenient banking service that has revolutionized the banking industry by providing customers with easy access to their bank accounts and a range of banking services through their mobile devices, However, the widespread adoption of mobile banking is still hindered by several challenges. This paper examines the challenges of mobile banking and the views of consumers towards mobile banking adoption. Algerian customers have a positive attitude towards mobile banking, It is attributed to its user-friendly interface, visually pleasing design, fast and efficient management and viewing of accounts, high level of security, and the availability of various features and services. In contrast to the generally positive view of mobile banking, customers have reported low satisfaction with customer service.

Keywords: Mobile banking, challenges, consumer, benefits, application.

Introduction:

The expansion of the financial sector, the proliferation of mobile telephony, and the advancement of the Internet network have all contributed to the growth of mobile banking in Algeria. The government's strategy for digitalization since 2013, called the "e-Algeria strategy", has accelerated the adoption of this technology in the country. The government has launched several digitization initiatives, such as the digitization of the university for online registrations and consultations, the online management of registrations and AADL payments in the real estate sector, and the implementation of "zero paper " in the Arab summit in Algiers in

2022. Banks in Algeria have been encouraged to develop mobile applications to offer more comfort, convenience, and connectivity to their customers; Mobile banking has become an essential tool in the financial industry, providing customers with a wide range of convenient banking services.

Despite its numerous benefits, the adoption of mobile banking faces several challenges. These challenges include technological issues, security concerns, privacy issues, lack of awareness, and a lack of trust in the mobile banking system. These issues can significantly impact the consumer's perception of mobile banking, influencing their level of adoption and continued usage.

This paper aims to explore the various challenges of mobile banking and the views of consumers toward mobile banking adoption in Algeria . By examining the relevant literature, we can gain a deeper understanding of the challenges of mobile banking and the factors that influence consumer adoption.

I. Theoretical framework and previous study

1. The concept of mobile banking

The concept of mobile banking is a more or less recent concept throughout the world, its emergence and its great development date from the 2000s linked to the great development of mobile telephony and the Internet network, this concept finds a certain ambiguity due to its great lack of definitions by the authors. M-Banking, synonymous with mobile banking and e-banking, is a component of mobile commerce that allows consumers to access the Internet through a wireless device to carry out transactions (Varshney and coll., 2010; Weitenberner and coll., 2006; Wei and coll., 2009). Mobile banking is therefore a channel through which the customer interacts with a bank via a mobile device (Barnes and coll., 2003; Scornavacca and coll., 2004) to make payments or use other mobile financial services with a mobile device. independence of time and place (Mobey Forum, 2008). The impact of mobile banking is different depending on the country (Porteous D., 2006; Porteous D., 2007).

In the literature search, definitions given by financial institutions including banks were also found. Mobile banking refers to an online banking service,

which refers to the use of a mobile device to carry out some financial transactions, rather than going to a local branch to access banking products, and it will also make it possible to have a direct eye on bank accounts. Price bank gives a simple definition to this concept "A mobile bank designates a structure which offers banking services mainly accessible and controllable via a smartphone application".

In the national context, Natixis Algeria explains this notion, "The mobile bank is a secure account, mobile and accessible from a smartphone, anywhere is at any time; remote banking services accessible to all". The main reason that has participated in the development of this new form of banking services is the development of mobile telephony and the Internet network, and according to data from the World Bank, three-quarters of the world's population have access to telephony. mobile, which has contributed to the financial inclusion of disadvantaged people in developing economies, including many North African and African economies.

Thanks to the development of banking applications and the development of mobile banking adapted to the consumer, banking operations have become easier to carry out, with a minimum of overruns at the bank branch or even no overruns.

Banking applications will also make it possible to inform customers about all the services and all the new features.

Many banks use both SMS and apps to inform their customers of their account movements and account status including all transactions or to send alerts and other information.

2. The use of mobile banking

According to the World Bank, 1.7 billion people worldwide did not use formal financial services, and more than 50% of adults in the poorest households remained unbanked. This indicates that there is still great potential to increase financial inclusion in poor or developing economies, people who do not have a formal bank account are at the base of the pyramid (BOP). According to the pyramid theory, there is a need to design and distribute affordable goods and services, including financial services specifically targeting poor communities. Half of these poor economies are from Sub-Saharan Africa, according to the 2018 World Bank report.

Developed countries (OECD), due to their high penetration rate and the low number of unbanked people, would use M-Banking as an additional channel in the distribution of mobile financial services and access to bank accounts, thus allowing consumers users to consult their balance, their history, transfer money, place orders, pay bills or even locate bank branches. And so the use of mobile banking in developed countries will make it possible to carry out some banking operations and also be used as a channel that allows generally unbanked populations to access banking services.

In Algeria, the appearance of the first application and mobile was in April 2018, launched by Natixis Algeria under the name "Banxy" which offers an innovative concept that has facilitated access to banking services, several other banks present in Algeria regardless of whether private or public takes the initiative to offer an online banking service, by offering mobile applications for better account management. In the Algerian banking market, there are about twenty commercial banks, 14 of them offering an online banking service with their mobile applications, but this figure is constantly growing and probably soon all the commercial banks present on the ground Algerian will offer an online service.

Table 1: Banking applications

| Banking app | Bank owned |
|---------------|-------------------------|
| Banxy | Natixis Algeria |
| MyBank | BNP Paribas El Djazair |
| Trust Connect | Trust Bank |
| LMS APP | Societe General Algeria |
| Digit Bank | BDL |
| al Baraka | Al Baraka from Algeria |
| AGB Online | AGB Gulf Bank Algeria |

| | |
|--------------|--------------------|
| | |
| Mobile CPA | CPA |
| CNEP connect | CNEP |
| Bank In App | Fransabank Algeria |
| MySalam | salam bank |

Source: made by the authors

3. Challenges of Mobile banking

Mobile banking has become a popular way for customers to manage their finances due to the ease and convenience of conducting transactions from a mobile device. However, there are challenges that come with implementing and adopting mobile banking.

- Mobile banking requires a reliable internet connection, which may not always be available in certain areas. Additionally, not all customers have smartphones, which limits their ability to access mobile banking services. The studies of Changchit and coll. (2017) and Kazi & Muhammad. (2013). suggest that mobile banking providers need to consider the needs of customers in areas with limited connectivity, and explore ways to make mobile banking services more accessible to all customers.
- The complexity of some mobile banking applications can make it difficult for customers to navigate and perform transactions. The studies of Kim and coll. (2014) and Ali Abdallah & coll. (2017), recommend the development of user-friendly and intuitive interfaces to improve the usability of mobile banking applications.
- The cost of mobile banking can be a challenge for customers. Some mobile banking services charge fees for certain transactions, and these costs can add up over time. This challenge has been discussed by authors such as Shankar & Kumari (2016) and Ching-Mun, Kam & coll. (2011). These studies suggest that mobile banking providers need to be transparent about the costs of

their services and explore ways to reduce the financial burden on customers.

- Regulatory issues and compliance requirements pose a challenge for mobile banking providers. Mobile banking services must comply with various regulations and standards, which can be difficult to navigate and comply with. The challenge has been discussed by authors such as Changchit & coll,(2017) and Sreelakshmi & Sangeetha (2019), who recommend that mobile banking providers collaborate closely with regulatory bodies to ensure compliance and stay up-to-date with changing regulations.
- Mobile banking relies heavily on technology, and as such, it is vulnerable to issues such as network outages and system failures. Authors have addressed this challenge in their works such as Zahoor & Shafie (2018) and Koenait & coll(2019). Both studies recommend that mobile banking providers ensure the robustness of their technological infrastructure and maintain a backup system to prevent service disruptions.
- Some customers may lack the knowledge or skills to use mobile banking effectively, which can create a barrier to adoption. The authors have tackled this particular challenge in their research. such as Mufingatun & Budi, (2020) and Pooja & Gaurav. (2019). Both studies recommend that mobile banking providers invest in educating customers about the benefits and risks of mobile banking, as well as how to use it effectively.
- Mobile banking can be influenced by social and cultural factors, including customers' attitudes and beliefs about banking. This issue has been examined by various authors in their studies such as Prastiawan &coll (2019) and Schankar. (2022). Both studies suggest that mobile banking providers need to understand and address the unique social and cultural factors that influence customer adoption of mobile banking.

all these challenges need to be considered when developing and implementing mobile banking services. By understanding these challenges, mobile banking providers can develop strategies to overcome them and provide high-quality services to their customers.

II. Research Methodology

Our study aims to develop an inventory of the quality of the online banking service offered by the banks present on Algerian soil, to measure this quality of service, through the opinion of customers, but also to know the limitations and obstacles of this service.

To proceed, a questionnaire of eleven (11) questions was intended for banked people in the region of Oran and its surroundings, electronically via modest customer databases that several banks communicated to us, and also via forms that certain banks required us to distribute to their customers for the period of February 2023.

The questionnaire is made up of three blocks, the first is to know the customer's profile, the second is to know the customer's attitude and motivation, and the third is to measure the quality of the online banking service on a five-point Likert scale, from strongly disagree to strongly agree.

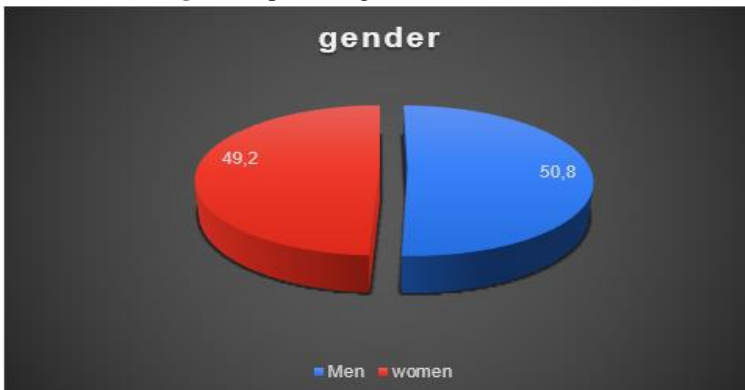
Our study targets banked individuals in the western region of Algeria. We administered 60 questionnaires, of which 5 were discarded due to insufficient responses or random answers, and an additional 15 questionnaires were not returned, resulting in a total sample size of 40. The statistical analysis employed in this study was performed using SPSS V20.

III. Result and discussions

1. Profile of banked people

1.1. The percentage of respondents of both genders

Fig.1. The percentage of men and women

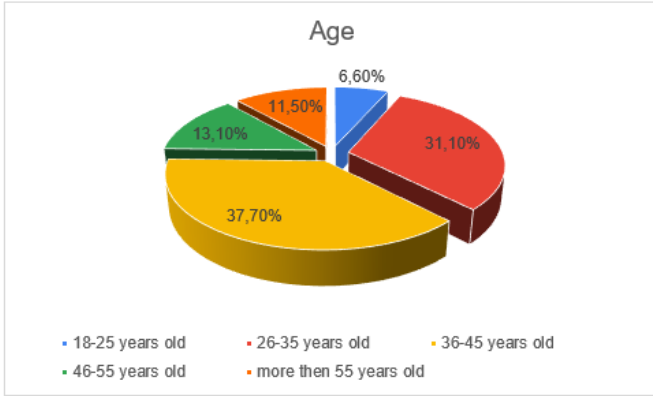


Source: Established by us from SPSS (V20)

According to the data collected in this survey, women represent 49.2% of respondents and men 50.8%. Thus, there is a considerable balance between the percentages of the two genders

1.2. Age of respondents

Fig.2. age of respondents

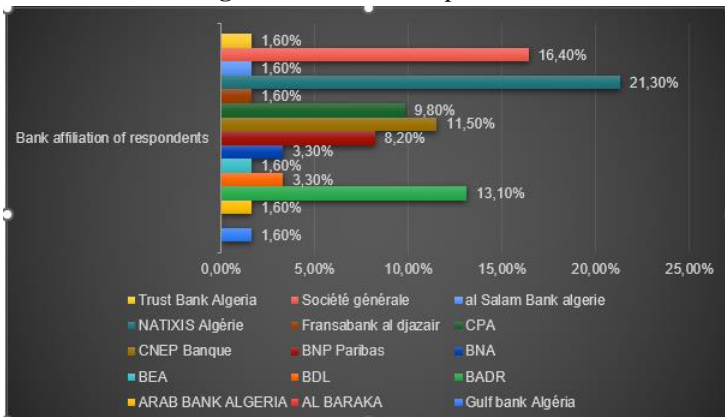


Source: Established by us from SPSS (V20)

The questionnaire was distributed equitably among the five age groups used. The results indicate that the most represented age group among the respondents is between 36 and 45 years old, followed by those 26 to 35 years old. In contrast, the 18 to 25 age group had a lower response rate.

1.3. Bank affiliation of respondents

Fig.3. Affiliation of respondents

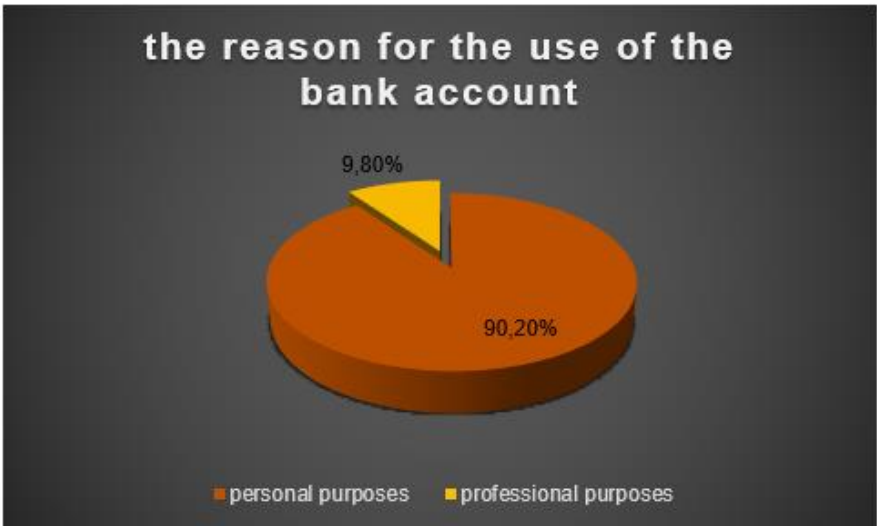


Source: Established by us from SPSS (V20)

According to the data presented in the table, Natixis Algérie, Société Générale Algérie, and BADR are the most frequented banks among our sample, followed by BNP Paribas, CPA, and BNA. On the other hand, Gulf Bank, Fransabank, Al Salam Bank, and Trust Bank, were the least frequented by the customers surveyed. The questionnaire was distributed fairly to people with banking relationships in general, without being based on any particular bank. The results clearly show that customers are much more inclined to turn to Natixis Algeria.

1.4. The use of the bank account: individual/professional

Fig.4. The reason for the use of the bank account



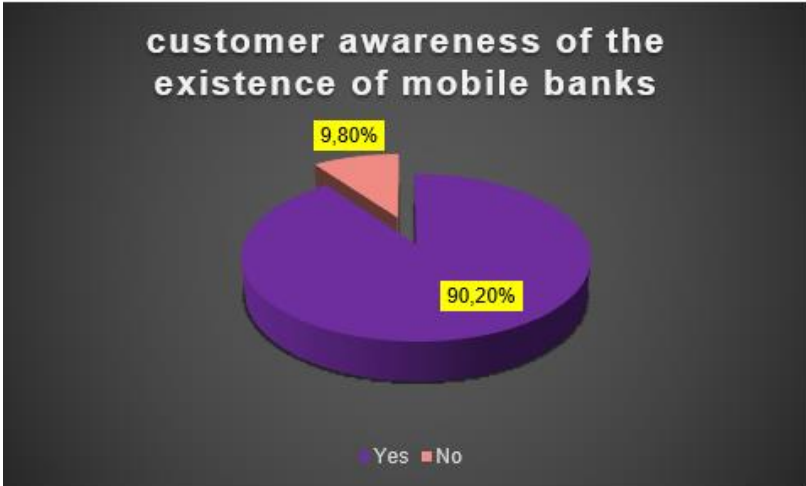
Source: Established by us from SPSS (V20)

According to the results, 90.2% of the surveyed population uses their bank account for personal purposes, while only 9.8% use it for professional purposes.

2. The reality of mobile banking in Algeria, from a customer's point of view

2.1. The reputation of mobile banking

Fig.5. customer awareness of the existence of mobile banks

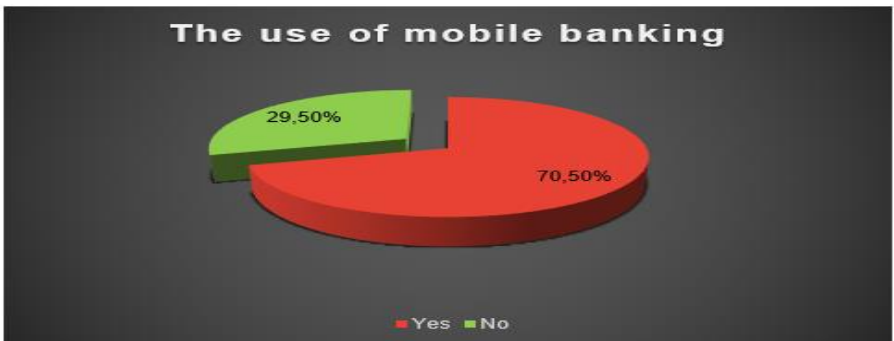


Source: Established by us from SPSS (V20)

According to the results, 90.2% of customers surveyed have already heard of the existence of mobile banking in Algeria, while a low percentage of 9.8% of banked customers have never heard of it. This can be explained either by an explanation and insufficient information of the staff on the banking products and services or because the affiliated bank of the customer does not yet have a mobile application for the management of the accounts of its customers.

2.2. The frequency of use of mobile banking

Fig.6. the use of mobile banking

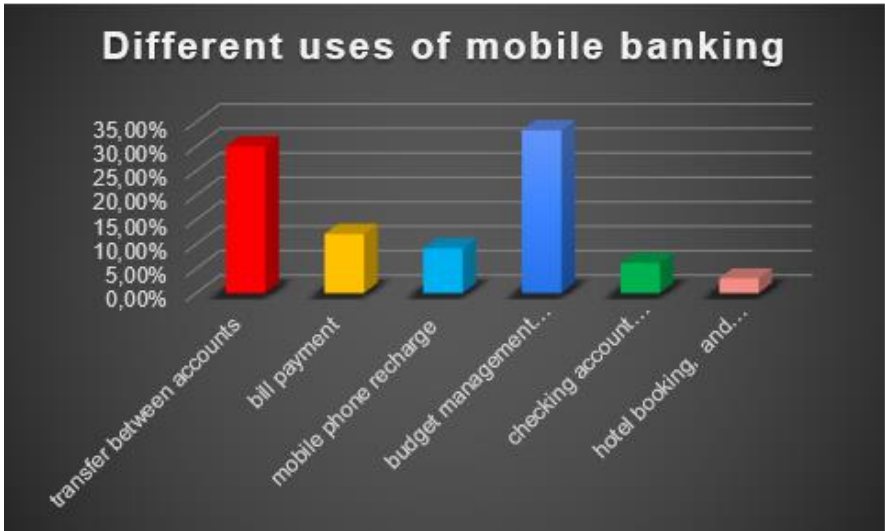


Source: Established by us from SPSS (V20)

According to the results on the frequency of use of mobile banking, it appears that 70.5% of customers use a banking application to manage their accounts, while only 29.5% of customers say they have never used a banking application.

2.3. Types of mobile banking uses

Fig.7. Different uses of mobile banking

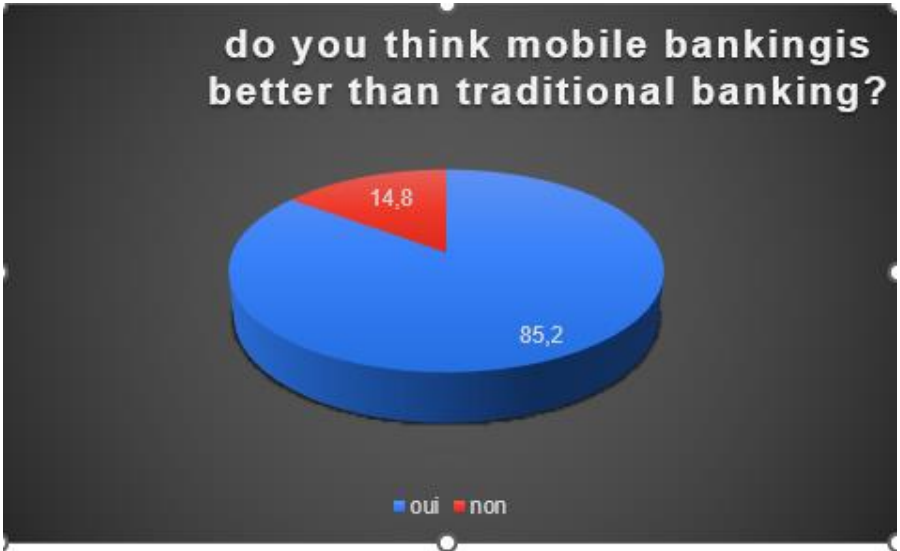


Source: Established by us from SPSS (V20)

The uses of mobile banking by customers are Transfer between accounts, bill payment, mobile phone recharge, budget management and expense tracking, balance consultation, and transaction history, hotel reservation, plane ticket reservation. The most popular are transfers between accounts, budget management, and balance consultation.

2.4. Customer feedback on their preference for mobile banking

Fig.8. Consumer preferences

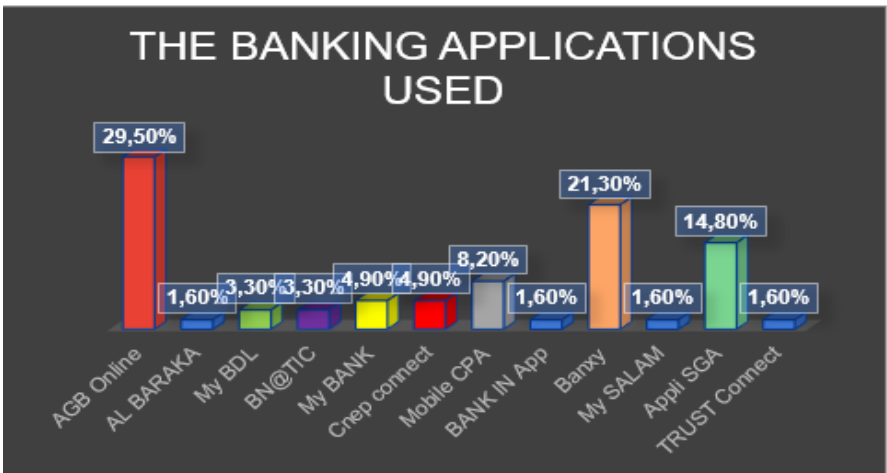


Source: Established by us from SPSS (V20)

58.2% of customers believe that mobile banking is better than traditional banking, while 14.8% say the opposite.

2.5. Banking applications used by customers

Fig.9. The banking applications used



Source: Established by us from SPSS (V20)

The results determine that the most used banking application is that of Baxy by Natixis Algeria followed by Appli SGA by Societe General Algeria as for the other applications have a very low use.

3. Customer assessment of m-banking and challenges

3.1. Reliability test of items used to get customer feedback

Table 2. Questionnaire reliability analysis

Statistiques de fiabilité

| Alpha de Cronbach | Nombre d'éléments |
|-------------------|-------------------|
| .638 | 7 |

Source: Established by us from SPSS (V20)

Cronbach's alpha test is 0.638, which is greater than 0.6, which explains why there the seven items are reliable.

3.2. Customer attitude toward mobile banking

Table 3. Customer opinions on mobile banking according to a Likert scale

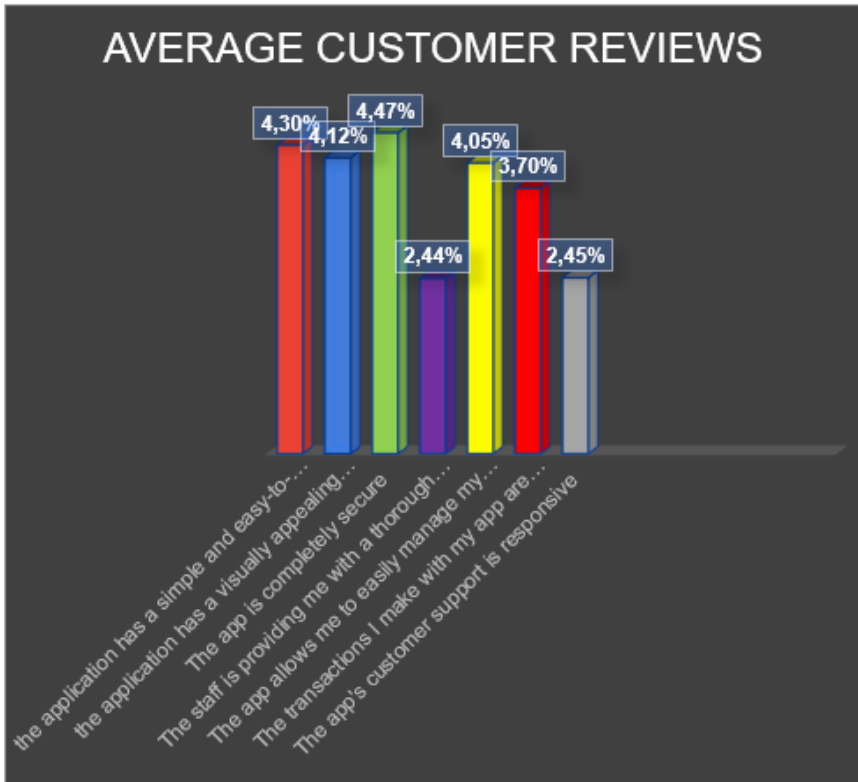
| Evaluation item | Customer review |
|---|--|
| The app has simple and easy to use | Strongly disagree: 0% Disagree: 6.6% Neither agree nor disagree: 2.4% Agree: 55.5% Extremely agree: 16% |
| The application interface is visually comfortable | Strongly disagree: 0% Disagree: 6.6% Neither agree nor disagree: 11.11% Agree: 55.6% Extremely agree: 26.69% |
| My bank's application is completely secure | Strongly disagree: 0% Disagree: 4.4% Neither agree nor disagree: 6.6% Agree: 35.5% Extremely agree: 53.5% |

| | |
|---|--|
| <p>The staff gives me a full explanation of the use of the banking application and the costs</p> | <p>Strongly disagree: 24.4% Disagree: 42.2% Neither agree nor disagree: 17.7% Agree: 11.1% Extremely agree: 4.6%</p> |
| <p>The application allows me to easily manage my bank accounts, and with a minimum of travel to the bank</p> | <p>Strongly disagree: 0% Disagree: 8.8% Neither agree nor disagree: 17.7% Agree: 42.2% Extremely agree: 31.3%</p> |
| <p>The movements I make with my application are recorded immediately</p> | <p>Strongly disagree: 2.2% Disagree: 20% Neither agree nor disagree: 11.1% Agree: 42.2% Extremely agree: 24.5%</p> |
| <p>The application's customer service is attentive and adopts a reassuring attitude when I have problems with the application</p> | <p>Strongly disagree: 33.3% Disagree: 31.1% Neither agree nor disagree: 15.5% Agree: 17.7% Extremely agree: 2.5%</p> |

Source: Established by us from SPSS (V20)

The results presented in the table above reveal that customers have an overall positive perception of the use of mobile banking. In fact, 55.5% of customers agree that it is simple and easy to use, and 56.6% declare that it is visually comfortable. Security is a very important element in the financial sector and customers appreciate it because none of them declare that the banking applications are not secure, which greatly promotes the growth of the mobile banking sector. One of the biggest challenges of mobile banking is security.. This challenge has been discussed by many authors, including Vishal & coll (2022) and Ashraf & Concepcion (2022). Both of these studies recommend the implementation of strong authentication methods and data encryption to ensure the safety of mobile banking transactions. On the other hand, customer service was widely criticized, with 64.4% of users dissatisfied with the customer service of their banking applications.

Fig.10. Average customer reviews



Source: Established by us from SPSS (V20)

The results in the table above confirm the previous results regarding customer opinion and attitude toward mobile banking. The items related to the use and security of the banking application recorded an average of more than 4, which is an excellent result. On the other hand, the items related to staff benefits recorded a lower rate of about 2. In conclusion, the banking application is very well designed in terms of use, delivery, and security. However, bank staff is not qualified to manage this new device offered by their bank.

3.3. Effect of age and gender variables on the image of mobile banking

To examine whether customers' age and gender influence their perception of mobile banking, we opted to conduct a chi-square test. This

test makes it possible to calculate several significant elements. The distance between the observed table and the one expected if the two variables were independent through the statistical value of the chi-square (χ^2).

- The number of degrees of freedom of the test (ddl).
- The p-value, an asymptotic measure, represents the likelihood or probability of obtaining a value of χ^2 under the assumption of independence.

For his interpretation:

- If: Asymptomatic significance < 0.05, there is a relationship between the two variables.
- If: Asymptomatic significance > 0.05, there is a relationship between the two variables.

Table 4. Chi-square test

| WB picture | Gender | | | Age | | |
|--------------------------------------|--------|-----|---------------------------|--------|-----|---------------------------|
| | Value | dof | Asymptomatic significance | Value | dof | Asymptomatic significance |
| Heard of BM in Algeria | 2.815 | 1 | .093 | 21.080 | 4 | .000 |
| Use of BM for transactions | 4.680 | 1 | .031 | 9.661 | 4 | .047 |
| BM is advantageous than BC | 1.061 | 1 | .303 | 11,666 | 4 | .020 |
| Regular use of a banking application | 4.166 | 2 | .125 | 9.882 | 8 | .273 |

Source: Established by us from SPSS (V20)

Examination of the chi-square used for the gender and age variables used with the image variables of mobile banking in Algeria revealed the following results:

There is a relationship between:

- Gender and use of BM to transact
- The age variable with the variables heard of the BM in Algeria, use of the BM to carry out transactions, and the BM is more advantageous than the BC.

There is no relationship between:

- The kind and the heard of the BM in Algeria, the BM is more advantageous than the BC, and the regular use of a banking application.
- Age and regular use of a banking application.

By analyzing the results, it can be concluded that there is a difference in the use of mobile banking between men and women to carry out transactions, but for the rest of the variables, there is no significant difference between the behaviors and opinions of men and women.

Based on these results, it is evident that age is related to the three previously mentioned variables, which means that age plays a crucial role in the attitude, ideology, and behavior of customers regarding the image of the BM. According to the answers of the customers questioned, the age group which does not use BM and which prefers BC to BM is among the over 55s. It is therefore clear that older customers are more reluctant towards this new service. However, banks must work to change the attitudes of older customers.

3.4. Effect of bank affiliation variables on the image of mobile banking

Secondly, the image of mobile banking is checked if it depends on the bank affiliation and the banking applications that customers use.

Table 4. Chi-square test

| WB picture | Bank affiliation | | | Banking application to use | | |
|--------------------------------------|------------------|-----|---------------------------|----------------------------|-----|---------------------------|
| | Value | dof | Asymptomatic significance | Value | dof | Asymptomatic significance |
| Heard of BM in Algeria | 14.353 | 14 | .424 | 15.897 | 12 | .196 |
| Use of BM for transactions | 37.266 | 14 | .001 | 54.056 | 12 | .000 |
| BM is advantageous than BC | 24.133 | 14 | .044 | 20.627 | 12 | .056 |
| Regular use of a banking application | 67.556 | 28 | .000 | 61,000 | 24 | .000 |

Source: Established by us from SPSS (V20)

The chi-square test conducted on the variables of bank affiliations and banking applications used in conjunction with the variables of mobile banking image in Algeria produced the following results:

There is a relationship between:

- The bank affiliation with the use of the BM for transactions, the BM is more advantageous than the BC, and the regular use of a banking application.
- The banking application is used with the use of the BM for transactions, and the regular use of a banking application.

There is no relationship between:

- Bank affiliation and hearing about the BM in Algeria.
- The banking application to use with the heard of the BM in Algeria, and the BM is more advantageous than the BC.

According to these results, there is a correlation between the bank chosen by the customer and the use of the banking application as well as the frequency of use and the attitude towards mobile banking. However, there is no link between bank affiliation and awareness of the existence of m-banking, indicating that m-banking is quite well-known among customers even without the use of a banking app. and that the majority of customers find it more advantageous than the traditional bank.

Conclusion

Our study aimed at assessing the reality of mobile banking in Algeria has shed light on the challenges to be met. The results of our analysis are positive, but there are still obstacles to overcome. Here are the conclusions of our analysis:

Banking apps or mobile banking is a widely recognized service among individuals with bank accounts, and a substantial proportion of them utilize it, although the promotion of this new mode of operation is insufficient. However, bank staff managed to convince their customers to use the bank's associated application.

Customers have a positive attitude towards mobile banking, due to its ease of use, comfortable design, speed of managing and viewing accounts, security, as well as various features such as online purchases, transfers, opening new accounts or even locating branches.

However, customers have a low rating of customer service, considering that they are not given enough consideration when they encounter problems with the app or seek information. Furthermore, they believe that the reception staff does not provide enough information on the use of the application.

The use of mobile banking is constantly growing and banks are gradually committing to offer these new services to their customers.

Based on the results of this study, several recommendations can be made:

- Enhancing customer service is a significant challenge in the present day, as an improvement can not only attract more users but can also pose a potential threat to banks as customers may lose confidence in them over time. To mitigate this risk, it is crucial to establish attentive customer service, including the provision of a 24/7 emergency hotline, given that the banking app manages critical funds and resides on customers' smartphones.
- Use of mobile banks to reach unbanked people in Algeria: It would be appropriate to use mobile banks to target people who are unbanked in the country. The best example is the Swiss bank Paysera which has managed to attract a significant portion of the unbanked in Algeria and around the world despite the distance.
- It is imperative for bank staff "front office" to better inform customers about the use of the application, by explaining to them how to use it and by regularly informing them of new features.
- Build digital financial literacy or provide financial education by informing customers about the different features and benefits of mobile banking to encourage wider and more effective use
- Offer incentives such as discounts on transactions made through mobile banks to encourage customers to use them more frequently.

It would be interesting to study the performance of banks or continue research on mobile banking in Algeria focusing on the factors that influence the decision to adopt mobile banking or not, such as confidence in security and technology, customers' financial consumption habits, and personal preferences. It could also be useful to study the behaviors and

consumption habits of customers in the use of mobile banks, as well as the advantages and limits of their use compared to traditional banks and, finally the diffusion of the culture of mobile banks.

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