

## The clients' intent in using the "MobiBank" mobile banking service in Algeria: (An analysis based on ACP to identify the key contributing factors)

Reguig Khelifa Mohammed\*, Chenni Talia\*\*

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**Abstract:** Despite the significant and noticeable advancements in banking services and the benefits they have achieved, there is still a clear lack of usage of these services, particularly the electronic ones, by bank clients in Algeria. This study aims to explore the impact of four variables (perceived benefit, perceived ease of use, trust, and perceived risks) on the behavioral intention of bank clients to use mobile banking services (MobiBank).

The study employed the hypothetical-deductive method to validate the proposed hypotheses, utilizing a questionnaire as the primary tool, with 200 questionnaires distributed. The results were analyzed using SPSS software. The findings indicated that the four studied variables—in the following order: perceived benefit, perceived ease of use, perceived risks, and trust—positively influence clients' intention to use mobile banking services.

**Keywords:** Mobile Bank; User's intention; Perceived usefulness and risks; Trust; Perceived Ease to Use

**JEL Classification:** D7, G41, L91

**ملخص :** على الرغم من التقدم الكبير والملاحظ في الخدمات المصرفية والمزايا التي حققتها، إلا أننا ما زلنا نلاحظ بوضوح قلة استخدام هذه الخدمات، خاصة الإلكترونية منها، من قبل عملاء البنوك في الجزائر. تسعى هذه الدراسة إلى استكشاف تأثير أربعة متغيرات (الفائدة المتصورة، سهولة الاستخدام المتصورة، الثقة، والمخاطر المتصورة) على النية السلوكية لعملاء البنوك في استخدام الخدمات المصرفية عبر الهاتف المحمول واعتمدت الدراسة المنهج الفرضي الاستنتاجي للتحقق من صحة الفرضيات المطروحة، واستخدمت الاستبيان كأداة رئيسية، (MobiBank). أظهرت الدراسة أن المتغيرات الأربعة المدروسة، بالترتيب التالي: SPSS حيث تم توزيع 200 استبيان. كما تم تحليل النتائج باستخدام برنامج الفائدة المتصورة، سهولة الاستخدام، المخاطر المتصورة، والثقة، لها تأثير إيجابي على نية العملاء في استخدام الخدمات المصرفية عبر الهاتف المحمول.

**الكلمات المفتاحية :** الهاتف المحمول البنكي، نية الاستخدام، الفائدة والمخاطر المتصورة، الثقة، سهولة الاستخدام.

\*Mustapha Stambouli University, Algeria, [kmohammed.reguig@univ-mascara.dz](mailto:kmohammed.reguig@univ-mascara.dz), (Corresponding author)

\*\* El-Bayadh University Center, Algeria, [b.cheni@cu-elbayadh.dz](mailto:b.cheni@cu-elbayadh.dz)

**1.Introduction:**

2.Algeria has experienced a true banking revolution in the realm of financial technologies. The rise of electronic banks has led to a widespread adoption of relatively new online banking services compared to traditional banks, primarily due to their numerous advantages. Banks have sought to enhance their services by launching new offerings that leverage these technologies. These services enable clients to complete various transactions without the hassle of visiting the bank in person, saving valuable time that could be spent resolving issues online in just a few minutes. Furthermore, unlike conventional banking services, these digital options are available 24/7.

Among the newest offerings in this field is Mobile Banking, or MobiBank. This service allows clients to easily manage their accounts anytime and anywhere, without restrictions. As a result, Algerian banks face a crucial strategic challenge: to identify the variables that would promote the use of banking services via mobile devices and encourage clients to embrace this option by investigating the factors that are likely to influence their intention to use MobiBank

1.1 The research problem What factors contribute to clients' intention to engage with the MobiBank service in Algeria?

**1.2 Hypothesis**

- The core hypothesis is that factors exist which impact clients' intentions regarding the use of MobiBank services in Algeria.

**1.3 The research objectives:**

The new technological era demands continuous innovation to meet customers' needs and desires. While the use of cell phones in Algeria has surged, the uptake of mobile banking services has been relatively low, hindering their growth and causing banks to hesitate in launching these services. This situation has created a strong incentive to investigate the factors influencing clients' intention to use mobile banking in Algeria. The study aims to analyze perceived usefulness, perceived risks, trust, and perceived ease of use to determine their impact on clients' behavioral intent to utilize mobile banking services via cell phones.

**1.4 The research importance**

The clients' intention regarding banking services via mobile phones, as a technological reference in Algeria's sustainable banking sector, has not been extensively studied. This research aims to shed light on clients' perspectives concerning banking services conducted over the phone. It will help banks assess the effectiveness of their technological implementations in banking services and identify ways to address the shortcomings perceived by clients. Additionally, the study will provide a foundation for banks that have not yet launched mobile banking services but may consider doing so in the future. Given that the MobiBank service is an electronic service, this study is also significant within the broader context of electronic services.

### 3. Theoretical Background:

According to Allied Market Research (2020), mobile banking services have emerged as a significant phenomenon compared to traditional banking services. The global growth in this sector was rapid, with an estimated value of \$3.715 million in 2018, projected to reach \$7.1824 million by 2026. (Allied Market Research, 2020)

Koivu (2002) emphasizes that an appropriate banking environment is foundational and essential for economic growth. Additionally, Kim et al. (2009) and Luo et al. (2010) view mobile banking as an innovative and alternative method for accessing banking services, enabling clients to check their credit, account status, transfer funds, and trade shares (Kumar Sagib & Zapan, 2014, p. 331)

However, there has been a lack of clear guidelines or direct statements in the literature regarding the banking service environment. Therefore, the current study aims to contribute to this gap by exploring these aspects.

#### 2.1 The Bank Service MobiBank :

Didi et al. (2021) define MobiBank as a service that provides accessibility and speed in obtaining financial information. It acts as a banking distribution channel that enables clients to access their accounts through GPRS technology on their mobile phones ( Hariawan& others, 2021, p. 271)

According to Haider et al. (2018), MobiBank is one of the fastest-growing components of financial services conducted via mobile phones. This service is adopted and implemented by new-generation banks and financial institutions worldwide. It offers a wide range of functionalities, including credit checks, access to financial records, money transfers, bill payment services, stock trading, and portfolio management (Akhter & Al Asheq, 2020, p. 107)

Furthermore, MobiBank is designed as a self-service platform to enhance efficiency in client servicing and provide convenience and accessibility to all banking services from mobile devices, as long as clients are connected to the internet, without the need for bank officials or fixed devices. It allows clients to check their accounts, make transfers, and pay bills ( Arie Fianto & others, 2021, p. 60)

Additionally, Shilpa and Veena (2018) describe MobiBank as a system that allows clients of financial institutions to deposit, withdraw, send, or receive money using a mobile phone or personal number. In contrast, Coi (2018) characterizes it as a service offered by a bank or financial institution to facilitate online financial transactions using a cellphone or tablet. Islam (2015) notes that online services also encompass account information, payments and deposits, withdrawals, money transfers, investments, and STC services (Darlington & others, 2022, p. 138)

#### 2.2 The Use intent:

Use intent refers to a response observed in specific situations aimed at particular purposes. It reflects the willingness and collective perceptions that influence behavior ( Thi NGAN & Bui Huy KHO, 2020, p. 394). Azjan (2010) suggests that an increase in an individual's willingness to engage in an activity raises the likelihood of actually doing it.

According to Fauzi et al. (2020), it is anticipated that cryptocurrency will eventually replace paper money globally. These shifts in the structure and methods of service delivery by banks are already occurring. With the rapid development of smartphones, these devices may evolve into self-sufficient tools that meet clients' needs for comfort and security in banking services (Navavongsa thian & others, 2020, p. 421)

In summary, the **\*\*intent to buy\*\*** represents the patterns that consumers follow in their attitudes toward searching for, purchasing, or evaluating goods, services, and ideas that they believe will satisfy their needs and wants (Abdelaal ahmed khaled, 2021, p. 162)

### 2.3 Perceived Ease to Use:

Perceived ease of use**\*\*** refers to the simplicity of accessing one's financial resources. With the introduction of mobile banking services, users can access their financial information even after regular banking hours, which facilitates the use of banking services via mobile devices (Darlington & others, 2022, p. 139)Laukkanen (2007) notes that using mobile phones as a service delivery channel, particularly in banking, is becoming increasingly acceptable.

Alamin et al. (2021) emphasize that benefits, compatibility, and risk are critical factors in adopting mobile banking services. Compatibility is fundamental to perceived ease of use, perceived usefulness, and credibility. Furthermore, both compatibility and trust significantly contribute to reducing the general perceived risks associated with these services (alamin & others, 2021, p. 421)

In a study by Alkho waiter (2022), perceived ease of use encompasses electronic banking payments that many individuals utilize daily. Clients require mobile banking services to streamline their activities, and ensuring easy access is likely to enhance client satisfaction. Vanessa (2015) supports this view, defining perceived ease of use as the ability for clients to engage with technology without experiencing anxiety or difficulties. Technological accessibility implies that the operations and processes involved in the service are straightforward and require minimal mental and physical effort ( Arie Fianto & others, 2021, p. 62).

Based on this literature review, the following hypothesis is proposed:

**\*\*H1: Perceived ease of use has a positive effect on clients' intention to use MobiBank.\*\***

#### 1.4 Perceived Risks:

**\*\*Perceived risks\*\*** represent a crucial aspect in examining clients' attitudes towards banking services. Historically, the concept of perceived risk was viewed as a lack of maturity in making purchasing decisions. According to Bawer (1960), perceived risk is defined as the state of uncertainty that clients experience, which subsequently influences their attitude towards the service (Abdelaal ahmed khaled, 2021, p. 161)

Naimi (2016) further elaborates on perceived risk as the uncertainty clients encounter during or after making a purchase or utilizing a service. This uncertainty often stems from a lack of sufficient information. While electronic banking services offer numerous advantages, they also present inherent risks, often described as "the possibility of an unexpected future event occurring." This means that taking risks involves anticipating potential positive or negative outcomes (Aladaile & others, 2016, p. 553).

Based on this understanding, the following hypothesis is proposed:

**\*\*H2: Perceived risks have a positive effect on clients' intention to use MobiBank.\*\***

#### 1.5 Perceived Usefulness:

ThiNGan et al. (2020) define perceived usefulness as the extent to which an individual believes that using a particular system will be beneficial ( Thi NGAN & Bui Huy KHO, 2020, p. 394). Tumewah et al. (2020) explain that perceived usefulness for clients is the value derived from their assessment of the benefits they would receive in relation to the sacrifices and costs involved ( Tumewah& others, 2020, p. 133)

In a survey conducted by Brown and Stroebe (2003) involving 162 participants, it was found that the opportunity to try online banking services, along with perceived risks, are significant factors influencing users' decisions. Similarly, Li and Laforet (2003) found through a random survey that consumers' perceptions have a considerable impact on the adoption of banking services, whether online or via phone, with media exposure further amplifying this effect. Moreover, Rios and Riquelme (2010) studied 681 Singaporean consumers and concluded that perceived usefulness, perceived social norms, and perceived risks are three critical factors affecting the use of banking services via mobile phones (Akhter & Al Asheq, 2020, p. 107)

Additionally, Lin (2011) highlighted that, regarding banking services over the phone, individual perceptions are linked to the bank's expertise and experience in meeting customers' financial needs. If users believe that their bank is experienced in "Over The Cellphone Services" and offers the necessary skills for comfortable transactions, they are likely to evaluate the service positively ( Khan& others, 2022, p. 237)

Based on these insights, the following hypothesis is proposed:

**\*\*H3: Perceived usefulness has a positive effect on the use of MobiBank.\*\*****1.6 Trust:**

Trust is defined as the extent to which clients believe that the institution they are engaging with will handle all their transactions safely and confidentially ( Huyen LE & and all, 2020, p. 207). It encompasses users' belief that their personal information and transactions, which may be accessed by the bank or its suppliers, will be protected. This service is expected to be reliable in safeguarding their information from unauthorized entities, such as hackers (Mardini, 2018, p. 09).

According to Masrek et al. (2014), the banking system over the phone is supported by three main technologies: web, website technologies, and mobile technologies. Improvements in these three areas enhance client satisfaction. Wati and Koo (2010) also noted that the quality of these variables influences trust, which, in turn, affects client satisfaction ( Arie Fianto & others, 2021, p. 63).

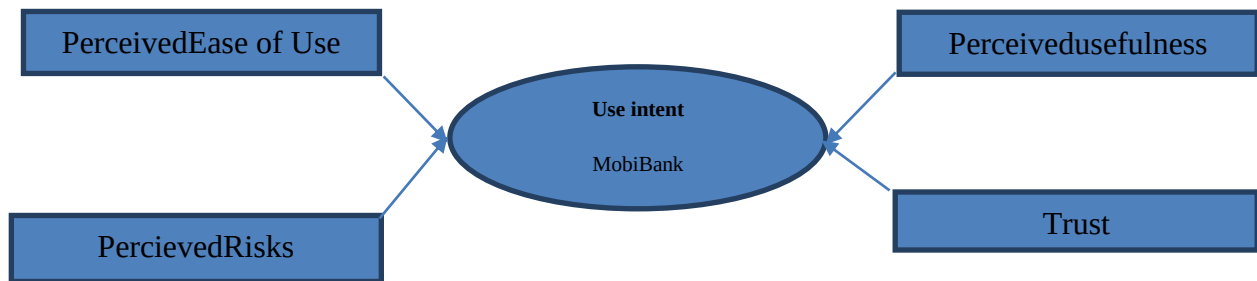
Numerous studies have highlighted that trust is a critical factor influencing clients' intentions to use products, services, or technologies over mobile phones (Kumar et al., 2017; De Leon, 2019). Conversely, a lack of trust is a significant concern for bank clients, as they worry about their money or personal information being transferred unknowingly to a third party ( Thi NGAN & Bui Huy KHO, 2020, p. 395).

Lin (2011) further explains that trust is the individual's recognition that the bank will adhere to certain principles, such as honesty and commitment, in providing banking services over the phone.

Based on this understanding, the following hypothesis is proposed:

**\*\*H4: Trust has a positive effect on clients' intention to use MobiBank.\*\*****1.7 Conceptual framework of the study:**

The objective of the current study is to understand the process of adopting banking services via mobile devices and the factors that influence the adoption of MobiBank in Algeria. To achieve this, a conceptual model has been developed to establish the relationships among the variables and to propose relevant hypotheses. This study focuses on four key variables: perceived ease of use, perceived usefulness, trust, and perceived risk, as illustrated in Figure 1.

**Figure (1): Conceptual framework of the study**

**Source:** Source:Prepared by authors and previous studies AmdjedMardini (2018). WilertPuriwatand SuchartTripopsakul(2017); BayuArie,Fianto and others (2021).

#### 4.The Research Method And Data Collection Setting:

##### 3.1 Sample and procedures:

The research population and sample comprise bank clients who utilize mobile banking services in El-Bayadh, Bechar, and Saida. The selected banks serve a diverse range of societal segments. A total of 200 questionnaires were distributed, with 60 of them being electronic. Ultimately, 140 questionnaires were returned, and after careful review, 122 were deemed valid for analysis, while 18 were rejected.

##### 3.2 Data Analytic Strategies :

Using SPSS version 23, this research employed an appropriate statistical technique to analyze the respondents' answers known as Principal Component Analysis (PCA). PCA is a factor analysis technique developed by the British scientist Charles Spearman. This technique examines the relationships among variables and summarizes them through a correlation matrix by calculating the correlation coefficients between pairs of variables.

#### 5. Results And Discussion:

##### 4.1 Respondents demographic profile

People with diverse demographic profiles took part in this research to validate the data collection.

**Table (1): Sample division according to gender**

| Valid  | Number of individuals | percentage | Validpercent age | Cumulative percentage |
|--------|-----------------------|------------|------------------|-----------------------|
| Male   | 77                    | 63,1       | 63,1             | 63,1                  |
| Female | 45                    | 36,9       | 36,9             | 100,0                 |
| Total  | 122                   | 100,0      | 100,0            |                       |

**Source :**Prepared by authors based on SPSS.23 outputs

The findings in Table 01 indicate that the majority of MobiBank users are male, with 77 clients representing 63.1% of the total. In contrast, females make up 36.9% of the users.

#### 4.2 Sample distribution according to age

**Table (2) :Sample division according to age**

| Valid         | Number of individuals | Percentage | Validperc entage | Cumulative percentage |
|---------------|-----------------------|------------|------------------|-----------------------|
| Lessthan 25   | 16                    | 13,1       | 13,1             | 13,1                  |
| From 25 to 35 | 53                    | 43,4       | 43,4             | 56,6                  |
| From 35 to 45 | 36                    | 29,5       | 29,5             | 86,1                  |
| From 45 to 50 | 13                    | 10,7       | 10,7             | 96,7                  |
| More than 55  | 4                     | 3,3        | 3,3              | 100,0                 |
| Total         | 122                   | 100,0      | 100,0            |                       |

**Source:** Prepared by authors based on SPSS.23 outputs

The findings from Table 02 indicate that the majority of MobiBank users are aged between 25 and 35 years, comprising 43.4% of the total users. Users aged 35 to 45 represent 29.5%, while those aged 55 and older account for 3.3%. The researcher suggests that this lower percentage among the older age group may be due to their lesser familiarity with technology compared to younger generations.

#### 4.3 Sample distribution according to academic qualification

**Table (3): Sample division according to academic qualification**

| Valid                  | Number of individuals | Percentage | Validperce ntage | Cumulative percentage |
|------------------------|-----------------------|------------|------------------|-----------------------|
| Secondarylevel or less | 14                    | 11,5       | 11,5             | 11,5                  |
| Collegegraduates       | 84                    | 68,9       | 68,9             | 80,3                  |
| Vocation graduates     | 24                    | 19,7       | 19,7             | 100,0                 |
| Total                  | 122                   | 100,0      | 100,0            |                       |

**Source:** Prepared by authors based on SPSS.23 outputs

The findings from Table 03 reveal that the majority of MobiBank users hold an academic qualification, with 68.9% being college graduates, which equates to 84 members. Additionally, 19.7% are vocational graduates. The researcher posits that this trend may be attributed to the notion that higher educational attainment correlates with increased knowledge and proficiency in using technology and its applications.

#### 4.4 Sample distribution according to current occupation

**Table (4): Sample division according to current occupation**

| Valid      | Number of individuals | Percentage | Validpercentage | Cumulative percentage |
|------------|-----------------------|------------|-----------------|-----------------------|
| student    | 26                    | 21,3       | 21,3            | 21,3                  |
| employee   | 67                    | 54,9       | 54,9            | 76,2                  |
| retired    | 8                     | 6,6        | 6,6             | 82,8                  |
| Freelancer | 8                     | 6,6        | 6,6             | 89,3                  |
| unemployed | 13                    | 10,7       | 10,7            | 100,0                 |
| Total      | 122                   | 100,0      | 100,0           |                       |

**Source:** Prepared by authors based on SPSS.23 outputs

The findings from Table 04 indicate that the majority of users, comprising 54.9%, are employees, which amounts to 77 clients. Additionally, 21.3% of the users are students. These results corroborate the previous findings, as the highest percentage of academic qualifications was indeed associated with college graduates.

#### 4.5 Sample distribution according to income

**Table (5): Sample division according to income**

| Valid                 | Number of individuals | Percentage | Validpercentage | Cumulative percentage |
|-----------------------|-----------------------|------------|-----------------|-----------------------|
| Lessthan 18000DA      | 44                    | 36,1       | 36,1            | 36,1                  |
| From 18000 to 36000DA | 31                    | 25,4       | 25,4            | 61,5                  |
| From 36000 to 54000DA | 29                    | 23,8       | 23,8            | 85,2                  |
| More than 54000DA     | 18                    | 14,8       | 14,8            | 100,0                 |
| Total                 | 122                   | 100,0      | 100,0           |                       |

**Source:** Prepared by authors based on SPSS.23 outputs

The findings from Table 05 present varied results. Clients whose income does not exceed 18,000 DA account for 36.1% of users, while those earning between 18,000 and 36,000 DA make up 25.4%. It can be concluded that individuals with lower incomes are more likely to prefer using bank services over the phone.

#### 4.6 Item wise of the Cronbach Alpha ( $\alpha$ ) value

**Table (6): Sample division according to Cronbach's Alpha reliability**

| Cronbach's Alpha | Numberof elements |
|------------------|-------------------|
| ,861             | 19                |

**Source:** Prepared by authors based on SPSS.23 outputs

The findings from Table 06 indicate that Cronbach's Alpha equals 0.861, signifying a high value that confirms the reliability of the questionnaire and the strong internal consistency among its items. Therefore, it is deemed appropriate for the study, analysis, and drawing conclusions. Additionally, the study tool was validated by experts from M'sila University, referencing the following studies: AmdjedMardini (2018), PuriwatWilert and TripopskulSuchart (2017), BayuArieFianto and others (2021), and MdRahat Khan and others (2022). Furthermore, incorporating the square root in the calculation of Cronbach's Alpha yielded a result of 0.927, further affirming the reliability of the questionnaire.

#### 4.7.The direction of sample answers

The table bellow illustrates some measures for descriptive statistics as the arithmetic average for every single question in the questionnaire and the standard deviation as well.

**Table (7): The descriptive analysis of sample's answers.**

|                                                                                                                           | Average | Ecart-type | n analyse |
|---------------------------------------------------------------------------------------------------------------------------|---------|------------|-----------|
| Q1 : Do you think using MobiBank saves time                                                                               | 4,19    | ,684       | 122       |
| Q2: Do you think MobiBankfacilitate banking tasks                                                                         | 4,19    | ,742       | 122       |
| Q3: Do you think MobiBank is useful because it allows you to do your tasks faster                                         | 4,21    | ,730       | 122       |
| Q4: Is it easy to conduct multiple bank operations over the phone using MobiBank                                          | 4,01    | 1,117      | 122       |
| Q5: MobiBank facilitates bank operations like bill payment or money transfer                                              | 4,00    | ,843       | 122       |
| Q6: MobiBank allows me to conduct more than one operation at the same time                                                | 4,07    | ,815       | 122       |
| Q7: MobiBank application does not require much mental effort                                                              | 4,15    | ,942       | 122       |
| Q8: Inscription process in MobiBank is easy ,quick and simple                                                             | 3,94    | 1,070      | 122       |
| Q9:MobiBank application is trust worthy                                                                                   | 3,76    | 1,076      | 122       |
| Q 10 : Do you feel safe using MobiBank in your financial transactions                                                     | 3,70    | 1,098      | 122       |
| Q11 : What fosters my trust in MobiBank is that all details concerning transactions are emailed or sent over the phone to | 3,83    | ,942       | 122       |

|                                                                                              |      |       |     |
|----------------------------------------------------------------------------------------------|------|-------|-----|
| confirm operations within 24 hours                                                           |      |       |     |
| Q12: In general, the cell phone is a secure environment to conduct bank transactions         | 3,35 | 1,366 | 122 |
| Q13 : Do you fear to lose money when you make financial transfer                             | 2,75 | 1,307 | 122 |
| Q14 : Do you fear the misuse of your personal information using MobiBank                     | 2,95 | 1,402 | 122 |
| Q15 : Security concerns makes me shy away from accessing my bank account using MobiBank      | 3,07 | 1,290 | 122 |
| Q16: In general ,are you worried about conducting your financial transactions over the phone | 3,66 | 1,041 | 122 |

**Source:** Prepared by authors based on SPSS.23 outputs

From the table above, it is observed that the sample members strongly agree on how perceived benefit, accessibility, and trust influence clients' willingness to use MobiBank. The arithmetic means for these dimensions range from 3.94 to 4.19, indicating that the sample's average scores are higher than the weighted arithmetic mean..Additionally, the lowest percentages in relation to the weighted arithmetic mean are reflected in questions 13, 14, and 15, with scores ranging from 2.75 to 3. These values are below the sample's overall arithmetic mean, suggesting that there may be specific concerns or limitations associated with these questions compared to the others.

#### 4.8.Verifying ACP conditions

As in all used samples and conditions, the data validity must be checked for application

**4.8. 1.The used indications** Through the correlation matrix (a symmetrical diametrical matrix) where its diameter is 1, it is noticed that the number of important transactions is bigger than 0.5 i.e. It's above 10 out of 16 mean that the first condition is fulfilled.(See Appendice 01)

#### 4.8.2. KMO indication and Bartlett test

**Table (9): KMO indication and Bartlett test**

|                                                       |          |
|-------------------------------------------------------|----------|
| Measures of sampling precision of Kaiser –Meyer-Olkin | ,813     |
| Khi – twoapproximates                                 | 1528,243 |
| Sphericity test of Ddl                                | 171      |
| Barlettssignificance                                  | ,000     |

**Source:** Prepared by authors based on SPSS.23 outputs

From the table above, the KMO (Kaiser-Meyer-Olkin) indicator is 0.813, which is above the threshold of 0.5. This suggests that the sample size is adequate for conducting the study. The second condition for factor analysis is also met. Regarding the significance of the Bartlett test, the results indicate a null significance (sig = 0.000), which is less than the critical value of 0.05. Therefore, the null hypothesis is rejected, and the alternative

hypothesis is accepted. This confirms that the third condition is satisfied, allowing for the application of Principal Component Analysis (ACP).

#### 4.8. 3.The quality of representation

From the table 10, it is reported that all variables attain a good representation considering that their value is higher than 0.4 .No variable, therefore is to be removed.(See Appendice02)

#### 4.8. 4.Total variance

**Table (10): Explained total variance**

| Components | Intrinsic values |                   |              | Sum extraction of squares in retained factors |                   |              | Sum of squares in retained factors for rotation |                   |              |
|------------|------------------|-------------------|--------------|-----------------------------------------------|-------------------|--------------|-------------------------------------------------|-------------------|--------------|
|            | Total            | % of the variance | % cumulative | Total                                         | % of the variance | % cumulative | Total                                           | % of the variance | % cumulative |
| 1          | 6,546            | 40,913            | 40,913       | 6,546                                         | 40,913            | 40,913       | 4,053                                           | 25,329            | 25,329       |
| 2          | 2,174            | 13,585            | 54,498       | 2,174                                         | 13,585            | 54,498       | 3,231                                           | 20,195            | 45,524       |
| 3          | 1,388            | 8,672             | 63,170       | 1,388                                         | 8,672             | 63,170       | 2,138                                           | 13,363            | 58,887       |
| 4          | 1,146            | 7,165             | 70,335       | 1,146                                         | 7,165             | 70,335       | 1,832                                           | 11,448            | 70,335       |
| 5          | ,798             | 4,988             | 75,323       |                                               |                   |              |                                                 |                   |              |
| 6          | ,703             | 4,393             | 79,716       |                                               |                   |              |                                                 |                   |              |
| 7          | ,541             | 3,381             | 83,097       |                                               |                   |              |                                                 |                   |              |
| 8          | ,491             | 3,069             | 86,166       |                                               |                   |              |                                                 |                   |              |
| 9          | ,483             | 3,021             | 89,187       |                                               |                   |              |                                                 |                   |              |
| 10         | ,385             | 2,406             | 91,594       |                                               |                   |              |                                                 |                   |              |
| 11         | ,348             | 2,176             | 93,770       |                                               |                   |              |                                                 |                   |              |
| 12         | ,300             | 1,872             | 95,642       |                                               |                   |              |                                                 |                   |              |
| 13         | ,247             | 1,542             | 97,184       |                                               |                   |              |                                                 |                   |              |
| 14         | ,168             | 1,053             | 98,237       |                                               |                   |              |                                                 |                   |              |
| 15         | ,159             | ,995              | 99,232       |                                               |                   |              |                                                 |                   |              |
| 16         | ,123             | ,768              | 100,000      |                                               |                   |              |                                                 |                   |              |

**Source:** Prepared by authors based on SPSS.23 outputs

The five extracted factors from the table above account for 70.33% of the variance in the phenomenon under study, which is an acceptable percentage for explaining the factors analyzed. The breakdown of these five axes shows that they explain the following total values: 40.19%, 13.58%, 8.67%, and 7.16%, respectively. Consequently, this indicates that the table has successfully reduced 16 variables into four key axes, effectively summarizing the main factors influencing the study.

## 4.8. 5.Matrix components after rotation

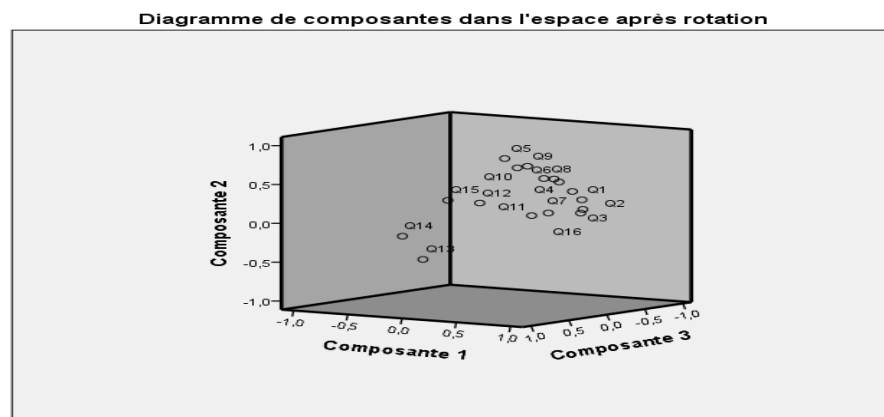
Table (11):Matrix components after rotation

|     | Components |       |       |       |
|-----|------------|-------|-------|-------|
|     | 1          | 2     | 3     | 4     |
| Q1  | ,734       |       |       |       |
| Q2  | ,813       |       |       |       |
| Q3  | ,823       |       |       |       |
| Q4  | ,421       | ,676  | -,356 |       |
| Q5  |            | ,808  |       |       |
| Q6  | ,436       | ,527  |       |       |
| Q7  |            | ,690  | ,411  |       |
| Q8  | ,528       | ,582  |       |       |
| Q9  | ,364       |       | ,384  | ,721  |
| Q10 |            |       | ,455  | ,683  |
| Q11 | ,472       |       |       | ,622  |
| Q12 |            |       |       | ,875  |
| Q13 |            | -,423 | ,690  |       |
| Q14 |            |       | ,888  |       |
| Q15 |            | ,367  | ,721  | -,363 |
| Q16 |            |       | ,738  |       |

**Source:** Prepared by authors based on SPSS.23 outputs

This matrix is quite clear, as it shows the relationship between the variables and the five extracted factors (refer to Table 11). It aids in elucidating the axes and uncovering their meanings, as depicted in Figure 02. This transparency allows for a better understanding of how each variable contributes to the identified factors, making it easier to interpret the overall results of the study.

Figure (2): Diagram of components in rotation space



**Source:**Prepared by authors based on SPSS.23 outputs

The diagram illustrates that the points used to label the axes are well-defined. The variables located along the circumference (with a diameter of 1) provide a stronger representation compared to those positioned towards the center. This suggests that the variables on the perimeter have a more significant impact on the identified factors, enhancing the clarity and effectiveness of the analysis.

#### 4.8. 6.Naming the axes

**Table (12): Naming the extracted factors**

| Variable description               | Variables 'order | Variation disparity | Factors' order       |
|------------------------------------|------------------|---------------------|----------------------|
| Variables of Perceived usefulness  | Q1,Q2,Q3         | 40,913              | <b>First factor</b>  |
| Variables of Perceived Ease of Use | Q4,Q5,Q6,Q7,Q8   | 13,585              | <b>Second factor</b> |
| Variables of Perceived risks       | Q13, Q14,Q15,Q16 | 8,672               | <b>Third factor</b>  |
| Variables of Trust                 | Q9,Q10,Q11,Q12   | 7,165               | <b>Forth factor</b>  |

**Source:** Prepared by authors

The table above presents the variance values and their influence on clients' intention to use bank services via mobile phones. Specifically, perceived usefulness accounts for 40.913% of the variance, indicating it has the most substantial impact. Following this, perceived ease of use contributes 13.585%, perceived risks account for 8.672%, and trust factors represent 7.165%. These percentages highlight the relative importance of each factor in shaping clients' intentions toward mobile banking services.

#### 4.8. 7.The extent of the clients' intent to use Bank services over the cell phone.

**Table (13) :The extent of the clients' intent to use Bank services over the cell phone**

|            | Q 17: I will frequently use the service in the future | Q18: I expect that using the service for my financial transactions will proceed in the future | Q19: I will strongly recommend the service to others |
|------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------|
| Valid N    | 122                                                   | 122                                                                                           | 122                                                  |
| Average    | 0                                                     | 0                                                                                             | 0                                                    |
| Moyenne    | 4,02                                                  | 4,04                                                                                          | 4,02                                                 |
| Ecart-type | ,857                                                  | ,913                                                                                          | ,966                                                 |

**Source:** Prepared by authors based on SPSS.23 outputs

Based on the results from the table above, it is evident that the arithmetic average for each expression related to the fifth factor concerning clients' intent to use MobiBank ranges from approximately 4.02 to 4.04. The standard deviation does not exceed 0.97, indicating a general agreement among clients. This suggests that customers of Algerian banks are positively inclined toward adopting the MobiBank application.

## 4.8. 8.The results of the model's hypotheses

Table (15) :Results of the model's hypotheses

| Hypothesis | Content                                                       | Result     |
|------------|---------------------------------------------------------------|------------|
| H1         | Perceived usefulness has a positive effect on using MobiBank  | Acceptable |
| H2         | Perceived risk has a positive effect on using MobiBank        | Acceptable |
| H3         | Perceived ease to use has a positive effect on using MobiBank | Acceptable |
| H4         | Trust has a positive effect on using MobiBank                 | Acceptable |

**Source:** Prepared by authors

The results presented indicate that all four hypotheses regarding the factors influencing the intention to use MobiBank have been accepted. Here's a detailed breakdown:

**Perceived Usefulness (H1):** The findings confirm that customers believe MobiBank enhances their banking experience, indicating that perceived usefulness significantly influences their intention to use the service. This suggests that customers see tangible benefits in adopting mobile banking services.

**Perceived Risk (H2):** The results suggest that perceived risks associated with using MobiBank do not deter customers. Instead, it seems that customers acknowledge and accept certain risks, which still leads to a positive intention to use the service. This might imply that customers weigh the benefits of using MobiBank against the perceived risks and find the advantages compelling enough to proceed.

**Perceived Ease of Use (H3):** Customers find MobiBank easy to use, which is crucial for adoption. A positive correlation indicates that the simpler the interface and processes, the more likely customers are to utilize the service. This highlights the importance of user-friendly designs in technology adoption.

**Trust (H4):** Trust plays a vital role in influencing customers' intentions to use MobiBank. A strong sense of trust in the bank's ability to protect their information and provide reliable service positively affects their willingness to adopt mobile banking.

## 6. Conclusion:

In today's fast-paced world, mobile banking has transformed how transactions are conducted, offering convenience that traditional banking methods cannot match. In Algeria, the adoption of bank services via mobile phones is gaining traction, particularly among the middle class and younger generations. This shift is largely driven by the recognition of the benefits associated with mobile banking, which allows users to perform a wide range of banking activities without the need to visit a physical bank branch.

The study highlights that customers appreciate the ease of access provided by mobile banking, valuing the time saved by eliminating the need for in-person visits. The positive perception of mobile banking services among clients is significantly influenced by perceived usefulness and perceived ease of use, suggesting that customers see tangible advantages in adopting these technologies.

Interestingly, while trust and perceived risks also play a role, their impact is less pronounced than the other factors. This indicates that, as customers become more comfortable with technology and mobile banking, their concerns regarding security and reliability may diminish.

Overall, the findings suggest a strong potential for the continued growth of mobile banking services in Algeria, as clients demonstrate a favorable attitude towards technology in sustainable banking. Banks should leverage this positive sentiment by enhancing their mobile service offerings, focusing on user-friendly designs, and building customer trust to facilitate further adoption.

## Recommendations

Based on the study results, the following recommendations are made for improving the adoption and effectiveness of mobile banking services in Algeria:

1. **\*\*Enhance Benefits Communication:\*\*** Bank authorities should actively promote the advantages of using mobile banking services. Clear communication about the convenience, efficiency, and time-saving aspects of mobile banking can help potential users understand its value.
2. **\*\*Address Service Deficiencies:\*\*** Banks should take proactive measures to identify and rectify any deficiencies in their mobile banking services. This includes regular assessments to ensure that the services are functioning optimally, with a focus on eliminating common issues that hinder user experience.
3. **\*\*Focus on Perceived Benefits:\*\*** Given that perceived benefits significantly influence user adoption, bank officials should receive training to effectively convey the benefits of mobile banking to clients. This can involve direct explanations during client interactions.

and providing informational brochures that outline the advantages of mobile banking. Such materials can be distributed during bank visits to reinforce the service's value.

4. **\*\*Invest in User Education:\*\*** Conducting workshops or informational sessions can help educate clients on how to use mobile banking services effectively. By enhancing users' understanding of the platform, banks can increase user confidence and satisfaction.
5. **\*\*Improve Security Measures:\*\*** As trust is a crucial factor in the adoption of mobile banking, banks must prioritize robust security measures to protect clients' personal and financial information. Regular updates on security features and protocols can help reassure clients about the safety of mobile banking.
6. **\*\*Monitor Customer Feedback:\*\*** Establishing channels for customer feedback will enable banks to continuously improve their mobile services. Regular surveys or feedback forms can help identify areas for enhancement and address any emerging concerns from users.

By implementing these recommendations, banks in Algeria can enhance the overall customer experience, increase mobile banking adoption rates, and contribute to the sustainable growth of banking services in the country.

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