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Financial Inclusion's Role in Algerian Banks' Competitiveness: Eloued Agencies Evidence

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Abstract: Financial inclusion has emerged as a strategic priority for regulators in emerging economies, yet its mechanisms of influence on bank competitiveness in MENA contexts remain underexplored, particularly at the sub-national level. This study examines how the three dimensions of financial inclusion — access, usage, and quality of services — shape competitive advantage in Algerian commercial banks operating in El Oued Province, a peripheral region where 58% of Algerian adults remain unbanked and where the Central Bank of Algeria's inclusion agenda intersects with persistent urban–rural and gender disparities. Drawing on Sarma's Financial Inclusion Index and Porter's competitive advantage framework, the study employs a sequential mixed-methods design. Quantitative data were collected through 174 structured questionnaires distributed via stratified random sampling across seven Algerian banks, achieving an 87% response rate. The 37-item instrument, validated through expert review (S-CVI = 0.91) and pilot testing, demonstrated strong internal consistency (Cronbach's α = 0.937). Simple linear regression conducted in SPSS v26 was supplemented by interviews and focus groups to contextualise the quantitative patterns. The findings establish that financial inclusion explains 40.6% of the variance in competitive advantage ($R = 0.637$; $p < 0.05$). Among

the three dimensions, service quality demonstrated the strongest association (R = 0.581; 33.8% variance explained), followed by usage (R = 0.535; 28.7%) and access (R = 0.533; 28.4%). Three contextual findings extend prior MENA literature: a digital adoption paradox in which 92% mobile-phone penetration coexisted with only 11% active mobile-banking usage, attributable to rural infrastructure deficits and fraud-related distrust reported by 73% of respondents; a local gender gap of 22% in financial service use, exceeding the national average of 15%; and unexpectedly low cost sensitivity (29.8%), reflecting that 86% of respondents held fee-free public-sector accounts. The study contributes to the economics–regulation interface by providing the first sub-national empirical assessment for southern Algeria, identifying a behavioural-regulatory gap between digital infrastructure provision and actual adoption, and offering evidence-based guidance for geographically differentiated inclusion policies in conservative rural markets.

Keywords: financial inclusion, competitive advantage, banking regulation, emerging markets, digital adoption paradox, gender financial gap, Algeria.

Introduction

Financial inclusion is a vital topic that allows the government to inject liquidity into the economy while also striving for financial stability. This is mainly achieved through providing banking services and financial innovations to all segments of society at a lower cost, via various services offered by the banking sector.

According to Financial inclusion means “individuals and businesses have access to useful and affordable financial products and services (Worldbank, 2022), that meet their needs – transactions, payments, savings, credit and insurance – delivered responsibly and sustainably, so financial inclusion aims to reduce barriers to people who want to connect with the financial sector and use financial services to enrich their lives.” In addition the concept of "inclusive finance" Ozili (2018, p. 331) suggests "That financial inclusion can be the use of formal financial services by the poor and Sarma (2008, pp. 2-3) coins the term inclusive finance as 'the process of ensuring access to financial services with timely and adequate credit where ever needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost." People in poverty are unable to undertake many typical functions in their lives that could change their status significantly.

According to Financial inclusion means “individuals and businesses have access to useful and affordable financial products and services (Worldbank, 2022), that meet their needs – transactions, payments, savings, credit and insurance – delivered responsibly and sustainably, so financial inclusion aims to reduce barriers to people who want to connect with the financial sector and use financial services to enrich their lives.” Moreover the term "inclusive finance" Ozili (2018, p. 331) says "that financial inclusion can also mean the use of formal financial services by the poor" and Sarma (2008, pp. 2-3) defined inclusive finance as "the process of ensuring access to financial services with timely and adequate credit wherever needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost." Individuals experiencing poverty are unable to carry out many of the standard functions in their lives that could marginally improve their status. Therefore, when they experience financial inclusion, they can save funds; they have a safe way to make payments to schools or physicians; they may qualify for a loan to grow a business or buy a house and take other steps that will improve their standard of living (Finca, 2022). An inclusive finance system should offer opportunities for all people, especially people experiencing poverty, to make payments and transfer funds, accrue wealth, and decrease risk exposure, according to Ozili (2018, p. 331).

Financial inclusion is defined as the degree to which individuals and firms use financial services that are delivered responsibly and environmentally sustainably (as cited in Khalaf & Ali, 2015). A continuum of financial inclusion can be defined, under which some perspectives see it as an ‘access and use of services in a manner that is responsible and sustainable’. In contrast, others see it as the ‘delivery

of financial services at an affordable price to those most disadvantaged, low-cost and low-income areas' (as cited in Khalaf & Ali, 2015). Financial inclusion plays a key role in economic development as it allows every person and enterprise to access valuable and affordable financial products and services to fulfil their needs – transactions, payments, savings, credit, and insurance. People who are not financially excluded can seek investment in education and create enterprises. Financial inclusion has essential implications for low-income families in that it provides those with low opportunities to save (a character aspect in terms of enabling steadiness within personal finance) and has a level of bank deposit utilization that provides return and creates for banks a more reliable deposit base in times of crises (Al-Duhaidahawi et al., 2019, p. 195). The evolution of Fintech, in particular, digital transactions, is maintaining the availability of financial inclusion (Grant, 2024).

Despite increased acknowledgement of their connection, some key mechanisms relating financial inclusion to competitive advantage remain unexplored. First, most studies use nationwide data (Allen et. al., 2014), ignoring localised service delivery and market factors. Second, most research isolates access metrics or digital transformation (Cornelli, 2020) from a competitiveness framework. Third, North Africa is understudied relative to other growing markets (Rojas-Suarez & Amado, 2014).

Financial inclusion is one of the key pillars of sustainable development, especially in emerging economies where more than 1.7 billion people suffer from financial exclusion (World Bank, 2023). In Algeria, 58% of people do not have a bank account (Bank of Algeria, 2023), posing significant challenges for development policies.

This study examines El Oued province, a sample location with strong financial sector growth and inclusion issues, to fill these gaps. We add to the literature in three ways: (1) by developing an integrated framework that links all three financial inclusion dimensions to competitive advantage indicators, (2) by collecting and analyzing novel branch-level data in an understudied regional market, and (3) by showing how inclusion strategies can be tailored to different customer segments and geographic contexts.

On the other hand, the competitive advantage is one of the challenges facing banking institutions at the local and international scale, which reflects the bank's ability to perform in a way that its competitors cannot. Among the dimensions that contributed to the development of banking performance are creativity, knowledge, excellence, cost, and quality. The measurement of every dimension is shown in Table 1 below.

Table 1

Measurement indicators of financial inclusion

Dimension	Measuring indicators
Access to financial services	Access points per 10,000 adults at the national level, differentiated by administrative unit type. ATMs per 1000 square kilometres. Electronic money accounts. The degree of interdependence of service delivery points. The percentage of the total population living in administrative units with at least one access point.
Use of financial services	The percentage of adults with at least one type of regular deposit account. The percentage of adults with at least one type of regular credit account. The number of insurance policies per 1,000 adults. The number of payment transactions per phone. The percentage of adults that use a bank account regularly and often. The percentage of adults that have held a bank account in the previous year. The percentage of adults that have received domestic or international remittances. The percentage of medium or small businesses that have official financial accounts.

	The percentage of SMEs that have outstanding loans.
Quality of financial services	Determine the average monthly cost, average annual cost, average cost of transfers between credit accounts, identify clients that identified transaction fees as high. Indebtedness: this is an important characteristic of the customer in the financial system. And the need to know how tardy the borrowers are in repayment within a certain time frame. Credit barriers: ability to choose among financial service products within a variety of options, the percentage of administrative units in urban areas, the percentage of small and medium-sized enterprises that need to provide warranties for the last bank loan, the degree of barriers or the lack of information about credit Transparency about affordability, indebtedness to credit barriers Transparency: the percentage of clients who said they received clear and enough information about financial services at the commencement of the financial loan. About the financial services. Consumer protection: the extent to which laws and regulations exist to guarantee and protect consumer rights and the potential for legal recourse for dealing with financial issues Protection from unfair gains by companies via fraud and unfair practices. Convenience & Access: This indicator measures the percentage of customers regarding the ease of access and/or convenience and ease of use of financial services, in relation to average wait time in lines in the branches at financial institutions, and average time spent by customers getting service at those branches at financial institutions and banks. Financial Literacy: measures the percentage of adults that have financial knowledge and aptitude to plan/budget/have knowledge of financial terminology and budgeting for income.

Source: (Khalaf & Ali, 2015)

Banks must find processes to provide new, distinctive services to achieve superiority over their competitors.

One of the necessities of the bank's continuation is the possession of its capabilities and characteristics that enable it to reduce costs and prices of the services provided and provide high-quality services.

Research Problem

The main problem is defined as follows:

- How far can financial inclusion dimensions contribute to achieving competitive advantage for Algerian banks?
- After defining the research problem, we create the following hypothesis to discuss and evaluate its truth in a sample of banks.

Research Focus

This report addresses a significant development in Algeria's financial sector. Our research supports the Central Bank of Algeria's strategic objective to prioritise financial inclusion as a national economic priority. Algeria has a 62% financial exclusion rate for women (Bank of Algeria, 2023) and significant regional differences, with rural areas still 43% less accessible to banking services than metropolitan ones. The reason is:

- Algeria's banking sector is undergoing a digital transformation. Mobile banking is used by only 11% of adults, despite a 92% prevalence of mobile phones. Our research demonstrates how traditional banks can leverage their infrastructure to bridge this gap, unlike studies on mobile money in sub-Saharan Africa that overlook Algeria's legal environment and its state-controlled banking industry.
- Our multidimensional analysis of competitive advantage (cost, differentiation, quality) shows how financial inclusion strategies can protect local banks from new entrants while creating offensive opportunities—a dimension overlooked in previous MENA studies.

Research Objective

This study examines how the dimensions of financial inclusion (access, use, and quality of services) contribute to the competitive advantage of Algerian commercial banks, with a focus on identifying practical strategies for banks operating in emerging markets.

Research Questions

The study addresses three fundamental questions, each linked to specific hypotheses:

- To what extent do the dimensions of financial inclusion collectively explain the competitive advantage of Algerian banks?
- How does each dimension individually affect competitive advantage?
- Which components of competitive advantage are affected by financial inclusion?

Literature Review

Many previous studies dealt with the subject of financial inclusion. They dealt with it through different angles. We will review some of the helpful studies, highlighting their most prominent features. The researchers would like to point out that the studies that will be reviewed are recent and were conducted between 2012 and 2020. They covered several countries and regions, which indicates their geographical diversity.

According to this paper (Zhao & Li, 2024), e-payments, online microloans, and digital insurance improve the economic and social conditions of rural China. Financial inclusion is essential to attaining the Sustainable Development Goals (SDGs) of ending poverty (Goal 1) and promoting equitable economic growth (Goal 8); hence, developing nations require this study. Using the China Rural Economic Survey (2015–2022) and PBC Digital Financial Inclusion Indicators. A cross-sectional and longitudinal regression model was used to assess the impact of digital financial inclusion on rural development. An instrumental variable (IV) was utilised to address adverse effects while evaluating geographical differences between rich and poor rural regions. Digital financial inclusion increases rural household income by 5–8%, non-farm employment (especially for youth and women), and microfinance-based entrepreneurship. Remote locations with better internet were particularly affected.

Hakimi, Boussaada and Karmani (2022) say financial inclusion boosts MENA banks' competitiveness by strengthening financial services and client base. Comprehensive financial inclusion strategies are shown to increase client retention and revenue growth for banks. The survey found that MENA banks that invested in financial inclusion programs, including rural branches and digital services, gained 15% market share over traditional banks.

Zhang and Posso (2017) found that women's access to microfinance increased their economic participation by 18% in developing nations, narrowing the gender gap. Financial inclusion is crucial to women's economic empowerment, as the study found that for every 10% rise in microfinance services coverage, the gender disparity index drops by 2.3%.

Nizam et al. (2021) found that Southeast Asian SMEs with greater access to financial services have 23% higher revenue growth. Firms that got official bank financing were 15% more productive than those that used informal finance.

Wang and Zhang (2025) show how digital financial services reduced rural poverty by 32% over five years in China, demonstrating their potential for inclusive growth. Every 10% rise in e-wallet adoption reduced extreme poverty by 1.8 percentage points, multiplying rural women's empowerment. Dupas and Robinson (2013) found in a Kenyan field trial that reducing savings barriers can boost small business growth. Simple savings accounts raised entrepreneurs' investments by 40%, demonstrating the need for secure savings solutions. The study also found that easy access to basic savings services helped small businesses flourish, notably for women, whose revenues climbed 27% six months after opening an account.

Research in Central Asia found that financial inclusion boosts economic growth by increasing access to financial services, confirming the hypothesis that it enhances bank competitiveness. This study uses field data to measure the partial dimensions of financial inclusion. The results of this study confirm the importance of financial service quality but differ in showing its impact on interbank competition rather than overall economic growth." Financial inclusion improves banking performance, as Sedera, Risfandy and Futri (2022) demonstrated in Southeast Asia. Since it used banking institution data, this study offers a different perspective using direct client data.

A distinct setting is used to analyse how financial inclusion affects banking competitiveness. Barik, Lenka and Parida's (2022) research on Indian states found that a 10% increase in financial inclusion increases state GDP by 1.2%. However, it used a field-based methodology to analyse informal impediments better. Though Lenka and Barik (2023) deemed infrastructure to be the key in India,

A distinct scenario is used to study its effects on banking consumers. Li, Wu and Xiao (2020) found that financial inclusion boosts Chinese household consumer expenditure by 18%, although they employed targeted field research to explore behavioural constraints. While Li, Wu and Xiao (2020) observed that digital channels drive China,

This study explores how single Algerian banks reflect this relationship (Naceur & Ghazouani, 2005). This study found that a 1% increase in financial inclusion reduces financial stability risks by 0.8% in MENA, but it collects primary data to gain a deeper understanding of the issues. Naceur and Ghazouani (2005) report an improvement in financial stability. (Ozili, 2020) found that 72% of research uses secondary data, leaving a void in field studies that use primary data. This study fills that gap." Ozili's (2021) bibliometric review of 5,124 studies found that financial inclusion research over-focuses on Asia (38%) and marginalises the Arab region (6%).

In oil-dependent Algeria, this study analyses how this link affects banks. Sethi and Acharya (2018) found that a 10% increase in financial inclusion boosts Indian state output by 1.5%, although they used a field methodology to explore behavioural and cultural constraints. While Sethi and Acharya (2018) found infrastructure crucial in India,

This study evaluates Algerian digital solutions, while Adegbite (2024) offers blockchain. In contrast to theoretical studies on emerging technologies, we measured the impact of current digital services. The data demonstrate that only 11% of people use basic technology like banking apps, emphasising the need to eliminate structural barriers before adopting blockchain.

Demirgüç-Kunt and Klapper (2012) revealed that fintech can lower transaction costs by 40% globally. This paper explores how this applies to Algeria. Demirgüç-Kunt and Klapper (2012) found global acceptance of digital services using a field methodology to analyse behavioural and cultural constraints.

This paper analyses how banks can acquire micro-competitive advantages from this possibility. Andrianaivo and Kpodar (2012) found that a 10% increase in phone penetration increases African GDP by 0.5%. They collected customer data to analyse the gap between phone ownership and financial service use. While Andrianaivo and Kpodar (2012) found a substantial link between phones and economic growth, FinTech is transforming the financial sector through innovation and digital change, according to Gomber et al. (2018). One World Bank study found a high association between financial inclusion and better economic indices globally. Direct field data from banking consumers enables a deeper understanding.

Cmara and Tuesta (2014) study measures the impact of each component on banking competitiveness, building on a conceptual framework. Based on the modified index, measurement tools were developed, tailored to the Algerian banking sector's institutional characteristics (Cmara & Tuesta, 2014).

The goal of Ozili's (2020) study is to offer a thorough review of recent evidence on financial inclusion from geographical regions around the world. Furthermore, the study examines whether financial inclusion and exclusion are pro-cyclical with the economic cycle. The methodology was simply a review of recent articles, containing reviews of 78 papers from 2010 to 2020, published as either an empirical study, an analytical study, a policy discussion paper, or a working paper. It was categorised into categories of country-specific studies, studies in the US, studies in the UK, studies across the African region, studies across the European region, studies across the Asian and Australian region, studies in the Middle East and North Africa region, and finally, those studies identified as international/ regional studies.

The most critical effects include financial inclusion, which is affected by the level of financial innovation, poverty alleviation, stability of the financial system, the state of the economy, financial literacy, and regulatory frameworks, which vary highly from country to country.

Ozili (2018) examined the impact of digital finance on financial inclusion and financial system stability. It had the following notable findings: Digital finance has a positive effect on financial inclusion in both developing and developed economies.

Digital finance has been more valuable for individuals with low and variable income than the higher cost they will pay to obtain such services from conventional regulated banks.

He also raised the topic of the challenges of financial technology, as it often attracts customers classified as high-risk by traditional banks. This raises the question about the relationship that may arise between digital finance and the spread of financial contagion during a crisis.

Demirgüç-Kunt and Klapper (2012) surveyed financial inclusion in Africa in their report "Financial Inclusion in Africa - An Overview." The authors used the Global Financial Inclusion Indicators (Global Findex) database to characterise adults in Africa who use both formal and informal finance, and to identify the barriers to holding a formal account. The authors used the World Bank's Enterprise Survey data to explore how financial services are being used by small and medium-sized enterprises (SMEs) in Africa compared to SMEs in other developing regions in terms of account ownership and the availability of credit lines.

The authors find that less than a quarter of adults in Africa have an account with a formal financial institution and that many adults in Africa are using informal methods to save and borrow. Unsurprisingly, the majority of small and medium enterprises in Africa are unbanked, and access to finance is a significant challenge. Essentially, compared to other developing economies, high-growth small and medium enterprises in Africa are less likely to use formal means of funding, which suggests that formal financial systems are not adequately meeting the needs of enterprises with growth opportunities.

Fungáčová and Weill (2014). "Understanding Financial Inclusion in China" sought to compare and analyse the financial inclusion level of China with other BRICS countries, and to study the determinants of the different individual characteristics that influence financial inclusion in China. They used the 2011 data from the World Bank's Index database to study the BRICS data. They concluded that China has, in most indicators, a higher level of financial inclusion than the other BRICS countries. The Chinese are less likely to use official credit than users in the other BRICS countries. The choice not to hold a formal account or get a product is primarily the result of voluntary exclusion. Furthermore, borrowing from family or friends is more common than borrowing from a formal source, as borrowing from a formal source is outside the purview of banking regulation.

The goal of "Competitive advantage of M-Pesa, is it sustainable?" was to assess the sustainability of M-Pesa's competitive advantage using Porter's Five Forces Model. A descriptive survey design was used to meet the study's objectives. The data for this study were collected from 240 respondents in Kenya using questionnaires (Wahito, 2015).

One of its most significant findings was that M-PESA has a sustainable competitive advantage similar to mobile money transfer in Kenya, based on the analysis of sources of competitive advantage using Porter's Five Forces model and regression analysis.

This research aims to explore the role that financial Inclusion plays in producing a competitive advantage (CA) within Iraqi banks, and specifically Islamic banks. The sample for this study consists of customers using the technological device to access the services they use as a result of Financial Inclusion. The study employs simple random sampling to select a target sample from which 230 questionnaires were analysed. The surveys used deception and regression analysis (Al-Duhaidahawi et al., 2019).

The study's primary findings were that financial inclusion affects institutional competitive advantage. A study by the World Bank (2012) was intended to assess the benefits and potential impact of mobile money, particularly for enhancing financial inclusion in the developing world. Moreover, it considers some of the impediments and challenges that might impede their launch. Furthermore, it identifies trends that will present new challenges for the industry in the years to come.

The sample represented six countries operating the M-Pesa system, which are India, South Africa, Afghanistan, Tanzania, Botswana, and Kenya.

The most prominent results were that the cost of operating M-Pesa was the lowest in Kenya compared to other countries, and it cost third to half compared to alternative traditional systems. Lower costs directly translate into money that people with low incomes can keep. Among the findings is that the amount of money transferred has grown compared to traditional forms of transfers. Conversely, in Botswana, transaction costs were high, and mobile money transfer growth was slow. The most common use is still money transfer, not credit or savings.

There is a justified concern about criminal activities, terrorist financing, and money laundering that may accompany these facilitated financial services.

The study concludes that, even though it is exciting, the success of a few mobile money deployments remains the exception, not the rule.

Onaolapo and Odetayo (2012). “Financial Inclusion as Tools for Survival in Globally Competitive Environment: Lessons for Nigerian Microfinance Banks.” The principal aim of this article is to explore various factors leading to financial exclusion in Nigeria while identifying financial inclusion strategies that Microfinance banks might adopt as a response to survive in a globally competitive environment.

Personal interviews were conducted to collect data from a comprehensive sample of all microfinance bank managers in Osun State, Nigeria. The study identified various factors leading to financial exclusion in Nigeria, including distance from the bank branch for residents in rural areas, irregular income, and unemployment.

One of its significant findings was that Micro Finance Banks can only realise their stated goals by adopting financial inclusion strategies, reaching the rural poor, functioning in a wider geographical area, and utilising mobile banking.

Materials and Methods

To represent the Valley Governorate demographics and geography, stratified random sampling was used. The population was stratified by gender, age, and area. Random samples were taken from each stratum in proportion to their population distribution. This technique followed Krejcie & Morgan 1970's advice on social research sample size. In his quantitative data analysis investigations, Field (2020) employed SPSS 26 to measure causal correlations between variables using fundamental linear regression analysis. To ensure the accuracy of the research tools, advanced validity and reliability tests were performed, including expert review, exploratory factor analysis (EFA), split-half reliability coefficient, and internal consistency coefficient (CR), all of which exceeded the minimum acceptable limit (0.70) set by Hair et al. (2019).

In this part, we seek to test the problem of our research on a sample of clients of bank agencies in El-Oued Province.

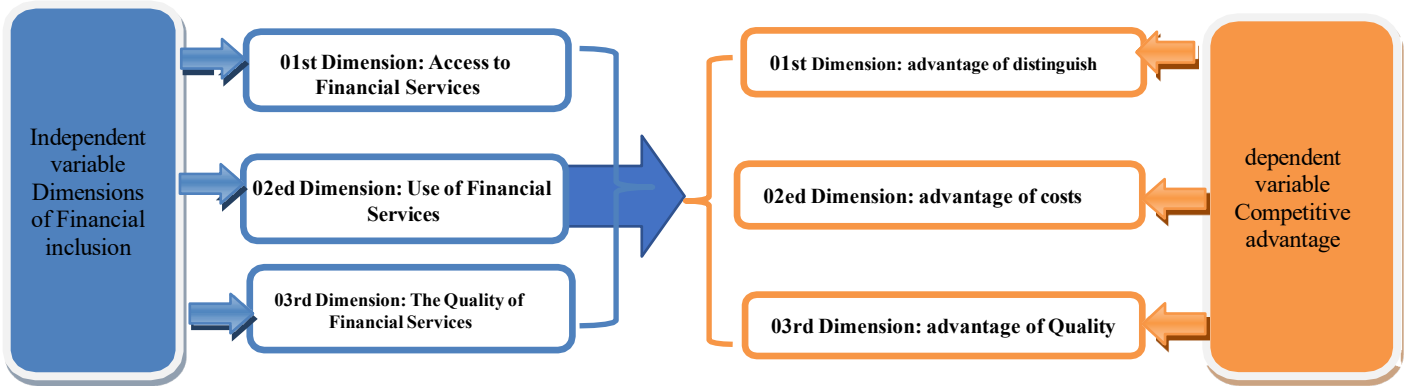
Study chart

The Study chart below shows the relationships between the independent and dependent variables, which are as follows:

The independent variable in the current study represented by financial inclusion by its three dimensions (access to financial services, use of financial services, quality of financial services), the dependent variable is competitive advantage presented by its three dimensions (distinction advantage, cost advantage, quality advantage) as shown in Figure 1.

Figure 1

Study variables and relationships



Source: charted by the researchers.

Improved Tools and Procedures Section

1- Questionnaire Development and Validation

The study used a carefully validated survey instrument, developed through a four-stage process. Item Generation (Stage 1): Directed from a systematic review of 20 key studies on financial inclusion and competitive advantage

An initial set of 45 items covering:

- Access (8 items: branch/ATM availability, digital channels)
- Usage (10 items: transaction frequency, product variety)
- Quality (12 items: responsiveness, transparency, customisation)
- Competitive Advantage (15 items: differentiation, cost, customer retention)

Expert Validation (Stage 2): Reviewed by 5 independent experts (3 academics, 2 senior bankers). Evaluated using:

- Item Content Validity Index (I-CVI): Items scoring ≥ 0.78 were retained
- Index Content Validity of the Scale (S-CVI): 0.91 was achieved after revisions.

Pilot Testing (Phase 3) :Conducted with 30 participants (15 urban/15 rural). Improvements included:

- Rewording 3 ambiguous items based on cognitive interviews.
- Modifying Likert scale criteria for cultural appropriateness.
- Reducing average completion time from 22 to 14 minutes.
- Final Instrument.
- 37 items distributed across 4 dimensions.

- Five-point Likert scale (1 = strongly disagree to 5 = strongly agree).
- Available in Arabic and French for comprehension.
- Improved Data Analysis Section.
- Statistical Methodology and Rationale.

2. Preliminary Analyses.

Missing Data:

- Less than 5% of missing values were addressed using an expectation-maximisation algorithm.
- Little's MCAR test confirmed randomness ($\chi^2 = 18.24$, p=0.21).

Normal distribution:

- Shapiro-Wilk tests (all p>0.05) + Q-Q plot validation.

3. Basic analysis: Regression modelling.

Technique selection rationale. Simple regression was chosen for the following reasons:

- Hypothesis structure: Each sub-hypothesis examines a bivariate relationship.
- Interpretability: Allows clear isolation of the effects of individual dimensions.
- Sample size adequacy: Meets Field's (2020) criterion of $N \geq 50 + 8\ m$ (m = predictors).

Model specification.

- Mathematics: Competitive advantage = $\beta_0 + \beta_1$ (access) + β_2 (use) + β_3 (quality) + ε.
- Robust standard errors demonstrated heteroscedasticity.
- All factors of variance <3.2 confirmed the absence of Multicollinearity

4. Secondary Distribution Analyses

Exploratory Factor Analysis (EFA):

- Projection Rotation (Correlated Factors Allowed)
- Factors Retained with Eigenvalues >1.0 and Loadings >0.5

Reliability Testing:

- Composite Reliability (CR) >0.70 for all constructs
- Test-Retest Reliability (ICC) = 0.89 (2-week interval)

Analysis and discussion of the survey results:

The questionnaire questions were divided into two axes, financial inclusion and competitive advantage, each of which included three main dimensions; the whole paragraphs of each of them are shown in Table 2 below.

Table 2

Distribution of the questionnaire to the study items

	Axle dimensions	**N**	**Questionnaire phrases**
Axle of financial inclusion	Dimension Access to Financial Services	01	There are enough bank agencies in all regions of the Province to allow access to financial services.
		02	There are enough ATMs near your location.
		03	**Withdrawals and deposits are easy and simple.**
		04	The bank's website is easy to use.
		05	The bank's website provides all banking services.
		06	The behavior of the bank's employees is good, which facilitates access to banking services.
		07	The bank's app is clear and accurate.

		08	The bank's app can perform all banking operations.
	Dimension Use of Financial Services	09	Your level of education affects your use of banking services.
		10	You pay for your various purchases and bills using bank card.
		11	Rely on bank cards more than physical money.
		12	Dealing with bank cards is easy for all segments of society.
		13	You pay bills, purchases, and transfer money through the bank's website.
		14	You pay bills, purchases and transfer money through the bank's mobile app.
		15	Bank fees don't effect on your use of the available banking services
		16	The required documents do not affect you to use of the available banking services.
	Dimension The Quality of Financial Services	17	Updated information about the bank and his banking services are available to customers via bank's website.
		18	Updated information about the bank and his banking services are available through the bank's app.
		19	Customers are informed through SMS about all latest banking services
		20	Customers are notified by SMS when they make any movement (withdrawal/deposit) on their accounts.
		21	Have you any desire to change your bank?
		22	Are you satisfied with the performance of the bank, its employees, and the services provided?
Axle of competitive advantage	Dimension advantage of distinguish	23	Is the bank committed to providing the service on time and with the required specifications?
		24	Does The bank reduce waiting time for its customers by simplifying work procedures?
		25	Is The bank having unique services that make the customer loyal to him?
		26	Does the customer's request have a quick response directly or through the application or website?
		27	Relying on payment cards guarantees to its user the advantage of obtaining credit facilities (financing) provided by the bank.
	Dimension advantage of costs	28	The cost of the bank services is acceptable.
		29	The costs of the service provided are commensurate with its quality.
		30	Bank's services fees are lower than other banks.
		31	The bank's automatic withdraw fees is low compared to other banks.
		32	The cost of obtaining payment cards is low compared to other banks.
	Dimension advantage of Quality	33	The services provided by the bank are good.
		34	The bank works on renewing, diversity, and innovation in the service it provides.
		35	The bank cares about customers' points of view and takes their opinions and suggestions that would develop its services.
		36	The bank provides facilities for obtaining new electronic services during crises and the spread of epidemics.
		37	The bank handles customer complaints in rational period.

total questionnaire phrases	37

Source: Created by researchers

To convert the respondents' answers into quantitative data, we used a Likert scale, as it provides a broader range of responses. The gradation in the scale used is as shown in Table 3:

Table 3

The severity of the answer

The answer	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Degree	1	2	3	4	5

Source: Created by researchers

To analyse the data collected, the SPSS V26 Program was used, as well as the EXCEL 2010 program, where data was unpacked and transferred from the qualitative form to the quantitative form, and the following results:

a- Study population and sample:

- Population: The study population comprises all clients of national and foreign banking agencies located in El-Oued Province.
- Sample of the study: The study sample is represented by clients of bank agencies in El-Oued Province, where a random sample of 200 individuals was selected, 200 questionnaires were distributed to them (paper and electronic), and 174 questionnaires were returned valid for analysis, including 130 paper questionnaires and 44 electronic questionnaires, with a rate of 87 percent From the total number of distributed questionnaires.

The sample is characterised by the following characteristics, shown in Table 4 below.

Table 4

General Characteristics of the Study Sample

Variables		Repetition	percentage	Variables		Repetition	percentage
sex	Male	122	70.1%	Monthly income	Less than 15000 DZD	18	10.3%
	Female	52	29.9%		From 15000 to 50000	58	33.3%
Age	From 24 - 34 years old	81	46.8%		From 50000 to 100000	62	35.6%
	35-44 years old	53	30.6%		more than 100000	36	20.7%
	45-54 years old	32	18.5%	Bank name	BADR	33	19.0%
	55-64 years old	07	4.0%		BDL	16	9.2%
Qualification	secondary or less	11	6.4%		BNA	29	16.1%
	tech / high tech	14	8.1%		CPA	32	18.4%
	Paramedic	02	1.2%		BEA	27	15.5%
	university	72	41.6%		CNEP-Banque	26	14.9%

	post gradient	74	42.8%		Al Baraka	1	0.6%
job position	public sector	74	42.5%		Gulf bank	8	4.6%
	private sector	34	19.5%		Other	3	1.7%
	Privet business	42	24.1%	Years of dealing with the bank	From less than 01 to 05 years	100	57.5%
	Commerce	14	8%				
	Farming	6	3.4%		From 06 to 10 years	51	29.3%
	Other	4	2.3%		From 11 to 15 years	11	6.3%
Residence	City	111	63.8%		From 16 to 20 years	9	5.2%
	Suburb	63	36.2%		From 26 to 30 years	3	1.7%
Total		174	100%	Total		174	100%

Source: Prepared by researchers based on the outputs of the program (SPSS V26)

Table 4 above shows that the males' responders in the sample are 70.1 per cent, which is greater than the females' responders, who are equivalent to 29.9 per cent. This is because men are more economically active than women in El Oued province.

We also observe that the dominant age segment that deals mor with banks within the sample is 24 to 34 years old with a percentage of 46.8 with a percent census of 81 customer, followed by costumers whose have age between 35 and 44 years old with a percentage of 30.6% with a census of 53 customer, which means that the half of the working age (15 to 64. OECD) is the predominant percentage of the sample, which is the most economically active category, as it is the most appropriate age for work and entrepreneurship, which necessitates them to resort to banks to meet their financial needs of their economic activities.

We also note that most of the sample members have a post-graduation level, where the sum of 74 clients which make 42.8 percent, followed by the university graduate's category with 72 clients with 41.6 percent, that means that these two categories are aware about the importance of financing the latest developments and updates about financial services provided by the banks under study.

Table 4 also shows that the majority of the elements studied are working in the public sector, with 74 clients, which makes 42.8 per cent, followed by Private business, with a census of 42 clients, at a rate of 24.1 per cent. The private sector, with 34 clients and a rate of 19.5 per cent, followed by commerce, agriculture, and other activities, which reflects the inclusion of financial services, the most economically active activities in the sample studied.

In the matter of Residence, Table 4 shows that the respondents were divided into 63.8 per cent or 111 clients who live in cities and 36.2 per cent or 63 clients who live in suburbs, which is a significant proportion, especially in light of the weakness of the Algerian banking sector.

For income, we deduce that financial services included all segments of income with ranges, led by the category of (from 50,000 to 100,000 dzd) with the highest portion of 35.6%, followed by the category (from 15000 to 50,000 dzd) at a rate of 33.3%, which means that financial services covered all income groups.

For the bank with which the sample elements deal, we notice a close spread among the banks under study, except for a relative weakness for Al Baraka Bank and Gulf Bank (This may be caused by

the lack of cooperation of some customers in answering the questionnaire). Finally, we note that most of the sample members are new customers with banks (for no more than 5 years), which indicates the growing importance and awareness about financial services provided by the banks.

b- Validity and Reliability of the Questionnaire:

The Reliability of the questionnaire denotes that when redistributed under the same constraints and conditions, its results are the same. In other words, stability indicates that the results of the questionnaire remain consistent and show no significant changes if they were redistributed to the sample members several times over different periods. In this research, we relied on the Alpha Cronbach total stability coefficients as indicated below:

Table 5

Overall stability coefficient

	number of phrases	Alpha Cronbach' Stability Coefficient	honesty coefficient
Axle of financial inclusion	22 (phrases from01 to22)	0.907	0.9523
Axle of competitive advantage	15 (phrases from23 to37)	0.906	0.9518
total questionnaire phrases	37	0.937	0.968

Source: Prepared by researchers based on the outputs of (SPSS V26)

The previous table shows that the high alpha coefficient of the overall resolution is 0.937, which is a positive and high value indicating the consistency of the questionnaire items. The study tool generally exhibits a high reliability and validity coefficient, enabling it to achieve the study's objectives and suggesting the stability of its results.

Test hypotheses of the study, analyse and discuss the results:

To study the role of financial inclusion in achieving competitive advantage in Algerian banks and to analyse the results, we studied the regression of the sample data to obtain several results through which we will test the hypotheses of the study as follows:

Test the central hypothesis:

The central hypothesis states:

- H0: There is no statistical significance between financial inclusion and competitive advantage.
- H1: There is statistical significance between financial inclusion and competitive advantage.

To confirm the validity of this hypothesis, we analysed the relationship between the financial inclusion variable and the competitive advantage variable through the Simple Regression equation, and based on the SPSS V26 program, we obtained the results shown in the table below:

Table 6

Results of simple regression analysis of the impact of financial inclusion on competitive advantage

	Dependent variable (competitive advantage)	
Independent Variable (Financial Inclusion)	**R**	**R^2**
	0.637	0.406

Source: Prepared by researchers based on the outputs of (SPSS V26)

Looking at Table 6, we note that the correlation coefficient between the independent and dependent variables has reached 63.7%. The coefficient of determination is equal to 40.6% at a level of significance less than 5%, meaning that the financial inclusion variable explains the competitive advantage of banks by 40.6%. The remaining variables explain the competitive advantage, which indicates a positive, statistically significant relationship between financial inclusion and competitive advantage.

Accordingly, we accept the alternative hypothesis, which states that there is statistical significance between financial inclusion and competitive advantage.

Testing the first hypothesis:

The first hypothesis states:

- H0: There is no statistical significance between the quality of financial services and the achievement of a competitive advantage in Algerian banks.
- H1: There is statistical significance between the quality of financial services and the achievement of a competitive advantage in Algerian banks.

To confirm the validity of this hypothesis, we analysed the relationship between the quality of financial services and the achievement of a competitive advantage in Algerian banks through the Simple Linear Regression equation and based on the SPSS V26 program, where we obtained the results shown in the table below:

Table 7

Results of simple regression analysis of the effect of the quality of financial services dimension on competitive advantage

	Dependent variable (competitive advantage)	
Independent Variable (Quality of Financial Services)	R	R^2
	0.581	0.338

Source: Prepared by researchers based on the outputs of (SPSS V26)

Looking at Table 7, we note that the correlation coefficient between the independent and dependent variables has reached 58.1%. The coefficient of determination is equal to 33.8% at a level of significance less than 5%, meaning that the quality of financial services explains the competitive advantage of banks by 33.8%, which indicates that there is a statistically significant relationship between the quality of financial services and the competitive advantage variable.

Accordingly, we accept the alternative hypothesis, which states that there is statistical significance between the quality of financial services and the competitive advantage variable.

Testing the second hypothesis:

The second hypothesis states:

- H0: There is no statistical significance between access to financial services and achieving a competitive advantage in Algerian banks.
- H1: There is statistical significance between access to financial services and achieving a competitive advantage in Algerian banks.

To confirm the validity of this hypothesis, we analysed the relationship between access to financial services and the competitive advantage variable through the Simple Regression equation and based on the SPSS V26 program, where we obtained the results shown in the table below:

Table 8

Results of simple regression analysis of the effect of having access to financial services on competitive advantage

	Dependent variable (competitive advantage)	
Independent Variable (Access to Financial Services)	**R**	**R^2**
	0.533	0.284

Source: Prepared by researchers based on the outputs of (SPSS V26)

Looking at Table 8, we note that the correlation coefficient between the independent and dependent variables amounted to 53.3%. The coefficient of determination equals 28.4%, meaning that the variable access to financial services explains the competitive advantage of banks by 28.4% at a level of significance less than 5%, which is Weak percentage, but a positive value, which indicates the existence of a statistically significant relationship between the dimension of access to financial services and the competitive advantage variable.

Accordingly, we accept the alternative hypothesis, which states that there is a statistically significant relationship between the dimension of access to financial services and the competitive advantage variable.

Testing the third hypothesis

The third hypothesis states:

- H0: There is no statistical significance between the use of financial services and the achievement of a competitive advantage in Algerian banks.
- H1: There is statistical significance between the use of financial services and the achievement of a competitive advantage in Algerian banks.

To verify the validity of this hypothesis, we analysed the relationship between the dimension of using financial services and the competitive advantage variable through the Simple Regression equation and based on the SPSS V26 program, where we obtained the results shown in the table below:

Table 9

Results of simple regression analysis of the effect of using financial services on competitive advantage

	Dependent variable (competitive advantage)	
Independent Variable (Use of Financial Services)	**R**	**R^2**
	0.535	0.287

Source: Prepared by researchers based on the outputs of (SPSS V26)

From Table 9, we note that the correlation coefficient between the independent and dependent variables has reached 53.5%. The coefficient of determination is equal to 28.7% at a level of significance less than 5%, meaning that the variable of using financial services explains the competitive advantage in banks by 28.7%, which indicates there is a statistically significant relationship between the dimension of using financial services and the competitive advantage variable.

Accordingly, we accept the alternative hypothesis, which states: There is statistical significance between the dimension of using financial services and the competitive advantage variable.

Testing the fourth hypothesis

The fourth hypothesis states:

- H0: There is no statistical significance between financial inclusion and achieving the advantage of excellence in Algerian banks.
- H1: There is a statistical significance between financial inclusion and achieving the

advantage of excellence in Algerian banks.

To confirm the validity of this hypothesis, we analysed the relationship between the financial inclusion dimension and the differentiation advantage variable through the Simple Linear Regression equation and based on the SPSS V26 program, where we obtained the results shown in the table below:

Table 10

The results of simple regression analysis of the impact of financial inclusion on the advantage of excellence in banks

	Dependent variable (advantage of distinguishing)	
Independent Variable (Financial Inclusion)	**R**	**R^2**
	0.577	0.333

Source: Prepared by researchers based on the outputs of (SPSS V26)

From Table 10, we note that the correlation coefficient between the independent and dependent variables has reached 57.7%. The coefficient of determination is equal to 33.3% at a level of significance less than 5%, that is, the financial inclusion variable explains the existence of an advantage of distinction in banks at a rate of 33.3%, which indicates that there is a statistically significant relationship between financial inclusion and the excellence advantage variable.

Accordingly, we accept the alternative hypothesis, which states that there is a statistically significant relationship between the dimension of financial inclusion and the advantage of distinction.

The fifth hypothesis test

The fifth hypothesis states:

- H0: There is no statistical significance between financial inclusion and achieving a quality advantage in Algerian banks.
- H1: There is statistical significance between financial inclusion and achieving a quality advantage in Algerian banks.

To confirm the validity of this hypothesis, we analysed the relationship between the financial inclusion dimension and the variable of achieving quality advantage in Algerian banks through the Simple Regression equation and based on the SPSS V26 program, where we obtained the results shown in Table 11 below.

Table 11

Results of simple regression analysis of the effect of financial inclusion on quality advantage

	Dependent variable (advantage of Quality)	
Independent Variable (Financial Inclusion)	**R**	**R^2**
	0.560	0.314

Source: Prepared by researchers based on the outputs of (SPSS V26)

Through Table 11, note that the correlation coefficient between the independent and dependent variables has reached 56%. The coefficient of determination is equal to 31.4% at a level of significance less than 5%, that is, the financial inclusion variable explains the presence of a quality advantage in banks by 31.4%, which indicates a statistically significant relationship between financial inclusion and the quality advantage variable.

Accordingly, we accept the alternative hypothesis that states: There is statistical significance between the financial inclusion dimension and the quality advantage.

The sixth hypothesis test

The sixth hypothesis states:

- H0: There is no statistical significance between financial inclusion and cost advantage in Algerian banks.
- H1: There is statistical significance between financial inclusion and achieving cost advantage in Algerian banks.

To confirm the validity of this hypothesis, we analysed the relationship between the financial inclusion dimension and the cost advantage variable in Algerian banks through the Simple Regression equation and based on the SPSS V26 program, where we obtained the results shown in the table below:

Table 12

Results of simple regression analysis of the effect of financial inclusion on cost advantage

	Dependent variable (advantage of costs)	
Independent Variable (Financial Inclusion)	**R**	**R^2**
	0.546	0.298

Source: Prepared by researchers based on the outputs of (SPSS V26)

Through Table 12, we note that the correlation coefficient between the independent and dependent variables amounted to 54.6%. The coefficient of determination equals 29.8% at a level of significance less than 5%, meaning that the financial inclusion variable explains the existence of a cost advantage in banks at a rate of 29.8%, which indicates that there is a statistically significant relationship between financial inclusion and the cost advantage variable.

Accordingly, we accept the alternative hypothesis, which states that there is statistical significance between the financial inclusion dimension and the cost advantage.

Discussion

A. Service Quality, the Greatest Driver of Competitive Advantage (β = 0.581)

The results show that service quality accounts for the most significant contribution to competitive advantage, as compared to access (β = 0.533) and usage (β = 0.535). The results are consistent with findings from the El Oued region and reinforce the theoretical suggestion that as the economy develops, service delivery that is human-centred becomes a defining feature of the competitive advantage found in developing economies (Zeithaml et al., 2020).

More specifically, in the current setting, two-thirds of the participants expressed preferences for face-to-face interactions with bank staff for digital-only products or services. Especially with older clientele and agricultural workers, the results illustrated that overall cultural resistance to anything digitally important required an escape hatch in its banking. As a result, this notion of personalisation within the service still exists in rural Algeria, where digital trust remains low.

Supporting evidence of this came from the case of BDL in Ghammar: the establishment announced a 37% improvement in banking retention performance, such as customer satisfaction, as a result of employee training intervention programs that supported staff by focusing on service quality and service personalisation at the bank. This finding points to how service quality and a focus on the employee experience as a determinant of competitive advantage can improve retention rates and satisfy customers while employing people in a challenging environment.

B. The Digital Adoption Paradox: High Access, Low Usage

Although the mobile phone penetration rate exceeds 92%, active mobile banking usage is incredibly low (11%), especially when compared to the level of active mobile banking usage in coastal urban areas such as Annaba (28%). These dynamics lead us to term the phenomenon observed here the

"digital adoption paradox," where there is a difference between technological access and behavioural usage.

Interviews and focus groups demonstrate that this gap is a result of both structural and behavioural factors:

- Infrastructure issues, especially the significant challenges with 4G in rural areas such as Rgiba and Rabba, affected the reliability of digital platforms.
- Trust issues have also been prevalent; for example, 73% of participants reported being afraid of fraud and a lack of assurance on misuse of their online bank accounts, suggesting that digital trust is an issue.

This finding aligns with global research demonstrating that access does not equate to inclusion without the development of trust and digital literacy (Demirgüç-Kunt et al., 2022). This is an important point because it challenges the focus on digital-only policies that emphasise digital infrastructure without addressing the socio-cultural barriers to usage.

Unexpected Findings and Their Contextualising Meaning

a. Gender Disparity Greater than National Average

In El Oued, the gender gap in financial service use is at 22%, which is well above the national average of 15%. Two interrelated barriers can explain this difference. Newly established financial institutions exist in a typical cultural socio-economic context when opening new branches in rural provinces. There are only two of fourteen local bank branches with female staff, essentially 'ring-fencing' women's access to banking, especially in conservative rural areas. There are no adapted financial products for women, particularly those engaged in informal or agricultural work, that address the exclusion. The above evidence shows the need for gender-sensitive banking innovations, such as mobile savings applications for women with micro-enterprises, and focused marketing through female agents.

b. Cost Sensitivity lower than anticipated

Although typically cost is a significant issue in price-sensitive markets, cost was given a lower ranking ($\beta = 0.298$) than could be expected. Several factors contribute to this contradictory expectation. Approximately 86% of respondents have fee-free accounts because they are employees of public sector organisations, and therefore, the relevance of costs is not an issue. In the case study of the CPA Bank, their main branch in the valley had a retention rate of 92% while having relatively high service charges, which demonstrates that the trust and convenience of access are more important than cost for customer retention. Recent tax measures aimed at certain electronic transactions, including tax exemptions, have further reinforced the perception that the cost of use for digital users has diminished (Bank of Algeria, 2023). Cooperation through joint ventures between banks and mobile operators has improved service availability in rural areas and provides non-price benefits, which may explain a lower sensitivity to price. These contextual factors challenge the cost-based theories of competition and also suggest a more complex model of financial behaviour in underbanked regions.

Conclusions and Implications

The results of the econometric analysis found weak, but statistically significant, associations for the financial inclusion indicators and the competitive advantage category of the Algerian banking sector. In summary, the results, below in Table 6, show financial inclusion to explain competitive advantage for the banks at a level of 40.6%, significant at the 5% level. Furthermore, the quality of financial services had positive and significant associations with competitive advantage, explaining 33.8% of the variance of the competitive disadvantage category at a correlation coefficient of 58.1%. As to the access dimension of financial inclusion, there was a statistically significant relationship, and as such, it explains competitive advantage for 28.4%, with a correlation coefficient of 53.3% and statistically significant at 5% level.

Similarly, the usage dimension of financial service sectors showed a correlation of 53.5% which explained 28.7% of the variance of competitive advantage, again at a significance level of less than 5%. In addition, the more encompassing financial inclusion indicator correlated with banks' excellence advantage at 57.7%, accounting for 33.3% of its variation, which is statistically significant. Finally, a similar positive relationship with financial inclusion was found, statistically significant, with cost advantage, where financial inclusion was 29.8% of cost advantage, correlated at 54.6% with a significance level lower than 5%.

The results indicate that while financial inclusion is not entirely determinable to competitive advantage, it plays an important role in uncovering banks' strategic positioning, particularly influenced by the dimensions of improved service quality, access, and usage. Overall, the implications suggest strategic imperatives for further strengthened financial inclusion initiatives, as a lever for sustainable competitive growth in the banking sector.

The previous low results are due mainly to low levels of financial inclusion because of the financial businesses of Algerians and Eloued residents are outside the formal financial sector to large extent, and therefore many of them do not possess a bank account, due to the manner and extent of financial inclusion is necessary for the enhancement of the living conditions of categories that lack access to credit from formal institutions, status to trigger a new intervention as more work needs to be done to enhance and promote financial inclusion through:

Supporting confidence in the banking system, financial literacy, consumers' protection, financial inclusion in rural areas, financial inclusion for low-income people (primarily through micro finance) to integrate in the formal financial services, supporting and strengthening the Internet and expanding its use for all stratification of society, developing policies and mechanisms to support an increase in financial inclusion, promoting and supporting technology usage in financial services, increasing the rate of use of mobile phones for financial use and bill payment, increasing opportunities for low-income groups to benefits from financial innovations, to promote and increase the rate of use by individuals of their financial accounts and services that are products of that account, increasing contact with digital technologies by enhancing infrastructure, use of government programs in

Recommendations

Initially, comprehensive research is required regarding the impediments to digital transformation within the Algerian banking sector. This research should concentrate on examining the fundamental reasons for the hesitance of 81% of mobile phone users to adopt digital banking services, with specific emphasis on cultural and religious aspects that affect customer confidence. They should evaluate the user experience of current banking applications and recommend feasible enhancements that align with global technical advancements.

Secondly, future research should focus on addressing the gender gap in financial services by developing financial products that align with women's employment patterns in the informal sector. The influence of female staff in bank branches on women's financial participation should be evaluated, drawing on effective models from neighbouring countries such as Morocco and Tunisia in women's financial empowerment.

Third, emphasis must be placed on research evaluating governmental programs that promote financial inclusion. This involves assessing the impact of tax incentives on the adoption of digital services, examining the effectiveness of financial literacy initiatives in changing behaviour, and exploring the feasibility of streamlining "know your customer" protocols without compromising financial security standards.

Fourth, we advocate for the adoption of advanced research methods, such as longitudinal studies spanning 5-10 years, to monitor the development of financial inclusion indicators. A mixed-methods approach (combining quantitative and qualitative data) should be employed to assess digital

experiences, utilising a participatory evaluation methodology that involves target audiences in the research process.

Fifth, priority should be given to applied research that evaluates practical models, such as the banking agent system in remote regions. The integration of financial services with social media platforms deserves assessment, and the potential application of current technologies like blockchain in domestic money transfers should be explored, considering local specificities.

Suggestions for Future Research

Building on this study's findings, key areas for further investigation include:

- Digital Adoption Barriers: Ethnographic research to understand cultural resistance to mobile banking despite high phone penetration (92% vs 11% usage).
- Gender Inclusion: Evaluating gender-sensitive financial products to address the 22% gender gap, particularly through female banking agents.
- Policy Impact: Longitudinal studies (5+ years) assessing sustained effects of financial inclusion policies on bank competitiveness.
- Regional Comparisons: Urban-rural adoption comparisons and cross-country analyses with neighbouring states to identify transferable practices.
- Behavioural Interventions: Testing SMS prompts, gamification, and simplified KYC models to boost digital adoption.
- Cost Sensitivity: Investigating why Algerian consumers show lower cost sensitivity (29.8%) versus similar markets (~40%).

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Conflict of Interest

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