

Assessing Financial Inclusion in Algeria: An Analysis of Key Indicators and Pillars

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Abstract:

This empirical study endeavors to conduct a rigorous examination of the prevailing state of financial inclusion in Algeria through a meticulous analysis of its most salient indicators: the financial depth index, accessibility, and utilization metrics. The overarching objective is to ascertain the extent of development within the nation's banking infrastructure and elucidate the levels of financial literacy among the populace concerning the deployment of contemporary technological tools. Concurrently, the study lauds select Arab initiatives and endeavors from which Algeria can potentially derive benefits. The findings culminate in the conclusion that all indicators and pillars underpinning financial inclusion reflect disturbingly inadequate levels, falling markedly short of the requisites for attaining parity with regional and international benchmarks. Consequently, the study proffers a series of constructive recommendations aimed at expanding the financial inclusion network within Algeria and enhancing its operational efficacy.

Keywords: Financial inclusion. Algeria. Banking infrastructure. Financial literacy

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Introduction:

The imperative to foster financial inclusion has attained paramount significance within contemporary economic discourse, both on the international and regional Arab stages. A mounting body of empirical evidence has evinced the positive correlation and causal impact of financial inclusion on catalyzing economic growth. Accordingly, a multitude of governments have embarked on an assiduous pursuit to achieve elevated echelons of financial inclusion by instituting a comprehensive financial system that facilitates universal access to financial services, transcending societal stratifications. This strategic endeavor encapsulates a paradigm for holistic and sustainable development. This exigent undertaking has been propelled by the ubiquitous and expeditious propagation of digital technology, rendered especially exigent in the wake of the COVID-19 pandemic, wherein the availability and utilization of financial and electronic services have garnered a profound demand across diverse societal cohorts, most crucially among marginalized groups, impoverished populations, and small and medium-sized enterprise owners. Concomitantly, this phenomenon has catalyzed a fortification of the banking sector by attracting an expanded clientele. Ergo, numerous nations, Algeria being a salient exemplar, are indefatigably striving to accrue elevated rates of financial inclusion, as this strategic objective has emerged as an exigent challenge confronting decision-makers, transcending the purview of a mere indulgence, owing to its inextricable role in stimulating economic growth and integrating the parallel informal economy into the official state apparatus.

Against this catalytic milieu, the following research question emerges as an urgent imperative: To what extent has Algeria achieved the requisite levels of financial inclusion to engender economic growth through the most crucial indicators and pillars?

The hypotheses undergirding this study are multifaceted. Firstly, the financial depth index is posited as a preeminent indicator that expresses the development of the banking sector and elucidates the extent of its efficacy in fostering savings by incorporating a broader stratum of disadvantaged groups and their concomitant contribution to the national

income. Secondly, emulating the praxis of other nations, it is hypothesized that Algeria seeks to consolidate the convergence of financial services and products through the financial availability index, thereby attaining parity with global averages by augmenting the geographical and numerical proliferation of banks and postal centers. Thirdly, the process of heightening awareness among individuals across diverse societal segments and cultivating financial literacy is postulated as an indispensable catalyst, enabling them to derive greater benefits from financial services and products through unimpeded access to financial utilization. Lastly, it is hypothesized that achieving financial inclusion of individuals in Algeria is inextricably intertwined with the extent of development within the banking system's infrastructure, as it constitutes a robust and appropriate environment to provide the requisites of availability as well as financial education for individuals, thereby facilitating the financial utilization of traditional and modern products.

This exigent study endeavors to conduct a rigorous diagnosis of the prevailing state of financial inclusion levels in Algeria through an incisive analysis of the most crucial indicators employed in evaluation, namely the financial depth index, financial availability, and financial utilization. Concurrently, it aims to elucidate the relationship between these indicators and the development of the banking system concerning the extent to which the monetary mass circulating within the economy is harnessed for fostering savings and investment requirements. Furthermore, it seeks to expound upon the degree of infrastructure development and the numerical and geographical proliferation of banking services to reach underprivileged groups that remain unintegrated into the official system across all segments and categories. Finally, it elucidates the most significant Arab initiatives that can be leveraged as catalytic mechanisms to enhance financial inclusion in Algeria.

Firstly. Basics in financial inclusion:

We introduces fundamental concepts and strategies aimed at expanding access to financial services for underserved populations. This introduction covers key principles such as promoting banking access,

fostering financial literacy, and leveraging technology to bridge gaps in financial inclusion.

1. The concept of financial inclusion:

Various international organizations, including the Arab Monetary Fund (AMF), the Global Financial Inclusion Alliance, the Group of Twenty (G20), the Organization for Economic Cooperation and Development (OECD), and the International Financial Education Network (INFE), have proposed definitions for financial inclusion. Synthesizing these definitions, this study conceptualizes financial inclusion as the provision and accessibility of a wide range of financial products and services to individuals and businesses. This inclusive access aims to cater to diverse societal needs fairly, transparently, and affordably, facilitated by a supportive legal and regulatory framework promoting responsible and sustainable financial practices.

Through this definition, the salient features of financial inclusion are elucidated as follows:

- A diverse array of financial products and services executed by financial institutions and specialized money management entities, including current accounts, savings accounts, investment vehicles, credit facilities, remittance channels, payment systems, and check books, among others.
- Targeting all societal segments, encompassing individual members and small and medium-sized enterprises, youth, women, merchants, artisans, farmers, and other cohorts, with a particular emphasis on those operating outside the official state system.
- The provision of services characterized by equitable treatment and transparency among consumers, addressing their needs promptly upon demand, at reasonable costs, and to the requisite extent.
- The delivery of financial services through official channels within the state's formal financial system, adhering to established protocols.
- The existence of a comprehensive institutional framework, comprising legislation and laws that govern all instructions and regulations, thereby enhancing financial inclusion while protecting the rights and funds of individuals and enterprises.

2. Services/Financial Products (Vapandim, 2019) :

Financial institutions and specialized financial companies perform a diverse array of financial and economic services, transcending specific frameworks to encompass a broad spectrum of activities. These services encompass various financial transactions, including but not limited to

depositing funds into current or savings accounts, issuing checks, facilitating money transfers, extending loans, offering credit card services, provisioning automated teller machines, and providing electronic banking services via Internet networks, among others. The pursuit of financial inclusion by relevant authorities necessitates the overcoming of challenges to ensure the accessibility and utilization of these financial services and banking products by a diverse range of individuals and entities.

Central banks, as primary proponents of financial inclusion, endeavor to formulate strategies and policies aimed at facilitating the uptake of financial services by a wider demographic. Their efforts entail the development of financial infrastructure, the enactment of legislation conducive to enhancing financial inclusion, the promotion of official financing channels, and the integration of modern technologies into the provision of financial services. Furthermore, domestic banks and other financial service providers, including exchange firms, financing institutions, postal services, insurance companies, and electronic payment entities, play pivotal roles in extending financial services to marginalized groups such as women, youth, rural residents, and micro, small, and medium enterprises (Hanan Al -Tayeb, 2020, p. 14) .

In their quest to enhance financial inclusion, these authorities also prioritize the assurance of financial service quality, a challenge necessitating the evaluation of various indicators (Shanbi, Souria; Belkhader, AL Saiid, 2018, pp. 110-111). These indicators encompass:

- ▲ **Cost-Bearing Capability:** The ability of individuals, particularly those with low incomes, to afford the costs associated with maintaining bank accounts.
- ▲ **Transparency:** The accessibility and clarity of information concerning financial services, enabling informed decision-making and safeguarding against linguistic inaccuracies or obscurities.
- ▲ **Convenience and Accessibility:** The ease of access and usage of financial services from the perspective of the customer.
- ▲ **Consumer Protection:** Adherence to laws and regulations designed to uphold consumer rights, prevent unfair practices, and mitigate against fraudulent activities by financial service providers.
- ▲ **Indebtedness or Financial Behavior:** Analysis of customers' financial conduct, including their propensity to repay debts within specified timeframes.

- ▲ **Credit Accessibility:** Ensuring that financial inclusion extends beyond mere access to financial services, enabling customers to choose from a range of financial products and services tailored to their needs.

3. Multifaceted Role of Financial Inclusion:

Financial inclusion has emerged as a crucial factor in advancing the sustainable development goals for many nations, closely tied to boosting economic growth. Its impact spans across various developmental dimensions, including:

3.1. Financial dimension (Tayeb, Hanan Al, 2020, p. 07):

The breadth of utilization of official financial products among all targeted demographic groups serves as a cornerstone for promoting financial stability. By extending the reach of investment savings deposits to encompass small depositors, the risk of liquidity is mitigated, rendering the financial system more robust and stable. Moreover, financial inclusion augments the efficacy of financial intermediation by aggregating the savings of individuals previously excluded from formal financial avenues, thereby bolstering savings rates and enhancing the performance of banking institutions. The establishment of organizational and legislative frameworks supportive of financial inclusion is pivotal for fostering comprehensive and sustainable economic growth, thereby fortifying financial stability.

Furthermore, financial inclusion facilitates the diversification of financial services across various institutions, consequently diminishing systemic risk. By broadening access to financial services—such as financing, savings, and insurance—financial inclusion plays a pivotal role in alleviating poverty, hunger, and inequality, particularly along gender lines. Additionally, it engenders opportunities for employment, stimulates economic growth, and enhances societal welfare. Moreover, financial inclusion stimulates competition among financial institutions by compelling them to diversify their product offerings and prioritize service quality, thereby bolstering customer retention and attracting new clientele. This, in turn, curtails the outflow of savings from formal financial channels and diminishes reliance on informal financial avenues, contributing significantly to financial stability.

3.2.Economic dimensions (Al-Bakl, Ahmed Saeed; Farouk Al-Haddad, Imen, 2022, p. 168):

Critical monetary supply and liquidity levels are key determinants of inflation, with a positive correlation observed between monetary supply, cash liquidity in markets, and inflation rates. Increased monetary supply and liquidity typically correspond to higher inflation rates. However, financial inclusion plays a crucial role in mitigating inflationary pressures by reducing local liquidity and promoting savings. By extending financial services to previously underserved segments of the population, financial inclusion channels funds towards small and medium-sized enterprises, while also integrating a substantial portion of the informal economy—such as freelance professions—into the formal economic framework. This integration helps prevent revenue losses for the state resulting from taxes evaded through informal economic activities.

Moreover, the adoption of financial inclusion strategies alongside digital transformation initiatives diminishes reliance on physical currency, fostering a shift towards electronic payment methods such as bank transfers, banking cards, and mobile wallets. This transition significantly curtails informal financial transactions and contributes to combatting corruption, terrorist financing, and money laundering. Furthermore, financial inclusion aligns with the objectives of sustainable development, as outlined in the United Nations' ambitious seventeen sustainable development goals for 2030.

Additionally, financial inclusion serves as a catalyst for sustainable economic development by providing the necessary liquidity to support the business sector in initiating and expanding economic projects. Consequently, this infusion of capital not only creates more employment opportunities but also augments economic growth rates, thus fostering a more robust and inclusive economy.

3.3.Social dimension (Essin, Adel Abdul Aziz, 2019, pp. 65-68):

Financial inclusion plays a dual role in enhancing social stability, catering to the financial needs of low-income individuals while also targeting specific demographics such as women, youth, and micro, small, and medium-sized enterprises, thereby integrating them into the formal financial sector. Moreover, financial inclusion correlates positively with individual well-being, as evidenced by increased per

capita GDP, enabling greater acquisition of goods and services. Furthermore, expanding the scope of financial inclusion has yielded positive social dividends, notably in crime reduction, facilitated by increased access to financing options such as microcredit and support for small and medium enterprises, thereby fostering job creation. Additionally, financial inclusion accommodates diverse religious beliefs by offering alternative financial products, exemplified by the principles of Islamic finance. Lastly, financial inclusion initiatives contribute to the dissemination of banking awareness and financial literacy through collaborative efforts among stakeholders, facilitating optimal engagement and outreach strategies

Secondly. Examination of Financial Inclusion and its Evolution in Algeria: Key Indicators Analysis

The primary objective of the banking system encompasses the attainment of financial inclusion, ensuring the incorporation of all strata of society, particularly the marginalized, impoverished, and disadvantaged, into formal financial channels and participation within the structured financial framework. In alignment with this mandate, Algeria endeavors to enhance its financial sector to encompass a broader spectrum of these demographic groups through the dissemination of diverse financial products and services. Such endeavors constitute a fundamental driver towards the realization of both financial development and sustainable growth objectives. Consequently, central banks play a pivotal role in formulating and disseminating key indicators of financial inclusion to gain insights into citizens' financial behaviors, thereby facilitating the formulation of policies conducive to their economic empowerment.

The elucidation of select indicators serves as a mechanism for gauging the level of financial development indicative of financial inclusion within Algeria. Among these indicators, the financial depth index, the financial availability index, and the financial utilization index emerge as prominent metrics. These indices serve as pivotal tools for evaluating the developmental trajectory of financial inclusion within Algeria. The Global Findex database, published by the World Bank, stands as a comprehensive repository of data encompassing various nations globally. Released triennially since 2011, this database furnishes invaluable insights into the state of financial inclusion across diverse jurisdictions, thereby facilitating informed policy formulation and strategic decision-making processes.

1. Financial Depth Index:

The financial depth index serves as a critical barometer of the banking sector's health and constitutes a key metric for assessing financial development. This indicator not only elucidates the prevalence of financial transactions within the economy but also encapsulates the utilization of money in fulfilling financial obligations, fostering savings, and meeting investment requisites (Al-Bakl, Ahmed Saeed; Farouk Al-Haddad, Imen, 2022, p. 174). The measurement of this index involves ascertaining the proportion of broad money—represented by the M2 monetary aggregate—to the gross domestic product (GDP). Mathematically, this relationship is articulated as the ratio of M2 Money Display to GDP. The examination of the financial depth index over the period 2010-2021 in Algeria is presented in the ensuing table:

Table N°01: The Financial Depth Index in Algeria during the period (2010-2021) in billion DA

years	GDP gross domestic product billion DA	Show money in the broad M2 concept billion DA	M2/ GDP Financial Depth Index
2010	161.21	828.07	%514
2011	200.01	992.92	%496
2012	209.06	15.1101	%527
2013	209.76	41.1194	%569
2014	213.81	86.136	%64
2015	165.98	137.04	%83
2016	160.03	138.16	%86
2017	170.10	149.74	%88
2018	174.91	166.36	%95
2019	171.71	165.06	%96
2020	145.01	176.59	%122
2021	163.04	188.99	%116

Source: From the preparation of the researchers based on the data of the Bank of Algeria, and the World Bank, the date of view: 01/03/2023, available on the site <https://www.bank-of-algeria.dz/indicateurs-monetaires/> <https://data.albankaldawli.org/country/DZ>

The tabulated data delineates noticeable fluctuations in the financial depth index within Algeria spanning the years 2010-2021. These fluctuations can be contextualized and explicated through three distinct stages:

1.1.Initial Stage: Ascending Financial Depth (2010-2013)

During this phase, a notable ascent in the financial depth index is observed, primarily attributable to a substantial surplus in financial resources stemming from heightened petroleum revenues. The consequent proliferation of money stocks resulted in a significant expansion of monetary circulation within the economy. Concurrently, the implementation of expansive fiscal and financial policies, aligned with the objectives outlined in the five-year development plans (2010-2015), facilitated an enhanced level of financial intermediation. This, in turn, facilitated the mobilization and redistribution of savings into credit activities, thereby augmenting real financial deepening and positively impacting the gross domestic product (GDP). It's noteworthy that this surge in the monetary supply didn't necessarily reflect commensurate advancements within the banking system or the diversification of financial services.

1.2.Subsequent Stage: Substantial Decline and Volatility (2014-2017)

Contrastingly, a marked downturn in the financial depth index is evident during this period, reaching its nadir in 2014. This decline is principally attributed to the austerity measures implemented by the Algerian government in response to dwindling petroleum revenues, which historically constituted the primary source of national development funding. The depletion of monetary reserves and the implementation of stringent monetary policies led to a notable contraction in economic activity, characterized by diminished financial services and reduced GDP. The adverse effects of this contraction were particularly pronounced, resulting in a notable decline in GDP to \$165.98 billion in 2015. However, a relative uptick in the financial depth index was recorded in 2018, corresponding with an injection of liquidity into the economy through increased currency issuance in 2017. This monetary stimulus was aimed at invigorating financial activities and rekindling economic vitality by facilitating enhanced access to financial services.

1.3.Third Stage: Resurgence in the Financial Depth Index (2019-2021)

During this period, Algeria witnessed a resurgence in the financial depth index, driven by strategic shifts in monetary policy aimed at diversifying the economy and mobilizing savings effectively. Legislative

reforms, including incentive investment laws enacted in 2016, enabled broader access to financial services, particularly for small and medium enterprises, women, and youth. Innovative financial instruments facilitated non-currency transactions, contributing to the index reaching 122% in 2020 despite challenges posed by COVID-19. Proactive government measures, such as tailored financial products and monetary policy adjustments, supported economic activity, culminating in a notable GDP increase to \$163.04 billion in 2021, aligning with Algeria's goals of financial inclusion and economic development. (Arab Portal for Development, 2022).

2. Financial availability Index:

This indicator serves as a gauge of the financial sector's capacity to attract clientele by ensuring widespread accessibility to all financial services and products in a convenient manner. It hinges upon an understanding of the banking system's structure and the density of banking branches per 100,000 individuals in the population, alongside considerations of infrastructure and technological tools employed by regulatory authorities to bolster the outreach of official financial services to diverse segments across various regions. By curbing the diversion of financial resources to informal markets, the economy stands to benefit significantly (Hakmi, NajibAllah; Boulehbel, Samira, 2021, p. 340). A comprehensive financial sector, therefore, is one that facilitates easy access to financial services for the largest possible swath of the population. Table No. 02 illustrates the Financial Provision Index in Algeria for banks and postal services during the period spanning from 2011 to 2021, computed according to this criterion:

$\text{Financial Availability Index} = \frac{\text{postal or bank branches number}}{\text{population number}}$
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The table presents data on the Index of Financial Availability in posts and banks, as well as related variables such as the number of post offices, total number of bank branches, and population size, spanning the years 2011 to 2021. This data offers insights into the accessibility of financial services through both postal facilities and banking institutions over the specified timeframe. Over the examined period, the Index of Financial Availability in posts exhibited a slight upward trend, with values ranging from 8.73 in 2011 to 9.18 in 2021. Conversely, the Index of Financial Availability in banks displayed minimal fluctuations, remaining relatively stable around the range of 3.60 to 3.80 across the

years. Notably, the total number of bank branches steadily increased from 1356 in 2011 to 1690 in 2021, indicative of efforts to expand banking infrastructure.

Table N°02: Financial Provision Index in Algeria during the period (2011-2021)

years	Populat ion value) in (millions	Total number of banks branches	Numbe r of post offices	Index of financial availability in banks Branch es number/ nonulation	Index of financial availability in posts Postoffic es/ population
2011	36.54	1356	3190	3.71	8.73
2012	37.26	1392	3284	3.74	8.81
2013	38.00	1418	3419	3.73	9.0
2014	38.76	1437	3533	3.71	9.12
2015	39.54	1469	3585	3.72	9.07
2016	40.33	1490	3654	3.69	9.06
2017	41.13	1501	3743	3.65	9.10
2018	41.92	1525	3811	3.64	9.09
2019	42.70	1546	3862	3.62	9.04
2020	43.45	1578	3984	3.63	9.17
2021	44.17	1690	4055	3.80	9.18

Source: prepared by the researchers based on the data of the Bank of Algeria and the World Bank for the years mentioned, the date of view: 01/15/2023 is available on the site: <https://www.bank-of-algeria.dz/nombre-agences-wilaya>
<https://data.albankaldawli.org/country>

Meanwhile, the number of post offices also saw a consistent rise, reaching 3984 in 2020 before slightly declining to 4055 in 2021. This increase in the number of post offices suggests a parallel effort to enhance the accessibility of financial services through postal channels. It is worth noting that these trends occurred within the context of a growing population, which expanded from 36.54 million in 2011 to 44.17 million in 2021. This demographic growth underscores the importance of continually improving the accessibility and availability of financial services to meet the evolving needs of an expanding populace.

3. Financial Use Index:

This indicator expresses the extent of individuals to benefit from financial services and banking products and actually use them after they are available and available from the financial and banking sector (Hakmi, Najib Allah; Boulehbhel, Samira, 2021, p. 338) by knowing each

of the volume of banking deposits and credit volume in relation to the gross domestic product as this indicator is calculated in the relationship:

$$1. \text{ The financial use index of banking deposits} = \frac{\text{bank deposits}}{\text{gross domestic product}}$$

$$2. \text{ Index of financial credit use} = \frac{\text{bank credit}}{\text{gross domestic product}}$$

Where Table 03 shows the extent of banks use bank deposits to grant bank credit to the economy as a whole, expressing this in the extent of the growth of the gross domestic product:

Table N°03: The Financial Use Index in Algeria during the period (2010-2022)

year	Bank deposits (billion DA)	bank credit (billio n dzd)	gross domestic product GDP (billion DA)	Financi al use index For bank deposits	Financial use index For bank credit
2010	6182.1	3268.1	16121	38.35	20.27
2011	7357.7	3726.5	20001	36.78	18.63
2012	8062.8	4287.6	20906	38.56	20.44
2013	8737.5	5156.3	20976	41.65	24.58
2014	10027.8	6504.6	21381	46.90	30.42
2015	9596.4	7277.2	16598	57.81	43.84
2016	9319.1	7909.9	16003	58.23	49.42
2017	10257.7	8880.0	17010	60.30	52.20
2018	11709.9	9976.3	17491	66.95	57.03
2019	11069.0	10857.	17171	64.46	63.23
2020	11521.3	11182.	14501	79.45	77.11
2021	13341.4	9794.7	16304	81.82	60.07
22/9	14736.1	10202	16304	90.38	62.57

Source: prepared by the researchers based on the data of the Bank of Algeria, and the World Bank, the date of view: 01/03/2023, available on the site

<https://www.bank-of-algeria.dz/indicateurs-monetaires/>

<https://data.albankaldawli.org/country/DZ>

The table provides a comprehensive overview of the Financial Use Index pertaining to bank credit and deposits, alongside related variables such as gross domestic product (GDP), across the years 2010 to 2022. This dataset offers valuable insights into the utilization of financial resources within Algeria's banking sector and its implications for economic activity. Examining the Financial Use Index for bank credit, a discernible upward trajectory is evident, with values increasing from 20.27 billion DA in 2010 to 62.57 billion DA in September 2022. This substantial growth reflects an augmented reliance on bank credit for financing various economic endeavors over the years. Similarly, the Financial Use Index for bank deposits exhibits notable expansion, rising from 38.35 billion DA in 2010 to 90.38 billion DA in September 2022. This upward trend underscores the increasing propensity of individuals and entities to entrust their funds to banking institutions for safekeeping and investment purposes.

Concurrently, the gross domestic product (GDP) demonstrates a consistent upward trend, indicating overall economic growth and development. Notably, the GDP expanded from 3268.1 billion DA in 2010 to 14736.1 billion DA in September 2022. This steady increase underscores the positive correlation between financial utilization and economic activity, wherein enhanced access to credit and deposits facilitates investment, consumption, and overall economic expansion. Furthermore, it is noteworthy that the data source for this analysis includes information sourced from the Bank of Algeria and the World Bank, ensuring reliability and credibility. The researchers have meticulously compiled and analyzed this data, affirming its validity for scholarly investigation.

Thirdly. Analysis and Evaluation of Key Determinants of Financial Inclusion in Algeria

This section examines critical factors influencing the accessibility and utilization of financial services within the Algerian context. It delves into demographic, economic, and regulatory aspects to assess the effectiveness of initiatives aimed at enhancing financial inclusion. Through rigorous analysis, this subsection aims to identify barriers and opportunities for advancing financial inclusivity in Algeria."

1. Infrastructure for the banking sector

The advancement of infrastructure stands as a pivotal prerequisite for fostering financial inclusion, constituting a fundamental pillar in establishing a robust and conducive environment for its realization. Integral to this endeavor is the geographical proliferation of financial services providers, encompassing diverse entities such as bank branches, postal outlets, automated teller machines (ATMs), and sales points. This expansive network plays a crucial role in facilitating individuals' access to financial services and utilization of available banking products. Table No. 04 delineates the evolution of the number of banking and postal branches, alongside automated teller machines, over the period spanning from 2011 to 2021. This dataset offers valuable insights into the progression of infrastructure development aimed at bolstering financial accessibility and inclusivity across Algeria.

Table N°04: Distribution of Banking and Postal Branches, and Automated Teller Machines in Algeria (2011-2021)

Years	Bank branches number	post offices number	ATMs in bank branches	ATMs in postal branches
2011	1356	3190	996	606
2012	1392	3284	1050	606
2013	1418	3419	1155	694
2014	1437	3533	1227	897
2015	1469	3585	1286	1079
2016	1490	3654	1341	1122
2017	1501	3743	1387	1271
2018	1525	3811	1421	1393
2019	1546	3862	1477	1404
2020	1578	3984	1493	1407
2021	1690	4055	1493	1409

Source: prepared by the researchers based on the data of the Bank of Algeria, the date of view: 20/03/2023, available on the site:

<https://www.bank-of-algeria.dz/indicateurs-monetaires>

The table provides a comprehensive overview of the distribution of banking and postal branches, as well as automated teller machines (ATMs) in Algeria over the period from 2011 to 2021. This data is crucial for understanding the expansion of financial infrastructure and

accessibility of banking services throughout the country. The number of bank branches and post offices shows a steady increase over the years, indicating efforts to expand the physical presence of financial institutions across Algeria. For instance, the number of bank branches increased from 1356 in 2011 to 1690 in 2021, while post offices increased from 3190 to 4055 during the same period. This expansion suggests a concerted effort to enhance the accessibility of financial services to the population.

Moreover, the availability of ATMs, both within bank branches and postal branches, is highlighted in the table. The number of ATMs in bank branches witnessed a consistent rise, reflecting the integration of technology to improve banking services. Similarly, the presence of ATMs in postal branches also increased over the years, albeit at a slower pace. This indicates efforts to enhance the convenience of accessing financial services in various locations, including remote areas where postal branches may serve as crucial access points. (Bernie, Obaid, & Habib, 2019, pp. 4-5) .

Overall, the progressive increase in the number of bank branches, post offices, and ATMs underscores the commitment of Algerian authorities to expand financial inclusion and accessibility. This expansion is essential for ensuring that individuals and businesses, especially in underserved areas, have access to basic banking services. However, further analysis may be necessary to evaluate the effectiveness of these efforts in promoting financial inclusion and addressing disparities in access to financial services across different regions of Algeria. Additionally, future research could explore the impact of this expanded infrastructure on key economic indicators, such as savings rates, investment activities, and economic growth.

2. Financial education in the use of digital technology:

Policy makers have shifted their focus from merely facilitating access to financial services towards advocating for comprehensive financial inclusion. This involves leveraging modern technology and financial innovations to reduce transaction costs and encompass marginalized segments of the population. Particularly, utilizing the Internet, electronic banking techniques, mobile phone usage, and bank card utilization are paramount.

Table N°05: Average (%) Adoption of Bank Cards, Internet, and Mobile Phone Usage (2011-2021)

2021	2017	2014	2011	Years
23.82	20.74	23.44	14.45	Ownership of bank cards %
2.02	4.41	4.66	9.33	bank cards utilization
3.75	2.50	0	0	Using mobile to pay bills

Source: From the preparation of the researchers based on the financial inclusion database (Global Findex) for the years mentioned, Review date: 11/04/2023 is available on the site: <https://www.worldbank.org/en/publication/globalfindex/Data#sec3>

The table delineates the evolution of financial services adoption over the years 2011, 2014, 2017, and 2021, with consideration to the impact of the COVID-19 pandemic. Ownership of bank cards exhibited a notable increase, rising from 14.45% in 2011 to 23.82% in 2021. However, it's essential to note that the growth trajectory might have been influenced by various factors, including the COVID-19 pandemic, which accelerated the shift towards digital and contactless payment methods. Conversely, bank card utilization experienced a significant decline over the same period, decreasing from 9.33% in 2011 to 2.02% in 2021. This decline might partly be attributed to the pandemic-induced economic uncertainty, which led to reduced consumer spending and a consequent decrease in the utilization of bank cards for transactions.

Furthermore, the usage of mobile phones for bill payments demonstrated a noteworthy increasing trend, rising from nonexistence in 2011 to 3.75% in 2021. This surge in mobile payment adoption can be attributed to the convenience and safety offered by contactless transactions, which gained prominence amidst the pandemic as individuals sought to minimize physical interactions and adhere to social distancing measures.

3. The Gender Disparity in Availability and Utilization

The gender digital gap, as delineated in the literature (Bank, The World, 2022), signifies the extent of inequality in access to financial services, information and communication technologies, and the requisite opportunities for participation and utilization. This phenomenon is exemplified by the statistical analysis presented in the subsequent table, indicating a substantial proportion of individuals, particularly among the youth demographic aged 15 to 24 in Algeria, who lack access to bank accounts within official financial institutions. This absence hampers their ability to avail themselves of both traditional and modern financial

services, underscoring disparities in accessibility across societal strata, as observed in the broader Arab region (Ascowa, The United Nations, 2020, p. 61). Such disparities persist along various axes, including gender, income, education level, economic status, political participation, and healthcare access, evident across Arab countries collectively. Despite a reported 50% increase in the global adult population holding bank accounts over the past decade, as indicated by sources such as the Financial Inclusion Gateway for Development, the persistence of these disparities underscores the pressing need for targeted interventions to ensure equitable access to financial services and digital technologies.

**Table N°06: Gender Disparity in Algeria and Arab Countries
2017,2021**

Years	2017		2021	
sex	males	females	males	females
countries	%	%	%	%
Algeria	56.25	29.27	56.83	31.19
Jordan	56.28	26.61	58.60	34.06
Iraq	25.82	19.50	22.21	14.89
Morocco	41.47	16.81	55.97	32.70
Tunisia	45.73	28.36	45.14	28.75
Palestine	34.44	15.91	41.44	25.93
Lebanon	56.69	32.91	24.55	16.59
Egypt	38.65	26.99	30.57	24.20

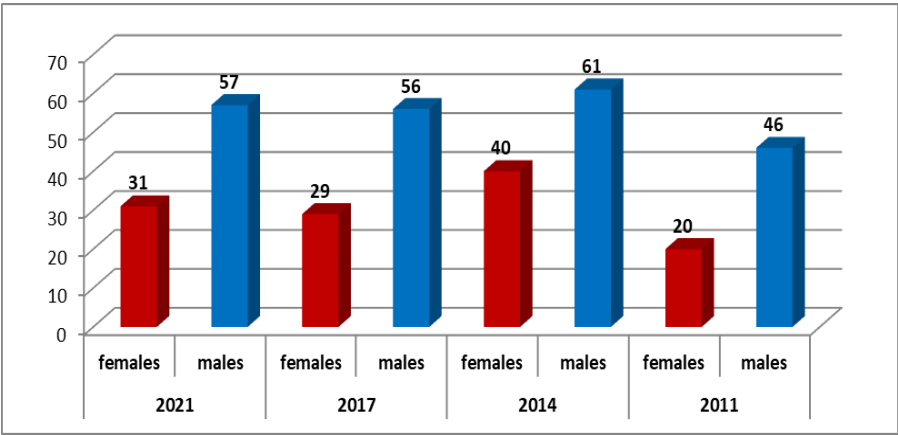
Source: Prepared by the researchers based on the financial inclusion database (Global Fendix) for the aforementioned years, Review date: 26/02/2023 available on the site: <https://www.worldbank.org/en/publication/globalfindex/Data#sec3>

The gender gap in the Middle East and North Africa, as indicated by the Arab average, stands at 52% for males and 35% for females, contrasting sharply with the global average of 72% for males and 65% for females (Bank, The World, 2022). Notably, there has been a gradual reduction in the gender gap concerning bank account ownership across Arab countries, albeit ranging from 1 to 15 percentage points. However, this reduction remains minimal, largely attributable to the prevailing disparity in bank account ownership between males and females, with males holding accounts at nearly twice the rate of females. This discrepancy underscores the pervasive exclusion and marginalization

experienced by women, despite their attainment of higher education levels and their participation in the labor market.

Statistical data reveals a clear pattern of exclusion of Arab women from banking and financial transactions, with significant hurdles impeding their access to official financial channels. Only approximately 31.19% of Arab women possess bank accounts, highlighting a substantial gender gap in financial inclusion. Several factors contribute to this disparity, including structural barriers such as legal restrictions and organizational obstacles, such as stringent 'know your customer' requirements. Additionally, national policies often overlook the specific needs of women and fail to address issues related to gender inequality, posing challenges across various domains including education, economy, politics, and health. Moreover, the lack of essential financial tools hampers women's ability to accumulate assets and achieve economic and political empowerment, further exacerbating the gender gap in financial inclusion.

Figure N°01: The gap indicator between females and males in Algeria



Source: Prepared by the researchers based on the financial inclusion database (Global Findex) for the aforementioned years, Review date: 17/03/2023 available on the site: <https://www.worldbank.org/en/publication/globalindex/Data#sec3>

Fourthly. Arab Efforts and Initiatives for Enhancing Financial Inclusion in Algeria

The Arab countries have undertaken significant strides towards advancing financial inclusion, with several nations implementing national strategies aimed at bolstering financial inclusion systematically and establishing the requisite infrastructure to support comprehensive

and sustainable growth. These strategies and plans have been structured around various pillars, with a primary focus on developing national programs for financial inclusion, harnessing modern financial technologies, and fortifying consumer protection measures. Additionally, there has been a concerted emphasis on addressing educational initiatives and fostering financial literacy to bolster support for small and micro enterprises, as well as to empower women and youth in accessing formal financial services. Consequently, we delve into an examination of the foremost endeavors undertaken by central banks and Arab monetary institutions aimed at enhancing financial inclusion.

1. UAE's efforts (Fund, International Monetary, 2019, pp. 48-49):

In 2017, the Central Bank of the UAE embarked on initiatives aimed at bolstering the network for safeguarding financial and banking consumers, particularly in response to the unprecedented acceleration and significant advancements witnessed in the financial sector. These efforts were centered on enhancing financial inclusion, fostering financial literacy, harnessing digital technologies, and disseminating crucial information integral to achieving financial stability. To this end, the Central Bank focused on fortifying the structural infrastructure to enhance the quality of banking services received by customers. This included the establishment of a dedicated financial customer complaints unit, tasked with overseeing operations within banks and financial institutions directly. Additionally, the Central Bank issued several awareness bulletins elucidating key concepts pertaining to financial services and elucidating consumer rights and responsibilities. Furthermore, concerted outreach efforts were undertaken, including field visits to educational institutions such as schools and universities, as well as government agencies. The Central Bank also actively participated in awareness exhibitions, both domestically and internationally, to disseminate pertinent information and promote financial literacy among stakeholders.

2. The Tunisian Republic:

The Ministry of Finance, in collaboration with the Tunisian Central Bank and regulatory bodies, developed a strategic blueprint for advancing financial inclusion in Tunisia during the 2018-2022 period. This initiative primarily aimed to enhance access to financial services through six key pillars: digital financing, microinsurance, financial literacy, financing for institutions operating in the social and solidarity economy sector, refinancing of microfinance institutions, and socio-

economic assessment of various financing mechanisms. The overarching goal was to facilitate access to tailored financial services for both fully and partially covered segments of the population, thereby mitigating spatial disparities and fostering job creation. To expedite the implementation and sustainability of the financial inclusion strategy, relevant authorities have endeavored to establish a comprehensive database overseen by the Financial Integration Observatory. This database serves to facilitate coordination among stakeholders involved in promoting financial inclusion.

3. State of Palestine (Monetary, The Authority Palestinian, 2019, pp. 48-49):

The Palestinian Monetary Authority has pursued a proactive approach in recent years, prioritizing the establishment of branches and banking offices, particularly in rural and remote areas. This concerted effort has resulted in an increase in the number of individuals accessing current, savings, and investment accounts. Additionally, a series of instructions and laws have been ratified to bolster levels of financial inclusion. Key among these are the Electronic Transactions Law enacted in 2017, aimed at fortifying the foundational infrastructure for electronic service exchange and utilization. Furthermore, the Financing Rental Law of 2014 was introduced to regulate services and safeguard the rights and interests of contractual parties. The issuance of entity instructions sought to streamline lending processes while upholding principles of transparency and disclosure. Specific directives were also established, such as those mandating the provision of basic banking services for every citizen, ensuring low-cost access to banking services for individuals with limited income.

Additionally, instructions governing ATM services were implemented to ensure secure and efficient operations nationwide, contributing to heightened financial awareness among consumers. Product guidelines and promotional campaigns were instituted to facilitate consumer outreach and engagement. The establishment of the Palestinian Corporation for Deposits aimed to safeguard depositor funds within a secure banking framework. Moreover, efforts were made to incentivize the banking system to expand lending to the small and medium enterprises sector, thereby fostering investment in this vital economic segment. The financial inclusion strategy in Palestine has set ambitious targets, aiming to elevate the current financial inclusion rate of 36.4% of adult individuals to a minimum of 50% by the year 2025.

This strategy focuses on enhancing the financial capabilities of target segments, improving access to official financial services for underserved populations, and protecting consumer rights while leveraging information and communication technologies to disseminate and promote the use of formal financial services.

Conclusion:

Financial inclusion is paramount for individuals and institutions alike, reflecting the accessibility of financial services and products across diverse demographics and regions. This importance has been underscored by heightened banking competition and the proliferation of digital financial technologies, especially in the wake of the global COVID-19 pandemic, which has accelerated financial transactions both domestically and internationally. However, an analysis of financial inclusion levels in Algeria reveals significant discrepancies compared to global and regional standards. While selected Arab countries have made considerable strides through the implementation of strategic initiatives, Algeria's progress remains wanting.

Key findings from the analysis reveal significant disparities in financial inclusion levels. The surge in the financial depth index from 2010 to 2014 was primarily fueled by windfall petroleum revenues rather than genuine progress in financial inclusion or banking system development, contradicting initial hypotheses. Furthermore, the consistently low financial availability index, consistently below 4% throughout the study period, highlights the inadequate expansion of banking and postal branches relative to population growth, hindering access to financial services. Additionally, the spike in the financial use index in 2019-2020, driven by deposit mobilization for development and pandemic relief, does not necessarily signify broader financial inclusion. This is exacerbated by limited financial literacy, evidenced by underutilization of financial technology despite widespread smartphone and internet access, further marginalizing women in banking and financial transactions.

Based on the findings, **recommendations include** transitioning to a digital economy, implementing equitable tax policies, developing mechanisms to limit inactive accounts, encouraging private investment in banking infrastructure, implementing national financial education strategies, utilizing media for financial inclusion, promoting gender equality in policies, enhancing banking governance, and integrating financial education into academic curricula.

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