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Digital Banking: A Gateway to Financial Inclusion
– A Comparative Analysis of Algeria and Malaysia-

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Abstract:

Financial inclusion and access to banking services are two key pillars of economic development, particularly in developing countries. Algeria and Malaysia have made significant progress in recent years in modernizing and developing their banking sectors through digitalization, with the goal of expanding financial inclusion.

This paper provides an overview of the current state and reality of digital banking and financial inclusion in Algeria and Malaysia. Digitalization initiatives by both countries and financial institutions, such as banks, are discussed, such as the introduction of mobile banking services and the promotion of electronic payment methods. The impact of financial technology on accelerating financial inclusion will also be examined.

A descriptive comparative approach was used in this study. This paper analyzes these challenges and provide recommendations on how Algeria can accelerate the digitalization of financial services to enhance financial inclusion, compared to Malaysia.

However, internet and smartphone penetration rates and the use of banking services, both digital and non-digital, remain relatively low in Algeria relative to its population, especially in rural areas. This is due to cultural barriers, lack of trust in electronic payment systems, a tendency to deal in cash, and a lack of digital awareness compared to Malaysia.

Keywords: Digitalization; Financial inclusion; Banking services; Algeria; Malaysia.
JEL Classification: O33; O16; G21; O57.

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Introduction

The Algerian banking sector is undergoing a significant transformation driven by the growing importance of digitalization. This intervention will delve into the realities and challenges of this transformation.

Our intervention begins by establishing a clear understanding of the terms often used interchangeably: digitalization, digitization, and digital transformation. Next, we will focus on digital banking, defining the concept and distinguishing it from the notion of a digital bank. This distinction will clarify the spectrum of digital solutions available to traditional banks and the potential emergence of entirely digital institutions. With a firm grasp of these foundational concepts, we will explore the process of transforming a traditional bank into a digital one. This section will shed light on the necessary steps and considerations for banks to embrace digitalization effectively. To gain further perspective, we will delve into the historical evolution of digital transformation in banks globally. This historical context will highlight how financial products and services have been transformed through the power of digitalization. Following our historical exploration, we will shift our focus to the specific advantages offered by digital banking. This section will analyze how digitalization can enhance convenience, security, efficiency, and accessibility for both banks and their customers.

Finally, we will arrive at the core of this intervention the realities and challenges faced by Algerian banks in their digital transformation journey. In addition, we will highlight the reality and digital infrastructure of Algerian banks and their various activities to promote digitization.

Research Probleme

Understanding the Paper focus allows us to formulate a research question: **“How can digital banking enhance financial inclusion in Algeria and Malaysia?”**

Sub-questions:

To address the research problem, several sub-questions have been posed:
1. What is the reality of digital banking in Algeria and Malaysia?

2. What is the reality of financial inclusion in Algeria and Malaysia?

Research Importance

The digitization of banking services in Algeria and Malaysia presents a critical opportunity to modernize the financial sector, improve financial inclusion, and drive economic growth. Despite initial efforts, Algeria and Malaysia faces significant realities and challenges in this endeavor. Research in this area is crucial it sheds light on how to effectively expand access to financial services, improve the efficiency and transparency of banking operations, harness the full potential for economic advancement, address critical security concerns, and ultimately inform the development of effective policies and regulations to guide this crucial evolution.

Research Objectives

- To comprehensively analyze the evolution of digital banking in Algeria and Malaysia from 2011 to 2024;
- To identify key trends, challenges, and opportunities of digital banking landscape in Algeria and Malaysia;
- To assess the impact of digital banking on financial inclusion and economy in Algeria and Malaysia;
- To evaluate the adoption rates of various digital banking services (e.g., online banking, mobile banking, ATMs) among Algerian and Malaysian consumer;

1-financial inclusion

Over the past two decades, financial inclusion has risen to the forefront of global development discussions, recognized for its potential to unlock opportunities for underserved populations. So, what is financial inclusion?

1-1- Definition of Financial inclusion:

Financial inclusion means that individuals, regardless of their background or income, and businesses have access to useful and affordable financial products and services. These include products and services such as banking, credit, insurance, pensions, and savings, as well as transaction and payment systems, and the use of financial technology. (Prabhakar, 2021)

According to this definition, we can conclude that financial inclusion means making sure everyone, especially those who are poor or marginalized, can access and use basic financial services like savings, loans, insurance, and payments to improve their lives and grow economically.

1-2- Outcomes of Financial inclusion:

Financial inclusion encompasses access to credit, savings products, microinsurance, and payment services. The following points demonstrate the various beneficial outcomes associated with financial inclusion:

- Financial inclusion spurs small enterprise activity;
- Access to credit encourages investment among small farmers;
- Savings products create resistance to income variability;
- Micro-insurance assists in mitigation of risks from external risks;
- Payments through mobile money reduce transaction and transportation costs; (Enhancing Financial Inclusion Through Islamic Finance, Volume II, 2020)

1-3- Key Importance of Financial Inclusion

Financial inclusion refers to the process of ensuring access to financial services and products to all individuals and businesses, particularly those in underserved or marginalized communities. It is a critical driver of economic growth, poverty reduction, and social development. Below are the key importance of financial inclusion:

- Poverty Reduction; (Asli Demirguc-Kunt, 2014)
- Economic Growth; (Beck, 2007)
- Reduction of Income Inequality (Sarma, 2011)
- Enhanced Financial Stability; (World Bank. Global Financial Development Report Bankers without Borders., 2017/2018)
- Empowerment of Women; (Promoting Women's Financial Inclusion: A Toolkit for Practitioners., 2016)
- Digital Financial Inclusion; (State of the Industry Report on Mobile Money., 2020)
- Resilience to Shocks; (Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19, 2020)
- Promotion of Innovation and Entrepreneurship; (Ayyagari, 2007)

02- Digital banking

2-1-Definition of Digital banking:

Digital banking refers to a banking strategy that allows clients to deal financially online without the necessity of visiting a bank office. Along with other perks, e-banking also saves users time by eliminating the need to physically visit a bank. Additionally, banks may use this strategy to increase the number of customers they have, which could result in higher revenues. Digital banking, is a technique that enables clients to access their accounts and learn about the newest bank services via personal computers or other technologically advanced devices. (Sultana, December 2023)

03- Digital banking is a key driver of financial inclusion

Digital financial services (DFS) are transforming the financial landscape by reaching billions of unbanked and underserved individuals. Leveraging digital technologies, including mobile phones, these services are now operational in over 80 countries, enabling millions to transition from cash-based transactions to formal financial systems. Through digital platforms, users gain access to payments, transfers, savings, credit, insurance, and even securities, fostering financial inclusion and economic empowerment.

03-01- Challenges and Risks Despite their potential, Digital Financial Inclusion introduce new risks, including

- The involvement of non-financial firms and new technologies;
- Complex contractual relationships between financial institutions and third parties;
- Regulatory disparities in treating deposit-like products;
- Potential costs and vulnerabilities for inexperienced consumers;
- Privacy and data security concerns arising from new data uses; (Kim, 2014)

04- The Role of Digital Banking in Promoting Financial Inclusion in Malaysia and Algeria

More and more people around the world are using digital banking. This can make banking cheaper, faster, and more open. It can also help with financial inclusion, which means giving everyone access to banking services. As the internet reaches more places, digital banking can connect with people who are often left out. But just having digital banking isn't enough to help everyone. If banks still ask for things like proof of high income, many people will still be excluded from financial inclusion. So, this article looks at how digital banking can help increase financial inclusion in Malaysia and Algeria. We'll see what kind of support and tools are needed to make sure digital banks can really help everyone get access to banking.

04-01- Key Indicators of Financial Inclusion :

01-01-01 Key Indicators of Financial Inclusion in Malaysia:

Figure 01 presents a table with financial indicators from 2011 to 2023. It includes data on: **Financial Access Points (FAPs)**;**Deposits**; **Loans Life Insurance; Family Takaful**; **Payments**; **Total Adult Population**

Figure 01 contains a table with **demand-side data** related to financial services from 2011 to 2021, compared to the global average from the FINDEX 2017 report. The data includes:

Figure 01: shows trends in financial service adoption and satisfaction over the years, with comparisons to the global average where available.

2) Demand-Side Data

Indicators	2011*	2015*	2018	2021	Global average (FINDEX 2017)
Take-up					
Adults with deposit accounts (%)	92	91	92	93	68.5
Adults with financing accounts (%)	36	25	39	61	22.5
Adults with life insurance / takaful policies (%)	18	16	17	23	-
Satisfaction Level					
Adults who are satisfied with overall financial services (%)	61	73	73	77	-

* Based on data published in FSPSR 2015

Source: bank negara Malaysia central bank of Malaysia (bank negara Malaysia central bank of Malaysia)

Figure 02: presents a table with financial indicators from 2011 to 2023.

Indicators	End-2011	End-2015	End-2018	End-2021	End-2022	End-2023
Financial Access Points (FAPs)						
No. of bank branches	3,143	3,264	3,297	2,986	2,950	2,905
No. of agent banks	460	6,902	6,254	4,119	3,829	3,501
No. of financial FAPs (bank branches & agent banks)	3,603	10,166	9,551	7,105	6,779	6,450
No. of ATMs	11,165	11,624	11,167	13,652	13,565	13,798
No. of CDMs	4,429	5,276	5,296	6,717	6,489	6,630
No. of ETPOS Terminals			na	779,206	834,284	875,504
Number of bank branches per 10,000 adults	1.5	1.4	1.4	1.2	1.2	1.2
No. of FAPs per 10,000 adults	1.7	4.4	4.0	2.9	2.7	2.5
No. of ATMs per 10,000 adults	5.2	5.0	4.7	5.5	5.4	5.3
No. of CDMs per 10,000 adults	2.1	2.3	2.2	2.7	2.6	2.6
No. of ETPOS Terminals per 10,000 adults	na	na	na	313.0	332.8	338.9
Sub-districts with financial access points (%)	46.4	97.1	95.7	96.0	96.2	95.8
Deposits						
No. of deposit accounts	63,515,147	72,374,817	77,567,489	76,412,535	77,724,629	80,858,419
No. of deposit accounts per 10,000 adults (ownership)	29,860	31,141	32,415	30,698	31,009	31,303
Adults with active[1] deposit account (%)[#] (usage)	86.8	92.4	95.5	95.7	96.8	97.3
Loans						
No. of loan accounts per 10,000 adults	8,792	8,424	8,596	8,752	8,993	9,027
Adults with loan account (%)[#]	37.0	38.8	38.8	40.2	40.6	41.2
Life insurance / family takaful						
Adults with life insurance / takaful policies (%)[#]	29.6	35.3	48.8	49.9	57.5	51.5
Payments						
E-payments transaction volume per capita (unit)	49.1	82.6	124.6	221.2	291.0	291.0[#]
Internet banking penetration rate (%)	40.9	63.3	91.1	122.4	134.3	140.0
Mobile banking penetration rate (%)	5.4	23.0	44.6	72.9	88.7	97.0
Total adult population[#]	21,271,000	22,751,800	23,929,300	24,891,400	25,065,100	25,830,500

Source: bank negara Malaysia central bank of Malaysia

04-01-02 Key Indicators of Financial Inclusion in Algeria

Figure 03 presents a report on Algeria's financial inclusion in 2015, comparing various financial indicators with those of upper-middle-income countries. It includes data on population demographics, GNI per capita, and various financial indicators such as account ownership, access to financial institutions, use of digital payments, remittances, savings, and credit. The report highlights disparities in access to and use of financial services between different demographic groups, such as women, young adults, and rural populations, compared to the broader category of upper-middle-income countries. Key points include lower account ownership rates, limited use of digital payments, and lower savings rates in Algeria compared to the average for upper-middle-income countries.

Figure 03: presents a report on Algeria's financial inclusion in 2015.

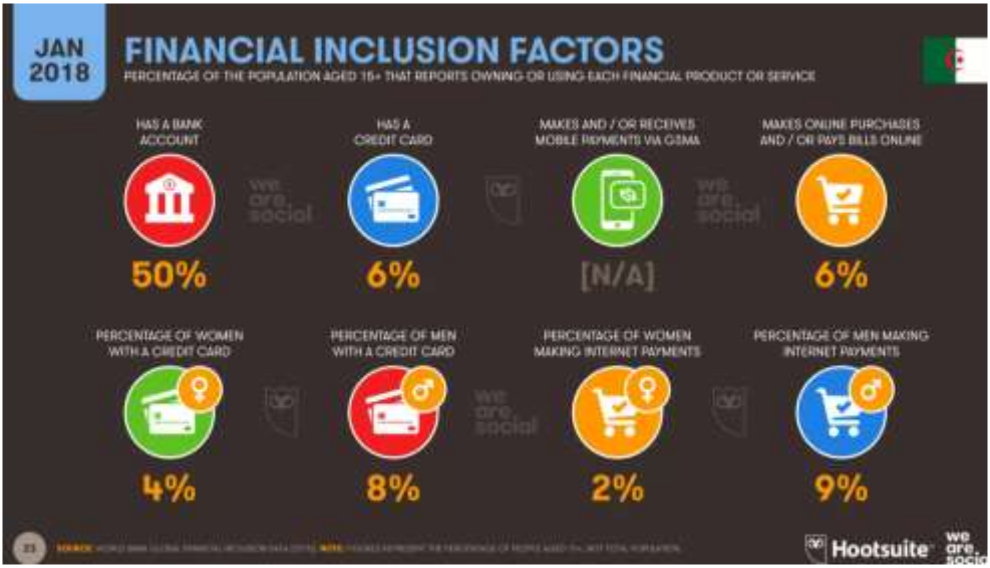
Algeria

			Upper middle income
Population, age 15+ (millions)	28.3	GNI per capita ($)	5,330

	Country data	Upper middle income
Account (% age 15+)		
All adults	50.5	70.5
Women	40.1	67.3
Adults belonging to the poorest 40%	36.7	62.7
Young adults (% ages 15–24)	38.5	58.1
Adults living in rural areas	42.3	68.8
Financial Institution Account (% age 15+)		
All adults	50.5	70.4
All adults, 2011	33.3	57.4
Mobile Account (% age 15+)		
All adults	..	0.7
Access to Financial Institution Account (% age 15+)		
Has debit card	21.6	45.9
Has debit card, 2011	13.5	38.5
ATM is the main mode of withdrawal (% with an account)	10.3	55.7
ATM is the main mode of withdrawal (% with an account), 2011	14.2	42.8
Use of Account in the Past Year (% age 15+)		
Used an account to receive wages	15.6	18.1
Used an account to receive government transfers	7.7	9.6
Used a financial institution account to pay utility bills	0.2	12.3
Other Digital Payments in the Past Year (% age 15+)		
Used a debit card to make payments	7.3	19.9
Used a credit card to make payments	4.7	14.4
Used the Internet to pay bills or make purchases	5.7	15.3
Domestic Remittances in the Past Year (% age 15+)		
Sent remittances	7.9	15.4
Sent remittances via a financial institution (% senders)	..	37.2
Sent remittances via a mobile phone (% senders)	..	8.8
Sent remittances via a money transfer operator (% senders)	..	19.7
Received remittances	12.6	17.8
Received remittances via a financial institution (% recipients)	12.4	29.8
Received remittances via a mobile phone (% recipients)	2.0	5.6
Received remittances via a money transfer operator (% recipients)	5.9	17.9
Savings in the Past Year (% age 15+)		
Saved at a financial institution	13.8	32.2
Saved at a financial institution, 2011	4.3	25.1
Saved using a savings club or person outside the family	3.4	4.9
Saved any money	45.3	62.7
Saved for old age	11.3	30.6
Saved for a farm or business	11.1	17.6
Saved for education or school fees	10.5	25.4
Credit in the Past Year (% age 15+)		
Borrowed from a financial institution	2.2	10.4
Borrowed from a financial institution, 2011	1.5	7.9
Borrowed from family or friends	13.2	24.0
Borrowed from a private informal lender	1.5	2.6
Borrowed any money	23.1	37.7
Borrowed for a farm or business	4.0	6.6
Borrowed for education or school fees	4.0	6.1
Outstanding mortgage at a financial institution	3.9	9.1

Source: THE LITTLE DATA BOOK ON FINANCIAL INCLUSION, 2015. (THE LITTLE DATA BOOK ON FINANCIAL INCLUSION, 2015)

Figure 4 presents a report on Algeria's financial inclusion in 2018. It presents the percentage of the population aged 15 and over that reports owning or using various financial products and services.



Source: World bank Global FINANCIAL INCLUSION DATA 2018

04-02 The Impact of the Number of Banking Institutions on Financial Inclusion:

A higher number of banks and physical agencies (branches) in underserved or rural areas can improve access to financial services for unbanked or underbanked populations. This is particularly important in regions where digital infrastructure is limited.

04-02-01 the Number of Banking Institutions in Malaysia: Currently, Malaysia has five licensed digital banks. GXBank was the first digital bank to launch, backed by Grab Holdings Inc. and Kuok Group. AEON Bank made history as Malaysia’s first Islamic digital bank, owned by AEON Financial Service Co. Ltd.Boost Bank emerged as a fintech-powered banking solution under Axiata Group and RHB Banking Group. KAF Digital Bank positioned itself as the second Shariah-compliant digital bank in Malaysia, while Ryt Bank, introduced by the YTL-Sea consortium, leverages AI for a more personalized banking experience. (Abdullah, 2025)

Figure 05: is a table showing the distribution of commercial banks and their branches across different states and federal territories in Malaysia as of December 31, 2024.The figure also provides the total number of branches for each bank and each state/territory, with a grand total of 1769 branches in

PERSATUAN BANK BANK DALAM MALAYSIA
THE ASSOCIATION OF BANKS IN MALAYSIA

COMMERCIAL BANKS AND BRANCHES (*) DISTRIBUTION BY STATE AS AT 31 DECEMBER 2024

BANK	PERLIS	KEDAH	PENANG	KELANTAN	TERENGGANU	PAHANG	PERAK	SELANGOR	WP KUALA LUMPUR	WP PUTRAJAYA	WP LABUAN	NEGERI SEMBILAN	MELAKA	JOHOR	SABAH	SARAWAK	TOTAL
Affin Bank Berhad	1	5	12	2	3	6	7	33	20	2		7	2	17	6	7	130
Alliance Bank Malaysia Berhad		3	4		1	1	2	18	14	1	1	1	1	12	15	6	80
AmBank (M) Berhad	1	6	14	2	2	7	18	34	22	1	1	7	6	20	9	15	165
Bangkok Bank Berhad			1					1	1					2			5
Bank of America Malaysia Berhad									1								1
Bank of China (Malaysia) Berhad			1					2	1				1	2		1	8
BNP Paribas Malaysia Berhad									1								1
China Construction Bank (Malaysia) Berhad			1						1								2
CIMB Bank Berhad	1	9	21	6	5	10	13	48	35	1	1	8	7	28	12	12	217
Citibank Berhad									1								1
Deutsche Bank (Malaysia) Berhad									1								1
Hong Leong Bank Berhad	1	9	16	1	3	8	16	55	29		1	7	7	29	8	22	212
HSBC Bank Malaysia Berhad		1	3	1		2	2	6	6			1	1	3	3	3	32
India International Bank (Malaysia) Berhad									1								1
Industrial and Commercial Bank of China (Malaysia) Berhad									1		1			1		1	4
J.P. Morgan Chase Bank Berhad									1								1
Malayan Banking Berhad	2	13	26	6	7	16	34	77	52	1	1	13	10	45	21	20	344
Mizuho Bank (Malaysia) Berhad									1								1
MUFG Bank (Malaysia) Berhad									1								1
OCBC Bank (Malaysia) Berhad		1	3	1		1	3	5	5			1	1	7	1	2	31
Public Bank Berhad	1	10	21	4	3	13	27	56	40		1	9	7	31	16	21	260
RHB Bank Berhad	1	8	12	3	4	6	19	41	29	1	1	6	4	29	9	20	193
Standard Chartered Bank Malaysia Berhad			2			1	1	6	4			1		3	1	3	22
Sumitomo Mitsui Banking Corporation Malaysia Berhad									1								1
United Overseas Bank (Malaysia) Bhd		2	6	1	1	3	1	16	7			1	3	7	3	4	55
TOTAL BY STATE	8	67	143	27	29	74	143	398	276	7	8	62	50	236	104	137	1769

* *Does not include standalone Islamic bank branches.*

Malaysia.

Source: The Association of Banks in Malaysia

Figure 06: Product Breakdown of Digital Banks in Malaysia

DIGITAL BANKS

DIGITAL BANK OFFERINGS IN MALAYSIA

		GXBank	Boost Bank	[illegible]	AEON Bank	KAF
	LICENSE TYPE	CONVENTIONAL	CONVENTIONAL	CONVENTIONAL	ISLAMIC	ISLAMIC
RETAIL	Savings Account	✓	✓	PENDING LAUNCH	✓	PENDING LAUNCH
	Debit Card	✓	✓		✓	
	Credit Card	✗	✗		✗	
	Lending	✓	✗		✗	
	Insurance	✓	✗		✗	
	Investment	✗	✗		✗	
BUSINESS	Business Account	✓	✗		✗	
	Lending	✓	✓		✗	
	Trade Finance	✗	✗		✗	

Source: Malaysia fintech report 2024

04-02-02 the Number of Banking Institutions in Algeria:

figure 07 (bank, 2023) is a table showing the distribution of banks across different states in Algeria with a total of 28 bank in December 31, 2023.

Table V.1: Banks and Financial Institutions in Operation

	2019	2020	2021	2022	2023
A) Banks	20	20	19	20	20
Public Banks	6	6	6	7	7
Private Banks	14	14	13	13	13
Islamic Banks	2	2	2	2	2
B) Financial Institutions	8	8	8	8	8
Public Financial Institutions	6	6	6	6	6
Private Financial Institutions	2	2	2	2	2
C) TOTAL	28	28	27	28	28

Source: Bank of Algeria.

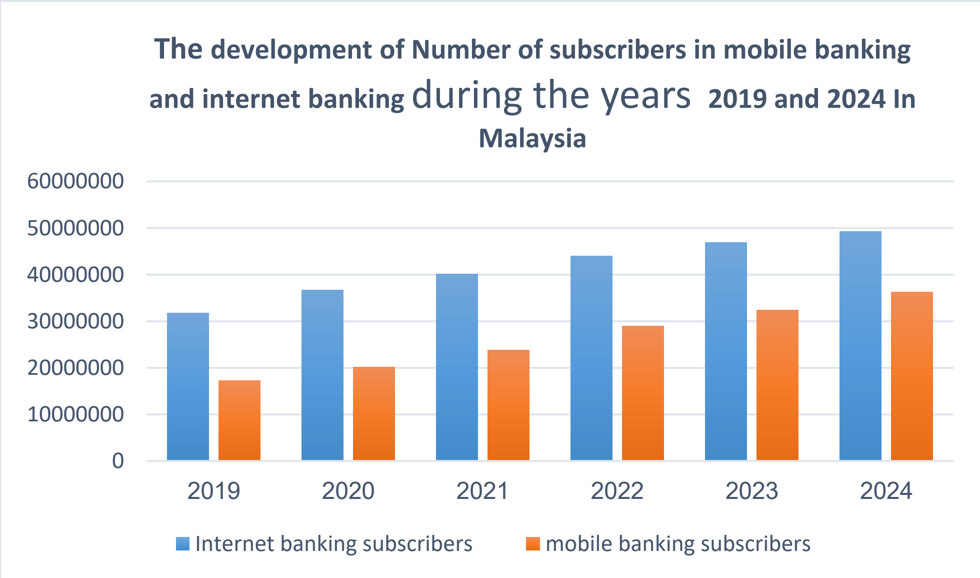
Source: *annual* report of bank of Algeria 2023

05- A Comparative Analysis of Digital Banking Realities: Malaysia and Algeria:

05-01 The reality Of Digital Banking In Malaysia:

05-01-01 Internet Banking and Mobile Banking Subscribers:

Figure 08 presents the development of Number of subscribers in mobile banking and internet banking during the years 2019 and 2024 In Malaysia



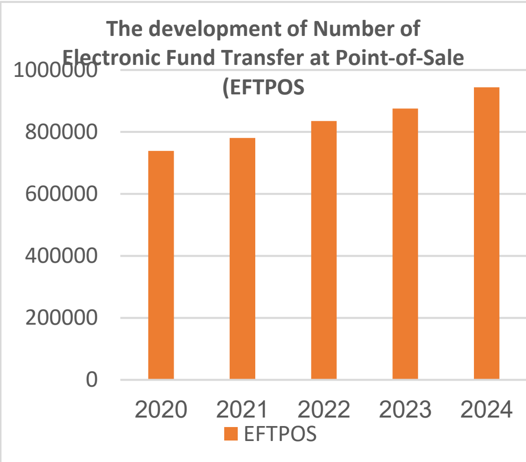
Source: – The development of Number of subscribers in mobile banking and internet banking between 2019 and 2024 In Malaysia Prepared by the researchers using statistics from Bank Negara Malaysia and Department of Statistics, Malaysia.

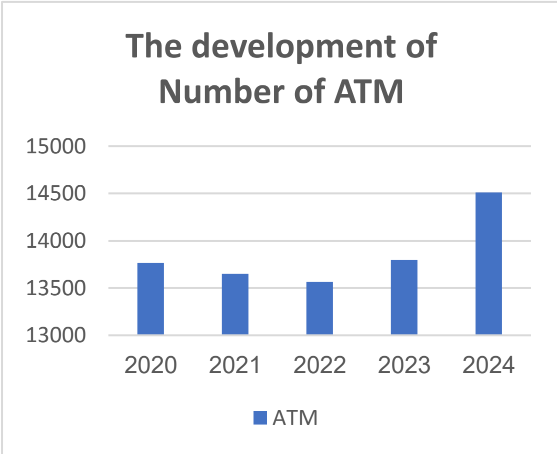
Analysis and interpretation:

Through Figure 08 and we observe a development in **Number of subscribers in mobile banking and internet banking In Malaysia** during the years 2019 to 2024. The beginning of the development was in 2020 and this is due to the Covid-19 pandemic, where electronic transactions were greatly enhanced during this period.

05-01-02 Number of Electronic Fund Transfer at Point-of-Sale (EFTPOS) Terminals and Automated Teller Machines (ATM):

Figure 09 and 10 presents the development of Number of Electronic Fund Transfer at Point-of-Sale (EFTPOS) Terminals and Automated Teller Machines (ATM) **during the years** 2020 and 2024 In Malaysia:





Source: Prepared by the researchers using statistics from Bank Negara Malaysia and Department of Statistics, Malaysia.

Analysis and interpretation:

Through Figure 09 and figure 10, Growth in Electronic Point-of-Sale (EFTPOS) Terminals: There has been a steady and significant increase in the total number of Electronic Point-of-Sale (EFTPOS) terminals from 2020 to 2024. This indicates a growing preference for electronic payments at points of sale.

Stability in ATM Numbers: The number of ATMs remained relatively stable over the same period, with slight fluctuations and no discernible overall trend.

Population **Penetration**: The number of Electronic Point-of-Sale (EFTPOS) terminals per 1,000 population increased, indicating the wider availability and adoption of electronic payment methods. The number of

ATMs per 1,000 population remained constant, indicating saturation or a balance between ATM usage and population growth.

05-02 The reality Of Digital Banking In Algeria:

05-02.01 The development of online payment activities in Algeria:

Since October 2016, online payment by CIB card has been officially operational in Algeria. In the first phase, the service was opened to major billers: water, energy (gas and electricity), landline and mobile telephone companies, insurance and air transport companies, and some government agencies.

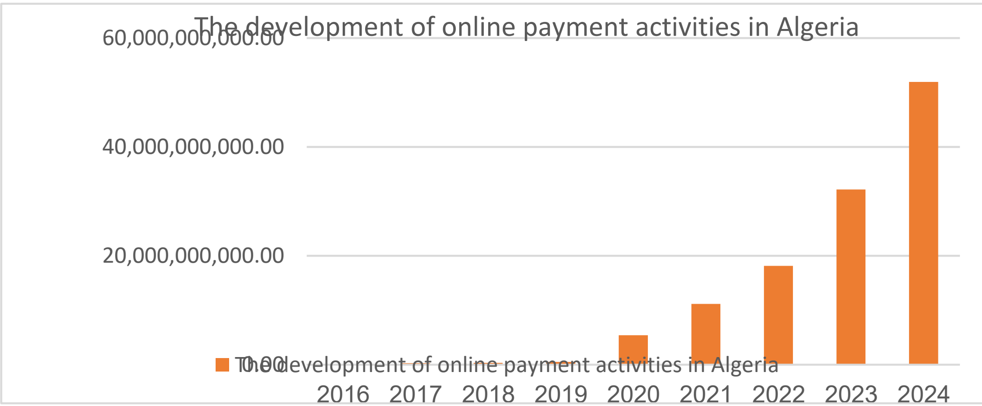
Today, 582 online merchants are members of the interbank card online payment system.

To date, the total number of transactions since the launch of online payment is 58,811,183.

Below is the breakdown of online payment transactions by sector of activity:

Following Algérie Poste's membership in the Monétique Economic Interest Group (GIE) and the implementation of CIB/EDAHABIA interoperability, which went live on January 5, 2020, the published statistics will now include electronic payment activity carried out using the CIB card and the EDAHABIA card. (https://giemonetique.dz, 2025)

Figure 11 presents the development of online payment activities in Algeria



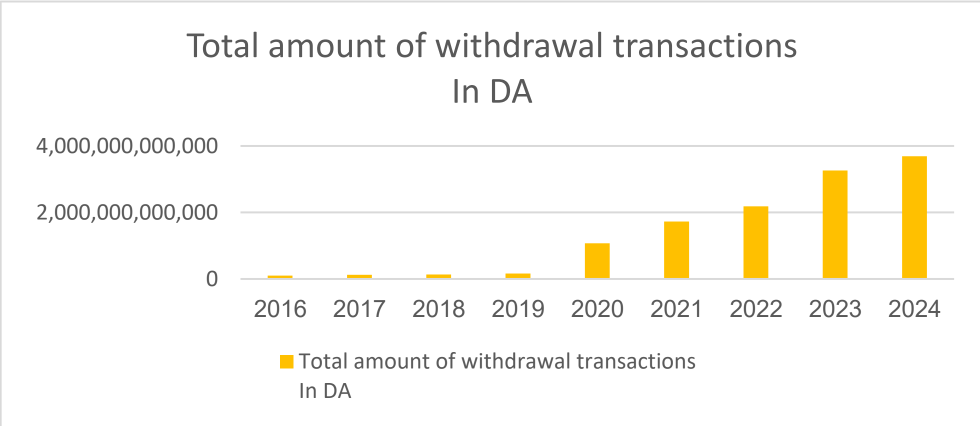
Source Prepared by the researchers using statistics from GIE monétique Statistics, Algeria

Analysis and interpretation:

Through **Figure 12 (**the graph), we observe a development in electronic payment in Algeria during the years 2016 to 2023. The beginning of the development was in 2020 from **503 870 361,61 DA to 5 423 727 074,80 DA**, and this is due to the Covid-19 pandemic, where electronic transactions were greatly enhanced during this period.

05-02-02 The development of ATM WITHDRAWAL ACTIVITY in Algeria:

Figure 13 presents the development of ATM WITHDRAWAL ACTIVITY in Algeria:



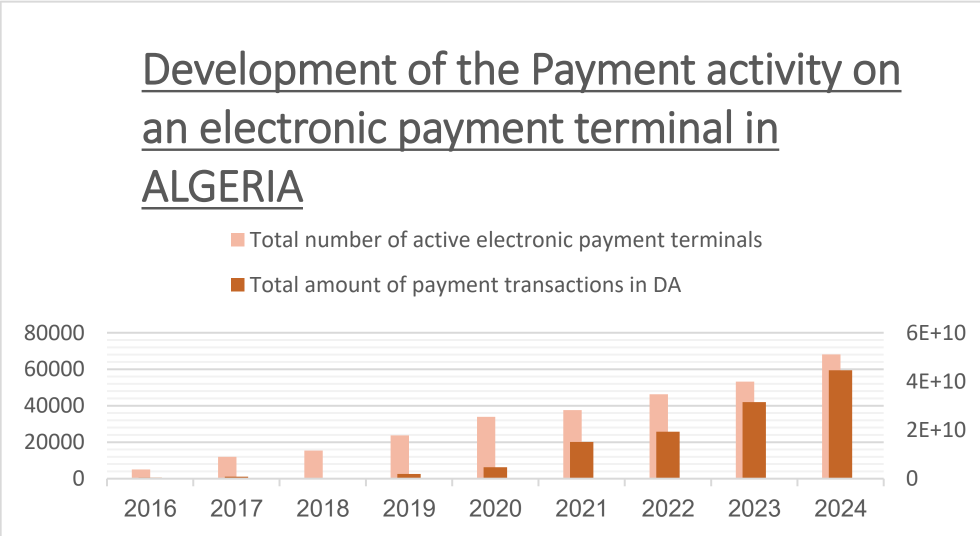
Source Prepared by the researchers using statistics from GIE monétique Statistics, Algeria.

statistics.

Analysis and interpretation Evolution of withdrawal transactions on ATMs: We observe a significant increase in the volume of withdrawal transactions on ATMs during the same period, from 98822524500 DA in 2016 to 3 691 600 492 000.00 DA in 2024.This increase can be attributed to the growing awareness among individuals of the benefits of using ATMs, such as avoiding queues inside on banks and saving time.

05-02-03 Development of the Payment activity on an electronic payment terminal:

Figure 13 presents The Development of the Payment activity on an electronic payment terminal in ALGERIA (**Point of Sale terminals)** and the total amount of payment transactions in DA



Source Prepared by the researchers using statistics from GIE monétique Statistics, Algeria.

<u>**Analysis and Interpretation:**</u> **Growth in the Number of Electronic Payment Terminals** The total number of electronic payment terminals in **Algeria** increased significantly from 5049 in 2016 to 68140 in 2024. This represents a high growth rate of. **Growth in the Total Value of Payment Transactions** The total value of payment transactions processed through electronic payment terminals also increased significantly from 444 508 902 DA in 2016 to 44 563 958 073.88 DA in 2024. represents a high growth rate

The growth in the number of electronic payment terminals and the total value of payment transactions can be attributed to a number of factors, including:

- The increasing adoption of electronic payments by businesses and consumers. This is due to a number of factors, including the convenience, security, and efficiency of electronic payments.
- The government's efforts to promote electronic payments. The government has implemented a number of initiatives to promote the

use of electronic payments, such as providing subsidies for the purchase of electronic payment terminals and reducing the fees associated with electronic payments.

- The growing awareness of the benefits of electronic payments. Consumers are becoming increasingly aware of the benefits of electronic payments, such as the convenience of not having to carry cash and the security of not having to worry about losing or being stolen.

06The Difference Between Digital Banking in Enhancing Financial Inclusion In Malaysia and Algeria: This section will compare digital banking and financial inclusion indices in Malaysia and Algeria, using the previous statistics and information summarized in the table below.

Table N°2 The Difference Between Digital Banking in Enhancing Financial Inclusion in Malaysia and Algeria

Category	Malaysia	Algeria	Comparison
Financial Inclusion Overview	High levels of financial inclusion, with widespread access to banking services.	Lower levels of financial inclusion, with significant gaps in access, especially in rural areas.	Malaysia has a more mature financial inclusion landscape compared to Algeria, where access to financial services is still limited, particularly for rural and marginalized populations.
Digital Banking Adoption	High adoption of digital banking, with significant growth in mobile and internet banking usage.	Growing adoption of digital banking, but still in early stages compared to Malaysia.	Malaysia has a more advanced digital banking ecosystem, with higher penetration rates for mobile and internet banking. Algeria is catching up but still lags behind in terms of digital adoption.
Key Indicators of Financial Inclusion	- High percentage of adults with deposit accounts (over 85%). - High penetration	- Lower percentage of adults with deposit accounts (around 50%). - Limited use of digital payments	Malaysia outperforms Algeria in key financial inclusion indicators, such as account ownership and

	of e-payments and mobile banking.	and mobile banking.	digital payment usage, reflecting a more inclusive financial system.
Digital Banking Infrastructure	- Well-developed digital banking infrastructure. - High number of ATMs and EFTPOS terminals.	- Developing digital banking infrastructure. - Increasing number of ATMs and payment terminals.	Malaysia has a more robust digital banking infrastructure, with a higher density of ATMs and EFTPOS terminals per capita. Algeria is improving but still has a long way to go to match Malaysia's infrastructure.
Government Support	Strong government support for digital banking and fintech innovation.	Government initiatives to promote digital payments and e-commerce, but limited compared to Malaysia.	Malaysia benefits from stronger government policies and support for digital banking and fintech, while Algeria's efforts are still developing and less comprehensive.

Source: Prepared by the researchers using the previous statistics

Conclusion:

This study examines the adoption of digital banking in Algeria's and Malaysia, highlighting key efforts made to modernize banking and payment systems.

The research offers insights into the digital payment situation in Algeria and Malaysia its growth. While significant strides have been made in digital transformation, especially after the COVID-19 pandemic, which emphasized the need for digital services, usage remains low. The pandemic highlighted the importance of digital channels, allowing vital services to function during lockdowns.

Despite progress in digital investments and development of financial services, with most banks offering online banking and mobile apps, Algeria large population and low bank account penetration (financial inclusion) pose challenges. Additionally, cultural preferences for cash transactions still prevail.

Algeria stands at a crossroads. By embracing digitalization and overcoming these challenges, the nation's banking sector can unlock a new era of financial inclusion, efficiency, and growth. This necessitates collaboration from banks, regulators, and the government to invest in infrastructure, financial literacy programs, and robust cybersecurity. Prioritizing these aspects can bridge the digital divide and empower Algerians to participate in the future of finance.

Results:

01- Digital technology serves as a crucial enabler for financial inclusion, facilitating convenient access to essential banking and financial services for underserved populations.
02- Fintech encompasses a diverse range of companies leveraging innovative and disruptive operational, technological, or economic approaches to address both current and emerging challenges within the financial services sector.
03- Algeria is experiencing a notable increase in internet penetration rates, indicating a growing digital presence and connectivity within the country.
04- The adoption of bank cards and electronic payment methods is on the rise, presenting an opportunity to diminish reliance on cash transactions within the national economy. To fully realize this transition, it is essential to streamline integration into payment platforms, promote the utilization of POS terminals among merchants, and introduce fiscal and regulatory incentives to support these advancements.

Recommendations:

- Invest in digital infrastructure.
- encourage using mobile banking.
- Simplify account opening processes.
- Prioritize cybersecurity.
- Leverage data analytics.
- Promote digital literacy and awareness.
- Promote digital competition policy and regulation internationally.

Bibliography

Promoting Women's Financial Inclusion: A Toolkit for Practitioners. (2016). *United Nations*.

Abdullah, I. N. (2025). *The Full List of Digital Banks in Malaysia and Their Top Benefits.* Malaysia fintech report .

Asli Demirguc-Kunt, L. K. (2014). *The Global Findex Database : Measuring Financial Inclusion around the World. World Bank.*

Ayyagari, M. B.-K. (2007). Small and Medium Enterprises Across the Globe. . *Small Business Economics.*

(n.d.). *bank negara Malaysia central bank of Malaysia.*

bank, A. c. (2023). *annual report of bank of algeria .*

Beck, T. D.-K. (2007). Finance, Inequality, and the Poor. *Journal of Economic Growth.*

Enhancing Financial Inclusion Through Islamic Finance, Volume II. (2020). Abdelrahman Elzahi Saaid Ali, Khalifa Mohamed Ali, Mohamed Hassan Azrag.

(2020). *Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.* World Bank. The Global Findex Database.

https://giemonetique.dz. (2025). Retrieved from https://giemonetique.dz: https://giemonetique.dz/qui-sommes-nous/activite-paiement-sur-internet/

Kim, J. Y. (2014). *Digital Financial Inclusion.* World Bank group.

(2024). *Malaysia fintech report .*

Price, D. (October 04, 2024). *How fintech impacts financial inclusion.* University of Phoenix's editorial advisory committee.

Sarma, M. &. (2011). Financial Inclusion and Development. . *Journal of International Development*.

(2020). *State of the Industry Report on Mobile Money.*

Sultana, T. (December 2023). *Digital Banking Activities in Prime Bank Limited and Its Impact on the Performance of the Bank.* algeria bba: Mohammad Nakib.

(2015). *THE LITTLE DATA BOOK ON FINANCIAL INCLUSION.*

(2017/2018). *World Bank. Global Financial Development Report Bankers without Borders.*