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Islamic Financial Technology in Malaysia and prospects for its development in Algeria: An analytical study

التكنولوجيا المالية الإسلامية في ماليزيا وآفاق تطويرها في الجزائر: دراسة تحليلية

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Abstract :

This study aims to shed light on the current state of Islamic financial technology (Islamic FinTech), with particular emphasis on the Malaysian experience.. The study finds that Malaysia ranked second in the Global Islamic FinTech (GIFT) Index, which covers 64 countries. The index is a composite indicator based on 32 indicators covering five main dimensions: the Islamic FinTech market, ecosystem, talent, regulation and infrastructure, and capital. Essentially, the GIFT Index measures a country's potential to serve as a global Islamic FinTech hub. The study also found that benefiting from the Malaysian experience requires adapting it to the Algerian legal and economic environment.

Keywords: Islamic financial technology; Malaysian experience, Algeria.

JEL classification*:*G21, O33

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1-Introduction:

Since the beginning of the 2000s, technological advances and the widespread adoption of smartphones, the Internet, and blockchain technologies have created new opportunities for providing financial services that are consistent with Islamic principles. These services include Islamic digital banking, crowdfunding platforms, and halal investment solutions. Such developments allow both Muslims and non-Muslims to benefit from innovative and advanced financial solutions that respect religious and ethical values.

Islamic FinTech represents the intersection of technological innovation and Islamic finance. It is a rapidly growing field driven by increasing interest in providing Sharia-compliant financial solutions in the digital era.

Malaysia is among the countries that have taken an early lead in creating an enabling environment for FinTech. Various stakeholders within the industry work toward common objectives, and Islamic FinTech provides a new model in which information technology drives innovation within Malaysia's Islamic financial industry. Algeria can draw on Malaysia's experience while adapting its practices to the specific characteristics of the Algerian context.

-Research Problem:

Based on the foregoing, the research problem can be formulated as follows:

To What extent can Algeria benefit from Malaysia'sexperience in the field of Islamic FinTech?

This main question gives rise to the following sub-questions:

- What does Islamic FinTech mean?
- To what extent has Islamic FinTech spread across countries around the world?
- How has Malaysia approached the adoption of Islamic FinTech?
- What is the current state of Islamic FinTech in Algeria, and what lessons can Algeria learn from the Malaysian experience?

To answer the main research question and the sub-questions, the following main hypothesis is proposed:

Malaysia aims to develop an enabling environment for Islamic FinTech, while Algeria can draw on the Malaysian experience.

-Significance of the Study

The significance of this study lies primarily in defining the concept of Islamic FinTech and highlighting the main aspects of the Malaysian experience in this field. FinTech has become a major contemporary issue in finance and banking and can contribute significantly to the development of the Islamic financial industry. The Importance of this topic is particularly significant for Algeria, given the developments that Islamic banking has undergone in recent years.

-Objectives of the Study:

The study seeks to achieve the following objectives:

- To identify and explain the concept of Islamic FinTech.
- To examine the Malaysian experience as a model for the development and implementation of Islamic FinTech.
- Identifying the key lessons that Algeria can learn from the Malaysian experience.

-Research Methodology

The study adopts the descriptive and analytical approaches to clarify the theoretical concepts that contribute to analyzing the research problem.

2. Islamic FinTech:

The global Islamic financial services industry and the global FinTech industry are both experiencing continuous growth and development. The integration of these two industries has resulted in what is commonly referred to as Islamic FinTech.

Islamic FinTech encompasses a wide range of companies that use financial technologies to provide financial transactions and services based on Islamic principles, within existing regulatory frameworks and the fundamental philosophy of Islamic finance.

2.1. Definition of Islamic FinTech:

Islamic FinTech can be defined as the integration of financial technology into the Islamic financial industry in order to provide Islamic financial services through technological means and modern applications, including artificial intelligence**. (Dahinin& Mustafa Al-Arabi, 2022, p. 610).**

It is also defined as all FinTech applications and products that comply with Islamic Sharia and are adopted by Islamic financial and banking institutions.**(Talam, 2020, p. 247).**

Accordingly, Islamic FinTech may be defined as:

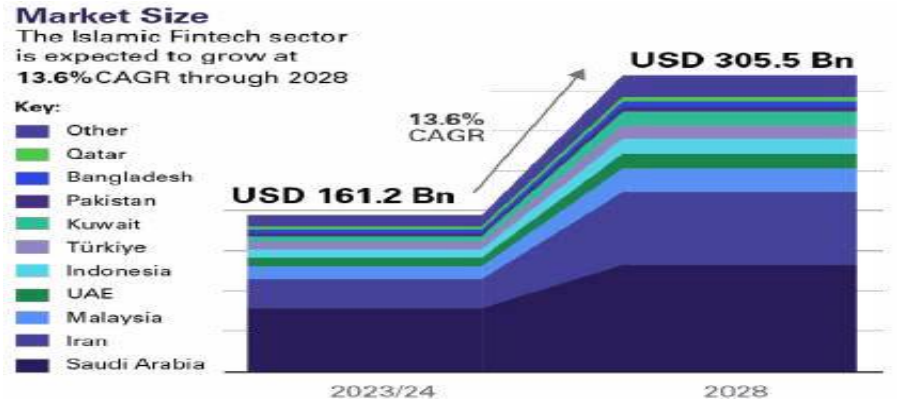
Financial engineering that uses technology to develop, innovate, and formulate financial services, products, and processes, provided that they comply with the principles of Islamic Sharia and the jurisprudence of Islamic financial transactions. These services and processes may be implemented through electronic applications, smart contracts, electronic cards, and other technological solutions that facilitate financial transactions.

2.2. The Global Islamic FinTech Market:

The global Islamic FinTech market was estimated at approximately **USD 161 billion in transaction value in 2023** and is projected to reach approximately **USD 306 billion by 2028**, representing a compound annual growth rate of approximately **13.6%**.

The countries with the largest estimated transaction volumes include Saudi Arabia, Iran, Malaysia, the United Arab Emirates, Indonesia, and Kuwait, according to the **Global Islamic FinTech Report 2024/2025 (GIFT)**.

Figure 1. Global Islamic FinTech Market Size in 2023



Source: Global Islamic FinTech Report 2024/2025, p. 6.

2.3. Islamic FinTech Companies:

The application of FinTech to Islamic finance has led to the emergence of specialized companies and institutions operating in this field.

According to the **Global Islamic FinTech Report 2022**, there were more than 375 FinTech companies connected to the Islamic finance sector worldwide. The Islamic FinTech market within the Organization of Islamic Cooperation (OIC) countries was projected to reach approximately USD 179 billion by the end of 2026.

The value of Islamic FinTech in OIC countries was approximately USD 79 billion in 2021, representing around 0.8% of the global FinTech industry **(FinTech, 2022).**

Indonesia ranked first in terms of the number of Islamic FinTech companies, with 61 companies, followed by the United Kingdom with 45 companies. The United Arab Emirates ranked third with 42 companies, followed by Saudi Arabia and Malaysia with 38 and 37 companies, respectively.

The principal activities of Islamic FinTech companies included:

- Fundraising: 18%;

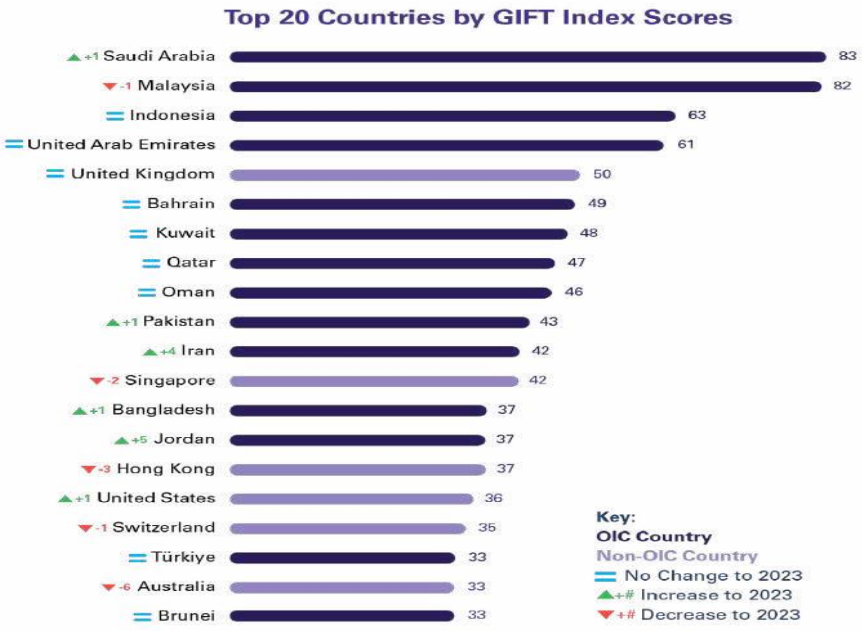
- Deposits and lending: 17%;
- Payments: 15%;
- Alternative finance: 13%;
- Wealth management: 13%;
- Digital assets: 8%;

Insurance, social finance, operations, and capital markets: between 1% and 5%.**(FinTech, 2022, p. 29)**

2.4. The Global Islamic FinTech (GIFT) Index:

The **Global Islamic FinTech (GIFT) Index** identifies countries that provide favorable conditions for the development of Islamic FinTech markets and ecosystems. The index covers 64 countries, primarily members of the Organization of Islamic Cooperation.

Figure 2. Top 20 Countries According to the GIFT Index, 2023:



Source: Global Islamic FinTech Report 2024/2025, p. 11.

Saudi Arabia ranked first in the GIFT Index for the first time, followed by Malaysia, Indonesia, the United Arab Emirates, and the United Kingdom among the top five countries. Pakistan entered the top ten for the first time.

2.5. Digital Assets:

Digital assets have increasingly attracted attention within Islamic financial markets. Saudi Arabia has explored digital assets and digital currency-related initiatives. The United Arab Emirates has also developed initiatives through the Abu Dhabi Global Market.

In Pakistan, the Securities and Exchange Commission of Pakistan (SECP) has considered incorporating Sharia principles into certain FinTech innovations, including smart contracts and blockchain technology.

According to the Islamic Finance Development Report, Saudi Arabia, Indonesia, the United Kingdom, Malaysia, and Kazakhstan together accounted for approximately 70% of global Islamic FinTech activity **(ICD-IFDI, 2022).**

2.6. Islamic FinTech Platforms:

Technology has increasingly been incorporated into Islamic financing operations, particularly through dedicated digital platforms.

A. Crowdfunding Platforms:

Crowdfunding refers to the process of raising funds from the public through Internet-based platforms. These platforms enable individuals and organizations to participate in financing projects or companies through websites and mobile applications, thereby connecting investors and borrowers (Talam, 2022, p. 262).

a-Types of Crowdfunding Platforms:
Crowdfunding platforms can generally be divided into the following categories **(Talam, 2022, p. 263):**
-Donation-based crowdfunding:

Funds are collected to support charitable and humanitarian projects, such as education programs, disaster relief, and famine assistance.

- Reward-based crowdfunding:

Projects and innovative ideas are financed in exchange for a reward, which may take the form of a gift or early access to a product or service.

- Peer-to-peer lending:

These platforms facilitate lending between individuals or businesses, either with or without interest, depending on the structure of the platform.

- Equity crowdfunding:

Projects are financed through the subscription or purchase of shares or ownership interests in the relevant enterprise.

3- The Malaysian Experience:

The COVID-19 health crisis increased Malaysia's interest in Islamic FinTech. This development was reflected, among other things, in the emergence of digital trading and financial platforms designed to comply with Islamic Sharia principles.

3-1. The Current State of Islamic FinTech in Malaysia

Like other countries, Malaysia has devoted significant attention to developing its financial capabilities in the field of Islamic FinTech. These developments have received considerable acceptance from different segments of society because of the time and effort savings associated with digital financial services.

3-2. Crowdfunding and Digital Financing Platforms in Malaysia:(Zarif, 2023/2024, p. 332).

Several digital payment and financing platforms operating according to Islamic principles have emerged in Malaysia

-PayHalal:

PayHalal is an Islamic payment gateway designed to facilitate e-commerce transactions. It processes payments through credit and debit cards for online merchants and consumers.

-Islamic Interbank Investment Account Platform (IAP):

Established in 2014, the Investment Account Platform provides an Islamic investment account product offered by Islamic financial institutions. Investors can place funds into investment accounts according to their risk tolerance. The platform was supported by five Malaysian Islamic banks and financed 14 projects with a total value of approximately MYR 211.45 million, involving more than 350 investors.

-Blossom Finance:

Established in 2014, Blossom Finance provides Sharia-compliant financial products using technology. The platform seeks to mobilize funds from international investors to finance small businesses and projects aimed at reducing poverty. It has also developed smart sukuk structures using blockchain technology, whereby payments can be distributed automatically to sukuk token holders through smart contracts.

-Ethis:

Ethis began operating in Malaysia in July 2020 and aims to facilitate crowdfunding and Islamic investment. The platform received approval from the Securities Commission Malaysia and is headquartered in Kuala Lumpur. It provides digital platforms based on Islamic principles and supports economic, commercial, social, and waqf-related projects, including charitable initiatives such as zakat and waqf.

-microLEAP:

Established in 2018, microLEAP is a Malaysian peer-to-peer (P2P) financing platform focusing on microfinance. It received approval from the Securities Commission Malaysia to conduct its activities in October 2019. The platform enables borrowers to obtain financing without traditional financial intermediaries through a P2P model.

Approximately 37 projects had been financed through microLEAP by November 2020, including 31 Islamic projects and six conventional projects. The Islamic financing structures were based on commodity Murabaha, while late-payment penalties were directed toward charitable activities.

-Islamic Markets:

Islamic Markets was established in London in 2014 and opened an office in Kuala Lumpur in January 2020. The platform provides tools and information that assist professionals and institutions in

understanding markets, identifying investment opportunities, and developing business activities.

3-3. Artificial Intelligence Applications in Malaysian Islamic Finance

Artificial intelligence is a field of science and technology that integrates computational techniques with disciplines such as computer science, psychology, linguistics, and mathematics in order to develop systems capable of performing tasks associated with human cognitive abilities.

MBSB Bank has implemented SKIL-RSA modules for certain securitization-related products and subsequently introduced banking and customer modules through the MBSB website. The **Banker** module is used by Sharia personnel and internal employees seeking to gain a better understanding of the products offered.

The SKIL-RSA platform also provides an integrated online environment for studying selected Islamic finance topics. However, the relatively high cost of implementation remains a challenge despite the promising characteristics of such applications.

3-4 Cryptocurrencies:

In 2019, Malaysia and Qatar cooperated on the development of an Islamic digital platform for exchanging gold-backed digital currencies. The initiative was designed to comply with Islamic Sharia principles and was associated with the name **I-Dinar**.

3-5. Blockchain-Based Islamic Capital Markets:

Malaysia has initiated projects to explore the use of distributed ledger technology (DLT), particularly blockchain, in unlisted and over-the-counter (OTC) markets. These initiatives have been supported through the Securities Commission's innovation laboratory, **aFINity**, which provides a platform for testing new digital innovations within the Islamic financial industry.

OTC markets operate outside traditional centralized exchange structures and can therefore benefit from distributed technological infrastructure.

3-6. Blossom Smart Sukuk:

Blossom's smart sukuk operates using the Ethereum blockchain, which supports smart contracts. The smart contract encodes the relevant business rules directly into the underlying payment process. Through blockchain technology, the contract can establish rules governing payments and the transfer of ownership.**(Linda &NoureddineCharaf, 2022, p. 102).**

The Islamic FinTech ecosystem in Malaysia remains relatively young and, according to INCEIF, still has significant potential for rapid growth. The Malaysia Digital Economy Corporation (MDEC) has indicated that Malaysia is strategically positioned to serve as a gateway for Islamic FinTech to the broader ASEAN market due to its supportive business environment, relatively cost-effective operating conditions, and reasonable living costs.

Although current indicators are encouraging and Malaysia has developed a significant position in Islamic FinTech, further efforts are still required to fully realize its potential in this sector.

4-The Current State of Islamic FinTech in Algeria:

4-1. Islamic Banking and FinTech Development in Algeria:

In recent years, Algeria has begun developing the legal and institutional framework for Islamic banking. Regulation No. 20-02 of 2020 represented an important milestone in this process, as it established a framework for regulating Islamic banking operations offered by banks and financial institutions, as well as Islamic banking windows within conventional banks.

This regulatory framework represents an important step toward integrating Islamic finance into the Algerian banking system. However, the existence of a legal framework for Islamic banking does not necessarily mean that a complete Islamic FinTech ecosystem has been established. Such an ecosystem requires the development of digital Islamic financial products, appropriate

technological infrastructure, and a regulatory environment that enables FinTech companies to cooperate effectively with Islamic financial institutions.

Recent studies concerning Algeria indicate that FinTech has begun to contribute to the development of Islamic banking services, particularly through mobile banking, electronic payments, and digital wallets. However, current applications remain concentrated primarily on basic banking services, while the digitization of more sophisticated Islamic financial products remains relatively limited.

Integrating FinTech with Islamic finance could contribute to greater financial inclusion by expanding access to financial services and improving their quality and usability. Nevertheless, Algeria faces challenges related to regulation, technological infrastructure, cybersecurity, and financial literacy. (Boudjelal, 2026, pp. 388-412)

4-2-.Comparison of Islamic FinTech in Malaysia and Algeria

Table 1: Comparison of Islamic FinTech in Malaysia and Algeria

Area of Comparison	Malaysia	Algeria
Regulatory Framework	More developed and specialized in financial innovation	At a stage of development and modernization
Islamic banking	Developed and diversified ecosystem	At an expansion stage
Sharia governance	Centralized Sharia advisory framework	Sharia supervision within the banking framework
FinTech	Developed market with diverse applications	Emerging market
Digital infrastructure	Relatively advanced	Under development
Islamic financial innovation	Broad and diversified	Still relatively limited
Innovation sandbox/testing environment	Regulatory mechanisms for testing innovation are available	Requires further development
Bank–FinTech partnerships	More developed	Still emerging

Source: Prepared by the researcher based on(Boudjelal, 2026, pp. 388-412)(Lakhal, 2026, pp. 109-121)

The comparison shows that the fundamental difference between the two experiences is related to the degree of maturity of the institutional, regulatory, and technological framework, rather than merely to the availability of technology. Malaysia has accumulated greater experience in developing the Islamic financial industry and linking it to financial innovation, whereas Algeria is still working to establish an integrated framework that combines Islamic banking, digitalization, and financial technology. (Lakhal, 2026, pp. 109-121)

4-3- Lessons learned from the Malaysian experience:

First: Developing a regulatory environment that supports Islamic financial innovation.
Second: Encouraging partnerships between Islamic banks and FinTech companies.
Third: Establishing a regulatory sandbox that allows digital financial products to be tested before their widespread adoption.
Fourth: Developing Shariah governance mechanisms that are consistent with digital financial products.
Fifth: Strengthening cooperation among universities, banks, and FinTech companies.
Sixth: Developing digital platforms, for Zakat, Waqf, and Islamic finance,

5- Conclusion

In conclusion, FinTech represents an important transformation in the delivery of financial services by combining Islamic principles with modern technological developments to meet the needs of both Muslim and non-Muslim communities. The sector has experienced rapid growth and offers significant future potential, particularly as awareness of Sharia-compliant finance increases and demand grows for innovation within an ethical framework.

Islamic FinTech has developed considerably in recent years. Based on the analysis presented in this study, **the following findings can be highlighted:**

- The number of crowdfunding platforms has increased, providing mechanisms for financing projects and start-ups in

accordance with Islamic principles, including profit-and-loss sharing rather than interest-based financing.

- Islamic FinTech has contributed to innovation within the Islamic financial industry through technologies such as blockchain and smart contracts, which can reduce costs and improve the efficiency of financial transactions.
- The global Islamic FinTech market is expanding considerably and is expected to continue growing in the coming years, driven by increasing demand for Sharia-compliant products from both Muslims and non-Muslims.
- Malaysia has achieved a prominent position in the GIFT Index, which evaluates Islamic FinTech ecosystems across 64 countries. The index is based on a range of indicators covering areas such as the Islamic FinTech market, ecosystem, talent, regulation, infrastructure, and capital.
- Malaysia's infrastructure and Sharia-compliant financial ecosystem provide favorable conditions for hosting and developing Islamic FinTech start-ups and initiatives. These conditions also support Malaysia's potential role as a regional hub providing both conventional and Islamic technological and financial services.
- There is opportunity to benefit from the Malaysian experience in developing the regulatory environment and strengthening Algerian institutions.
- The successful development of Islamic FinTech in Algeria requires the establishment of an integrated system that brings together technology, Islamic finance, and Shariah governance.

-Recommendations

Based on the findings of the study, the following recommendations are proposed:

- Arab countries should take the necessary steps to develop and attract the infrastructure required for the implementation of Islamic FinTech.
- Greater attention should be given to research and development in Islamic finance by drawing on the

experiences of countries that have made significant progress in this field.

- Cooperation with specialized FinTech start-ups should be strengthened in order to benefit from their expertise and technological capabilities.
- Administrative and legal procedures should be simplified to facilitate the establishment and development of Islamic banking institutions and the integration of FinTech into their operations.
- Regulatory frameworks should continue to evolve in order to support innovation while ensuring Sharia compliance, financial stability, consumer protection, and cybersecurity.

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