Reality and Prospects of Financial technology in Arab countries

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Abstract:

In recent years, a new field has emerged in the finance sector known as “fintech”, and it has become an imperative for countries of the world to keep pace with the development and progress in the fields of finance, and this study aims to identify the field of financial technology and its services, and the global investments it achieved after the global financial crisis, as It aims to identify the reality of financial technology in the Arab countries and the most important emerging projects in this field, and the motives for using this sector in the Arab countries.

It was concluded through this research paper that financial technology is a newly emerging sector that would provide all kinds of traditional financial services But in a different style and form, more developed, faster and more accurate, and it was concluded that the Arab countries know a kind of delay despite all the projects that the countries of the region seek to develop, and the Arab countries need to provide a suitable environment for this sector in order to benefit from all its advantages**.**

Keywords:financial technology, Arab countries, startups.

الملخص:

في السنوات الأخيرة ظهر مجال جديد في قطاع التمويل يعرف بالتكنولوجيا الماليةوأصبح ضرورة حتمية لدول العالم لمواكبة التطور والتقدم في مجالات التمويل،وتهدف هذه الدراسة إلى التعرف على مجال التكنولوجيا المالية وخدماتها، وما حققه من استثمارات عالمية بعد الأزمة المالية العالمية، كما تهدف إلى التعرف على واقع التكنولوجيا المالية في الدول العربية وأهم المشاريع الناشئة في هذا المجال،وقد تم التوصل من خلال هذه الورقة البحثية إلى أن التكنولوجيا المالية هي قطاع حديث النشأة من شأنه أن يوفر كل أنواع الخدمات المالية التقليدية ولكن بأسلوب وشكل مغاير أكثر تطور وسرعة ودقة،كما تم التوصل إلى أن الدول العربية تعرف نوع من التأخر بالرغم من كل المشاريع التي تسعي دول المنطقة إلى تطويرها،وتحتاج الدول العربية إلى توفير بيئة مناسبة لهذا القطاع من أجل أن تستفيد من كل مزاياه.

الكلماتالمفتاحية: التكنولوجيا المالية، الدول العربية، الشركات الناشئة.

1. Introduction:

Fintech is a revolution in the global economy, witnessed recently. It is a modern concept in the financial sector and has witnessed significant spread and development in various countries around the world. This is due to the activity of fintech companies, which in turn contribute to facilitating and accelerating financial and banking services. These companies work to provide a wide range of services, such as payment solutions, money transfers, and other financial services, by adopting a range of modern technologies. In this context, fintech companies have become a strong competitor to traditional financial intermediary institutions, due to their importance in facilitating and accelerating financial services, enhancing both inclusion and financial stability.

For their part, Arab countries are trying to keep pace with this rapid development of fintech, as it is a fast-growing sector that offers opportunities to achieve strong investment returns that support the path of economic development throughout the region. Fintech companies also provide new solutions that the financial sector can employ to improve the efficiency and effectiveness of its operations.

The problem:

How have Arab countries benefited from financial technology? What are the difficulties and challenges facing financial technology in the Arab world?

Hypothese :

The proper use of financial technology techniques can have a positive impact on the performanceof the Arab world.

Objectives of the study:

- Learn about financial technologyand its services.
- Identifying the global investments, it achieved after the global financial crisis.
- Explain the reality of financial technology in the Arab countries.
- Recognize the motives for using this sector in the Arab countries.

The importance of the study:

The importance of this research is that it raises an important topic which is the reality and prospects of Financial technology in Arab countries, due to the latter's ability to develop financial and banking transactions and services.

Study methodology:

In this study, we relied on the descriptive approach by collecting information and literature on financial technology from several Arabic references and articles in addition to reports, then

the analytical approach in order to evaluate the financial performance of Arab countrieswhen using financial technology.

2. The emergence of financial technology

The concept of financial technology emerged after the internet revolution and the emergence of smartphones, making it necessary to facilitate any business. Financial technology has become widely used in many areas, such as transactions between companies and their customers, businessmen, banks, and others. Recent years have witnessed a boom in the world of technology, evidenced by the presence of more than 100 companies operating in this field. The need to solve the financial problems of individuals and companies contributed to its emergence. Technology is used to improve financial activities and enhance the financial services of banks, enabling customers to conduct their transactions online from any device. The most important developments in financial technology can be summarized in the following stages:(http//www.e-ziqurat.com/innovation school/blog/evolution-of-fintech)

2.1.The period from 1886 to 1967:

This period coincided with financial globalization, as financial technology began with the emergence of the telegraph and railways, which allowed for the first time the rapid transfer of financial information across borders in the United States. In addition to the establishment of the first transatlantic cable and fedwires.

2.2. The period from 1967 to 2008:

During this period, financial technology remained dominant within the traditional financial services industry, representing the transition from analog to digital. The first handheld calculator was launched and the first ATM was installed by Barclays Bank in 1967. This period also featured the creation of the NASDAQ stock exchange, the world's first digital stock exchange, which is considered the beginning of how financial markets operate.

2.3. The stage from 2008 to the present day:

With the 2008 financial crisis, which quickly turned into an economic crisis, the public lost confidence in the traditional banking system, leading to a shift and paving the way for a new industry. This period was marked by the boom in cryptocurrencies and the widespread penetration of smartphones into the market, enabling internet access to millions of people around the world.

The most important factors that contributed to the development of financial technology are the following:(kmpc, 2017)

First: Technological Development

Fintech, which has no legacy constraints, is taking advantage of emerging opportunities amidst technological advancements and the rapid pace of technological developments, such as new mobile and internet capabilities.

Second: Availability of Funding

Easy access to funding and capital enables entrepreneurs and founders to launch new projects and innovate new products and business models. Funding is also available in various forms to support fintech at various stages of growth. Venture capital in fintech companies globally reached $13.6 billion in 2016.

Third: Changing Customer Expectations

Growing support from changing customer expectations and demands for digital services has called for innovative solutions from traditional players. Customer expectations are changing with increasing demand and better service inspired by digital interfaces provided by technology companies.

Fourth: Regulatory Support

Support provided by governments and regulatory bodies may reduce barriers to entry into financial services. Some governments have begun to recognize the important role that financial technology can play in facilitating and complementing the traditional roles of financial services firms, and regulatory bodies are working to promote new policies.

3. Financial Technology

3.1. The concept of financial technology:

According to the Financial Stability Board: FinTech is financial innovation using technology that can create new business models, applications, processes or products that have a tangible impact on financial markets and institutions, and on the provision of financial services.(بوطريف وشعيب، 2021، ص469)

According to the Financial Technology Report: FinTech is those products and services that rely on technology to improve the quality of financial services. This technology is faster, cheaper, easier, and more people can access it, and in most cases these services and products are developed by startups.(ومضة وبيفورت، 2017، ص7)

According to the Digital Research Institute: Financial technology is modern technological inventions and innovations in the field of the financial sector, and these inventions include a set of digital programs that are used in the financial operations of banks, including:

transactions with customers and financial services such as money transfer, currency exchange, calculations of interest rates and profits, knowledge of Expected earnings for investments and other banking operations.(نيس، 2022، ص229)

According to the Basel Committee on Banking Supervision: any financial technology or innovation that results in a new business model, process or product that has an impact on financial markets and institutions.(بن ناصر ومصداع، 2022، ص11)

Various definitions:

Financial technology is a term that combines the technological side with the financial side, resulting in a field concerned with financial transactions using and exploiting all the results of modern technology such as smart phones, communication networks, electronic commerce, and digital currencies, where the latest technologies were directed to the development of financial services, and it became an advancement of A corporate party that has integrated technology into the services sector.(بن عامر وآخرون، 2022، ص43)

Financial technology is a new branch of science that combines the experience of banks with modern techniques of management sciences, informatics and modern communication technologies, that is, the stock of knowledge that enables the inclusion of machines, equipment, processes, software and information applications in the field of financial services in order to improve and develop them. This activity is practiced by information and communication technology companies to provide financial services in the most effective and lowest cost to a large number of individuals.(نيس، 2022، ص230)

It is a process of mating between innovations of modern technology that is characterized by speed and inclusiveness, and financial and banking services that are usually provided by financial and banking institutions, and therefore it is a financial service in a technological template in which emerging companies have specialized.(بن عامر وآخرون، 2022، ص43)

Financial technology is harnessing the latest innovations and technologies and introducing them in the development of the financial sector, in order to improve the quality of financial services to gain a competitive advantage by financial technology companies by enhancing their financial inclusiveness and reducing their transaction costs compared to traditional transactions.(بلحرش، 2022، ص532)

Table 01: Fundamental Elements of FinTech

physical impact	Technology use	Financial innovations
The spread of technology-based financial products would have a real impact on economic and financial activity in terms of increasing financial employment, providing the necessary financing for economic activity, and increasing the contribution of the financial sector to the gross domestic product.	Necessary for the creation and marketing of financial products that increase the financial activity of the financial institution.	The result of the use of financial technology, and therefore access to innovative financial products using advanced technological means in the field of financial transactions, may lead to the complete disappearance of paper money from circulation.

Source: Prepared by the two researchers based on:بوخاري، 2022، ص109

FinTech Characteristics637ص ،2021 ،مرزق وزيان):

Reaching all users: Startups target all classes and continually enhance their capabilities through partnerships, or redesign products designed for low-income customers.

Flexibility and Affordability: Fintech startups offer multiple payment plans and offers for goods and services.

Customer-Centered Design: FinTech companies focus on user demands and design products that are simple and easy.

Speed: Powerful analytics allow fintechs to move quickly, as transactions are completed in a few minutes taking advantage of big data and algorithms.

Data and mobile policy: This policy can improve products and services provided to customers, and allows business owners to make better decisions and take advantage of opportunities.

3.2. Fintech innovations:

Mobile payment: It is the use of a mobile phone to transfer money and meet financial requirements, where the cash value is stored electronically in a portable wallet by an agent specialized in that.

Crowdfunding platforms: They are specialized sites on the Internet to finance projects by collecting money from a large number of the public, which makes a large number of individuals at the center of investment and financing decisions for these projects.

Encrypted currencies: It is the unit of commercial exchange that exists only in the electronic body, and it is encrypted, decentralized, and works in a peer-to-peer system. It is completely managed by its users without any central authority or intermediaries, through electronic media only such as computers and smart devices such as mobile phones, electronic tablets, etc., It can also be defined as digital assets designed to act as a means of exchange, and encryption is used to secure their transactions, control the creation of additional units, and verify the transfer of assets and values in a non-copyable manner, and they are mostly based on block chain technology, which ensures transparency, speed, and confidence in transfer. production of these currencies and ensure their continuity.

Blockchain: The largest distributed and open digital record that allows the transfer of ownership from one party to another at the same time without the need for an intermediary while achieving a high degree of security for the transfer process in the face of fraud or manipulation attempts, and all individuals around the world participate in this record, and it can be considered a chain Hunks is currently the largest database globally distributed between individuals.

It is also a rule that uses the encryption mechanism to build a decentralized electronic ledger that is interconnected in the data, in a historical order that cannot be modified or manipulated.

It is characterized by transparency, speed, and ease in conducting operations. It also provides the possibility of the concerned parties participating in building it, ensuring its correctness and maintaining it according to the self-operating systems and instructions that are regulated for use.(بن عامر وآخرون، 2022، ص43، 44)

Big data analytics: The International Organization for Standardization defines it as a set of data that has its unique characteristics, such as size, speed, diversity, variance, validity of data, etc., which cannot be processed efficiently using traditional technology to benefit from it.

Artificial intelligence: This technology enables the implementation of various financial functions in an automated manner without human intervention, and this is indeed the latest breakthrough in the field of financial services, which has become more rapid and accurate in responding to customers.

Cryptography: Cryptocurrencies are produced and exchanged in a decentralized manner. This type of currency has many advantages that have contributed to the development of the

payments sector and global trade.This is due to the ease of the payment process and the settlement of transactions very quickly and at the lowest costs by transferring funds without an intermediary from peer to peer, but the lack of a central authority over it raises the problem of protecting funds and financial and economic stability as a whole.

Internet of Things: This technology allows connecting various things to the Internet through sensors that provide data continuously. Currently, information plays a pivotal role in the process of competition and market expansion.

Cloud computing: It is simply the use of the Internet to provide computer services, and it is called the cloud because the cloud is the symbol of the Internet.(محاجبية وبريش، 2022، ص98)

3.3. The importance of financial technology:(بوطريف وشعيب، 2021، ص471، 472)

Cross-border trade and remittances of workers abroad: Financial technology and related innovative financial solutions (virtual currencies, digital ledgers) can contribute to providing cross-border payment mechanisms that are characterized by high efficiency, transparency and profitability compared to traditional banks or money transfer companies that rely on Correspondent Banking Relationships Thus, the challenges posed by the interruption of correspondent banking relationships in some countries can be mitigated.

Stability and integrity in the financial sector: Financial technology can contribute to achieving financial stability by reducing operating costs in banks and facilitating the analysis of big data for risk management and fraud detection, and in light of the prevailing geopolitical tensions on the one hand and the increasing dealing with issues of combating money laundering and terrorist financing on the other hand, Data-driven technology will have an important role to play in regulatory compliance as countries move from improving AML/CFT regulations to implementing them.

Financial and monetary operations: Digital transformation would contribute to raising the efficiency of revenue collection and the performance of government payments, while the expansion of the use of electronic payment methods could find fraud and increase the effectiveness of the transmission of the effects of monetary policy.

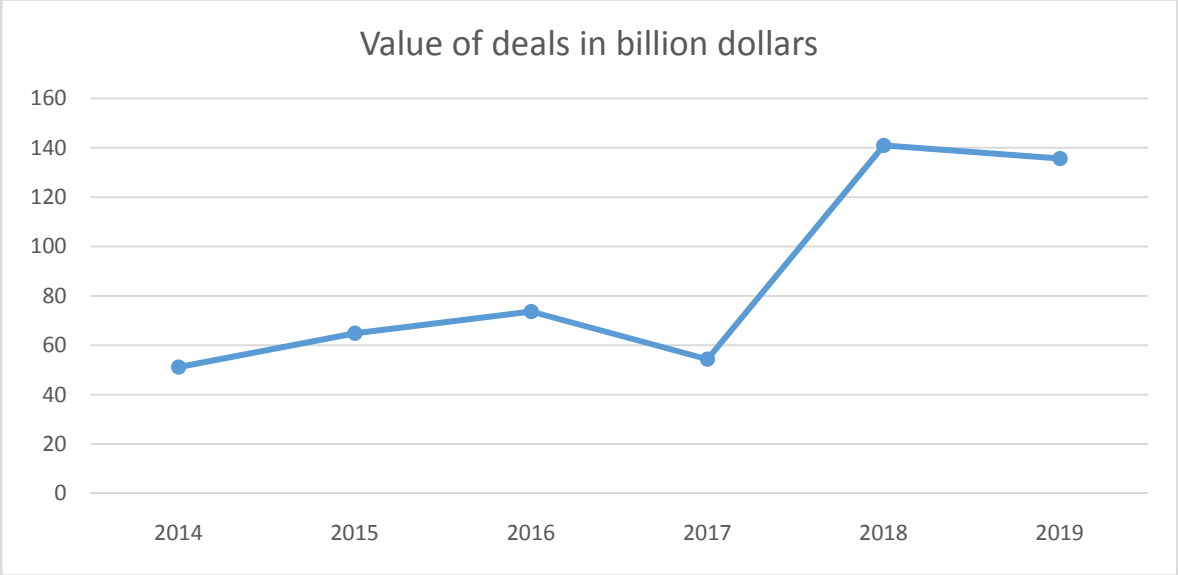
4. The Fintech companies' operating mechanisms

Fintech companies are technology-based companies that aim to develop banking and financial services. They can be defined as "startups." Startups are small, newly established companies that aim to expand by creating new markets or capturing a significant share of

existing markets by offering value. Therefore, fintech startups are small, newly established companies that promise to improve banking services for individuals and businesses, in cooperation with or in competition with established financial service providers. These companies have invaded various markets worldwide due to their development and success in financial technology.

According to a 2020 report by the Swiss firm KPMG, the volume of global fintech startup activity has been steadily increasing from 2014 to 2019. Invested capital increased from $52.2 billion in 2019, indicating growing interest in this field. The following figure illustrates this:

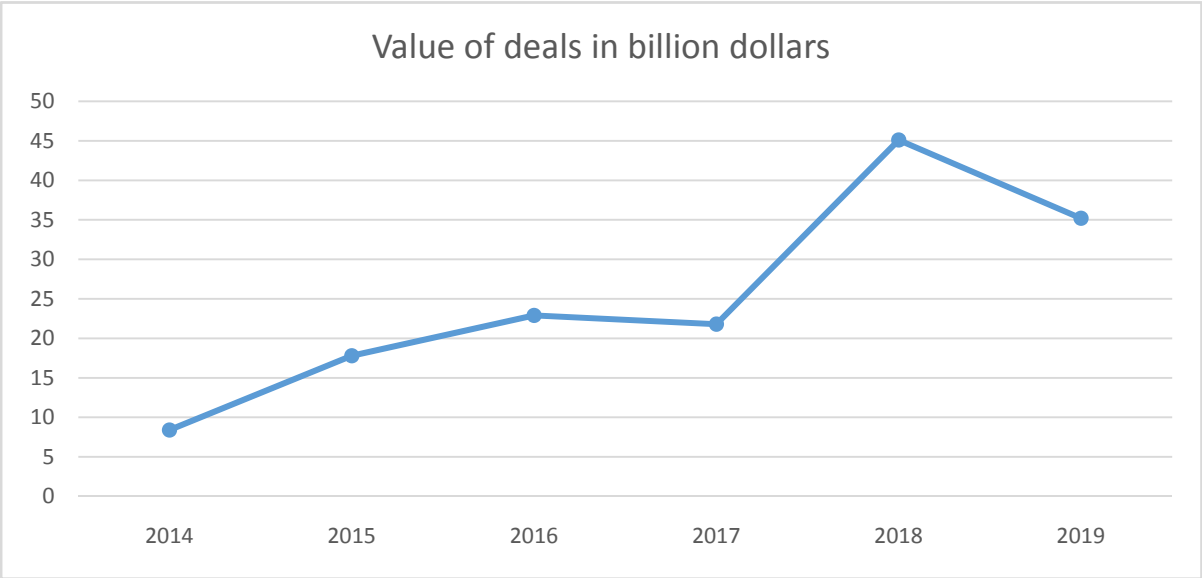
Figure 1: Total investment activity in the field of financial technology in the world during the period (2014-2019)



source :KPMG ,the pluse of fintechreport global analysis of investment in fintech,february2020

The figure shows fluctuations in total investment activity, with the highest rate recorded in 2018 at 141%, followed by a decline in 2019.

Figure 2: Total venture capital activity in the field of financial technology in the world during the period (2014-2019)



source :KPMG,opcit

The figure shows fluctuations in venture capital activity, with 2018 recording the highest rate, followed by a decline in 2019. This phenomenon is likely cyclical.

The following are the most important factors that drive consumers to choose fintech companies over traditional financial firms.

Table 2: The most important factors that make consumers choose technology companies over traditional financial companies.

Factors	Ratio %
It's easy to create an account	%43.4
More attractive rates and fees	%15.4
Access to a variety of services and products	%12.4
Better online experience and functionality, and better quality of service	%11.2
More innovative products than those available in traditional banks, and a higher level of trust	%12.2

Source: EY fintech adoption index report, germany, key finding, p17

The table illustrates the key factors that drive consumers to choose fintech companies over traditional financial firms. It's worth noting that the ease of creating an account was among the primary factors contributing to this, followed by attractive pricing and fees, and then access to financial services and products. It also highlights a better online experience and functionality, better service quality, and, finally, the availability of more innovative products than those available in traditional banks, along with a higher level of trust.

These can be summarized in the following points: (مولاي مصطفي، 2019)

- The use of innovative technology, especially mobile phones, computers, or tablets connected to the Internet or any other communication network, to provide the end customer with richer products and services at lower costs than those of other players. Mobile technology and the development of the use of big data and predictive analytics, in particular, allow for a significant reduction in market entry costs.

- Evolving customer behavior (connected mobile phones and geo-tagging on social networks).

- Creating an appropriate regulatory and legal environment.

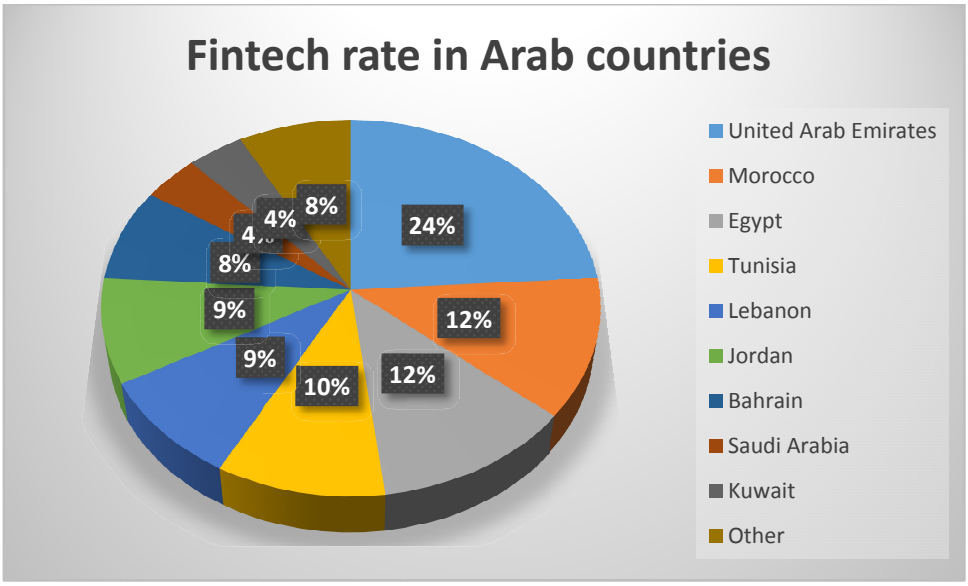
- Establishing partnerships and a good relationship with banks.

- New innovations in the field of financial and banking services.

5. The development of financial technology in Arab countries:

5.1. Current global economic developments have pushed Arab countries to embrace financial technology in an effort to reach higher levels of financial service provision by relying on new technologies. The rates of use of the latter in Arab countries can be highlighted in the following figure:

Figure 3: FinTech rate in Arab countries

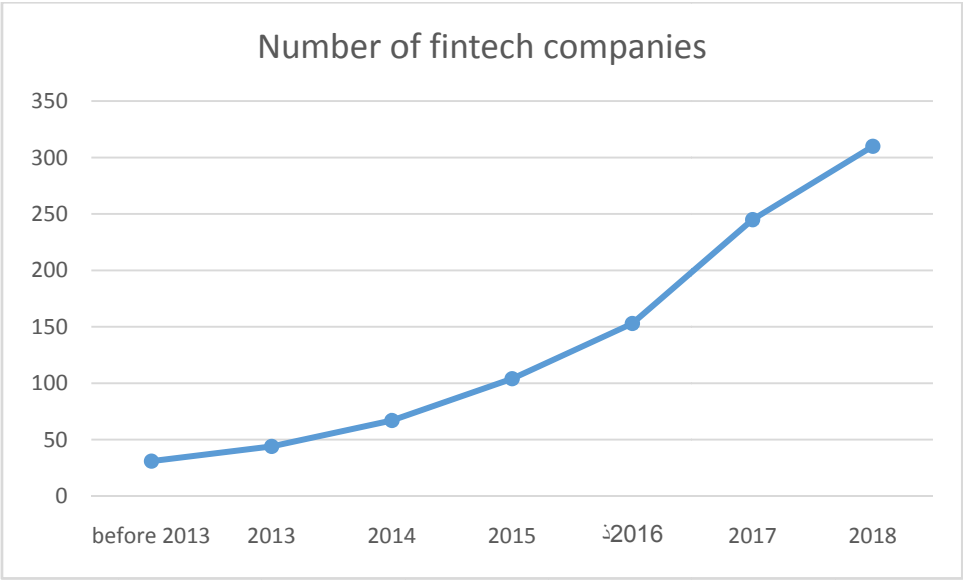


Source:regional report,fintech landscaping in the arab word,final draft,april2020p9

A significant development in its usage rates is observed. The United Arab Emirates ranked first, followed by Morocco and Egypt, then Tunisia, Lebanon, Jordan, and Bahrain, respectively. Saudi Arabia and Kuwait, however, had lower rates.

Given investor confidence in and support for financial technology, and the significant development in its usage rates in Arab countries, the latter experienced increased investments and growth in their companies. The number of financial technology companies in Arab countries (the Middle East and North Africa) witnessed a significant increase during the period 2013-2018, from 44 companies in 2013 to 245 companies in 2017 and 310 companies in 2018. This is illustrated in the following figure:

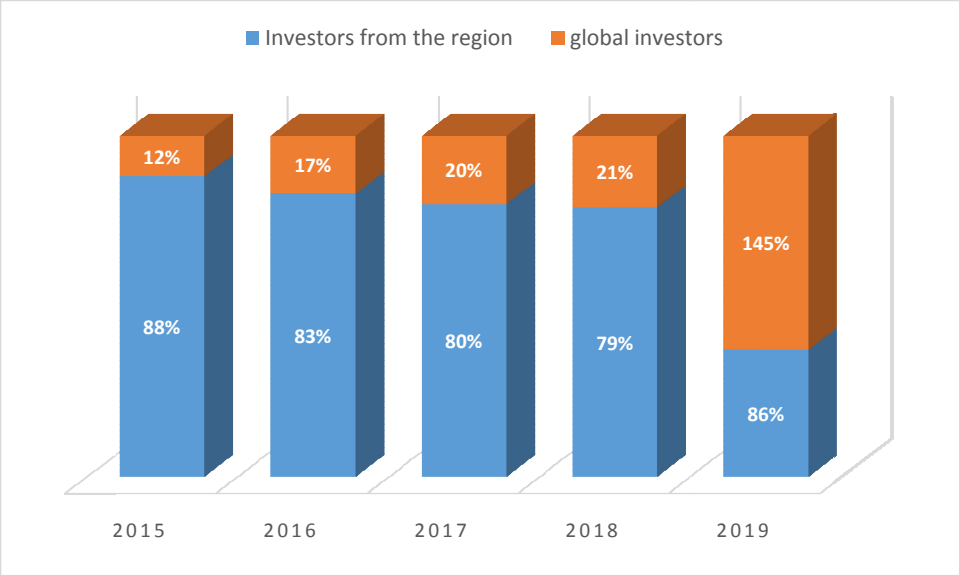
Figure 4: Number of FinTech startups in Arab countries (North Africa and the Middle East)



source : Mena Fintech,venture Report,MAGNITTReport in collaboration withAbuDhabiGlobal Market(ADGM),2019Edition p25

As for the number of investors in emerging financial technology companies in the Middle East and North Africa region during the period from 2015, this increases the amount of potential capital and support services available to them, thus enhancing their development and growth. It is also noted that this percentage has been declining (declining/increasing) over the years (2015-2019).

Figure 05: Number of investors in fintech startups in the MENA region.



Source: MENA FinTech Ventures Report, published by MAGNiTT in collaboration with Abu Dhabi Global Market, 2019 edition, p. 16

5.2. The most important projects for expanding financial technology in the Arab region:

The Arab region is witnessing a growth in financial technology projects, particularly in the Middle East, and particularly in the United Arab Emirates. The Dubai International Financial Centre (DIFC) launched the region's first financial technology project in 2017, in collaboration with Accenture (a global company that provides a wide range of professional services and solutions in the fields of strategic planning, consulting, digitalization, technology, and operations) and FinTech Hive at the DIFC. The project aims to transform the

DIFC into a global innovation destination that brings together markets from the United States, Europe, the Middle East, Africa, and Asia. The centre also aspires to expand its operations to include other areas, including insurance and Islamic finance. Meanwhile, Abu Dhabi is seeking to launch two initiatives starting in the third quarter of 2018: the ADGM FinTech Innovation Hub, along with a collaboration with Plug and Play, the world's largest and most successful global innovation platform. This program will be renamed Plug and Play Abu Dhabi Global Market. The program aims to accelerate the launch of fintech startups with significant solutions and initiatives that address the dynamic needs of the region's financial markets.

For its part, Egypt launched Project 1864 in 2016, a program that seeks to enhance the fintech innovation space in Egypt. In July, the American University in Cairo and the Commercial International Bank partnered to establish the IUC Venture Lab FinTech Project, supported by the Commercial International Bank. The new specialized program aims to develop and support startups in Egypt in areas such as digital and mobile payments, peer-to-peer lending, customer interfaces, personal financial planning, retail, investment, and remittances. The Saudi Arabian Monetary Authority (SAMA) also launched the "FinTech Saudi" initiative, which aims to support the financial technology ecosystem and advance the Kingdom as a financial technology hub, promoting financial inclusion and increasing digital financial transactions in the Kingdom.

Bahrain, for its part, established the "Bahrain FinTech Bay" in 2018, which it claims is the largest financial technology hub in the Middle East and North Africa. It will work with leading financial technology institutions and global leaders, as well as local, regional, and global startups.

5.3. Challenges and Difficulties of FinTech in Arab Countries:

There are still several significant structural and institutional obstacles facing and limiting the growth of fintech in Arab countries. The most important of these are:

- The weak business environment and the problem of restrictions that still exist on foreign entities entering markets limit the entry of existing global fintech companies.

- The scarcity of private equity and venture capital, which underpins the growth of fintech in advanced economies.

- Legal uncertainty due to regulatory gaps hinders the growth of the fintech sector, despite ongoing efforts to develop regulatory frameworks for digital financial services and enact laws regarding the issuance of electronic money.

- The poor quality and prices of internet and mobile phone services, despite the increased rates of information and communications technology penetration in recent years.

Broader institutional support remains limited, with only a few Arab countries establishing incubators and accelerators (Egypt, Lebanon, and the United Arab Emirates) to help scale up startups, or regulatory sandboxes (Abu Dhabi, Bahrain, and Saudi Arabia) that allow fintech companies and traditional institutions to test innovations in the real world.

From the demand side of fintech services, the "trust gap" and financial literacy levels pose major constraints to fintech startups. Using fintech as a payment channel requires trust to reduce uncertainty. This is compounded by the challenge of promoting this type of service and the level of customer education in Arab countries.

The cyber threat issue: Cyberattacks can lead to operational disruptions, financial losses, reputational damage, and systemic risks. These risks can become a significant constraint unless information security frameworks are strengthened.

6. Conclusion :

Financial technology offers tremendous opportunities for developing financial services, and helps in renewing and developing traditional services. Arab countries, especially the Gulf Cooperation Council countries, are trying to occupy a position in the field of financial technology by providing all regulatory, legal and technological frameworks for this. Through this study, we reached a set of results, the most important of which are:

Results :

- Fintech is any invention or innovation that relies on technology to develop the financial sector, and its services rely on ease and speed.
- Arab countries are trying to keep pace with the tremendous development in technology worldwide, and the Gulf Cooperation Council countries rank first among Arab countries. The United Arab Emirates ranks first with 30 companies.
- Many countries in the region have launched programs and projects in financial technology, the most prominent of which are Hive Fintech in Dubai and Bahrain Fintech Bay.
- The use of financial technology in Arab countries faces several challenges, most notably: weak business, scarcity of venture capital, legal and regulatory issues, and problems with the quality of internet and communication services.

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