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Fintech up-coming in Saudi Arabia: study, analysis, and recommendations

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Abstract: Fintech is the new IT solution for the financial sector which it uses artificial intelligence, machine learning, security, etc. Moreover, different governments encourage the implementation of Fintech to improve their economics in the future. However, the crisis of the oil sector busts the GCC governments to change the types of their economic sectors to be more varied. Fintech is one of the major players in new GCC economics. Therefore, Fintech is one of the promote solutions that lines with the vision 2030 in Saudi Arabia. In this fact, this paper proposes a study of the Fintech implementation in Saudi Arabia, in which it analyses the different metrics involve in the process of implementation. Precisely, it focuses on three levels of implementation: Fintech initiative, Fintech regulation and Fintech in society. Finally, the paper presents a strategy recommendation to improve the implementation of Fintech in Saudi Arabia.

Keywords: Fintech; GCC countries; Saudi Arabia; ecosystem; Fintech regulation.

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1 Introduction

The term 'financial technology' or short 'Fintech' reflects the development of financial services using the new technology (Warner, 2016). Fintech has opened an angle towards a new level of business because of the opportunities provides by the internet in many sectors including finance. Using technology becomes a key driver of economic growth (Jain and Kulhar, 2019). A strong relationship between digital infrastructure services and organisation's growth has been proved (Augustsson et al., 2019) besides a significant relationship between sophisticated strategic information systems and strategic performances (Yazid and Kofarnaisa, 2019). The individual intention to adopt a financial technology application was positively influenced by their motivation to learn the Fintech application (Yoon et al., 2017). The popularity of Fintech has risen significantly since 2014 (Swan, 2015; Puschmann, 2017). Fintech refers to innovators in the financial sector providing new business models that promise more flexibility, performance, security, efficiency and opportunities than ordinary financial services (Adner and Kapoor, 2010). For the viability of Fintech, the organisation's infrastructure must be strengthened technically and managerially (Jahantigh et al., 2019). The use of smartphones, digital wallet and electronic interaction channel, in general, have grown over the last years resulting in a change in consumer behaviour and then forced many financial services providers to reorganise their channel management towards customer self-services (Zhou, 2013; Payette, 2014). Changing ecosystems, business environment, organisational structure, practices and policy, technology, etc. (Rajab and Sharma, 2017) become a demanding reality for traditional banks and insurance companies.

Fintech leads to new ecosystems including Fintech start-ups, government agencies and regulators, user/financial customers, and many other incumbents as shown in Figure 1. Fintech startups need to consider their ecosystem when developing their services (Lee and Shin, 2018). Many countries have launched initiatives to lower entry levels for Fintech start-ups and provide Fintech support in recent years (Pollari, 2016). Moreover, Fintech ecosystem is an affiliation, where traditional industry boundaries have broken down (Lee and Shin, 2018; Christopher et al., 2019). In addition, innovation is a radically reconfiguring relationship between ecosystem members which affects relationships between verities of different actors (Gomber et al., 2018).

The rapid international growth of Fintech is a key factor that has made regulators race against time to prepare the infrastructure to receive Fintech and support its adoption and integration in the financial sector (Anshari et al., 2018). Various initiatives are taken by government agencies in many countries. Regulators around the world are coordinating an innovation system to promote the adoption of regulatory technology solutions, while at

the same time transforming their internal processes to support the adoption and integration of new solutions (Grinberg, 2012; Arner and Barberis, 2015b; Hung and Luo, 2016). The following examples numerate the different regulations in various continents.

Figure 1 Ecosystem elements of Fintech (see online version for colours)

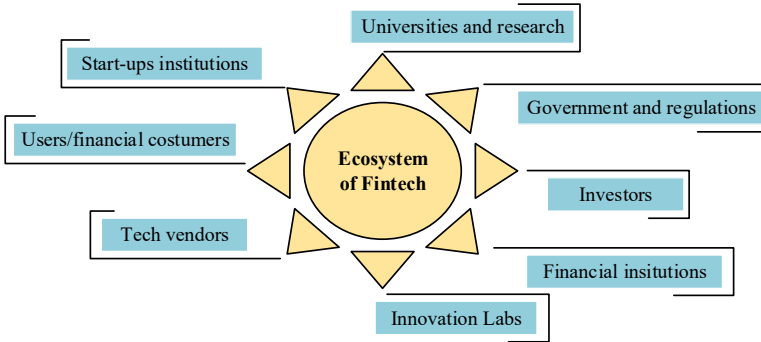
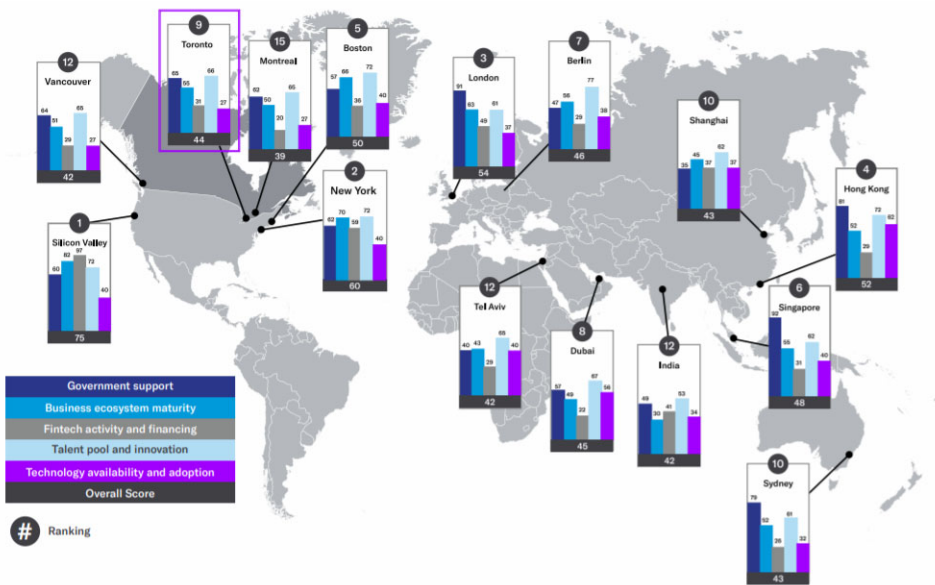


Figure 2 Ranking of 15 global Fintech hubs (see online version for colours)



Source: Accenture analysis: Accenture research fintech hubs maturity model

First, Monetary Authority of Singapore (MAS) established an innovation group in the Fintech and announced the HACKATHON competition to develop a creative and innovation ecosystem by creating new products, processes, and services. Second, Australian Securities and Investments Commission (ASIC) allows eligible Fintech companies to test certain products or services for up to 12 months without an Australian financial services (AFS) license or credit license. ASIC also offers regulatory guides to

facilitate innovation in Fintech¹. Third, in Emirates, Dubai Financial Services Authority (DFSA) Innovation Testing License is a limited financial services license that allows qualified financial technology companies to develop and test innovative concepts within the Dubai International Financial Centre (DIFC), without being subject to all regulatory requirements that normally apply to DFSA regulated companies. It was launched in May 2017 as part of the Authority's efforts to develop a regulatory framework that stimulates growth and innovation in the sector. Fourth, in Canada, Toronto's Fintech ecosystem derivate from Toronto Finance International of Canada (TFI) has continued to rise in recent years and has a significant opportunity to increase its share of global deals. Finally, in Europe, The Financial Conduct Authority (FCA) of British issued a regulatory technology note in November 2015 stating that the adoption of regulatory technology could be enhanced by defining new regulations in machine-readable formats.

Fintech sector rose significantly these recent years and continue to be on an upward trend, Fintech start-ups play a key role in the growth and innovation of the financial services industry through new or improved products and services (Arner and Barberis, 2015a; Lee, 2015a, 2015b). Each country needs to address the challenges of its Fintech ecosystem to remain competitive as a leading global Fintech hub (TFI Report, 2019).

1.1 Research question

Fintech has more and more places in the GCC countries, which is linked with the strategic economic plan for these countries. Moreover, Saudi Arabia started to change the nature of his economy sectors with the vision 2030. Indeed, Fintech is one of the solutions to improve the strategy vision of the new Saudi Arabia economy. What is the reaction of decision makers to activate technology in all sectors such as the financial and economic sectors? Precisely, what are the initiatives to the adoption of financial technology (Fintech) in Saudi Arabia? And how improve this new concept the current economy sectors?

1.2 Research objective

The objective of this research is to find out the most decisions and initiatives taken into consideration in Saudi Arabia to support the implementation of Fintech in the kingdom in line with the 2030 vision. We focus our study on the three levels of Fintech implementation: Fintech initiative, Fintech regulation and Fintech in society.

In this paper, we study and analyse the implementation of Fintech in Saudi Arabia. We present our recommendations to improve the implementation. Further, our study focuses on three levels of implementation: Fintech initiative, Fintech regulation and Fintech in society. The rest of the paper is organised as follows. The second section will present the position of Fintech in Saudi Arabia for the three levels mentioned above. The third section will analyse and discuss the implementation of Fintech in Saudi Arabia since 2010 and its challenges. In the fourth section, we will present various recommendations and solutions to improve the implementation of Fintech in KSA. Finally, the conclusion section will summarise the overall this work and will give some future works.

2 Literature review: Fintech around the world

The Fintech ecosystem globally attracts a huge amount of capital each year (Christopher et al., 2016). According to a KPMG Report (2019), \$120 billion have been spent in Fintech [venture capital (VC), private equity (PE) and mergers and acquisitions (M&A)] for the first half of 2019. In H1 2019, Fintech investment in the global world reached \$37.9 billion with 96 deals, while Americas² recorded \$21 billion across 545 deals. US Fintech investment achieved 470 deals with \$18.3 billion. Investment Fintech in Europe reached \$13.2 billion with 307 deals in H1 2019. As for Asia Pacific³, investments reached \$3.6 billion across 102 deals.

Figure 3 Median M&A size by region (see online version for colours)

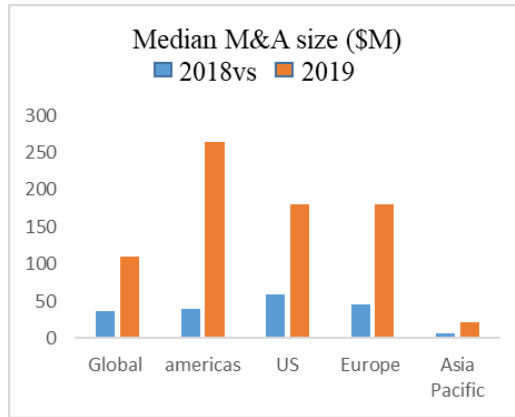
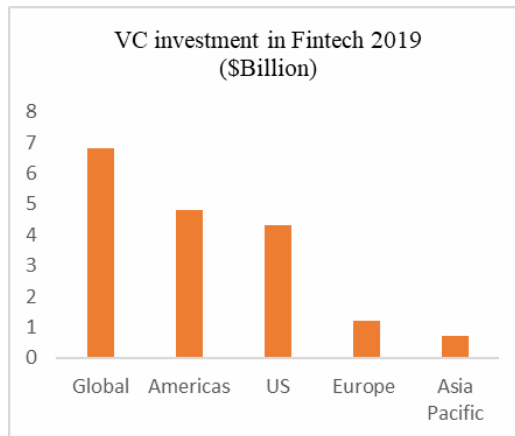


Figure 4 VC investment in Fintech (see online version for colours)



Median M&A size in the global world tripled to \$110.5 million in the second quarter of 2019 from \$36.5 million in 2018 as shown in figure 3, while in Americas the median M&A size soared to \$265 million in H1 2019 from \$39 million in 2018. So, for US Fintech investment, the size of M&A increases to \$180 million in 2019 from \$58.3 million in 2018. M&A Fintech investment in Europe passed from \$45 million in

2018 to \$180 million in 2019. While in Asia Pacific median M&A size grows to \$21 million from \$7 million in 2018. Figure 4 presents the given the statistics of VC investment in Fintech, it reached \$4.8 billion in the Americas in Q2 2019, \$4.3 billion in the US, \$3.3 billion in Europe and, \$0.7 billion in the Asia Pacific in H1 2019.

The Middle East and North Africa (MENA) region has recently started opening to Fintech, in 2016, there are 145 Fintech startups compared to 46 in 2012 ((IIF Report, 2018). The Fintech market in the MENA region is currently estimated at \$2 billion and expected to reach an annual growth of \$125 million until 2022. Fintech investment into the MENA region have been low compared to other parts of the world and this can be explained by an inadequate regulatory and business environment, undeveloped entrepreneurship ecosystem, political instability, and unclear exit opportunities for investors.

Most Fintech start-ups are based in UAE, Egypt, Jordan, Lebanon, Bahrain and Saudi Arabia. The UAE has the most developed Fintech ecosystem in the region due to the government's initiative to provide an enabling regulatory environment. Fintech could reduce the profitability of some GCC banks and affect some services such as GCC banks' money transfer operations and foreign-currency exchange and change the way they operate. This would encourage banks to adjust their operations through increased digitalisation. The GCC banks have already started using blockchain in remittance, trade finance, Islamic banking. The digitalisation of GCC economies is in progress. Adopting artificial intelligence (AI) analytics, big data could lead to more effective customer services.

Saudi Arabia is competing to be the Fintech hub in its region, working hard to create new services and competitive products that align with kingdom's vision 2030. To study the implementation of Fintech we choose three levels: *Fintech initiatives*, which represent an environment that supports innovation and economic growth in the financial sector. *Fintech regulation*, which is the different rules and regulations developed by the country to define the different aspects of used Fintech in the local market and with the outside market, and *Fintech in community*, to evaluate the receiving of the society to this new concept of business

3 Fintech in Saudi Arabia

The new world of Fintech and blockchain technology seduced the Kingdom of Saudi Arabia (KSA) who carried about innovation and creativity in line with the 2030 vision. The Fintech seems to be a new home for KSA's financial sector as opposed to conventional finance, creating new methods and concepts that are changing the financial world. The importance of Fintech to business activity in KSA is relevant for many reasons. Adopting innovative technologies based on 'blockchains' that make it possible to reduce the costs of capital raising, avoiding intermediaries and payment agents (banks, credit card circuits).

The increase and success of Fintech in Saudi Arabia are challenging finance decisionmakers, investors, and entrepreneurs, as well as market authorities. The Saudi Arabia Monetary Authority (SAMA) is showing greater support for the Fintech sector through various initiatives such as Fintech Saudi and Sandbox regulatory environment. Fintech deal volume declined markedly in the second half of 2018 but still reached 2,196 deals for the year, up from 2,165 in 2017. According to KMG Al Fozan & Partners

(KPMG Report, 2018), “we expect growing investor interest in the Fintech offerings over time which will transform the Kingdom as the Middle East and North Africa’s (MENA) primary market”⁴.

Toward becoming more cashless, Saudi Payments Network (MADA), the domestic network for online payments, recorded a 47% surge in completed deals to 688 million in the first half of 2019, at a value of SAR 136 billion, in comparison to the same period last year⁵. The kingdom pushes its banks to adjust their operations through increased digitalisation, branch network reduction, and staff rationalisation. Banks are in front of a big challenge, is how to be in parallel with the response from authorities and regulators to Fintech’s grown influence.

“People used to go to the UAE and Bahrain because we didn’t have the infrastructure. But most of those Fintech in the UAE and Bahrain want to sell into Saudi Arabia, because we have the market and the purchasing power and that itself is an advantage for us.” (Mishari Al-Assailant, the Acting Head of Fintech Saudi, a division of Saudi Central Bank)

So, to foster a culture of Fintech innovation, and raise awareness around financial services technology in the kingdom, Saudi Arabian Monetary Authority (SAMA), the Kingdom’s Central Bank, has launched ‘Fintech Saudi’ initiative and plans to set up ‘sandbox’ regulatory environment to establish the country as a regional Fintech hub.

3.1 Fintech Saudi initiative

“Although ATMs, credit cards, online banking services and cellular phones are all products that use Fintech, today we are witnessing tangible progress in the Fintech field.” (Ahmed bin Abdulkarim Alkholifey, SAMA Governor)

Saudi Arabia Monetary Authority (SAMA) has launched the Fintech Saudi initiative in April 2018 (Fintech Saudi Report, 2018/2019) to support the Fintech ecosystem and promote the kingdom as a Fintech hub. The main objective is to encourage the small and medium enterprise (SME) sector, diversify the local economy, and create job opportunities and, to support local banks, international Fintech companies, and partners to establish diverse Fintech activities as shown in Figure 5. Fintech Saudi partners in building the Fintech ecosystem in collaboration with ten universities, six governments, 12 banks, seven investors, 13 corporates, four consultancies and three international affiliates.

Saudi Arabia’s Capital Market Authority (CMA) has launched the Fintech Lab, a new initiative aimed at supporting innovation and the development of new products in the Fintech sector. The lab aims to create a regulatory framework designed to enhance and support innovation in the financial market⁶.

3.2 Fintech local regulations

Regulators must consider the various risks posed by Fintech, these risks can be characterised as a risk to consumers and investors, Financial services firms and financial stability. Financial services firms need to demonstrate that they are following the growing array of Fintech-related regulatory requirements. To clarify the available options to the interested international financial technology companies who are entering the Saudi market. The financial services regulators, CMA⁷ and SAMA⁸ and the government

entities, SAGIA⁹ and Monshaat¹⁰ provide a guide that involves the local regulations of Fintech Saudi. The regulators are developing various Fintech licenses and may release new Fintech-specific licenses related to specific Fintech activities¹¹. Also, Fintech Saudi offers another option for international Fintech interested in entering the Saudi Market to help them to navigate their way into Saudi Arabia and to attract foreign investment as a part of Saudi Arabia's Vision 2030. Fintech guide involves three parts: regulation clarity, Fintech idea framework and options for international Fintech.

Part 1 Regulation clarity for conducting Fintech activities in Saudi Arabia (Fintech Access Guide version 1.1).

Part 2 Framework for local entrepreneurs to launch a Fintech idea.

Regulators provide a framework for a new Fintech idea or develop an existing Fintech idea. Four steps exist to help entrepreneurs to generate a Fintech idea, validate and test ideas and built it into a successful Fintech business (Fintech Access Guide version 1.1)

Figure 5 Fintech Saudi Arabia's ecosystem (see online version for colours)



Part 3 Options for international Fintech interested in entering the Saudi market.

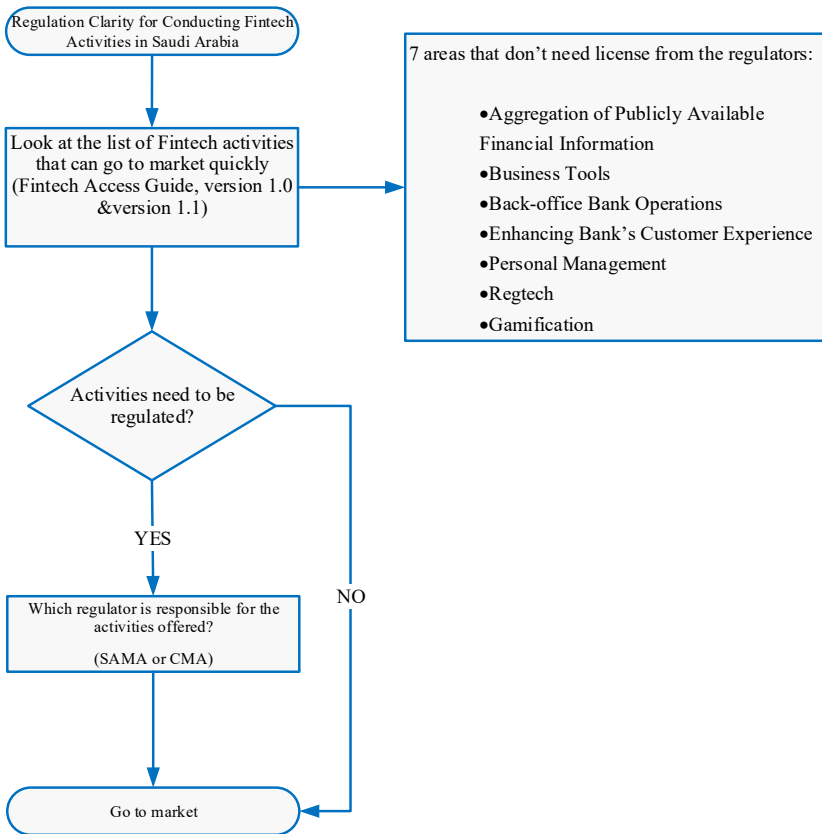
In line with the 2030 version, Saudi Arabia aspires to attract international investors. Various options for international Fintech companies are opened to enter the Saudi market, Given that:

- *Option 1: Establish a subsidiary of an existing Fintech company:* international companies need to submit attested financial statements and a commercial registration from their home country to obtain the SAGIA license.
- *Option 2: Start a new Fintech company through SAGIA's entrepreneurship program:* through the special program put by SAGIA 'entrepreneurship program' any international investor can integer into it subject to provide not

only the attested financial statements and a commercial registration but also, it needs to obtain an endorsement letter from an approved incubator or Saudi university.

- *Option 3: License my technology to KSA- based startup:* it is about selling a product using the technology, a contract with a local company that has the required license will be enough.
- *Option 4: Appoint a sales agent:* international Fintech companies can appointing a sales agent to sell a Fintech product or service in KSA. They do not require a license to be under this arrangement, a distribution agreement with a regulated local sales representative will be enough. (Fintech Access Guide version 1.1).

Figure 6 Flow chart of regulation clarity (see online version for colours)



Source: Fintech Access Guide, version 1.1

Figure 7 Four steps' framework (see online version for colours)



3.3 Activities by the Fintech community

The KFUPM Business School (KBS) at King Fahd University of Petroleum & Minerals has organised the first regional Fintech Hackathon on April 2019¹². The main objective of this event is to promote Fintech startups and increase potential investment among banks and other financial players with 120 participants, representing 44 teams from the Eastern Province, Jeddah and Riyadh. Eleven prizes were awarded to the winning teams, in addition to incubation opportunities at KFUPM (EI). This event is sponsored by Riyadh Bank (Platinum Partner), Monsha'at, KFUPM Entrepreneurship Institute (EI), Fintech Saudi, TechBench, and KFUPM School Club.

The Saudi Arabian General Investment Authority (SAGIA) has organised the Financial Technology Week in London, the aim is to reveal several available investment opportunities in Saudi's financial technology sector and build a broad understanding about Fintech and support the growth of Fintech entrepreneurs and SMEs.

Bank Aljazira has launched the 'Noor Innovation Programme' that aims to foster the financial technology ideas in the kingdom, to make the country a leading center for financial technology.

Mohammed Ibrahim Al-Subaie & Sons Investment Company (MASK) presents an award [Esamyoon Award (Masik)] for the best existing Fintech idea and to support the efforts of entrepreneurs.

4 Recommendations

Several factors contribute to the high potential growth of Fintech in Saudi Arabia. One, Fintech will increase digitalisation and benefit from its growth. Two, a young population, with an average age of 30¹³, addicted to high mobile and internet penetration, and growing smartphone adoption. Three, political stability, regulatory support, the involvement of the private sector, financing availability, education create a stable environment that supports Fintech's growth in the kingdom.

Saudi Arabia needs to continue to innovate their practices, digitise their processes, and increase investment in technology platforms. The law is seen as a critical reform that must be developed to assist Fintech companies and protect the rights of creditors. Provide a guide's Fintech activity and increasing regulatory clarity to improve the Saudi Fintech market.

The unprecedented rate of technological advancement has reshaped the world of business. This rapid change is leading to constant disruption across sectors, requiring professionals to continuously reskill to remain relevant. With the increasing need to upskill, and the rate of change in technology, regulators must promote skills-based certificates because they will become an increasingly valuable signal of capability on a potential candidate's CV in the next years. The technical capabilities are required to manage technological innovation, including hiring for appropriate skill sets such as data scientists, mathematicians and statisticians to respond to Fintech developments and its related risks.

Saudi Arabia should not focus only on pure Fintech, it must include insurance technology (Insurtech), regulatory technology (Regtech) and Islamic Fintech companies. Fintech' Saudi companies must move quickly enough to adapt to the digital world and catch the potential opportunities from digital innovation through providing programs,

workspace and partners to grow start-ups into global companies and supporting tech-companies at all stages of their growth.

Innovation is coming from outside financial services and should be driven by a variety of sources including tech-companies, e-retailers, and social media platforms. Start-ups are the main success factors. They can innovate at a far faster pace than incumbents and providing platforms for Financial Institutions.

5 Conclusions

The emergence of innovative business and the rise of new technology have a remarkable influence on current finance dynamics in the entire world. Due to the rapid economic change and intensive user of new development in computer skills and communication technology, the banking sector and financial services are facing a serious transformation: finance technology (Fintech). Most regulators in the industry try to take immediate steps to create a Fintech ecosystem to explore opportunities to increase the level of using artificial intelligence (AI) and machine learning in their processes. “Fintech Saudi is a Financial Sector Development Programme initiative launched by the Saudi Arabian Monetary Authority (SAMA) in April 2018. It acts as a catalyst for the development of the financial services technology industry in Saudi Arabia, to transform the kingdom into a global Fintech hub” (Fintech Saudi Report, 2018/2019).

This paper provides an analysis of the implementation of Fintech in Saudi Arabia:

- 1 there is only one objective that Saudi Arabia is trying to reach: transform the kingdom as the Middle East and North Africa’s (MENA) primary market in the Fintech
- 2 a description of the legal framework provided by Saudi Arabia’s regulators to develop standards and facilitate the incoming of international Fintech interested in the Saudi market.
- 3 activities by the Fintech community are mentioned, all efforts came together to achieve the kingdom’s goal.
- 4 and finally, many recommendations have been cited, the technology revolution in financial services is on an open path towards controlling the financial sector.

Banks and financial companies must embrace openness and digitalism and making a smart investment in the new domain of business through Regtech implementation to specific Fintech initiatives.

Fintech is becoming an important way to run a business, but it is not something that everyone is comfortable with. Users who want to run their business online have several barriers. In developing countries, people have many difficulties such as do not have enough experience in internet usage, poor infrastructure quality, low-speed internet, etc. The question: what are the barriers to support Fintech in developing countries? It can be a research question for future papers.

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Notes

- 1 <https://asic.gov.au/regulatory-resources/find-a-document/regulatory-guides/>.
- 2 Americas involves: Canada and Latin America
- 3 Pacific included companies from seven different countries: China, Korea, Indonesia, Vietnam, Singapore, Australia and Malaysia.
- 4 Said Islam Al Bayaa, Head of Advisory at KPMG Al Fozan & Partners.
- 5 "About 45% of our online transactions in Saudi are from Mada online" (Altamami).
- 6 CMA chairman Mohammed Al Kuwaiz.
- 7 Capital Markets Authority (CMA) regulates the activities relating to the capital market and securities, including dealing, arranging, managing, advising, and holding custody of securities.
- 8 Saudi Arabian Monetary Authority (SAMA) regulates all companies that are involved in providing banking services, real estate finance and lease finance, and insurance and reinsurance activities.
- 9 Saudi Arabian General Investment Authority (SAGIA) is responsible for providing investment licenses to international investors and has a one-stop-shop which supports international investors in completing required governmental procedures to establish a company in KSA.
- 10 Small and Medium Enterprises General Authority (Monshaat) regulates the entrepreneurial ecosystem and supports, develops and caters to it as per the best practices.
- 11 Fintech Access Guide V1.1.
- 12 <https://www.argaam.com/en/article/articedetail/602766>.
- 13 <http://www.worldometers.info>.