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FinTech Implementation Challenges in the Palestinian Banking Sector

Jamal Hurani *, Mohammed Kayed Abdel-Haq and Emir Camdzic

Centre for Islamic Finance, The University of Bolton, Bolton BL3 5AB, UK;
mohammed.abdel-haq@bolton.ac.uk (M.K.A.-H.); e.camdzic@bolton.ac.uk (E.C.)
* Correspondence: jh13bbs@bolton.ac.uk

Abstract: This study addresses FinTech implementation challenges in the banking industry in Palestine. This was accomplished by adopting qualitative research methods. Semi-structured interviews were conducted with interviewees from the Palestinian Monetary Authority, banks, and FinTech companies. Thematic analysis was conducted using NVivo 12 software to identify themes in the interview scripts. Research outcomes suggest that FinTech development in Palestine encounters a range of multifaceted challenges, which can be categorised using the TOE (technological, organisational, environmental) framework. On the technological front, issues such as underdeveloped IT and telecommunications infrastructure, restricted mobile frequencies due to Israeli occupation, limited IT expertise, cyber risks, low digital literacy, and minimal FinTech awareness hinder progress. Organizationally, resistance to change, inadequate agility, limited digital skills, and slow Sharia compliance updates in Islamic banking impede innovation. Environmentally, the absence of a dedicated FinTech framework, unclear regulatory guidance, limited market size, and strict AML/CFT regulations create uncertainties for non-bank entities and restrict investment opportunities. Addressing these interconnected barriers requires coordinated efforts across legal, financial, and technological sectors to foster FinTech integration and growth in Palestine.

Keywords: FinTech; TOE framework; IT infrastructure; regulatory challenges; digital literacy; Sharia compliance

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1. Background

The term FinTech refers to both finance and technology, denoting the delivery of financial solutions using technology (Arner 2016). FinTech was first mentioned by the Citigroup Chairman in the 1990s (Puschmann 2017; Arner 2016). FinTech has many descriptions from various scholars. For example, Murinde et al. (2022) concluded that FinTech generates significant benefits for consumers through breakthroughs in technology, having the potential to revolutionise the delivery of financial services and foster the development of innovative business models, applications, processes, and products. The Financial Services Board (FSB) defined FinTech as "technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets, financial institutions, and the provision of financial services" (CGFS&FSB 2017). Schueffel (2016) explained that FinTech improves financial activities through the application of technology.

Advancements and developments in information technologies (IT) have affected and continue to affect financial services. FinTech has had a significant impact on the financial industry, resulting in a wave of FinTech innovations that have transformed how banks and other financial institutions operate (Walker et al. 2023). IT development usually increases process automation; however, ongoing progress is leading to the fundamental reorganisation of the value chain of financial services by introducing new business models (Puschmann 2017). The International Monetary Fund (IMF) policy paper proposed that the adoption of FinTech

by users can be linked to FinTech solutions through technological innovations that successfully cover the gaps in speed, cost, transparency, access, and security, which are not covered by the traditional model of financial services (Khera et al. 2022). Corporations should not ignore FinTech innovations because their customers may move towards competitors, hence, it is of high importance that banks adopt FinTech as a customer retention strategy. It costs five times as much to attract a new customer than retain a current customer (Tripathy and Jain 2020).

Banks face different challenges in adopting and implementing FinTech, including customer management, investment management, regulatory environment, and other risks (Lee and Shin 2018). Furthermore, shifted customer behaviour has a critical impact on businesses, including the banking sector (Lestari and Rahmanto 2023). While FinTech provides new opportunities for businesses, it also presents new challenges (Bhandari 2021).

Palestine presents a unique context for studying the challenges and opportunities of FinTech adoption, as its financial and technological ecosystems operate within the constraints of prolonged occupation, conflict, and economic instability. These circumstances create barriers such as limited access to global financial systems, restricted movement of goods and people, and inadequate digital infrastructure which significantly influence the development, implementation, and scalability of FinTech solutions. At the same time, these challenges highlight the potential of FinTech to address critical gaps in financial inclusion and economic resilience in conflict-affected regions. The Palestinian banking sector has recently emerged. It began in 1994 after the establishment of the Palestinian National Authority. The Palestinian Monetary Authority (PMA) is a regulator equivalent to the central bank. Thirteen banks operate in Palestine (PMA 2021). Banks in Palestine are expected to invest in FinTech and face different challenges, both global and local, which are the same as the banking sector globally.

Little research is available on the challenges faced by banks in Palestine that prevent, delay, or slow FinTech investments. This study, therefore, addresses this gap and investigates the challenges faced by banks in Palestine concerning FinTech implementation.

Furthermore, studying the challenges of FinTech implementation in Palestine is crucial for promoting financial inclusion, economic development, and innovation. With a significant unbanked population and limited access to traditional banking due to geopolitical restrictions, FinTech offers an opportunity to provide accessible financial services, empower marginalised groups, support small businesses, and ultimately improve social mobility chances to positively impact Palestinian society. By addressing these challenges, Palestine can foster entrepreneurship, reduce inequality, and create a more integrated and resilient economy. Additionally, understanding regulatory and infrastructure barriers—such as inadequate digital infrastructure and restrictive financial policies—can help policymakers design effective strategies to enable FinTech growth.

2. Literature Review

While FinTech is improving accessibility, efficiency, and security for both consumers and businesses, thereby reshaping the financial landscape (Gopal et al. 2023), it is worth noting that the integration between financial services and technology has developed over time. According to Puschmann (2017), FinTech evolution can be summarised as falling within three developmental areas starting in 1960:

- The first era is internal digitisation, in which information technology usage is directed into internal processes or automation. Customers were dependent on one and two later channels: branches and ATMs. Financial institutions have locally developed information technology systems.
- The second era is provider-oriented digitisation, in which financial institutions have shifted to the use of providers of information technology systems. As a result, the process and application functions were standardised. Outsourcing of business processes such as information systems and some back-office functions also occurred.

- Customer-oriented digitisation is a third era in which customers have FinTech applications centred around them. Moreover, new entrants provide financial services in addition to incumbents expanding the ecosystems.

The collaboration of FinTech ecosystem categories benefits financial system consumers by fuelling innovation, providing an economy with added value, and raising competition levels in the financial industry (Albarrak and Alokley 2021). For example, Karim and Lucey (2024) concluded that while BigTech and FinTech disrupt various aspects of banking, they also offer opportunities to adapt to blockchain-based financing mechanisms. Understanding the ecosystem is important for identifying FinTech innovations and their interactions. Lee and Shin (2018) identified five main elements of the FinTech ecosystem:

- FinTech start-ups are entrepreneurial ventures that provide financial services in innovative ways across areas like payments, wealth management, lending, crowdfunding, capital markets, and insurance.
- Technology providers and developers work in emerging fields such as big data analytics, cloud computing, social media, and cryptocurrency. These tech advancements allow entrepreneurs to benefit from an environment with significant cost savings and minimal capital requirements.
- Governmental bodies are responsible for legislation and regulations, creating a supportive environment for entrepreneurs through favourable licencing and capital requirements, while tightening regulations on established companies. This approach fosters innovation and helps new solutions spread.
- Consumers, both individuals and organisations, play a major role. Millennials, those aged 18 to 34, are the primary consumers of FinTech in many countries with future demographics also likely to favour FinTech.

Telecom service providers are considered the main FinTech enablers through the provision of domestic and global broadband setups of connectivity, which is considered the basic infrastructure needed for FinTech growth (Lestari and Rahmanto 2023). Traditional banking products, such as payments and investment advisories, are being widely challenged by innovative FinTech solutions. Moreover, new technologies such as blockchain are enhancing many traditional banking services, enabling more security and lower costs. Financial incumbents such as banks, insurance companies, stock brokerage firms, and venture capitalists who offer financial services in the traditional forms, and after realising the disruptions introduced by entrepreneurs, were forced to re-evaluate their business models and develop strategies to catch up with the FinTech era, shifting into collaboration strategies. Although more disruptions are expected in the future, challenges are present and will emerge for both FinTech and incumbents (Lee and Shin 2018). Moreover, Lee and Shin (2018) identify the six proposed FinTech challenges as follows:

- Investment management: The selection of the best FinTech portfolios by financial institutions has the potential to provide better results. Incumbents may choose internal FinTech investments or collaborative investments with external start-ups.
- Customer management: Considering the availability of unbundled financial services by FinTech companies focusing on niche markets and the tendency for customers to deal with different providers for different services, incumbents need to figure out ways to retain customers, and FinTech needs to be innovative in attracting and retaining customers.
- Regulatory challenges: Incumbents already face the regulatory requirements of capital adequacy, data security, and other reserves and regulations, whereas FinTech companies need to be aware of and keep an eye on future regulatory directions and requirements that affect their business models. Venaik et al. (2024) argue that the FinTech sector has demonstrated significant potential to revitalise the current financial system, prompting regulators worldwide to work towards achieving a balance between innovation and protection.

- Technology integration: This focuses on a financial institutions' legacy IT systems and the challenges they pose when integrating with new FinTech technologies.
- Security and privacy: FinTech companies must pay attention to customers' privacy and security of information, where breaches of such data may result in losses. AlBenJasim et al. (2023) suggested that developing a cybersecurity framework for FinTech could be beneficial, offering a fresh perspective by highlighting it as a natural extension of existing knowledge.
- Risk management: FinTech innovations and adopted technologies, such as Robo-advisory, may result in faulty investment advice where FinTech may be held liable.

In a comprehensive systematic literature review (SLR) of FinTech, Suryono et al. (2020) summarised FinTech challenges into three main categories:

- Collaboration, where the development of a FinTech systematic framework is of clear importance, and adoption models are also being researched because of their high importance. Additionally, support from stakeholders, including regulators and banks, and the transition of FinTech's consideration from disruption to collaboration is a challenge.
- Regulation is another challenge owing to global differences in practises. Some are reactive whereas others are proactive. The adoption of sandboxes by regulators can help better regulate this new field.
- The protection and security of technology and data are of high importance for FinTech to secure the confidentiality of customers' data and for the continuity and efficiency of service.

Sanyaolu et al. (2024) explain that FinTech implementation must overcome various challenges including regulatory, ethical, and technological challenges. Furthermore, traditional financial institutions face challenges in adapting to changes introduced by FinTech, such as technological agility needs, adaptation to regulatory modern requirements, and the fostering of consumer confidence in digital platforms. Oberoi and Dharni (2023) concluded that the main challenges that must be addressed for FinTech include risk management and investment, customer management, technology integration, privacy and security, and regulatory compliance. Naz et al. (2024) identified the major challenges posed by FinTech startups in the MENA region, including privacy concerns, cybercrimes, financial disruption and instability, exploitation of social norms and values, growing inequalities, and regulatory authorities' lack of compliance. FinTech has a multifaceted impact on the banking sector, encompassing dimensions such as customers, companies, banks, regulatory authorities, and society (Elia et al. 2023). Moreover, FinTech has sparked concerns related to privacy, security, consumer protection, ethical issues, and regulatory compliance (Prastyanti et al. 2023).

To draw a comparison between conflict areas and the situation in Ukraine, for example, according to Vyhovska et al. (2018), IT infrastructure is crucial for FinTech as it helps adapt financial systems to post-conflict needs and creates innovative solutions for economic challenges. Wartime shifts FinTech's focus to urgent needs with FinTech companies leveraging advanced IT to offer services like "money jars" and fast donations. However, regulatory challenges hinder their ability to innovate quickly, highlighting the need for more flexible frameworks during crises (Sydorenko 2023). Furthermore, wartime increases cybersecurity challenges with financial fraud evolving through phishing, hacking, and crypto exploitation. Combating these threats requires monitoring transactions, improving cybersecurity, and educating users to prevent fraud. Effective methods for investigation and prevention are essential in tackling these risks (Reznik et al. 2024).

Research shows that FinTech implementation faces different challenges in Palestine. For example, Al-Daya et al. (2022) concluded that prominent challenges include the legal environment, cybersecurity, and customers not trusting digital services. Additionally, Awwad (2023) underscored that differences in FinTech adoption were linked to the city where the bank was situated and the educational background of the study participants. Furthermore, according to Magdy Rezk and Halim (2022), the regulatory environment

development and readiness is a challenge for FinTech implementation in Arab countries, including Palestine.

3. Methodology

3.1. Theoretical Framework

Diffusion on innovation theory (DOI) (Rogers 1995) and the technology, organisation, environment model (TOE) (Tornatzky et al. 1983) are both considered technology adoption theories for firms (Oliveira and Martins 2011). TOE is the most used; for instance, Awa and Ojiabo (2016) emphasise its robustness and dominance in studies concerned with organisational-level adoption, supported theoretically and empirically by recent studies. Gierdien and Jokonya's (2023) study revealed that technology factors are the main influencers at FinTech adoption at universities, while Megahed et al. (2021) investigated the relevance of DOI and TOE on the banks FinTech was adopted into in Egypt and Bahrain. Urumsah et al. (2022) found that factors like pressure of customers, pressure of competition, readiness of organisations, support of top management, and information technology knowledge significantly influence FinTech adoption.

As Figure 1 shows, Oliveira and Martins (2011) concluded that the TOE framework emphasises the organisations' internal and external factors and variables that interact with each other to facilitate technology adoption:

1. Technology factors consider technology characteristics including systems and technologies both internal and external. Complexity, compatibility, availability, trialability, observability, and other factors are of the most importance in facilitating or restricting technological innovation in an organisation.
2. The organisation factor considers the characteristics of the organisation itself. Factors like culture, structure, size, available resources, and its capabilities affect the organisations' position and abilities to adopt new innovative technologies.
3. The environment factor is the external field where the organisation operates. Many issues can be crucial including industry standards, regulatory environments, and competition which have a large influence on the organisation's position towards development and innovation.

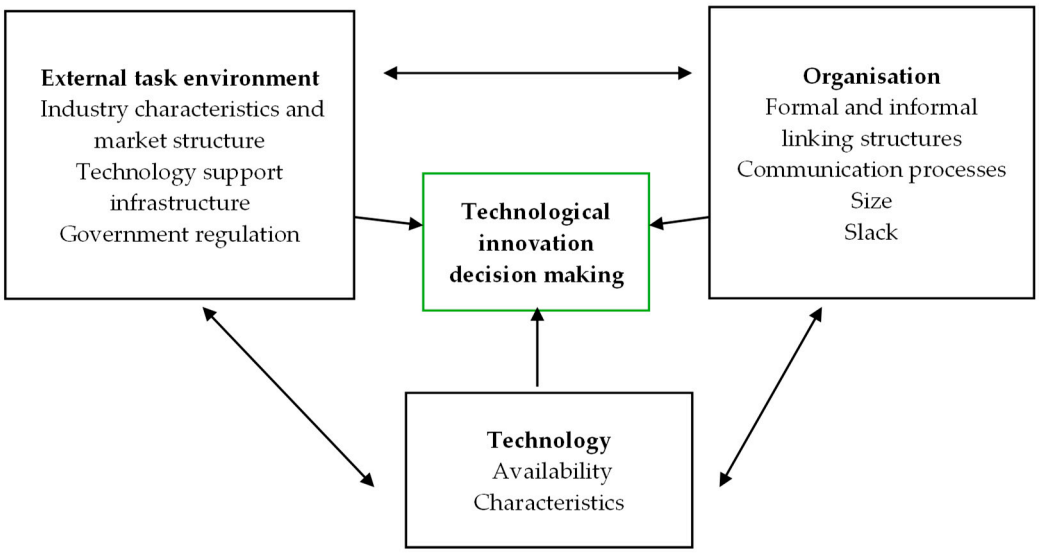

Figure 1. TOE (Oliveira and Martins 2011).

The Technology–Organisation–Environment (TOE) framework is better suited than the Diffusion of Innovations (DOI) theory for discussing FinTech challenges in Palestine because it provides a broader, multidimensional perspective. TOE examines the interplay between technological, organisational, and environmental factors, addressing critical issues such as limited infrastructure, regulatory challenges, and resource constraints that FinTech

companies face in Palestine. Unlike DOI, which focuses mainly on the adoption process and innovation characteristics, TOE accounts for external environmental pressures and organisational readiness, making it more adaptable to the complex and evolving FinTech landscape in the region. This holistic approach allows for a deeper analysis of the structural and contextual barriers affecting FinTech development in Palestine.

3.2. Instrument Development

A qualitative approach was adopted where the opinions of stakeholders, including the bank's seniors in addition to the regulator and other FinTech companies, were explored through semi-structured interviews. The researchers prepared and proposed questions to be used while interviewing the proposed sample based on the TOE framework mentioned before. The proposed questions are listed in Table 1.

Table 1. Proposed questions about operationalization.

Construct	Proposed Questions	References
General	Would you please describe the FinTech status in the banking sector in Palestine?	
	How about the non-banks affiliated FinTech companies?	
	To what extent are banks responding to FinTech challenges? In what thoughts can you explain about sufficient FinTech provisions by banks to their customers?	(Albarrak and Alokley 2021)
Technological	As technology is the second half of FinTech, how would you describe the technological environment, including but not limited to availability of professionals who are able to develop FinTech Apps, telecommunication infrastructure, IT development services, and support companies?	(AlBenJasim et al. 2023) (Al-Daya et al. 2022) (Lestari and Rahmanto 2023) (Lee and Shin 2018) (Karim and Lucey 2024) (Sanyaolu et al. 2024) (Oberoi and Dharni 2023)
Organisational	How would you describe your bank's budget for FinTech?	(Lee and Shin 2018) (Oberoi and Dharni 2023)
	What challenges may Islamic banks face concerning FinTech adoption different than those faced by traditional banks?	(Saba et al. 2019)
	In your opinion, how can the new FinTech companies position themselves in the market so that they become successful?	(Karim and Lucey 2024)
	To what extent would bank customers change their bank because of other competitor banks are providing FinTech services earlier or faster? How about moving to non-banks companies because of the same?	(AlBenJasim et al. 2023) (Oberoi and Dharni 2023)
	What about the challenges FinTech companies face/may face in Palestine?	(Suryono et al. 2020) (Oberoi and Dharni 2023)
Environmental	What thoughts do you have about the regulatory environment that facilitates/encourages FinTech provision and implementation in Palestine?	(Suryono et al. 2020) (Lee and Shin 2018)
	What about the regulatory environment's challenges or restrictions on FinTech?	(Lee and Shin 2018) (Venaik et al. 2024) (Sanyaolu et al. 2024)
	The legal environment has a critical effect on the business environment. What do you think about the legal environment with regard to FinTech in Palestine?	(Al-Daya et al. 2022)
	How do you describe the customers' position regarding the use of FinTech?	(Al-Daya et al. 2022) (Lee and Shin 2018)

3.3. Data Collection

Semi-structured interviews were conducted with sample bank Chief Executive Officers (CEOs), Business Development Heads (BDs), and Information Technology Heads (ITH).

Additionally, the interviewees included five FinTech companies (e-wallets) in addition to the PMA governor, PMA deputy governor, and PMA assistant governor. Table 2 presents the participants' details.

Table 2. Participants and interview details.

Institute	Participants	Individual/Group Interview	Total Participants	Number of Interviews	Interview Length (Minutes)
PMA	Governor Deputy Governor, Assistant Governor	Individual	3	3	70 60 45
Bank A	CEO, CFO	Group	2	1	60
Bank B	CEO, Head of strategy and IT	Group	2	1	60
Bank C	Consumer banking head	Individual	1	1	45
Bank D	CEO, Head of IT	Group	2	1	60
Bank E	CEO Head of IT	Individual	2	2	50 30
E-Wallet A	CEO	Individual	1	1	30
E-Wallet B	Reflect Head	Individual	1	1	30
E-Wallet C	CEO	Individual	1	1	30
E-Wallet D	CEO	Individual	1	1	30
E-Wallet E	CEO	Individual	1	1	30
Count			17	15	

Semi-structured interviews are suitable for the purpose as it gives the researchers the ability to have a clearer picture of the responses with the ability to have the 'why?' answered in addition to the 'what?' and 'how?' (Mark et al. 2007). Interviewees were contacted by phone first to secure their participation; an official email was sent to some interviewees according to their preference. The schedule was prepared according to interviewees preferences and interviews took place at their offices in Ramallah city in Palestine. They were assured at the start of each interview that collected data would only be used for scientific research and there would be no mention of any data that may disclose their privacy. After each interview, the recording was converted into a script and the script was sent back to them for any modifications. The version received from interviewees was used for thematic analysis.

3.4. Analysis Tools and Methods

The increasingly popular thematic analysis (TA) method was used to analyse the interview scripts. Braun and Clarke (2012) and Vaismoradi et al. (2016) suggest four stages to develop themes in the thematic analysis process, as shown in Table 3.

Table 3. Phases and stages of theme development in qualitative content and thematic analysis (Vaismoradi et al. 2016).

Stage	Steps
Initialisation	Reading transcriptions and highlighting meaning units; Coding and looking for abstractions in participants' accounts; Writing reflective notes.
Construction	Classifying; Comparing; Labelling; Translating and transliterating; Defining and describing.
Rectification	Immersion and distancing; Relating themes to established knowledge; Stabilising.
Finalisation	Developing the story line.

The use of computer-assisted qualitative data analysis software (CAQDAS) improves the quality of qualitative research outcomes. The CAQDAS helps researchers collect, organise, analyse, and visualise the reporting data. It is important to highlight that CAQDAS assists and does not replace human researchers. NVivo is an example of a popular CAQDAS (Dhakal 2022). NVivo development began in 1981 by Lyn and Tom Richards and, since then, developers have incorporated continuous capabilities and enhancements into its abilities and features so it can handle large amounts of different types of data (Jackson et al. 2019). Owing to its ability to improve and streamline qualitative research methods, researchers from a variety of fields have increasingly used qualitative data analysis software such as NVivo. NVivo offers several noteworthy benefits, including the capacity to effectively handle and arrange massive amounts of qualitative data from textual texts and multimedia sources, thereby allowing researchers to dive deeper into intricate datasets. NVivo enhances the rigour and depth of research findings by making it easier to extract significant insights and patterns from various sources by offering an intuitive interface and an extensive suite of tools for coding, categorisation, and data exploration (Limna 2023). Thematic analysis was conducted using NVivo software V12 leveraging the software licence of the university of Bolton. NVivo 12 developed by QSR International—Melbourne, Australia.

Tables 4 and 5 show the participants' institutes and their job titles. The institutes were carefully chosen to have a repressing sample consisting of the regulator (PMA), in addition to the supply side of FinTech, that is, banks and FinTech companies. The sample included five out of thirteen banks operating in Palestine and five licenced e-wallet companies. Due to its critical and important role, PMA, which is the banking and FinTech companies' regulator in Palestine, was chosen for inclusion in the sample. According to ABP (2023), the sample banks' assets constitute more than 71.1% of the total banking sector assets in Palestine. FinTech companies constitute all payment companies licenced operating in Palestine. The large and diverse sample size enhances the reliability and credibility of the research. Each participant was assigned a code between X1 and X17 for confidentiality.

Table 4. Palestine monetary authority participants.

Institute	Governor	Deputy Governor	Assistant Governor	Total
PMA	Yes	Yes	Yes	3
Total	1	1	1	3

Table 5. Banks and companies' participants.

Bank	CEO	IT/Strategy	CFO/Strategy	Consumer Banking Head	Past FinTech CEO	Total
Bank A	Yes		Yes			2
Bank B	Yes	Yes				2
Bank C				Yes		1
Bank D	Yes	Yes				2
Bank E	Yes					1
E-Wallet A	Yes					1
E-Wallet B	Yes					1
E-Wallet C	Yes					1
E-Wallet D	Yes					1
E-Wallet E	Yes					1
Expert					Yes	1
Total	9	2	1	1	1	14

Parallel to the interview's execution, using the iPhone recorder with the permission of participants, researchers transcribed the audio recordings into a script and then translated them into English, as they were multilingual in Arabic and English according to participants'

preferences. The translation was checked, and a semi-final version was introduced. The transcripts were then sent back to participants who carried out some amendments, corrections, and modifications, and sent them back to the researchers. This procedure aims to enhance the reliability and validity of data collection and analysis, as well as the ethical stance of researchers.

The interview files were uploaded to the NVivo software. The coding process took place by parsing the files line-by-line, and the coding process was performed three times to ensure accuracy and comprehensiveness. After the last run, the researchers reviewed the resulting codes and grouped them into categories, which were then grouped into themes correlating with the paper goals.

4. Data Analysis

Table 6 shows the codebook extracted from NVivo highlighting the main themes and their relative appearance within the interview files. Figure 2 also shows the main challenges mentioned by the participants classified within the TOE framework. Subsections will discuss each identified challenge in further detail.

Table 6. FinTech challenges codebook.

Name	Files	References
FinTech challenges	15	297
AML, CFT, and correspondent relationships	5	9
Bad service quality or lack of access or trust	4	6
Banks heavily involved in limited and small market	7	12
Cyber risks and consumer protection	8	17
Digital literacy, awareness, and culture	9	21
Economic limits	1	1
Global FinTech penetrating local markets (without licence)	1	4
IT and telecom infrastructure availability and cost	8	16
Lack of ecosystem interconnectivity	6	8
Lack of framework	6	12
Legacy systems at banks	3	6
Limited qualified talent	10	16
Non-bank challenges	15	68
Access to capital and funding and fear from failure	8	10
Cost of enacting business	5	8
Fierce banks competition	5	9
Financial infrastructure	1	1
Lack of creativity (copying global ideas only)	3	6
No financial inclusion problem and low banking barriers	3	10
Reputation and trust	5	6
Specific regulatory challenges	9	18
Political instability challenges	5	7
Readiness of the government	3	7
Regulatory and legal environment	15	53
Resistance to change and lack of agility digital age skills	11	24
Sharia compliance and slowness of updates	3	10

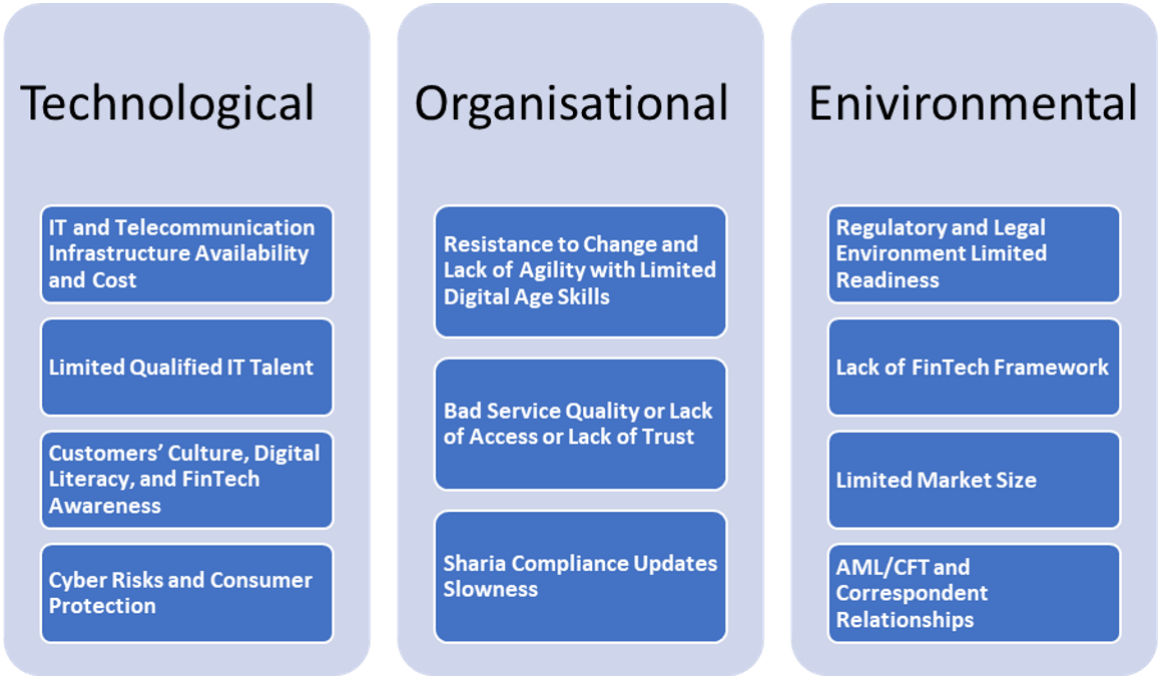

Figure 2. FinTech challenges.

4.1. IT and Telecommunication Infrastructure Availability and Cost

IT and telecommunication infrastructure availability and cost came out as the fifth challenge, with sixteen references and eight out of fifteen files. This factor is of high importance considering that FinTech is fully dependent on technology and telecommunications. It is of utmost importance in the Palestinian context, as telecommunication is fully controlled by the Israeli occupation. First, Israel controls the mobile frequencies Palestinians are allowed to use; hence, Gaza uses 2G, and the West Bank uses limited 3G frequencies. Second, Israel controls the communication equipment allowed in Palestine, limiting its ability to use suitable and sufficient equipment to guarantee service quality. Third, the full Israeli control of area C, which is more than 62% of the West Bank and Gaza, limits telecommunication companies' abilities to lay communication equipment like fibres, with their need to acquire Israeli permissions before any action. Finally, these restrictions increase the cost of services offered by telecommunications to customers.

Participants highlighted this challenge in many ways: participant (X1) commented on the challenges subject saying, "Telecommunications Infrastructure: There are a lot of mobile phones, but it can be hard to get consistent high-speed internet access, especially in rural places". Furthermore, participant (X15) also commented, "*The cost of internet access in Palestine is still relatively high, which can make it difficult for some people to access FinTech products and services*". Participant (X9) pointed to Israeli restrictions saying, "*We know that in Palestine there is certain challenges with the network due to Israeli restrictions*".

4.2. Limited Availability of Qualified Talent

The limited availability of qualified talent was also mentioned as a main challenge, with sixteen references from ten out of fifteen files. FinTech is recent and the availability of talent expertise can be considered critical for the development of this sector. It is not concerned with only technology, but also with financial services knowledge and global FinTech developments. Participant (X14) mentioned "*Qualified talent with global exposure*" as a major challenge, which was also mentioned by participant (X15), "*The lack of skilled talent in the FinTech sector*". Participant (X5) also said, "*it can help to certain limits, and then those who seek greater development will be insufficient*".

4.3. Customers' Culture, Digital Literacy, and FinTech Awareness

The customers' culture, digital literacy, and FinTech Awareness as a challenge came with twenty-one references from nine out of fifteen files and ranked third. While these factors affect customers' FinTech adoption and usage, they also affect the supply side, namely, banks. It does not encourage or challenge them to act rapidly towards FinTech investments. Participants concluded that culture has not developed enough towards digital services, where many customers still prefer traditional ways of banking (i.e., branches); they referred this to insufficient customers' digital literacy. Participant (X14) said, "*Similar to other markets in the region, digital literacy across the mass is not at the stage of easy adoption*", while participant (X8) argued that "*Digital literacy and trust in tech is still low*". Participant (X1) referred to the culture in the country as "*Cultural resistance, preferring the old ways of banking*".

4.4. Cyber Risks and Consumer Protection

Cyber risks and consumer protection came out as the fourth challenge, with seventeen references from eight out of fifteen files. This challenge was mentioned from two perspectives: one as a barrier for customer adoption, which results in low customer appetite for FinTech. The second as a challenge to FinTech providers and the risks of fraud. Participant (X5) spoke about the potential risks saying, "*the issue of electronic security, electronic piracy, and fraud operations*". Participant (X8) elaborated on the risks of scaling up FinTech, "*Scaling while managing risk is challenging*". On the other hand, some participants showed confidence in tech talent to handle such cyber risks as well.

4.5. Banks' Resistance to Change and Lack of Agility

The banks' resistance to change and lack of agility as a challenge came second with twenty-four references from eleven of fifteen files. Participants stated that some banks were slow to adopt and implement FinTech. Reasons for this slowness and resistance were diverse among the participants. Additionally, considering that online services and mobile banking provided by banks are sufficient, the banks find difficulty in managing the change and, having assessed that customers still prefer branches, they do not feel the need to rush to FinTech.

Participant (X14) said, "Other banks are more resistant to change and are taking a wait-and-see approach", while participant (X9) commented by saying "other banks find it difficult to manage the change", additionally, participant (X16) concluded "Until now except bank of Palestine and Arab bank, the banks coping PMA and FinTech solutions as it is". Participant (X3) noted that the understanding of FinTech by the majority of the banks is not accurate, "The issue depends on their view and understanding of FinTech. There are banks that believe that if they establish online services, they believe that it is sufficient" and concludes "I see that a bank that does not want to develop its electronic services will not have future sustainability".

4.6. Sharia Compliance and the Slowness of Its Updates

Islamic banking is attached to *Sharia* compliance, which was identified as a challenge, with ten references from three out of fifteen files. This challenge is important to Islamic banks, as they are the ones concerned. Islamic banks cannot adopt or introduce any product or service without passing the *Sharia* conditions from the Fatwa Agency. Some participants assessed that such slowness provides a competitive advantage to conventional banks. Participant (X5) says, "*Commercial banks are faster than Islamic ones, this may be because Sharia standards are still not ready to deal with the issue of financial technology*", but he affirms that efforts are being extended to handle this challenge "*Sharia and supervisory bodies are making great efforts to reach legitimate solutions regarding digital transformation and financial technology for Islamic banks*". Participant (X3) sheds light on the complexity of Islamic lending services in comparison to conventional lending products by saying, "*Regarding credit, how will you*

have integrated electronic services in credit issues and credit approvals? It differs from traditional banks in which credit is a loan regardless of the goal, whether personal, a car, or a house, for example".

4.7. Regulatory and Legal Environment

Interviewees agreed with the literature review about regulatory challenges. The regulatory and legal environment came first with fifty-three references out of fifteen files. This shows how important and vital the readiness of the regulatory and legal environment is to the success of FinTech. While many banks praised the monetary authority's steps towards FinTech, others saw that more is still needed; on the other hand, FinTech companies saw that the PMA's actions were not supportive. Participant (X15) commented, "*The legal environment in Palestine is still evolving when it comes to FinTech. The (PMA) has taken some steps to create a more supportive environment for FinTech, but there is still room for improvement*". Participant (X12) saw that the regulator should spread support at its operational level, "*I think the challenge for the regulator is that while I think at the top the directions are there, but it is always much difficult when it comes to the operational level where really the blockers come from those who are used to do the day-to-day work. There is a positive sign*". On the other hand, participants saw an adverse action by the PMA, especially interfering with the fees and commissions, which represent the soul of the FinTech; for example, participant (X17) commented "*in many cases they are giving themselves the right to interfere in fees and commissions of the services*". Moreover, participants addressed the need to facilitate laws and regulations other than those of the PMA; participant (X13) commented, "*The law and regulations and the legal legislation should be in place in order to facilitate working, it's about time for the laws and regulations and the legal aspect to be solved out*".

4.8. The Lack of FinTech Framework

The lack of a FinTech framework was identified as an important challenge. The availability of a comprehensive FinTech framework is critical; it provides straightforward data for everyone interested in the field, including legal, regulatory, ecosystem, government, incubating environment, and clear strategies. Participant (X15) highlighted "*The lack of a comprehensive FinTech framework: The PMA is still working to develop a comprehensive FinTech framework, which can make it difficult for FinTech companies to know exactly what is required of them*". Participant (X12) also said, "*we lack the framework in Palestine that shows that opportunities needed to be covered by FinTech to make the banking sector more efficient and advance*". Participant (X11) described the deficiency in the running framework, before some fixtures by PMA, saying "*part of the framework regulating the work of banks and financial institutions in Palestine, was hindering the ability of start-ups and companies in the FinTech field, to innovate in the field of developing financial services, and creating more services*".

4.9. Limited Market Size

The small and limited Palestinian market was highlighted with twelve references from seven out of fifteen files. Market size provides opportunities for competitors and market players; additionally, market openness and exposure to neighbouring and global markets provide opportunities for market players to innovate and progress. Unfortunately, Palestine is a small market with a population of about 5.5 million people, and the segregation between the West Bank, Jerusalem, and Gaza causes current market players to compete fiercely and nearly cover all segments. Additionally, because of occupation, the Palestinian market is very limited and nearly closed from the outside because of border control by Israel. Participant (X9) addressed this factor saying, "*it is very difficult for those FinTech to find the untapped market because maybe it's not there*". Participant (X5) mentioned, "*As for competition in the market, I believe that the situation of banks in Palestine does not allow any intruder, and this will be prevented by providing the service*". Furthermore, participant (X3) thinks that with such a market size, only creative ideas will have opportunities, "*this is the result of the fact, that Palestine is small, and the spread of banks is large. These companies may not be able to compete with*

banks, but this does not mean that if someone comes up with a creative idea in the future, you will not be able to take it on".

4.10. Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT)

Anti-money laundering and counter financing of terrorism were described as needing special attention while engineering FinTech services. FinTech companies lack experience and proper knowledge of this critical matter. Participant (X3) mentioned AML/CFT as challenge saying, "*the issue of combating money laundering and combating terrorism*".

4.11. Non-Bank Companies' Challenges

FinTech non-bank companies' specific challenges were assessed to be of high importance, with sixty-eight references from fifteen out of the fifteen files. FinTech companies are challengers who globally compete with banks and challenge them, and for that, banks joined the race and started to invest in FinTech to preserve their revenues and market shares. The benefits are substantial, and their existence and ability to work, and the challenges they face require special attention.

4.11.1. Regulatory Challenges

There were eighteen references to regulatory challenges from nine out of fifteen files. FinTech companies do not have experience dealing with the well-regulated banking sector. The same is true for PMA, which is not used to regulate small businesses. PMA restrictions concerning fees and commissions, for example, hinder FinTech companies from building their business models. Participant (X15) explains this matter saying, "*There are several regulations that FinTech companies need to comply with, and these regulations can be complex and time-consuming*". Regulatory constraints are diverse and may affect the companies' abilities to develop their profitable business model; participant (X9) explains, "*another challenge is how will those FinTech's make money, the market is not free in terms of commissions and fees for FinTech to do their own operating business model*". Participant (X5) infers that the regulator purposely prevents FinTech companies from gaining market share: "*the regulator is afraid of providing the environment and tools for new companies to obtain a market share*".

4.11.2. Access to Capital and Funding

The access to capital and funding has ten references in eight out of fifteen files. This matter is important to FinTech companies, hence, an important challenge. Entrepreneurs with weak financial abilities fear loss and become hesitant to invest their money without guaranteed compensation in case of loss. Participant (X10) described this challenge, "*Fear that they are going to invest and then if we fail, no one compensates them*". Participant (X5) shared a similar view, "*the most important reasons for that is that failure to do so means exiting the market*".

4.11.3. Low Barriers for Banking Relationships

Ten references from three out of fifteen files considered low barriers for establishing a banking relationship as a challenge to non-bank FinTech companies. This is important because market availability and entry opportunities are critical for success. Participants argued about the low requirements for people to start a banking relationship and the high coverage of banks' branches in the geography of Palestine. Participant (X9) commented on this matter saying, "*in Palestine I believe it's very easy for anyone to open a bank account as banks are everywhere*". He even doubted the financial inclusion issue because of banks availability, "*I don't think there's an issue of financial inclusion*". Participant (X3) saw that there was no need for electronic payment companies, considering size of country, and developed banking system, he said, "*it became clear that in countries that have a fairly developed banking system, there is no need for electronic payment companies, especially in countries that are geographically small and where banks are well spread*".

4.11.4. Other Challenges for Non-Bank Companies

Other challenges faced by non-bank companies included fierce competition by banks, the high cost of enacting business in Palestine, the positive reputation of banks in Palestine, and the lack of creativity in the services offered by FinTech companies. Participant (X3) addressed this matter saying, "*do not redo something existing because you will not be able to compete with it*".

4.12. Other Challenges

Other challenges for banks were identified and mentioned, including:

1. The Absence of an Ecosystem and its Interconnectivity was identified as another challenge, where FinTech is dependent on connectivity with other stakeholders, such as billers and service providers, in addition to the banking system. Participant (X12) described that saying, "*How to set up business architectures that connect with different networks*".
2. Political Instability Caused by Occupation was mainly mentioned as a challenge, also causing a less attractive investment environment for investors, especially global investors. Participant (X17) said, "*Availability of FinTech investors that mean less FinTech and less competitors, affected by occupation*".
3. Government Tech-Maturity and Technological Readiness by the government in Palestine was described by participants as lacking digital services and development; hence, it is another challenge for FinTech in general and FinTech companies in particular. The government is a main biller from one side and has important resources required for FinTech, such as state registers. Participant (X9), for example, mentioned, "*Also the digital maturity of the government*".
4. The legacy of IT systems at the banks poses a challenge as there is little trust in FinTech by customers, the customers' perceived quality of service is poor, and there is fear from global FinTech players such as ApplePay, GooglePay, and the Amazon market penetration without any ability to supervise or even proper regulatory frameworks and licencing.

5. Discussion

As seen in the literature review section, Lee and Shin (2018) discussed six FinTech challenges: investment management, customer management, regulatory, technology integration, security and privacy, and risk management. Suryono et al. (2020) summarised FinTech challenges into three categories: collaboration, legal framework, and IT infrastructure. It is worth mentioning that every researcher looks at the matter from a different angle, resulting in diverse FinTech challenge classifications. The participants in the semi-structured interviews had a compatible perspective regarding all the previously mentioned challenges. Moreover, additional challenges were identified because of the special situation in Palestine: IT and communication infrastructure, talent availability, digital literacy, lack of framework, and *Sharia* compliance.

5.1. Investment Management

Lee and Shin (2018) stated that investment management is a FinTech challenge related to incumbents choosing the right FinTech investments and choosing a suitable framework, being local or through collaboration with start-ups. Bank participants (representing incumbents) said that they preferred in-house development. While all banks' participants reiterated their plans and strategies for FinTech development, three participants argued that two banks, namely Bank of Palestine and Arab Bank, were ahead of other banks in FinTech development and implementation, and that all banks' participants showed willingness to collaborate with FinTech companies and entrepreneurs, conditions to provide innovative services and solutions. Evidence tends to suggest that while two banks are proceeding heavily, other banks follow a wait-and-see strategy with fair expenditures on digital projects, especially those forced by PMA, leaving other banks to lead. This situation can be explained by the two leading banks financial, technical, and capital abilities that

enable them to be pioneers in FinTech investments, while other banks with fewer abilities and resources learn from their success and failure to decide their way forward.

5.2. Customer Management

Lee and Shin (2018) related customer management challenges to their tendency to deal with different providers for different services. All participants said that their institutes were investing heavily in FinTech. Banks and banks related to FinTech companies' participants clarified their banks and companies' plans to sufficiently cover their customers' needs through in-house FinTech development and investments. FinTech non-bank companies, on the other hand, explained that they are gaining market share and attracting customers from both the unbanked and banking sectors. One PMA participant commented that most FinTech companies' users were already bank customers. The results tend to suggest that customer management challenges will deepen in the future because they deal with banks and FinTech companies.

PMA participants explained PMA's efforts and plans to enable FinTech development to banks and FinTech companies. Efforts included the licencing of five FinTech companies and the launch of the FinTech Sandbox. Furthermore, PMA's bill presentation (E-Sadad) and instant payment projects are being developed. It is worth mentioning that the E-Sadad bill presentation system is currently alive; it connects all billers in one system that is integrated with all banks and e-wallets companies, and mobile and electronic applications.

All participants (17) agreed that challenges are the highest for FinTech non-bank companies. Two out of three PMA participants reiterated that challenges for FinTech companies are high, explaining their concerns about their ability to survive competition with banks, unless they introduce innovative solutions to the market. The FinTech companies' participants argued that they need more support and protection from regulators to enable them to gain market share, especially for the provision of FinTech services that banks have neglected so far. The banks' participants do not share this direction requested by FinTech companies and see those companies as not needed in the market, considering the banks' abilities and appetite to invest and provide FinTech. Here, one can see the existential challenges facing FinTech companies, as on one hand they need to face formidable competition from banks because they have financial muscles, and they can develop the FinTech offering in-house; on the other hand, they are expected to compete with each other to gain a customer base and trust.

5.3. Regulatory Challenges

Restoy (2019) discussed the regulatory challenges of FinTech to regulators and classified the regulatory framework into three groups: FinTech activities regulations such as digital banking, new technologies regulations like artificial intelligence, and financial services promotion technologies such as digital identification technologies. Moreover, Lee and Shin (2018) incumbents are already facing regulatory challenges, including capital, data security and other requirements, while FinTech companies are not aware of, or used to, such a highly regulated environment. Venaik et al. (2024) addressed the regulatory challenge of balancing between protection and innovation. Suryono et al. (2020) identified the regulatory environment as a major challenge for FinTech globally. As Sydorenko (2023) emphasises, regulatory challenges deepen and require swift action during conflict and war times.

All 17 participants agreed with the regulatory challenges and their importance. Each group of participants had a point of view in this regard.

PMA participants said that the current legal framework imposes restrictions on their ability to enable FinTech innovations. They explained their plans to introduce law amendments that fix current legal gaps, but they reiterated that it is not an easy mission as it requires other parties' involvement, such as the commercial law and the lack of data protection law. It is worth mentioning that FinTech entrepreneurs who want to scale globally

are expected to face complex regulations in different jurisdictions, which inhibit access to markets and delays customer adoption (AllahRakha 2023).

Banks (and bank-related companies) participate in highlighted regulatory challenges from their own perspectives. They raised the subject of restrictions imposed by PMA on fees and commissions categories and amounts, as banks are unable to collect any type of commission or fee that was not approved by PMA beforehand. The bank participants also expressed their views that PMA does not introduce the required law amendments required for FinTech development. One participant mentioned that while senior management at PMA may be supportive of FinTech, lower-level management and staff may delay or block FinTech innovation. All bank participants expressed their views that PMA is extending some effort in the right direction, but they need to accelerate these efforts.

The FinTech companies' participants also agreed that regulatory challenges are of the highest importance. They highlighted their views that PMA needs to be more flexible with FinTech companies and give actors space to innovate and create, especially to build different business models. Participants criticised PMA for their intervention by imposing the fees and commissions structure for FinTech transactions, which are the blood life that will make FinTech services profitable. Moreover, the companies' participants reiterated the imminent need for regulations and law amendments that enable FinTech innovation by the companies; for example, one participant spoke about open banking, which refers to banks opening their core systems for third parties using application interfaces (APIs), condition to customers' consent, and those third parties can introduce innovations of value to customers like account aggregators (Premchand and Choudhry 2018).

Addressing regulatory challenges for FinTech implementation in Palestine requires constructive collaboration between banks, FinTech companies, and policymakers. Regular dialogue can help identify and address specific barriers, while advocating for regulatory sandboxes enables controlled testing of innovations. Engaging stakeholders in co-developing policies ensures frameworks are practical and supportive of both innovation and consumer protection. Educational initiatives can help regulators understand FinTech's potential to enhance financial inclusion, digital payments, and economic activity. By showcasing FinTech's positive impact and adapting global best practises to local needs, interaction with policymakers can foster a balanced regulatory environment that supports a thriving FinTech ecosystem in Palestine.

5.4. Banks Legacy Systems

Banks and PMA participants agreed with Lee and Shin's (2018) description of the banks' legacy systems as challenges for FinTech because of IT integration between such systems and FinTech. Contrary to the inference, the two large banks in Palestine are leading FinTech development in the market, as participants highlighted. It is worth highlighting that witnessing the two large banks leading FinTech in the Palestinian banking sector does not mean that they are not having legacy systems challenges; it may be evidence of their efforts to overcome such challenges and provide solutions.

5.5. Cyber Risks and Consumer Privacy Protection

Consistent with Suryono et al. (2020), participants emphasised the importance of cyber risks and consumer privacy protection and considered them an important challenge facing the development of FinTech in Palestine, which has been confirmed by all participants. Cybercrime and cyber risks become more imminent during conflict times and needs high attention and care (Reznik et al. 2024).

Cyber risk is defined as "an operational risk associated with the performance of activities in cyberspace, threatening information assets, ICT resources, and technological assets, which may cause material damage to an organisation's tangible and intangible assets, business interruption, or reputational harm. The term 'cyber risk' also includes physical threats to ICT resources within an organisation" (Strupczewski 2021). Robust and effective controls are required for the prevention and mitigation of serious cyber risks, especially in areas such as

cybersecurity, injection of malware, denial of service attacks, privacy, insecure APIs, insider threats, vulnerabilities, and data security (AlBenJasim et al. 2023). Participants highlighted such cyber risk challenges; hence, they emphasised that they should be considered and handled from origination. One PMA participant highlighted the need for banks to invest in this field and deepen their experience and knowledge in the cyber risk field considering the shortage of available local expertise.

5.6. Risk Management

Risk management is important Lee and Shin (2018), as faulty advice or decisions that may be taken by FinTech applications, such as robot-advisors or artificial intelligence, will make concerned companies or banks legally liable. The participants addressed this subject as part of the regulatory and legal challenges faced by FinTech in Palestine. While the examples are of global and local importance, additional legal issues were highlighted by participants related to the primitive digital legal environment in Palestine. They emphasised the importance of legislation, such as electronic transactions and digital signatures. This legislation is basic and enables innovation and creativity in FinTech. On the other hand, Global FinTech are heavily utilising artificial intelligence (AI) and machine learning (ML) technologies to introduce innovative solutions and services, including advisory and support services, introducing new types of risks and challenges. While banks in Palestine did not reach the AI and ML levels of technologies, such technology usage will soon become the new normal; hence, Palestine should consider these risks and have appropriate legislation that is comparable to global directions.

5.7. Palestinian-Specific FinTech Challenges

The participants identified further challenges that are specific to Palestine and may be like other markets. They are IT and communication infrastructure, talent availability, digital literacy, lack of framework, legal compliance, and *Sharia* compliance.

a- IT and communication infrastructure: Participants spoke about the weak communication infrastructure in Palestine, especially mobile frequencies. One participant explained that Palestine is split between the West Bank, where 3G became available a few years ago, and the Gaza Strip, which is still on 2G. This is related to the restrictions of Israeli occupation, preventing and restricting the communication environment in Palestine. It was recently announced that 4G is expected to be approved by Israel soon. Knowing that FinTech is interrelated with Internet connectivity, and considering Palestinian telecommunication networks, participants considered this matter as an acritical challenge. The IT infrastructure is of high importance, especially in countries like Palestine with war and conflict conditions (Vyhovska et al. 2018).

b- Talent availability: This was addressed by all the participants as a challenge. All expressed their views about insufficient talent availability, both technological talent and business talent who innovate new ideas. While all agreed about the challenge, the proposed solutions included the ability to cooperate with external experts, the development of FinTech training programmes for young graduates, and collaboration with universities to enhance tech graduates. It is worth mentioning that continuous instabilities in Palestine and the occupation's entry restrictions for international experts contributed to this challenge by preventing expertise exchange.

c- Digital literacy: Participants considered weak digital literacy within some parts of the Palestinian population, limiting and creating challenges for FinTech development and adoption. They relate this challenge to seniors and older people, while young Palestinians, who are the majority, are tec-savvy high technology demands.

d- The lack of a FinTech framework that clarifies strategy, organises efforts, and shows development priorities was identified by participants with high importance. While it was part of the investment management challenge mentioned before Lee and Shin (2018), participants paid special attention to it because its severity increases with the severity of every other challenge.

e- *Sharia* compliance for Islamic banking was mentioned by six out of seventeen participants, who are Islamic banks and PMA participants, as a challenge for Islamic banks in line Saba et al.'s (2019) conclusions. Participants highlighted a slow approval process by *Sharia* committee at each Islamic bank and by Islamic banking and finance agencies such as the Accounting and Auditing Organisations for Islamic Financial Institutions (AAOIFI). Participants explained the inability to have comprehensive technological solutions for Islamic bank services, especially financing services. Important to say is that this challenge is not a Palestinian one; it concerns all Islamic banking providers globally. Participants elaborated that the FinTech *Sharia* compliance subject is attracting the attention of all stakeholders in the Islamic Banking industry, and intensive efforts are being made to address and accelerate the process.

5.8. FinTech Companies' Special Challenges

On the other hand, according to five out of seventeen participants representing FinTech companies, there are challenges with high importance specific to those FinTech companies, which, according to the participants, require attention and solving.

1. Regulatory challenges: Nine out of seventeen participants described the regulations of FinTech companies as complex and difficult to comply with, describing them as complex, rigid, sometimes restrictive to innovation, and time-consuming; for example, they mentioned capital requirements and restrictions on fees and commissions. One participant expressed his view that PMA is afraid that FinTech companies will gain market share.
2. Limited access to capital, financing, and venture capital: Eight out of seventeen participants spoke about the limited availability of venture capital and investment instruments. Moreover, access to financing is limited because banks are hesitant to lend to start-ups. The weak financial position led to the fear of loss in the case of failure of FinTech start-ups.
3. Competition with banks was considered an important challenge for five out of seventeen participants. They describe competition with banks as fierce and strong. It hardens considering the limited size of the Palestinian market and banks targeting and accepting all types of clients, from ultra-high net worth individuals (UHNI) to the smallest consumer clients. Consequently, this prevents FinTech companies from finding market gaps to penetrate the marketplace. On the other hand, banks and PMA participants argued that non-bank FinTech companies lacked creativity. One PMA participant criticised the FinTech companies for focusing only on payment services; such services he said, "are well served by banks". This shows an irreconcilable position and paradox in the marketplace between banks, regulators, and FinTech companies.

6. Conclusions

In conclusion, FinTech in Palestine faces several challenges. They are diverse and complicated and are concerned with different parties. Findings suggest that they can be classified in accordance with TOE framework.

On the technological front, the situation is challenging. The IT and telecommunication infrastructure, compounded by the limited availability of mobile frequencies due to Israeli occupation controls, poses a significant hindrance to the growth of FinTech services. Moreover, the shortage of qualified IT talent and the cyber risks related to consumer protection add further complexity to the technological landscape. The lack of digital literacy among customers and limited FinTech awareness compound these technological barriers, reducing the likelihood of widespread adoption.

From an organisational perspective, resistance to change within the financial sector is a key issue. Many institutions struggle with a lack of agility, and their limited digital skills prevent them from keeping pace with the evolving technological landscape. Additionally,

Sharia compliance updates are slow to implement, further delaying progress in the adoption of digital financial services within Islamic banks.

Finally, the environmental challenges include a lack of a FinTech framework, which leaves both banks and non-bank companies without clear regulatory guidance. The regulatory and legal environment is also not fully ready for the rapid developments of the FinTech sector, adding to the uncertainty. Limited market size and AML/CFT regulations also create challenges for non-bank entities, which face fierce competition from established banks and struggle with a lack of funding and investment opportunities.

Overall, these interrelated challenges require coordinated efforts across different sectors, including the legal, financial, and technological domains, to enable the successful integration and growth of FinTech in Palestine.

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