Fintech in Malaysia: Navigating Challenges and Shaping a Digital Future

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Abstract

This paper explores the growth of Fintech in Malaysia, particularly focusing on the challenges faced by Fintech startups in shaping the country's evolving digital landscape. Through a comprehensive narrative review, the paper synthesizes themes from diverse sources such as articles, newspapers, and written materials. This approach not only enriches the limited Fintech literature specific to Malaysia but also resonates with key global concerns in Fintech such as market competition, regulatory barriers, insufficient capital, lack of talents, security concerns, technological issue, and market readiness. This paper demonstrate research that complements existing knowledge and offers fresh perspectives, bridging the gap between the local context and the broader global conversation. The findings provide crucial information for policymakers, investors, and Fintech industry stakeholders, ultimately fostering growth and innovation in the Malaysian Fintech ecosystem.

Keywords: Fintech, digital economy, Malaysia, Fintech challenges, Fintech development

1. Introduction

Fintech, which refers to financial technology, is a concept that has been around for a while. It refers to any innovation in technology applied to the financial sector to describe the innovation it brings in delivering the business services. Fintech describes the processes of change in the financial sector through the introduction and use of information and communication technology (Gomber, Koch and Siering, 2017). Many researchers use terms like 'digital innovation' or 'digital transformation' in their studies to identify innovations and disruptions (Barroso and Laborda, 2022). The term has occasionally been used interchangeably with challenger banking, digital banking, digital finance, or e-finance might be due to its potential to disrupt how conventional banks operate.

Milian, Spinola and Carvalho (2019) opined that term of Fintech appears as a "buzz word" or hype, especially when it was in press, as if it were an important phenomenon that should be observed by practitioners (incubators, venture capital, angels, among others) connected to the financial industry, information technology (IT) and innovation. Gomber, Koch and Siering (2017) proposed a concept of Digital Finance Cube in navigate the understanding of Fintech. This concept applies three central dimensions that are digital business function (Digital Financing, Digital Investments, Digital Money, Digital Payments, Digital Insurances, and Digital Financial Advice), technologies and technological concepts (block chain technology, social networks, near field communication (NFC), peer-to-peer technologies, big data analytics, and further technological enablers, like mobile devices, intuitive user interfaces, and security technologies) and digital finance institution (Fintech Companies be it a startup or established IT companies and traditional finance provider).

In a milestone for Malaysian Fintech, Bank Negara Malaysia (BNM) has announced the selected few for its coveted Digital Bank Licenses. Only five consortiums emerged victorious from 29 proposals, propelling Malaysia to the forefront of Southeast Asia's Fintech revolution. This strategic move, encompassing licenses under both the Islamic Financial Services Act (IFSA) and the Financial Services Act (FSA), promises to unlock a treasure trove of benefits: fostering financial inclusion, slashing transaction costs, and empowering Malaysians with better tools for managing their finances (Bank Negara Malaysia, 2022). By embracing digital technology into daily transactions and providing tailored solutions backed by digital analytics, digital banking paves the way for enhanced economic involvement. This moves towards digital banking stems from the acknowledgment that technology holds the power to transform financial services, offering individuals and organizations unparalleled convenience, efficiency, and accessibility. The fusion of technology and money has ushered in a new era of financial services, disrupting conventional banking, payment systems, lending, and investment practices.

This paper aims to delve deep into the history and development of the Fintech sector in Malaysia, shedding light on its evolution and significant turning points. By examining the past, we seek to understand the roots upon which Malaysia's contemporary Fintech ecosystem has been built. Understanding the historical context is crucial for gaining insights into the foundations and drivers of Fintech innovation in Malaysia. This paper takes a distinctive dive into the history of Malaysian fintech, presenting a comprehensive narrative from the emergence of e-banking to current innovations. This approach enables the identification of pivotal milestones, impediments, and adaptations unique to Malaysia's experience. Thus, incorporating a historical lens adds substantial value to fintech discourse with a deeper appreciation of the distinct factors and forces that have shaped the trajectory of financial technology in Malaysia.

Moreover, this paper investigated the challenges facing Malaysian Fintech sector. These challenges encompass various factors such as market competition, regulatory barriers, insufficient capital, security concerns, technological issue, and market readiness. Investigating these challenges could provide valuable insights about the limitations that Fintech companies must overcome to innovate and grow. Resolving these issues in an efficient manner is essential to the long-term growth and advancement of Malaysia's Fintech industry.

Overall, this paper seeks to provide a comprehensive analysis of the Fintech landscape in Malaysia, examining its historical development and the challenges that Fintech companies face. By shedding light on these aspects, we aim to contribute to understanding Malaysia's Fintech ecosystem and pave the way for further innovation and growth in the sector.

2. Research Methodology

This paper conducted a thorough review that included relevant academic articles, industry reports, and regulatory documents to provide a detailed examination of the Fintech industry in Malaysia. The literature was selected based on their relevance to the research objectives and their ability to provide valuable insights into the growth, obstacles, and opportunities present in the Malaysian Fintech sector, as identified by specific themes. The methodology used in this paper was by reviewing the relevant academic journals. It used narrative review methodology to determine the challenges of FinTech in Malaysia that could compromise their long-term sustainability. Various databases were searched to carry out the study. The following are some of the appropriate keywords during the search: Fintech, challenges of fintech, banking, net banking, online banking, e-wallet and digital finance. The search covered articles from journals, newspapers, English language and publicly available.

3. Literature Review

3.1 Overview of the Fintech Industry in Global

The history of Fintech can be traced back to July 1886, when the world witnessed the first electronic fund transfer across the Atlantic Ocean via transatlantic cable using technology such as telegraph. The communication duration from North America to Europe has been reduced from ten days to 17 hours (Leong and Sung, 2018). This historical moment marked the beginning of the new information age, Fintech 1.0, which further improved financial services, especially in the banking industry afterwards. The business model during that time involved branches, cheques, and paper currency since its first establishment of the world's oldest bank, Monte dei Paschi di Siena in 1472. This model remained unchanged for over 500 years until the first automated teller machine was created in 1967 (Arner, Barberis, and Buckley, 2015). Since then, financial connections, payments, and other financial transactions have been made possible across international borders due to globalization and automated teller machines. Other notable milestones in the Fintech timeline also include the launch of the Egg credit card in the UK in 1998, utilizing client-side aggregation technology from vendor eWise. In the same year, PayPal was created, marking a significant development in online payments. Starting in 2008 onwards, the digitization process quickly shifted into one where businesses began to use innovative technologies in their operation. Many new technology start-ups began to arise in the financial industry, known as Fintech, as an alternative to traditional banking in reaction to the gap left by the banks during the 2008 financial crisis (Barroso & Laborda, 2022).

The year 2009 saw the founding of Venmo and Square, further expanding the Fintech landscape. In 2011, First Direct became the first to launch a smartphone banking app in the UK, followed closely by Natwest. Venmo also took a step forward in 2012 by launching as a mobile payment app. Since then, Fintech has experienced a surge of new applications worldwide. For example, in 2014, Tencent launched WEBank and Ant Financial launched MYBank.

In 2020, Facebook unveiled Facebook Bank, while in 2021, Amazon introduced a checking account featuring personalized spending recommendations, point-of-sale financing options, and access to Amazon Go branches. By reimagining traditional banking practices and embracing technological advancements, these milestones highlight the transformative nature of Fintech and its impact on the financial services industry. The following figure illustrates the global fintech era with few milestones for each era.

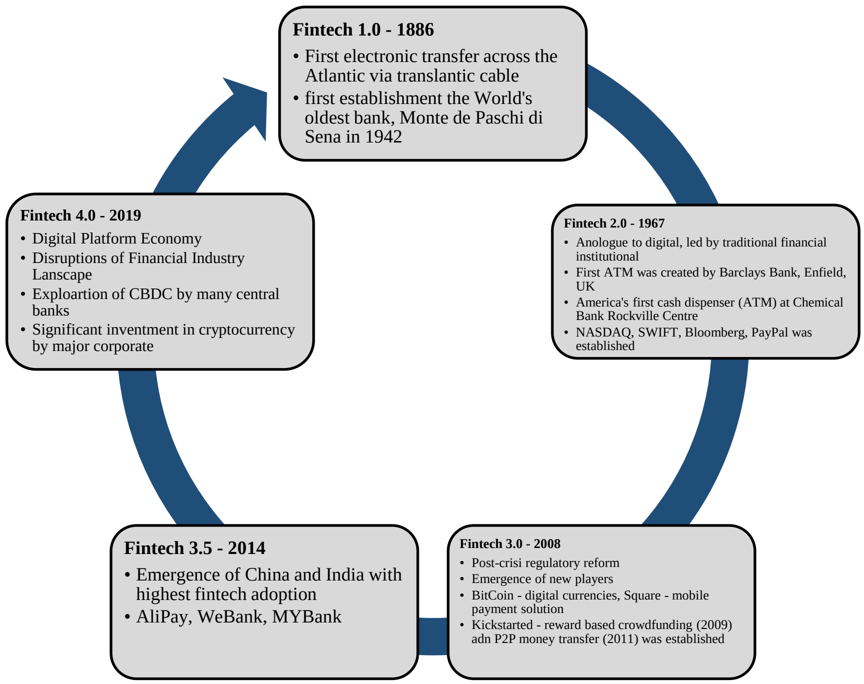

Figure 1. Global Fintech Era

3.2 History and Development of the Fintech Industry in Malaysia

The usage of the first credit cards back in 1978 can be marked as one of the earliest key turning points in Malaysia's Fintech development of the digital-based banking sector. The credit card was issued by Bank Bumiputra (known as CIMB Bank today) in collaboration with Mastercard. In order to efficiently clear checks, cashier orders, demand draughts, and other retail paper-based instruments, SPICK (Sistem Penjelasan Imej Cek Kebangsaan), the national cheque information clearing system was introduced in November 1997. In the same year MEPS (Malaysian Electronic Payment System), interbank network service provider in Malaysia was established and collaborated with banking institutions to come out with multipurpose stored value card using smart card technology, MEPS Cash**.** Two years later RENTAS (Real Time Electronic Transfer of Funds and Securities), was implemented to replace the previous end-of-day net settlement system, Sistem Penjelasan Elektronik Dana dan Sekuriti (SPEEDS). It enables the processing and continuous settlement of payment instructions between System participants during the working day. In the same year, an internet payment gateway also created by MEPS to monitor e-commerce activities made transactions over the internet more secure.

Domestic financial institutions were permitted to offer the full range of internet banking services in 2000, but only under BNM guidance and control. As a result, Maybank, one of the biggest banks in Malaysia, introduced Maybank2u, its online banking platform, in 1997. It allows their customers to have easy access to their accounts and perform various banking transactions digitally, taking advantage of increasing use of the internet during that time. According to Abdul Rahim, Jaaffar, Sarkawi, and Shamsuddin (2020), the goal is to persuade customers to use an internet banking system rather than an automated teller machine during that time. Later, CIMB bank adopted a similar strategy and launched CIMB Clicks, an internet banking platform that gave customers access to online banking in the same year.

In October 2004, BNM launched the Financial Process Exchange (FPX), the multi-bank internet platform, witnessing a significant development in the financial services industry. FPX enables the user to do transactions at lower transaction cost and a more customer-oriented system (Akhtar, 2004). It provides a more secure platform to allow for real time interbank fund transfer and many e-commerce transactions. This paved for a more streamlined and customer-oriented environment to the digital banking ecosystem in Malaysia. The shift towards digital banking and online transactions not only offered convenience but also improved security measures to safeguard customer information and funds. Another big landmark in the Fintech industry was when M2UMap was launched by Maybank in 2009, marking the first mobile internet banking in Malaysia. Later, in the subsequent years, many banks and financial institutes followed suit by launching their mobile applications, embracing the growing trend of mobile banking and catering to the evolving needs of their customers.

The Securities Commission Malaysia (SC) founded the Alliance of Fintech Community (aFINity) in 2015 to boost the development of Fintech in Malaysia. It acted as a hub for communication and interaction amongst all Fintech stakeholders including the creator, financial institutions, the government, and several others. The first equity crowdfunding platform in Malaysia, CRowdPlus, was established in the same year to aid startups and small and medium-sized businesses generate money through alternative funding which are faster and more convenient. It aims that such an initiative will lessen the financial barrier faced by small and medium-sized businesses when trying to obtain financial support through traditional financing channels such as incumbent banks.

In June 2016, the FTEG (The Financial Technology Enabler Group) was formed by Bank Negara Malaysia (BNM) as a committee with a mandate to develop and improve regulatory regulations to make it more feasible for Malaysia's financial services sector to adopt new technologies. BNM then launched the Regulatory Sandbox to monitor and support the adoption of Fintech solutions with some regulatory flexibility in order to ensure financial stability and fair treatment of customers while encouraging its expansion. The same year, SC introduced the regulatory framework for P2P operators, specifying the requirements and obligations of the operators as per revised Guidelines on Recognised Markets.

In 2017 the SC established a regulatory framework for digital investment management, therefore giving way for robo-advisory services to operate in Malaysia and provide automated investment advice. MyClear and MEPS were merged in 2017 to form PayNet, which operates Malaysia’s shared Payment Infrastructure, and is jointly owned by BNM and the financial services industry. Real-time retail payments platform (RPP) was introduced in 2018, which enables the user to receive or make payments by using their identification card, phone number, business registration number, or just using a QR code such as DuitNow without having to memorize their account number. The same year also saw the birth of other e-wallet applications to facilitate payment, such as TNG and boost wallet. The Securities Commission Malaysia issued the revised Guidelines on Recognized Markets in 2019 for the facilitation of registration of digital asset exchange operators in Malaysia, marking the recognition of digital assets in Malaysia after many controversial issues surrounding the digital currency industry.

When the pandemic hit nationwide in March 2020, it sped up the adoption of Fintech applications due to movement restrictions posed by the government. This has pushed the bank and financial industry to move their business process virtually and force the customer to adopt a digital platform. This allows banks to expand their digital products with new features and security measures. Due to the growing trends of many stakeholders venturing more into the Fintech business, BNM, in partnership with MDEC, established Fintech Booster in August of the same year to facilitate Fintech establishment to build and offer their products and services. At the end of 2020, a Policy Document on Licensing Framework for Digital Banks was issued by BNM to grant 5 digital banking licenses or Islamic digital licenses. This paved the way for the establishment of Neobank in Malaysia. 2021 witnessed one of the highest achievements of the Malaysian Fintech industry when MoneyLion's Foong Chee Mun became the first Malaysian Fintech founder on the NYSE in 2021. The transaction was approved on 21 September 2021, after the closed deal with Fusion Acquisition Corp and the company became known as MoneyLion Inc after the combination.

In April 2022 five digital bank licences were awarded to qualified applicants under the Financial Services Act 2013 (FSA) and Islamic Financial Services Act 2013 (IFSA). It will be remembered as a significant milestone throughout Fintech history. Those applicants are the consortium led by Axiata with its subsidiary Boost and RHB, the consortium by GXS (jointly owned by Grab and Singtel) and Kuok Brothers, the consortium by SeaGroup (ShopeePay) and YTL Corporation Berhad, the consortium that led by KAF Investment Bank include Moneymatch, Carsome, Jirnexu, and lastly the consortium by Aeon Credit and MoneyLion. They will undergo the period of operational readiness that BNM will verify before they can start operating. Three months later, the Prime Minister launched the Malaysia Digital initiatives with Malaysia Digital Economy Corporation (MDEC) taking the lead. It signifies another milestone the government took towards improving the environment for Fintech businesses. MDEC is a government agency responsible for fostering the development of the digital economy in Malaysia.

This Malaysia Digital (MD) project will replace the Multimedia Super Corridor (MSC Malaysia), which has been in place for 25 years, hopes to improve the nation's digital capabilities and expand the nation's digital economy. Recently, the cross-border QR payment linkage between the two countries was announced by BNM and Bank Indonesia (BI) in May 2023. Users can now use DuitNow QR codes Quick Response Code Indonesian Standard (QRIS) to make transactions for services provided by participating financial institutions. In conclusion, Malaysia has recognized the enormous potential and significance of the Fintech industry in promoting driving economic growth and digital transformation. The nation has taken a proactive measure to foster Fintech innovation and establish a supportive environment for its growth. Below shows the summary of fintech development in Malaysia.

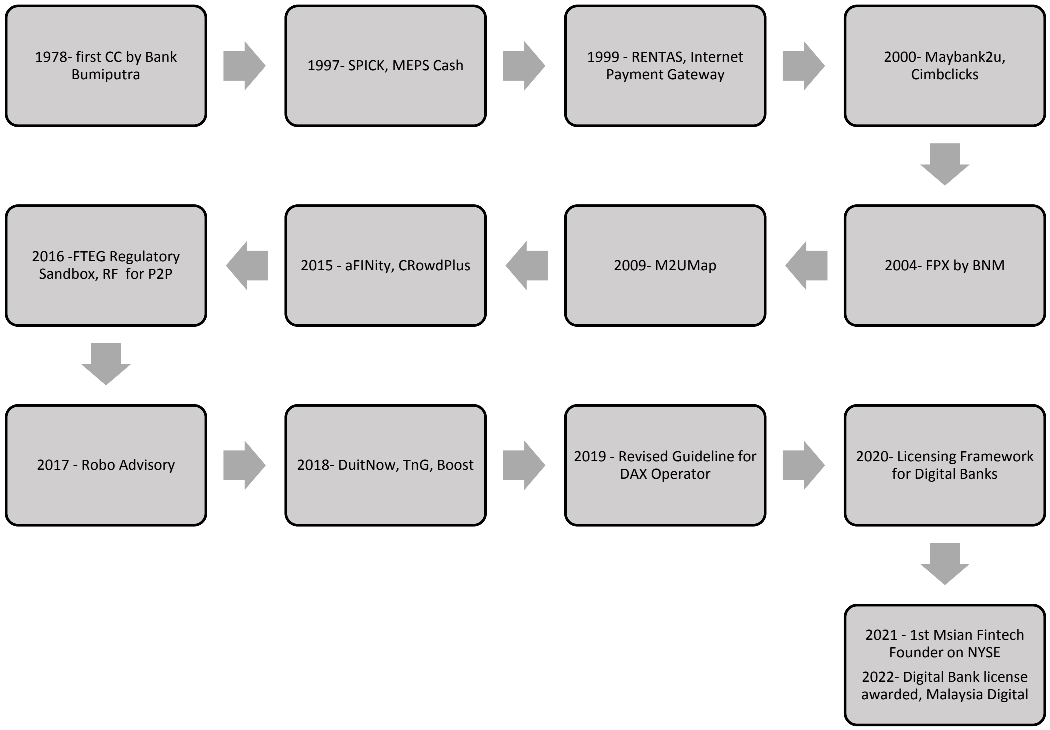

Figure 2. Malaysia Fintech History

Malaysia has seen substantial growth in the Fintech industry in meeting local needs and demands. It is expected that ASEAN countries to be the next major global growth region and Malaysia is on track to become the leader in the digital economy in ASEAN with a strength of 650 million users. The Internet economy alone is expected to be worth US$300 billion by 2025 (Google, Temasek and Bain, 2022). Here are some of the key technologies that have played a big role in driving the advancement of the Fintech sector in Malaysia.

Table 1. Malaysia Fintech Applications

Technology	Application
EWallet and Payment	The widespread use of smartphones among Malaysian has solved issues and facilitated day-to-day financial transactions driving the existence of mobile and ewallet solutions. The easiness and convenient offered by these facilities have change the way Malaysia deal with financial transaction.
	TnG, MAE, Boost, ShopeePay, Setel, BigPay.
Blockchain and Distributed Ledger	The blockchain technology has been rapidly developing and its usage has gone beyond crypto-currency and bitcoin applications that have been introduced since 2000. It is now currently used for trading, logistics, research, and financial services in line with the National Blockchain Roadmap 2021-2025. The implications are felt in heighten security, more transparency and trust in financial transactions and reducing fraud.
	Blockcord, Luno, GoldX, LuxTag
Lending/BNPL (Buy Now Pay Later)	It's a financial solution that allows the customer purchase things, but the payment can be postponed with an extra charge. Most of the retail and e-commerce businesses provide this to their customers so that they can enjoy flexibility and convenience.
	SpayLater, Atome, QuicKash, ShopBack
AI /Big Data	This technology has been specifically utilized to provide analysis of customer behavior, preferences, and suggested credit scores. Hence, the experience of the customer is enhanced thanks to personalized financial services offered.
	Mobilize, Pand.AI, Experian
Crowdfunding	It refers to the attempts by individual or group to raise money for their project from a relatively large number of people by asking for a comparatively small contribution via the internet .
	Crowdo, PitchIn, iPivot
RegTech (Regulatory Technology) / KYC (Know Your Customer)	This is to automate compliance procedures, reduce risks, improve the effectiveness of regulatory reporting and eventually to ensure the compliance to the regulations and laws.
	Innov8tif, CTOS, Napier, Wise AI
WealthTech ;	It is a solution for wealth management, investment and financial planning by using the customized or personalized wealth advisory and utilization the technologically-based financial services.
	TnG Go+, Rakuten Trade, moneylion, iFast
Insurtech:	Insurtech is a digital financial solution for insurance, especially underwriting and claims processes. This technology has expanded the accessibility and effectiveness of insurance services.
	GoInsurance, naluri, Bima, Doc2us

Malaysia's noteworthy fintech growth in the region can be attributed to a combination of geopolitical and economic factors. Geopolitically, the country benefits from political stability and a strategically advantageous location, fostering an environment conducive to fintech innovation. The government's supportive regulatory framework and initiatives like the Malaysia Digital Economy Blueprint play a significant role in propelling the sector forward. Malaysia's diverse and robust economy, along with a tech-savvy population, creates ideal environment for the expansion of fintech. The country's progressive approach to digitalization, as proven in the widespread of e-banking adoption since the early 2000s, has established a solid foundation for Fintech evolution. While Malaysia outperforms certain regional counterparts in facing geopolitical challenges or economic vulnerabilities, it does faces competition from technologically advanced neighbours. Malaysia's has positioned it uniquely in the regional fintech landscape due collaborative approach, which balances the innovation with regulatory prudence. However, these potentials might disappear if the issues and challenges are not resolved.

3.3 Challenges Faced by Fintech Companies

In the year 2022, Fintech startups have asserted their prominence in Malaysia's startup scene, making up approximately 18% of the total 3,000 startups. Nevertheless, as highlighted in The Global Startup Ecosystem Report, a substantial number of startups in Malaysia, precisely 1,800, encounter considerable difficulties, leading to a noteworthy failure rate of around 60%, especially within the initial three years of their operations. This underscores the prevalent challenges within the startup ecosystem.

As more Fintech companies arise, it is vital to acknowledge some of the difficulties and concerns that are unique to the Malaysian Fintech industry, notwithstanding the opportunities afforded by this industry. By addressing these challenges, a comprehensive understanding can be gained regarding the obstacles faced by various stakeholders in the Fintech industry, including businesses, regulators, and consumers. This understanding becomes crucial in shaping Malaysia's direction towards becoming a digital society. Additionally, highlighting these challenges provides valuable insights for potential startups to navigate the industry landscape more successfully. These are some of the issues and challenges faced by the Fintech industry in Malaysia such as survival issues, technological issue and market readiness, regulatory barriers, insufficient capital, lack of talent, trade-off between innovators and regulators, and security concerns.

3.3.1 High Failure Rate and Survival Challenges

Due to their agility and flexibility, Fintech businesses are relatively simple to start up, which has led to Fintech dominating the startup landscape. Because of this, the Fintech sector is extremely competitive, and many businesses compete for market share. The potential for Fintech startups to become dominant participants in the financial sector is hindered by the traditional incumbent banks' continued dominance of the Fintech market (Mohsin, Ahmad and Chan, 2022). As part of their plan to reach a wider market base, Fintech startups frequently need to work with traditional banks to acquire market access. In addition to their large cash and information capital resulting from their important position in the financial market, traditional banks have strong household brands that inspire confidence in potential consumers. As a result, Fintech startups struggle to independently enter the market (Mohsin, Ahmad and Chan, 2022) and face challenges in independently reaching the market due to limited capital resources.

3.3.2 Technological Issues and Market Readiness

Technological advancements are crucial to completing the direction of the fintech business. The industry is limited in its ability to advance due to outdated infrastructure and technological limitations that make progress slow and discouraging. It is also important to ensure that all digital financial services remain accessible to all layers of society, whether unbanked or underbanked. This disadvantage is more prominent, especially in the remote or poor areas. Not everyone has the access to the internet, the key driver of Fintech landscape due to various reasons. It could be varied due to age, educational background, exposure to the technology, IT literacy level of income or skills. The issue with lack facilities does not limited to the remote area with public people only, even some education institution also have weak internet connection. This is irony because colleges are meant to be the centre of education, research, and innovation to drive Fintech industry and produce digital talent when the students graduate later. Therefore, the collaborative effort between government, private entities and NGOs can bridge this digital divide for Fintech to remain inclusive and sustainable to all.

While e-payment continues to experience robust growth as a promising area within Fintech, other sectors such as wealth management, insurtech, and property management in Malaysia, are showing slower progress. Historically, the banking and financial industry in Malaysia has operated under strict regulations overseen by the central bank to safeguard public funds (Urus and Mohamed, 2021). However, to accelerate the digital economy, the government has introduced various incentives and support measures, attracting numerous new Fintech entrants to the market. In 2022, Fintech startups alone accounted for 18% of the total 3,000 startups. Despite the increased supply of Fintech solutions, users still exhibit reluctance to adopt the technology unless it is associated with a well-established brand from the traditional banking sector.

The adoption of robo-advisors in digital wealth management in Malaysia, for instance, has raised concerns about their reliability and effectiveness. Robo-advisors are expected to offer financial advisory services like human advisors but with the advantage of being free from emotional biases and driven by objective-based rules (Nguyen, Chew, Muthaiyah, Teh and Ong, 2023). However, doubts exist regarding the suitability of advice provided by algorithm-based advisors, as the recommendations may be standardized and not tailored to the individual's unique risk profile. Robo-advisors lack the human touch and may not fully understand the various backgrounds, life experiences, and financial goals of different investors.

The volatility of the digital currencies markets also contributed to the challenges of the Fintech industry. The usage of digital currencies in payment digitization has undermined the value of cash as a medium of exchange. However, digital currencies are better ideal for speculative investment than for serving as a store of wealth due to their volatility disadvantages and absence of regulatory safeguards (Mohsin, Ahmad and Chan, 2022). Most countries do not recognize cryptocurrency legally (Fauzi, Paiman, and Othman, 2020). In Malaysia, bitcoin is not considered legal tender because it does not meet the universal characteristics of money, which are a store of value, a medium exchange, and a unit of account (Fong, 2023) despite the promising cryptocurrency value amounting to USD4.57 billion in 2022. On top of that, BNM's progress in evaluating merit for central bank-backed digital currencies (CBDCs) might place another cryptocurrency inferior to CBDCS due to its features, issued and backed by the government if this is to happen in future. The decision of Securities Commission of Malaysia (SC) to penalized CEO of cryptocurrency trading platform Huobi Global in May 2023 for running a digital asset exchange (DAX) in Malaysia without a licence and demand of LAvida Coin investors for their money back in March 2023 further add incidents that cause hampering Malaysia cryptocurrency industry. These incidents add to customer dissatisfaction, loss of confidence and market share eventually affecting the Fintech industry negatively.

3.3.3 Regulatory and Compliance Hurdles

The rise of Fintech has resulted in substantial advances in Malaysia's financial sector. The primary problems that Fintech companies confront in digitalizing financial services are connected to rules and supervisory requirements (Mohsin, Ahmad and Chan, 2022). As the business evolves, an adaptable regulatory framework is required to maintain consumer protection, market stability, and long-term growth. The Central Bank of Malaysia (BNM) and the Securities Commission Malaysia (SC) are the key regulators in Malaysia, and both have been supportive of the Fintech ecosystem, working collaboratively with the Malaysia Digital Economy Corporation (MDEC) to support digitalization and create an optimal environment for the ecosystem (Fintech News Malaysia, 2022). In October 2016, Bank Negara Malaysia developed a regulatory sandbox to provide a regulatory framework conducive to the implementation of Fintech and general innovation in the Malaysian financial sector (Bank Negara Malaysia, 2023).

The regulatory framework for Fintech in Malaysia is still lacking where the current regulatory environment only applies uniformly and equally to all Fintech participants. The existing framework comprises laws such as the Financial Services Act of 2013, the Islamic Financial Services Act of 2013, and the Money Services Business Act of 2011 (Onn, 2021; Global Legal Group, 2022). The lack of a unique regulatory regime for Fintech participants causes the same regulatory framework to apply to the conventional financial services industry and Fintech businesses. This downplays the unique characteristics, customs, and difficulties Fintech companies face across many sectors. Furthermore, most Fintech products are still relatively new, so the supervisory and regulation is in the early stages or for some cases non-existent at all. They function within a sector-agnostic framework, subject to the regulations that are unique to the industry they operate in. If the product has the same characteristics as the existing product or service, then the existing rules will apply. For example, if the company operates in securities trading, it will fall under the regulation by Securities Commission and so on. Therefore, the companies need to ensure the compliance with industry-specific regulation while at the same time functioning under a broader regulatory context.

Multiple regulatory authorities, which include the Central Bank of Malaysia and the Securities Commission Malaysia, regulate various sectors of the industry, resulting in overlapping jurisdictions and regulatory gaps. This fragmentation makes it difficult for Fintech companies seeking clarity and consistency in compliance standards to function effectively as they navigate the regulatory landscape (Onn, 2021; Global Legal Group, 2022).

3.3.4 Access To Funding and Investment Landscape

According to Thomas (2023), the availability of investor capital has an important impact on the growth of an economy's Fintech sector. However, access to sufficient funding has been a chronic difficulty for Malaysian Fintech startups (YCP Solidiance, 2022). Investor scepticism and risk perception are among the hurdles that Malaysian Fintech startups encounter in acquiring capital (Jalil, 2021). Due to their creative nature and unpredictable market reception, Fintech companies, particularly startups, are sometimes considered high-risk investments (Mohsin et al., 2022). Thus, they rely primarily on financing from venture capitalists and private equity (Haddad & Hornuf, 2019). This lack of faith stifles the growth and development of Fintech firms (Nawayseh and Mohamad, 2020) limiting their capacity to scale operations and provide innovative solutions.

Despite its thriving Fintech scene, Malaysia faces a critical bottleneck. there is major lack of specialized venture capital (VC) funds which dedicated to nurturing these innovative startups (YCP Solidiance, 2022; Gambe & Estopace, 2022). Traditional financiers often struggle to grasp the unique characteristics and disruptive potential of Fintech, leaving a shallow pool of readily available funds for these ventures to navigate. This mismatch between ambition and opportunity can prevent the growth and impede the full potential of Malaysia's Fintech ecosystem. The lack of early-stage funding limits the ability of Fintech businesses to attract investment and hinders their maturation.

Meanwhile, stringent regulatory standards and the expenses associated with compliance with regulatory frameworks like anti-money laundering rules may be time-consuming and expensive (Gambe & Estopace, 2022). Meeting these rules imposes a financial burden on Fintech companies, diverting capital away from innovation and growth. Furthermore, negotiating the regulatory framework may dissuade potential investors, increasing the problem of insufficient cash.

Furthermore, there is a restricted engagement of traditional financial institutions with Fintech startups. Traditional financial institutions have been sluggish to embrace collaboration and provide critical support to Malaysian Fintech companies (Tiu, 2022). Because of their limited involvement with Fintech businesses, they have limited access to traditional banking services such as loans and credit facilities. Fintech companies encounter difficulty scaling their operations and meeting working capital requirements without proper access to these financial services, limiting their growth potential.

3.3.5 Talent Acquisition and Skills Gap

The Fintech sector's digital transformation is strongly reliant on a trained workforce with the appropriate digital skills. However, Malaysia continues to experience a dearth of digital skills in the financial business (Urus & Mohamed, 2021; The Edge Malaysia, 2023). One of the primary causes of the skills gap in Malaysian Fintech is a shortage of skilled workers. The demand for digital abilities in areas such as data science, artificial intelligence, blockchain, and cybersecurity has exceeded the supply of qualified workers. The restricted availability of skilled has limited Fintech companies' capacity to drive innovation, provide cutting-edge solutions, and compete effectively in the global market (Kijkasiwat, 2021; Vijay, 2019).

The mismatch between industrial requirements and school curricula exacerbates Malaysia's digital talent shortage (Singh, 2022). Traditional academic programmes may fail to meet the changing needs of the Fintech industry, resulting in a skills gap among graduates. Because of the rapid rate of technological innovation, educational institutions must update their curriculum to provide students with the essential digital skills and knowledge (Muthaiyah & Zaw, 2020). Failure to overcome this divide impedes the Fintech talent pipeline. Students' and professionals' lack of knowledge and understanding of Fintech careers contributes to the skills shortage (Sung, Leong, Sironi, O'Reilly, and McMillan, 2019)

Many people may be unaware of the opportunities and development potential in the Fintech business (Singh, 2022). Talented individuals are discouraged from pursuing suitable educational paths and entering the Fintech sector due to a lack of information about Fintech careers. Efforts to improve awareness and promote Fintech as a desirable career path can help overcome this issue. Aside from that, the government might explore launching a national-scale Fintech-enabled training subsidy plan, leveraging e-wallets and education platforms to provide subsidies for re-skilling (ICMR, 2021). Meanwhile, top-performing talent relocate to Singapore, a neighbouring country that is well-positioned as a global financial centre. Considering the rapid advances in technology, companies, therefore, faced a shortage of skilled workers. To keep up with the transition to a more digitally driven future, companies must choose how to attract, retain current talent, and re-skill and upskill the older workforce (ICMR, 2021).

3.3.6 Trade-off between Innovator and Regulator

Scrutinizing potential conflicts of interest and trade-offs between regulatory bodies and Fintech innovators reveals complex dynamics in the financial landscape. Regulatory bodies seek stability, consumer protection, and systemic security, often through stringent oversight. In contrast, Fintech innovators aim for flexibility, agility, and rapid development, which can clash with regulatory frameworks. Although regulators recognise the need to be flexible to welcome newcomers and take a more business-friendly strategy for allowing sectorial growth, they are also cautious in their licencing and approval processes, where only new operators with adequate capability and resources will be opted for to ensure adequate safety measures and system integrity, deter opportunism and as well as to prevent overcrowded in Malaysia's Fintech space. The SC, on the other hand, has issued a consultation paper in which it is seeking public opinion on a potential regulatory framework for capital market organisations managing technology risks (Securities Commission Malaysia, 2022).

Due to the widespread use of technology, the emergence of new technologies, and the increasing sophistication of cyber threats, the proposed regulatory framework intends to improve capital market entities' ability and effectiveness in identifying and dealing with an increasing range of technology risks (Fintech News Malaysia, 2022). Utilising traditional regulatory tactics to new high-tech businesses may not be the solution (Karim, Naz, Naeem and Vigne, 2022). Part of the challenge is balancing the trade-offs that come with regulating new advancements that could both help and hurt consumers (Yadav & Brummer, 2019; Barroso & Laborda, 2022).

Malaysia has created efforts such as the innovation sandbox and the regulatory sandbox to address the issues of Fintech regulation. These frameworks provide a regulated environment for Fintech companies to test their goods and services, allowing them to innovate while minimising risks. The effectiveness and scalability of these sandboxes, however, raise questions, given their tendency to be accompanied by stringent rules and restricted participation (Onn, 2021; Tan & Choo, 2022). A more inclusive approach to sandboxing has the potential to promote experimentation and foster improved collaboration among regulators and industry stakeholders. This aligns with one of the strategic goals outlined in the Bank Negara Malaysia's Financial Sector Blueprint (Bank Negara Malaysia, 2020).

Potential disputes can emerge due to data privacy, risk management, and compliance standards. Regulators may struggle to adapt regulations at the pace of fast-changing technology, which could hinder the innovation. Meanwhile, Fintech innovators may push back against compliance burdens which cause limitation to their flexibility. Trade-offs could arise in attempting to expand the financial inclusion while properly managing risks. Achieving the optimal balance is crucial which overly stringent regulations may stifle progress, but too loose may potentially endanger consumers (Haddad & Hornuf, 2019). Collaboration and communication will be key to navigating these tensions. Initiatives like regulatory sandboxes, industry consultations, and flexible frameworks can promote innovation while still upholding regulatory aims. Fintech's transformative potential warrants an adaptive, participatory approach to regulation and policymaking. Addressing conflicts requires an understanding of the evolving Fintech landscape and a commitment to collaborative solutions.

3.3.7 Cyber Threats and Security Concerns

The advancement of technology in the Fintech industry has led to many Fintech innovations. However, it also has led to new opportunities for cyber threats, posing challenges for both Fintech players and regulators in ensuring the security of customer information. This threat not only hampers the adoption of Fintech innovations among potential users but also necessitates enhanced measures to protect customers from various fraudulent activities such as ransomware attacks, cyber espionage attempts, data leaks, cyber scams, and identity theft. According to Mohsin (2022), cybersecurity is identified as one of the top concerns for key players in the Fintech industry, including banks and Fintech firms. Malaysia faced an average of 84 million cyber-attacks per day in the fourth quarter of 2022, highlighting its vulnerability compared to other locations in the region. Cyber Security Malaysia (CSM) reported 4,741 cases of cyber threats in 2022, with an additional 456 fraud cases recorded as of February 2023 (Xiao Hui, 2023). A total of 3,099 network security incidents throughout 2022 have been managed by The Malaysian Communications and Multimedia Commission (MCMC) through the Network Security Centre (NSC), with phishing noted as the highest number of incidents (1653 incidents) followed by malware and botnet with 754 incidents. The other remaining 692 incidents include spam, vulnerabilities, attempted intrusions, denial of service (DDos) and others (NSC, 2022).

Fintech companies and users rely heavily on their digital platforms and information and communication technology to enable their development, adaptability, and delivery, especially for financial transactions. This makes the industry more attractive to become the target for cybercrimes. It is vital for Fintech businesses to ensure the security of consumer data, take precautions to maintain the system's integrity, and provide protection from cyberattacks and other types of fraud. For example, in 2022, Kiplepay, an e-wallet service provider and a wholly owned subsidiary of Green Packet, informed all its Kiple Visa Prepaid Card users after notification by BNM about a possible data breach by iPay88, the payment gateway provider. The investigation was promptly initiated by iPay88 in May 2022 upon discovery of the issue, and it reported no more suspicious activities had been detected since July 2022 after it had successfully completed its containment processes. Even though there were no further suspicious activities identified afterwards, this incident adversely affected the growth of the Fintech industry.

Another concern is that large volumes of financial and personal information are frequently collected and analysed as part of Fintech innovation. This raises issues on providing strong consumer protection and data privacy (Meng and Tian, 2021; Barroso & Laborda, 2022). Malaysia's current regulatory frameworks may not adequately handle rising data privacy problems and security dangers. Consumers have been left susceptible due to a lack of clear guidelines on data sharing, permission, and security, which has discouraged their adoption of Fintech services. As a result, norms and rules governing Fintech must be regularly updated and evaluated for this industry to thrive (Urus & Mohamed, 2022).

The study conducted by Muniandy, Muniandy, and Samsudin (2017) found that there is a lack of safe practice implemented among youngsters in Malaysia. Lack of knowledge and overconfidence are among the reasons. This is concerning because young people often utilize Fintech goods the most because they are skilled and knowledgeable about digital and technological characteristics. They are more susceptible to scams because they cannot fully grasp how much the cyber-attack can affect them by using Fintech services.

To address these challenges, it is crucial to implement robust cybersecurity measures and establish stringent regulations to safeguard customer data. Numerous examples of publicized cyberattacks like phishing, scams, or identity theft might further hamper its growth and innovation if the Fintech industry does not step up their cyber resiliency. Fintech players must prioritize cybersecurity and invest in technologies, processes, and skilled professionals to protect against cyber threats. Encryption, data protection, employee training, increased security monitoring and investment in effective internal control are among the steps that can be adopted to protect confidential and privacy data. Most importantly the security culture must be embedded within the organisation to be protected against cyber-attack. However, the responsibility is not limited to the Fintech companies alone but als**o** requires collaborative efforts among regulators, Fintech players, and raising customer awareness to have effective mitigation programs towards cyber risk.

4. Conclusion

Many questions have been raised on how Fintech may help Malaysia move more quickly towards a digital economy. Most Fintech businesses are still small-scale or start-ups, despite the market's potential. The modest scale of Fintech cannot acquire the trust of potential customers to increase digital inclusion across Malaysian society without working with major financial institutions. As evidenced by the first five digital bank licence recipients, all of them are consortiums; none of them are single incorporations due to a lack of numerous necessary resources, financial resources, and talent on their own.

Focusing on the hurdles faced by Fintech establishment is crucial for fostering market growth and building a conducive ecosystem. Recognizing the challenges can assist many stakeholders in encouraging and fostering market growth and help to build a suitable ecosystem for Fintech establishment. It also can instil confidence among potential users. Even though the potential market is there, yet security concerns remain a top priority of the seers, hindering the potential Fintech market from expansion. Therefore, building trust in digital financial services is important. This can be executed by having transparent data practices, robust security measures and awareness and educating the people to instil confidence. By addressing these concerns and fostering growth, the industry will be able to attract the necessary digital, offering valuable skills and knowledge to enhance security measures and build trust with the customer.

Since Malaysia has a substantial number of e-mobile users, it makes Malaysia an intriguing subject for Fintech research. Therefore, for future research, numerous areas can be addressed within Fintech-related subjects that can be researched, especially in a Malaysian context. While a lot of the literature focuses on areas that facilitate payments, like eWallets, many other areas still need to be explored, like regtech, insurtech, robo advisors, and many others. Empirical research can also be carried out to examine real-world issues and offer practical application insights to effectively propose solutions. By focusing on all these challenges, Fintech can continue to evolve, thrive, and contribute to the realization of digital society.

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