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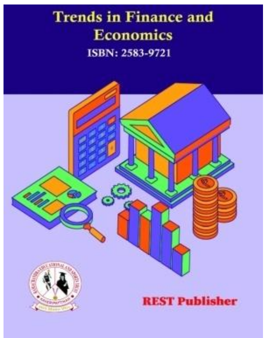

Innovative Fintech Solutions: A Comprehensive Study on Technology Changing the Financial Services Industry

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Abstract: *The fourth industrial revolution has accelerated digital technology, creating fintech financial services. Technology-enabled financial services have upended the industry. Due to its disruptive nature, financial technology (fintech) is growing worldwide, especially among those without access to traditional financial services. Due to the digital revolution's increased interconnection, fintech investments are rising worldwide. Fintech, or financial technology, includes innovative applications in payments, lending, asset management, insurance, and more. There is a void in the literature and research on fintech advances in payments and financial services and financial laws. Lack of understanding and analysis in this domain is shown by this gap. This research gap requires further scholarly research to fill it and expand the knowledge base. This project aims to improve understanding of fintech advances in payments and finance. Additionally, it examines how regulatory frameworks affect the creation and maintenance of a just environment. A comprehensive systematic review of peer-reviewed journal publications from 2014 to 2022 was done to achieve this goal. Financial technology (fintech) has gained global interest; hence this time span was chosen. The study's findings add to fintech expertise in the financial services industry. The research shows that these breakthroughs will shape business's future. This report provides a great reference for scholars to comprehend and analyze fintech advances.*
Keywords: *Financial technology, financial services, paymentinnovations, revolutionary potential*

1. INTRODUCTION

Fintech affects economic growth in several places. New investment banking and retail trading enterprises have combined internet power and user-friendly smart phones. Banking apps allow customers to transact digitally and reduce banking processes, making banks more accessible online (Wang 2021). The fourth industrial revolution has created an atmosphere where disruptive and digital transformational technologies like the Internet of Things, extended reality, artificial intelligence, etc. are changing our lifestyle (Schulte and Liu 2018). This change has also affected the financial industry, resulting in fintech, which uses technology to create new profitable financial services business ideas (Stern et al. 2017). Wonglimpiyarat (2017a) defined fintech as technology-backed financial services that increase key performance with integrated IT. Fintech creates fast money, delivers quality service, and decreases expenses, reshaping the financial industry and stabilising the financial system (Shin and Choi 2019). Technology integration, forecasting, and process optimisations in diverse finance activities showed a rapid adaption from inquiry to application in the financial service industry (Kou 2020). About every financial action is done under fintech, including requesting for credit without a bank, raising funds to start a business, investment management, and cashless payments.

Fintech startups are generally SMEs with a clear understanding of a new product or how to improve an existing service (Saksonova and Kuzmina-Merlino 2017). Innovation has transformed industry performance and product, increasing profitability. According to Arner et al. (2016), fintech 1.0 (1866–1967) was a transformation of digital practices from analogue, fintech 2.0 (1967–2008) was the growth of conventional digital financial services, leading to digitalization and globalisation of finance, and fintech 3.0 (2008–present) is about making digital financial services available to everyone. Alt et al. 2018; Das and Ali 2020; Gomber et al. 2018; Hua et al. 2019; Ng and Kwok 2017; Puschmann 2017; Wilamowicz 2019). After the 2008 global financial crisis, financial services became increasingly important. Traditional financial services provided safe jobs and stable companies till then (Gomber et al. 2018). Saksonova and Kuzmina-Merlino (2017) reported that fintech companies have grown due to the limitations of traditional banking systems that have put consumers in terrible situations and technological innovations that improve performance, customer experience, and convenience. Traditional sources have failed to meet the diverse need for finance. Financial innovations like microfinance, venture capital, crowdfunding, peer to peer lending, and SME stock exchange may have originated in one part of the world but quickly spread around the world. However, fintech growth and innovation are unlocking many hidden answers to financial service industry concerns (Lu 2018). The Internet has helped fintech grow rapidly and reach unbanked areas, making financial services more accessible (Popkin 2019). In-depth study of global fintech financial services breakthroughs requires a systematic review. Fintech advances and regulations will be briefly theoretically explained in this paper.

Fast-growing economies can be transformed by fintech. Luo et al. (2022) find that fintech technologies have improved regional and customised efficiency. This Chinese study found that fintech has increased innovation efficiency without hurting technological R&D. China's household spending is strongly correlated with fintech technologies. The fintech revolution increased wealth and entrepreneurial creativity. Fintech has not replaced traditional funding, but it has solved many complex issues that prevented needy people from accessing financial goods. Fintech and traditional finance have boosted cash flow and growth, notably during COVID pandemics (Zhang et al. 2022). Rabbani et al. (2021) examined how fintech accelerated COVID-19-related economic aftershock recovery.

2. RESEARCH METHODOLOGY

For information system research and trend analysis, a systematic literature review is used. Literature reviews underpin all research (Snyder 2019). A systematic review of literature protocol was used to analyse fintech publications in financial services. Systematic review summarises conceptual material from published publications and formulates study questions. The next methods were carefully tailored to ensure that the book meets study needs. The preparatory stage involved creating research questions that fit the study's title and objective. Electronic databases were used for subsequent study. The next step was to critically assess the research paper inclusion and exclusion criteria. The repository of published research publications was reviewed, aggregated, and summarised last. Methodical literature review creates a gold standard faster than other review research methods (Davis et al. 2014). Research philosophy guides knowledge sources, compounds, and applications. Research philosophy describes how data were collected, recorded, summarised, and used to attain goals (Holden and Lynch 2004). The title and aims of this research piece prompted this study to change its interpretative philosophy to understand fintech advancements in the financial services business.

Research Questions:

Systematic literature reviews based on research questions help explain the notion. This study reviews fintech technologies that simplify standard processes.Finance and payments are financial services. The research questions in this review are:

1. What are fintech advancements in financial services financing and payments?
2. How important is regulation in fintech innovation?

3. LITERATURE REVIEW

A systematic review used English-language research publications from EBSCO, ProQuest, and Google Scholar. Articles on financial service fintech advances were included. Title, abstract, and conclusion were carefully examined to exclude articles based on exclusion criteria. Research articles were retrieved using “fintech innovations”, “fintech regulations”, and “digital finance”. The 346 records left after title and abstract screening yielded 235 full-text articles for eligibility assessment. The final sample included 153 research publications focused on our topic.

Bruckner (2018) described crowdfunding as online community decision-making to raise funds for commercial initiatives. Crowd testing involves entrepreneurs pitching their unique idea to a crowd of funders (Borrero-Domínguez et al. 2020; Rossi and Vismara 2018; Zetzsche and Preiner 2018). Crowdfunding can assist small business owners that lack means to borrow from banks, decreasing hurdles to starting a business and reducing banking issues (Bruckner 2018; Ibrahim 2018; Martínez-Climent et al. 2018; Wonglimpiyarat 2017b). The crowdfunding ecosystem has many stakeholders, thus regulation is needed to enable businesses enter the market and build the economy. The government should prioritise public confidence and credibility when regulating crowdfunding to enhance opportunities and minimise hazards (Ibrahim 2018; Martínez-Climent et al. 2018; Wonglimpiyarat 2017a). In 2018, Costa-Climent and Martínez-Climent identified P2P lending and equity crowdfunding as developing subjects with significant financial returns. Crowdfunding investors should examine project kind to ensure a positive outcome (Borrero-Domínguez et al. 2020). Other 2014–2020 scholarly works with a similar interpretation are Abdullah and Oseni 2017, Gomber et al. 2017, Ibrahim 2018, Rao and Anand 2019, Venturelli et al. 2020, and Wonglimpiyarat 2017a.

The services and participants crowdfunding platforms offer major stakeholders determine their growth. Rossi and Vismara (2018) suggested that investment-based crowdfunding platforms give demand-side participants post-campaign services to boost interest and future campaigns. In addition, Venturelli et al. (2020) have noticed that the amount invested is being affected by ethnic and gender similarity on both sides of the platform, investors and entrepreneurs. Stern et al. 2017 lending reduces transaction costs by using novel communication technologies, allowing many investors to contribute funds. P2P lending risks include loan default rate, which relies on loan terms and conditions and features. borrower, therefore laws must balance risks and returns (Funke et al. 2019; Lee 2020; Marot 2017). Due to the rise in mobile phone users, P2P lending is widely used to boost business growth (Stern et al. 2017). Investors in this platform face significant risks but substantial returns that boost portfolio efficiency (Marot et al. 2017). P2P lending platforms reach more unbanked people than banks, which affects their performance (Funke et al. 2019; Yeo and Jun 2020). COVID-19 has changed market paradigms with turn-around tactics like P2P lending platforms, which provide inclusive financing for rural borrowers who otherwise have restricted access to finance (Najaf et al. 2022). Fintech P2P lending is the world's most promising banking finance alternative. Payments are made to fulfil contract obligations by transferring dollars or valuables. Fintech eliminates payment formalities, while traditional payments require fiat currency and physical locations. Recent advances in fintech, smart phones, and simple technologies have made digital payments fast and efficient. Users do not need financial literacy to use fintech technology, which is unique among transitional characteristics. Fintech has thrived due to government assistance and risk diversification knowledge (Nathan et al. 2022).

Fintech provides online payments services, meeting a large business requirement (Lee and Teo 2015; Lee and Lee 2016; Romanova et al. 2018; Soutter et al. 2019). Fintech payments serve different income levels and transaction amounts (Teja 2017). Customer acceptance of digital payment systems is influenced by various aspects, which impact fintech payment model success (Eka Putri et al. 2019; Golubic´ 2019). Innovative technology have made transactions fast and straightforward and led to new digital techniques for performing existing functions (Dermaku 2018; Vanatta 2018). Fintech differs from traditional payment systems in speed, convenience, and availability through innovative approaches. As digitization leads to a cashless economy and more transactions every day, the payment sector dominates the financial sector (Azali 2016). Banks must improve their obsolete payment systems (Hendriyani and Raharja 2019; Rosavina et al. 2019; Soutter et al. 2019). Fintech payments offer entrepreneurs various options to develop a new business model and gain new payment clients (Raharja et al. 2020). In order to understand the current state of payment systems and their benefits for startups, various case studies on digital payments were conducted. Chen et al. (2022) state that Fintech Exchange Traded Funds (ETFs) are rising faster than traditional ETFs, which dominate the finance market. In times of global crises and financial volatility, Fintech ETF has proven to be less volatile and more reliable than traditional ways. Smartphone usage and use are rising rapidly due to its improved features. Smartphones are essential to financial activity deployment and performance (Kang 2018). Thus, IT solutions and organisational pressure impact which enterprises participate in this market (Du 2018). Financial accessibility is crucial for financial inclusion through mobile payments, which fill the gap left by physical banking, according to Coffie et al. (2020). Kang (2018) highlighted that fintech mobile payment services face dangers and must meet integrity and privacy criteria. Choi and Park (2019) also noted that following the strict Payment Directive Service structure, which decentralises the payment network, reduces mobile payment risks. Unethical transaction system hackers risk valuable customer data (Lu 2018). Major SMEs in developing nations intend to use mobile payment as an alternative to the strict banking system, thus firms must be very careful (Talom and Tengeh 2020).

Customer satisfaction with the mobile system depends on perceived usefulness and security. Customers are driven to continue social mobile payments (Nan et al. 2020). Malala (2017) argued that regulations help legal transactions and have spread payment services across the economy. This gives informal sector workers who cannot make mobile payments access to this official service. Mobile payments usually involve merchants, individuals, or groups (Du 2018; Lee and Lee 2016; Nahata 2018). Convenience and compatibility are key to mobile payment improvements. Gomber et al. (2018) found that mobile phone users first used internet banking but are now adopting new apps for diverse payment structures. Payment methods include cash, cards, and checks. According to Šere˙jiene˙ et al. (2019), integrating mobile financial apps with bank accounts, NFC, and smart budget planners can enhance security by using biometric data. Fintech payments include mobile money, electronic money, P2P payments, digital currency, blockchain, Distributed Ledger technology, and others, according to Soutter et al. (2019). Blockchain is an electronic payment system that ensures payment security regardless of participants (Sangwan et al. 2019). Blockchain enhances cryptocurrencies and other technologies used in financial services, making it a permanent fixture in the finance industry. Many Blockchain research discussed it. The banking industry is struggling to develop a technology distribution plan, making blockchain a viable competitor. Blockchain provides a virtual currency payment system for websites, strengthening the economy (Henly et al. 2018; Manta and Pop 2017). Organisational variables affect blockchain adoption in different nations. Any

IT organisation considering blockchain implementation should prioritise organisational readiness, culture, and managerial support (Clohessy and Acton 2019). UTAR (Understanding, Technology, Application, Regulation) principle is used to describe blockchain ethics by standardising all variables (Tang et al. 2019). Customer values, logics, maintenance, and disruptive innovation must be present for a business model to benefit from blockchain and the economy. Large corporations use blockchain to provide transaction details to investors for decentralised and transparent capital usage monitoring (Umarovich et al. 2017). Blockchain startup companies raise revenue through initial coin offerings (Tönnissen et al. 2020; Boreiko and Vidusso 2019). Blockchain enterprises automate contract execution with smart contracts (Daj 2018; Fandl 2020; Van der Elst and Lafarre 2019). Blockchain is used worldwide to solve problems and update market infrastructure (Hughes 2018; Surujnath 2017).

Blockchain technology is frequently used in cryptocurrency (Daj 2018; Gomber et al. 2018; Olsen 2018; S, cheau and Zaharie 2018). Bitcoin is often touted as the most secure and innovative payment network (Olsen et al. 2018). Due to its decentralisation, bitcoin solves long-standing private and public sector issues, requiring authorities to establish critical legislation to assure its continued use (Daj 2018). Cryptocurrency regulations protect financial innovation and help microfinance organisations grow (Afzal 2019; Franklin 2019; S, cheau et al. 2020). Implementing cryptocurrency uses electricity. This increases electricity use. Compared to other cryptocurrencies, bitcoin uses very little electricity (Denisova et al. 2019). These digital sites employ sensitive consumer data that hackers could steal. Thus, such data must be protected from immoral actors (Carnahan et al. 2010; Chanson et al. 2019). Sun et al. (2022) found that crowd funding and block-chain technology in fintech have transformed the banking business. To identify fintech's future, literature analysis and visualisation studies are lacking. Their study of 1128 papers from 2000 to 2021 found that IT technologies underpin fintech, while finance entrepreneurs' innovations and policy oversights have ensured its growth in the last two decades. Due to fintech's disruptive nature, business model innovations have changed worldwide, raising regulatory issues because incumbent financial institutions' strict norms cannot handle fintech's complexity (Kumail Abbas Rizvi et al. 2018). Several publications (Adri-ana and Dhewantoa 2018, Arner et al. 2017, Bruckner 2018, Das and Ali 2020, Golubic´ 2019, Gomber et al. 2018, Lin 2019, Yoon and Jun 2019) address this concern.

Policymakers and regulators can achieve essential goals by using appropriate and current tools, frameworks, and regulatory approaches to give correct regulation information, even though fintech and digital finance innovation is known (Gomber et al. 2018). Unregulated fintech loans attracted small enterprises (Palladino 2018). Fintech 3.0 participants lack financial compliance customs and suffer difficulties in implementing novel ways due to limited regulator interaction (Arner et al. 2015; Wilamowicz 2019). To establish a standard market position, fintech businesses need proper laws, regulations, and guidelines (Adriana and Dhewantoa 2018; Deng et al. 2018). Lawmakers should propose transparent legislation that reduce uncertainty and safeguard fintech participants from fraud (Aulia et al. 2020). Accountability, openness, and monitoring establish compliance culture, which helps authorities disclose and systematise information, according to Currie et al. (2018). Huang (2018) claimed that regulation is better than prohibition because most. Globally, illegal fund-raising stunts economic progress, thus strict rules are needed to protect clients (Liu et al. 2018; You 2018). Market discipline affects banking distress but cannot control it, yet appropriate regulation reduces it and maintains the Too-Big-To-Fail variable (Oliveira and Raposo 2019). The advantage debtors have over other customers due to higher formal sector consumer protection standards compromises consumer protection (Gaughan 2017; Omede 2020). International policy promotes consumer use of innovative financial products that cushion economic shocks (Ramsay and Williams 2020). Complex regulations create ambiguity, market manipulation, arbitrage, and regulatory loopholes (Allen et al. 2018; Pollman 2019).

Customers' rapid use of fintech payments has put pressure on authorities to regulate a framework (Eka Putri et al. 2019; Romanova et al. 2018). The payment service directive typically helps fintech and other institutions develop a solution that benefits both. Payment services run smoothly with fewer uncertainty and fair resource distribution thanks to laws (Volkov et al. 2019). Loan amount depends on borrower inputs and credit score. Lending regulation reduces unlawful discrimination but hinders innovation (Bruckner 2018; Naglie 2017). Other innovative goods like cryptocurrency, Robo-advisory, crowdfunding, and P2P financing need regulations to safeguard internet safety, privacy, and customer trust. Regulation helps incumbents comprehend consumer data and develop fintech countermeasures as customers transfer to enterprises that give more value (Mitchell 2016). Ling et al. (2021) examined how COVID-19 and financial technologies moderated financing limitations. The epidemic would have disrupted global markets, but fintech mitigated its effects, according to one analysis.

4. DISCUSSION

The Fintech innovation in payment services is analysed in this study. The major discussion and customer advantages highlight the paper's main topic and research outcomes. As fintech organisations worldwide implement payment services, it's important to analyse and observe the results from many perspectives. This table covers payment service hazards, financial inclusion, and legislation. Fintech can readily supply services to the informal sector, where people don't meet standard financial service firm requirements. Internet and mobile phone use are rising worldwide, giving fintech firms an edge to gain market dominance. Fintech services are accessible, transparent, and fast, appealing Gen Z. Cybercrime threatens online payment systems. Such payment systems require more sensitive data, which may give hackers more chances to steal it. Fintech firms understand that data is the new oil and tailor their policies appropriately. Fintech companies are rising worldwide because their basic services leverage new digital technologies creatively. Due to their intricate financial services model and tight regulatory board requirements, incumbents are threatened by this. Incumbents must consider a strategic alliance that may be collaborative, cooperative, or competitive depending on their company goals. Collaborative and cooperative are sometimes interchangeable. Collaborative is shared authorship with common vision and values, while cooperative is passive teamwork without sacrificing individual autonomy. Recently, fintech has balanced innovation, efficiency, and risk management (Toderas, cu and Oprea 2021). Governments and central banks mandated fintech implementation in most nations in the previous three years. Start-up funding schemes fostered fintech innovations, improving finance intermediation and productivity.

Various scholars examine the influence of fintech in traditional banks. Fintech lacks equity to expand, but traditional banks lack new, fast technology-backed services to attract customers. Both parties may gain from collaboration and achieve their aims faster. Personalisation, accessibility, and smart solutions enable banks reach unmet clients. Eliminating disparities also helps fintech firms. Fintech firms confront ambiguous legislation, insufficient funding, security issues, and poor infrastructure. The report found that most incumbents recognise the value of digital technology and are collaborating with fintech businesses. Fintech finance was used in 40 of the publications analysed. Studies on novel fintech strategies focus on financing services more than other finance industry services. Emergence covers the global origins and evolution of fintech and its role in addressing service shortages. Fintech-incumbent alliances affect financial products. Collaboration offers financial product advantages over alliance competition. Reduced costs and risks, customer retention, and a new digital model boost financial product value. Competition hurts incumbents and fintechs' financial products. Competitiveness reduces income, customer retention, and relationship maintenance.Innovations in technology disrupt financial services. Fintech is improving financial services, decreasing customer limitations, and lowering operating costs, but it may threaten other variables. Fintech firms face stiff competition from traditional financial services providers. Fintech is moving towards a single medium. Most companies in this field base their business models on customers. The report examined fintech's advancements in the financial services industry and policymakers' regulatory challenges. This report reviews fintech literature using top-published research papers from multiple databases. The researcher studied 2014–2022 scholarly literature to assess fintech's state. This article also draws conclusions from the systematic review of key fintech papers. Fintech is a huge issue, but finance, payments, and laws are key to understanding and are reshaping financial operations with new technologies. Fintech is the solution for methodical finance industry growth. Fintech has made much-needed finance sector innovations more effective and efficient (Wang et al. 2022). Fintech fosters entrepreneurship and improvement. Global government assistance is seen as a direct proportionate stimulator for fintech growth.

5. CONCLUSION

Banks and financial institutions helped economic recovery, and technology ensured society's financial liquidity. Fintech has improved the quality of life, social equality, and economy through financial inclusion and technological interface. COVID-19 has enabled several uncomplicated social innovations and reached the interested public faster, unfailingly, promptly, and sustainably to tackle economic inequality. Fintech is simply the tip of the iceberg, not a mature financial technology. More commercial and consumer inventions are expected to boost the area rapidly. Fintech has boosted outer market sectors in fast-growing economies like BRICS. The rapid adoption of digital payments in India has changed revenue records through fintech. In fast-growing economies, fintech operations have moved from short-term to long-term. Internet finance is the next fintech trend that will grow in the finance industry. Thus, fintech's most charismatic feature is innovation, and the financial services industry has substantially profited from fintech's participation in the last two decades. Fintech overview from this thorough systematic literature assessment. Fintech is at the centre of this mind map, which branches into innovation, emergence, regulation, threats, and ecosystem. To conclude, the study provided useful financing and payment insights. Regulators must consider every interdisciplinary fintech field in the mind map to create a fair financial ecosystem.

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