

# The Impact of Financial Technology (Fintech) on The Growth and Development of Traditional Banking Systems, With a Particular Focus on Drawing Practical Lessons for Guyana's Banking Sector.

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## Abstract

Despite Fintech's rapid global expansion as a catalyst for innovation, inclusion, and operational efficiency, limited research addresses its strategic integration within small, emerging economies such as Guyana. This study investigates the impact of Financial Technology on the growth and transformation of traditional banking systems, offering context-specific insights for Guyana's banking sector. Guided by Stakeholder Theory, Resource-Based View, Lean Strategy, and Value Proposition Theory, the research employs a systematic review of peer-reviewed and reputable industry sources. Thematic analysis revealed five interlinked dimensions: technological innovation, regulatory and institutional responses, customer access and engagement, comparative lessons from developed economies, and strategic integration for value creation.

Findings highlight Guyana's structural constraints—dated infrastructure, weak regulatory capacity, and low digital literacy—yet underscore significant potential stemming from high mobile penetration, a youthful demographic, and growing openness to digital services. Rather than functioning as a disruptive threat, Fintech can act as a strategic enabler when aligned with banks' resource structures. Policy recommendations include establishing a tailored regulatory sandbox and implementing nationwide digital financial literacy programmes. This research bridges a gap in Fintech literature by presenting a theoretically informed, practice-oriented roadmap for inclusive and resilient Fintech adoption in Guyana's banking sector.

## Keywords

Financial Technology, Traditional Banking Systems, Digital Transformations, Regulatory Frameworks, Fintech Innovations

## 1. Introduction

The global financial services industry has undergone significant transformation in recent decades, driven by rapid technological advancements and the emergence of Financial Technology (Fintech). Fintech encompasses a range of digital innovations such as mobile banking, digital wallets, peer-to-peer lending, blockchain, that are reshaping the way financial services are utilised and delivered. In developed markets, Fintech has already redefined customer expectations, operational efficiency, and financial inclusion. However, in developing economies such as Guyana, the pace of Fintech adoption and its impact on traditional banking systems which remains underexplored.

Banking in Guyana is characterized by a blend of traditional conservatism and emerging digital transformation. The sector is regulated by the Bank of Guyana and consists of six commercial banks, with Republic Bank holding the largest market share. The banking sector has been slow to fully embrace innovation, although progress is being made and the adoption of digital banking services is growing driven by the expansion of mobile apps, online banking, and digital wallets like MMG and WiPay. However, the level advancement can be improved, since much of the economy remains cash based.

As Guyana continues to experience rapid economic growth fueled by oil revenues, the demand for modern banking services is increasing. However, key barriers such as outdated regulatory frameworks, limited infrastructure, and a shortage of IT and finance professionals must be addressed since Guyana's banking sector plays a critical role in supporting the country's economic development. The sector continues to face increasing pressure to modernize, embrace innovation, and remain competitive amidst regional and global shifts. Overall, while the sector is stable and increasingly profitable, to realize its full potential a more aggressive push towards financial innovation, inclusion, and regulatory modernization is required.

This study examines the impact of Fintech on the growth and development of traditional banking systems, with a specific focus on Guyana.

Globally, Fintech significantly ballooned, transforming the financial services landscape. While North America is at the helm of this transformation, Guyana is germinating with growth potential. Fintech companies offer innovative and digital solutions that enhance customer experience, operational efficiency and increase financial accessibility (Nicoletti, 2017).

Since 2008, Fintech has exerted pressure on banks to innovate, collaborate and address risk obsolescence. This research investigates the effects of Fintech's transformation, particularly in developed and developing economies by analysing emerging trends, challenges, and opportunities (Ploshtakov, 2017).

Based on the growing influence of Fintech on traditional banking, this study focused on understanding its transformative impact, particularly within the context of Guyana. To achieve this, the research is guided by the following objectives:

1. Identify the key technological innovations driving Fintech development and evaluate how Fintech has altered core banking functions (Technologies, 2024).
2. Assess how financial regulators have responded to the rise of Fintech.
3. Analyze how Fintech is improving accessibility to banking services and reshaping customer engagement, especially for underserved populations (McKinsey Financial Services, 2024).
4. Synthesize lessons on Fintech transformation in developed countries and propose actionable recommendations tailored for Guyana.

The aim was to critically examine the impact of Fintech and how it is reshaping traditional banking. Analyse key drivers such as innovations, regulatory responses and providing actionable recommendations for the adoption and integration of Fintech solutions in Guyana. Thereby promoting financial inclusion, enhancing banking efficiency, and supporting economic development.

The findings will contribute to the broader discourse on the impact of Fintech in the growth and development of Guyana's banking sector.

## **2. Literature Review**

### **2.1. Overview of Technological Innovations - Fintech**

Financial Technology, commonly known as Fintech, refers to the integration of advanced digital technologies into financial services with the goal of enhancing efficiency, accessibility, and user experience. Fintech encompasses a range of innovations that either complement/disrupt traditional banking operations, including digital payments, mobile banking, peer-to-peer lending, and open banking platforms (Judijanto, 2025).

According to Bank for International Settlements (2024), Fintech is broadly defined as “technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services”. This definition highlights the transformative potential of Fintech, particularly in reshaping the roles and relevance of traditional banks.

Fintech operates across a wide spectrum of services that traditionally fall under the purview of commercial banks, such as savings, lending, payments. However, unlike conventional banking models, Fintech solutions are typically digital-first, often mobile and designed with a focus on customer-centricity and rapid scalability (Arslanian & Fischer, 2021). This has enabled Fintech's businesses to close service gaps in underbanked or underserved populations an

issue particularly relevant in developing countries like Guyana, where there are limitations to access financial services.

## **2.2. Theoretical Constructs/Perspectives**

The literature on Fintech and its impact on traditional banks draws from several theoretical frameworks that helps to understand the dynamics of Fintech and how it impacts customer satisfaction and the operations of banks. The most prominent theories include: the Stakeholder Theory, the RBV Theory, Lean Strategy and Value Proposition.

### **2.2.1. The Stakeholder Theory**

As financial technology continues to reshape the global banking landscape, traditional banks must adopt strategic frameworks to remain competitive Bunea et al. (2016). Stakeholder Theory provides a foundation for understanding how banks can align their operations with the interests of their stakeholders ranging from customers and regulators to underserved communities with emphasis on ethical responsibility and long-term value creation (Caribbean Development Bank, 2021).

According to Ellis (2024) in the 1980s, R. Edward Freeman advised that idea in opposing the conventional shareholder-centric perspective of corporate governance, which places the greatest priority on increasing investor profits. Additionally, different stakeholders have unique needs and expectations Ellis (2024). In Guyana for example customers desire reduced waiting time and better accessibility, therefore commercial banks enhanced both their retail and corporate online banking platform with more choices to assist with bill payments, third-party transactions and wire transfers which reduce the need to physically visit a bank and wait in a long line to effect transactions.

The Stakeholder Theory also emphasizes that organizations should create value for all stakeholders, not just shareholders. Recent studies highlight the role of stakeholder engagement in building trust and ethical frameworks within Fintech applications, suggesting that proactive stakeholder involvement can enhance the ethical deployment of AI and other technologies in financial services, (Oliveira and Ruiz, 2021).

In Guyana's banking sector, applying Stakeholder Theory could guide traditional banks in navigating Fintechs' collaborations, ensuring that innovations align with the needs and concerns of all stakeholders (Nicoletti, 2017 and Naraine, 2025).

### **2.2.2. The Resource Based View Theory**

The RBV place emphasis on the importance of internal capabilities, mainly technological infrastructure and human resources for a sustained competitive advantage, (Maijanen, 2020). In countries like the USA, Canada, and Guyana, the need for strengthen digital infrastructure and to have human capital to innovate, differentiate, and retain market share against Fintech entrants is

critical. Also, the RBV theory focuses on leveraging unique internal resources, skills, technology, brand, or data for sustained competitive advantage (Ploshtakov, 2017).

Further, this theory has been a prominent framework in strategic management within organisations as it highlights the significance of company specific assets and competencies for developing sustainable competitive edge (Mulders, 2019). JPMorgan Chase is a prime example as the largest North American bank that employed the RBV Theory to maintain its competitive edge. This was made possible using its financial and technological resources to provide services such as cheque deposit, P2P payments and investment tools, all of which are tailored for customers through data analytics (Ding et al., 2021).

Further, while there are several known gaps within the RBV Theory, it offers a strong theoretical foundation for helping an organisation in recognizing how the optimisation of its internal resources could potentially develop its competitive position and enhance performance (Kiewitz et al., 2020).

### **2.2.3. The Lean Strategy**

The Lean Strategy originated in the latter part of the 20th century by Taiichi Ohno and Eiji Toyoda developed the Toyota Production System (TPS) (Ohno and Bodek, 2019). This strategy has now been broadly used in various sectors for waste reduction, value creation and operational efficiencies. While this approach was primarily used by the manufacturing sector in the past, currently it has been expanded to the service sectors since continuous improvement, resource optimisation and value creation for customer through continuous identification and efforts for waste removal. Banks can adopt these approaches to enhance agility and responsiveness. Recent studies emphasize the importance of digital transformation and open banking initiatives, highlighting how banks can leverage APIs and partnerships to innovate their service models and improve customer experiences (Stefanelli et al., 2022).

In developed countries like USA, UK & Canada and developing countries such as Guyana, banks are embracing Lean Strategies to pilot new digital services efficiently, respond to customer feedback promptly, and foster a culture of continuous improvement. The Lean Strategy, derived from lean startup principles, advocates for iterative development and rapid integration of customers' feedback to drive innovation. Fintech firms often employ lean methodologies to swiftly align to market needs and technological advancements (Eakin, 2019).

In the USA, Wells Fargo adopted lean concepts to streamline their operations, minimize duplication of efforts and utilise automation to enhance customer service. This improved its operations, streamlined customer service and significantly reduced inefficiencies (Welch, 2022). Similar to Wells

Fargo's strategy, JPMorgan Chase, the largest bank in the USA, implemented lean strategies also by adopting artificial intelligence (AI) powered chat-bots. This enables the bank to provide 24/7 customer support, relieving customer service representatives of this task to direct focus on other aspects of the bank's operations (Ding et al., 2021). In adopting this strategic approach, Guyana will be able to lower operating costs, create sustainable digital banking eco-system and equip its banking organisations to satisfy the growing desires of clients.

Recently, Lean Strategy has become relevant as banks seek to adopt more agile, iterative approaches to innovation, enabling rapid testing and refinement of digital services in response to the shifting consumer demands. Guyana's banking industry can utilise automation to improve customer service, reduce inefficiencies and streamline internal processes (Ganga, 2024 and Frost, 2020).

For instance, the establishment of new bank accounts can be done using an online platform, which will provide the bank with the necessary information without requiring the customer to visit. By adopting similar strategies, Guyana will be able to expand considerably and meet the growing needs of the nation and international standards for banking products and services (Naraine, 2025).

#### **2.2.4. Value Proposition**

Value proposition has its roots in marketing and strategic management literature. It emerged in the 1980s as businesses began to articulate more clearly how their products or services deliver unique value to customers (Frow et al., 2014).

Over the years, Value Proposition evolved to become a central element in strategic management and business model design, especially following the work of Osterwalder et al. (2014), who positioned the value proposition as a core component of the Business Model Canvas. This framework became particularly influential in the digital era, where Fintechs companies rely on customer-centric innovation and rapid adaptability to redefine value delivery (Rafiq, 2019).

In the context of Fintech, value propositions are centered around accessibility, efficiency, low cost, convenience, and personalised services. These characteristics, when compared to traditional banking model, are often critiqued for bureaucratic inefficiencies, limited customer focus, and delayed technological adoption. Fintech companies like Revolut, PayPal, and M-Pesa have disrupted conventional banking by offering agile, technology-driven services that respond more directly to evolving customer expectations (Syed et al., 2025).

The relevance of value proposition theory shows how Fintechs' can attract customers away from traditional banks. This challenges traditional banks to re-evaluate their own value propositions for sustainable growth. Guyana's banking sector, where financial inclusion and digital transformation are pressing needs, understanding and adopting enhanced value propositions is

essential for competitiveness (Ramamohan et al., 2021). In this era of Fintech, customers are demanding seamless, personalized, and 24 hours access to financial services and traditional banks are forced to redefine their value propositions to align with these expectations (Rathnayake, 2023).

Together, these frameworks offer a comprehensive lens for analyzing how banks are navigating Fintech disruption and strategically evolving to meet the complex demands of modern financial ecosystems.

### **2.3. Overview of Fintech and its Impact on Traditional Banks**

Over the past decade, Fintech's ability to deliver low-cost, real-time services could directly address several inefficiencies currently limiting the reach and effectiveness of Guyana's banking sector. The role of Fintech in enhancing Guyana's financial services is critical as digital infrastructure improves and mobile penetration increases, Fintech offers scalable solutions for expanding access to financial services such as real time payments. (Sahay et al., 2020).

Further, with Guyana now being recognised as one of the fastest growing economies and as an oil producing nation, it is imperative that the banking sector is of international standards to satisfy the growing needs of the nation. As a result, this literature review critically analysed the role of Fintech and its impact on traditional banks to enhance accessibility and efficiency (Bank of Guyana, 2023). Fintech has also boosted operational effectiveness and changed customers' experience through more responsive, individualized and accessible banking services (Devineni, 2024; Siek & Rukma, 2022). It increased customer satisfaction, expanded accessibility and has reduced the waiting time for customers (Wahyuni et al., 2023).

In recent years, Fintech has dramatically transformed the financial industry, its impact is profound and far-reaching, it is reshaping the financial landscape, offering innovative solutions that enhance accessibility, efficiency, and security (Vives, 2017).

As technology continues to evolve, the Fintech sector is poised for even greater advancements, in Guyana making financial services more inclusive, efficient, and user-friendly. Embracing these innovations will be crucial for both consumers and businesses to stay ahead in an increasingly digital world. The increase in mobile payment solutions was one of the most significant changes and the surge in mobile payments was particularly impactful in areas where traditional banking infrastructure was limited (Yan et al., 2021). Fintech has bridged gaps through mobile banking and digital payment platforms. These innovations have proven critical in reaching unbanked populations by reducing costs and increasing accessibility (Sahay et al., 2020). In Guyana more so in regions where financial access remains challenge, innovation through mobile technologies and digital platforms offers a compelling path toward greater inclusion.

Further, while product and service innovation are critical, the regulatory upgrade and adaptation referred to as Regulatory Technology (RegTech) are also vital for innovation. RegTech applies digital tools to streamline compliance, reporting, and monitoring processes. According to [Anagnostopoulos \(2020\)](#), RegTech not only reduces compliance costs for financial institutions but also enhances the capacity of regulators to oversee complex digital financial ecosystems. This is especially relevant for developing countries like Guyana, where regulatory bodies must evolve alongside a rapidly digitising financial landscape.

Further, consumer behaviour is also playing a pivotal role in driving innovation in the banking sector and Fintech. The increasing digital literacy and demand for seamless financial interactions force key stakeholders to innovate continuously ([Deloitte, 2021](#)).

Nevertheless, the pace of innovation also presents regulatory and operational challenges, especially in Guyana. Issues related to data privacy, cybersecurity, and digital identity management require robust frameworks to ensure safe adoption. Guyana's path toward leveraging Fintech innovation will thus require not only technological investments but also institutional reforms to support responsible innovation and consumer protection ([Leong, 2018](#)).

In summary, as Fintech continues to drive efficiency, competition, and inclusion while posing challenges and opportunities for Guyana to embracing Fintech innovation, it also offers a unique opportunity to strengthen financial access, modernise traditional banking structures, and build a resilient, future-ready banking sector.

#### **2.4. Gaps in Literature**

Throughout this research most literature on Fintech centers on developed economies and major emerging markets, leaving a significant research gap in the context of small developing countries like Guyana. There is a lack of in-depth studies exploring how Fintech impacts traditional banking systems in the Caribbean Region, particularly limited information on how Fintech supports financial inclusion in underserved and rural communities. Most existing research also neglects the infrastructural challenges such as limited internet access and low digital literacy that affect Fintech adoption. Moreover, the regulatory landscape and its ability to keep-up with the pace of rapid Fintech innovation. Also, most studies framed Fintech and traditional banks as competitors, overlooking collaborative models that could benefit both sectors.

Finally, even though not much has been done to analyze Fintech's potential role in supporting sustainable development goals, Guyana has been implementing Unibank of versal practices to improve on sustainability and digitalization in the banking sector despite of the many challenges ([Bank of Guyana, 2023 & Zhang et al., 2022](#)).

### **3. Materials and Method**

#### **3.1. Method**

This study employed a systematic review to examine the impact of Fintech on the growth and development of traditional banking systems. Adoption of the systematic review method offered an objective and detailed synthesis of topic research and assists in identifying current trends, gaps, and inconsistencies in the literature. The first step analysed existing literature on Fintech' approach in reshaping traditional banking structures across North America and other developed economies (Mills 2018). Additionally, based on the fact that the Fintech landscape is broad and rapidly evolving, the use of a systematic review provides a robust foundation to map existing research, identify global trends, and highlight gaps in knowledge. This ensures the analysis is grounded with high-quality and up-to-date literature. It also complements qualitative methods like thematic analysis by ensuring that emerging themes are grounded in well-structured evidence base and helps to inform strategic decisions, (Booth et al, 2016).

During this review key risks, challenges, opportunities and impact of Fintech in developed and developing countries were analysed and findings are presented. The use of themes in digital banking, such as technological innovations, risks, customer experience, regulatory changes and opportunities in developed markets were also critically analysed to determine applicability and contextualization for Guyana's banking sector, (Judijanto, 2025).

#### **3.2. Search Strategy**

After careful consideration and in an effort to satisfy the objectives of this research key search words were used: Fintech, Financial Technology, Innovation, Regulatory Framework, Digital Transformation, Traditional Banking Systems and Strategic Partnership. The use of these words helped to target the relevant research findings in databases such as Google Scholar, SAGE, JSTOR, Scopus and Emerald. A ten-year analysis span for aged data/evidence was exhausted for optimum recommendations for Guyana's banking sector.

### 3.3. Inclusion and Exclusion Criteria

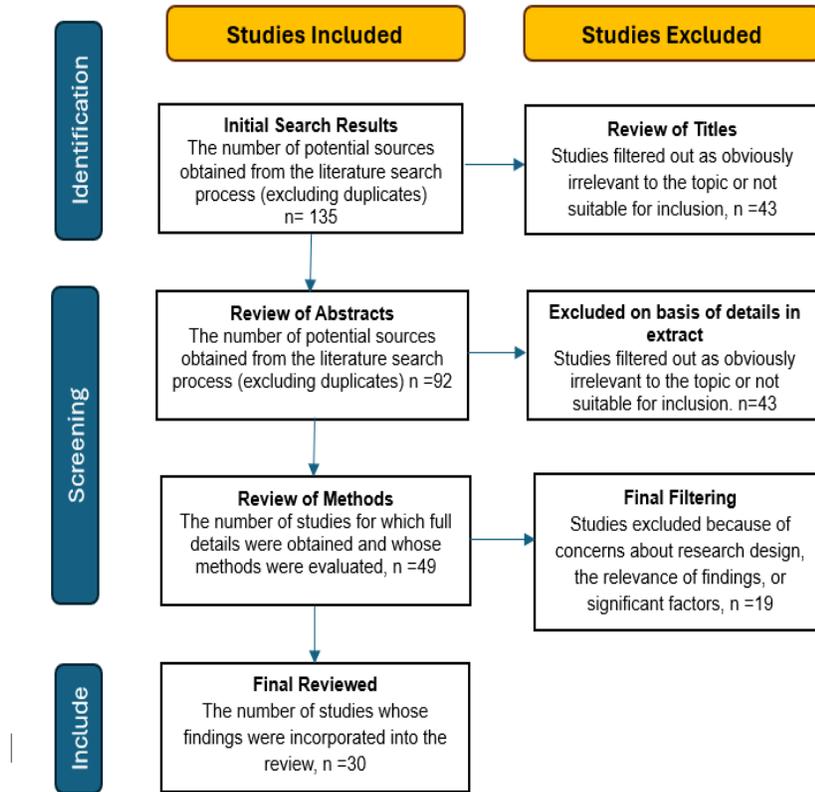
The publications which provided data for this research were chosen based on the inclusion and exclusion criteria listed in the table below:

Included	Excluded
Research that has been made available in books, peer-reviewed publications or credible industry reports.	Articles or publications prior to 2015 since the content may not reflect current trends and provide dated market information.
Publications within the period 2015-2025 to ensure current data and trends are acquired	Studies aimed at Fintech and digital transformation for non-banked entities.
Studies that examined how Fintech and digital banking improved the customer service and banking sector.	Studies centered on non-North and South American nations.
Studies conducted in or pertaining to Fintech operations and its impact on traditional banks in North and South American banks to ensure relevance to research topic.	Sources that are not academic in nature such as blogs, opinion pieces and information from unreliable sources.
Research relevant to current trends, customer satisfaction, Fintech and digital banking technologies.	

### 3.4. Data Collection

Data was obtained from secondary sources comprising qualitative data sets. The secondary data collected are findings from published articles in online journal databases, peer reviews and other reputable sources were re-evaluated to ensure quality.

The Prisma chart in [Figure 1](#) below delineates the data collection process, indicating the final number of articles from which data was extracted, and analysed for this study.

**Figure 1***Prisma Chart*

Source: *Figure 1: Prisma Chart (Kahale, et al., 2021)*

### 3.5. Data Analysis

Data was extracted from selected sources and the findings were further dissected using thematic analysis to compare and contrast patterns related to infrastructure readiness, innovation adoption/diffusion, customer engagement, regulations flexibility, benefits, efficacy, risks, and challenges (Yanto, 2023).

### 3.6. Ethical Issues

Based on the process used, the collection and analysis of published secondary data, had no significant ethical issues to address. However, it was critical to address all protocols related to sources used with appropriate acknowledgements and the referencing with relevant in-text citations.

## 4. Results

Themes	Findings	Sources
1. Technological Innovations in Fintech	<p>Fintech growth worldwide is driven by robust digital infrastructure, including fast internet, 4G/5G networks, and widespread smartphone use. In developed countries, these technologies have enabled scalable digital banking services such as mobile payments, online lending, and real-time transactions. As a result, traditional banks are undergoing digital transformation, adopting mobile platforms, AI-driven support, and automated back-office systems to meet rising consumer expectations.</p> <p>In contrast, developing nations like Guyana face infrastructure and resource constraints that limits digital progress. Although mobile usage is growing, inconsistent internet access and limited adoption of technologies hinder innovation and scalability.</p> <p>Digital transformation in Guyana is essential to support the economic development and remain competitive and relevant. Banks must upgrade outdated systems and invest in secure, walkable technology. Strengthening digital infrastructure by embracing Fintech solutions is critical to enhance service delivery, cost reduction and to foster financial inclusion especially in rural and underserved regions such as Region 1.</p>	<p>Gomber et al.,2017.</p> <p>Philippon, 2016.</p> <p>Vives, 2017.</p> <p>Arner et al.2016.</p> <p>Bank of Guyana,2023.</p>
2. Regulatory Framework and Institutional Response	<p>Globally, regulatory responses continue to be behind with Fintech innovation, creating gaps and risks. The rapid rise of Fintechs' has challenged traditional regulatory frameworks, which were mainly designed for conventional banking institutions. Some key concerns include the oversight of non-bank financial entities, consumer protection, data privacy, cybersecurity, etc.</p> <p>Further, in the Caribbean, regulatory progress varies. While the Eastern Caribbean Central Bank has implemented digital currency initiatives and supportive frameworks, Guyana's regulatory system remains traditional. The Bank of Guyana lacks a dedicated Fintech framework, regulatory sandbox, or tailored licensing regime, creating uncertainty for Fintech innovators and limiting ecosystem growth.</p> <p>Many developed countries have adopted forward-looking tools such as open banking, flexible licensing, and consumer data protection laws to support innovation while managing risks. For Guyana, developing a modern, adaptive regulatory framework is essential. Stakeholders must balance innovation with financial stability, drawing lessons from global practices to ensure safe and inclusive Fintech development.</p>	<p>Ng and Kwok, 2017.</p> <p>Arner et al, 2016.</p> <p>Bank of Guyana, 2023.</p> <p>Zetsche et al, 2017.</p> <p>Caribbean Development Bank, 2021.</p> <p>Frost et al.,2019.</p>
3. Customer Access and Engagement	<p>Fintech has significantly enhanced global financial inclusion through tools such as mobile money,etc. Developed countries illustrate how digital financial solutions have transformed banking access and improved customer engagement. In these mature Fintech markets, customers benefit from digitized onboarding, real-time services, and highly personalized user experiences. Traditional banks, constrained by legacy systems, often fail to meet the expectations of younger, tech-savvy customers.</p> <p>Rather than viewing Fintech as a disruptor, banks in Guyana can embrace it as a strategic partner. Collaborations between Fintech firms and banks offer mutual benefits banks gain agility and digital innovation, while Fintechs access regulatory legitimacy and customer trust. API integration, co-branded platforms, and shared technology can drive service enhancements and operational efficiency.</p> <p>Fintech also plays a vital role in reaching underserved communities, especially in rural and hinterland areas. It bridges the service gaps left by traditional banks offering financial services. Guyana, must adopt a customer-centric digital solutions such as seamless onboarding, real-time support, and personalized services to remain competitive. Strategic partnerships (Fintech-Bank) can drive innovation, reduce costs, and expand financial inclusion.</p>	<p>Shehadeh,2025.</p> <p>Demirgüç-Kunt et al., 2018.</p> <p>Gomber et al.,2017.</p> <p>Sahay et al.,2015.</p> <p>Chuen and Teo, 2015.</p> <p>Puschmann, 2017.</p>

4. Comparative Lessons from Developed Economies	<p>The rise of Fintech has transformed global banking with technological innovations. Traditional banks now face increasing competition not only among each other but also from non-financial entities such as tech start-ups, social media platforms etc.</p> <p>In developed economies like the USA, Fintech is characterised as a consumer-focused innovation. Fintechs' utilized tools such as AI, blockchain, and open banking APIs to deliver personalized, efficient financial services. Digital banks and robo-advisors have gained popularity by offering convenient, low-cost, mobile-first solutions. While regulatory sandboxes have further enabled safe experimentation, the challenges with data privacy concerns, cyber threats, remains.</p> <p>In contrast, developing economies view Fintech as a driver of financial inclusion required for economic development. Technologies such as mobile money, agent banking, and digital lending platforms have proven effective in reaching unbanked populations.</p>	<p>Románova and Kudinska, 2016.</p> <p>Arner, Barberis and Buckley, 2016.</p> <p>Caribbean Development Bank, 2021.</p> <p>Chen, Wu and Yang, 2021.</p> <p>Zhang et al., 2022.</p> <p>Anagnostopoulos, 2020.</p> <p>World Bank 2022.</p> <p>Sahay et al., 2020</p>
5.Strategic Integration and Value Creation in Guyana's Banking Sector	<p>Post COVID 19 banks continue to focus attention on digital transformation, innovation and customer-centric improvements. The study recognizes significant inconsistency in Fintech revelations and digital transformation strategies among banks. Some benefits, such as operational efficiency and customer satisfaction, were emphasized more than challenges like cybersecurity and regulatory compliance. Despite the benefits/drawbacks global Fintech platforms have advanced interoperable payment systems, digital wallets, and real-time settlement solutions, which gradually became the standard in advanced economies. These systems enhance efficiency and financial inclusion. Building trust through consumer education, transparent operations, and regulatory oversight are essential Fintech adoption across diverse demographics.</p> <p>Traditional banks must prioritize digital transformation and consider strategic Fintech partnerships to remain competitive. Mobile-first Fintech solutions can dramatically improve access and engagement if supported by reliable digital infrastructure.</p> <p>Guyana's payment landscape is relatively fragmented. While several electronic payment options exist, there is limited interoperability between banks, payment platforms, and mobile money providers. The lack of integrated infrastructure reduces the effectiveness of digital financial services and inhibits user adoption.</p>	<p>Vives, 2017</p> <p>World Bank, 2022</p> <p>Bank of Guyana, 2023</p>

## 5. Discussion

This section discusses the key findings of the study based on the thematic analysis of data collected from industry professionals, academic literature, and relevant case studies. The aim of the research was to examine how Fintech is impacting the growth and development of traditional banking systems, with specific focus on drawing lessons applicable to Guyana's banking sector.

Using a qualitative approach, five major themes emerged from the analysis:

1. Technological Innovations in Fintech
2. Regulatory Framework and Institutional Responses
3. Customer Access and Engagement
4. Comparative Lessons from Developed Economies
5. Strategic Integration and Value Creation in Guyana's Banking Sector

### 5.1.1. Technological Innovations in Fintech

Technological innovations such as mobile banking, digital payment platforms and AI continue to transform financial service delivery. The findings revealed that mobile-first solutions and digital wallets are increasingly popular among the younger generations, while AI-driven risk assessment tools are proven to be more efficient than manual processes used by traditional banks (Omarini, 2018). The study also confirmed innovations used by Fintechs globally improved cycle time, cost and accessibility to financial services (Frost, 2020).

Fintechs' over the years have created faster, more inclusive, and lower cost alternatives to traditional financial service channels (Manyika, 2016), such as mobile banking and access to financial services increased significantly particularly in rural areas. Also, local Fintech operators, such as Mobile Money Guyana (MMG+), were frequently cited as examples of innovation meeting the needs of the underbanked population. However, some stakeholders expressed concerns that traditional banks in Guyana have been slow to adopt these technologies due to dated systems, limited technical capacity, and regulatory uncertainty (Bank of Guyana, 2023).

These findings resonate with the broader literature, while Arner et al. (2017) highlighted that technological innovation is the driver of the Fintech revolution, enabling cost effective scalability and enhanced customer engagement. Similarly, (Gomber et al. (2018) argued that AI and mobile technologies redefine the financial landscape. These innovations challenge the conventional bank structure by lowering entry barriers, thereby fostering more customer-centric ecosystems.

Further, while technology serves as a catalyst for Fintech advancement, its effectiveness is influenced by digital literacy, customer privacy, cybersecurity, high infrastructure costs associated with digital expansion/upgrades (Arner et al., 2016). Additionally, scarcity of local digital talent coupled with regulatory support and institutional agility which when examined further with Guyana's

emerging digital economy are considered barriers to innovation and has slowed Fintech adoption (Frost, 2020). However, the success of mobile payment platforms in other developing countries highlights the potential for Guyana to leapfrog traditional stages of banking development (Deloitte, 2019). Nevertheless, with proper investment and a supportive regulatory framework, banks in Guyana can harness Fintech innovation to expand financial inclusion and operational efficiency. Lee and Shin (2018) cautioned that while Fintech innovation improves service efficiency, it simultaneously exposes users to risk if not managed.

Additionally, from a theoretical perspective the RBV highlights that banks in developing countries like Guyana are limited in their ability to build dynamic capabilities required for long-term competitiveness.

Their technological infrastructure does not yet qualify as a strategic resource under RBV standards (Maijanen, 2020). Furthermore, Lean Strategy principles according to Opall et al. (2019) also suggest that banks should experiment incrementally with innovation to remain flexible and employ lean methodologies to swiftly align market needs and technological advancements.

While several studies confirmed that opportunities are significant in developed countries like the USA where it was demonstrated that mobile-first financial models are effective, developing countries on the other hand nothing this can only thrive with the right infrastructure and regulatory framework (Omarini, 2018). The Guyana's growing digital economy and its National Payments System modernization initiatives suggest that success is possible with the collaboration of both public and private entities (Bank of Guyana, 2023).

### **5.1.2. Regulatory Framework and Institutional Responses**

Regulatory capacity is critical in shaping Fintech growth while safeguarding systemic stability. The role of regulatory institutions in facilitating/constraining Fintech development emerged as a key theme in this study. The need for a responsive and forward-looking regulatory environment that enables innovation while ensuring financial stability and consumer protection is critical for long term success (Ghosh, 2020).

Additionally, the lack of tailored regulations for Fintech startups such as digital lenders, mobile money platforms, has created uncertainty in the Guyana market (Demirgüç et al., 2018). Findings revealed that Guyana's current regulatory framework is not designed to manage the evolving Fintech landscape. There is also limited institutional capacity to implement or monitor uscriptnew compliance regimes, since the lack of formal guidance from the Bank of Guyana as a key barrier to both innovation and consumer trust Manyika (2016) was also cited.

The Guyana market is evolving and requires a proactive, flexible regulatory approach to encourage innovation while protecting consumers and maintaining

trust in the financial system. Fintech firms do not know what rules to follow, and the banks are unsure how to engage them, hence their inability to engage and collaborate effectively. These insights also suggest that Guyana's regulatory system has yet to catch up with the pace of digital transformation. In contrast to more advanced economies, adaptive frameworks such as regulatory sandboxes have been introduced to support Fintech experimentation, (Zetzsche et al., 2017). The lack of proactive institutional response may slow down both Fintech innovation and digital banking.

In emerging markets, regulatory sandboxes are proven to an effective tool to balance innovation, Zetzsche et al. (2017) and Arner et al. (2016) emphasized the importance of "smart regulation" in Fintech ecosystems, claiming that flexibility can stimulate innovation while protecting consumers. Similarly, Haddad and Hornuf (2019) validates that in countries with agile regulations, Fintech adoption and competitiveness tend to grow faster. The findings indicated that Guyana's current lag aligns with regulatory uncertainty which constrains both Fintech growth as well as public/private sector collaboration.

From the perspective of Stakeholder Theory, key stakeholders' interests must be aligned, for regulatory framework to be effective, it requires transparent consultation with all stakeholders to prepare policies that will be effective for enabling innovation. The BOG should consider adopting the regulatory sandbox model to allow Fintech experimentation without full-scale licensing, like models in the UK, launched by Financial Conduct Authority (FCA) in 2016 (FCA, 2021).

To foster responsible Fintech development, Guyana's Regulators must modernize policy frameworks by introducing mechanisms such as Fintech sandboxes, open banking standards. These should be developed in collaboration with banks, startups, civil society, and academia for inclusivity and feasibility (Anagnostopoulos, 2020).

Finally, it is important to note that regulatory reform is constrained by institutional capacity and political will. While some stakeholders called for rapid policy changes, others cautioned that too lenient a framework may expose the financial system to risks such as fraud, data breaches, or money laundering. Balancing innovation with risk mitigation remains a key challenge for Guyana's policymakers (Aron et al, 2021).

### **5.1.3. Customer Access and Engagement**

Consumer demand for convenient, digital-first financial services is pushing banks toward customer-centric innovation. The theme relates to how Fintech is reshaping customer access to financial services by redefining engagement models between banks and consumers. It captures insights around digital inclusion, personalised service, and the challenges posed by disparities in digital literacy and infrastructure (Ozili, 2021).

Customers in urban areas benefited from mobile banking, while rural populations face barriers due to connectivity issues and lack of awareness. In the study it was noted that mobile banking apps and Fintech platforms have expanded access to banking services, especially for younger and urban users. However, older adults, low-income populations, and rural communities often face barriers to digital adoption.

The findings suggest a growing digital divide in Guyana, where Fintech uptake varies significantly among demographics. This risk excludes certain groups if targeted strategies are not implemented to bridge digital literacy and access gaps. At the same time, the shift to digital platforms offers banks and Fintechs an opportunity to expand financial inclusion, lower service delivery costs, and improve customer satisfaction (Haddad and Hornuf, 2019).

According to Ozili (2021), while Fintech has improved inclusion, gaps remain due to low digital literacy and trust issues in underbanked communities. While digital finance has the potential to enhance inclusion, its success depends heavily on digital education and infrastructure. The World Bank also identifies digital connectivity and trust in digital platforms as critical enablers of financial engagement in developing countries. In Guyana's case, Fintech innovations are available, but accessibility remains fragmented.

From the Value Proposition framework, Banks and Fintechs must offer tailored services meeting the evolving needs of different customer segments, (Frow et al., 2014). While Lean Strategy also advocates the need for rapid feedback cycles to adapt services to user needs something Fintech startups are doing more effectively than Banks in Guyana.

To optimise the benefits of Fintech for inclusion and engagement, targeted interventions are needed such as digital financial literacy campaigns, investment in rural broadband, and the design of user-friendly interfaces. Additionally, banks must balance automation with personalized service to avoid alienating customers who prefer in-person interaction (McKinsey & Company, 2020).

Despite enthusiasm for Fintech's potential, several concerns about overreliance on technology and the erosion of human interaction in banking were noted. The study revealed that for some, face-to-face service remains a valued aspect of trust-building. Thus, while digital engagement is important, banks must maintain a hybrid model that blends technology with human-centered service delivery, this will no doubt have positive impact on customer access and engagement (Osterwalder et al., 2014 & PwC, 2020).

#### **5.1.4. Comparative Lessons from Developed Economies**

Banks are increasingly leveraging partnerships with Fintech firms to reduce costs, increase speed to market, and improve customer experience (Plostakov, 2017). One of the most insightful themes to emerge from this study is the value of examining how developed economies have successfully integrated Fintech

into their financial systems. Guyana's Fintech ecosystem is still emerging; valuable models can be adapted where Fintech has become established and is effectively regulated. Local banks in Guyana remain cautious, citing data privacy concerns and lack of internal tech capabilities as barriers to Fintech collaboration, (PwC, 2020).

The lessons from developed countries like the USA can be used as benchmarks for how Fintech innovation can thrive under supportive regulatory and technological ecosystems (Mills, 2018). These markets have prioritized inclusive financial education and created innovation sandboxes to promote digital transformation. Several studies indicated Guyana's inability to replicate these frameworks, despite recognizing their relevance due to the need for mindset shifts and capacity-building (PwC, 2020).

Some findings also suggested that while there are contextual differences, the transferable lessons from advanced Fintech markets could help Guyana to overcome its regulatory challenge, bridge technical gaps, and most of all enhance customer trust. However, rather than direct imitation, Guyana needs to engage in context-sensitive adaptation, accounting for its unique political, economic, and infrastructural conditions. Gozman et al. (2018) highlighted that successful banks adopt open APIs and collaborate with Fintechs to create value-added services.

Zetzsche et al. (2017) also highlighted that regulatory sandboxes in developed countries have accelerated Fintech development by empowering firms to first test innovations without incurring full compliance costs upfront. Gozman et al. (2018) emphasized the role of open banking and API integration in creating interoperable ecosystems that promote collaboration between Banks and Fintechs. These innovations made financial services more inclusive and competitive for highly desirable emerging economies like Guyana.

Through the lens of the Stakeholder Theory, developed economies demonstrated the importance of balancing innovation with consumer protection through inclusive policymaking. The RBV also suggests that successful adaptation requires building institutional capacity and leveraging internal strengths such as culture and local market knowledge rather than merely importing foreign models. Regulators and Industry leaders must support and drive innovation and partnerships to accelerate digital integration (Sahay et al., 2020).

Finally, for long-term sustainability strategic integration should be guided by culture, customer needs and not just technological trends. While benchmarking against advanced economies offers valuable guidance, Guyana must be cautious as success in one country does not guarantee success in another. Factors such as Institutional, cultural, and infrastructural differences demand careful customization. Moreover, a purely top-down approach may risk overlooking grassroots innovations already occurring in local Fintech

ecosystems, so international models should serve as inspiration and not for immediate adoption (Tang et al, 2022).

#### **5.1.5. Strategic Integration and Value Creation in Guyana's Banking Sector.**

This theme explores how Guyana's traditional banks can leverage Fintech not merely for digitization, but to create long-term strategic value for all stakeholders. Strategic integration involves the deliberate adoption of Fintech tools such as mobile platforms, data analytics, and APIs to drive innovation, enhance competitiveness, and deliver personalized financial services (Visconti, 2016).

Findings reveal that while banks in Guyana have introduced basic digital services such as SMS alerts, mobile banking, real-time payments, these efforts are often ad hoc and reactive, lacking a coherent strategy. Fintech adoption in Guyana remains fragmented and underutilized, resulting in banks risk missing opportunities to improve customer experience, streamlining operations and expanding market access (Vives, 2017).

Scholars such as Gozman et al. (2018) stressed that successful Fintech integration requires cultural change and shared digital infrastructure. Similarly, Arner et al. (2016) argued that banks must evolve from service providers to platform-based solution enablers. The banking value chain from customer onboarding and credit risk to product design can be enhanced with Fintech integration.

To leverage strategic value Fintech and Banks in Guyana must take a multi-pronged approach by investing in digital capacity and building partnerships (Teece et al., 2016).

Applying the RBV, it is clear Guyana's Banks lack the technological infrastructure, digital talent, and the flexibility needed to innovate. From a Stakeholder Theory perspective, current integration efforts have yet to deliver inclusive value, especially for rural communities, low-income residents (Maijanen, 2020).

While strategic integration is promising, challenges remain (Lees & Shin, 2018). Resistance to change, lack of leadership, and dated infrastructure can slow progress (Leong & Sung, 2018). Additionally, the heavy reliance on imported Fintech models can have positive/negative impact on Fintech integration (Momaya, 2019). Banks must therefore find a balance with global learnings to local responsiveness, ensuring that Fintech solutions are accessible, secure, and genuinely creating value for Guyana's diverse population.

## **6. Conclusion**

The dissertation set out to examine the impact of Fintech on the growth and development of traditional banking systems, with specific attention to document lessons applicable to Guyana's banking sector.

The study concluded that a significant reshaping of the financial landscape has been attributed to the influence of advancing technologies. Fintech innovations, categorized by agility, customer-centric approaches, and advanced technological applications, have significantly disrupted traditional banking models. This disruption is seen in various dimensions, ranging with both positive and negative impacts on operational efficiencies, customer engagement, market competition, trust, regulatory compliance. In recent years traditional banks, once as the leaders in financial services, now have to innovate and adapt rapidly to the changing landscape and Financial Technology. The study highlights that the integration of Fintech solutions into traditional banking operations is not just beneficial but is necessary for maintaining relevance and competitiveness in the market.

A key finding of the study is the eminent impact of Fintech innovations across various areas of traditional banking. While some areas such as payment processing and personal finance management have yielded extensive benefits from Fintech integration, other areas like Regulatory Compliance and Risk Management continue to pose challenges.

In developed economies banks that have successfully embraced Fintech innovations have proven improved operational efficiencies, enhanced customer satisfaction, and market expansion. On the contrary, banks that have been slow to adapt face significant risks of obsolescence. The study emphasizes the critical role of strategic planning and agile adaptation in leveraging Fintech innovations not only for value creation but also for a sustainable competitive advantage.

Additionally, the study examines the complex relationship between Fintechs and traditional banks, revealing relations from aggressive competition to strategic partnerships. Also, over the years some traditional banks have increasingly recognized the value of collaborating with Fintech firms to leverage their innovative capabilities and technological expertise. These collaborations in some developed economies led to the advancements of hybrid models which combine the strengths of traditional banking with the agility and innovation of Fintechs. Also, the hybrid model was necessary to satisfy the evolving financial landscape globally. The study concludes that the future of banking lies in the synergetic relationship between Fintechs and Banks, with both entities leveraging on their unique strengths for a better financial ecosystem.

The study also emphasized the broader implications of Fintech innovations in the financial industry, including regulatory and policy considerations. The rapid growth of Fintech has outperformed regulatory frameworks, requiring the need to keep reviewing existing policies to ensure their applicability to innovation while maintaining the balance between customer protection and financial stability. The study also revealed that a balanced regulatory approach is essential to support innovation without compromising on security and

compliance. It also highlights the need for continuous dialogue between key stakeholders to tailor and develop new policies that support the sustainable growth of the financial sector.

In conclusion, the study provides a holistic understanding of the transformative impact of Fintech innovations on traditional banking systems globally and regionally. The need for strategic adaptation, collaboration, and regulatory foresight was highlighted as major drivers for Fintech integration. Ultimately, to support Guyana's economic growth and development and to ensure alignment with international standards the implementation of the proposed recommendations can revolutionise Guyana's banking sector in the near future.

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### Conflict of Interest

The authors declare no conflict of interest.

### References

- Anagnostopoulos, I. (2018) Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business*, 100, pp.7–25. <https://doi.org/10.1016/j.jeconbus.2018.07.003>
- Anagnostopoulos, I. (2020) Fintech and regtech: Impact on regulators and banks', *Journal of Economics and Business*, 112, pp. 105996. <https://doi.org/10.1016/j.jeconbus.2020.105996>
- Arner, D. W., Barberis, J. and Buckley, R. P. (2016) The evolution of Fintech: A new post-crisis paradigm? *Georgetown Journal of International Law*, 47(4), pp.1271-1319. <https://doi.org/10.2139/ssrn.2676553>
- Arner, D. W., Barberis, J., & Buckley, R. P. (2017) Fintech, regtech, and the reconceptualization of financial regulation. *Northwestern Journal of International Law & Business*, 37(3), 371-413. <https://tinyurl.com/4s7f29k8>
- Arner, D.W., Barberis, J.N. and Buckley, R.P. (2017) Fintech and regtech: Impact on regulators and banks. *Journal of Banking Regulation*, 19(3), pp.240–247.
- Aron, D., Cotteleer, M., & Omri, O. (2021) Traditional banks vs. digital banks: The balancing act. *Harvard Business Review*. <https://hbr.org>
- Arslanian, H. and Fischer, F. (2021) *The Future of Finance: The Impact of FinTech, AI, and Crypto on Financial Services*. 2nd edn. London: Palgrave Macmillan. <https://tinyurl.com/c6c7phhr>
- Bank for International Settlements (Basel Committee). (2024) *Digitalisation of finance*. February. Basel: BIS. <https://www.bis.org/bcbs/publ/d575.pdf>
- Bank of Guyana. (2023) *Annual Report 2022*. Georgetown: Bank of Guyana. <https://tinyurl.com/ykmd2sm7>

- BANK OF GUYANA. (2023) *Facilitating the Transformation of the Guyanese Economy for Sustainable Growth, development and Prosperity: 5-year Strategic Plan 2023 - 2027*. <https://tinyurl.com/3r8xvjnd>
- Booth, A., Sutton, A. and Papaioannou, D. (2016) *Systematic approaches to a successful literature review*. 2nd ed. London: SAGE Publications. <https://tinyurl.com/yc3u488k>
- Bunea, S., Kogan, B. and Stolin, D. (2016) 'Banks vs. FinTech: At Last, it's Official', *Journal of Financial Transformation*, 44, pp. 35–44. <https://tinyurl.com/4yk4s6h3>
- Caribbean Development Bank (2021) *Caribbean FinTech: Opportunities and Risks in the Digital Financial Landscape*. Bridgetown: CDB.
- Deloitte. (2019) *Digital Banking Maturity 2019: Transformation Starts Here*. [Online] Available at: <https://www2.deloitte.com/>
- Deloitte. (2021) *2021 Global FinTech Rankings Report*. [online] Deloitte Insights. Available at: <https://www2.deloitte.com/global/en/pages/financial-services/articles/global-fintech-rankings-2021.html>
- Demirgüç-Kunt, A., Klapper, L., Singer, D. and Van Oudheusden, P. (2018) *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. World Bank.
- Devineni, M. (2024) 'A comparative analysis of customer satisfaction towards traditional and digital banking', *International Journal of Science and Research (IJSR)*, 13(1), pp. 1599–1605. <https://doi.org/10.21275/sr24124220129>
- Ding, W., Chaudhri, V. K., Chittar, N. and Konakanchi, K. (2021) "JEL: Applying End-to-End Neural Entity Linking in JPMorgan Chase", *Proceedings of the AAAI Conference on Artificial Intelligence*, 35(17), pp. 15301-15308. <https://doi.org/10.1609/aaai.v35i17.17796>
- Eakin, K. (2019) 'Lean leadership and strategy', *Office Lean*, pp. 221–230. <https://doi.org/10.4324/9780429203817-17>
- Ellis, D. (2024) 'Stakeholder theory', *Stakeholder Theory* [Preprint]. <https://doi.org/10.4324/9780367766924-ress34-1>
- Financial Conduct Authority (FCA) (2016) *The future of financial services regulation*. [online] London: Financial Conduct Authority. <https://www.fca.org.uk/publication/corporate/future-financial-services-regulation.pdf>
- Financial Conduct Authority (FCA) (2021) *Regulatory approaches to Fintech*. <https://www.fca.org.uk>
- Frost, J. (2020) *The Economic Forces Driving Fintech Adoption Across Countries*. Bank for International Settlements. <https://doi.org/10.2139/ssrn.3515326>
- Frost, J., Gambacorta, L., Huang, Y., Shin, H.S. and Zbinden, P. (2019) "BigTech and the changing structure of financial intermediation." *BIS Working Papers*, No. 779. <https://doi.org/10.1093/epolic/eiaa003>
- Frow, P., McColl-Kennedy, J. R., Hilton, T., Davidson, A., Payne, A., & Brozovic, D. (2014) Value propositions. *Marketing Theory*, 14(3), 327–351. <https://doi.org/10.1177/1470593114534346>
- Ganga, G.N. (2024) Bank of Guyana Half Year Report 2024. <https://tinyurl.com/43bdt86t>

- Ghosh, S. (2020) *Fintech and the transformation of the financial industry: Opportunities and challenges*. *Journal of Banking and Financial Technology*, 4(1), pp.1–14.
- Gomber, P., Kauffman, R.J., Parker, C. and Weber, B.W. (2018) "On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services." *Journal of Management Information Systems*, 35(1), pp.220-265. <https://doi.org/10.1080/07421222.2018.1440766>
- Gozman, D., Liebenau, J., and Mangan, J. (2018) The innovation mechanisms of fintech start-ups: Insights from swift's innotribe competition. *Journal of Management Information Systems*, 35(1), 145-179. <https://doi.org/10.1080/07421222.2018.1440768>
- Haddad, C., & Hornuf, L. (2019) The emergence of the global fintech market: Economic and technological determinants. *Small Business Economics*, 53(1), 81-105. <https://doi.org/10.1007/s11187-018-9991-x>
- Judijanto, L. (2025) Fintech Disruption in Traditional Banking: A Bibliometric Review. <https://doi.org/10.58812/esee.v3i03.542>
- Kiewitz, C., Meek, W.R. and Palmer, C. (2020) 'Entrepreneurial stress: Implications of the resource-based view and conservation of resources theory', *Academy of Management Proceedings*, 2020(1), p. 14058. <https://doi.org/10.5465/ambpp.2020.14058abstract>
- Lee, I., & Shin, Y. J. (2018) Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35-46. <https://doi.org/10.1016/j.bushor.2017.09.003>
- Leong, K. (2018) FinTech (Financial Technology): What is It and How to Use Technologies to Create Business Value in Fintech Way? *International Journal of Innovation Management and Technology*, 74–78. <https://doi.org/10.18178/ijimt.2018.9.2.791>
- Maijanen, P. (2020) '3 approaches from Strategic Management: Resource-based view, knowledge-based view, and Dynamic Capability View', *Management and Economics of Communication*, pp. 47–68. <https://doi.org/10.1515/9783110589542-003>
- Manyika, J. et al. (2016) *Digital Finance for All: Powering Inclusive Growth in Emerging Economies*. McKinsey Global Institute. <https://tinyurl.com/3wwevucp>
- McKinsey & Company. (2020) Digital banking in 2020: Trends and opportunities. Retrieved from <https://www.mckinsey.com>
- McKinsey Financial Services. (2024) McKinsey Financial Services on LinkedIn: #mckinsey #banking #technology #financialservices #neverjusttech [Video]. [https://www.linkedin.com/posts/mckinseyfinancialservices\\_mckinsey-banking-technology-activity-7254854101719527426-UpKR](https://www.linkedin.com/posts/mckinseyfinancialservices_mckinsey-banking-technology-activity-7254854101719527426-UpKR)
- Mills, K.G. (2018) The Future of Fintech and the American Dream. In: *Fintech, Small Business & the American Dream*. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-03620-1\\_12](https://doi.org/10.1007/978-3-030-03620-1_12)
- Mulders, M. (2019) 'Resource based view', *101 Management Models*, pp. 291–294. <https://doi.org/10.4324/9781003022022-80>
- Naraine, B. A. (2025) Home page | Who's who in Guyana business. <https://www.whoswho.gy/>
- Nicoletti, B. (2017) The Future of Fintech: Integrating Finance and Technology in Financial Services. [https://doi.org/10.1007/978-3-319-51415-4\\_2](https://doi.org/10.1007/978-3-319-51415-4_2)

- Ohno, T. and Bodek, N. (2019) 'Evolution of the toyota production system', Toyota Production System, pp. 17–44. <https://doi.org/10.4324/9780429273018-2>
- Oliveira, C.G.B. and Ruiz, E.E.S. (2021) 'Why Talking about Ethics is Not Enough: A Proposal for Fintech's AI Ethics', *arXiv preprint arXiv:2102.07213*. [arXiv https://doi.org/10.48550/arXiv.2102.07213](https://doi.org/10.48550/arXiv.2102.07213)
- Omarini, A. E. (2018) Banks and Fintechs: How to develop a digital open banking approach for the bank's future. *International Business Research*, 11(9), 23. <https://doi.org/10.5539/ibr.v11n9p23>
- Opall, B. *et al.* (2019) 'The importance of aligning lean with organizational strategy.', *International Journal of Business Excellence*, 1(1), p. 1. <https://doi.org/10.1504/ijbex.2019.10019637>
- Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A. and Papadakos, P. (2014) *Value Proposition Design: How to Create Products and Services Customers Want*. Hoboken, NJ: Wiley. <https://doi.org/10.31219/osf.io/vxqgs>
- Ozili, P.K. (2021) *Bank non-performing loans in the Fintech era*. *International Journal of Financial Innovation in Banking*, 3(2), pp.95–112. <https://doi.org/10.1504/ijfib.2021.10042242>
- Ozili, P.K. (2021) *Banking sector earnings management using loan loss provisions in the Fintech era*. *International Journal of Managerial Finance*, 18(1), pp.75–93. <https://doi.org/10.1108/ijmf-07-2020-0369>
- Ozili, P.K. (2021) *Has financial inclusion made the financial sector more resilient in developing countries during COVID-19?* *Journal of Economic and Administrative Sciences*, 37(4), pp.321–340. <https://doi.org/10.1108/jfrc-08-2020-0074>
- Ploshtakov, I. (2017) The emerging Fintech companies - challenge and chance for banks. *Economic Thought Journal*, 62(4), 124–142. <https://doi.org/10.56497/etj1762406>
- PwC. (2020) *Retail Banking 2020: Evolution or Revolution?* <https://www.pwc.com/>
- PwC. (2020). The future of banking: A hybrid model. Retrieved from <https://www.pwc.com>
- Rafiq, M. (2019) 'Digital banking is an important ingredient for the future of banking', *Journal of Digital Banking*, 4(2), p. 144. <https://doi.org/10.69554/HLTX7018>
- Raihan, M. Z. (2019) Sustainable finance for growth and development of banking industry in Bangladesh: An equity perspective. *MIST International Journal of Science and Technology*, 7(1). <https://tinyurl.com/8u24xkjr>
- Ramamohan, M., Mehta, M., & Sunitha, B. (2021) FinTech and Sustainable Development: A Comparative Study of Indian and Chinese FinTech Ecosystems. In *Handbook of Research on Financial Management During Economic Downturn and Recovery* (pp. 323-342): IGI Global. <https://doi.org/10.4018/978-1-7998-6643-5.ch018>
- Rathnayake, N.D. (2023) 'The era of the transition – from traditional to digital banking', *Transformation for Sustainable Business and Management Practices: Exploring the Spectrum of Industry 5.0*, pp. 41–55. <https://doi.org/10.1108/978-1-80262-277-520231005>
- ResearchGate (2025) 'Digital Innovation and Revolution in Financial Sector: The Role of Financial Products on Sustainable Performance under the Lens of Resource Based View'. [ResearchGate](https://www.researchgate.net/publication/391111111)
- Sahay, R., von Allmen, U.E., Lahreche, A., Khera, P., Ogawa, S., Bazarbash, M. and Beaton, K. (2020) *The Promise of Fintech: Financial Inclusion in the Post COVID-*

- 19 Era. IMF Departmental Paper No. 2020/009. Washington, DC: International Monetary Fund. <https://tinyurl.com/yw7pbvbz>
- Siek, M. and Rukma, L.Y. (2022) 'Impact analysis of digital banking applications on disrupting traditional banking industry', 2022 International Conference on Information Management and Technology (ICIMTech), pp. 443–448. <https://doi.org/10.1109/icimtech55957.2022.9915184>
- Stefanelli, V., Manta, F., and Toma, P. (2022) 'Digital Financial Services and Open Banking Innovation: Are Banks Becoming Invisible?', *arXiv preprint arXiv:2210.01109*. <https://doi.org/10.1177/09721509231151491>
- Syed, A., Aslam, H., and Mashkoo, B. (2025) Green Human Capability and Technology Adoption as Drivers of Sustainable Performance: A Strategic Capability Perspective. *The Critical Review of Social Sciences Studies*, 3(3), 546-561. <https://doi.org/10.59075/vwmgee59>
- Tang, Y. M., Chau, K. Y., Fatima, A., & Waqas, M. (2022) Industry 4.0 technology and circular economy practices: business management strategies for environmental sustainability. *Environmental Science & Pollution Research*, 29(33). <https://doi.org/10.1007/s11356-024-34322-6>
- Technologies, D. (2024) 6D Technologies on LinkedIn: 6D Technologies Aureus [Online forum post]. <https://tinyurl.com/j8w6spp9>
- Teece, D.J., Peteraf, M.A. and Leih, S. (2016) "Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy." *California Management Review*, 58(4), pp.13-35. <https://doi.org/10.1525/cmr.2016.58.4.13>
- Visconti, R. M. (2016) Microfinance vs. traditional banking in developing countries. *Microfinance vs. traditional banking in developing countries*. <https://doi.org/10.1504/ijfib.2016.076613>
- Vives, X. (2017) "The impact of FinTech on banking." *European Economy – Banks, Regulation, and the Real Sector*, 2(1), pp.97–105. <https://european-economy.eu/2017-2/the-impact-of-fintech-on-banking/>
- Wahyuni, S., Nurbaiti, N. and Bi Rahmani, N.A. (2023) 'The effect of digital banking implementation on customer satisfaction (Case Study of BSI Digital Banking user customers)', *Jurnal Pamator: Jurnal Ilmiah Universitas Trunojoyo*, 16(3), pp. 643–660. <https://doi.org/10.21107/pamator.v16i3.21286>
- Welch, J. (2022) 'Wells Fargo: A corporate recovery model to bank on', *Journal of Business Strategy*, 44(5), pp. 247–256. <https://doi.org/10.1108/jbs-03-2022-0045>
- Yan, C., Siddik, A. B., Akter, N., & Dong, Q. (2021) Factors influencing the adoption intention of using mobile financial service during the COVID-19 pandemic: The role of FinTech. *Environmental Science and Pollution Research*, 1-19. <https://doi.org/10.1007/s11356-021-17437-y>
- Yanto, E.S. (2023) The what and how of Essential Thematic Analysis', *The Qualitative Report* [Preprint]. <https://doi.org/10.46743/2160-3715/2023.6744>
- Zetsche, D.A. et al. (2017) From FinTech to TechFin: The regulatory challenges of data-driven finance. *NYU Journal of Law and Business*, 14(2), pp.393–446. <https://doi.org/10.2139/ssrn.2959925>
- Zetsche, D.A., Buckley, R.P., Arner, D.W. and Barberis, J.N. (2017) 'Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation', *Fordham Journal of Corporate & Financial Law*, 23(1), pp. 31–103. <https://doi.org/10.2139/ssrn.3018534>

Zetsche, D.A., Buckley, R.P., Arner, D.W. and Barberis, J.N. (2020) "Decentralized finance." *Journal of Financial Regulation*, 6(2), pp.172-203. <https://doi.org/10.1093/jfr/fjaa010>

Zetsche, D.A., Buckley, R.P., Arner, D.W. and Barberis, J.N. (2017) "From FinTech to TechFin: The regulatory challenges of data-driven finance." *New York University Journal of Law and Business*, 14(2), pp.393–446. <https://doi.org/10.2139/ssrn.2959925>

Zhang, X., Wang, Z., Zhong, X., Yang, S., & Siddik, A. B. (2022) Do green banking activities improve the banks 'environmental performance? The mediating effect of green financing. *Sustainability*, 14(2), 989. <https://doi.org/10.3390/su14020989>