INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN ACCOUNTING, FINANCE AND MANAGEMENT SCIENCES

OPEN ACCESS JOURNAL

Vol 16, Issue 1, (2026) E-ISSN: 2225-8329

A Systematic Literature Review on the Impact of Fintech Adoption, Digital Transformation, and Bank Stability on Operational Efficiency and Performance in GCC Banks

Sarah Ahmed Dubis

School of Management, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia

Email: sarahdubis2023@student.usm.my

Haslindar Ibrahim

School of Management, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia

Email: haslindar@usm.my

Ayat Nader Abdalgani

Assistant Professor of Finance, Department of Finance and Investment, College of Business Administration, University of Tabuk, Tabuk, Kingdom of Saudi Arabia

Email: aabdelghane@ut.edu.sa

DOI Link: http://dx.doi.org/10.6007/IJARAFMS/v16-i1/27778

Published Online: 30 March 2026

Abstract

This systematic literature review examines the impact of fintech adoption, digital transformation, and bank stability on operational efficiency and performance in banks in the Gulf Cooperation Council (GCC) region. Analysing thirty-five peer-reviewed studies, the review highlights that Fintech, and digital technologies significantly enhance operational efficiency, customer service, and financial performance, particularly in conventional and Islamic banks. Key findings reveal positive correlations between technologies like AI, blockchain, and mobile banking and metrics such as return on assets (ROA) and cost reduction. However, bank stability during digital transitions varies by institution size and governance, with larger banks demonstrating greater resilience. Challenges include regulatory fragmentation and Shariah compliance in Islamic finance. The study highlights the importance of harmonised policies, strategic investments, and additional research on the long-term impacts, ESG considerations, and cybersecurity.

Keywords*:* Fintech adoption, Digital transformation, Bank stability, Operational Efficiency, GCC Banks, Islamic Finance, Financial Performance

Introduction

Fintech developments have rapidly transformed the banking industry, and countries from the Gulf Cooperation Council have become increasingly involved in this digital shift. (Kismawadi, 2025; Naouar, 2025). The UAE, Saudi Arabia, and Qatar are making significant efforts in innovation to support larger goals, such as Vision 2030, and to reduce dependence on oil revenues. As a result, the GCC banking sector pays special attention to Fintech, digital transformation, and maintaining bank stability regarding its efficiency and financial results (Alqahtani et al., 2024; Alshubiri et al., 2019).

As technology drives changes in the global banking industry, GCC banks have begun adopting technologies such as mobile banking, AI, blockchain, and cloud computing to enhance service, reduce costs, and better manage risks (Abumughli, 2024). On the other hand, although Fintech is thought to improve efficiency, its impact on the stability of banks in developing countries and those governed by Islamic law remains a challenging area to study and is poorly researched (Peter et al., 2025; Sardana & Shukla, 2025; Srairi, 2024).

Although the literature on fintech adoption and digital transformation in the banking sector is growing, there has not been a synthesis that specifically deals with the GCC nations on how fintech adoption, bank stability, and operational performance in both traditional and Islamic banking are integrated. The current literature tends to discuss these factors separately and lacks exhaustive data on their interaction in the context of the GCC. This paper is inspired by the rapid digitisation of GCC banking industries and the strategic significance of fintech in realising national development agendas, such as Saudi Vision 2030 and other like-minded projects in the region. Trying to comprehend these relationships is crucial to policymakers, financial institutions, and regulators aiming at improving efficiency, stability, and competitiveness. This study, therefore, aims to:

- Review the role of Fintech, digital progress, and bank stability in boosting efficiency for GCC countries.
- Determine the main research trends, research methodology, and theoretical frameworks in the literature in the past decade (2014-2025).
- Identify any gaps in research and highlight them for future researchers.

To ensure the process was consistent and easy to follow, the review adhered to the PRISMA guidelines (Sohrabi et al., 2021). This study contributes to the field by providing an overview of how digital advancements are influencing banking practices within a specific economic and regulatory environment. The relationship between traditional finance, obligatory religious laws in Islamic finance, and technological progress is a focus that is not found in worldwide discussions of digital banking. For the rest of the paper, the method section explores the processes and tools that were used during the review, the results give an overview of what studies were found as well as themes, the discussion outlines main insights from various studies, and the final sections talk about what can be learned, gaps that remain and what the future of Fintech and GCC banking appears to be.

Methodology

The review was guided by the adoption of the PRISMA 2020 guidelines (Sohrabi et al., 2021), which provide a standard approach for conducting and reporting systematic reviews. This specific approach is chosen to support a fair, strict, and repeatable process that reduces the

risk of errors in the findings. A comprehensive list of important literature was compiled using databases such as Lens.org, Google Scholar, ScienceDirect, Web of Science, and Scopus. The selection was made because of the wide range of financial, technological, and banking articles available in these databases. Table 1 summarises the inclusion criteria for selecting papers and the exclusion criteria to explain why some resources were discarded.

Table 1.
*Inclusion **and Exclusion Criteria***

Inclusion	Exclusion
Articles published between 2014-2025	Article published before 2014
Published in the English language	Other than the English language
Discuss the banking sectors in GCC countries.	Do not discuss GCC countries.
Discuss the Impact of Fintech Adoption, Digital Transformation, and Bank Stability.	Do not discuss the Impact of Fintech Adoption, Digital Transformation, and Bank Stability.
Peer-reviewed Journal articles	Books, Book sections, Conference papers, working papers, and other sources of gray literature

Numerous search strings were used across various platforms, incorporating Boolean operators, to retrieve relevant research papers.(Ismail et al., 2024). The search terms included keywords related to Fintech, digital transformation, bank stability, operational efficiency, performance, and GCC banks.

Table 2
Sample keywords and Search Strings

Concept	Related Keywords	Strings
Digital Transformation	"Technology Adoption," "Digitalisation", "Digital Innovation", "ICT", "Fintech Integration", "IT Transformation", "Digital Banking"	" Online Banking" AND "Operational Efficiency" AND "BANK" AND "GCC Countries"
Operational Efficiency	"Efficiency", "Cost Efficiency", "Performance Improvement", "Process Optimisation", "Operational Performance"	"Technology Adoption" AND "Efficiency" AND "Commercial Banks" AND "GCC Countries"
Banking Sector	"Banks", "Financial Institutions", "Commercial Banks", "Islamic Banks", "Banking Industry"	"Technology adoption" OR "digitalisation", "digital innovation" OR "ICT" OR "Fintech integration" OR "IT transformation", "digital banking"
GCC Countries	"Gulf Cooperation Council", "Saudi Arabia", "Uae", "Kuwait", "Bahrain", "Oman", "Qatar"	"efficiency" OR "cost efficiency" OR "performance improvement" OR "process optimisation" OR "operational performance" AND "banks" OR "financial institutions" OR "commercial banks" OR "Islamic banks" OR "banking industry" AND "Gulf Cooperation Council" OR "Saudi Arabia" OR "UAE" OR United Arab Emirates OR "Kuwait" OR "Bahrain" OR "Oman" OR "Qatar"

The selection of studies was conducted using the PRISMA approach and consisted of four main stages: identification, screening, eligibility assessment, and inclusion(Sohrabi et al., 2021).

1. **Identification:** An initial search through the databases turned up 600 articles.
2. **Screening:** After removing duplicates, screening was done, resulting in 300 articles left. After looking at the titles and abstracts, only articles that met our standards were included, resulting in 70 studies.
3. **Eligibility:** All remaining articles were reviewed in full using the specified criteria, and only 35 articles were selected for inclusion.
4. **Inclusion:** A total of 35 papers were selected and included in the systematic literature review (SLR).
5.

Figure 1 illustrates the process.

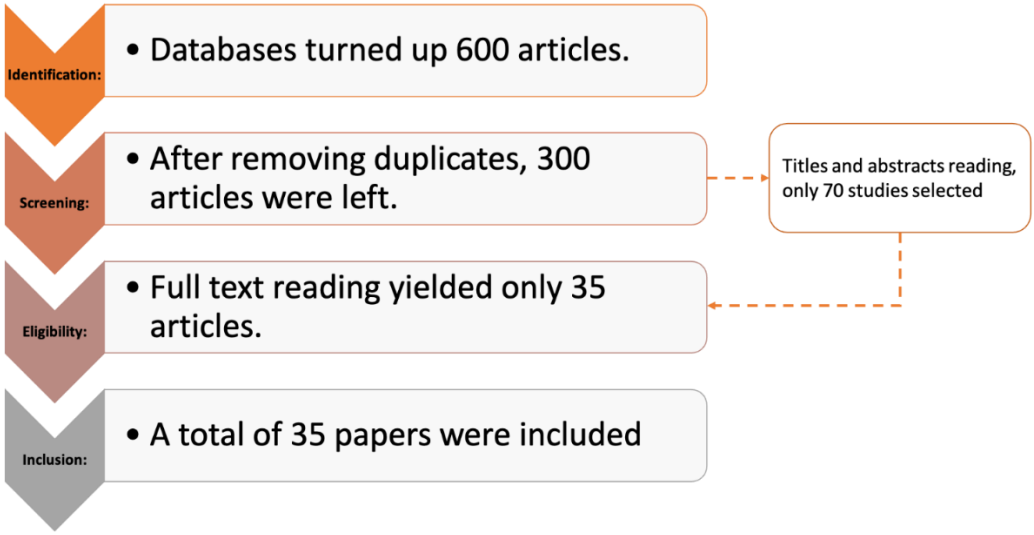

Figure 1. The Prisma diagram

Two tools were used in the data extraction and analysis process. First, Microsoft Excel is used to organise the data, add information, and categorise it by thematic aspects(Bukar et al., 2023). Secondly, the VOS viewer is used for generating visualisations, as it is a tool used to analyse literature by studying co-authorship, co-citation, and co-occurrence of keywords(Shah et al., 2020).

Two approaches are adopted for synthesis. The bibliometric analysis (Passas, 2024) identifies publication trends, important authors, main journals, and research connections. A bibliometric analysis was conducted using VOSviewer, which helped identify research subject areas and clusters. The second strategy, the Thematic Analysis Strategy (Neuendorf, 2018)The findings from the selected studies were synthesised. This required analysing the literature using key themes related to Fintech adoption, digital change, bank stability, operational efficiency, and performance in GCC banks. It enabled a comprehensive understanding of the main themes and gaps in the existing research.

Results: Bibliometric Analysis

Annual Publication Trends (2014–2025)

The temporal distribution of literature on fintech adoption and digital transformation in GCC banking reveals significant patterns in research momentum over the past decade. As illustrated in Figure 2, publication activity demonstrates a marked acceleration from 2019

onwards, with the highest concentration of studies occurring in 2023 (n = 12) and 2024 (n = 10). The initial period from 2014 to 2018 shows minimal research activity, with only scattered publications addressing fintech-banking intersections in the GCC context. This initial phase represents the nascent stage of fintech development in the region, where the relative infancy of digital banking technologies limited academic inquiry.

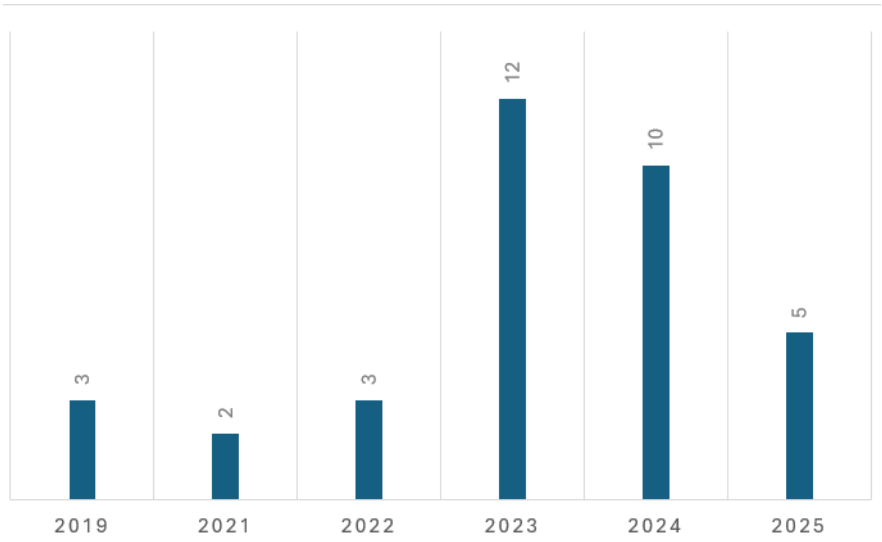

Figure 2: Yearly Distribution

A notable surge in research output becomes evident from 2019 (n = 3), continuing through 2021 (n = 2) and 2022 (n = 3), before reaching its peak in 2023. This trajectory closely aligns with the rapid digitalisation of banking services, accelerated by the COVID-19 pandemic and the subsequent recognition of Fintech as a critical competitive advantage. The substantial research volume in 2023 and 2024 suggests that scholars have increasingly recognised the strategic importance of understanding Fintech's implications for operational efficiency and bank performance in the GCC region. The decline to five publications in 2025 may reflect the temporal limitations of the search strategy, as the review was conducted early in the year.

Country-Wise Contribution

The geographical distribution of research contributions, as depicted in Figure 3, reveals the UAE as the leading contributor to the literature, with the highest number of studies focusing on its banking sector. This dominance reflects the UAE's position as a regional fintech hub and its initiative-taking regulatory framework, which supports digital banking innovation. Saudi Arabia emerges as the second most studied country, aligning with its Vision 2030 initiative, which emphasises financial sector transformation and technological advancement.

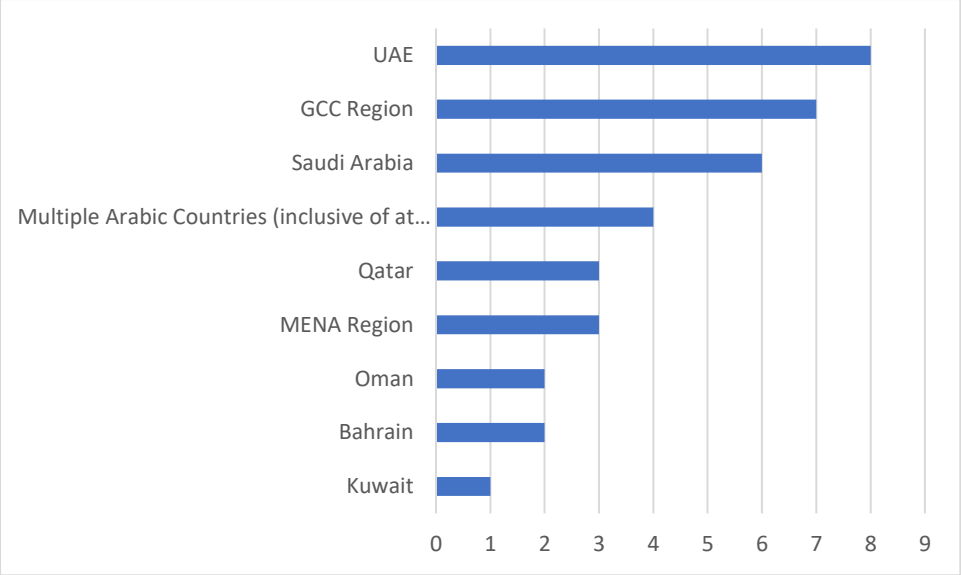

Figure 3: Country Contribution

The broader GCC region category represents studies that examine multiple countries collectively, indicating scholars' recognition of regional patterns and cross-border dynamics in fintech adoption. Qatar, despite its smaller banking sector, shows substantial research interest, reflecting its National Vision 2030 and emphasis on developing a knowledge-based economy. The MENA region classification encompasses broader Middle Eastern studies that include GCC countries within their scope, suggesting the region's integration into wider economic analyses. Bahrain, Oman, and Kuwait demonstrate moderate research attention, with each country contributing distinct insights into fintech adoption patterns. The inclusion of "Multiple Arabic Countries" reflects comparative studies that examine fintech development across various Arab nations, providing a broader contextual understanding beyond the GCC framework.

Type of Banks

A glance at Figure 4 shows which areas within GCC banking are most extensively studied by researchers. Of the institutions surveyed, 43% were conventional banks due to their leading role and broad use of Fintech. Conventional banks are larger, more connected to their customers, and own more assets; therefore, examining Fintech's influence on them is a natural choice.

A fifth of all research appears to focus on Islamic banks, due to their specialised characteristics and diverse needs. The region's strong position in Islamic finance has led to significant attention on Islamic banks, as they work to use Fintech while still adhering to Islamic law. By focusing on Islamic banks, researchers demonstrate that they are aware of the importance of exploring how digital advances impact organisations operating according to religious rules.

This category, which includes 37% of the studies, examines banks from both conventional and Islamic perspectives, together or about each other. Many researchers in the field recognise the importance of comparing banking models to understand how they respond to the adoption of Fintech. Results from such studies indicate whether Fintech brings the same or different benefits to distinct types of banks.

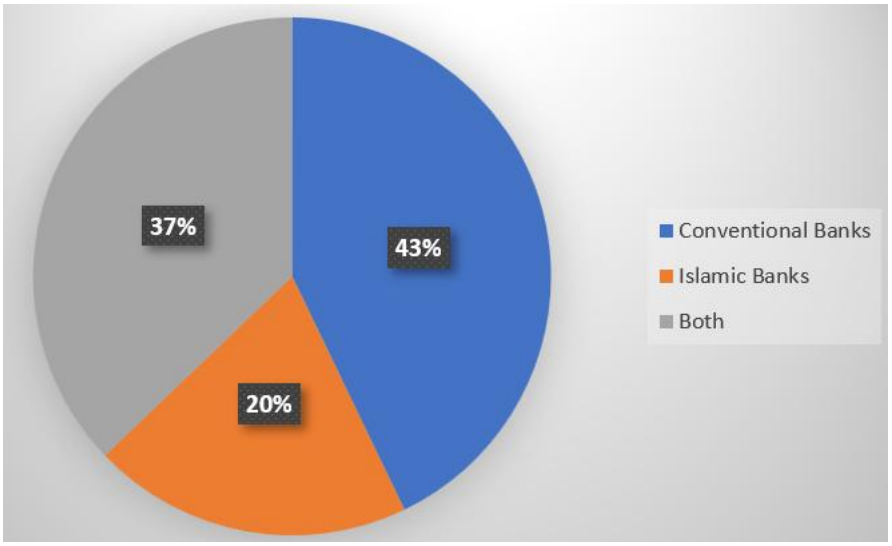

Figure 4: Study Distribution of Bank Types

Thematic Evolution in the Domain

The Sankey diagram in Figure 5 illustrates the dynamic evolution of research themes and authorial contributions across different periods, revealing the interconnected nature of scholarly discourse in this domain. The visualisation illustrates how the focus of research has shifted from foundational concepts in earlier periods to more specialised applications in recent years. The connections between authors, time periods, and keywords reveal collaborative networks and thematic continuities that have shaped the field's development.

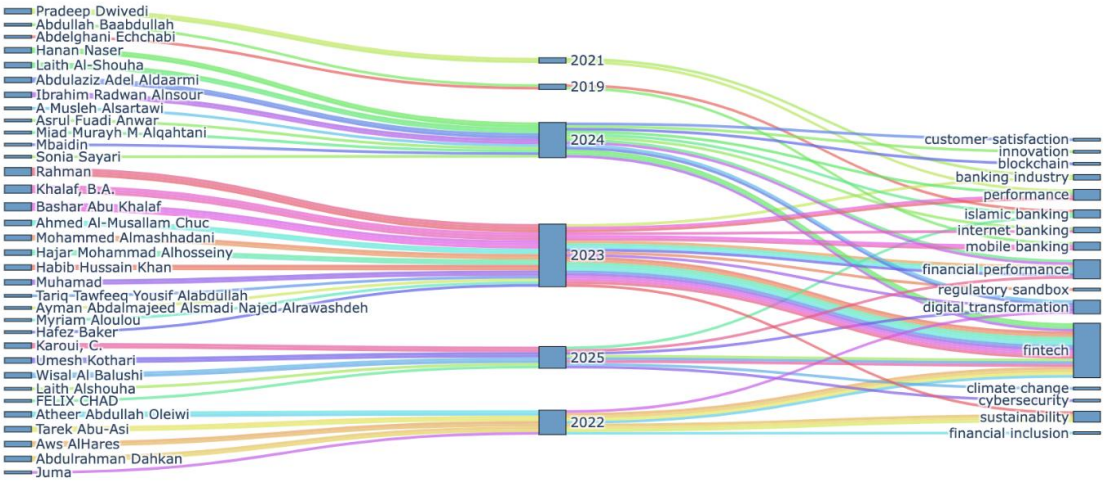

Figure 5: Sankey Diagram (Authors-Time-Keywords)

The diagram shows that early research (2019-2021) focused on fundamental concepts, including "fintech," "digital transformation," and the "banking industry," laying the theoretical foundation for subsequent investigations. The middle period (2022-2023) witnessed diversification into more specific themes, including "customer satisfaction," "blockchain," "performance," and "regulatory sandbox," indicating the field's maturation and specialisation. Recent research (2024-2025) demonstrates further thematic expansion into areas such as "financial inclusion," "cybersecurity," "sustainability," and "climate change," reflecting contemporary concerns and emerging priorities in fintech-banking research.

Top Journals and Citation Scores

There are a total of thirty journals in which 35 articles were published. The citation column displays the cumulative citations for the articles. For example, the Journal of Banks and Bank Systems published three articles, and the cumulative citation count for these three articles is 53; other journals have similar data. More details can be seen in Table 3. Figure 6 also highlights the most important journals.

Table 3
Journal Distribution and Citations Score

Source	***Articles***	***Citations***
Banks and bank systems	3	53
International journal of membrane science and technology	2	9
J. Risk Financial manag	2	4
Journal of financial reporting and accounting	2	149
Advances in Social Sciences Research Journal	1	2
African journal of emerging issues (AJOEI)	1	2
Borsa Istanbul review	1	42
Corporate governance and organisational behaviour review	1	8
Educational administration: theory and practice	1	4
Finance: theory and practice	1	0
IJIEF: international journal of Islamic economics and finance	1	23
International academic institute for science and technology	1	2
International journal of bank marketing	1	213
International journal of economics and financial issues	1	9
International journal of engineering business management	1	200
International journal of global business and competitiveness	1	193
Journal of Asia Business Studies	1	0
Journal of Ecohumanism	1	0
Journal of Emerging Market Finance	1	3
Journal of Entrepreneurship Education	1	1
Journal of risk and financial management	1	55
Research gate	1	0
Socioeconomic challenges (SEC)	1	11
Sukuk: international journal of banking, finance, management, and business	1	0
Sustainability	1	17
Turkish online journal of qualitative inquiry (TOJQI)	1	0
International journal of data & network science	1	5

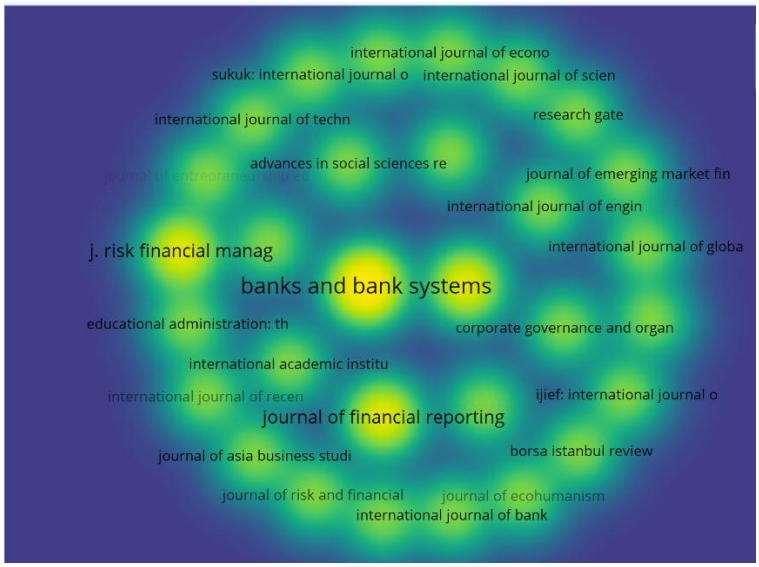

Figure 6: Journal Density Visualisation

Methodological Overview

The methodological distribution of the reviewed literature demonstrates a clear preference for empirical research approaches, as illustrated in Figure 7. Empirical research constitutes 91% of the total studies, while descriptive research accounts for only 9%. This substantial emphasis on empirical investigation reflects the field's orientation toward quantitative validation and evidence-based conclusions regarding fintech adoption and its impact on banking performance in the GCC region.

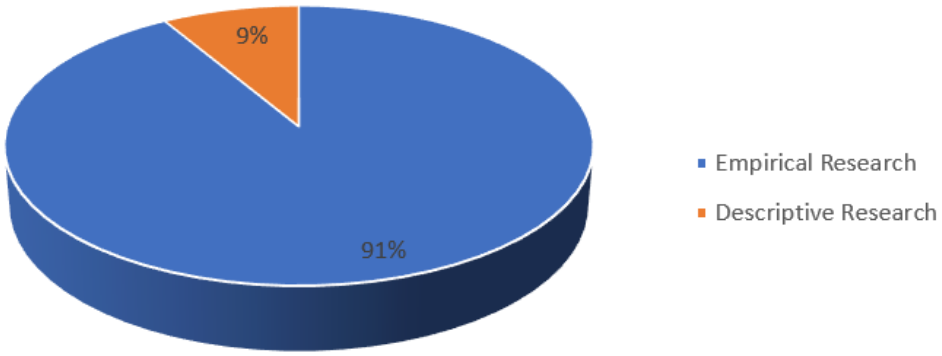

Figure 7: Type of Research

The overwhelming dominance of quantitative analysis (83%) reflects the field's emphasis on empirical validation and statistical rigor in examining fintech-banking relationships. The limited use of qualitative methods (11%) and mixed approaches (6%) suggests potential opportunities for more comprehensive methodological triangulation in future research.

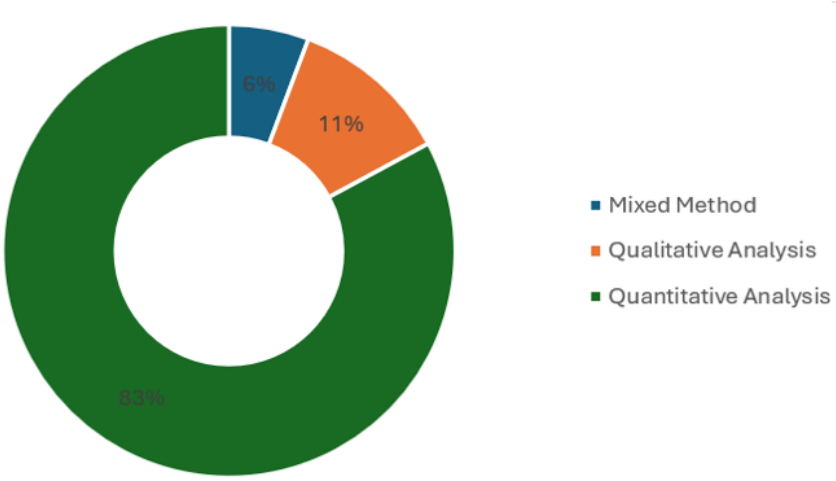

Figure 8: Type of Analysis

As detailed in Table 4, regression analysis emerges as the dominant analytical technique, with 13 studies employing general regression models and additional studies utilising specialised approaches, such as OLS/Pooled-OLS (n = 2) and the Generalized Method of Moments (GMM) (n = 2). This preference for regression-based methodologies indicates researchers' focus on establishing causal relationships between fintech adoption variables and performance outcomes. Structural Equation Modelling (SEM) is employed in six studies, with five utilising general SEM approaches and two specifically employing Partial Least Squares (PLS) techniques, demonstrating scholars' interest in examining complex relationships and mediating effects. Survey and questionnaire methodologies feature in seven studies, highlighting the importance of primary data collection in understanding stakeholder perspectives and behavioural intentions. The presence of mixed methods approaches in three studies indicates growing recognition of the value of combining quantitative rigor with qualitative insights to provide comprehensive understanding of fintech phenomena.

Table 4

Methodologies Used in Reviewed Literature

Methodology Category	***Specific Methodology/Technique***	***Count***
Regression Analysis	*general/unspecified*	*13*
	OLS/Pooled-OLS	*2*
	Generalised Method of Moments (GMM)	*2*
	Fixed effects (FEs) estimations	*1*
	Panel regression analysis (fixed and random effect techniques)	*2*
	Univariate & Multivariate Regression Analysis	*1*
Structural Equation Modelling (SEM)	*general/unspecified*	*3*
	PLS	*2*
	Variance-based structured equation modelling	*1*
Survey/Questionnaire		*7*
Hypothesis Testing	*One-sample t-test*	*1*
Qualitative/Review Methods	*Policy reviews, literature analyses, thematic coding*	*1*
	Primarily involves case-based analysis	*1*
	Review	*1*

	Revision of Arabic and foreign sources and electronic websites.	*1*
Mixed Methods	*Survey, regression analysis*	*1*
	Regression analysis (OLS, panel regression) and structured interviews	*1*
	Comparative Index Approach, Quantitative analysis, Qualitative insights from interviews and surveys	*1*
Other Quantitative Techniques	*Diffusion Index + Empirical Analysis*	*1*
	Text-mining	*1*
	Statistical analysis techniques (general)	*1*
	Survey and PLZ (assuming PLZ refers to PLS in a survey context)	*1*

Theoretical Overview

The theoretical foundation of the reviewed literature, as presented in Table 5, reveals a diverse range of conceptual frameworks guiding research in this domain. Technology acceptance and adoption theories dominate the theoretical landscape, with the Technology Acceptance Model (TAM) employed in three studies, reflecting its continued relevance in understanding fintech adoption patterns. The Theory of Planned Behaviour, Rogers' Diffusion of Innovation, and Task-Technology Fit models each contribute unique perspectives on technology adoption processes. Organisational and strategic theories provide substantial theoretical grounding, with the Resource-Based View (RBV) appearing in four studies and the Technology-Organisation-Environment (TOE) Framework in three studies. However, a significant proportion of studies (17) adopt conceptual or framework-based approaches without explicitly referencing established theories, suggesting potential opportunities for stronger theoretical grounding in future research endeavours.

Table 5

Theories Used in Reviewed Literature

Theory Category	Specific Theory/Model	Count
Technology Acceptance/Adoption Theories	Technology Acceptance Model (TAM)	3
	Theory of Planned Behaviour	1
	Rogers' Diffusion of Innovation	1
	Task-Technology Fit (TTF) model	1
	Unified Theory of Acceptance and Use of Technology model	1
	Financial technology adoption theory	1
Organisational/Strategic Theories	Resource-Based View (RBV) of the firm	4
	Technology-Organisation-Environment (TOE) Framework	3
	Theory of disruptive innovation	1
Financial/Risk Theories	Risk management theory	1
	Investment Management Theory	1
Conceptual/Framework-Based	(Not mentioning theory explicitly)	17

Most Frequent Keywords and Co-occurrence Analysis

Co-citation Analysis

The co-authorship network analysis reveals important characteristics of scholarly collaboration within the Fintech and Islamic banking research domain. The network comprises 75 authors distributed across 34 clusters with 78 connecting links, indicating a moderately connected research community (see figure 9). However, the analysis reveals that meaningful collaboration is concentrated among a smaller subset of researchers, with the largest collaborative cluster comprising only 9 authors connected through 21 links across two primary clusters (see Figure 10).

Figure 9: Co-authorship network

This pattern suggests that, while the field attracts numerous researchers, the intensity of collaboration remains low, with most scholars working in smaller, isolated research groups rather than forming large, interconnected research networks. The fragmented nature of the collaboration network may indicate either the emerging status of this interdisciplinary field or geographical and institutional barriers to collaboration.

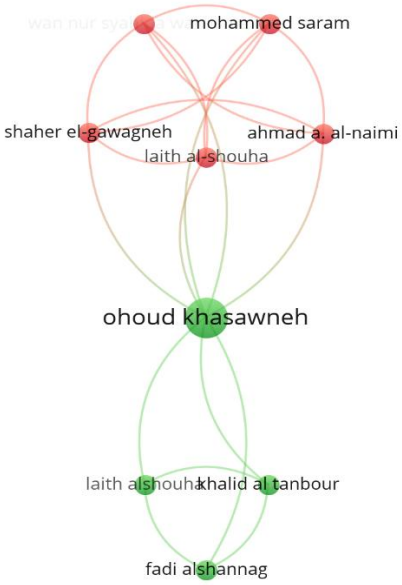

Figure 10: Network of the Largest Cluster of Authors

Keyword Co-Occurrence Analysis

The keyword analysis, based on abstract and title content, identifies the core research themes within the literature. The analysis reveals 16 key items organised into 3 distinct clusters with 95 interconnecting links and a total link strength of 1,469, indicating strong thematic coherence within the field. "Performance" emerges as the most frequently occurring term with 71 instances (relevance score: 0.73), followed closely by "fintech" with 69 occurrences (relevance score: 1.00). This indicates that performance evaluation represents the primary research focus. At the same time, Fintech serves as the foundational technological framework being studied. "Islamic bank" appears 23 times with a high relevance score of 1.42, demonstrating its significance as a distinctive research theme rather than merely a frequent term. Geographic terms such as "UAE" (21 occurrences), "Bahrain" (11 occurrences), and "Saudi Arabia" (10 occurrences) highlight the regional concentration of research, particularly within the GCC countries. The term "financial inclusion" exhibits the highest relevance score (3.16), despite its moderate frequency (12 occurrences), indicating its emergence as a specialised and distinctive research focus.

Term	Occurrences	Relevance
performance	71	0.73
fintech	69	1.00
islamic bank	23	1.42
uae	21	0.84
financial performance	18	1.06
customer	18	0.61
fintech adoption	18	0.47
financial inclusion	12	3.16
gcc	12	1.65
financial stability	12	0.67
return	12	0.41
bahrain	11	1.11
digital transformation	11	0.87
asset	11	0.36
saudi arabia	10	1.16
covid	10	0.49

Figure 11: Common Terms, Occurrences, and Relevance (Abstract and title based)

The term co-occurrence map reveals three distinct research streams within the literature. The first cluster centres on "performance" and "Islamic bank," examining traditional banking metrics and their adaptation to technological changes while maintaining Sharia compliance. The second cluster focuses on "fintech" and "fintech adoption," exploring the impacts of technological transformation on "financial inclusion" and "financial stability." The third cluster emphasises geographic specificity, particularly in the GCC countries, by analysing region-specific fintech performance in Islamic banking contexts. The cross-cutting presence of "COVID" indicates pandemic-driven research examining how crisis conditions affected performance, adoption rates, and market dynamics across all three thematic areas, suggesting an integrated approach to understanding the intersections of Fintech and Islamic banking.

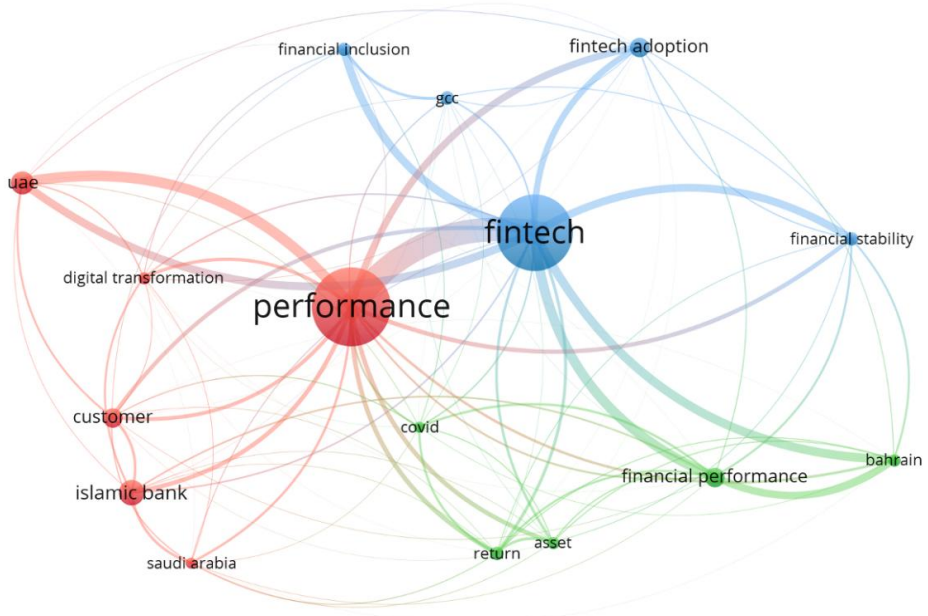

Figure 12: Term Co-occurrence Map (Abstract and title based)

Keyword	Occurrences	Total link strength
fintech	10	6
performance	4	5
mobile banking	3	4
financial performance	4	3
financial technology	5	3
gcc	3	2
saudi arabia	4	2
islamic banking	3	1

Figure 13: Common Terms, Occurrences, and Relevance (Keywords based)

The keyword-based analysis reveals a more focused research landscape compared to the analysis based on abstracts and titles. The network comprises 8 key items organised into 3 clusters with 9 connecting links and a total link strength of 13, indicating a concentrated thematic structure within the field. Fintech emerges as the dominant keyword, with 10 occurrences and the highest total link strength of 6, establishing itself as the central connecting theme across research clusters. "Financial technology" follows with 5 occurrences and a link strength of 3, suggesting terminological variations in describing the same core

concept. Performance-related terms appear prominently, with "performance" (4 occurrences) and "financial performance" (4 occurrences) demonstrating the field's emphasis on evaluating technological impacts on banking outcomes. Geographic concentration remains evident through "Saudi Arabia" (4 occurrences) and "GCC" (3 occurrences), reinforcing the regional focus of fintech research in Islamic banking contexts. "Mobile banking" (3 occurrences) and "Islamic banking" (3 occurrences) represent specific technological applications and institutional contexts, respectively.

The keyword co-occurrence map displays three distinct clusters, with "fintech" serving as the central hub that connects all thematic areas. The first cluster links "fintech" to "performance" and "Islamic banking," indicating research that examines how fintech innovations affect the performance of Islamic banking. The second cluster connects "financial technology" to "financial performance," suggesting studies focused on the quantitative measurement of technological performance. The third cluster encompasses geographic and application-specific terms, with "Saudi Arabia," "GCC," and "mobile banking" forming interconnected research themes around regional fintech implementation.

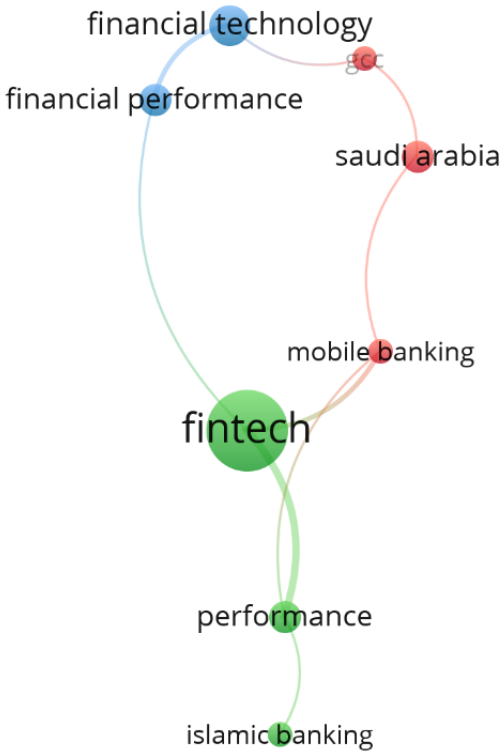

Figure 14: Term co-occurrence Map based on keywords.

Influential Papers and Authors

The citation analysis identifies key contributors to the field, with the author network showing 3 clusters among influential researchers. The most cited publications demonstrate the field's development trajectory and core theoretical foundations. The top 5 most cited articles reveal significant scholarly impact within the field. Baabdullah et al. (2019) Leads with 213 citations, establishing a foundational understanding of fintech adoption in regional contexts. Alshubiri et al. (2019) the publication follows with 200 citations, indicating sustained influence over the research period. Dwivedi et al. (2021) (193 citations) represents more recent

contributions that have quickly gained recognition, indicating the rapid evolution of theoretical frameworks.

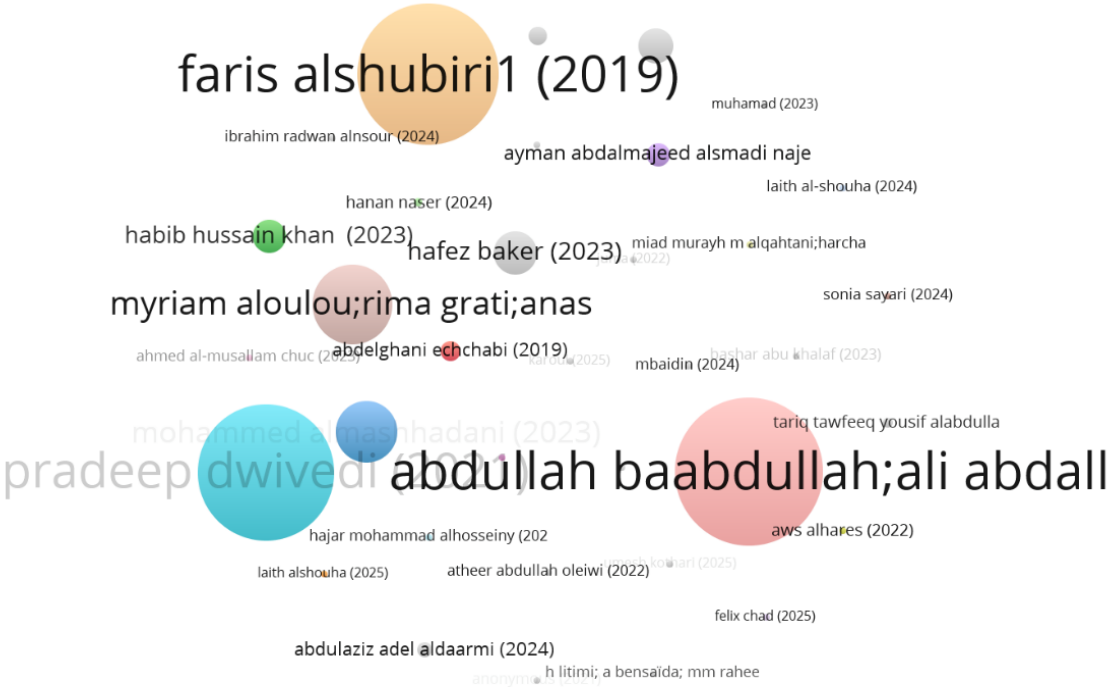

Figure 15: Influential Author Maps

Aloulou et al. (2024), a collaborative work with 106 citations, and Almashhadani and Almashhadani (2022), a publication with 81 citations, demonstrate continued scholarly engagement and the emergence of new research directions. The temporal distribution of these influential works, spanning from 2019 to 2023, indicates the field's recent emergence and rapid scholarly development, with newer publications quickly achieving significant citation impact.

Overview of Included Literature

This systematic literature review synthesises the findings of 35 peer-reviewed studies exploring the impact of fintech adoption, digital transformation, and bank stability on operational efficiency and performance in GCC banks. The overarching conclusion is that fintech innovations and digital technologies are significantly reshaping the banking landscape in the GCC, with positive outcomes for operational efficiency and financial performance, though with some contextual caveats.

Aligned with the first objective—examining the impact of Fintech, digital transformation, and bank stability on operational efficiency—most studies report a positive and significant relationship. For instance, Almashhadani and Almashhadani (2022) found that Fintech has a positive influence on both return on assets (ROA) and return on equity (ROE) in UAE banks, highlighting its role in enhancing financial outcomes. Similarly, Alqahtani et al. (2024) emphasised the role of advanced technologies, such as artificial intelligence and the Internet of Things (IoT), in driving operational efficiency and enhancing customer engagement in Saudi Islamic banks.

Digital transformation is consistently shown to enhance banking efficiency through automation, improved customer service, and streamlined internal processes (Khalaf et al., 2023; Kothari et al., 2025; Muhamad, 2023; Sayari, 2024). Studies (Alshouha et al., 2025; Naser et al., 2024) Also, confirm that fintech implementation reduces liquidity risk and boosts asset returns, respectively, reinforcing the efficiency-performance link.

Bank stability, while generally viewed as a positive outcome of fintech integration, appears to be a more complex issue. Khan et al. (2023) caution that Fintech may undermine financial stability in some GCC banks, particularly smaller institutions, though larger and better-capitalised banks are more resilient. Conversely, AlHares et al. (2022) and Karoui (2025) found that Fintech enhances stability and mediates performance outcomes, suggesting that context, governance, and bank-specific factors significantly influence outcomes.

The second objective—identifying gaps, trends, and methodologies—reveals that quantitative methods are dominant, with regression models, structural equation modelling (SEM), and panel data analysis being the most common approaches. A growing trend in recent years has been the integration of technology readiness, risk management, and digital inclusion frameworks, particularly in post-COVID contexts (Anwar, 2024; Rahman et al., 2023). However, some research gaps persist. Few studies have deeply investigated the long-term effects, ESG outcomes, or challenges in Islamic finance beyond digital compliance (Alnsour, 2024; Chad, 2025). Additionally, the environmental and social implications of digital transformation remain underexplored, despite emerging interest (Balushi et al., 2025).

Table 7
Overview of Reviewed Research

Authors **(**Year**)**	**Focus**	**Key Findings**	**Impact on Efficiency / Performance**
(Almashhadani & Almashhadani, 2022)	Fintech → ROA/ROE	Fintech adoption has a significant impact on improving bank performance in the UAE, positively influencing return on assets and equity among foreign banks operating in the financial sector.	Significant
(Khan et al., 2023)	Fintech & Stability	The study found that Fintech adoption reduces financial stability in GCC banks, with large and well-capitalised banks less negatively affected by this impact.	Mixed/Negative
(Alqahtani et al., 2024)	AI, Cloud, IoT	Technological capabilities, such as AI, cloud computing, and IoT, enhance operational efficiency, customer engagement, and strategic performance in Islamic banks in Saudi Arabia.	Positive

(Al-Shouha et al., 2024)	Fintech & Liquidity	Fintech innovations mitigate liquidity risks in GCC commercial banks, and this relationship is significantly influenced by bank size, with larger banks experiencing better outcomes.	Positive
(Sayari, 2024)	Internet Banking	The adoption of internet banking in Saudi Arabia significantly enhances banking profitability, resulting in a measurable increase in return on assets and equity for both bank types.	Significant
(AlHares et al., 2022)	Fintech & Stability	Fintech development has a positive impact on the financial stability of banks in the GCC region, with findings consistent across various bank sizes, types, and governance levels.	Positive
(Dwivedi et al., 2021)	Fintech & Competitiveness	Adopting Fintech technologies significantly boosts banks' competitiveness and financial performance in the UAE, particularly when strategically aligned with management practices.	Positive
(Alsmadi et al., 2023)	Fintech & Enablers	Business enablers such as leadership support and infrastructure positively mediate Fintech development, leading to stronger economic, social, and environmental performance in Saudi banks.	Significant
(Balushi et al., 2025)	Fintech & Environment	The study found that while Fintech adoption improves environmental performance in Omani banks, the statistical significance varies depending on model specification and sample size.	Mixed
(Echchabi et al., 2019)	E-Banking Adoption	Customers of Islamic banks in Oman show a strong willingness to adopt E-banking, with key adoption drivers including ease of use,	Indirectly Positive

		self-efficacy, and relative advantage.	
(Musleh Alsartawi, 2024)	Fintech Diffusion	Fintech diffusion significantly improves market value among GCC-listed banks, although the study's findings do not clearly define its direct impact on profitability.	Moderate
(Naser et al., 2024)	Fintech Innovation	Fintech innovation is positively associated with improved return on assets in Bahraini banks, with stronger effects observed among conventional and state-owned financial institutions.	Positive
(Aloulou et al., 2024)	Digital Inclusion	The study identified that Fintech adoption in the UAE banking sector enhances digital financial inclusion and economic performance, particularly during the COVID-19 pandemic.	Positive
(Chuc et al., 2023)	Fintech in MFIs	Fintech adoption in microfinance institutions in Bahrain enhances operational efficiency, reduces costs, mitigates loan default risks, and improves customer satisfaction and trust.	Strong Positive
(Chad, 2025)	Islamic Banking	Fintech implementation in Al Rajhi and QIB Islamic banks enhances operational efficiency, customer experience, and market competitiveness while aligning with Shariah compliance.	Positive
(Juma et al., 2022)	Work Efficiency	Digital banking services enhanced work efficiency among UAE bank employees during the pandemic, although human factors continued to be essential due to customer expectations and cultural needs.	Significant
(Khalaf et al., 2023)	Internet & Mobile Banking	The study found a strong positive relationship between Fintech tools, such as mobile banking and	Strong Positive

		Internet banking, and bank performance, confirmed through regression analysis and interviews.	
(Karoui, 2025)	Mediation Role	Financial stability fully mediates the relationship between Fintech adoption and bank performance, suggesting that performance gains are achieved through improved stability.	High (Mediated)
(Alnsour, 2024)	Islamic Banks	Fintech adoption and external policy factors contribute positively to Islamic bank performance in Jordan, particularly through strategic partnerships and digital transformation efforts.	Moderate
(Alabdullah, 2023)	Fintech & Risk Mgmt	The study revealed a strong correlation between Fintech adoption and improved return on assets and equity in Kuwaiti institutions, highlighting the importance of risk management practices.	Positive
(Alhosseiny, 2023)	Literature Review	Based on aggregated secondary data, this literature-based review confirms that Fintech adoption has a consistently positive influence on banking performance across GCC countries.	General Positive
(Alshubiri et al., 2019)	ICT & Finance	ICT variables, such as broadband access, significantly enhance financial development in GCC economies, with fixed broadband contributing more to economic performance than internet usage.	Significant
(Rahman et al., 2023).	Islamic Banks Post-COVID	Fintech adoption strengthened the resilience and competitiveness of Islamic banks during the COVID-19 pandemic, providing new opportunities	Positive

		for growth and market differentiation.	
(Aldaarmi, 2024)	Service Quality	Customer satisfaction with Fintech services increases re-use intentions, although digital transformation alone did not directly impact sustainable performance in Saudi banks.	Mixed
(Mbaidin et al., 2024)	Blockchain in Islamic Banks	Blockchain adoption in UAE Islamic banks is strongly influenced by investment willingness, organisational culture, and leadership support, resulting in improved operational outcomes.	Significant
(Kothari et al., 2025)	Retail Banking	Digital transformation in UAE retail banks is driven by service quality, digital skills, customer experience, and regulatory support, all of which contribute significantly to performance.	Structural Impact
(Muhamad, 2023)	Tech & Satisfaction	The study concluded that customer satisfaction and service quality in Fintech applications drive users to prefer digital banking, improving operational and competitive positioning.	Perceived Efficiency
(Oleiwi, 2022)	Financial Inclusion	Fintech tools enhance financial inclusion in Arab countries, although legal, regulatory, and cultural barriers still limit broader adoption and integration into the economic system.	Policy Insight
(Anwar, 2024)	Lockdown Adaptation	Digital banking adoption in the GCC accelerated due to COVID-19 lockdowns, improving inclusion; however, challenges such as digital literacy and cybersecurity risks remain.	Conditional Positive
(Baker et al., 2023)	Fintech Adoption	Fintech adoption improves total deposits and net profits in UAE and Jordanian banks, with the study recommending inclusive	Positive

		digital strategies for sustainable growth.	
(Khalaf & Al-Shaer, 2023)	Fintech & ROA	The study found that Internet and mobile banking significantly improve profitability in MENA banks, with larger institutions experiencing greater returns from Fintech investments.	Positive
(Alshouha et al., 2025)	Fintech & Liquidity Risk	Fintech innovations reduce liquidity risk; bank size moderates this effect. Larger banks benefit more from risk reduction.	Fintech adoption significantly improves operational efficiency and enhances stability through liquidity control.
(Baabdullah et al., 2019)	Mobile Banking Adoption	Perceived privacy, security, usefulness, and task-technology fit have a positive effect on users' continued intention to adopt mobile banking.	Positively impacts efficiency by enhancing user trust and digital service adoption.
(Litimi et al., 2024)	Fintech Growth & Performance	Fintech startup growth negatively affects ROA, ROE, and NIM; recommends partnerships to avoid disruption.	Negative impact on operational efficiency; suggests an initiative-taking approach to engagement with Fintech to mitigate risks.
(Mulla et al., 2019)	Quality Management & Tech in Islamic Banks	Management quality and technology development account for 41% of the variance in Islamic bank performance.	The development of technology and quality management significantly enhances operational efficiency and institutional stability.

Findings and Discussion

Theme 1: Fintech Adoption and Operational Efficiency

The GCC banking sector views fintech adoption as a key factor in enhancing its operations. Almost all of the studies in this review report a direct link between applying Fintech and improvements in a firm's workflows, cost savings, customer support and results in important financial measures. Almashhadani and Almashhadani (2022) found that the adoption of technology for payments and services enhanced financial results in UAE foreign banks, mainly by increasing ROA and ROE. The conclusions by Alshouha et al. (2025) Alshouha et al. (2025) support our findings, showing that both liquidity risk and operational improvements were observed for larger banks in the GCC. Alqahtani et al. (2024) found that Saudi Islamic banks utilise AI, IoT, and cloud computing to enhance the efficiency of their processes and improve customer interaction.

It was shown in Alsmadi et al. (2023) that business enablers such as support from regulators and better management, helped banks in Saudi Arabia integrate Fintech which led to better

operational results. Dwivedi et al. (2021) mentioned that UAE banking institutions became both more efficient and competitive when Fintech was used together with technology management practises. It was also noted by Baker et al. (2023) that adopting Fintech brought more deposits and profits to banks in UAE and Jordan. Chuc et al. (2023) reported in Bahrain that using Fintech in microfinance significantly reduced running costs, improved service delivery by automation and increased the safety of banking services. Al Rajhi and QIB were studied by Chad (2025) side by side, showing how focusing on growing Fintech usage assisted in making operations more efficient without breaking Islamic rules. Baabdullah et al. (2019) discovered that the use of mobile banking by people in Saudi Arabia can be explained by its usefulness and emphasis on security.

Oleiwi (2022) underlined that financial technologies increase service reach and efficiency, particularly for underbanked populations, by expanding access to financial services at lower costs. Similarly, Sayari (2024) analysis of internet banking in Saudi Arabia confirmed statistically significant gains in profitability and efficiency, validating the operational impact of digital finance. Finally, Naser et al. (2024) in Bahrain emphasised that Fintech innovations at the bank level correlate positively with improved return on assets (ROA). Meanwhile, Musleh Alsartawi (2024) noted that the diffusion of Fintech across GCC banks significantly enhances market value and potentially supports internal efficiency mechanisms.

Theme 2: Digital Transformation and Performance Outcomes

The digital transformation of banking services in the GCC region has been a crucial enabler of enhanced financial performance, customer experience, and institutional adaptability. Numerous studies in this review demonstrate that digitalisation, through platforms such as internet banking, cloud infrastructure, and AI, contributes to key performance metrics, including profitability, customer satisfaction, and market competitiveness. Sayari (2024) found that internet banking significantly improved both the return on assets (ROA) and the return on equity (ROE) among Saudi banks, underscoring the financial benefits of digitised banking services. Similarly, Khalaf and Al-Shaer (2023) investigation across MENA banks reported that mobile and internet banking are positively associated with profitability, specifically return on assets. Khalaf et al. (2023) supported these conclusions, noting a direct link between digital financial tools and an increased customer base and improved bank performance.

The work of Karoui (2025) further emphasised the performance-enhancing role of Fintech, asserting that financial stability acts as a mediating factor in the relationship between digital innovation and bank profitability. This suggests that performance improvements are often conditional on the maturity and stability of a bank's digital ecosystem. This view is echoed by Dwivedi et al. (2021), who linked technology management and Fintech alignment to improved performance outcomes in the UAE banking sector. Alqahtani et al. (2024) provided evidence that digital technologies such as IoT and cloud computing increase process efficiency, customer interaction, and performance in Saudi Islamic banks. Likewise, Kothari et al. (2025) analysed UAE retail banks and concluded that variables like automation, digital literacy, and service quality significantly influence performance outcomes.

Musleh Alsartawi (2024) found that Fintech diffusion in GCC-listed banks has a positive impact on market performance, as reflected in Tobin's Q ratios. However, the effect on profitability

was less directly measurable. In Bahrain, Naser et al. (2024) demonstrated that digital technologies—especially AI and big data—strengthen return on assets, particularly in conventional banks. Juma et al. (2022) investigated internal operational performance during the COVID-19 pandemic and found that digital transformation enhanced work efficiency, although cultural and human factors remained crucial. Oleiwi (2022) added that digital tools facilitate inclusion and broader financial outreach, improving overall economic participation. A 2025 comparison by Chad of QIB and Al Rajhi Bank showed that both institutions achieved competitive advantages through strategic digital transformation, including the integration of mobile banking, blockchain, and AI. Meanwhile, Alnsour (2024) emphasised that internal bank factors, such as strategic partnerships, help leverage technology to achieve tangible improvements in financial performance.

Theme 3: Bank Stability During Fintech Adoption/Digital Transformation

While the adoption of Fintech and digital transformation yields operational and financial benefits, its implications for bank stability are more nuanced across the GCC banking sector. Several studies in this review highlight that the stability of banks during technology adoption depends on variables such as institutional maturity, regulatory frameworks, and risk management capacity. Khan et al. (2023) found that Fintech adoption had a destabilising effect on banks in the GCC, particularly smaller or less capitalised institutions. However, they noted that large, government-owned, and foreign banks were more resilient to adverse impacts due to their stronger capital bases and diversified operations. This suggests a differential effect of Fintech on bank stability based on organisational structure. In contrast, AlHares et al. (2022) Observed that Fintech firms contribute positively to the financial soundness of GCC banks over time, especially in institutions with strong corporate governance. Their findings suggest that stability and Fintech adoption can coexist under conditions of regulatory oversight and institutional readiness.

Karoui (2025) further extended this debate by empirically demonstrating that financial stability fully mediates the relationship between Fintech adoption and bank performance, reinforcing the notion that stability is not only an outcome but also a precondition for successful digital integration. Research by Alabdullah (2023) in Kuwait found support for the role of effective risk management practices in enhancing both stability and profitability during the adoption of Fintech. These practices include the use of AI-based risk tools and predictive analytics to manage credit exposure and operational risks.

From a liquidity perspective, Alshouha et al. (2025) reported that Fintech adoption reduces liquidity risk in GCC banks, particularly in those with large asset bases and diversified portfolios. Likewise, the study by Chuc et al. (2023) found that Fintech applications in Bahrain's microfinance sector significantly reduced non-performing loan ratios, enhancing institutional stability. Rahman et al. (2023) examined how Islamic banks maintained their resilience during the COVID-19 pandemic by leveraging Fintech tools to remain operational and compliant under stressful conditions. Similarly, Alqahtani et al. (2024) highlighted that the strategic integration of digital innovation improved both operational and financial stability in Islamic banks.

Naser et al. (2024) noted that state-owned banks were better positioned than Islamic or privately held banks to absorb the volatility introduced by Fintech due to stronger financial

buffers. Musleh Alsartawi (2024) added that the highest levels of Fintech diffusion were observed in countries such as the UAE and Bahrain, where institutional stability supported broad adoption.

Theme 4: Challenges and Opportunities in the GCC Banking Sector

Despite the numerous benefits associated with fintech adoption and digital transformation, banks in the GCC region face a variety of structural, regulatory, technological, and cultural challenges. At the same time, these challenges also present strategic opportunities for institutions aiming to remain competitive, innovative, and inclusive in an evolving financial ecosystem. One of the key challenges identified by Muhamad (2023) Is an inconsistency in fintech maturity across institutions. While some banks in the UAE demonstrate high levels of innovation and customer satisfaction, others lag in digital adoption due to internal resistance and limited strategic vision. Similarly, Aloulou et al. (2024) observed that although the UAE banking sector benefited from digital financial inclusion during the COVID-19 pandemic, infrastructural disparities and regulatory gaps remain prevalent, especially in reaching underbanked populations.

Aldaarmi (2024) noted that while customer satisfaction and intention to re-use fintech services are high, digital awareness and the direct link between digital transformation and sustainable bank performance remain ambiguous. The findings suggest that while users are willing to engage with digital banking, banks must enhance financial literacy and digital onboarding strategies. From a regulatory perspective, Alshubiri et al. (2019) emphasised the importance of ICT infrastructure and coordinated digital policies for financial development across the Gulf Cooperation Council (GCC) countries. Their study highlighted the need for cohesive regional strategies to mitigate fragmentation in the implementation and governance of Fintech.

Chad (2025) revealed regulatory tensions in aligning Fintech with Shariah-compliant frameworks. Although both banks effectively leverage technologies such as blockchain and AI, the challenge remains in navigating the complex intersections of religious, legal, and technological aspects within Islamic finance. At the micro-level, Mbaidin et al. (2024) stressed the role of organisational culture and leadership in driving blockchain adoption within UAE Islamic banks. They identified leadership support as a crucial enabler of readiness, suggesting that internal transformation is as important as external technology investments.

Conversely, several studies point to emerging opportunities. Baabdullah et al. (2019) Highlighted the potential of mobile banking in Saudi Arabia, particularly in improving user intention and operational efficiency. The study underscored security and perceived usefulness as critical success factors, presenting banks with clear strategic levers to encourage adoption. Anwar (2024) Noted that the COVID-19 pandemic created a unique opportunity for banks to enhance digital inclusion and customer access through emergency fintech measures. Similarly, Oleiwi emphasised the growing role of Fintech in promoting equitable access to finance, particularly for marginalised groups. Finally, Alnsour (2024) Suggested that strategic partnerships between banks and fintech startups could accelerate digital transformation, creating shared value through innovation and resource optimisation.

Implications and Future Research Agenda

This review offers actionable insights for both financial regulators and banking executives in the GCC. First, banks should prioritise developing their digital maturity through targeted investments in IT infrastructure, staff digital literacy, and customer engagement platforms. Strategic alignment between fintech adoption and institutional goals is crucial for achieving measurable improvements in performance and stability. For policymakers, the findings underscore the need for harmonised regulatory frameworks that strike a balance between innovation and risk management, particularly in jurisdictions with Islamic finance systems. Regulatory sandboxes and fintech hubs, as seen in the UAE and Bahrain, can be further expanded to support safe experimentation and public-private partnerships.

Although the reviewed literature demonstrates a positive relationship between Fintech and efficiency/performance, several gaps remain. Few studies offer longitudinal analyses capturing the long-term impact of digital adoption. Most studies rely on regression-based cross-sectional data, which limits the ability to make causal inferences. Additionally, Islamic banking-specific challenges, such as aligning digital innovation with Shariah compliance, warrant further examination. There is also a lack of research addressing the environmental, social, and governance (ESG) dimensions of digital transformation. Emerging concerns such as cybersecurity, digital inequality, and AI ethics are underrepresented despite their growing relevance in financial systems.

Future studies should adopt multi-method approaches, combining qualitative and quantitative insights to enrich the understanding of digital transformation dynamics. Comparative research across GCC countries could elucidate how national strategies and institutional capabilities influence fintech outcomes. Specific attention should be paid to Islamic banking systems and how Fintech affects their unique compliance and operational structures, as well as ESG-linked fintech performance, particularly in the post-COVID era. Additionally, cybersecurity readiness and digital resilience in GCC financial institutions should be considered.

Conclusion

Using a systematic procedure, this paper identified and examined 35 peer-reviewed articles that discuss the effects of Fintech, digital improvements, and financial stability on operational results and performance across the GCC banking sector. These findings demonstrate that Fintech and digital technologies enhance operational success, improve customer service, and help achieve financial strategies in both traditional and Islamic banking models. Digital tools, such as mobile banking, AI, cloud computing, and blockchain, are strongly linked to improved return on assets, reduced costs, and increased client interaction, according to the research. In addition, performance results varied according to the stability of each institution, especially as digital changes occurred.

Although Fintech offers clear benefits, it also introduces complexity, primarily in maintaining stability for banks and addressing weak regulations and technological disparities across the region. Islamic banking organisations must deal with additional problems as new technologies advance rapidly. Although the UAE and Saudi Arabia are leading the way in digital progress, other GCC states are making progress at varying rates, so developing better joint strategies is necessary. Empirical, quantitative methods continue to play the most important role, with

regression analysis and structural equation modelling being the most popular. At the same time, this main viewpoint does not allow for studying aspects such as digital culture, how strategies are aligned, and what technology means for the future.

The paper highlights the role of Fintech in disrupting and modernising traditional banking services in the GCC. Digital integration works well only if technology is used, along with proper advanced planning, new rules, and the right institutional support. People working in the field must collaborate with those from different disciplines and countries to address the remaining issues and maximise the benefits of Fintech in building robust, inclusive, and stable financial systems across the GCC.

References

Abumughli, A. A. (2024). Islamic Banking and Their Responses to the New Wave of Digital Disruption in the Gulf Countries. In M. H. Bilgin, H. Danis, E. Demir, E. Aykac Alp, & S. Çankaya, *Eurasian Business and Economics Perspectives* Cham.

Al-Shouha, L., Khasawneh, O., El-qawaqneh, S., Al-Naimi, A. A., Saram, M., & Ismail, W. N. S. W. (2024). The Impact of Financial Technology on Bank Performance in Arabian Countries. *Banks and Bank Systems*, *19*(2), 234.

Alabdullah, T. T. Y. (2023). The Impact of Financial Technology and Risk Management Practices on Corporate Financial System Profitability: Evidence from Kuwait. *SocioEconomic Challenges (SEC)*.

Aldaarmi, A. A. (2024). Fintech Service Quality of Saudi Banks: Digital Transformation and Awareness in Satisfaction, Re-Use Intentions, and the Sustainable Performance of Firms. *Sustainability*, *16*(6), 2261.

AlHares, A., Dahkan, A., & Abu-Asi, T. (2022). The Effect of Financial Technology on the Sustainability of Banks in the Gulf Cooperation Council Countries. *Corporate Governance and Organizational Behavior Review*

Alhosseiny, H. M. (2023). The Effects of Fintech Adoption on Banking Industry's Performance: Literature Review. *Journal of Entrepreneurship Education*, *26*(6), 1-10.

Almashhadani, H., & Almashhadani, M. (2022). The Impact of Financial Technology on Banking Performance: A Study on Foreign Banks in Uae. *International Journal of Scientific and Management Research*, *6*(01), 1-21.

Alnsour, I. R. (2024). Determinant of the Financial Performance of Islamic Banks in Light of Financial Technology. *Educational Administration: Theory and Practice*, *30*(5), 4321-4333.

Aloulou, M., Grati, R., Al-Qudah, A. A., & Al-Okaily, M. (2024). Does Fintech Adoption Increase the Diffusion Rate of Digital Financial Inclusion? A Study of the Banking Industry Sector. *Journal of Financial Reporting and Accounting*, *22*(2), 289-307.

Alqahtani, M. M. M., Singh, H., Haddadi, E. A. A., Al-Shibli, F. S. R., & Al-balushi, H. A. A. (2024). Impact of Internet of Things, Cloud Computing, Artificial Intelligence, Digital Capabilities, Digital Innovation, It Flexibility on Firm Performance in Saudi Arabia Islamic Bank. *Advances in Social Sciences Research Journal*, *11*(7).

Alshouha, L., Khasawneh, O., Alshannag, F., & Al Tanbour, K. (2025). Nexus between Fintech Innovations and Liquidity Risk in Gcc Banks: The Moderating Role of Bank Size. *Journal of Risk and Financial Management*, *18*(5), 226.

Alshubiri, F., Jamil, S. A., & Elheddad, M. (2019). The Impact of Ict on Financial Development: Empirical Evidence from the Gulf Cooperation Council Countries. *international Journal of engineering business management*, *11*, 1847979019870670.

Alsmadi, A. A., Alrawashdeh, N., Al-Gasaymeh, A., Al-Malahmeh, H., & Moh'd Al_hazimeh, A. (2023). Impact of Business Enablers on Banking Performance: A Moderating Role of Fintech. *Banks and Bank Systems*, *18*(1), 14.

Anwar, A. F. (2024). Banking during Lockdown and Its Implications for Financial Inclusion: A Study on Gcc Countries. *SUKUK: INTERNATIONAL JOURNAL OF BANKING, FINANCE, MANAGEMENT AND BUSINESS*, *3*(II), 1-15.

Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Patil, P., & Dwivedi, Y. K. (2019). An Integrated Model for M-Banking Adoption in Saudi Arabia. *International Journal of Bank Marketing*, *37*(2), 452-478. https://doi.org/10.1108/IJBM-07-2018-0183

Baker, H., Kaddumi, T. A., Nassar, M. D., & Muqattash, R. S. (2023). Impact of Financial Technology on Improvement of Banks' Financial Performance. *Journal of Risk and Financial Management*, *16*(4), 230.

Balushi, W. A., Al-Salti, Z., & Miah, M. D. (2025). The Impact of Fintech on the Environmental Performance: The Case of Commercial Banks in Oman. *International Journal of technology management & sustainable development*, *24*(1), 77-93.

Bukar, U. A., Sayeed, M. S., Razak, S. F. A., Yogarayan, S., Amodu, O. A., & Mahmood, R. A. R. (2023). A Method for Analyzing Text Using Vosviewer. *MethodsX*, *11*, 102339.

Chad, F. (2025). Financial Technology and Digital Transformation in Islamic Banks: Current Realities and Future Outlook -a Comparative Study of Al Rajhi Bank (Saudi Arabia) and Qatar Islamic Bank.

Chuc, A. A.-M., Atayah, A. A., & Özer, S. Q. (2023). Impact of Financial Technology (Fintech) on Financial Performance of Micro Finance Institutions in Bahrain. *African Journal of Emerging Issues*, *5*(17), 1-11.

Dwivedi, P., Alabdooli, J. I., & Dwivedi, R. (2021). Role of Fintech Adoption for Competitiveness and Performance of the Bank: A Study of Banking Industry in Uae. *International Journal of Global Business and Competitiveness*, *16*(2), 130-138.

Echchabi, A., Al-Hajri, S., & Tanas, I. N. (2019). Analysis of E-Banking Acceptance in Oman: The Case of Islamic Banks' Customers. *International Journal of Islamic Economics and Finance (IJIEF)*, *1*(2), 145-164.

Ismail, A., Lee, U. H. M. S., Ismail, F. L. M., Sharbani, A. S. B., & Harun, S. (2024). Strategic Insights into Marketing Islamic Banking Products: A Systematic Literature Review. *Global Business and Management Research*, *16*(3s), 491-513.

Juma, M., Muhammad, A. M., Hamadimann, E., & Qureshi, R. (2022). The Impact of Digitization on the Work Efficiency of Uae Banks' Employees during the Covid-19 Pandemic. *Turkish Online Journal of Qualitative Inquiry*, *13*(1).

Karoui, C. (2025). Exploring the Mediating Role of Financial Stability in the Relationship between Fintech and Bank Performance: Evidence from the Mena Region. *Journal of Ecohumanism*, *4*(3), 264–277-264–277.

Khalaf, B. A., & Al-Shaer, A. (2023). The Impact of Fintech on Profitability: An Analysis of Determinants in Banks of Middle East and North Africa (Mena) Region. *International Journal of Membrane Science and Technology*, *10*(4), 61-67.

Khalaf, B. A., Awad, A. B., Ahmed, O., & Gharios, R. T. (2023). The Role of Fintech in Determining the Performance of Banks: The Case of Middle East & North Africa (Mena) Region. *International Journal of Membrane Science and Technology*, *10*(3), 1525-1535.

Khan, H. H., Khan, S., & Ghafoor, A. (2023). Fintech Adoption, the Regulatory Environment and Bank Stability: An Empirical Investigation from Gcc Economies. *Borsa Istanbul Review*, *23*(6), 1263-1281.

Kismawadi, E. R. (2025). Islamic Fintech: Navigating the Regulatory Framework and Promoting Financial Inclusion in Gulf Cooperation Council (Gcc) Countries. *Journal of Islamic Marketing*, *16*(6), 1742-1769. https://doi.org/10.1108/JIMA-02-2023-0061

Kothari, U., Grandhi, B., & Thrassou, A. (2025). Digital Transformation of Retail Banking in the United Arab Emirates. *Journal of Asia Business Studies*, *19*(1), 163-181.

Litimi, H., BenSaïda, A., & Raheem, M. M. (2024). Impact of Fintech Growth on Bank Performance in Gcc Region. *Journal of Emerging Market Finance*, *23*(2), 227-245.

Mbaidin, H. O., Alomari, K. M., AlMubydeen, I. O., & Sbaee, N. Q. (2024). The Critical Success Factors (Csf) of Blockchain Technology Effecting Excel Performance of Banking Sector: Case of Uae Islamic Banks. *International Journal of Data & Network Science*, *8*(1).

Muhamad, J. (2023). How Effective Is the Banking and Financial Services Sector in the United Arab Emirates in Using Technological Innovations. *Journal of Asia Business Studies*, *27*(3), 139-153.

Mulla, M., Ameen, A., Alrajawy, I., & Bhaumik, A. (2019). Influence of Management Quality and Technology Developments on Islamic Banking Performance in Uae. *International Journal of Recent Technology and Engineering*, *8*(2), 297-303.

Musleh Alsartawi, A. (2024). The Diffusion of Financial Technology-Enabled Innovation in Gcc-Listed Banks and Its Relationship with Profitability and Market Value. *Journal of Financial Reporting and Accounting*.

Naouar, A. (2025). Examination of the Key Drivers Fueling the Adoption of Fintech in the Banking Sector in the Uae. In K. Tsanis, H. C. Webb, A. Kaddour, & O. David-West (Eds.), *The Palgrave Handbook of Fintech in Africa and Middle East: Connecting the Dots of a Rapidly Emerging Ecosystem* (pp. 1-24). Springer Nature Singapore. https://doi.org/10.1007/978-981-97-1998-3_24-1

Naser, H., Sultanova, G., & Nahar, S. (2024). The Impact of Fintech Innovation on Bank's Performance: Evidence from the Kingdom of Bahrain. *International journal of economics and financial issues*, *14*(1), 136-143.

Neuendorf, K. A. (2018). Content Analysis and Thematic Analysis. In *Advanced Research Methods for Applied Psychology* (pp. 211-223). Routledge.

Oleiwi, A. A. (2022). The Impact of Financial Technology on Promoting the Financial Inclusion of Banks in Arab Countries. *International Academic Journal of Economics*.

Passas, I. (2024). Bibliometric Analysis: The Main Steps. *Encyclopedia*, *4*(2), 1014-1025. https://doi.org/10.3390/encyclopedia4020065

Peter, E., Griffin, C. H., Amana, S., Mensah, A., & Fischer, M. (2025). *Financial Innovations and Governance in the Digital Era*. Cari Journals USA LLC.

Rahman, A. A. A., Rahiman, H. U., Meero, A., & Amin, A. R. (2023). Fintech Innovations and Islamic Banking Performance: Post-Pandemic Challenges and Opportunities. *Banks and Bank Systems*, *18*(4), 281.

Sardana, V., & Shukla, A. (2025). Market Discipline in Banking: A Systematic Review and Future Research Agenda. *FIIB Business Review*, 23197145241301934.

Sayari, S. (2024). Driving Digital Transformation: Analyzing the Impact of Internet Banking on Profitability in the Saudi Arabian Banking Sector. *Journal of Risk and Financial Management*, *17*(5), 174.

Shah, S. H. H., Lei, S., Ali, M., Doronin, D., & Hussain, S. T. (2020). Prosumption: Bibliometric Analysis Using Histcite and Vosviewer. *Kybernetes*, *49*(3), 1020-1045.

Sohrabi, C., Franchi, T., Mathew, G., Kerwan, A., Nicola, M., Griffin, M., Agha, M., & Agha, R. (2021). Prisma 2020 Statement: What's New and the Importance of Reporting Guidelines. In (Vol. 88, pp. 105918): Elsevier.

Srairi, S. (2024). The Impact of Risk and Fintech on Esg Performance: Evidence from Gulf Cooperation Council (Gcc) Banks. *Journal of Chinese Economic and Business Studies*, 1-42.