A Comprehensive Review and Analysis of FinTech Research

Mabi Aming¹, Ruirui Liu^{2,a,*}, Yuchen Wang³, Zixin Li⁴

 ¹Chengdu University of Technology, Dongsanlu, Erxianqiao, Chengdu, Sichuan, 610059, P.R.China
²Shenzhen Bao'an No.1 Foreign Language School, Shenzhen, Guangdong, 518128, P.R.China
³Wuhan Britain-China High School, Qiaokou District, Wuhan, 430022, P.R.China
⁴Department of Economics, University of Southampton, Southampton, SO17 1BJ, United Kingdom a. ruiruiliu0113@outlook.com
*corresponding author

Abstract: FinTech has transformed the business models of traditional financial industries. However, current research mainly focuses on specific areas of financial technology, lacking a systematic analysis of the overall development of the FinTech industry. To understand this development, this study reviews recent literature on FinTech, summarizing scholars' viewpoints. The paper examines relevant literature from SSCI core collection international journals between 2018 and March 2021, categorizing it into six main areas: "Technology, Services, Innovation, Usage Intention, Regulation, and Financial Inclusion." Subsequently, it analyses the status and development trends of FinTech in different fields, summarizing its impacts and roles in modern economic society. Additionally, the paper highlights the research focus of Chinese scholars and explores their different emphases in these six areas. Finally, the paper presents future research prospects for FinTech, aiming to provide reference suggestions and research directions for scholars.

Keywords: Financial Technology, Literature Analysis, Systematic review.

1. Introduction

With the continuous advancement of information technologies such as the internet, the development of financial technology (FinTech) is also accelerating [1]. As we have experienced, FinTech has significantly transformed the way we conduct financial transactions and use financial services, such as the use of online FinTech payment services [2]. However, what is less obvious is that FinTech is also subtly changing the mindset, development approaches, and implementation strategies of financial participants [3-6]. The widespread and diversified nature of the FinTech phenomenon prompts us to reshape our understanding of the financial system at the intersection of information technology and finance [4,7]. FinTech influences the behaviour and decision-making of micro-level participants in the financial market and creates new effects on the macroeconomic situation, driving innovative development across the entire financial system [6,8]. In 2019, the proportion of technological investment by major banking and financial institutions generally exceeded 2.5% of operating revenue, and this proportion is expected to continue increasing in the future. In terms of talent reserves, the number of FinTech professionals increased by more than 50% year-over-year in 2019 [9-10]. During the 2020 pandemic, FinTech played a dual role: on one hand, it provided contactless transaction

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methods for the public, meeting daily consumer needs and promoting the growth of digital payment services; on the other hand, it supported lending to small and medium-sized enterprises (SMEs), improving the accessibility of microloans, stimulating production vitality, and driving economic recovery [11-13]. According to the "FinTech Development Plan (2019–2021)," FinTech is technology-driven financial innovation, aiming to apply modern technological advancements to transform or innovate financial products, business models, and operational processes, thereby enhancing the value and efficiency of financial development [13-14]. The degree of investment in FinTech can, to some extent, reflect the innovative driving force behind the industry's development. FinTech plays a crucial role in the economy and society [15].

The combination of information technology and financial activities, known as financial technology (FinTech), has grown from its early stages to becoming increasingly comprehensive, drawing more attention from both practitioners and scholars [16-19]. In recent years, many scholars have focused on analysing the specific impacts of FinTech, such as its effects on regulation and its role in commercial banks [20]. However, research on the overall development trajectory of FinTech remains relatively scarce. To understand how FinTech influences the operations and business of traditional financial industries, Eduard [7,21] classified and summarized relevant FinTech literature from the preceding 38 years, up to 2018. Building on his research into the overall trends of FinTech, this paper continues in the same direction by reviewing relevant literature from 2018 to March 2021, and categorizes and analyses it in terms of technology, services, innovation, usage intentions, regulation, and financial inclusion. Finally, based on the current limitations in FinTech research, this paper proposes several relevant suggestions for future studies [15, 22].

2. Research methods

This study conducted a systematic literature search using the Web of Science Core Collection database, with the English keywords "fintech" and "fintech's" in the title, covering the period from 2018 to March 2021. The primary focus of this research is on published English-language journal articles, as journals undergo a rigorous peer-review process prior to publication, ensuring a high level of accuracy and quality in the content and data. Therefore, journals serve as the main subject of literature analysis in this study. Building on the literature review and research conducted by Eduardo and others, which covered FinTech literature from 1980 to February 2018 [7, 23], this study continues in the same direction, collecting a total of 210 journal articles published between 2018 and March 2021 to examine the latest developments in FinTech. After screening, excluding previously included literature, conference papers, non-English literature, and editorial comments from special issues, this study included 196 journal articles. The study conducted a quantitative distribution analysis of the literature based on publication year. The data reveals that in the past three years, scholars' attention to FinTech has increased, with the number of relevant publications showing a general upward trend. Additionally, an increasing number of Chinese scholars are focusing on FinTech research. Among them, Chinese scholars have published a total of 37 articles, with 23 as first author, 2 as corresponding author, and 12 where both the first author and corresponding author are Chinese scholars. In recent years, Chinese scholars have mainly concentrated on the intersection of FinTech and services, as well as empirical studies on the use of blockchain, big data, and other technologies in FinTech, along with innovation research [21-25].

As shown in Table 1, this paper summarizes and organizes the literature based on journals. Due to the wide variety of journals included, only the top 9 journals by publication count are listed below. *Sustainability* published the most articles, with 10 papers; followed by *Environment and Planning A: Economy and Space, Industrial Management & Data Systems,* and *Journal of Economics and Business,* each with 4 papers. Chinese scholars published a total of 10 articles in these 9 journals, accounting for 26.32% of the total number of articles published between 2018 and March 2021.

Journal	Number
《Sustainability》	10
《Environment and Planning A-Economy and Space》	4
《Industrial Management & Data Systems》	4
《Journal of Economics and Business》	4
《Small Business Economics》	4
《European Journal of Finance》	3
《Future Generation Computer Systems-The International Journal of eScience》	3
《Progress In Human Geography》	3
(Technological Forecasting and Social Change)	3

Table 1: Number of fintech related studies published in each journal from 2018 to March 2021

3. Literature analysis

Eduardo and colleagues focused on the FinTech sector and divided it into two key areas: the integration with financial technology and the integration with financial services. Within the financial services domain, they identified five components: innovation, regulation, financial inclusion, financial education, and service operations [7, 21]. Due to the broad scope and numerous factors covered in the existing literature, and to facilitate a clearer understanding of the current state of FinTech development for both readers and existing FinTech companies, this paper builds upon Eduardo's framework and further refines the categorization based on the main content of the articles [21]. The collected articles are classified into six categories: technology, services, innovation, usage intention, regulation, and financial inclusion. The importance of studying usage intention lies in examining the factors that influence users' initial or continued adoption of FinTech, helping to understand the motivations or barriers for users in using FinTech services. This insight can assist banks in implementing appropriate strategies to enhance user motivation, thus enabling them to benefit from the convenience and support provided by FinTech services [22]. Therefore, this paper classifies usage intention as a separate category. In summary, the refined categorization aims to provide a more detailed analysis, which is useful for understanding the different aspects of FinTech development, while making the findings more accessible to readers and practical for stakeholders in the industry [23].

Currently, both Chinese and international scholars primarily focus their research on the areas of FinTech's integration with services, technology, innovation, and regulation, while there is relatively less attention given to user usage intention and financial inclusion [24]. Next, this paper will analyse the six main categories of FinTech research, along with the key areas of focus for Chinese scholars, aiming to explore the opportunities and gaps in this field through effective integration of existing literature. This will provide relevant directions for future research in FinTech [25].

3.1. Finance technology

The Fourth Industrial Revolution has interconnected industries, fostering cross-industry innovations like FinTech, which merges finance and technology. Emerging technologies—blockchain, cognitive computing, machine learning, and AI—are transforming financial services, benefiting both new and traditional players. For instance, Chen et al. applied machine learning to classify patent data, identifying IoT, robo-advisors, and blockchain as key FinTech innovations. Matsuura's research used adaptive stochastic analysis to explore blockchain's role in financial engineering, focusing on stable applications and token valuation. Such technologies can reduce transaction costs, enhancing financial

services' convenience and security. Jaksic and Marinc further reviewed how AI impacts relationship banking, considering technology-related risks for stability.

3.2. Finance service

Technological innovation fuels FinTech development, helping the financial industry reduce transaction costs and maximize profits while enhancing customer experience and transforming services. Gomber et al. introduced a FinTech innovation mapping method that evaluates transformations in operational management, payments, lending, and global investment. This approach drives continuous updates in financial products, business models, and services. Zhang's study on Alibaba and Tencent shows how cross-sector FinTech fosters business model innovation and growth. Abbasi's research on SMEs in OECD countries found that FinTech boosts SME efficiency, though cultural factors like individualism can affect its impact.

3.3. Financial innovation

FinTech innovation is driven by advancements in science and technology, which transform modern economic models and respond to external factors. For instance, Au used social network analysis to study how Hong Kong banks leverage foreign FinTech knowledge, enhancing local innovation by analysing network roles and competitive advantages. Technological advancements also reshape business models, as seen in Pizzi's study, where FinTech helps SMEs adopt sustainable practices aligned with the circular economy. Additionally, FinTech extends its influence on green finance; Puschmann's research on Swiss green FinTech highlights its potential to combat climate change.

3.4. Usage intention

Research on FinTech heavily focuses on technology and services, with less attention on users' willingness to adopt these technologies. Studies on usage intentions emphasize FinTech's accessibility and user-friendliness to facilitate user-technology interaction. For instance, Blanche applied the Technology Acceptance Model to identify key factors, like attitudes toward robo-advisors, media influence, and social norms, impacting initial adoption in financial services. This research helps practitioners implement AI-driven solutions effectively. Additionally, the growing demand for wealth management highlights the need for FinTech to offer convenience and continuous value, as Shiau's study demonstrates by analysing factors influencing sustained FinTech use through self-efficacy and expectancy models.

3.5. Regulation

The rapid growth of FinTech brings both economic benefits and risks to the financial services industry, impacting individual users and broader financial systems. Anagnostopoulos investigates FinTech's effects on banks, aiming to explain bank behaviours and regulatory issues, while highlighting FinTech's disruptive potential on the financial ecosystem. Given FinTech's global impact, Bromberg and colleagues study the role of regulatory cooperation, suggesting that bilateral agreements could develop into broader multilateral arrangements. Omarova views FinTech as a systemic disruptor to current financial regulations, examining technology-driven changes and proposing improvements for a more robust regulatory framework.

4. Conclusion and Discussion

This paper reviews FinTech literature from 2018 to March 2021, focusing solely on "fintech" in titles, which may have excluded relevant studies. Future research should include broader terms like

"financial technology" for a comprehensive view. Findings indicate that Chinese scholars mainly study FinTech's integration with traditional banking, with less focus on areas like usage intention, regulation, and financial inclusion. To advance FinTech, multi-dimensional research is needed, particularly in aligning regulations with policies, assessing risks, and enhancing financial inclusion for underserved groups, such as small businesses and farmers. Additionally, scholars should explore diverse FinTech business models to uncover common traits and expand understanding. Continuous updates on FinTech trends, such as in credit risk and cybersecurity, are essential to monitor its impact on economic stability.

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