AI-Driven FinTech: Accelerating Sustainable Development Goals and Economic Growth in the Philippines

Christian Cabungcal[1,2], Klint Allen Mariñas[1,2] and Michael G. Calamba[3]
[1] *School of Industrial Engineering and Engineering Management, Mapua University, 1002 Manila, Philippines*
[2] *School of Graduate Studies, Mapua University, 1002 Manila, Philippines*
[3] *College of Engineering and Architecture, Mapua Malayan Colleges Mindanao, Gen. Douglas MacArthur Hwy, Talomo, Davao City, 8000 Davao del Sur, Philippines*
cecabungcal@mymail.mapua.edu.ph, kaamarinas@mapua.edu.ph, mgcalamba@mcm.edu.ph

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Abstract: The Philippines has emerged as a fintech hub powered by artificial intelligence in recent years, propelled by innovative governance, by broadening financial access, and a youthful, tech-inclined population. This flourishing AI-driven fintech environment has influenced Filipinos' banking services accessibility and spurred economic expansion and innovation, indirectly supporting the UN's sustainable development goals. Because more people use smartphones and the internet more frequently, many now view AI-driven fintech services as vital components of their daily lives. AI has made financial services and applications more customer-focused and technologically advanced; the increasing complexity of this dynamic setting is the primary reason for the recent rise in interest in this field. As a result, it is just logical to conduct an in-depth review of the relevant literature in this field. This research aims to summarize the significant AI-Fintech employed in the Philippines, analyze the benefits of applying and adopting AI-Fintech, outline fintech developments, possible risks, and disadvantages, analyze and evaluate possible challenges to the implementation of AI-Fintech in the Philippines, and provide recommendations to strengthen the bridge between academia, industry, and regulators. Finally, it aims to reveal research gaps in AI-driven financial technology.

1 INTRODUCTION

The introduction of technological advancements has had a significant impact on how we live our lives and on traditional methods of doing things, impacting transaction processing and data management. These technological advancements, such as cryptocurrencies, robo-advisors, and peer-to-peer lending, improved customer satisfaction, financial inclusion, and operational efficacy [1]. Complex financial operations brought about by fintech advancements amplify service efficacy [1].

In 2023, 72.2% of Filipinos used financial technology apps, totaling 59.3 million users [2]. Payments and transfers increased by 17.6%, e-wallets by 4.9%, and e-banking by 4.3% [2]. Fintech adoption reached 69.3% in 2022, driven by government support and market demand [2]. Online lending and e-wallets grew significantly [2].

The country's 2023 Fintech Report [3] highlighted 299 fintech firms, with payments leading the sector at 37%. Meanwhile, digital financial services have seen a decline from 27% to 21%, while lending comprises 20%, remittances account for 11%, and e-wallets make up 9% [4].

The most recent fintech report indicates significant growth in the industry, which has enhanced financial inclusion for unbanked Filipinos, supported by regulatory bodies. The Philippines has 441 rural banks, 48 thrift banks, and 46 universal and commercial banks, with total assets amounting to $385.6 billion [5]. Commercial banks dominate the banking sector, representing 92.8% of overall assets [5]. Prominent fintech firms such as CIMB, UNOBank, and GCash lead the electronic payments sector [5], [6].

Digital banking has revolutionized financial services through improved customer engagement and transaction efficiency [7]. The role of artificial

intelligence (AI) is vital in personalizing experiences and managing risks. Union Bank and Bank of the Philippine Islands are at the forefront of AI innovations, enhancing client satisfaction and streamlining operations [7]. Advancements in high-speed communication, data storage, and processing power have made AI implementation practical across various sectors, including healthcare, manufacturing, and finance [8]. Its adaptability has contributed to its widespread adoption in the banking sector [9].

The proliferation of data in the banking sector is expected to drive further AI integration. However, issues like data bias and other challenges can hinder full utilization, affecting customer trust and outcomes [10]. A reliance on external AI solutions can alienate customers, necessitating strategies like audits, transparent evaluations, and customer feedback to effectively address these challenges [11].

This study investigated the Philippines' use of AI-Fintech, how it could contribute to certain SDGs, examined the benefits, risks, and implementation challenges, and provided recommendations for stakeholders to foster innovation. The guiding question investigated whether the country's adoption of AI-driven FinTech can boost financial inclusion and innovation, and further the nation's economic growth.

2 RESEARCH METHOD

To guarantee a systematic review with improved quality control, this study adhered to the guidelines of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [12], which include identifying information sources, selecting studies, collecting data, and establishing eligibility criteria.

The study systematically collected and analyzed data and filtered unreliable publications via Scopus. Eligible papers were identified using specific keywords and reviewed in-depth based on title, abstract, and keywords.

The SLR collected data through manual study searches, screening, and analysis to extract key information on article type, journal, publication year, subject, methods, and outcomes. The inclusion criteria (IC) specified (IC1) original, peer-reviewed English studies (IC2) on factors affecting AI-driven fintech adoption and its economic impact, (IC3) using robust quantitative, qualitative, or mixed-methods.

Data items were selected based on specific criteria to ensure study consistency. Figure 1 presents the systematic literature review process. Out of 308 research publications, the selection process considered variables like title, abstract, and keywords, leading to 81 publications. Ultimately, 25 relevant articles emphasized the practical goals and contextual significance.

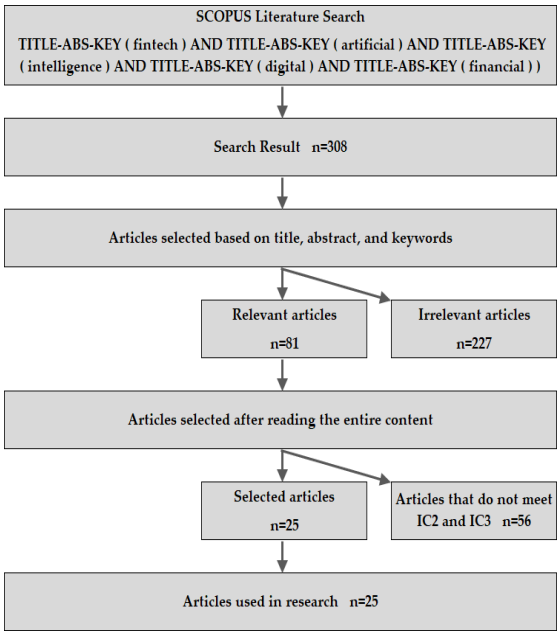

Figure 1: SLR reporting items (PRISMA Adopted).

3 RESULTS

A literature search identified 25 articles published between 2019 and 2025, organized into six groups: AI and fintech applications (15 articles), sustainability and financial inclusion (4 articles), adoption and impact (2 articles), and regulation and policy (4 articles).

Articles were categorized by primary focus, highlighting interests in areas such as financial risk management and robo-advisory services. Key issues include sustainability, financial inclusion, and regulations. A research gap exists on stakeholder effects, requiring further exploration. Table 1 highlights 25 articles on empirical analysis. The +Sig findings highlight the potential benefits and positive impacts of AI-driven fintech on various aspects of finance.

Table 1: Article analysis and synthesis.

No.	Reference	Scope	Method	Results
1	[13]	Analyzes how AI-FinTech transforms banking, focusing on payment systems for efficiency, security, customer experience and sustainability.	Mixed-method	+Sig
2	[14]	Analyzes FinTech and AI's roles in sustainable development, financial inclusion, and social responsibility.	Quantitative	+Sig
3	[15]	Investigates the effects of user characteristics and the human-like characteristics of robo- advisors on loyalty, trust, and financial well-being, aiming to enhance robo-advisory services.	Quantitative	+Sig
4	[16]	Examines fintech regulation's geopolitical impact, contrasting major powers' methods and addresses challenges in digital finance and AI.	Qualitative	+Sig
5	[17]	Examines AI adoption and financial access's role in China's energy sustainability, offering policy recommendations for green finance and responsible AI use.	Quantitative	+Sig
6	[18]	Explores technology adoption in Indian banking, focusing on FinTech innovations' benefits, challenges, and future implications for financial services.	Qualitative	+Sig
7	[19]	Evaluates the efficacy of blockchain and artificial intelligence in financial risk management for compliance and fraud detection.	Quantitative	+Sig
8	[20]	Explores the integration of sustainability in finance and digital accounting, highlighting the revolutionary potential of AI-enabled FinTech, identifying literature gaps, and developing comprehensive sustainability frameworks.	Qualitative	+Sig
9	[21]	Explores enhancing AI- supported Letter of Credit review methods to mitigate assessment risks and optimize checker capacity in trade finance.	Quantitative	+Sig
10	[22]	Develops statistical methods and fuzzy logic to improve long- term management of digital financial assets in Russia, Analyzing- price growth and trade volumes.	Quantitative	+Sig
11	[23]	Analyzes legal challenges of AI-FinTech in Tanzania's finance, offering recommendations for balanced regulation ensuring stability, Consumer protection, and ethics.	Qualitative	+Sig
12	[24]	Analyzes FinTech adoption trends in SMEs, its implications, and potential effects on traditional.	Quantitative	+Sig
13	[25]	Explores opportunities, challenges, and potential of agentic AI in FinTech, proposing a sustainable research agenda.	Qualitative	+Sig
14	[26]	Examines robo-advisory solutions for wealth management, behavioral finance, and investment decision- making, contributing to future research in India.	Qualitative	+Sig
15	[27]	Examines the research on sustainable finance and financial inclusion, focusing on emerging digital financial risks and strategies for promoting secure, inclusive systems.	Qualitative	+Sig
16	[28]	Explores behavioral biases affecting Gen Z investment decisions in India and examines how AI-led digital advisory services can mitigate these biases.	Quantitative	+Sig
17	[29]	Analyzes the relationship between emerging transactions, enhancing accuracy through attention mechanisms.	Quantitative	+Sig
18	[30]	Develops CL- BGAD, a framework for detecting anomalies in bipartite graphs, enhancing security and robustness in AI models.	Quantitative	+Sig
19	[31]	Explores NFT return and volatility statistics, developing predictive models using autoregression and AI to forecast prices based on macroeconom ic factors	Quantitative	+Sig
20	[32]	Aims to create the RR- ABiLSTM chatbot for precise financial query classification, enhancing contextual understanding and improving communication in accounting	Quantitative	+Sig
21	[33]	Aims to create and assess a GAGAN model for effective money laundering detection in bank transactions, enhancing accuracy through attention mechanisms..	Quantitative	+Sig
22	[34]	Examines factors affecting AI neo-banking service quality and their effects on brand experience, trust, and loyalty.	Quantitative	+Sig
23	[35]	Investigates enterprise generative AI's applications in HR management, fintech, and productivity, emphasizing team selection, hiring decisions, and employee satisfaction and performance.	Qualitative	+Sig
24	[36]	Investigates Random Forest's effectiveness in predicting financial distress in BSE firms using financial ratios and corporate governance for improved accuracy.	Quantitative	+Sig
25	[37]	Aims to synthesize knowledge on financial robo-advisor design through a literature review, identifying requirements and providing an implementation framework.	Qualitative	+Sig

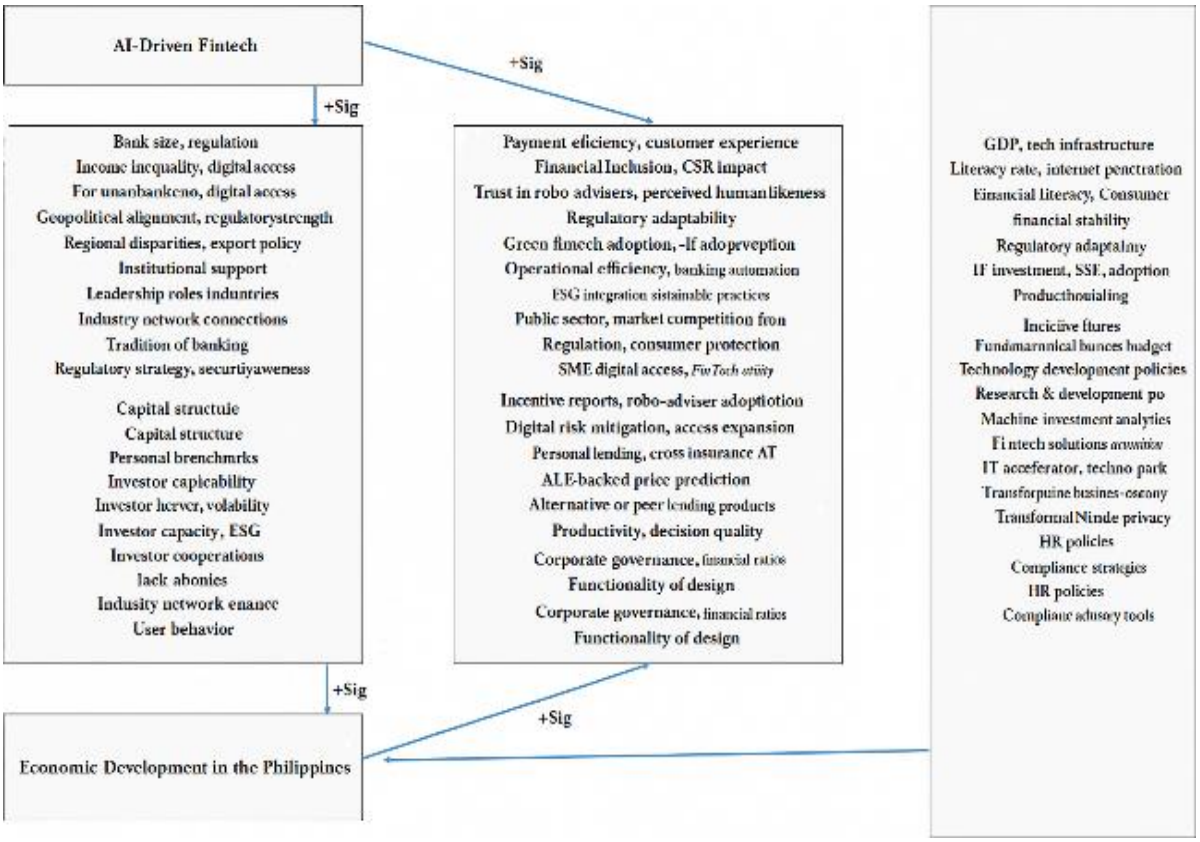

Figure 2: Research conceptual framework.

This research explored the theoretical ideals of the convergence of economic growth, technology, and finance, as rooted in Rogers' innovation diffusion theory [17], and explored the application of AI-driven FinTech in the Philippines, its wide-ranging effects on social and economic landscapes (Fig. 2).

The study also examined how AI-driven FinTech fosters economic growth and provides competitive advantages for businesses, grounded on the resource- based view (RBV) [38]. Additionally, it emphasizes the significance of easily accessible financial services and supports the theory of financial inclusion [39].

This study expands our understanding of the effects of AI-driven FinTech on financial inclusion and economic growth, notably in the underprivileged areas of the country.

Collaborations between traditional financial institutions and the emerging FinTech industry expand FinTech's ability to engage with the public and end-users, thereby helping to attain SDGs.

4 CONCLUSIONS

The Philippine fintech scene is in constant flux, driven by beneficial policies, inclusive finance programs, digital advancements, contactless payment solutions, and the integration of digital currency. The financial technology space remains strong, adapting to varied demands. With a solid standardized framework, it is ready for expansion, transformation, and inclusive finance.

The study looked at how AI-powered FinTech affected the nation, focusing on economic expansion, inclusive finance, transformation, strategic direction, and service quality enhancement. The outcomes can guide organizational direction and framework development, highlight growth prospects, and streamline financial processes. Possible approaches include investing in digital infrastructure, financial literacy programs, FinTech innovation centers, and standardized frameworks, thereby fostering economic growth and an entrepreneurial ecosystem.

There have been numerous studies on the impact of AI-FinTech on sustainable development and how it can accelerate the SDGs from various directions, but very few have examined AI-FinTech implementation initiatives and their effectiveness in furthering the SDGs. By providing resources and tools to deliver environmental and societal outcomes and encouraging inclusive finance, fintech companies help accomplish the SDGs. Therefore, companies' financial technology might be regarded as a stimulating way to create and deliver transformation.

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