

Dynamics and Growth Projections of Fintech Sharia Lending (Sharia and Conventional) in Indonesia: Spatial-Temporal Analysis and Policy Implications

Dinamika dan Proyeksi Pertumbuhan Fintech Syariah Lending (Syariah dan Konvensional) di Indonesia: Analisis Spasial- Temporal dan Implikasi Kebijakan

Sulhan¹, Moh. Hamzah²

^{1,2}*Sekolah Tinggi Agama Islam Az-Zain Sampang*
¹*sulhans789@gmail.com, ²mohhamzah262@gmail.com*

Abstract : *Fintech lending in Indonesia is experiencing rapid growth, but there are significant variations in growth dynamics between Java, outside Java, and overseas segments. This study aims to explore and project the growth patterns of Islamic and conventional fintech using spatial-temporal analysis. Quantitative research methods were applied with data analysis of the number of lender accounts and funds disbursed from January 2022 to May 2024. Results show that Java experienced market consolidation with an increase in disbursed funds, while outside Java showed moderate growth, and the overseas segment experienced high fluctuations but with significant expansion potential. Policy implications include the need for increased penetration outside Java, development of a cross-border regulatory framework, and incentives for fintech innovation. The findings highlight the importance of diversified policies to support inclusive growth and stability of the national financial system.*

Keywords: *Fintech lending, Spatial-temporal growth, Islamic fintech, Financial inclusion, Regulatory policy*

Abstrak : Fintech lending di Indonesia mengalami pertumbuhan pesat, namun terdapat variasi signifikan dalam dinamika pertumbuhan antara wilayah Jawa, luar Jawa, dan segmen luar negeri. Penelitian ini bertujuan untuk mengeksplorasi dan memproyeksikan pola pertumbuhan fintech syariah dan konvensional menggunakan analisis spasial-temporal. Metode penelitian kuantitatif diterapkan dengan analisis data jumlah rekening pemberi pinjaman dan dana yang disalurkan dari Januari 2022 hingga Mei 2024. Hasil menunjukkan bahwa Jawa mengalami konsolidasi pasar dengan peningkatan dana yang disalurkan, sedangkan luar Jawa menunjukkan pertumbuhan moderat, dan segmen luar negeri mengalami fluktuasi tinggi namun dengan potensi ekspansi yang signifikan. Implikasi kebijakan mencakup perlunya peningkatan penetrasi di luar Jawa, pengembangan kerangka regulasi lintas batas, dan insentif untuk inovasi fintech. Temuan ini menyoroti pentingnya kebijakan yang terdiversifikasi untuk mendukung pertumbuhan inklusif dan stabilitas sistem keuangan nasional.

Kata Kunci: Fintech lending, Pertumbuhan spasial-temporal, Fintech syariah, Inklusi keuangan, Kebijakan regulasi

I. INTRODUCTION

Fintech lending, especially in the sharia-compliant sector, has experienced significant growth in Indonesia due to its adherence to Islamic financial principles, promoting equity-based financing and partnerships while avoiding interest [1]. The study on Islamic fintech in Indonesia highlights the importance

of a robust policy and regulatory framework to support this emerging sector's development [4]. Additionally, research on Islamic banks in Indonesia emphasizes their intermediation role in financing, contributing to economic growth and poverty alleviation at the district level [2]. Furthermore, a comparative analysis of Islamic and conventional banks in Indonesia reveals that Islamic banks exhibit a higher stability propensity in stable economic regimes, underscoring their unique dynamics in the banking industry [3]. These findings collectively underscore the strategic significance of fintech sharia lending in Indonesia's financial inclusion efforts and digital economy development, offering a comprehensive perspective on the evolving fintech lending landscape in the country.

The rise of fintech lending in Indonesia has indeed shown a positive trend, impacting various regions differently. Research indicates that the entry of fintech lenders increases bank competition, leading to greater market power and efficiency [4][5]. Additionally, fintech peer-to-peer (P2P) lending plays a crucial role in promoting Sharia financial inclusion and community well-being across different provinces in Indonesia [6]. However, the development of fintech lending has been found to erode the efficiency of Islamic local banks, especially in regions where these banks operate, emphasizing the need for policymakers to monitor fintech development to maintain financial service stability [7]. Moreover, the transition from traditional banking services to online lending has been influenced by various factors such as switching costs, low financial literacy, and the appeal of easy digital onboarding and quick loan processing, impacting users' decisions across different regions in Indonesia [8].

While the growth of fintech lending in Indonesia shows a positive trend, there are significant variations in the growth pattern across different regions [9]. The Java region, as the economic center, shows a decline in the number of lender accounts but a substantial increase in the amount of funds disbursed. In contrast, the regions outside Java and the overseas segment show different growth trends, with high fluctuations but with significant growth potential [10]. The specific issues addressed by this study are how regional variations in fintech lending growth can be explained and projected, and the policy implications needed to optimize this growth.

Studies on fintech lending have grown rapidly in recent years, focusing on various aspects including technology adoption, regulation, and economic impact. This research explores the transformative impact of fintech on banking, finance, and insurance, emphasizing technological advancements, the regulatory environment, and user adoption patterns, aligning with the growing study of fintech lending [11][12][13]. Additionally, research has explored the surge in popularity of fintech lending practices in the Indian financial sector, emphasizing the importance of effective risk management and responsible lending to shape a more ethical and sustainable fintech ecosystem [14]. Moreover, research on fintech adoption in developing countries has underscored the factors influencing uptake, including economic conditions, technological infrastructure, and regulatory environment, while also highlighting potential benefits such as increased financial inclusion and enhanced economic opportunities [15].

While there is a wealth of research on fintech lending, most studies still focus on technological and regulatory aspects without paying attention to significant regional variations. Existing research tends to ignore the differences in growth between Java, outside Java, and overseas, as well as the specific factors that influence the growth dynamics in each region. In addition, studies on Islamic fintech lending are relatively rare compared to conventional fintech lending, even though Islamic fintech has great potential in Indonesia. Therefore, this study aims to fill the gap in the literature by exploring the spatial-temporal dynamics of Islamic and conventional fintech lending in Indonesia, as well as providing in-depth comparative analysis and growth projections.

This research makes a significant new contribution by combining spatial-temporal analysis and comparative analysis approaches to explore the dynamics of fintech lending growth in Indonesia. It also emphasizes the importance of diversified and adaptive policies to support sustainable and inclusive growth across Indonesia. The findings of this research are expected to serve as a basis for developing more effective policies in promoting financial inclusion, enhancing consumer protection, and maintaining the stability of the national financial system in the digital era.

II. RESEARCH METHODS

This research design uses a quantitative approach with spatial-temporal analysis to explore the dynamics and growth projections of Islamic and conventional fintech lending in Indonesia. This approach allows in-depth analysis of variations in growth across regions. This study also applied comparative analysis methods to assess differences and similarities in growth patterns across Java, outside Java, and overseas regions.

The research variables analyzed include the number of lender accounts and the amount of funds disbursed in billion Rupiah. These variables are monitored over the period from January 2022 to May 2024. In this context, the number of lender accounts and the amount of funds disbursed are used as indicators of fintech lending market activity and growth, respectively.

The data collection technique used is secondary data collection from financial reports and statistics of the fintech lending industry in Indonesia. The data is sourced from the Monthly Report of Information Technology-Based Money Lending and Borrowing Service Providers submitted through the Integrated Reporting Information System (SILARAS) and processed by the Directorate of IKNB Statistics and Information. The data presented includes sharia fintech data.

The data analysis technique involves several stages. First, descriptive analysis is conducted to describe the dynamics of fintech lending growth in each region. Second, comparative analysis is used to assess differences and similarities in growth patterns between regions. The results of this analysis are then used to develop policy recommendations that can support sustainable and inclusive growth across Indonesia.

III. RESULTS AND DISCUSSION

Tables 1,2 and 3 provide a visual summary of the growth dynamics of fintech lending in Indonesia, regional differences, and key areas for policy development. The analysis shows that while Java still dominates in terms of volume, there is significant growth potential in regions outside Java and overseas that can be encouraged through appropriate policies.

Table 1: Descriptive analysis of fintech lending growth in Indonesia

Region	Indicator	Jan-2022	May-2023	May- 2024	Trends
Java	Number of Accounts	8,540,460	8,191,061	5,151,423	Declining
	Funds (billion IDR)	6,487.22	13,931.95	19,618.46	Increasing
Outside Java	Number of Accounts	95,369	61,748	136,303	Fluctuating, increasing trend
	Funds (billion IDR)	204.94	297.78	340.23	Moderate increase
Overseas	Number of Accounts	1,820,750	2,688,167	2,336,634	Fluctuating, tending to increase
	Funds (billion IDR)	4,140.22	5,646.99	5,560.82	Increasing

Table 2: omparative Analysis

Aspects	Java	Outside Java	Overseas
Market Dominance	High	Low	Medium
Funds Growth	Stable, high	Moderate	significant
Account Fluctuation	High	Moderate	High
Growth Potential	Stable	High	High

Table 3: Policy Implication Recommendations

Policy Area	Recommendation
Access Equity	Focus on increasing penetration outside Java
International Regulation	Development of regulatory framework for cross-border transactions
System Stability	Policies to maintain stable growth in Java and encourage growth in other regions
Consumer Protection	Strengthening lender protection regulations
Innovation	Incentives for new product and service development, especially outside Java

Spatial-temporal analysis of fintech lending dynamics in Indonesia reveals significantly different growth patterns across regions. Java, as the epicenter of economic activity, showed a downward trend in the number of lender accounts from 8,540,460 in January 2022 to 5,151,423 in May 2024. However, paradoxically, the amount of funds disbursed in this region experienced a substantial increase from IDR 6,487.22 billion to IDR 19,618.46 billion over the same period. This phenomenon indicates market consolidation and increased efficiency in fund allocation in the Java region.

Meanwhile, the region outside Java showed a moderate but consistent growth trend. The number of lender accounts increased from 95,369 to 136,303, accompanied by an increase in funds disbursed from IDR 204.94 billion to IDR 340.23 billion. These findings highlight the significant potential for expansion outside Java, which can be optimized through well-targeted policies.

Interestingly, the overseas segment shows the most volatile yet potential dynamics. There were fluctuations in the number of accounts from 1,820,750 at the beginning of the period to 2,336,634 at the end of the period, with a peak of 2,688,167 in May 2023. The amount of funds disbursed also increased significantly from IDR 4,140.22 billion to IDR 5,560.82 billion. This indicates strong interest from foreign investors in Indonesia's fintech lending market, as well as the need for a robust regulatory framework for cross-border transactions.

Comparative analysis reveals that while Java still dominates in terms of transaction volume, outside Java and overseas show higher growth potential. This finding has implications for the urgency of policy reorientation to encourage equitable access and growth outside Java, as well as the optimization of foreign investment potential while taking into account the stability of the national financial system.

Growth projections based on identified trends indicate the possibility of market stabilization in Java, moderate growth acceleration outside Java, and significant expansion potential from the overseas segment. These findings collectively highlight the importance of a diversified and adaptive policy approach to holistically optimize the growth potential of fintech lending in Indonesia, while taking into account aspects of equitable access, consumer protection, and national financial system stability.

Discussion

The results of this study reveal complex dynamics in the development of fintech lending in Indonesia, showing asymmetric growth patterns between regions. The phenomenon of market consolidation in Java, which is characterized by a decrease in the number of accounts but an increase in the volume of funds, In addition, a study by Yin et al. (2021) examined the impact of the fintech era on the stability of China's banking sector, revealing that the second wave of fintech development led to a reduction in non-performing loans and improved financial stability [16]. This may reflect innovative adaptations to more stringent regulation in the context of the global fintech evolution [17][18][19].

The diffusion of financial innovations in Indonesia, particularly in non-urban areas, is in line with Rogers' theory but at a slower rate than expected [20]. This contrasts with Frost's findings in other developing countries, where fintech adoption in rural areas is faster [21]. Indonesia's unique infrastructure and financial literacy factors, highlighted by Iman's research on the national fintech ecosystem, likely contribute to this difference [21]. The Sustainable Development Goals emphasize industry, innovation, and infrastructure in Indonesia, with fintech playing an important role in the transition to a cashless society [22]. Efforts to improve financial literacy and communication strategies, as discussed in various studies, have the potential to accelerate the spread of financial innovation in Indonesia, especially outside Java.

Interestingly, high volatility in the offshore segment challenges the assumption of stability of foreign investment in fintech [23]. These fluctuations may reflect the sensitivity of global investors to changes in Indonesian regulation and macroeconomic conditions, a dynamic that has not been fully explored in the international fintech literature. These findings open a new perspective on the interaction between domestic fintech and global capital flows, an area that warrants further research.

The growth projections generated from the temporal analysis suggest the potential for greater inter-regional divergence in the future. This challenges the assumption of convergence of financial markets often associated with digitalization, as argued by Goldstein et al. [24][25]. Instead, the findings support the "path dependence" theory of financial system development proposed by Acemoglu and Robinson (2012) [26], but in a more fintech-specific context.

The policy implications identified, especially the need for diversified and adaptive regulation, resonate with Zetzsche et al.'s [27] argument about the importance of "smart regulation" in fintech. (2017) argument on the importance of "smart regulation" in fintech. However, the findings of this study emphasize the need for a more granular and area-specific approach, going beyond the generic policy recommendations dominant in the current literature.

Overall, this research presents a new perspective on the spatial-temporal dynamics of fintech lending in a developing country with a complex geography like Indonesia. The findings not only enrich the theoretical understanding of fintech evolution in emergent markets, but also highlight the need for a more nuanced analytical framework to understand the interaction between financial innovation, economic geography, and regulatory policy. Further research is needed to explore the causal mechanisms behind the identified patterns, as well as to test the generalizability of these findings in other emerging market contexts.

IV. CONCLUSION

This study successfully reveals the spatial-temporal dynamics of fintech lending in Indonesia, both sharia and conventional. Based on data analysis from January 2022 to May 2024, it was found that the Java region, despite experiencing a decline in the number of lender accounts, showed a significant increase in the amount of funds disbursed, reflecting market consolidation and improved fund allocation efficiency. In contrast, the Outer Java region showed moderate and consistent growth in the number of accounts and funds disbursed, signaling significant potential for expansion. The overseas segment, despite showing high fluctuations, showed strong interest from foreign investors with a significant increase in the amount of funds disbursed. These findings highlight the importance of diversified and adaptive policies to promote inclusive growth across all regions of Indonesia, increase financial inclusion, and maintain the stability of the national financial system in the digital era.

Based on the findings of this study, it is recommended that the government and regulatory authorities increase the focus on increasing fintech lending penetration in areas outside Java through better infrastructure and comprehensive financial literacy programs. The development of a regulatory framework that supports cross-border transactions is also needed to optimize the potential for foreign investment. In addition, consumer protection policies should be strengthened to maintain lender confidence and security. Incentives for fintech product and service innovation, especially Shariah-based ones, need to be improved to support sustainable and inclusive growth. Further research is needed to explore the causal mechanisms behind these growth dynamics and to test the generalizability of these findings in other emerging market contexts.

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