ANALYSIS OF TEMBILAHAN PUBLIC UNDERSTANDING OF FINANCIAL TECHNOLOGY AND HOW FINANCIAL TECHNOLOGY-BASED INSURANCE SERVICES WORK

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Article Info

Abstract

The development of financial technology (fintech) has driven innovation in financial services, including fintech-based insurance services (InsurTech). However, utilization of these services still faces obstacles in the form of low public understanding, particularly in non-metropolitan areas. This study aims to analyze the Tembilahan community's understanding of fintech and how fintech-based insurance services work, and to identify the factors influencing it. This study used a qualitative method with a descriptive approach. Data were obtained through in-depth interviews with Tembilahan residents selected using purposive sampling. The results indicate that the community generally only understands fintech as a digital payment service and does not yet understand the mechanisms. Service digital insurance. Low digital financial literacy, limited information, and perceived risks regarding data security and the claims process are the main factors contributing to this low understanding. However, after being provided with an explanation, the public showed a more positive attitude toward digital insurance services. Therefore, increasing digital financial literacy and education is necessary to encourage optimal understanding and utilization of insurance fintech.

1. INTRODUCTION
Background Proglem

The development of information and communication technology has brought significant changes to the economic and financial systems. The digitalization of payment systems has become a crucial transformation in the development of the global financial sector, including in Indonesia, as technology enables people to conduct transactions quickly, easily, and securely without relying on conventional methods like cash (Fadhilah, 2025)[1].In this digital era, access to financial services is no longer limited by the physical presence of financial institutions, but can be facilitated through technological devices such as mobile banking, digital wallets, and peer-to-peer lending platforms.

Due to this digitalization progress, financial technology (fintech) has emerged which is a form of digital technology-based financial services to increase efficiency and access to financial services for the public (Taftazani et al., 2025)[2]. Fintech is an innovation in the financial services industry that utilizes the use of technology (Tobing & Adrian, 2021)[3]. Fintech encompasses a variety of technological innovations that simplify, speed up, and reduce costs in various financial activities, both for individuals, businesses, and financial institutions (Ulfah et al., 2024)[4]. The development of FinTech in Indonesia has been driven by increasing internet penetration and the use of mobile devices, which allows people even in remote areas to access financial services (Aswirah, Arfah, & Alam, 2024)[5].

In addition, similar digital innovations are starting to be implemented in the insurance sector through technology-based services (InsurTech), which have the potential to increase financial inclusion in this sector, although specific literature on this is lacking. InsurTechin Indonesia is still limited. InsurtechIt offers solutions to various problems in the conventional insurance industry, such as complicated administrative processes, lack of transparency, and lengthy claims processing times. Through the use of digital technology, insurance services are expected to become simpler, more transparent, and more accessible to the wider public. Therefore, insurance fintech plays a strategic role in improving public financial protection.

However, the development of insurance fintech has not been fully matched by public readiness and understanding. Financial Services Authority (2021) Research shows that Indonesians' digital financial literacy remains moderate, while literacy regarding non-bank financial products, including digital insurance, is relatively low. This situation results in the public not fully understanding the concept of fintech, the mechanisms of digital insurance services, and the benefits and risks inherent in these services[6].

Based on previous research, low public understanding of financial technology (FinTech) and fintech-based insurance services is a widespread phenomenon across various regions. Pratama and Hwihanus (2025) Research shows that financial literacy significantly influences people's interest in using digital financial services [7]. Furthermore, people's experience with traditional financial services influences how they understand new digital products, while their ability to adapt to digital services such as e-wallets, online payments, and digital insurance determines how effectively they utilize these technologies. People with low digital literacy tend to only know fintech as a digital payment tool and do not fully understand the mechanisms of digital financial services, including the benefits and risks inherent in these services.

Indonesians' understanding of digital financial services, including fintech payments and digital insurance, remains limited due to low financial literacy. Yulandari and Astuti (2023) stated that financial literacy and financial technology payments have a positive and significant impact on financial inclusion in Indonesia[8]. This research underscores the need for further education to enable the public to optimally utilize digital financial services.

Furthermore, research by Fadhilah (2025) stated that, in terms of demographics, significant differences were found between users from urban and rural areas[1]. Urban users have better access to and understanding of digital payment systems, while many in rural areas still lack access to these services due to limited internet infrastructure and low levels of technological socialization.

Research on InsurTech in Indonesia shows that although digital insurance technology has great potential to expand access to insurance services, there is still low awareness and participation in insurance in Indonesia (Lubis, Nurbaiti, & Nurwani, 2025)[9],This reflects the public's lack of understanding of the mechanisms and benefits of technology-based insurance services. Strategies to accelerate adoption InsurTechIt is necessary to

increase public literacy and participation in digital insurance services so that trust in data security and the claims process can be built.

Based on previous research, public understanding of digital financial services, including fintech and technology-based insurance, remains limited due to low financial literacy, limited experience with traditional services, and varying digital adaptability. Disparities in access between urban and rural areas further impact the level of financial technology adoption. These findings underscore the need for education, outreach, and strategies to accelerate the adoption of digital insurance services to optimally understand the mechanisms, benefits, and risks of technology-based financial services and build trust in data security and the claims process.

Based on preliminary research conducted among the Tembilahan community, it was found that most respondents still understand insurance conventionally and are unfamiliar with the mechanisms of fintech-based insurance services. The community also expressed doubts about data security and the clarity of the claims process. Therefore, this research is crucial to analyze the Tembilahan community's understanding of fintech and how fintech-based insurance services work.

Problem Formulation

Based on the background that has been described, the problem formulation in this research is as follows:
1. How do the Tembilahan community understand the term fintech?
2. How does the public understand how financial technology-based insurance services work?
3. What factors influence the low public understanding of insurance fintech?

Research purposes

This research aims to:
1. Analyzing the Tembilahan community's understanding of fintech.
2. Knowing the public's understanding of the mechanismservicedigital insurance.
3. Identifying the factors causing low insurance fintech literacy.

2. LIBRARY REVIEW

The concept of Financial Technology (Fintech))

The development of digital technology has spurred innovation in the financial services sector, known as financial technology, or fintech. Fintech is a form of integration between technology and financial services that aims to increase the efficiency, effectiveness, and accessibility of financial services for the wider community. Siburian et al. (2024) stated that fintech not only introduces new business models, but also expands public access to financial services, increases cost efficiency, and strengthens transaction security, including in digital insurance services [10].

In Indonesia, fintech is growing rapidly along with the increasing use of the internet and digital devices. Ulfah et al. (2024) stated that fintech services cover various sectors, such as digital payments, peer-to-peer (P2P) lending, crowdfunding, personal financial management, digital investment, insurtech (insurance technology), and blockchain and cryptocurrency[4]. The presence of fintech is expected to encourage financial inclusion, especially for communities that are not yet covered by conventional financial services.

However, the rapid development of fintech is not always accompanied by adequate public understanding. Many people use fintech services without understanding the concepts, mechanisms, and inherent risks. This situation demonstrates that the use of financial technology depends not only on the availability of services but also on the public's level of digital financial literacy.

Digital Insurance and InsurTech

Digital insurance or insurtech is a form of fintech innovation that focuses on the insurance sector. Setiawan et al. (2024) insurtech Combining information technology with insurance services allows processes such as registration, premium payments, and claims settlements to be conducted online, thereby increasing

accessibility and efficiency for consumers [11]. With a digital system, insurance services are expected to be more transparent, efficient, and accessible to the public.

According to Artanti and Napitupulu (2025) besides providing benefits for insurance companies, Insurtechalso has a positive impact on consumers [12]. Now, people can easily access insurance services through digital applications without having to go through complicated administrative processes. Furthermore, this technology also enables needs-based insurance (online-demand insurance), where customers can choose coverage according to their needs, without having to pay high premiums for services they don't need. Thus,Insurtechplay a role in increasing financial inclusivity, enabling more people to obtain insurance coverage that suits their circumstances."

However, the implementation ofinsurtechalso faces various challenges, especially related to public trust. Irfan Hs and Thoyyibah (2025) emphasized that the success of digitalization does not only depend on technological development, but also on user readiness and understanding. Therefore, public understanding is a key factor in the success of implementation insurtech[13].

Digital Financial Literacy

Digital Financial Literacy (DFL) or Digital Financial Literacy is knowledge about financial service activities or payment methods using technology that is carried out digitally meNyala (2023) [14]. This literacy includes an understanding of digital financial terms, transaction mechanisms, consumer rights and obligations, and the risks that may arise from using digital financial services.

In line with this, financial inclusion plays a crucial role in driving economic growth, improving public welfare, and reducing social inequality. Financial inclusion refers to efforts to expand public access to financial services by addressing both cost and non-cost barriers Farhansyah and Amna (2025) [15]. Therefore, digital financial literacy is a key factor in increasing financial inclusion, because the public's ability to understand and use digital financial services appropriately will encourage increased access, use, and utilization of formal financial services.

Public Understanding of Fintech and Digital Insurance

Public understanding of fintech encompasses the definition, types of services, how they work, and the benefits and risks of digital financial services. In Indonesia, some people still only understand fintech as a digital payment service and online loans, while understanding other fintech services, including digital insurance, remains low. Public understanding of fintech also varies by region. In non-metropolitan areas, understanding tends to be lower than in urban areas. Fadhilah (2025) stated that minimal socialization and limited access to information are the main causes of low fintech literacy in the regions[1].

Digital insurance or InsurTech is a form of fintech innovation that allows the registration process, premium payments, and claims disbursement to be carried out online, thereby increasing accessibility and efficiency for consumers (Setiawan et al., 2024)[11].

This aligns with the situation in the Tembilahan community, which still relies on information from its local community and has not received much formal education about fintech services or digital insurance. As a result, most people still understand insurance conventionally and are unfamiliar with the mechanisms of fintech-based services, raising doubts about data security and the clarity of the claims process.

This condition indicates that the digital financial literacy of the Tembilahan community is still limited. Their understanding of fintech and InsurTech This has resulted in the public's inability to optimally utilize digital financial services, including understanding the benefits, risks, and how these products work. Therefore, education, outreach, and increased digital financial literacy are crucial to enable the public to use fintech and digital insurance services with confidence and security.

Relevant Previous Research

Several previous studies are important references in this research regarding financial literacy, fintech, andInsurTech in Indonesia. Pratama and Hwihanus (2025) found that financial literacy influences people's interest

in using digital financial services, while experience with traditional services and digital adaptability determine how effectively people utilize these services[7].

Yulandari and Astuti (2023) stated that financial literacy and the use of financial technology payments have a positive and significant impact on financial inclusion, thus emphasizing the need for education so that the public can utilize digital services optimally[8]. Fadhilah (2025) added that differences in access and understanding of digital financial services emerged between urban and rural areas, which were influenced by infrastructure and technological socialization[1].

Regarding InsurTech, Lubis, Nurbaiti, and Nurwani (2025) This study shows that public awareness and participation in digital insurance remains low[9]. This study emphasizes the need for strategies to accelerate adoption through education, outreach, and increased literacy to ensure the public understands the mechanisms, benefits, and risks of digital insurance services and builds trust in data security and the claims process.

Based on previous research, it can be concluded that the public's understanding of fintech services and InsurTech remains a relevant issue and requires further study. Financial literacy, experience with traditional services, digital adaptability, demographics, and education and outreach are important factors influencing the public's understanding and adoption of digital financial services, including technology-based insurance.

Research framework

The conceptual framework in this research was developed to explain the researcher's thought process in analyzing public understanding of fintech and fintech-based insurance services. The development of digital technology has driven the emergence of fintech as a financial service innovation. However, the utilization of fintech insurance is highly dependent on the public's level of understanding.

Public understanding is influenced by several key factors, namely digital financial literacy, access to financial information, and perceptions of the risks and security of digital services. Digital financial literacy plays a crucial role in helping the public understand fintech terms, how digital insurance works, and the benefits and risks of these services. Limited access to information makes it difficult for the public to acquire adequate knowledge about fintech insurance.

The understanding formed will influence public attitudes and trust levels toward fintech-based insurance services. A good public understanding will increase trust and interest in fintech insurance. Conversely, a lack of understanding will lead to doubt and resistance to these services. A qualitative approach was used to explore the relationship between these factors in depth, based on the experiences of the Tembilahan community.

Figure 1. Research Framework

Proposial Study

Based on theoretical studies, previous research results, and initial findings through interviews with the community in Tembilahan, the hypothesis in this study is formulated as follows:

1. The Tembilahan community's understanding of financial technology (fintech) and financial technology-based insurance services is still relatively low.
2. Low digital financial literacy and limited access to information contribute to the public's low understanding of how financial technology-based insurance services work.
3. The level of public understanding of insurance fintech influences public attitudes, interest, and trust in using financial technology-based insurance services.

3. RESEARCH METHODS

Types and Approaches of Research

This study uses a qualitative research method with a descriptive approach. The qualitative approach was chosen because this study aims to deeply understand the public's understanding, perceptions, and experiences regarding financial technology (fintech) and how fintech-based insurance services work. According to UNESA (2024) Qualitative methodology focuses on research approaches that aim to explore and understand the meaning of human experiences, social interactions, or specific phenomena[16]. This research typically uses non-numerical data such as interviews, observations, documents, or field notes.

A descriptive approach was used to systematically and factually describe the Tembilahan community's understanding of fintech and digital insurance as it exists on the ground, without manipulating the research variables. This study did not aim to statistically test causal relationships, but rather to obtain an in-depth picture based on interview results.

Research Location and Subjects

This research was conducted in Tembilahan District, Indragiri Hilir Regency. The research location was chosen based on the consideration that Tembilahan is a non-metropolitan area with a growing level of digital technology utilization, but not yet fully accompanied by an increase in the community's digital financial literacy, particularly regarding fintech and digital insurance.

The research subjects were the Tembilahan community, selected using purposive sampling. The purposive sampling technique was used because the researchers established specific criteria for selecting informants, namely communities that:
1. Have used digital financial services (e.g. digital wallets),
2. Have you ever heard the term insurance, and
3. Willing to provide information through interviews.

The selection of informants was carried out to obtain data that was relevant and in accordance with the research objectives.

Data Collection Techniques

The primary data collection technique in this study was in-depth interviews. Interviews were conducted directly with Tembilahan residents using a semi-structured interview guide. This interview guide allowed researchers to gather information more broadly and in-depth while also giving informants the freedom to express their views.

Interview questions focused on several main aspects, namely:
1. Public understanding of the term fintech,
2. Public knowledge regarding types of fintech services,
3. Public understanding of how financial technology-based insurance services work,
4. Public perception of the risks and security of digital insurance services, and
5. Public attitudes after receiving an explanation regarding fintech and digital insurance.

In addition to interviews, supporting data was obtained through documentation studies, namely by reviewing Financial Services Authority reports, books, and scientific journals relevant to the research topic.

Data Analysis Techniques

Data analysis in this study was carried out using a qualitative data analysis model which includes three stages, namely data reduction, data presentation, and drawing conclusions.

1. Data Reduction

Interview data obtained from informants were selected and simplified by focusing on information relevant to the research objectives, particularly regarding the understanding of fintech and digital insurance.

2. Data Presentation

The reduced data is then presented in a systematic, descriptive narrative for easy understanding. The data is presented by grouping the findings based on specific themes.

3. Drawing Conclusions

Conclusions are drawn based on patterns that emerge from the interview results and are linked to previous theories and research.

Data Validity

To ensure the validity of the data, this study used source triangulation techniques. Triangulation was carried out by comparing the interview results.betweeninformants and comparing interview results with previous theories and research. This step was taken to ensure that the data obtained was valid and academically accountable.

4. RESEARCH RESULTS AND DISCUSSION

Public Understanding of the Term Fintech

Interview results indicate that most Tembilahan residents are familiar with the term fintech only in terms of digital payment services such as e-wallets and interbank transfers, as well as online loans. Their knowledge of other forms of fintech, such as peer-to-peer lending, crowdfunding, digital financial management, or InsurTech, remains very limited. This is due to low digital financial literacy and minimal publicity about fintech services in non-metropolitan areas. Several respondents admitted to only learning the term fintech when using mobile banking or digital wallets, but did not fully understand how it works or its benefits.

Furthermore, differences in understanding are also evident based on age and education level. Younger people or those with secondary or higher education tend to be more familiar with the term fintech than older age groups. This indicates that digital literacy and exposure to technology significantly influence people's understanding of modern financial services. Overall, the majority of Tembilahan residents still require formal education and outreach to fully understand fintech.

Public Understanding of How Digital Insurance Works

Interview results indicate that Tembilahan residents' understanding of fintech-based insurance services remains very limited. Most informants only understand insurance in its conventional form, namely through agents and face-to-face. They were unaware that insurance services can now be accessed digitally through fintech apps or platforms.

When asked about the registration process, premium payments, and digital insurance claims, most informants were unable to explain the mechanisms. This indicates a lack of public understanding not only of fintech terms but also of the technical processes of digital insurance services. This aligns with the findings of Setiawan et al. (2024)[11] and Lubis et al. (2025)[9].

Risk Perception and Security of Digital Insurance Services

Perceptions of risk and security were key issues emerging from the interviews. Most informants expressed concerns about the security of their personal data and the clarity of the claims process when using

digital insurance. They worried about their data being misused and claims not being processed properly due to the lack of face-to-face interaction.

These concerns indicate that low public understanding also impacts trust in digital insurance services. According to the Financial Services Authority (2021), a lack of digital financial literacy can increase public risk perceptions regarding technology-based financial services[6].

Public Attitude After Receiving an Explanation

Interestingly, interview results also revealed a shift in public attitudes after being explained about fintech and how digital insurance works. After researchers explained it simply and in easy-to-understand language, most informants reported beginning to understand the concept of fintech and expressed interest in digital insurance services.

Informants reported that digital insurance services are considered more practical and efficient if properly understood. This finding suggests that targeted education can increase public understanding and positive attitudes toward fintech insurance. These results align with OJK findings (2021)[6], which emphasize the importance of digital financial education.

Discussion

The results of this study indicate that the Tembilahan community's low understanding of fintech and digital insurance is influenced by low digital financial literacy, limited information, and risk perception. These findings reinforce previous research conducted by Pratama and Hwihanus (2025)[7], Yulandari and Astuti (2023)[8], Fadhilah (2025)[1], and Lubis, Nurbaiti, and Nurwani (2025)[9], which demonstrated that financial literacy, experience with traditional services, and access to information play a significant role in the adoption of digital financial services and technology-based insurance.

However, this study also provides an empirical contribution by demonstrating that communities in non-metropolitan areas have the potential to embrace fintech insurance innovations if provided with the right education. Therefore, improving digital financial literacy is key to encouraging the use of fintech insurance in the Tembilahan community.

5. CONCLUSION

This study concludes that the Tembilahan community's understanding of financial technology (fintech) and fintech-based insurance services remains low. They generally only recognize fintech as a digital payment tool and lack a clear understanding of the mechanisms and benefits of digital insurance. This low understanding is influenced by limited digital financial literacy, lack of access to information, and concerns about data security and the claims process.

Nevertheless, this research shows that the public has the potential to accept fintech insurance services if provided with the right education. Increasing literacy and outreach are key to building public understanding and trust in fintech-based insurance.

6. SUGGESTION

1. Regional governments and the Financial Services Authority are advised to enhance sustainable digital financial literacy programs, particularly those related to financial technology and financial technology-based insurance services, using approaches that are easily understood by the public.
2. Financial institutions and fintech service providers are expected to be more active in providing direct outreach to the public, especially in non-metropolitan areas like Tembilahan, regarding the workings, benefits, and risks of digital insurance services.
3. The public is expected to increase awareness by seeking and learning accurate information regarding fintech and digital insurance services so they can utilize technology-based financial services safely and optimally.
4. Further research is recommended to expand the area and number of informants and use more diverse research methods to obtain more comprehensive results.

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