

Determinants of Online Loan Services Among Microentrepreneurs in Tagbina, Surigao Del Sur, Philippines

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ABSTRACT

The growing reliance on online loan services as an alternative source of credit has increased the need to understand the factors influencing their adoption among microentrepreneurs, particularly in rural areas with limited access to formal financial institutions. This study examined the determinants of online loan service adoption among microentrepreneurs in Tagbina, Surigao del Sur. Specifically, it assessed the respondents' demographic profile, level of online loan service availment, technological, organizational, and environmental determinants, significant differences across profile variables, key predictors of adoption, and the development of a policy framework.

A quantitative descriptive-correlational research design was employed involving 298 microentrepreneurs in Tagbina, Surigao del Sur. Data were gathered using a structured survey questionnaire and analyzed using descriptive and inferential statistical tools. Results revealed that the overall level of online loan service availment was low despite technological, organizational, and environmental determinants being perceived as influential. Among the determinants, compatibility, financial resources, and perceived usefulness emerged as significant predictors of adoption. Significant differences in availment were found according to sex and employment status, whereas age showed no significant influence. Based on these findings, a Digital Financial Inclusion Enhancement Framework was proposed to improve platform accessibility, strengthen digital and financial literacy, enhance consumer protection, and reinforce institutional support mechanisms. The framework aims to promote responsible online loan utilization and advance digital financial inclusion among microentrepreneurs in the municipality.

Keywords: Online Loan Services, Microentrepreneurs, Digital Financial Inclusion, Financial Technology Adoption, Technology Acceptance Model.

INTRODUCTION

The growing prominence of online loan services has created new avenues for microentrepreneurs to access credit beyond the confines of traditional banking institutions. In rural areas such as Tagbina, Surigao del Sur, where access to formal financial channels remains limited, online loan services have emerged as a viable alternative for sustaining and expanding small-scale business operations. Understanding the determinants that influence the adoption of these digital lending platforms is essential in ensuring that microentrepreneurs can harness their full potential. This study, therefore, examines the determinants of online loan services among microentrepreneurs in Tagbina, Surigao del Sur, with the aim of providing real insights that can guide financial institutions, policymakers, and local government units in promoting inclusive and well-regulated digital lending adoption.

Studies have shown that online lending platforms provide faster loan processing, greater convenience, and wider accessibility, making them attractive alternatives to traditional financing, particularly for underserved entrepreneurs (Candraningrat et al., 2021; World Bank, 2022). Researchers further observed that perceived usefulness, ease of use, and compatibility with business operations positively influence the adoption of digital financial services (Chaveesuk et al., 2022). However, a contrasting body of evidence indicates that adoption

remains constrained by low digital and financial literacy, lack of trust, perceived risk, cybersecurity concerns, and limited understanding of digital loan products (Lyons & Kass-Hanna, 2021; Morgan et al., 2022; (Nawai, 2024). Other studies have likewise highlighted the continuing challenges posed by weak institutional support, inadequate digital infrastructure, and poor internet connectivity, particularly in rural and developing communities (Asian Development Bank, 2023).

Despite the rapid growth of digital lending in the Philippines, a significant gap remains in understanding how rural microentrepreneurs adopt and utilize online loan services, particularly in municipalities such as Tagbina, Surigao del Sur, where access to formal financial institutions remains limited (Asian development Bank, 2023). Local microentrepreneurs in the municipality commonly rely on personal savings, informal lenders, or borrowing from relatives due to concerns about online loans.

Preliminary interactions and lived experiences of participants revealed persistent issues such as fear of scams and fraudulent lending schemes, difficulty understanding loan terms and digital platforms, limited financial knowledge, unstable income sources, poor internet connectivity, and inadequate guidance from government or financial institutions. While online loan services offer convenient access to credit, these challenges discourage responsible adoption and contribute to low utilization despite their potential benefits for business growth. More importantly, there is a lack of a localized and integrated policy framework that addresses these interconnected barriers. This gap prompted the conduct of the study and led to the development of the Digital Financial Inclusion Enhancement Framework, which aims to strengthen digital and financial literacy among microentrepreneurs (Lyons & Kass-Hanna, 2021), improve platform, accessibility and consumer protection (Bangko Sentral ng Pilipinas, 2023), and enhance institutional support for responsible online loan adoption among microentrepreneurs. (Agu et al., 2025)

This study is significant as it examines the factors influencing local entrepreneurs' acceptance and use of digital lending platforms, providing insights into how financial technology can offer accessible, convenient, and affordable financial solutions to support microenterprise growth. For microfinance institutions and banks, the findings can guide the design of user-friendly digital loan services tailored to small business needs. Policymakers and local governments can use the results to develop community-based programs on financial and digital literacy, financial technology awareness, and secure digital transaction management. By identifying adoption challenges, trust factors, and gaps in financial inclusion, the study contributes to enhancing online loan services, improving microentrepreneurs' financial decision-making, and promoting sustainable local economic growth, thereby advancing knowledge in the Philippine financial and entrepreneurial context.

Research Objectives

This study generally aimed to examine the determinants of online loan services in Tagbina, Surigao del Sur.

Specifically, it sought to:

1. What is the demographic profile of the respondents in terms of age, sex, income and employment status
2. What is the level of online loan services among microentrepreneurs availed
3. What technological determinants influences digital technology adoption in terms of perceive usefulness perceive ease of use, compatibility and complexity
4. What organizational determinants influence digital technology adoption in terms of organizational readiness, financial resources and managerial capability
5. What environmental determinants influence digital technology adoption, in terms of competitive pressure, customer expectations and, government/Institutional support
6. Which among the domains of the determinants greatly affect the availing of the online loan services to the microentrepreneurs
7. Is there a significant relationship on the determinants influence digital technology adoption when grouped according to profile
8. Develop an Intervention-Based Programmatic Framework that may strengthen online loan availment in the rural areas like Tagbina, Surigao del Sur.

REVIEW OF RELATED LITERATURE

Technology Acceptance Model Theory

The Technology Acceptance Model explains that an individual's acceptance of a technology is primarily determined by perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which a person believes that a technology can enhance performance, while perceived ease of use pertains to the degree to which the technology is perceived as effortless to use. TAM provides the basis for examining technological determinants such as perceived usefulness, perceived ease of use, compatibility, and complexity in influencing online loan service adoption.

Unified Theory of Acceptance and Use of Technology (UTAUT) Theory

The Unified Theory of Acceptance and Use of Technology posits that technology adoption is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions. These factors affect both behavioral intention and actual technology use. In the context of this study, UTAUT explains how organizational and environmental factors, including financial resources, financial literacy, customer expectations, competitive pressure, and institutional support, influence the adoption of online loan services.

Theory of Planned Behavior (TPB) Theory

The Theory of Planned Behavior explains that behavioral intention is shaped by attitude toward the behavior, subjective norms, and perceived behavioral control. These factors influence an individual's willingness and ability to perform a specific behavior. In this study, TPB provides insight into how micro-entrepreneurs' perceptions, social influences, and confidence in using digital financial services affect their decision to avail themselves of online loan services.

Technological Determinants

The advancement of information and technology across various sectors has influenced changes in the activity patterns of many people. Many countries have been impacted by these technological developments. The rapid growth of information technology has led to the emergence of a highly complex financial system, with strong interconnections among financial sub-sectors, both in terms of products and institutional structures (Aziz, S., & Nur'aisyah, N. (2021).

The rapid evolution of digital technology has reshaped society, with digital innovations becoming integral to daily life. Financial technology has emerged as a key driver of this transformation, offering greater convenience and accessibility by converting traditional financial services into faster and more efficient digital processes. This financial technology model integrates technological innovation with banking functions to facilitate more practical, secure, and efficient financial transactions. These platforms increase financial inclusion by expanding access to credit for individuals and small businesses that may be underserved by traditional banks.

In the Philippine context, digital lending and other financial technology services have expanded opportunities for individuals and businesses that are traditionally underserved by formal banking institutions. These innovations are particularly beneficial for microenterprises, which often face challenges in meeting the requirements of traditional lenders. The World Bank (2022) emphasized that digital financial services play a critical role in expanding financial inclusion by reaching unbanked and underserved populations through technology-driven solutions. Furthermore, Binaluyo et al. (2024) found that the adoption of digital financial services among microfinance institutions in the Philippines leads to increased operational efficiency, improved service quality, and enhanced client satisfaction, underscoring the transformative role of technology in the local financial sector.

Perceived Usefulness

Perceived usefulness refers to an individual's belief that using a particular technology can enhance their

performance. In a digital context, it describes how effectively digital technology can assist someone in improving their work efficiency. If a person finds a digital application helpful in supporting their tasks, they are more likely to continue using it. On the other hand, if the application does not provide meaningful benefits, the person is unlikely to use it. Therefore, ensuring that digital tools deliver clear advantages is essential for encouraging consistent use (Wahjudi, 2021).

Perceived usefulness is a significant determinant of financial technology adoption because users are more likely to utilize digital financial services when they perceive them as beneficial and capable of improving their financial activities. In a study involving Generation Z and Millennial users in the Philippines, Belmonte et al. (2024) found that perceived usefulness significantly influenced fintech adoption intention. The study further revealed that users were more inclined to adopt financial technologies when they recognized their practical benefits, efficiency, and value in managing financial transactions. These findings suggest that the perceived advantages of digital financial services play an important role in encouraging adoption and continued use among consumers.

In the Philippine context, Tugade, Reyes, and Nartea (2021) found that perceived usefulness significantly influences individuals' intention to use digital banking services. Their study revealed that users are more likely to adopt digital financial technologies when they believe that these services improve the efficiency, convenience, and effectiveness of financial transactions. The findings further suggest that perceived usefulness plays a crucial role in technology acceptance, as individuals tend to embrace digital banking platforms that provide clear and practical benefits. This emphasizes the importance of demonstrating tangible value to users to encourage the adoption and continued use of financial technology services in the Philippines.

Perceived Ease of Use

Perceived ease of use refers to an individual's belief that using a technology can be effortless and does not require significant effort or time to learn. This perception influences how easily a person can adopt and navigate a system without feeling overwhelmed. When technology is seen as easy to use, users are more likely to engage with it regularly and explore its features. Furthermore, a user-friendly system can reduce errors, increase efficiency, and enhance overall satisfaction, encouraging continued use and trust in the technology (Pirdayanti & Wiagustini, 2021).

Perceived ease of use also refers to the extent to which an individual believes that using a particular system requires minimal effort. The term "ease" implies freedom from difficulty or significant exertion. Each person determines how much effort they are willing to invest in different tasks, and when all factors are equal, users are more likely to adopt applications they consider easier to operate. Systems perceived as easy to use can also enhance user confidence and reduce frustration, leading to higher engagement and consistent use. Additionally, simplicity in design often encourages users to explore more features, increasing overall satisfaction and loyalty (Reepu & Arora, 2022).

Compatibility

Compatibility plays a significant role in the adoption of digital financial technologies because users are more likely to embrace innovations that align with their existing needs, financial practices, and business operations. When financial technologies fit the daily activities and operational realities of users, they are perceived as more relevant and beneficial, increasing the likelihood of adoption and continued use. In the Philippine context, Celestino et al. (2021) emphasized that financial technologies contribute to financial inclusion when they are effectively integrated into the financial behaviors and needs of users, highlighting the importance of aligning digital financial solutions with the realities of their target markets.

Complexity

Technology complexity refers to how difficult a system or innovation is perceived to be in terms of understanding and using it. When users see a technology as complicated, they may feel that it requires more effort to learn and operate, which can decrease their willingness to adopt it. Because high complexity can create confusion or frustration, simpler technologies are generally adopted more quickly than those seen as hard to use. Moreover,

the perceived complexity of a system can act as a barrier, discouraging potential users from engaging with it unless its benefits clearly outweigh the effort required.

Banks need to provide ongoing information about innovations to help customers understand and adopt new services. To address customers' concerns about complexity, financial institutions should implement strategic marketing that leverages various communication platforms to educate and inform users. This involves using media channels that are cost-effective, fast, and easily accessible, especially social media platforms such as Facebook, Instagram, Twitter, and LinkedIn, to share clear, helpful content and updates. By actively engaging customers on these platforms, banks can quickly disseminate useful information, respond to questions, and build trust through transparent communication. Utilizing social media also enables banks to deliver tailored financial tips, service explanations, and real-time support that make digital banking services easier to grasp and use (Sudarsono et al., 2021).

Synthesis

The reviewed literature emphasized the growing significance of digital financial services in transforming credit access for microenterprises. Technological determinants such as perceived usefulness, ease of use, compatibility, and complexity influence adoption, while organizational determinants including readiness, financial resources, and managerial capability determine internal preparedness. Environmental factors such as competitive pressure, customer expectations, and government support further shape the digital lending landscape. Collectively, the literature establishes a multidimensional view of the factors that drive or limit online loan service adoption among microenterprises in rural and underserved communities.

The literature affirms that adoption is not solely driven by technology availability but is equally shaped by user readiness, perceptions, and the broader operating environment. Microentrepreneurs in rural areas face unique barriers including limited digital literacy, inadequate infrastructure, and low awareness of digital financial products. These insights reinforce the relevance of the present study in examining the determinants of online loan service adoption among microentrepreneurs in Tagbina, Surigao del Sur, and in identifying evidence-based strategies that can bridge the gap between digital financial innovation and inclusive economic participation.

METHODOLOGY

Research Design

The study employed a quantitative descriptive-correlational research design. The descriptive component assessed the level of online loan service availment and the determinants influencing its adoption among micro-entrepreneurs. Online loan service availment was examined in terms of loan application, loan approval, loan utilization, and repayment behavior. The determinants were assessed across technological, organizational, and environmental dimensions, including perceived usefulness, perceived ease of use, compatibility, complexity, financial resources, financial literacy, customer expectations, competitive pressure, and government or institutional support.

The correlational component determined the strength and direction of the relationship between the determinants and online loan service availment. Regression analysis was also employed to identify which determinant dimensions significantly influenced the adoption of online loan services. This design was appropriate because the study aimed to describe the existing level of online loan service availment and examine the statistical relationships between the determinants and adoption behavior among micro-entrepreneurs.

Research Locale and Respondents

The study was conducted among registered microentrepreneurs in Tagbina, Surigao del Sur, Philippines. From a total population of 1,161 registered microentrepreneurs, respondents were selected through simple random sampling. This sampling method ensured that microentrepreneurs from 25 barangays of Tagbina included in the study were represented proportionately.



Research Instrument

A researcher-made questionnaire was used to collect quantitative data. The instrument used a five-point Likert scale, ranging from Strongly Disagree to Strongly Agree to measure the respondents' level of online loan service availment and the influence of technological, organizational, and environmental determinants on the adoption of online loan services among micro-entrepreneurs.

The instrument underwent face and content validation by a panel of experts composed of a former bank manager, CPA, extension appointed associate professor, and research-handle associate professor and a bookkeeper/instructor handling accounting subjects. A pilot test was conducted with 15 non-respondent microentrepreneurs. The highest reliability coefficient was obtained by the Organizational Determinants with a Cronbach's Alpha of 0.983, followed by the Level of Online Loan Services Availed with 0.969, and the Technological Determinants with 0.936, all indicating excellent reliability. The Environmental Determinants likewise demonstrated excellent reliability with a Cronbach's Alpha of 0.920. All constructs exceeded the acceptable threshold of 0.70, confirming that the items under each construct are reliable and consistent in measuring their intended variables.

Data Gathering Procedure

The researcher secured the necessary approvals from the Graduate School, local government units, and other concerned offices prior to data collection. The validated survey questionnaires were personally administered to the selected micro-entrepreneur respondents and retrieved upon completion. The collected data were checked for completeness, coded, tabulated, and analyzed using appropriate statistical tools to address the objectives of the study. Ethical standards were observed throughout the research process, including obtaining informed consent and ensuring voluntary participation, confidentiality, and anonymity of the respondents.

Statistical Treatment

Descriptive statistics, including frequency counts, percentages, weighted means, and adjectival ratings, were used to describe the respondents' demographic profile and determine the level of online loan service availment as well as the influence of technological, organizational, and environmental determinants. Pearson product-moment correlation was used to determine the relationship between the respondents' demographic profile and the determinants of online loan service adoption. Multiple regression analysis was used to identify the determinant domains that significantly predict the adoption of online loan services. Analysis of Variance (ANOVA) was employed to determine significant differences in respondents' perceptions of the determinants when grouped according to their demographic characteristics.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

Table 1 presents the demographic profile of the 298 respondents in terms of age, sex, monthly income, and employment status. These characteristics provide essential background information for understanding the respondents' perceptions and adoption of online loan services.

Among the respondents, those aged 24 years old and above comprised the largest group, while those aged 18–20 years old represented the smallest. This suggests that microentrepreneurship in Tagbina is largely undertaken by mature adults who may have limited exposure to digital financial technologies and tend to be more cautious in adopting online loan services. This finding supports Purnamasari et al. (2020), who noted that older entrepreneurs generally exhibit lower technology acceptance due to limited digital experience.

Female respondents outnumbered their male counterparts, indicating the significant role of women in sustaining microenterprises. However, women may also face greater challenges in accessing digital financial services due to lower digital literacy and limited access to formal financial networks. This observation is consistent with BSP

(2024), which reported that women in rural areas encounter greater barriers to formal and digital financial inclusion.

Table 1. Demographic Profile of the Respondents

Indicators	Category	Frequency	Percentage
Age	18-20 years old	10	3%
	21-23 years old	14	5%
	24 years old and above	274	92%
	Total	298	100%
Sex	Male	112	37.58%
	Female	185	62.08%
	Prefer not to say	1	0.34%
	Total	298	100%
Monthly Income	₱5,001–₱10,000	143	48%
	₱10,001–₱15,000	69	23%
	₱15,001–₱20,000	49	16%
	Above ₱20,000	37	12%
	Total	298	100%
Employment Status	Full-time Business Owner	213	71.48%
	Part-time Business Owner	85	28.52%
	Total	298	100%

Female respondents outnumbered their male counterparts, indicating the significant role of women in sustaining microenterprises. However, women may also face greater challenges in accessing digital financial services due to lower digital literacy and limited access to formal financial networks. This observation is consistent with BSP (2024), which reported that women in rural areas encounter greater barriers to formal and digital financial inclusion. Most respondents earned between ₱5,001 and ₱10,000 monthly, while only a few earned above ₱20,000. This indicates that many microentrepreneurs operate within limited financial capacity, making them more cautious in taking on loan obligations. Zarrouk et al. (2020) emphasized that stronger financial capacity increases willingness to adopt external and digital financing options. Full-time business owners constituted the majority of respondents, confirming that microenterprise serves as their primary source of income. As a result, they have a greater need for financing but are also more vulnerable to repayment risks, highlighting the importance of accessible and flexible loan products.

Level of Online Loan Services Among Microentrepreneurs Availed

Table 2 presents the level of online loan service availment among microentrepreneurs in Tagbina, Surigao del Sur. The results indicate a generally low level of engagement with digital lending platforms despite the increasing

availability of online financial services.

Table 2. Level of Market Sustainability Among Fisherfolk

Table 2. Level of Online Loan Services Among Microentrepreneurs Availed

Indicators	Mean	Adjectival level
I frequently use online loan services for my business.	2.466	Seldom Availed
I have successfully applied and received loans through financial technology platforms.	2.430	Seldom Availed
I prefer online loan services over traditional banking loans due to convenience.	2.628	Sometimes Availed
The loan amounts offered online meet my business needs.	2.678	Sometimes Availed
I am satisfied with the repayment schedules of online loan services.	2.584	Seldom Availed
Overall Mean	2.557	Seldom Availed

Among the indicators, “the loan amounts offered online meet my business needs” obtained the highest rating and was described as Sometimes Availed. This suggests that microentrepreneurs recognize the potential of online loans to provide adequate financing for their businesses. However, the moderate rating indicates that awareness of financial benefits does not necessarily translate into actual usage. This finding supports Candraningrat et al. (2021), who noted that while MSMEs perceive digital lending as a viable source of capital, adoption remains constrained by operational and technological barriers.

Conversely, “I have successfully applied and received loans through financial technology platforms” received the lowest rating and was described as Seldom Availed. The result indicates that challenges such as complex application procedures, documentation requirements, limited digital literacy, and connectivity issues continue to hinder successful loan acquisition.

This finding is consistent with the observations of the International Monetary Fund (2020) and Siwale and Godfroid (2021), who emphasized that structural barriers and the lack of user guidance often prevent borrowers from completing digital loan applications successfully.

Overall, the level of online loan service availment was described as Seldom Availed, indicating that digital lending remains underutilized among microentrepreneurs in Tagbina despite its availability. The finding suggests that barriers related to digital skills, trust, procedural complexity, and financial capacity continue to limit adoption. As highlighted by Candraningrat et al. (2021) and the International Monetary Fund (2020), meaningful digital financial inclusion requires not only accessible platforms but also supportive interventions such as financial education, trust-building measures, and simplified lending processes.

Technological Determinants That Influence Digital Technology Adoption

Table 3 presents the level of influence of technological determinants on digital technology adoption among microentrepreneurs, measured in terms of perceived usefulness, perceived ease of use, compatibility, and complexity.

Table 3. Technological Determinants That Influence Digital Technology Adoption

Indicators	Mean	Descriptive Level
Perceived Usefulness	2.920	Influential
Perceived Ease of Use	2.696	Influential
Compatibility	2.942	Influential
Complexity	3.046	Influential
Overall Mean	2.901	Influential

Among the technological determinants, Complexity obtained the highest mean and was rated Influential, indicating that the perceived difficulty of understanding and navigating online loan platforms strongly affects adoption decisions. Microentrepreneurs may experience challenges related to application procedures, documentation requirements, and platform navigation, which can discourage actual usage. This finding supports Lyons and Kass-Hanna (2021), who found that limited digital and financial literacy increases the perceived complexity of digital financial services and hinders adoption.

Perceived Ease of Use recorded the lowest mean, although it remained rated Influential. This suggests that while respondents can generally access and explore digital lending platforms, completing the actual loan application process remains challenging. Wahjudi (2021) similarly emphasized that improving platform usability and reducing procedural difficulties are essential for increasing adoption, particularly among users with limited digital skills.

Overall, the technological determinants were rated Influential, indicating that technological factors play a significant role in shaping online loan adoption among microentrepreneurs. The findings suggest that both enabling factors and technological barriers influence adoption decisions, highlighting the need for simpler, more user-friendly platforms and enhanced digital literacy programs. This result aligns with Nabot et al. (2021), who identified usability, compatibility, and perceived usefulness as important drivers of digital financial service adoption.

Organizational Determinants That Influence Digital Technology Adoption

Table 4 presents the level of influence of organizational determinants on digital technology adoption, measured in terms of organizational readiness, financial resources, and managerial capability.

Table 4. Organizational Determinants That Influence Digital Technology Adoption

Indicators	Mean	Descriptive Level
Organizational Readiness	3.162	Influential
Financial Resources	3.068	Influential
Managerial Capability	3.018	Influential
Overall Mean	3.083	Influential

Among the organizational determinants, Organizational Readiness obtained the highest mean and was rated Influential, indicating that the preparedness of microenterprises in terms of technology, resources, and willingness to adopt digital tools significantly affects online loan adoption. Although respondents appear open

to using digital financial services, their readiness may not fully translate into actual implementation due to limitations in infrastructure and operational capacity. This finding supports Jewapatarakul and Ueasangkomsate (2024), who identified organizational readiness as a key determinant of successful digital technology adoption among small businesses.

Managerial Capability received the lowest mean but remained rated Influential. This suggests that while microentrepreneurs possess basic financial awareness, many still face challenges in documentation, financial management, and compliance with lending requirements. Similar findings were reported by Zaiane and Semenova (2025), who emphasized that managerial competence influences access to financial services and the ability to engage effectively with digital lending systems.

Overall, the organizational determinants were rated Influential, highlighting the importance of internal business conditions in shaping online loan adoption. The results imply that strengthening organizational readiness, financial management skills, and administrative capabilities can enhance the capacity of microentrepreneurs to utilize digital lending services. This finding is consistent with Binaluyo et al. (2024), who noted that organizational capacity and digital competence are essential for successful participation in digital financial services.

Environmental Determinants That Influence Digital Technology Adoption

Table 5 presents the level of influence of environmental determinants on digital technology adoption, measured in terms of competitive pressure, customer expectations, and government/institutional support

Table 5. Environmental Determinants That Influence Digital Technology Adoption

Indicators	Mean	Descriptive Level
Competitive Pressure	2.993	Influential
Customer Expectations	3.100	Influential
Government/Institutional Support	3.009	Influential
Overall Mean	3.034	Influential

Among the environmental determinants, Customer Expectations obtained the highest mean and was rated Influential, indicating that customer demand for consistent product availability and quality service strongly affects financing decisions. Microentrepreneurs may view access to financing as necessary to meet customer needs, particularly for inventory replenishment and business expansion. This finding supports Wahjudi (2021), who emphasized that customer demand encourages businesses to seek accessible financing and adopt technologies that enhance operational responsiveness.

Competitive Pressure recorded the lowest mean, although it remained rated Influential. This suggests that while competition affects business decisions, it exerts less influence on online loan adoption because digital lending is not yet widely practiced or visible among local businesses. Ulupui et al. (2025) similarly found that competitive pressure becomes a stronger adoption driver when technological innovations are commonly used and observed within the business environment.

Overall, the environmental determinants were rated Influential, highlighting the significant role of external factors in shaping online loan adoption among microentrepreneurs. The findings imply that customer demand, peer influence, and institutional support collectively affect adoption decisions, although their impact remains moderate. This result aligns with Agu et al. (2025), who noted that supportive regulations, institutional initiatives, and partnerships are essential in promoting financial technology adoption and advancing financial inclusion.

Domain of the Determinants That Greatly Affects the Availing of Online Loan Services

Table 6 presents the results of the multiple regression analysis conducted to determine which domains of the determinants significantly predict the availing of online loan services among microentrepreneurs in Tagbina.

The regression analysis revealed that Compatibility was the strongest predictor of online loan availment, indicating that microentrepreneurs are more likely to adopt digital lending services when these align with their existing financial practices and business routines. This finding supports Sunardi et al. (2021), who emphasized that compatibility is a critical determinant of digital financial service adoption because users tend to prefer technologies that fit their established behaviors and needs.

Table 6. Multiple Regression Analysis Predicting Availment of Online Loan Services

Predictors	Coefficient (β)	t-value	p-value	Decision
Perceived Usefulness	0.1556	2.007	0.046*	Significant
Perceived Ease of Use	0.0812	1.124	0.262	Not Significant
Compatibility	0.3980	5.341	0.000*	Significant
Complexity	0.0431	0.652	0.515	Not Significant
Organizational Readiness	0.0614	0.891	0.374	Not Significant
Financial Resources	0.2991	4.302	0.000*	Significant
Managerial Capability	0.0723	0.987	0.325	Not Significant
Competitive Pressure	0.0518	0.741	0.459	Not Significant
Customer Expectations	0.0389	0.563	0.574	Not Significant
Government/Institutional Support	0.0441	0.634	0.527	Not Significant
R² = 0.63 F = 48.92 p = 0.000				

Note. *p < 0.05. R² = 0.63; F (10, 287) = 48.92, p = 0.000.

Financial Resources also significantly predicted online loan availment, suggesting that entrepreneurs with greater financial capacity are more willing and able to engage with digital lending. The result implies that affordability and repayment capability remain important considerations in adoption decisions. This finding is consistent with Zarrouk et al. (2020), who found that stronger financial positions increase willingness to utilize external financing and digital credit services.

Perceived Usefulness likewise emerged as a significant predictor, indicating that microentrepreneurs who recognize the benefits and efficiency of online lending are more likely to avail of such services. This supports the Technology Acceptance Model of Davis (1989), which identifies perceived usefulness as a key factor influencing technology adoption. In contrast, the remaining determinants were not significant predictors, suggesting that although they may influence perceptions, actual adoption is primarily driven by compatibility, financial capacity, and perceived benefits. Collectively, these findings confirm that practical fit and economic readiness are the most critical factors shaping online loan adoption among microentrepreneurs.

Significant Relationship Between the Determinants and Profile Variables

Table 7 presents the results of the One-Way Analysis of Variance (ANOVA) conducted to determine whether significant differences exist in the determinants of digital technology adoption when respondents are grouped according to their demographic profile.

Table 7. Determinants of Digital Technology Adoption by Demographic Profile

Sources of Variation		Computed F	P-value	Decision	CONCLUSION
Perceived Usefulness	Age	0.990	0.374	Failed to Reject Ho	Not Significant
	Sex	9.160	0.003	Reject Ho	Significant
	Income	1.370	0.256	Failed to Reject Ho	Not Significant
	Employment	6.350	0.002	Reject Ho	Significant
Perceived Ease of Use	Age	1.330	0.267	Failed to Reject Ho	Not Significant
	Sex	9.240	0.003	Reject Ho	Significant
	Income	2.910	0.056	Failed to Reject Ho	Not Significant
	Employment	4.460	0.012	Reject Ho	Significant
Compatibility	Age	1.000	0.368	Failed to Reject Ho	Not Significant
	Sex	9.800	0.002	Reject Ho	Significant
	Income	1.960	0.143	Failed to Reject Ho	Not Significant
	Employment	4.910	0.008	Reject Ho	Significant
Complexity	Age	0.500	0.605	Failed to Reject Ho	Not Significant
	Sex	7.230	0.008	Reject Ho	Significant
	Income	0.900	0.371	Failed to Reject Ho	Not Significant
	Employment	2.770	0.064	Failed to Reject Ho	Not Significant

Organizational Readiness	Age	0.530	0.591	Failed to Reject Ho	Not Significant
	Sex	5.820	0.016	Reject Ho	Significant
	Income	0.780	0.458	Failed to Reject Ho	Not Significant
	Employment	4.350	0.014	Reject Ho	Significant
Financial Resources	Age	0.670	0.511	Failed to Reject Ho	Not Significant
	Sex	10.800	0.001	Reject Ho	Significant
	Income	4.500	0.012	Reject Ho	Significant
	Employment	6.000	0.003	Reject Ho	Significant
Managerial Capability	Age	1.180	0.310	Failed to Reject Ho	Not Significant
	Sex	8.640	0.004	Reject Ho	Significant
	Income	1.160	0.316	Failed to Reject Ho	Not Significant
	Employment	6.890	0.001	Reject Ho	Significant
Competitive Pressure	Age	0.200	0.818	Failed to Reject Ho	Not Significant
	Sex	4.590	0.033	Reject Ho	Significant
	Income	2.320	0.100	Failed to Reject Ho	Not Significant
	Employment	5.490	0.005	Reject Ho	Significant
Customer Expectations	Age	0.970	0.379	Failed to Reject Ho	Not Significant
	Sex	2.960	0.086	Failed to Reject Ho	Not Significant
	Income	0.920	0.400	Failed to Reject Ho	Not Significant
	Employment	5.490	0.005	Reject Ho	Significant
Government/Institutional Support	Age	1.540	0.216	Failed to Reject Ho	Not Significant

	Sex	5.220	0.023	Reject Ho	Significant
	Income	0.190	0.826	Failed to Reject Ho	Not Significant
	Employment	7.590	0.001	Reject Ho	Significant

The analysis revealed that sex and employment status significantly influenced respondents' perceptions of the determinants of online loan adoption. Female and male microentrepreneurs differed in their assessment of technological, organizational, and environmental factors, which may reflect variations in digital access, financial literacy, and risk perceptions. This finding supports the BSP (2024), which reported persistent gender disparities in digital financial access, and Morgan et al. (2022), who noted that employment characteristics influence financial behavior and engagement with digital services.

In contrast, age did not produce significant differences across the determinants, suggesting that perceptions of online loan adoption are not primarily shaped by age in this study. This finding aligns with Purnamasari et al. (2020), who argued that digital literacy and experience, rather than age itself, are more influential in technology adoption. The result may also be attributed to the concentration of respondents within a similar age group.

Monthly income showed significant differences only in financial resource perceptions, indicating that income level mainly affects how microentrepreneurs assess their ability to afford and manage digital loans. This finding is consistent with Zarrouk et al. (2020), who found that financial capacity influences risk tolerance and willingness to engage with external financing. Overall, the results suggest that sex, employment status, and income shape adoption perceptions, highlighting the need for targeted and inclusive digital financial inclusion strategies.

OUTPUT

Intervention-Based Programmatic Framework

Based on the findings, the study proposes the Digital Financial Inclusion Enhancement Framework for Micro-Entrepreneurs. The framework is intended to guide local government units, financial institutions, financial technology providers, cooperatives, academic institutions, and community organizations in developing coordinated interventions that promote responsible online loan adoption and digital financial inclusion among micro-entrepreneurs.

The framework is anchored on the empirical findings that online loan availment among micro-entrepreneurs is generally low and that compatibility, financial resources, and perceived usefulness significantly influence adoption. The study also identified key challenges, including complex application procedures, low digital literacy, poor internet connectivity, lack of trust in online lending platforms, financial instability, weak financial management practices, and limited institutional support.

The framework has nine components:

1. **Platform Accessibility and Usability Enhancement.** This component focuses on simplifying online loan application processes through user-friendly interfaces, localized guides, mobile-first designs, and application assistance. It aims to reduce technological barriers and improve ease of use among micro-entrepreneurs.
2. **Digital and Financial Literacy Development.** This component includes digital finance education, financial literacy training, budgeting workshops, and loan orientation programs. It seeks to strengthen the knowledge and skills necessary for responsible use of digital financial services.

3. Behavioral Adaptation and Digital Confidence Building. This component promotes digital confidence through mentoring programs, guided loan simulations, and financial behavior development activities. It aims to reduce hesitation and improve readiness to engage with online lending platforms.
4. Responsible Borrowing and Financial Capacity Support. This component focuses on repayment planning, debt management, savings mobilization, and cash flow monitoring. It helps micro-entrepreneurs strengthen financial readiness and maintain sustainable borrowing practices.
5. Trust, Security, and Consumer Protection Program. This component includes anti-scam awareness campaigns, data privacy education, platform verification activities, and consumer protection initiatives. It aims to increase trust and confidence in digital lending systems.
6. MSME-Compatible Loan Product Development. This component encourages the development of loan products that align with the operational realities of micro-enterprises through flexible repayment terms, simplified requirements, and cash flow-based lending approaches.
7. Institutional Support and Community Partnerships. This component strengthens collaboration among local government units, financial institutions, schools, cooperatives, and community organizations. It promotes continuous guidance, mentoring, and support for micro-entrepreneurs.
8. Digital Infrastructure and Connectivity Support. This component focuses on improving internet accessibility and digital connectivity through infrastructure enhancement and community-based digital access initiatives.
9. Monitoring and Evaluation. This component includes baseline assessments, periodic evaluations, feedback mechanisms, and performance monitoring activities. It ensures that the framework remains responsive, effective, and sustainable.

The framework assumes that digital financial inclusion and responsible online loan adoption can be strengthened when technological accessibility, financial capability, behavioral readiness, institutional support, trust, and digital infrastructure are addressed through coordinated and sustainable interventions.

SUMMARY OF FINDINGS

The study revealed that online loan service availment among microentrepreneurs in Tagbina, Surigao del Sur remains low despite the growing availability of digital lending platforms. While respondents generally recognized the potential of online loans to provide adequate financing for business needs, successful loan application and actual utilization remained limited. This suggests that awareness of digital lending benefits does not necessarily translate into adoption, highlighting a persistent gap between access and effective use of financial technology among rural microentrepreneurs.

Technological, organizational, and environmental determinants were all perceived as influential in shaping online loan adoption. Technological barriers were primarily associated with platform complexity and difficulties in navigating application processes, while organizational factors reflected concerns regarding business readiness, financial capacity, and managerial competencies. Environmental influences were largely driven by customer expectations and the need to sustain business operations, demonstrating that external market demands play a substantial role in motivating financing decisions. Collectively, these findings indicate that adoption is influenced by a combination of technological accessibility, organizational preparedness, and environmental conditions rather than by a single factor alone.

Regression analysis identified compatibility, financial resources, and perceived usefulness as the only significant predictors of online loan availment. Compatibility emerged as the strongest determinant, suggesting that microentrepreneurs are more likely to adopt digital lending when services align with their existing business practices and financial routines. Financial capacity and recognition of the practical benefits of online lending also contributed significantly to adoption, emphasizing that both economic readiness and perceived value are critical drivers of digital financial behavior. These findings extend existing technology adoption literature by

demonstrating the importance of contextual fit and financial capability in explaining digital lending adoption among rural microentrepreneurs.

The qualitative findings reinforced the quantitative results by revealing interconnected technological, organizational, and environmental barriers. Key challenges included complex application procedures, low digital literacy, unstable internet connectivity, financial instability, weak financial management practices, lack of institutional support, and persistent concerns regarding trust, security, and fraudulent schemes. Taken together, the findings suggest that improving digital financial inclusion requires interventions that go beyond platform availability and address capability development, trust-building mechanisms, financial readiness, and institutional support systems. The study contributes to the growing literature on digital financial inclusion by providing evidence that adoption among rural microentrepreneurs is shaped by the interaction of technological usability, organizational capacity, and environmental support structures.

CONCLUSIONS

The findings reveal that online loan adoption among microentrepreneurs remains low despite the growing availability of digital lending services. The predominantly female, low-income, and full-time entrepreneur population faces challenges related to financial capacity, digital literacy, and risk sensitivity, indicating that access alone is insufficient to achieve digital financial inclusion.

Compatibility, financial resources, and perceived usefulness emerged as the only significant predictors of online loan adoption, highlighting that digital lending services must align with existing business practices, provide clear benefits, and remain financially accessible. Significant differences based on sex and employment status further suggest the need for targeted and inclusive interventions.

Qualitative findings showed that trust issues, fear of fraud, complex application procedures, limited digital skills, weak financial management, inadequate institutional support, and poor connectivity continue to hinder adoption. Overall, the study demonstrates that improving digital financial inclusion requires a comprehensive approach that combines technology accessibility, financial capability development, consumer protection, and institutional support.

RECOMMENDATIONS

Based on the findings, microentrepreneurs are encouraged to enhance their digital financial literacy, financial management skills, and familiarity with online lending platforms to improve their readiness for responsible digital borrowing.

Financial institutions and financial technology providers may develop more accessible and user-friendly loan products through simplified application processes, flexible repayment options, and loan features that align with the needs and financial realities of rural microentrepreneurs.

Government agencies, local government units, and academic institutions are encouraged to strengthen digital and financial literacy initiatives, consumer protection programs, and community-based training activities to promote safe and informed use of digital lending services.

Future researchers may examine the long-term impact of financial literacy interventions and digital platform improvements on loan adoption, as well as replicate the study in other locations to enhance the generalizability of the findings.

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