



## Determinants Influencing Borrowing Decisions via Online Applications in the Digital Economy Era

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### Abstract

This research investigates the determinants influencing the decision to borrow money via online applications in the digital economy era. Utilizing a quantitative research approach, data were collected from 691 Thai individuals through convenience sampling. The study employed binary logistic regression for statistical analysis. The findings reveal several factors significantly impact the decision to use online borrowing applications. Specifically, age, frequency of financial transactions, the perceived attractiveness of borrowing through applications, and awareness of the service's terms and conditions all positively affect the decision-making process. Older individuals who frequently engage in financial transactions and find the borrowing process via apps appealing are more likely to opt for such services. Additionally, a higher level of understanding regarding the terms and conditions of borrowing also contributes to a more positive borrowing decision. These insights are instrumental in refining online lending services to better align with user preferences and requirements. Furthermore, the results provide valuable guidance for policymakers in developing strategies and regulations to enhance digital financial services, ensuring they are more accessible and user-centric. The study's implications extend to improving both digital lending platforms' practical and regulatory aspects.

**Keywords:** *money borrowing, online applications, decision-making, digital economy*

### 1. Introduction

In the digital economy, globalization has been profoundly transformed by the widespread adoption of the Internet, mobile communication technologies, and information and communication technology (ICT) advancements. Central to this modern phase of globalization is integrating computers and innovative ICTs, which collectively establish a unified global communication system and shape a cohesive financial and information environment (Limna et al., 2023; Nivornusit et al., 2024). Technology has become crucial in revolutionizing people's lifestyles and financial transactions. Advances in ICT have completely transformed financial services from traditional models to cutting-edge digital financial services (Bapat, 2022; Limna and Kraiwanit, 2022; Taherdoost, 2023). Digital financial services enhance convenience and allow users to manage their finances more independently and efficiently through mobile devices such as smartphones or tablets, eliminating the need to visit bank branches. This innovation saves time and resources and increases financial agility, leading to significant changes in consumer financial behavior. Financial literacy is also crucial, as higher financial knowledge significantly impacts individuals' perception and use of financial technology (FinTech) products (Morgan and Trinh, 2020; Pazarbasioglu et al., 2020). Conversely, low financial literacy is linked to poor borrowing behavior and excessive debt (Davies et al., 2019).

Kasikorn Research Center (2020) observes that the digital lending sector in Thailand is still in its early stages and remains relatively small. This is primarily due to the lack of sufficient credit data for risk assessment by digital lenders. Initially, digital lending services are alternative financing options for existing customers, with providers typically approving small loan amounts, short-term loans averaging 1 to 3 months, and charging high interest rates. These services cater to general consumers needing emergency funds for consumption or small businesses requiring emergency capital for operational use. Consequently, the digital lending market in Thailand is not very large. Kasikorn Research Center estimates that in 2020, the total outstanding digital loans in Thailand were around 12,000 to 12,500 million baht, accounting for approximately 0.2% of total retail loan balances. Currently, issues related to non-performing digital loans are not yet prominent due to the early stage of the market.

Given its significance, examining the determinants influencing borrowing decisions via online applications is essential. Various factors may impact an individual's choice to borrow through these platforms, including personal characteristics such as gender, age, education, occupation, income, and



spending behavior. Economic conditions, employment, and interest rates also contribute to this decision, as do technological factors like the application's usability, system security, and the service provider's reliability. Understanding these factors is crucial for elucidating app-based borrowing trends and growth patterns in the digital economy.

## 2. Objectives

This research aims to investigate the factors influencing the decision to borrow money through online applications within the context of the digital economy era. By identifying and analyzing these factors, the study contributes to a deeper understanding of consumer behavior in digital financial markets. Additionally, the findings offer valuable insights for policymakers, financial institutions, app developers, and other stakeholders to design more effective and user-friendly borrowing platforms, thereby enhancing financial inclusion and accessibility in the digital economy.

## 3. Materials and Methods

The study aimed to investigate the factors influencing the decision to borrow money through online applications. To achieve this, the following research design and methodology were employed.

**Research Design:** The research strategy relied on a quantitative approach. To collect quantitative data, online questionnaires were distributed that were based on reliable and valid research findings. Additionally, the questionnaire was pre-tested on 30 respondents to refine it, as recommended by Thetlek et al. (2023).

**Sample Selection:** This study employed convenience sampling to select participants. Researchers recruited individuals meeting predefined criteria aligned with the research objectives. The final sample consisted of 691 consenting Thai participants.

**Data Collection:** Structured questionnaires collected demographic information such as gender, age, education, income, and items related to the study's specific factors. Data collection lasted three months, from January to March 2024, giving researchers a large observation window to identify trends and confirm the relevance and reliability of their findings.

**Data Analysis:** The collected data were analyzed using descriptive and inferential statistics, with statistical analysis software utilized for these analyses. Descriptive statistics, including frequencies and percentages, summarized participants' demographic characteristics. Inferential statistics, such as chi-square tests and logistic regression, explored associations and made predictions about the outcome variable based on predictor variables. Logistic regression assessed the relationship between predictor variables and the outcome variable, starting with a baseline model containing only the constant term. Additional predictor variables were then incorporated to evaluate their impact on the outcome variable. The performance of the logistic regression models was assessed through various statistical measures, such as classification tables, which evaluated model fit, predictive power, and accuracy.

## 4. Results and Discussion

A complete dataset was compiled from 691 Thai respondents who completed detailed online surveys. Each response was meticulously coded and statistically evaluated. This rigorous process resulted in robust insights that aligned well with the research objectives and significantly contributed to understanding the subject matter.

### 4.1 All Significant Variables

**Table 1** Omnibus Tests of Model Coefficients (All Variables)

Omnibus Tests of Model Coefficients				
		X <sup>2</sup>	df.	Sig.
Step 1	Step	125.179	22	0.000
	Block	125.179	22	0.000
	Model	125.179	22	0.000

Table 1 presents the results of the Omnibus test for the model's performance, incorporating all independent variables. The chi-square value was 125.179, with 22 degrees of freedom. The independent variables significantly explained the dependent variable at the 0.05 significance level.



**Table 2** Model Summary (All Variables)

Model Summary			
	-2 Log likelihood	Cox and Snell R <sup>2</sup>	Nagelkerke R <sup>2</sup>
Step 1	332.378 <sup>a</sup>	0.166	0.342

a: Estimation terminated at iteration number 7 because parameter estimates changed by less than 0.001

According to Table 2, the Cox and Snell R Square value is 0.166, while the Nagelkerke R Square value is more robust at 0.342. This suggests that the independent variables explain approximately 34.2% of the variability in a decision to borrow.

**Table 3** Classification Table (All Variables)

Classification Table <sup>a</sup>				
	Observed	Predicted		Percentage Correct
		Decision		
		No	Yes	
Step 1	Decision 0.00	613	7	98.9
	Decision 1.00	52	19	26.8
Overall Percentage				91.5

a: The cut value is 0.500

Table 3 shows that the logistic regression model's overall efficiency in predicting the factors influencing the decision to borrow money through applications is 91.5%.

**Table 4** Variables in the Equation (All Variables)

Variables in the Equation							
	Variable	B	S.E.	Wald	df.	Sig.	Exp(B)
Step 1 <sup>a</sup>	MAL	0.002	0.314	0.000	1	0.994	1.002
	AGE	0.508	0.117	18.730	1	0.000*	1.663
	EDU	-0.034	0.241	0.020	1	0.888	0.967
	STD	-0.974	0.425	5.236	1	0.022*	0.378
	BKK	-0.011	0.308	0.001	1	0.973	0.989
	INC	-0.253	0.190	1.765	1	0.184	0.777
	EXP	-0.306	0.184	2.788	1	0.095	0.736
	SAV	0.044	0.193	0.053	1	0.817	1.045
	DEB	0.312	0.155	4.038	1	0.044*	1.366
	FRE	0.305	0.137	4.992	1	0.025*	1.357
	LAA	0.883	0.258	11.736	1	0.001*	2.418
	INF	0.549	0.216	6.430	1	0.011*	1.731
	SRH	0.234	0.209	1.251	1	0.263	1.263
	RAB	-0.177	0.267	0.443	1	0.506	0.837
	RAN	-0.333	0.285	1.362	1	0.243	0.717
	NEF	-0.226	0.267	0.717	1	0.397	0.798
	USE	0.000	0.248	0.000	1	0.999	1.000
	SAF	0.030	0.225	0.018	1	0.894	1.030
	MIS	-0.347	0.204	2.884	1	0.089	0.707
	CON	0.107	0.247	0.189	1	0.664	1.113
	SAT	0.179	0.322	0.310	1	0.578	1.196
	REC	-0.016	0.274	0.003	1	0.953	0.984
	Constant		-5.733	1.046	30.050	1	0.000*

a: Variable(s) entered on step 1: MAL: Male Gender; AGE: Age; EDU: Highest Education Level; STD: Sample Group of Students; BKK: Sample Group Residing in Bangkok and Metropolitan Areas; INC: Monthly Income; EXP: Monthly Expenditure; SAV: Monthly Savings; DEB: Monthly Debt Obligations; FRE: Frequency of Financial Transactions; LAA: Interest in Borrowing Money Through Applications; INF:



Awareness of Information and Conditions for Using Loan Services via Applications; SRH: Researching Information from Various Sources About Loan Applications Before Deciding to Use the Service; RAB: Reasonable Interest Rates; RAN: Appropriate Level of Interest Rate Charges; NEF: No Additional Service or Fee Charges; USE: User-Friendly and Simple Application Interface; SAF: Confidence in the Security of Borrowing Money Through Applications; MIS: Risk of Personal Information Being Misused; CON: Convenience of Conducting Transactions Through Loan Applications; SAT: Satisfaction with Loan Transactions Through Applications; REC: Recommending Loan Applications to Others

\*:  $P < 0.05$

Table 4 shows the estimation of variables using a logistic regression model. The dependent variable in the model is the decision to borrow money through applications (DEC), and there are 22 independent variables in the model. The logistic regression equation test results reveal that six independent factors significantly influence the decision to borrow money through applications (DEC) at the  $P < 0.05$  level. These factors are age (AGE), sample group of students (STD), monthly debt obligations (DEB), frequency of financial transactions (FRE), interest in borrowing money through applications (LAA), and awareness of information and conditions for using loan services via applications (INF). Specifically, the sample group of students (STD) has a negative impact on the decision to borrow money through applications (DEC) with a coefficient of -0.974. In contrast, age (AGE), monthly debt obligations (DEB), frequency of financial transactions (FRE), interest in borrowing money through applications (LAA), and awareness of information and conditions for using loan services via applications (INF) positively impact the decision to borrow money through applications (DEC) with coefficients of 0.508, 0.312, 0.305, 0.883, and 0.549, respectively.

#### 4.2. Only Significant Variables in the Model

**Table 5** Omnibus Tests of Model Coefficients (Only Significant Variables)

Omnibus Tests of Model Coefficients				
		$\chi^2$	df.	Sig.
Step 1	Step	96.797	6	0.000
	Block	96.797	6	0.000
	Model	96.797	6	0.000

Table 5 presents the results of the Omnibus test for the model's performance, incorporating all independent variables. The chi-square value was 96.797, with 6 degrees of freedom. The independent variables significantly explained the dependent variable at the 0.05 significance level.

**Table 6** Model Summary (Only Significant Variables)

Model Summary			
Step 1	-2 Log likelihood	Cox and Snell R <sup>2</sup>	Nagelkerke R <sup>2</sup>
	360.759 <sup>a</sup>	0.131	0.270

a: Estimation terminated at iteration number 6 because parameter estimates changed by less than 0.001

Table 6 presents the model summary incorporating all independent variables. The Cox and Snell R Square value is 0.131, while the Nagelkerke R Square value is more robust at 0.270. This suggests that the independent variables explain approximately 27% of the variability in a decision to borrow.

**Table 7** Classification Table (Only Significant Variables)

Classification Table <sup>a</sup>				
Observed		Predicted		Percentage Correct
		Decision		
Step 1	Decision	No	Yes	
		0.00	614	6
1.00	62	9	12.7	
Overall Percentage				90.2

a: The cut value is 0.500



Table 7 shows that the logistic regression model's overall efficiency in predicting the factors influencing the decision to borrow money through applications is 90.2%.

**Table 8** Variables in the Equation (Only Significant Variables)

		Variables in the Equation					
	Variable	B	S.E.	Wald	df.	Sig.	Exp(B)
Step 1 <sup>a</sup>	AGE	0.336	0.096	12.284	1	0.000*	1.399
	STD	-0.514	0.396	1.685	1	0.194	0.598
	DEB	0.048	0.123	0.155	1	0.694	1.049
	FRE	0.290	0.120	5.802	1	0.016*	1.337
	LAA	0.476	0.159	8.953	1	0.003*	1.610
	INF	0.668	0.168	15.838	1	0.000*	1.951
	Constant	-7.215	0.832	75.257	1	0.000*	0.001

a: Variable(s) entered on step 1: AGE: Age; STD: Sample Group of Students; DEB: Monthly Debt Obligations; FRE: Frequency of Financial Transactions; LAA: Interest in Borrowing Money Through Applications; INF: Awareness of Information and Conditions for Using Loan Services via Applications

\* P < 0.05

Table 8 shows the results of estimating the variables using a logistic regression model once again. It was found that only four factors significantly influence the decision to borrow money through applications (DEC) at the P < 0.05 level. These factors are age (AGE), frequency of financial transactions (FRE), interest in borrowing money through applications (LAA), and awareness of information and conditions for using loan services via applications (INF). The impacts of these four factors on the decision to borrow money through applications (DEC) are 0.336, 0.290, 0.476, and 0.668, respectively.

## 5. Conclusion

Analyzing factors influencing borrowing decisions through applications in the digital economy reveals that the model used is well-aligned with the collected data. The independent variables in the model account for approximately 16.6% to 34.2% of the variance in borrowing decisions via applications, with the model demonstrating an overall predictive accuracy of 91.5%. Specifically, the model correctly identifies borrowers 26.8% of the time and non-borrowers 98.9% of the time. Logistic regression analysis highlighted four key factors affecting borrowing decisions: age, frequency of financial transactions, the perceived attractiveness of borrowing through applications, and the awareness of the information and terms of the service. The impact of these factors on the decision to borrow via applications was quantified as 0.336 for age, 0.290 for transaction frequency, 0.476 for perceived attractiveness, and 0.668 for awareness of terms and conditions. These findings indicate that older individuals, frequent financial transactors, those who find borrowing via apps attractive, and those well-informed about the service terms are more likely to use application-based borrowing services.

The analysis reveals that age positively correlates with borrowing decisions through applications, supporting Frangos et al. (2012), who suggest that older individuals often have more complex financial needs and greater technological familiarity, which increases their likelihood of utilizing application-based borrowing services. Similarly, the frequency of financial transactions positively influences borrowing decisions, as noted by Choomchit & Dheera-umpon (2022), who observed frequent transactions are associated with higher comfort and trust in digital financial systems. The perceived attractiveness of borrowing via applications also plays a significant role, aligning with Akinwale & Kyari (2022), who found that perceived benefits can shape attitudes and intentions toward FinTech services. Additionally, awareness of information and terms of service positively impacts borrowing decisions, consistent with Akhileshwari & Majumdar (2023), who emphasize that financial literacy and a clear understanding of service terms help reduce uncertainty and boost confidence in borrowing choices.

The results have several implications for practitioners and policymakers. Service providers can enhance user engagement by targeting specific demographics and emphasizing the benefits of their services. Clear communication about terms and conditions can improve user confidence and adoption rates. Additionally, these insights can inform policy-making, guiding the development of regulations and frameworks to support digital financial services.

## 6. Limitations and Recommendations

This study's limitations include its use of convenience sampling, which may affect the generalizability of the results, and its focus on Thai individuals, potentially limiting applicability to other regions. The cross-sectional design provides a snapshot in time but does not account for changes over time. Future research should consider longitudinal studies to track shifts in borrowing behavior. Additionally, exploring interactions between critical factors and including a more diverse sample could enhance insights. Investigating variables like financial literacy and user experience with technology would provide a more comprehensive understanding of online borrowing behavior.

## 7. References

- Akhileshwari, A., & Majumdar, J. Factors Influencing the Adoption of Digital Lending: A Comprehensive Literature. *Tuijin Jishu/Journal of Propulsion Technology*, 44(6), 98-111.  
<https://www.propulsiontechjournal.com/index.php/journal/article/view/3061/2105>
- Akinwale, Y. O., & Kyari, A. K. (2020). Factors influencing attitudes and intention to adopt financial technology services among the end-users in Lagos State, Nigeria. *African Journal of Science, Technology, Innovation and Development*, 14(1), 272–279.  
<https://doi.org/10.1080/20421338.2020.1835177>
- Bapat, D. (2022). Exploring the relationship between lifestyle, digital financial element and digital financial services experience. *International Journal of Bank Marketing*, 40(2), 297-320.  
<https://doi.org/10.1108/IJBM-12-2020-0575>
- Choomchit, C., & Dheera-umpon, S. (2022). Factors affecting the decision to use personal loan service via mobile banking application. *Journal of Buddhist Education and Research*, 8(2), 130-141.  
<https://so06.tci-thaijo.org/index.php/jber/article/view/260570>
- Davies, S., Finney, A., Collard, S., & Trend, L. (2019). *Borrowing behaviour*. University of Bristol, Personal Finance Research Centre. Retrieved from <https://www.bristol.ac.uk/media-library/sites/geography/pfrc/pfrc1901-borrowing.pdf>
- Frangos, C. C., Fragkos, K. C., Sotiropoulos, I., Manolopoulos, G., & Valvi, A. C. (2012). Factors affecting customers' decision for taking out bank loans: A case of Greek customers. *Journal of Marketing Research & Case Studies*, 927167. <https://doi.org/10.5171/2012.927167>
- Kasikorn Research Center. (2020, July 23). *Digital lending market: Growth opportunities lie in data access and investment in digital technology (Trends perspective, issue 3125)*. Retrieved from <https://www.kasikornresearch.com/th/analysis/k-econ/financial/Pages/z3125-Digital-loan.aspx>
- Limna, P., & Kraiwanit, T. (2022). The rise of fintech: A review article. *STOU Academic Journal of Research and Innovation (Humanities and Social Science)*, 2(2), 35-46.  
<https://so04.tci-thaijo.org/index.php/InnovationStou/article/view/260155>
- Limna, P., Kraiwanit, T., & Siripipathanakul, S. (2023). The growing trend of digital economy: A review article. *International Journal of Computing Sciences Research*, 7, 1351-1361.  
<https://www.stepacademic.net/ijcsr/article/view/347>
- Morgan, P. J., & Trinh, L. Q. (2020). *Fintech and Financial Literacy in Viet Nam*. ADBI Working Paper 1154. <https://www.adb.org/publications/fintech-and-financial-literacy-viet-nam>
- Nivornusit, R., Kraiwanit, T., & Limna, P. (2024). Food delivery competition in the digital economy: Price war strategy in a developing country. *Digital Business*, 4(1), 100076.  
<https://doi.org/10.1016/j.digbus.2024.100076>
- Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020, April). *Digital financial services*. Retrieved from <https://pubdocs.worldbank.org/en/230281588169110691/Digital-Financial-Services.pdf>
- Taherdoost, H. (2023). Fintech: Emerging trends and the future of finance. In *Turi, A.N. (eds) Financial Technologies and DeFi. Financial Innovation and Technology*. Springer, Cham.  
[https://doi.org/10.1007/978-3-031-17998-3\\_2](https://doi.org/10.1007/978-3-031-17998-3_2)



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