

The relationship between FinTech adoption, financial inclusion and poverty in rural Thailand

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Abstract: Poverty remains a major barrier to financial inclusion among rural dwellers. However, digitalisation has been driving improvements in financial well-being for vulnerable groups by expanding financial inclusion, particularly for the poor and those living in remote areas. This study investigates the relationship between FinTech adoption, financial inclusion, and poverty. Primary data were collected through a structured survey administered in the Southern and Northeastern regions of Thailand. The data were analysed using Ordinary Least Squares (OLS) regression, with structural equation modelling (SEM) applied to test the robustness of the results. The findings confirm that FinTech adoption has both direct and indirect effects on reducing poverty.

Keywords: FinTech, financial inclusion, poverty, Thailand

1. INTRODUCTION

Thailand's poverty rate has declined significantly over the past three decades, from 58% in 1990 to 6.8% in 2020, yet 79% of the poor continue to reside in rural areas (World Bank Group, 2022). Poverty remains a major barrier to accessing financial services, including deposits, loans, and money transfers (Bank of Thailand, 2020). In 2018, over half of Thailand's villages lacked a financial institution within 5 kilometres, with low income and distance identified as key obstacles (Puey Ungphakorn Institute for Economic Research, 2018). Digitalisation offers a transformative opportunity to bridge these gaps by enhancing financial inclusion and improving the financial well-being of vulnerable groups. During the COVID-19 pandemic, government subsidies delivered via the Paotang mobile payment application accelerated mobile banking adoption. These developments highlight the critical role of digitalisation and policy in expanding financial access, particularly for rural households, thereby helping to break the cycle of poverty. While the impact of financial technology on financial inclusion has been widely studied internationally, research in the Thai context remains limited. This study addresses this gap by examining the relationship between FinTech adoption, financial inclusion, and poverty in rural Thailand.

2. METHODOLOGY AND RESULTS

This study employed a structured survey questionnaire to collect data from two regions of Thailand: the South (Nakhon Si Thammarat and Phattalung) and the Northeast (Nakhon Ratchasima and Buriram). A non-probability sampling method was used. With approval from the Lincoln University Human Ethics Committee, data were collected between August and September 2024, yielding 632 completed responses. The OLS regression was applied to examine the relationship between FinTech adoption, financial inclusion, and poverty. To test robustness, the SEM was employed to assess the direct and indirect effects of FinTech adoption on poverty. FinTech adoption was proxied by mobile banking usage, while poverty was proxied by monthly per capita consumption expenditure.

The results indicate that mobile banking usage has a statistically significant positive effect on monthly per capita consumption expenditure at the 0.001 level. The estimated coefficient shows that a rural household using mobile banking spends, on average, 3,865.5 Baht more per month than households that do not use mobile banking (see column 1 of Table 1). This finding aligns with previous studies (Appiah-Otoo & Song, 2021; Li et al., 2020; Yang et al., 2023). Column 2 of Table 1 presents results including control variables and financial inclusion measures, which show that the effect of mobile banking on household consumption remains positive and significant at the 0.001 level. These results suggest that FinTech adoption has a direct and robust positive impact on monthly consumption expenditure.

Regarding the indirect effects of FinTech adoption on poverty, the results indicate that mobile banking positively influences monthly per capita consumption expenditure through bank account ownership, significant at the 0.05 level. The estimated coefficient shows that rural households using mobile banking are more likely to hold a bank account, increasing access to financial services and raising monthly consumption by an average of 882.14 Baht (see Column 3 of Table 1). This finding aligns with previous studies (Koomson et al., 2020; Mohammed et al., 2017; Timbile & Kotey, 2021).

Similarly, mobile banking has a positive indirect effect through money transfers, also significant at the 0.05 level. Households using mobile banking are more likely to engage in money transfers, enhancing their financial transaction behaviour and contributing to an average increase in monthly consumption of 223.13 Baht (see Column 6 of Table 1),

consistent with prior research (Munyegera & Matsumoto, 2016; Priscilla Twumasi et al., 2021). However, the indirect effects of mobile banking on consumption via savings and borrowing were not statistically significant (see Columns 4 and 5 of Table 1).

The robustness of these findings is supported by the SEM results, where financial inclusion is measured by the availability, access, and usage of banking services, and poverty is proxied by monthly per capita income. The results show that mobile banking has a positive direct effect on monthly income and a positive indirect effect mediated through financial inclusion (see 1).

Table 1 Direct and indirect effects of FinTech adoption on monthly consumption expenditure per capita (Baht)

Variables	Direct Effect		Indirect Effect			
	(1) Initial	(2) With control variables	(3) Having a bank account	(4) Savings	(5) Borrowing	(6) Money Transfer
FinTech Adoption	3865.5***	3289.55***	1794.87**	3292.45***	3247.34***	1554.00**
Having a bank account			884.74			
FinTech Adoption*Having a bank account			882.14**			
Savings				-358.51		
FinTech Adoption*Savings				48.51		
Borrowing					-44.45	
FinTech Adoption*Borrowing					72.01	
Money Transfer						745.38
FinTech Adoption*Money Transfer						223.13**
Age		355.37**	364.13**	348.97**	352.71**	400.68**
Level of Education		84.87	33.82	91.71	83.42	-9.09
Occupation		2038.92***	2006.8***	2095.73***	2031.10***	2059.56***
Region of living		-4337.36***	-4274.44***	-4375.01***	-4336.09***	-4139.27***
Constant	4506.68***	9733.55***	8960.46***	9875.58***	9761.72***	9385.55***

Note: ***, **, and * indicate significance at 0.001, 0.05, and 0.1 levels, respectively. Source: Author's calculations

3. CONCLUSIONS

This study confirms that digitalisation enhances financial inclusion, enabling rural households to escape poverty. The results show that FinTech adoption directly increases monthly per capita consumption and indirectly raises consumption through bank account ownership and money transfer usage. Thus, FinTech adoption exerts both direct and indirect effects on poverty reduction. These findings are further supported by the SEM analysis. The study provides important implications for policymakers, highlighting that promoting FinTech adoption can strengthen the financial well-being of rural households and reduce their vulnerability to poverty.

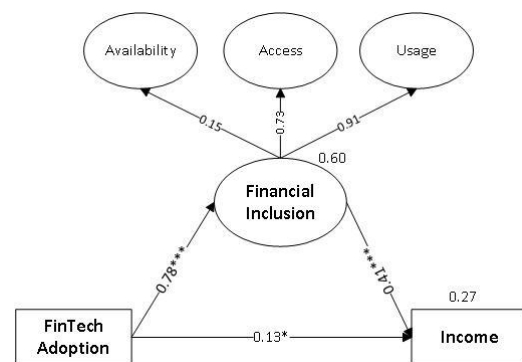


Figure 1 SEM results of FinTech adoption on poverty

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