

Original Paper

The Role of Financial Technology Platforms in Expanding Financial Inclusion, Digital Banking Access, and Economic Participation in Rural Areas of China

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Funding: The 2025-2026 Academic Year School-level Party Building Research Project of Guangdong Technology College, "Research on the Mechanism, Path and Evaluation of Empowering the High-quality Development of Applied Undergraduate Financial Talent Cultivation through Party Building" (DJKT202505); The school-level scientific and technological project of Guangdong Technology College, "Research on the Competitiveness Evaluation and Energy Level Jumping Countermeasures of the New Energy Storage Industry Cluster in Zhaoqing" (2026YBSK027).

Received: September 06, 2025 Accepted: September 26, 2026 Online Published: October 3, 2026
doi:10.22158/ibes.v8n3p416 URL: <http://dx.doi.org/10.22158/ibes.v8n3p416>

Abstract

Objective

The study asks what FinTech platforms contribute to financial inclusion and digital banking access in rural China, and whether that contribution reaches household economic participation.

Methods

Rural households are followed over time in a longitudinal panel, and the analysis stays quantitative and observational: no household is experimentally assigned to FinTech exposure. The Peking University Digital Financial Inclusion Index (PKU-DFIIC) proxies FinTech development, combining coverage breadth, usage depth and digitization level. Digital banking access and financial inclusion are built as mediators, so that the routes from FinTech to economic participation can be traced instead of assumed. Confounders at the household and regional levels are controlled throughout. Four estimators are brought together - fixed effects, mediation analysis, quantile regression and dynamic panel GMM - each answering a part of the causal question that the others cannot.

Findings

FinTech carries a coefficient of 0.406 ($p < 0.001$), which reads as a 0.406 rise in log household income for each additional unit of FinTech adoption once the other covariates are held fixed. Digital banking points the same way and is likewise significant, at 0.191 ($p < 0.001$). Among the financial variables, inclusion dominates: its coefficient of 0.300 ($p < 0.001$) is the largest, and so is its standardized beta of 0.339. Once digital financial indicators enter the model, most macroeconomic and household controls no longer register as statistically significant; whatever explanatory power they had appears to be absorbed by the digital financial measures.

Conclusion

What raises household economic participation is not digital finance as such, but the access to and use of formal financial services that it makes possible.

Keywords

Digital Transformation, Digital Ecosystems, Financial Accessibility, Household Welfare, Inclusive Growth

1. Introduction

In the past three decades, technological advancements in form of emergence of big data, cloud computing, artificial intelligence, and blockchain have profoundly transformed the global financial landscape and significantly reframed financial-inclusion research. For most of that history, retail finance ran on large branch networks, physical documentation and face-to-face interaction, and banks delivered it in exactly that form (Aracil et al., 2025; Gaviyau & Godi, 2025). The model did support economic development in most economies, but at a cost: it was costly to run, inefficient to use, and inaccessible to people living in isolated and rural areas. Nowhere did the limitations of that physical approach show more clearly than in developing economies, where geographic obstacles, high transaction costs, poor infrastructure and strict account-opening procedures produced persistent financial exclusion (Balasundaram et al., 2026) and left millions of individuals and small enterprises disconnected from formal financial systems, restricting their ability to save, borrow, invest and take part in related economic activity on equal terms (Adesola Oluwatosin Adelaja et al., 2024; Tay et al., 2022). FinTech platforms broke that pattern. By introducing innovative digital solutions, they altered the landscape, making financial services more accessible, more efficient and more inclusive than the branch model had ever managed (Singh & Sharma, 2023; Zhang, 2026). What changed is therefore not only the technology in use but the set of customers the financial system is able to reach at all.

In global finance, financial exclusion is not only a problem for the developing economies. Despite sustained financial reforms since the 1978 economic transition, rapid banking sector deepening during the 1990s and early 2000s, and the accelerated rise of digital financial ecosystems after 2015, and the remarkable economic growth and substantial progress in financial sector development during these eras, financial exclusion still remains a significant challenge in many rural regions of China (Gao et al., 2024; Liu et al., 2024; Zhang et al., 2024). In China, rural financial exclusion is significantly attributed to

geographic inequalities in terms of the vast territorial expanse and substantial regional diversity which create significant challenges for the delivery of financial services across remote and sparsely populated areas (Xiong et al., 2022; Zhang et al., 2026). Rural communities located in mountainous regions, western provinces, and geographically isolated locations often experience limited access to banking facilities and other formal financial institutions (Chen & Shen, 2023). Urban and rural China also diverge on the things that decide whether finance reaches people at all - economic development, the quality of infrastructure, technological adoption and the availability of financial services - and those gaps complicate the rural financial exclusion landscape still further (Gao et al., 2024; Liang & Liu, 2026). Digital Fintech has begun to alter the trend. Its active adoption has integrated digital payments, online lending, mobile banking and data-driven credit assessment systems into rural finance, and these have contributed extensively to greater financial inclusion and broader economic participation. What remains unresolved is the step in between. Evidence that financial technology enhances financial inclusion and access to digital financial services continues to accumulate, yet limited research has examined the mechanisms through which those improvements translate into broader economic participation among rural populations in China. Accordingly, the present research examines the role of financial technology platforms in expanding financial inclusion, digital banking access and economic participation in rural areas of China, by investigating the direct and indirect pathways through which FinTech influences economic participation.

2. Literature Review and Conceptual Framework

FinTech has moved fast enough to draw sustained scholarly attention to a basic question: can it rewire the way financial services are delivered, widen inclusion, and promote development among groups the formal system has overlooked? Research on FinTech and rural development has since settled into several overlapping concerns - whether FinTech promotes financial inclusion, whether it expands access to digital banking, how digital payment systems are adopted and used, what digital finance does for poverty reduction and household welfare, and whether financial technologies contribute to entrepreneurship and economic participation. Working with panel data covering Asian economies over 2014 to 2021, Nguyen Thi Tu et al. (2026) find that digital payments and digital credit raise financial inclusion, chiefly by lowering transaction costs and improving efficiency. In the same study, Nguyen Thi Tu et al. (2026) report that higher levels of internet usage, mobile money adoption, education and digital literacy strengthen the positive effects of FinTech, which suggests that technological infrastructure and human capital act as complements rather than substitutes in realising the benefits of digital financial services. Thi My An & Thanh Tri (2025) approach the question from the income side, examining digital technology, financial technology and household income in China, and show that digital financial inclusion operates as the transmission channel through which innovation improves household welfare, reduces financial barriers and creates room for greater economic engagement. Taken together, the two studies locate the income-enhancing effects of digital finance in financial

inclusion and digital banking access rather than in technology adoption as such, which is the premise this paper carries into rural China.

Kong & Loubere (2021) take the argument into rural China specifically, holding that FinTech platforms can ease long-standing rural financial constraints by carrying payments, savings, credit and related services past the point where bank infrastructure stops. Hidayat-ur-Rehman & Alam (2026) arrive at much the same place: digital finance supports rural development by widening financial access, helping rural households and small enterprises reach markets, and opening new opportunities for economic engagement. Lyu et al. (2025) complicate the picture. Their results trace a U-shaped relationship between FinTech development and economic resilience - early-stage expansion may achieve little and may even be harmful, whereas more mature levels of digital finance clearly strengthen resilience. According to Lyu et al. (2025), FinTech strengthens resilience by enlarging financing constraints, which improves access to financial resources and helps economies adapt to external shocks. The implication is that the benefits of digital finance reach well beyond inclusion, extending to broader economic outcomes and regional development. Shen et al. (2023) add a distributional result: digital financial inclusion significantly reduced urban-rural income disparities in China by stimulating economic growth and improving access to financial resources, and all three of its core dimensions - coverage breadth, usage depth and digitization level - contributed to narrowing the gap, with coverage and usage exerting particularly strong effects. On this evidence, digital financial development can promote more inclusive economic outcomes by eroding inequalities that have separated urban and rural populations for decades.

Against those hypotheses, the framework set out below specifies the pathways through which financial technology (FinTech) platforms influence economic participation among rural households in China. It integrates three interconnected dimensions - FinTech development, digital banking access, financial inclusion and economic participation - while also incorporating regional and socioeconomic heterogeneity as moderating factors. Within this context, FinTech development is conceptualized as the primary factor reshaping financial service delivery through digital platforms, mobile technologies and data-driven financial systems. It acts on rural financial systems in three ways at once: by expanding digital banking access, by improving financial inclusion, and by directly facilitating economic participation. In addition, the framework recognizes that FinTech may exert a direct effect on economic participation even where full financial inclusion has not been reached, by reducing transaction costs, improving market connectivity and enabling participation in digital economic ecosystems. Because digital infrastructure, financial literacy and economic development levels are unevenly distributed, the framework further incorporates regional heterogeneity and socioeconomic characteristics as moderators: the impact of FinTech is expected to vary across regions, income levels and demographic groups.

3. Methodology

Four interconnected objectives shape the empirical design, and together they evaluate the multifaceted role of FinTech in rural economic development. They are: to examine the direct effects of FinTech development on rural economic participation; to test the indirect effects operating through digital banking access and financial inclusion; to assess heterogeneity across households, income groups and geographic regions; and to address endogeneity and omitted variable bias through advanced panel data techniques. A quantitative research design grounded in a longitudinal panel data framework is adopted accordingly, in order to examine the role of FinTech platforms in shaping financial inclusion, digital banking access and economic participation among rural households in China. Because exposure to FinTech is not experimentally assigned but evolves naturally across time and space, the study is structured as an observational econometric investigation. To strengthen causal interpretation within that non-experimental setting, a multi-method causal inference strategy is employed, integrating fixed effects models, mediation analysis, quantile regression and dynamic panel generalized method of moments (GMM) estimation. Fixed effects models serve as the primary estimation approach, controlling for time-invariant unobserved heterogeneity at the household level and isolating within-unit variation in FinTech exposure and economic outcomes. Mediation analysis then identifies and quantifies the indirect pathways, while quantile regression assesses distributional heterogeneity in the effects of FinTech across different points of the economic participation distribution.

Several secondary sources are combined into a single panel for analysing the relationship between financial technology (FinTech) development, financial inclusion, digital banking access and economic participation among rural households in China. Household-level information comes from the China Family Panel Studies (CFPS), a nationally representative longitudinal survey that tracks households and individuals over time and records the detail needed to measure economic participation outcomes in rural China: household income, employment status, entrepreneurship participation, and demographic characteristics such as age, gender, education level, household size and rural or urban classification. FinTech development is measured with the Peking University Digital Financial Inclusion Index (PKU-DFIIC), the standard proxy in empirical research on digital finance in China. It is built from three main dimensions - coverage breadth, usage depth and the level of digitalization - which together measure how far financial services have been integrated with digital technologies. Macro-level control variables are drawn from China Statistical Yearbooks to account for broader regional economic and infrastructural conditions that may influence both FinTech development and economic outcomes. The study constructs a merged dataset by integrating household-level CFPS data with provincial-level FinTech indicators from the PKU-DFIIC and macroeconomic controls from the China Statistical Yearbooks. The resulting dataset is organized as a two-dimensional panel structure, where (i) represents individual rural households and (t) represents time periods.

The primary dependent variable of interest is economic participation which is captured using both composite and individual indicators and is conceptualized as the extent to which households engage in

income-generating, productive, and market-oriented economic activities. Four indicators carry it. Household income enters in logarithmic form, which reduces skewness and allows the estimated coefficients to be read as elasticities. Whether a household engages in self-employment or operates a business is recorded as a binary entrepreneurship indicator. Employment status enters as a second binary variable, reflecting participation in formal or informal labour markets. Agricultural investment participation, covering spending on inputs, equipment and land-related improvements, captures household engagement in productive agricultural activities. On the explanatory side, the key independent variable is financial technology (FinTech) development, measured using the Peking University Digital Financial Inclusion Index (PKU-DFIIC) and serving as a comprehensive proxy for the level of digital financial development across regions and over time; the index is constructed along three core dimensions - coverage breadth, usage depth and digitization level. Digital banking access and financial inclusion are constructed as the two mediating variables through which FinTech is expected to work, and a set of control variables is included to account for potential confounding factors at both the household and regional levels.

A series of econometric specifications is estimated so that the direct, indirect and distributional effects of financial technology (FinTech) development on rural economic participation in China can be told apart. The baseline fixed effects model examines the direct effect of FinTech development on rural economic participation and is written as follows;

$$Y_{it} = \beta_0 + \beta_1 FinTech_{it} + \beta_2 X_{it} + \mu_i + \lambda_t + \epsilon_{it}$$

Where:

- μ_i = household fixed effects
- λ_t = time fixed effects

The digital banking access model is then used to evaluate the extent to which FinTech development influences digital banking access among rural households, and it is estimated as follows;

$$BankAccess_{it} = \alpha_0 + \alpha_1 FinTech_{it} + \alpha_2 X_{it} + \mu_i + \lambda_t + \epsilon_{it}$$

Should the coefficient prove significant, the reading is that better FinTech infrastructure goes together with heavier use of digital banking services.

The third specification relates digital banking access and FinTech development to financial inclusion. It is written to separate two things: the effect that FinTech exerts on financial inclusion directly, and the part that runs through digital banking access as the intermediary bringing households into broader engagement with formal financial systems. The financial inclusion model is estimated as follows;

$$FinIncl_{it} = \gamma_0 + \gamma_1 BankAccess_{it} + \gamma_2 FinTech_{it} + \gamma_3 X_{it} + \mu_i + \lambda_t + \epsilon_{it}$$

A final mediation model evaluates the direct and indirect effects of FinTech on economic participation together, allowing the total effect to be decomposed into a direct component and an indirect one operating through digital banking access and financial inclusion. The model is presented as follows;

$$Y_{it} = \delta_0 + \delta_1 FinTech_{it} + \delta_2 BankAccess_{it} + \delta_3 FinTech_{it} + \delta_4 X_{it} + \mu_i + \lambda_t + \epsilon_{it}$$

Mediation is estimated in more than one way: the Baron and Kenny stepwise procedure, bootstrapped standard errors to make inference more robust, and the Sobel test as a supplementary diagnostic. Three quantities are reported - the direct effect of FinTech on economic participation, the indirect effect transmitted through digital banking access and financial inclusion, and the total effect combining both channels. Distributional heterogeneity is then examined with quantile regression at the 10th, 25th, 50th, 75th and 90th percentiles of the economic participation distribution, so that the effect of FinTech can be compared across the outcome distribution rather than at a single point.

Because the effects of financial technology (FinTech) development should not be uniform, heterogeneity is examined along two key dimensions. Geographically, the analysis is disaggregated across eastern, central and western China. At the socioeconomic level, it is further disaggregated by household income status, by education attainment, and by the gender of the household head. Reverse causality and persistence in the dependent variable are then addressed with a dynamic panel data approach using the Generalized Method of Moments (GMM), and the dynamic specification is written as follows;

$$Y_{it} = \rho Y_{it-1} + \beta \text{FinTech}_{it} + \epsilon_{it}$$

Additional checks are run to test whether the results hold up, and how far they travel beyond this sample.

4. Results

Summary statistics show wide dispersion in FinTech adoption, digital financial service use and economic outcomes across households. The sample consists of 3,000 observations, with no missing values on the key variables. FinTech averages 3.35 (SD = 0.57), which suggests moderate-to-high penetration and relatively low dispersion, while the digital banking index records a mean of 1.997 (SD = 0.599) across a wide range from 0 to 3.92. The financial inclusion index shows a mean of 2.34 (SD = 0.78), reflecting moderate inclusion levels. The asset index exhibits considerable dispersion (Mean = 2.99, SD = 0.99), and the macroeconomic environment is captured through GDP per capita (Mean = 6.67, SD = 1.41). An urbanization rate of 0.525 (SD = 0.11) suggests the sample is relatively balanced between rural and urban settings, while digital infrastructure development is moderate, with an internet penetration index of 0.534 (SD = 0.232). The financial infrastructure index (Mean = 1.68, SD = 0.57) indicates uneven availability of financial institutions and service points across the study area. The dependent variable, log income, has a mean of 4.43 (SD = 0.69) with substantial variation, ranging from 1.70 to 7.01, which confirms significant income heterogeneity and makes the sample suitable for examining the inequality and distributional effects of FinTech.

A Pearson correlation analysis was performed and the analysis reveals strong and statistically significant relationships among FinTech adoption, digital financial services, financial inclusion, and household economic outcomes. The FinTech index is positively and significantly correlated with all

key outcome variables including digital banking access ($r = 0.543$, $p < 0.01$), financial inclusion ($r = 0.519$, $p < 0.01$) and log income ($r = 0.594$, $p < 0.01$). The correlation results further show statistically significant associations between digital banking and financial inclusion ($r = 0.562$, $p < 0.01$), income ($r = 0.535$, $p < 0.01$) and financial inclusion and income ($r = 0.602$, $p < 0.01$). Also, household income was significantly associated with FinTech adoption ($r=0.594$), financial inclusion ($r=0.602$), digital banking ($r=0.535$) and financial infrastructure ($r=0.287$). Further, the results show statistically significant associations between financial infrastructure and FinTech ($r=0.488$) and income ($r=0.287$). Statistically significant associations were also reported between FinTech and digital environment variables including internet penetration ($r=0.104$), urbanization ($r=0.189$) and GDP per capita ($r=0.197$). Interestingly, the findings show no significant correlation between asset index and fintech and income, suggesting FinTech access is not purely wealth-driven and may be more inclusive.

To account for potential confounding factors and establish conditional relationships, a fixed effects regression analysis was performed. The mixed-effects panel model was estimated using a repeated-measures AR (1) covariance structure to account for within-household temporal dependence in income. The estimated intercept of the model is $\beta_0 = 4.432$ ($p < 0.001$) which represents the average log-income level across households in the absence of explanatory variation. The statistically significant intercept confirms a stable baseline income structure within the sample. The model dimension is shown in Table 1.

Table 1. Mixed Model Dimension

Model Dimension ^a						
		Number of Levels	Covariance Structure	Number of Parameters	of Subject Variables	Number of Subjects
Fixed Effects	Intercept	1		1		
Random Effects	Intercept	1	Identity	1		
Repeated Effects	year	6	First-Order Autoregressive	2	hh_id	500
Total		8		4		

a. Dependent Variable: ln_income.

The AR(1) diagonal variance (0.475) indicates substantial variation in income over time within households, justifying the use of a panel framework.

Table 2. Estimates of Covariance Parameters

Estimates of Covariance Parameters ^a						
Parameter	Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound

Repeated Measures	AR1 diagonal	.475106	.012273	38.711	.000	.451650	.499780
	AR1 rho	.018742	.020266	.925	.355	-.020987	.058412
Intercept	Variance	.000000 ^b	.000000	.	.	.	.

a. Dependent Variable: ln_income.

b. This covariance parameter is redundant. The test statistic and confidence interval cannot be computed.

Income moves considerably within households over the study period: residual variance is estimated at 0.475 ($p < 0.01$), so economic outcomes are not stable from one wave to the next. The autoregressive parameter ($\rho = 0.018$) is statistically insignificant, which means little serial correlation remains in income once time effects are accounted for - income shocks appear largely transitory rather than persistent across consecutive years.

A baseline OLS regression relates FinTech adoption to household economic participation as measured by the natural logarithm of household income. The fit is strong: $R = 0.699$ and $R^2 = 0.488$, so the included predictors explain approximately 48.8% of the variation in household income, and the model is statistically significant at the 1% level ($F = 356.350$, $p < 0.001$). FinTech carries a coefficient of 0.406 ($p < 0.001$), meaning that a one-unit increase in FinTech adoption is associated with a 0.406 increase in log household income, all other factors held constant. Digital banking is positive and statistically significant at 0.191 ($p < 0.001$). Among all financial variables, financial inclusion has the strongest effect on household income, with a coefficient of 0.300 ($p < 0.001$) and the highest standardized beta value ($\beta = 0.339$). Set against these digital financial indicators, most macroeconomic and household controls fall away: asset index ($\beta = -0.008$, $p = 0.368$), GDP per capita ($\beta = 0.010$, $p = 0.420$), urbanization rate ($\beta = -0.153$, $p = 0.304$), internet penetration ($\beta = -0.031$, $p = 0.493$) and financial infrastructure ($\beta = -0.018$, $p = 0.319$) do not exhibit significant effects on household income in this specification, their explanatory role apparently absorbed by the digital financial indicators. The ANOVA results are shown in Table 3.

Table 3. Regression ANOVA table

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	695.311	8	86.914	356.350	.000 ^b
	Residual	729.506	2991	.244		
	Total	1424.818	2999			

a. Dependent Variable: ln_income

b. Predictors: (Constant), financial_infrastructure, asset_index, internet_penetration, digital_banking_index, urbanization_rate, financial_inclusion_index, fintech_index, gdp_per_capita

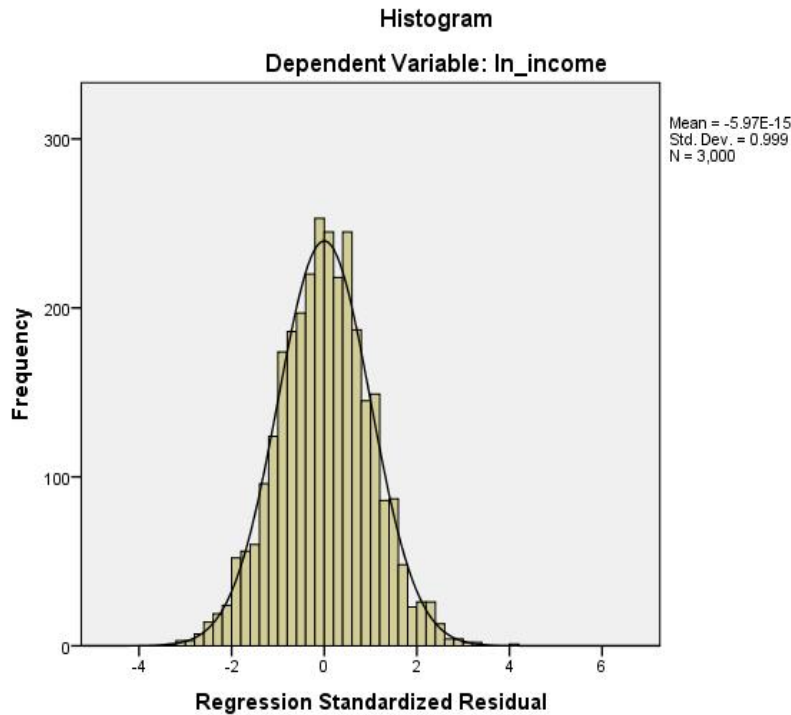


Figure 1. Regression Histogram

5. Discussion

FinTech adoption emerges as a genuine driver of household economic involvement, not a correlate: its effect on income survives controls for key socioeconomic and macroeconomic variables and is large enough to matter economically. Digital banking and financial inclusion hold their importance throughout, and the size of the FinTech coefficient points to something more than association - a structured financial transformation in which digital financial technologies change how households acquire, utilize and capitalize on financial services. The route matters. Financial inclusion turns out to be the most significant pathway, which says that the income gains linked to FinTech travel mainly through increased access to formal financial systems rather than through broader contextual factors such as urbanization, GDP per capita or internet accessibility. Several conventional monetary development measures lose significance alongside it, and the natural reading is that digital financial processes are taking the place of traditional macroeconomic drivers in explanations of household-level economic outcomes. Considered collectively, these results place FinTech at the centre of economic participation in modern financial ecosystems rather than at its margins, with its effects running through institutional access and behavioural changes in financial engagement rather than through structural economic conditions alone.

Behind the estimates lies a two-stage transmission that reinforces itself. FinTech first raises engagement with digital banking platforms (Chen et al., 2022; Zhang et al., 2026); that engagement then strengthens financial inclusion (Mashoene et al., 2025; Naysary & Tarazi, 2024), and inclusion is

what ultimately exerts the strongest direct influence on income. FinTech therefore behaves as enabling infrastructure: it lowers the entry barriers to formal financial institutions and broadens the reach of financial involvement, rather than acting as a strictly direct means of producing money (Li et al., 2025; Tao & Chao, 2022). Financial inclusion does the income-generating work, providing access to credit, savings and insurance products that directly support income-generating activities and consumption smoothing (Mallick & Zhang, 2026). Digital banking is the entry point, the mechanism through which routine financial transactions happen and households are wired into formal financial networks (Tay et al., 2022). The weighting placed on inclusion also carries a condition: the economic advantages of FinTech are most fully realized when digital access results in significant use of financial services, not merely in the adoption of new technology (Rajees, 2025). Taken together, these mechanisms demonstrate a tiered diffusion process in which FinTech first changes access, then usage, and finally economic welfare, which is what makes it a structural catalyst within the larger ecosystem of financial development rather than a marginal addition to it.

6. Conclusion

This study asked how FinTech adoption affects household economic participation, both directly on income and indirectly through digital banking and financial inclusion. Controlling for household characteristics and macroeconomic factors does not weaken the result: FinTech is positively and strongly correlated with higher household income and explains a major portion of income variation. The direct connection is only part of the story. A distinct transmission structure appears, whereby FinTech increases the use of digital banking, digital banking in turn promotes financial inclusion, and inclusion acts as the most potent conduit between digital financial innovation and improved economic outcomes. That last point is the substantive one: financial inclusion is not a supplementary factor but the principal means by which FinTech translates into welfare increases. It is reinforced by the declining significance of traditional development indicators once digital financial variables are present, which suggests a structural shift in what drives household economic participation, with access to digital financial systems progressively surpassing traditional macroeconomic drivers. Overall, the study presents FinTech as a disruptive force in modern financial ecosystems, changing how households access financial services and how they create and maintain income.

References

- Adesola Oluwatosin Adelaja, Stanley Chidozie Umeorah, Bibitayo Ebunlomo Abikoye, & Michelle Chibogu Neziyanya. (2024). Advancing financial inclusion through fintech: Solutions for unbanked and underbanked populations. *World Journal of Advanced Research and Reviews*, 23(2), 427-438. <https://doi.org/10.30574/wjarr.2024.23.2.2379>

- Aracil, E., Fernández-Méndez, L., Roch-Dupré, D., & Fuertes, F. J. (2025). Trust and financial inclusion: A literature review with reference to the digital transformation. *Heliyon*, 11(16), e44128. <https://doi.org/10.1016/j.heliyon.2025.e44128>
- Balasundaram, E., V., A., Navalgund, N., P., A., & Hanji, S. (2026). The impact of digital public infrastructure on financial inclusion and economic growth in rural India: Evidence from the UPI revolution. *Indian Growth and Development Review*, 19(1), 109-126. <https://doi.org/10.1108/IGDR-12-2024-0213>
- Chen, M., & Shen, R. (2023). Rural settlement development in western china: Risk, vulnerability, and resilience. *Sustainability*, 15(2), 1254. <https://doi.org/10.3390/su15021254>
- Chen, X., Teng, L., & Chen, W. (2022). How does FinTech affect the development of the digital economy? Evidence from China. *The North American Journal of Economics and Finance*, 61, 101697. <https://doi.org/10.1016/j.najef.2022.101697>
- Gao, J., Wu, Y., & Li, H. (2024). Digital inclusive finance, rural loan availability, and urban–rural income gap: Evidence from china. *Sustainability*, 16(22), 9763. <https://doi.org/10.3390/su16229763>
- Gao, S., Zhang, J., Ma, Z., Zhou, G., Liu, Y., & Liu, Y. (2025). Digital economy development and urban–rural integration in northeast china: An empirical analysis. *Land*, 14(5), 993. <https://doi.org/10.3390/land14050993>
- Gaviyau, W., & Godi, J. (2025). Banking sector transformation: Disruptions, challenges and opportunities. *FinTech*, 4(3), 48. <https://doi.org/10.3390/fintech4030048>
- Hidayat-ur-Rehman, I., & Alam, M. N. (2026). Digital transformation and sustainable performance: The roles of FinTech, financial inclusion and competitiveness. *South Asian Journal of Business Studies*, 1-27. <https://doi.org/10.1108/SAJBS-01-2025-0024>
- Kong, S. T., & Loubere, N. (2021). Digitally down to the countryside: Fintech and rural development in china. *The Journal of Development Studies*, 57(10), 1739-1754. <https://doi.org/10.1080/00220388.2021.1919631>
- Li, Y., Stasinakis, C., Yeo, W. M., & Fernandes, F. D. S. (2025). Fintech, financial development and banking efficiency: Evidence from Chinese commercial banks. *The European Journal of Finance*, 31(10), 1245-1295. <https://doi.org/10.1080/1351847X.2025.2468481>
- Liang, K., & Liu, W. (2026). Digital infrastructure and urban-rural income gap: Empirical evidence from China. *International Review of Economics & Finance*, 107, 105003. <https://doi.org/10.1016/j.iref.2026.105003>
- Liu, J., Chen, Y., Chen, X., & Chen, B. (2024). Digital financial inclusion and household financial vulnerability: An empirical analysis of rural and urban disparities in China. *Heliyon*, 10(15), e35540. <https://doi.org/10.1016/j.heliyon.2024.e35540>

- Lyu, J., Li, J., Liu, H., & Liu, L. (2025). Digital finance for economic resilience: The uneven impact of Fintech across urban China. *Frontiers in Sustainable Cities*, 7. <https://doi.org/10.3389/frsc.2025.1671032>
- Mallick, D., & Zhang, Q. (2026). Household adaptation to economic transformation: The role of financial inclusion in enhancing welfare. *Review of Economics of the Household*. <https://doi.org/10.1007/s11150-026-09848-y>
- Mashoene, M., Tweneboah, G., & Schaling, E. (2025). FinTech and financial inclusion in emerging and developing economies: A system GMM model. *Cogent Social Sciences*, 11(1), 2491701. <https://doi.org/10.1080/23311886.2025.2491701>
- Naysary, B., & Tarazi, A. (2024). Fintech and financial inclusion. In B. Naysary & A. Tarazi (Eds.), *The Digital Finance Era: A Journey Through Fintech and Cryptocurrency* (pp. 183-209). Springer Nature. https://doi.org/10.1007/978-981-97-3970-7_8
- Nguyen Thi Tu, L., Nguyen Tu, L., Cao Thi Huong, G., Tran Hoang, A., & Truong, D. (2026). The role of Fintech in promoting financial inclusion. *Journal of Financial Economic Policy*, 1-17. <https://doi.org/10.1108/JFEP-05-2025-0190>
- Rajeess, J. (2025). The role of fintech in enhancing financial inclusion in emerging economies. *International Journal of Finance, Economics, and Management Studies*, 1(1), 38-48. <https://doi.org/10.64137/31080030/IJFEMS-V1I1P105>
- Shen, H., Luo, T., Gao, Z., Zhang, X., Zhang, W., & Chuang, Y.-C. (2023). Digital financial inclusion and the urban–rural income gap in China: Empirical research based on the Theil index. *Economic Research-Ekonomska Istraživanja*, 36(3), 2156575. <https://doi.org/10.1080/1331677X.2022.2156575>
- Singh, Dr. A., & Sharma, Dr. L. M. (2023). Fintech and financial inclusion: Transforming underserved access to financial services. *International Journal of Tourism and Hotel Management*, 5(2), 07-11. <https://doi.org/10.22271/27069583.2023.v5.i2a.71>
- Tao, Z., & Chao, J. (2022). *Research on the impact of fintech on china's banking industry: 2022 International Conference on Computer Science, Information Engineering and Digital Economy (CSIEDE 2022)*. https://doi.org/10.2991/978-94-6463-108-1_61
- Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8(6), e09766. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- Thi My An, T., & Thanh Tri, H. (2025). Digital technology, financial technology and household income: The inclusive-finance channel in china. *Proceedings of the 2025 2nd International Conference on Digital Economy and Computer Science*, 119-128. <https://doi.org/10.1145/3785706.3785725>
- Xiong, M., Li, W., Teo, B. S. X., & Othman, J. (2022). Can china's digital inclusive finance alleviate rural poverty? An empirical analysis from the perspective of regional economic development and an income gap. *Sustainability*, 14(24), 16984. <https://doi.org/10.3390/su142416984>

- Zhang, S. (2026). The influence of digital transformation on chinese bank profitability performance. *PLOS One*, 21(1), e0340249. <https://doi.org/10.1371/journal.pone.0340249>
- Zhang, X., Huang, Z., Liu, X., & Rong, Y. (2026). The impact of fintech on innovation quality: Evidence from Chinese enterprises. *Journal of Innovation & Knowledge*, 12, 100895. <https://doi.org/10.1016/j.jik.2025.100895>
- Zhang, Y., Liu, P., Wang, H., & Zhao, L. (2026). Digital inclusive finance and common prosperity: Spatial spillovers through innovation and entrepreneurship in China. *Journal of Innovation & Knowledge*, 17, 101060. <https://doi.org/10.1016/j.jik.2026.101060>
- Zhang, Z., Song, J., Shu, T., & Zhao, T. (2024). Changes in rural financial exclusion's supply and demand factors from the perspective of digital inclusive financial policies. *Cogent Economics & Finance*, 12(1), 2305480. <https://doi.org/10.1080/23322039.2024.2305480>