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FinTech Innovation and Adoption of Digital Lending among Small Business Owners

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Abstract - FinTech innovations have increased the availability of credit in digital lending platforms. However, availability does not guarantee the adoption of these technologies by small business owners. This study explores the factors driving FinTech adoption in digital lending.

A quantitative research methodology was applied which involved the application of primary data collected from 220 owners of small businesses through a structured questionnaire. Variables such as Financial Self-Efficacy, Digital Financial Literacy, Risk Tolerance, Information Transparency, Financial Distress and FinTech Adoption were measured on the basis of five-point Likert scale. Data analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM).

Results show that all the five variables were significantly associated with FinTech Adoption. The strongest association was observed between FinTech Adoption and Financial Self-Efficacy (β = 0.365) followed by Information Transparency, Digital Financial Literacy, Risk Tolerance and Financial Distress. The model was able to explain 61.6% of variance in FinTech Adoption. The study highlights the significance of factors such as financial confidence, financial digital literacy, information transparency and financial behavior for promoting FinTech adoption in digital lending platforms. Future research may include larger sample sizes as well as longitudinal studies.

Keywords: FinTech, Digital Lending, FinTech Adoption, Small Business Owners, Financial Self-Efficacy, Digital Financial Literacy, PLS-SEM

INTRODUCTION

Financial technology has come to play a significant role in the financial services sector through the evolution in the manner of accessing financial products and services. Among these innovations is digital lending, whereby borrowers can access loans via online platforms. Timely finance plays a significant role in the running of small business enterprises. On the other hand, conventional lending may require collateral, complicated processes, and information asymmetries. Digital lending offers a substitute through online application, digital know-your-customer (KYC), quick processing and technology-based credit rating. Even though the availability of digital lending platforms is not sufficient for adopting such a technology, different individuals may vary in terms of financial self-confidence, knowledge of the Internet, propensity towards taking risks, information perception and financial status. The current study, therefore, seeks

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to examine FinTech-based digital lending adoption among small business owners and financial and behavioral factors underlying it.

RESEARCH PROBLEM

The research problem deals with the discrepancy between the provision of digital lending and its actual adoption among small businesses' owners. The objective is to analyse the adoption process of digital lending platforms empowered by Fintech and determine the factors that influence their adoption.

OBJECTIVES

- To investigate the use of FinTech-based digital lending platforms by small business owners.
- To understand the determinants of FinTech adoption by small business owners.
- To recommend ways to enhance the adoption of digital lending platforms by small business owners.

LITERATURE REVIEW AND RESEARCH GAPS

From the literature reviewed for this paper, it can be seen that there are several factors affecting FinTech adoption such as technology, financial literacy, confidence, digital literacy, risk preferences and information related factors. According to Königsheim, Lukas and Nöth (2017), financial knowledge and risk tolerance had an influence on the adoption of digital financial-services. Barkley and Schweitzer (2020) discussed the influence of FinTech-lending in providing loans to small businesses that are not able to acquire credit from conventional banks. Islam and Khan (2024) found significant relationships between financial literacy, financial self-efficacy and FinTech adoption. Similar findings were reported by Chinh et al. (2024). Digital and financial literacy have been found to be important by Pant and Agarwal (2024) as far as FinTech adoption is concerned. Risk tolerance was found to be influencing the use of digital financial-services by Liu, Lyons and Fang (2024). The significance of digitalisation, Big Data and information in the context of evaluating creditworthiness of SMEs has been highlighted by Nimbark whereas digital awareness, digital financial literacy and digital engagement are emphasized by Kumar et al. (2026).

Generally, it is evident that there are many financial, behavioral and informational factors. The difference between the reviewed studies lies in the populations and contexts where the research was conducted, as well as the digital financial products examined in each of them. It provides an opportunity for conducting a focused study of the adoption of digital lending by small business owners.

Identification of Research Gap

Research Gap 1: Limited empirical evidence on small business owners' adoption of digital lending

Limited empirical evidence exists on the decision making of small business owners towards adopting digital lending. Majority of the reviewed studies focus on general consumers, households and digital financial services in general. Hence, there is need to conduct a study on how small business owners decide to adopt digital lending.

Research Gap 2: Insufficient combination of financial and behavioral factors

Limited studies exist that investigate the integration of the factors of financial self-efficacy, digital financial literacy, risk tolerance, information transparency and financial distress in one adoption model. The existing literature tends to

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investigate separate individual factors or a limited number of factors in the field. Research on how the above-mentioned financial, behavioral and information factors can be combined in one model of FinTech adoption is insufficient.

Research Gap 3: Adoption of digital lending by small business owners requires additional investigation

The adoption of digital lending by small business owners requires additional investigation. Although there are discussions about FinTech adoption and use of digital financial services, little has been done regarding the adoption of digital lending by small business owners.

Research Gap 4: Role of Financial Distress needs further analysis

There is lack of studies analyzing whether financial distress will prompt or dissuade small business entrepreneurs from using digital lending platforms. On one hand, financial distress may increase the need to obtain credit fast and easily. However, on the other hand, financial distress may make people worry about increasing their indebtedness. Hence, the need for further research exists.

METHODS AND METHODOLOGY

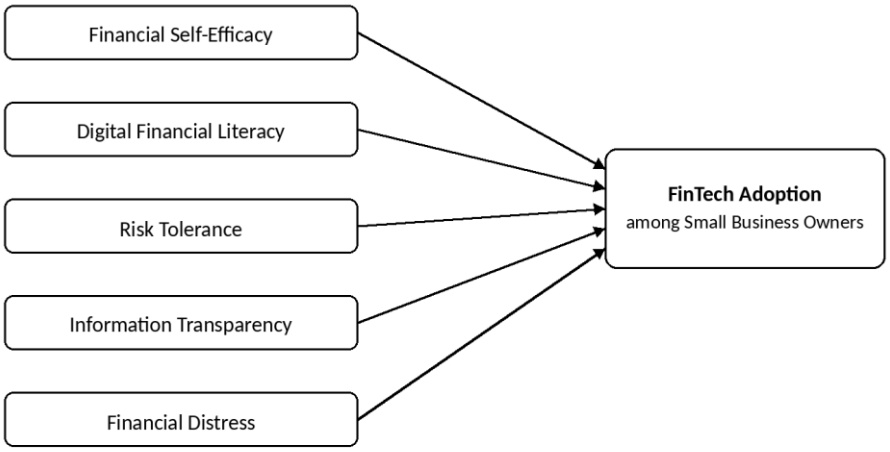
Objective No.	Statement of Objective	Methods and Methodology	Resources Utilized
1	To study the adoption of FinTech-enabled digital lending platforms among small business owners	Primary survey and descriptive analysis followed by test for reliability and validity	220 respondents, five-point Likert scale, Mean, SD, Cronbach's Alpha, CR and AVE.
2	To identify the financial and behavioural factors influencing FinTech adoption among small business owners	EFA, KMO and Bartlett's test and measurement model, PLS-SEM assessment	220 respondents, SPSS and SmartPLS.
3	To develop recommendations for improving the adoption of digital lending platforms among small business owners	Analysis at factor-wise level using path coefficients and key results	SmartPLS results, β, p-values, R^2 and results from Objectives 1 and 2

CONCEPTUAL FRAMEWORK AND HYPOTHESES

The conceptual framework is built according to the research questions and existing literature review. The research framework suggests that such intervening variables as Financial Self-Efficacy, Digital Financial Literacy, Risk Tolerance, Information Transparency and Financial Distress affect FinTech adoption by small business owners.

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Hypotheses

- H1: A significantly positive relationship exists between financial self-efficacy and adoption of FinTech among small business owners.
- H2: A significantly positive relationship exists between digital financial literacy and adoption of FinTech among small business owners.
- H3: A significantly positive relationship exists between risk tolerance and adoption of FinTech among small business owners.
- H4: A significantly positive relationship exists between information transparency and adoption of FinTech among small business owners.
- H5: A significantly positive relationship exists between financial distress and adoption of FinTech among small business owners.

RESULTS AND DISCUSSIONS

Objective 1: FinTech-enabled digital lending adoption

Descriptive analysis was conducted to determine the level of responses in relation to the study constructs. The mean and standard deviation for FinTech Adoption were 3.9636 and 0.7157 respectively, suggesting that the adoption level is high.

Construct	Mean	Standard Deviation
Financial Self-Efficacy	**4.0573**	**0.68739**
Digital Financial Literacy	**3.9927**	**0.69882**
Risk Tolerance	**2.9455**	**0.72220**

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Information Transparency	**3.9882**	**0.67197**
Financial Distress	**2.7809**	**0.74208**
FinTech Adoption	**3.9636**	**0.71574**

Similarly, the results of reliability and validity also indicate that the adoption construct is valid and reliable. FinTech Adoption shows Cronbach's alpha of 0.909, composite reliability of 0.932 and AVE of 0.734. Overall, Objective 1 shows that respondents have adopted FinTech relatively more and the adoption construct is valid and reliable.

Objective 2: Factors affecting adoption of financial services

Prior to performing exploratory factor analysis, KMO test and Bartlett's test were carried out to check the suitability of the data for performing factor analysis. The value of KMO is 0.903, while that of Bartlett's test is significant (χ^2 = 4113.609, df = 435, $p < 0.001$). From the EFA results, it is clear that there are six factors accounting for 64.314% of the total variance. Measurement model assessment involved outer loadings, reliability, convergent validity, and discriminant validity.

Measure	Result	Interpretation
KMO	0.903	Data suitable for factor analysis
Bartlett's test	χ^2=4113.609; p<0.001	Significant relationships among items
Variance explained	64.314%	Six-factor structure reported
Outer loadings	>0.77	Strong indicator loadings
Cronbach's alpha	0.888–0.909	Good internal consistency
Composite reliability	0.918–0.932	Good reliability
AVE	0.691–0.734	Adequate convergent validity
HTMT	<0.70	Discriminant validity supported
SRMR	0.050	Acceptable model fit

The outcomes indicate that the data were appropriate for factor analysis and that the constructs selected were reliable and valid. These outcomes lay a solid foundation for measurement in analyzing the structural relationships in the next phase of the analysis.

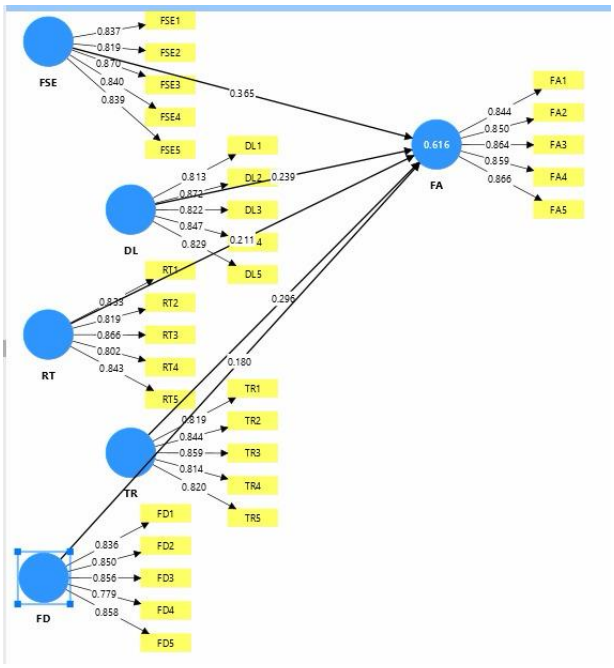
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Objective 3: Recommendations Based on Empirical Findings

The structural model was tested through path coefficients, significance level, variance accounted for, and effect size. All five hypotheses proved to be significant at $p<0.001$. Financial Self-Efficacy had strongest relationship with FinTech Adoption ($\beta = 0.365$) while Information Transparency had the second-strongest relationship ($\beta = 0.296$). Digital Financial Literacy had a third strongest relationship ($\beta = 0.239$), Risk Tolerance ($\beta = 0.211$) and Financial Distress ($\beta = 0.180$).

Hypothesis	Relationship	β	t-value	p-value
H1	FSE → FA	0.365	7.730	<0.001
H2	DL → FA	0.239	5.290	<0.001
H3	RT → FA	0.211	5.197	<0.001
H4	TR → FA	0.296	6.335	<0.001
H5	FD → FA	0.180	4.088	<0.001



PLS-SEM Model

The R^2 statistic for FinTech Adoption was 0.616 with an adjusted R^2 of 0.607. Consequently, the five independent variables taken together account for 61.6% of the variance in FinTech Adoption in the current sample. The highest reported effect size is $f^2 = 0.306$, which belongs to Financial Self-Efficacy, followed by Information Transparency (0.182), Digital Financial Literacy (0.132), Risk Tolerance (0.105) and Financial Distress (0.076).

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In view of the results obtained, the policy recommendations should revolve around building financial confidence, enhancing digital financial literacy, offering transparent information about interest rates and repayments, promoting proper assessment of risks, and using digital credit responsibly. The positive relationship between financial distress and FinTech adoption cannot be viewed as proof of any negative impact that digital lending may have on distressed businesses, since causality cannot be proved in cross-sectional research design.

FINDINGS, CONTRIBUTION AND IMPLICATIONS

- All the five proposed relationships with FinTech Adoption proved to be statistically significant in the sample group.
- Financial Self-Efficacy revealed the most significant relationship with FinTech Adoption.
- Information Transparency too displayed a strong positive relationship, stressing on the significance of information transparency regarding loans.
- Digital Financial Literacy and Risk Tolerance were significant financial and behavioral variables related to adoption.
- Significant positive relationship was found between Financial Distress and FinTech Adoption; however, it is to be noted cautiously owing to the nondirectional hypothesis proposed.
- 61.6% variation of FinTech Adoption was accounted for by the model.

The contribution of the research is concepts of financial literacy, behaviorial traits, and informational factors in one model that would target small business owners. For FinTech and lending platforms, the results will provide recommendations on simplicity and transparency of communication, financial education, and confidence-building. For small business support agencies, the research could be helpful for financial decision-making education.

CONCLUSION

This research investigated the adoption of FinTech-enabled digital lending by small business owners through the use of primary data involving 220 participants. Measurement evaluation revealed adequate reliability and validity while structural model revealed significant associations between all five selected factors and FinTech Adoption. The factor that was most strongly related to FinTech Adoption was Financial Self-Efficacy ($\beta = 0.365$), and the model revealed an ability to explain 61.6% of the variation in adoption. The results imply that FinTech Adoption is linked to a combination of factors including self-confidence, knowledge about digital technology, behavioral tendencies, information disclosure and financial situations.

FUTURE WORK AND LIMITATIONS

Further research could apply bigger sample sizes, employ longitudinal designs, or consider more variables like trust, perceived usefulness, perceived security, technology readiness, previous lending experience, interest rate perceptions, and actual digital lending practices.

The paper is based on a cross-sectional study of 220 participants; thus, there is an evidence of statistical dependence between the variables but not of causality. The answers provided in the study are self-reported; therefore, they might be affected by the respondent's interpretation of the questions. Moreover, the model employs five predictors; hence, it is

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not able to take into account all the possible factors that might influence the phenomenon under investigation. Besides, some literature used for comparison pertains to non-Indian households or non-Indian context, so direct equivalency should be made with caution.

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