

Empowering Women through FinTech Adoption and Financial Inclusion in Wayanad, an Aspirational District

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ABSTRACT

The advent of Financial Technology (FinTech) has revolutionized financial transactions, making them more accessible and convenient. This study investigates the factors influencing FinTech adoption and financial inclusion among women in Wayanad, a socio-economically disadvantaged district in India with a significant tribal population. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), this research examines the relationship between FinTech adoption and financial inclusion. A standardized and pre-tested questionnaire was administered to 242 respondents, selected through convenience sampling. The results reveal that Perceived Performance Expectancy (PPE), Social Influence (SI), and Trust (TR) significantly impact women's Behavioral Intention to adopt FinTech services (BI), ultimately promoting Financial Inclusion (FI). The findings highlight the importance of these factors in fostering financial inclusion among women in Wayanad, aligning with previous research while providing unique insights into the financial empowerment of women in this region. This study contributes to the understanding of FinTech adoption as a means to bridge the financial inclusion gap, informing policymakers and stakeholders on strategies to enhance financial access and empowerment for women in disadvantaged regions.

Keywords: *FinTech, Financial Inclusion, Perceived Performance Expectancy, Social Influence, Trust, FinTech Services Adoption, Women Empowerment.*

Introduction

FinTech, or financial technology, is the term used to describe how new and innovative digital tools are integrated to improve and simplify financial services [1]. Because of its widespread use, financial services are now accessed and managed by individuals in a way that is more efficient, secure, and convenient [2]. FinTech is essential to financial inclusion because it provides financial services to people in backward regions that would not otherwise have access to formal banking services, such as low-income people and those living in distant places [3]. FinTech has the ability to close gaps in financial access through peer-to-peer lending platforms, digital payments, and mobile banking, empowering people and promoting economic growth [4]. The adoption of FinTech services is influenced by various factors, including perceived usefulness, perceived ease of use, and user acceptance of information technology [5]. Additionally, digital financial literacy and inclusive finance are crucial in promoting financial inclusion, particularly in rural areas.

Financial inclusion is also closely linked to women's economic empowerment, as evidenced by studies in Ethiopia [6] and India [7]. The use of FinTech services can help women access financial services and promote their economic empowerment [8]. However, trust and perceived risk are also important factors that influence customers' intention to use FinTech services, such as NFC mobile

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payment systems [9]. In the context of India, FinTech adoption is critical for promoting financial inclusion, particularly among rural women [10]. The Indian government has launched several initiatives to promote digital financial inclusion, but there is still a need to address the digital divide and promote financial literacy among rural women [11]. The behavioral intention to adopt FinTech services is influenced by factors such as performance expectancy, effort expectancy, and social influence [12].

This study aims to investigate the factors that influence women's adoption of FinTech services in Wayanad, a rural district in India. The objectives of the research are to examine the impact of perceived performance expectancy, social influence, and trust on behavioral intention to adopt FinTech, and ultimately, financial inclusion [13]. By understanding the factors that influence women's adoption of FinTech, stakeholders can develop targeted interventions to improve financial inclusion and promote economic growth in rural areas.

Methods

This study aims to investigate the effects of perceived performance expectancy, social influence and trust on the adoption of financial technology among women in Wayanad, Kerala, and its subsequent impact on financial inclusion. A mixed-methods approach was employed, combining both primary and secondary data.

Data Collection

Primary data was collected from 242 women residing in the Wayanad district of Kerala. A standardized and previously validated questionnaire was used to gather data. The sample was selected using convenience sampling, a non-probability sampling technique, based on the researcher's convenience. The questionnaire was administered in person, and respondents were assured of confidentiality and anonymity. The questionnaire consisted of four sections: (1) demographic information, (2) perceived performance expectancy, (3) social influence, (4) trust and (5) behavioral intention to adopt FinTech. The questionnaire items were adapted from existing scales and were modified to fit the context of FinTech adoption among women in Wayanad, Kerala.

Data Analysis

The data was analyzed using Structural Equation Modeling (SEM), which enables the examination of relationships between variables while controlling for their interactions [14]. SEM is based on covariance analysis and generates a more accurate covariance matrix. The significance of the hypotheses was tested using P-values, with an alpha level of 0.05. The analysis was performed using a two-step approach. First, the measurement model was tested to ensure that the questionnaire items were valid and reliable. This involved assessing the factor loadings, composite reliability, and average variance extracted (AVE) for each construct. Second, the structural model was tested to examine the relationships between the constructs and to test the hypotheses.

Measurement

Respondents' answers to statement items were measured on a 5-point Likert scale, ranging from 5 (strongly agree) to 1 (strongly disagree). The validity and reliability of the instruments used in this study were assessed, and the statement items were considered acceptable if the factor loading was ≥ 0.70 [15].

The constructs and their corresponding questionnaire items were:

- Perceived performance expectancy (5 items)
- Social influence (4 items)
- Trust (4 items)
- Behavioral intention to adopt FinTech (3 items)
- Financial inclusion using FinTech (3 items)

Hypotheses Testing

The following hypotheses were tested to examine the relationship between the dependent and independent variables:

- H₁: Perceived performance expectancy has a positive relation with behavioral intention to adopt FinTech.
- H₂: Social influence has a positive relation with behavioral intention to adopt FinTech.

H₃: Trust has a positive relation with behavioral intention to adopt FinTech.

H₄: Behavioral intention to adopt FinTech is positively associated with financial inclusion using FinTech.

These hypotheses were tested to investigate the relationships between perceived performance expectancy, social influence, trust, and behavioral intention to adopt FinTech, as well as the impact of behavioral intention on financial inclusion using FinTech. The results of the hypotheses testing will provide insights into the factors that influence the adoption of FinTech among women in Wayanad, Kerala, and its subsequent impact on financial inclusion.

Results and Discussion

Table 1: Measurement of Convergent Validity and Reliability

Constructs	Indicators	Item Loadings	Ave Variance Extracted	Composite Reliability	VIF
Perceived Performance Expectancy	PPE1	0.709	0.590	0.741	1.034
	PPE2	0.823			1.034
Social Influence	SI1	0.924	0.827	0.905	1.755
	SI2	0.895			1.755
Trust	TR1	0.889	0.730	0.843	1.274
	TR2	0.817			1.274
Behavioral Intention to Adopt FinTech	BI1	0.873	0.730	0.844	1.271
	BI2	0.836			1.271
Financial Inclusion Using FinTech	FI1	0.824	0.698	0.874	1.777
	FI2	0.782			1.503
	FI3	0.896			1.774

Table 1 presents the results of the convergent validity and reliability analysis for the constructs used in this study. The factor loadings for each indicator are above the recommended threshold of 0.70, as suggested by Fornell and Larcker (1981), demonstrating adequate convergent validity. Specifically, the factor loadings for Perceived Performance Expectancy (PPE), Social Influence (SI), Trust (TR), Behavioral Intention to Adopt FinTech (BI), and Financial Inclusion Using FinTech (FI) range from 0.709 to 0.924, indicating that the indicators are adequately measuring their respective constructs. In addition to convergent validity, the Average Variance Extracted (AVE) values were calculated to assess the amount of variance captured by each construct. The AVE values range from 0.590 to 0.827, exceeding the recommended threshold of 0.50[16]. This suggests that the constructs are capturing a sufficient amount of variance in the data.

Internal consistency reliability was assessed using Composite Reliability (CR) values, which range from 0.741 to 0.905. These values exceed the recommended threshold of 0.70, as suggested by Hair et al. (2013), indicating that the constructs have adequate internal consistency reliability [17]. Finally, Variance Inflation Factors (VIFs) were calculated to assess potential multicollinearity issues. The VIF values range from 1.034 to 1.777, which are significantly below the cutoff value of 3.3. This suggests that multicollinearity is not a concern in this study[18]. Overall, the results presented in Table 1 demonstrate that the constructs used in this study have adequate convergent validity, internal consistency reliability, and do not suffer from multicollinearity issues.

Table 2: Fornell and Larcker Criterion Test for Discriminant Validity

Constructs	BI	FI	PPE	SI	TR
BI	0.845				
FI	0.418	0.835			
PPE	0.503	0.369	0.768		
SI	0.264	0.248	0.330	0.809	
TR	0.429	0.411	0.612	0.182	0.854

Table 2 presents the results of the Fornell and Larcker criterion test for discriminant validity. This test evaluates the correlations between variables by computing the square root of the Average Variance Extracted (AVE) coefficient. According to Fornell and Larcker (1981), the square root of the AVE for each latent construct should exceed the correlations with any other variable. In other words, the diagonal values should be greater than the off-diagonal values in the same row[19]. As shown in Table 2, the

diagonal values, representing the square root of the AVE, are indeed greater than the correlations between the variables, indicating that the latent variables meet the criteria for discriminant validity. Specifically, the diagonal values (0.845 for BI, 0.835 for FI, 0.768 for PPE, 0.809 for SI, and 0.854 for TR) exceed the corresponding off-diagonal values, demonstrating that each latent variable is distinct and captures a unique concept[20]. Therefore, the results suggest that the measures used in the study have discriminant validity, supporting the reliability and validity of the findings.

Table 3: Hypotheses Testing

Hypothesis	Relationship	β	T-value	P-value	Result
H ₁	PPE->BI	0.344	5.306	0.000	Accepted
H ₂	SI->BI	0.114	2.015	0.044	Accepted
H ₃	TR->BI	0.198	3.202	0.001	Accepted
H ₄	BI->FI	0.418	8.702	0.000	Accepted

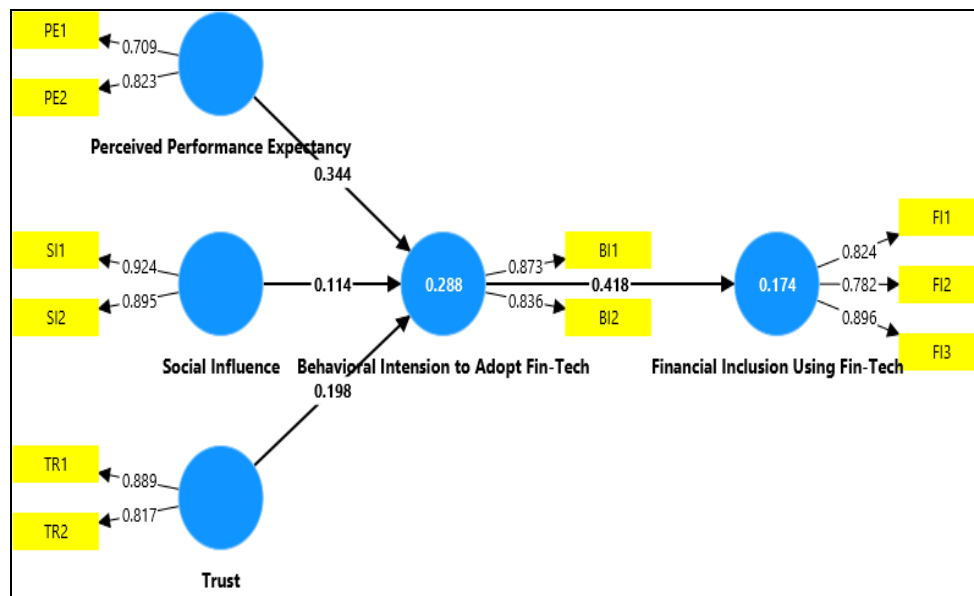


Figure 1: Path analysis of structural model

Structural Model

The study tested four hypotheses to examine the relationships between the dependent and independent variables, with the results in Table 3 confirming support for all hypotheses. A further examination of the relationships using the structural model also revealed support for all four hypotheses. The path coefficients showed that behavioral intention to adopt FinTech (BI) is positively and significantly related to financial inclusion using FinTech (FI) ($\beta = 0.418$, $p < 0.05$), and that perceived performance expectancy (PPE) ($\beta = 0.344$, $p < 0.05$), trust (TR) ($\beta = 0.198$, $p < 0.05$), and social influence (SI) ($\beta = 0.114$, $p < 0.05$) all have positive and significant relationships with BI. The R-squared (R^2) value of 0.288 for BI indicates that 28.8% of the variance in BI is explained by the four exogenous constructs (PPE, SI, TR, and FI). These findings provide valuable insights into the factors influencing FinTech adoption and financial inclusion among women, highlighting the potential for policymakers and financial institutions to leverage these factors to promote FinTech adoption and improve financial inclusion. As illustrated in Figure 1, the path analysis of the structural model underscores the importance of considering these factors in developing effective strategies to enhance financial inclusion and promote economic empowerment among women.

The research reveals that women in Wayanad are significantly influenced by perceived performance expectancy when adopting FinTech, as they believe it enhances their financial management efficiency. Their decision to use FinTech is largely driven by their trust in its benefits. Additionally, "social influence" plays a role, with women adopting FinTech because they see their peers using it and perceive

it as trendy. Their desire to conform to societal trends also contributes to their acceptance of FinTech services. The adoption of FinTech is further influenced by women's perceptions of the security and reliability of FinTech platforms, with trust being a key factor. The research findings indicate that women in Wayanad have a strong behavioral intention to adopt FinTech, which is positively and significantly linked to their financial inclusion. Ultimately, the use of FinTech improves women's overall financial empowerment by increasing their access to financial services. The study highlights the crucial role of FinTech in enhancing financial inclusion for women in Wayanad, driven by performance expectancy, social influence, and trust.

Conclusion

This study underscores the pivotal role of FinTech in promoting financial inclusion among women in Wayanad. The key drivers of FinTech adoption are perceived performance expectancy, social influence, and trust. Women view FinTech as a valuable tool for enhancing their financial management, which motivates them to use these services. The influence of peers and societal trends further reinforces this adoption, as women strive to keep pace with those around them. Moreover, trust in the reliability and security of FinTech platforms strengthens their intention to use these services. The study reveals a strong positive correlation between women's behavioral intention to adopt FinTech and their financial inclusion, indicating that FinTech adoption not only empowers women by providing better access to financial services but also enhances their overall financial well-being. Ultimately, FinTech emerges as a powerful enabler of financial inclusion and women's empowerment in Wayanad.

Managerial Implications

The findings of the study states that, the women are influenced by the factors such as perceived performance expectancy, social influence and trust for adopting FinTech services which promotes to financial inclusion. FinTech companies need to make sure that the women trust them. FinTech companies may innovate and develop new products and services which ensures the perceived performance expectancy and trust among women. The policymakers may promote financial literacy programs that helps the women to use various FinTech services and be the part of financial inclusion which will result in women empowerment. They can also create confidence among women to depend on FinTech for their financial needs.

Author's Contribution

I, hereby declare that the article is the original work done by me and for the literature taken from other article, it is properly cited.

Conflict of Interest

There is no conflict of interest and no financial support is available for the research.

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