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Factors Influencing FinTech Adoption Behavior of Millennials in Nepal: Evidence from Karnali Province, Nepal

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Abstract

Purpose: *This study aims to investigate the factors affecting FinTech adoption intention among millennials in the Karnali Province, Nepal.*

Methods: *A descriptive and causal-comparative research design was employed in this study. A total of 410 samples were collected using the purposive sampling technique. Data were collected through structured questionnaires administered physically and online and analyzed using structural equation modeling to estimate the relationships between the observed variables and latent constructs.*

Results: *The findings of this study reveal that digital literacy (DL), trust in technology (TT), perceived ease of use (PEU), and social influence (SI) emerged to be the critical determinants affecting the fintech adoption behavior of millennials. The results show significant effects of DL, TT, PEU, and SI on FinTech Adoption Intention (FAI).*

Conclusion: *The findings suggest that creating awareness surrounding digital capabilities, instilling positive trust and faith in the technological systems, making the user interface of financial platforms more approachable and implementing social influence could improve the adoption of FinTech solutions in Nepal.*

Keywords: FinTech adoption, millennial, digital literacy, Karnali province, structural equation modeling

I. Introduction

Financial technology (FinTech) has become increasingly popular recently, particularly among millennials, due to advancements in cloud services, open-source software, artificial intelligence, and mobile devices (Le, 2021)to maintain the loyal behavior of consumers after usage, firms need to predict key reasons to enhance their intention to use the service and maintain current consumers in the long term. This study offers a model to assess the components of the perceived usefulness toward Fintech. Data were collected via Mechanical Turk (MTurk. These technological advancements have been a critical factor in FinTech's growth(Yan et al., 2021)FinTech applications such as mobile financial service (MFS. Millennials have demonstrated a strong affinity for these emerging financial technologies due

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to their higher rates of mobile device usage, negative attitudes toward traditional financial institutions, and higher educational attainment(Hill, 2018). Several aspects, including their perceptions, usage behaviors, and the limitations they encounter, have shaped Millennials' adoption of FinTech services (Hu et al., 2019; Vaicondam et al., 2021)many scholars have studied how information technology is applied to financial services with a focus on extended methods for application. Few scholars have studied the influence mechanism behind the adoption of Fintech services. This paper proposes an improved technology acceptance model (TAM. Millennials and Generation Z demonstrated more excellent knowledge and usage than Generation X and Baby Boomers (Calvo-Porral & Pesqueira-Sanchez, 2020; Das & Das, 2020)banking and financial services have widened their scope. India achieved FinTech adoption rate of 87 percent as against the global average of 64 percent mostly contributed by FinTech startups aiming for providing access to financial services even in the remotest areas. Realizing the potential of FinTech to contribute toward financial inclusion and stability, the Governments have taken requisite steps toward digital transformation and promote FinTech ventures. In order to meet the customers' needs, collaborative moves with FinTech firms have been initiated by financial institutions as well. This article aims to investigate the relationship between different demographic profiles, the adoption of FinTech services, the perception, user pattern, and constraints faced by the bank customers in using FinTech services. The results based on survey of 215 respondents reveal significant association between usage of FinTech services and different demographic profiles. However, the awareness and use of such services is found more among millennials and generation Z as compared with generation X and baby boomers. While the FinTech companies gained the popularity in payment space, it is observed that misconception is an important factor that hinders the growth of technology-based services among respondents.

FinTech development has reshaped the financial sector rapidly, providing users with new approaches to financial management and accessibility to services (Gomber et al., 2018). Prior studies in diverse contexts, such as those examining Generation Z in Saudi Arabia (Abed & Alkadi, 2024)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL and Gen Y in India (Aggarwal et al., 2023), emphasize trust, convenience, and mobile usage as critical determinants. Moreover, research from Bangladesh and other emerging markets highlights the role of trust and technological literacy (Hassan et al., 2022)the acceptance and adoption of fintech services hiked after the outbreak of the virulent coronavirus. With this breakout, the adoption of mobile fintech services (MFS. FinTech, demonstrated by blockchain, big data, intelligent investment consulting, etc., grew rapidly in the financial sector (Hu et al., 2019)many scholars have studied how information technology is applied to financial services with a focus on extended methods for application. Few scholars have studied the influence mechanism behind the adoption of Fintech services. This paper proposes an improved technology acceptance model (TAM). Khatun and Tamanna (2021) found that effort expectancy, social influence, facilitating conditions, perceived reliability and added value positively influence behavioural intention to adopt FinTech.

FinTech has revolutionized the financial services sector by developing systems that enhance financial activities and meet customers' evolving needs, fundamentally reshaping business models, payment services, and banking operations (Vaicondam et al., 2021). FinTech significantly impacts the business industry by transforming financial transaction processes and enhancing competitiveness (Alt et al., 2018; Zhao et al., 2019). FinTech services have evolved beyond mere e-banking and the digitization of traditional financial services. The financial service industry now prioritizes the consumer perspective, aiming to leverage innovative technologies that cater to users' financial needs and demands(Singh et al., 2020).

Despite the global momentum, the adoption of FinTech services in regions like Karnali Province remains underexplored. As a relatively underdeveloped area in Nepal, Karnali faces unique challenges, such as limited access to high-speed internet, lack of digital literacy, and hesitancy towards non-traditional financial services. In this context, examining millennials'

behavior in adopting FinTech offers critical insights. Previous studies have shown that millennials are early adopters of technological innovations due to their comfort with mobile technology and digital interfaces (Blackburn, 2011; Chin et al., 2024; Z. Hu et al., 2019)2011; Chin et al., 2024; Z. Hu et al., 2019. However, trust and perceived security are significant concerns for users in less developed regions, where the potential risks of digital fraud and financial scams loom large (Cele & Kwenda, 2024; Hassan et al., 2022). People's acceptance of technological changes has escalated with time. However, the acceptance and adoption of fintech services hiked after the outbreak of the virulent coronavirus. With this breakout, the adoption of mobile fintech services (MFS.

Studies conducted globally have revealed that the most significant factors influencing FinTech adoption are convenience, trust, security, perceived ease of use and usefulness (Abed & Alkadi, 2024; Alshari & Lokhande, 2022)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL. Millennials, particularly in emerging markets, are thus more engaged with financial services where the experience is instantaneous, reliable and user-friendly. A study in India highlighted that factors like mobile internet access, personalized services, and the growing trust in digital financial platforms drive FinTech adoption among Generation Y (Aggarwal et al., 2023). Similarly, in Saudi Arabia, Generation Z's inclination toward Buy Now Pay Later (BNPL) services exemplifies the appeal of flexible, technology-enabled financial solutions that cater to evolving consumer needs (Abed & Alkadi, 2024)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL.

This study explores the adoption of FinTech by millennials in developing regions like Karnali Province, Nepal, highlighting the significance of understanding this technology for financial inclusion, economic participation, and regional development, filling a significant gap in traditional banking services.

II. Reviews

The body of research on FinTech adoption by millennials highlights a complex landscape influenced by multiple factors. Abed and Alkadi (2024)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL and Daragmeh et al. (2021)such as the World Health Organization, encouraged consumers to use contactless payment methods instead of payment methods such as cash, which can be carriers of the SARS-2 virus. This study aims to evaluate factors that influence Hungarian Generation X's behavioral intentions to use mobile payment services during the pandemic. We conducted an electronic questionnairebased survey among 1120 Generation X individuals.

Using structural equation modeling to analyze the study's conceptual model, our results confirm that perceived COVID-19 risk, perceived usefulness, and subjective norms significantly influence Hungarian Generation X's behavioral intentions to use mobile payment services. Moreover, perceived usefulness mediates the relationship between perceived ease of use and behavioral intention to use mobile payment systems. Overall, our results show that the model of perceived COVID-19 risk, perceived usefulness, subjective norms, and perceived ease of use explains 62.9% of the variance in intention to use mobile payment systems. Our study contributes to the technology acceptance model and highlights its effectiveness in explaining the behavioral intention to adopt mobile payments during the COVID-19 pandemic. This is further supported by (Srivastava et al., 2024), who asserted that enhanced digital literacy facilitates better understanding and use of FinTech services and breeds confidence and trust in these technologies among millennials. This sense of trust is essential as Al Karim et al. (2023) and Yi et al. (2023)discussed how trust mitigates perceived risks associated with new financial technologies, thereby fostering adoption intentions among this demographic (Abed & Alkadi, 2024; Daragmeh et al., 2021; Srivastava et al., 2024; Yi et

al., 2023)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL).

Furthermore, the ease of use of FinTech platforms plays a crucial role in their adoption among millennials (Al Tarawneh et al., 2023)in which the customer can access bank services over an internet connection anytime and anywhere. Millennials in Malaysia's business environment are an enormous segment of the Malaysian population, and they are moving to take their places in the middle and high levels of their companies' managerial governance pyramid these days and in the near future. This study examines the question, "What are the main factors that may influence mobile banking use (MBU. Their research indicates that millennials are more inclined to use technologies perceived as easy and intuitive. Gupta and Agrawal (2021) found that user-friendly interfaces significantly enhance the likelihood of FinTech adoption, suggesting that ease of use is a decisive factor in the engagement and sustained use of these services (Al Tarawneh et al., 2023; Gupta & Agrawal, 2021)in which the customer can access bank services over an internet connection anytime and anywhere. Millennials in Malaysia's business environment are an enormous segment of the Malaysian population, and they are moving to take their places in the middle and high levels of their companies' managerial governance pyramid these days and in the near future. This study examines the question, "What are the main factors that may influence mobile banking use (MBU. Additionally, Hassan et al. (2022)the acceptance and adoption of fintech services hiked after the outbreak of the virulent coronavirus. With this breakout, the adoption of mobile fintech services (MFS provided evidence that the functional benefits of FinTech, such as speed and convenience, are amplified when the technology is easy to navigate, further driving adoption among tech-savvy millennials.

Social influence also plays a significant role in shaping FinTech adoption behaviors. According to Daragmeh et al. (2021)such as the World Health Organization, encouraged consumers to use contactless payment methods instead of payment methods such as cash, which can be carriers of the SARS-2 virus. This study aims to evaluate factors that influence Hungarian Generation X's behavioral intentions to use mobile payment services during the pandemic. We conducted an electronic questionnairebased survey among 1120 Generation X individuals. Using structural equation modeling to analyze the study's conceptual model, our results confirm that perceived COVID-19 risk, perceived usefulness, and subjective norms significantly influence Hungarian Generation X's behavioral intentions to use mobile payment services. Moreover, perceived usefulness mediates the relationship between perceived ease of use and behavioral intention to use mobile payment systems. Overall, our results show that the model of perceived COVID-19 risk, perceived usefulness, subjective norms, and perceived ease of use explains 62.9% of the variance in intention to use mobile payment systems. Our study contributes to the technology acceptance model and highlights its effectiveness in explaining the behavioral intention to adopt mobile payments during the COVID-19 pandemic.

This sentiment is reinforced by Lee (2023), who points out that peers' behaviors and testimonials can significantly sway millennials' perceptions and willingness to embrace FinTech solutions. Similarly, Rosli et al. (2023) noted that endorsements from social circles not only build initial interest but also help overcome skepticism toward new financial technologies, suggesting that social proof is a powerful driver of FinTech adoption among millennials (Daragmeh et al., 2021; Lee, 2021; Rosli et al., 2023)such as the World Health Organization, encouraged consumers to use contactless payment methods instead of payment methods such as cash, which can be carriers of the SARS-2 virus. This study aims to evaluate factors that influence Hungarian Generation X's behavioral intentions to use mobile payment services during the pandemic. We conducted an electronic questionnairebased survey among 1120 Generation X individuals. Using structural equation modeling to analyze the study's conceptual model, our results confirm that perceived COVID-19 risk, perceived usefulness, and subjective norms significantly influence Hungarian Generation X's behavioral intentions to use mobile

payment services. Moreover, perceived usefulness mediates the relationship between perceived ease of use and behavioral intention to use mobile payment systems. Overall, our results show that the model of perceived COVID-19 risk, perceived usefulness, subjective norms, and perceived ease of use explains 62.9% of the variance in intention to use mobile payment systems. Our study contributes to the technology acceptance model and highlights its effectiveness in explaining the behavioral intention to adopt mobile payments during the COVID-19 pandemic.

The role of digital literacy, trust in technology, perceived ease of use, and social influence all contribute to a vibrant scene for FinTech adoption, particularly among millennials. Studies such as those by Mazambani and Mutambara (2020) and Hu et al. (2019)many scholars have studied how information technology is applied to financial services with a focus on extended methods for application. Few scholars have studied the influence mechanism behind the adoption of Fintech services. This paper proposes an improved technology acceptance model (TAM highlighted that while individual factors are significant, combining these influences yields a more robust behavior prediction model. These different structures not only increase knowledge about FinTech adoption trends but also give useful tips for developers and marketers in designing services to cater based on the demands and tastes of millennials (Z. Hu et al., 2019; Mazambani & Mutambara, 2020)many scholars have studied how information technology is applied to financial services with a focus on extended methods for application. Few scholars have studied the influence mechanism behind the adoption of Fintech services. This paper proposes an improved technology acceptance model (TAM).

The debate surrounding the factors influencing FinTech adoption by millennials is marked by divergent views on the significance and interpretation of these factors, leading to a rich landscape of scholarly discourse. One such debate involves the role of digital literacy and its perceived importance. While Abed and Alkadi (2024)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL stressed the pivotal role of digital literacy in fostering FinTech adoption, Alshari and Lokhande (2022) suggested that demographic factors such as age, income, and education may mediate the impact of digital literacy, indicating that its influence may not be uniform across all segments of millennials. This variation points to the need for a more nuanced understanding of how digital literacy intersects with other demographic variables to influence FinTech adoption (Abed & Alkadi, 2024; Alshari & Lokhande, 2022; Daragmeh et al., 2021)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPL.

Another area of contention is the impact of trust and perceived security, particularly on adopting new and less familiar FinTech services. Jafri et al. (2024) highlighted trust as a critical determinant of FinTech adoption, arguing that trust in the technology and the provider significantly influences adoption decisions. However, Lee (2021) introduced a counter-narrative by discussing “digital technostress” and its potential to deter adoption despite high trust and digital literacy levels. This suggests a paradox where even tech-savvy millennials may resist FinTech adoption due to the stress and complexity associated with new financial technologies. Such contradictions underline the complex interplay of psychological and behavioral factors impacting millennials’ adoption of FinTech services (Jafri et al., 2024; Lee, 2021).

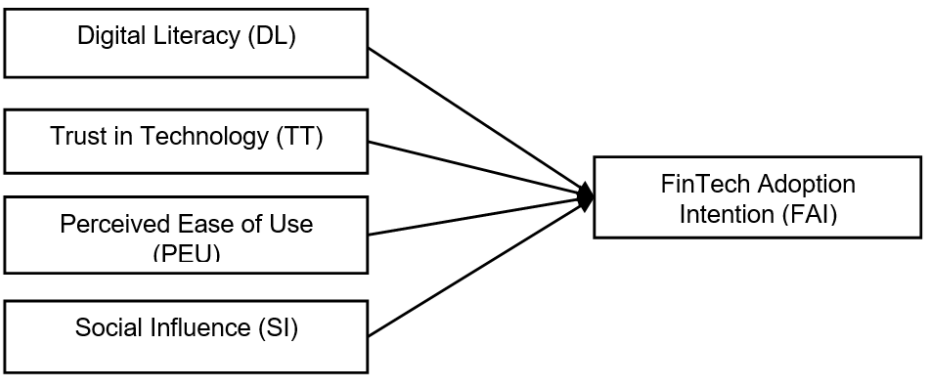
A comprehensive literature review systematically pointed out that digital literacy, trust in technology, perceived ease of use, and social influence significantly influence millennials’ FinTech adoption intention. This framework develops hypotheses that primarily centres on the relationships among these variables and their joint effects on the intention to adopt FinTech. This holistic model mechanism will lead to a deeper understanding of factors affecting the adoption of FinTech in Karnali Province, enabling both academic and practical implications.

Development of Conceptual Model

The model incorporates several significant factors (digital literacy, confidence in technology, perceived ease of use, and social impact), drawing from the existing body of literature and the empirical findings from our early study. These factors are expected to affect the intention to use new financial technology services. To confirm these correlations and improve the understanding of the dynamics of FinTech adoption in the area, the study will conduct an empirical inquiry guided by this conceptual framework, which acts as the foundation for our analysis.

Figure 1

Conceptual Model of the Study



Hypotheses Development

H_1: Digital literacy significantly influences the FinTech adoption intention of Millennials.

H_2: Trust in technology significantly influences the FinTech adoption intention of Millennials.

H_3: Perceived ease of use significantly influences the FinTech adoption intention of Millennials.

H_4: Social Influence significantly influences the FinTech adoption intention of Millennials.

III. Methodology

This research employed a descriptive and causal-comparative design to explore the dynamics of FinTech adoption among millennials in Karnali Province, Nepal. A total of 410 samples were collected using the purposive sampling technique. It enhances statistical power, improves model fit, reduces sampling errors, and strengthens the generalizability of findings. Focusing on the age group of 28-40 years, purposive sampling was utilized to ensure the sample was representative and aligned with the research objectives, specifically targeting individuals with prior experience with FinTech platforms (Aggarwal et al., 2023). Primary data were gathered using structured survey questionnaires developed based on an extensive literature review and further customized to reflect Nepal's unique socioeconomic and cultural context. This approach was designed to capture detailed, context-specific data on the variables and constructs influencing FinTech adoption among this demographic.

Structural Equation Modeling (SEM) was applied for data analysis, a robust analytical technique that facilitated examining the complex relationships between observed variables and latent factors (Rana, 2024)particularly concerning investment choices. The central objective of this study was to assess the impact of financial literacy dimensions on the investment decisions of retail investors in the Nepalese stock market. The current study

applied a causal-comparative research design. The convenience sampling technique was used to select samples, and a total of four hundred twenty nine samples were collected from retail investors of the Nepal Stock Exchange using a structured survey questionnaire. The data was analyzed using IBM SPSS 26 and AMOS 22. The study employed a diverse array of statistical methods for data assessment, including reliability analysis, descriptive statistics, correlation analysis, exploratory factor analysis, confirmatory factor analysis, and structural equation modeling (SEM. The data collection instruments were checked for internal consistency using Cronbach's alpha. Simultaneously, confirmatory factor analysis (CFA) was performed as a part of the SEM process to establish construct validity (Shrestha & Rana, 2024). This comprehensive methodology allowed for a nuanced understanding of the direct and indirect effects influencing FinTech adoption and confirmed that the survey measurements accurately reflected the intended constructs. These methodological steps provide a strong foundation for analyzing the factors driving FinTech adoption among millennials in Karnali Province, offering insights that could help shape effective strategies to enhance FinTech uptake in similar contexts.

IV. Results and Discussion

Table 1

Descriptive Metrics of Study Variables

Variables	Mean	SD	Skewness	Kurtosis
Digital Literacy (DL)	4.040	0.759	-0.326	-0.621
Trust in Technology (TT)	4.052	0.710	-0.157	-0.762
Perceived Ease of Use (PEU)	3.853	0.707	0.040	-0.701
Social Influence (SI)	4.043	0.632	0.083	-0.392
FinTech Adoption Intention (FAI)	3.884	0.690	-0.183	-0.529

Note.SD = standard deviation. Data Derived from Author Survey (2024)

The mean values imply that the respondents, in general, share similar views about the effects of DL (mean = 4.040), TT (mean = 4.052), PEU (mean = 3.853), and SI (mean = 4.043) on FAI (mean = 3.884)*(see Table 1)*. The skewness and kurtosis values for these variables lie within the acceptable range (-2 to +2 for skewness and -7 to +7 for kurtosis), confirming that normality assumptions hold. This ensures the data's suitability for analyses requiring multivariate normality.

Table 2

Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity

Measure	Value
Kaiser-Meyer-Olkin (KMO) Measure	0.822
Bartlett's Test of Sphericity	
Approximate χ^2	8145.34
Degrees of freedom (df)	190
p-value	< .001

Note. Data derived from the author survey (2024).

KMO measure of sampling adequacy is 0.822 (above the acceptable level), confirming that a high share of variance in the variables can be explained with underlying factors, thus

the dataset can undergo factor analysis. Bartlett's Test of Sphericity further demonstrates significance with an approximate value of Chi-Square 8145.343, 190 degrees of freedom, and the significance (Sig. is 0.000). Therefore, this shows that the variables are correlated enough and not orthogonal to justify the factorability of the correlation matrix.

Measurement Model

Confirmatory Factor analysis (CFA) performed with AMOS 22 software was used to test the measurement models of the study. This analysis assessed the reliability of scaling instruments using convergent and discriminant validity. Convergent validity was confirmed as composite reliability (CR) values exceeded 0.7, ensuring strong internal consistency. Discriminant validity was confirmed as the average variance explained (AVE) for each construct exceeded both the maximum shared variance (MSV) and inter-construct correlations. This ensures that each construct uniquely captures its variance, reinforcing the distinctiveness of factors influencing FinTech adoption among millennials in Karnali Province, Nepal.

Table 3

Confirmatory Factor Analysis (CFA) Model Summary

Items	Loadings	Alpha	CR	AVE	MSV
Digital Literacy (DL)		0.964	0.965	0.872	0.068
DL1	.936				
DL2	.952				
DL3	.951				
DL4	.894				
Trust in Technology (TT)		0.935	0.945	0.812	0.053
TT1	.938				
TT2	.963				
TT3	.802				
TT4	.892				
Perceived Ease of Use (PEU)		0.924	0.925	0.756	0.019
PEU1	.868				
PEU2	.819				
PEU3	.871				
PEU4	.917				
Social Influence (SI)		0.912	0.917	0.736	0.062
SI1	.874				
SI2	.832				
SI3	.766				

SI4	.948				
FinTech Adoption Intention (FAI)		0.934	0.938	0.791	0.068
FAI1	.898				
FAI2	.904				
FAI3	.770				
FAI4	.974				

Note. Data derived from the author survey (2024).

In Table 3, each construct shows high item loadings, ranging from 0.766 to 0.974, indicative of strong individual indicators. The Cronbach's Alpha and Composite Reliability scores are within threshold of 0.70 for all constructs, reflecting internal consistency and reliability. The AVE for each construct significantly surpasses the 0.50 benchmark, ensuring robust convergent validity. At the same time, the low MSV values confirm the constructs' distinctiveness, supporting their discriminant validity.

Table 4

Testing Discriminant Validity

Constructs	CR	AVE	MSV	MaxR(H)	DL	TT	PEU	SI	FAI
DL	0.965	0.872	0.068	0.968	0.934				
TT	0.945	0.812	0.053	0.963	0.156**	0.901			
PEU	0.925	0.756	0.019	0.931	0.139**	0.224**	0.869		
SI	0.917	0.736	0.062	0.941	0.291**	0.231**	0.221**	0.85	
FAI	0.938	0.791	0.068	0.966	0.261**	0.221**	0.183**	0.236**	0.890

Note. CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance; MaxR(H) = Maximum Reliability. diagonal values represent the square root of AVE, which exceed inter-construct correlations (below the diagonal), supporting discriminant validity (Fornell & Larcker, 1981). Correlations marked with ** are significant at $p < .01$. Data derived from the author survey (2024).

Table 4 assesses discriminant validity for constructs in a study on FinTech adoption among millennials. It demonstrated CR values above the threshold of 0.7 for all constructs, which ranged from 0.917 to 0.965, and well above 0.6 for internal consistency. AVE values surpass the criteria level of 0.50 and support convergent validity, as well as MSV indicates that all values significantly score lower than their respective AVEs confirming discriminant validity. The Maximum Reliability (MaxR(H)) values approach 1.0, demonstrating precision in the measurement of constructs. The inter-construct correlations are significant yet markedly lower than the square roots of the AVEs (diagonal values), further supporting that the constructs are distinct and share more variance with their indicators than each other. These findings affirm the structural integrity of the model and the unique contributions of each construct to understanding FinTech adoption intentions among this demographic, based on the 2024 survey data.

Table 5

Assessment of Measurement Model Fit

Measure	Estimate	Threshold	Interpretation
CMIN/DF	2.845	Between 1 and 3	Excellent
GFI	0.950	>0.90	Excellent
CFI	0.964	>0.95	Acceptable
TLI	0.957	>0.90	Excellent
SRMR	0.033	<0.08	Excellent
RMSEA	0.067	<0.06	Acceptable

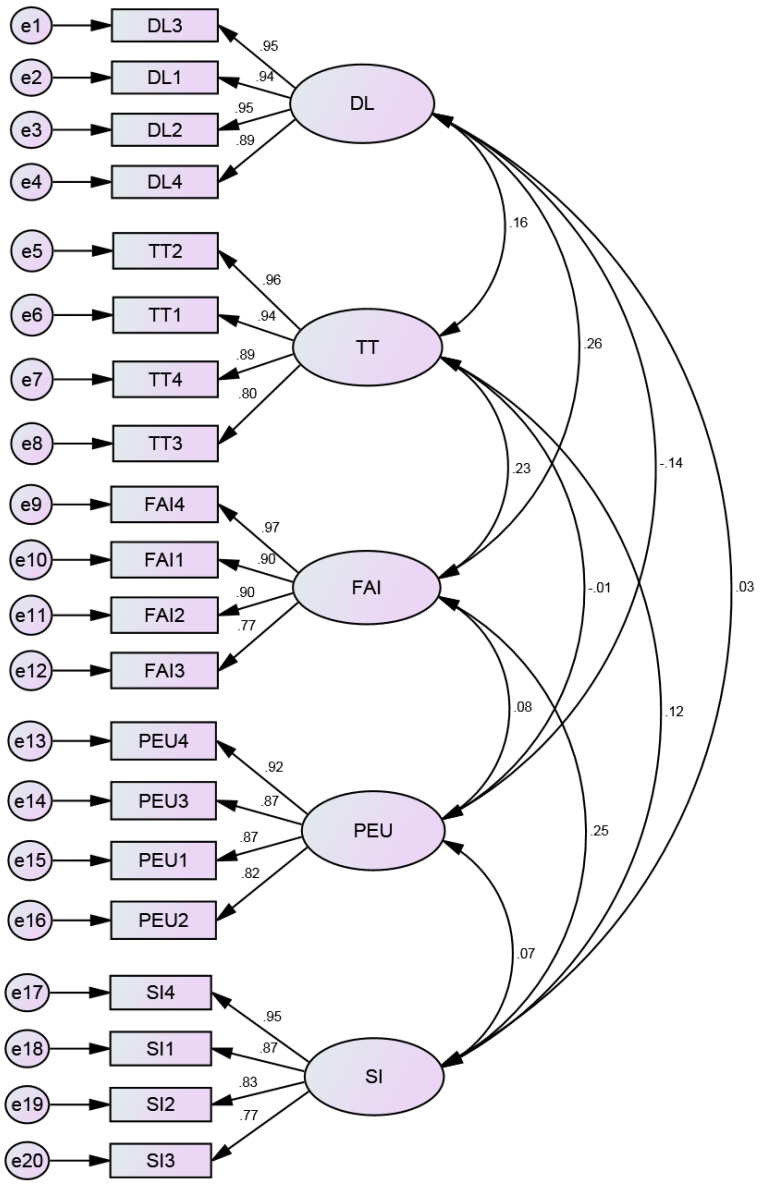
Note. CMIN/DF = Chi-Square/Degrees of Freedom; GFI = Goodness-of-Fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation. All indices meet or exceed recommended thresholds for adequate model fit (Hu & Bentler, 1999). Data derived from the author survey (2024).

The "CMIN/df, GFI, CFI, TLI, SRMR and RMSEA" model-fit metrics are used to evaluate the measurement model based on the 2024 survey data on FinTech adoption among millennials. These values were respectively in line with the standard acceptance levels defined by(Bentler, 1990; L. Hu & Bentler, 1998; Ullman, 2001)"source":"Google Scholar","title":"Structural equation modeling. İçinde BG Tabachnick ve FLS (Ed.. A model comprised of constructs including Digital Literacy, Trust in Technology, and FinTech Adoption Intention revealed an adequate fit to the data. Indeed, all of the goodness of fit indices: GFI, TLI, and CFI, exceeded the 0.90 benchmark, indicating perfect fitting of the model. The CMIN/df ratio was also 2.845, which is considered to fall within the recommended range between 1 and 3. SRMR value was also great (0.033) and much lower than the threshold (0.08). Though RMSEA was very close to the ideal threshold (0.067), overall, RMSEA was still within the acceptable range, suggesting a reasonable fit of the model with the observed data.

Figure 2 showcases the results ofSEM for a measurement modelwithin a study on FinTech adoption among millennials. It visually represents the relationships between observed variables and latent constructs, with double-headed curving arrows indicating the correlations among constructs such as Digital Literacy (DL), Trust in Technology (TT), Perceived Ease of Use (PEU), Social Influence (SI), and FinTech Adoption Intention (FAI). These arrows illustrate the interdependencies between different aspects of technology adoption behaviors. Observed variables are connected to the constructs by standardized coefficients relevant to their respective associations with the structural model, illustrated with arrows depicting the strength and direction of relationships. The various coefficients, such as factor loadings, show how strongly related the observable variables are to the corresponding latent constructs, while the residual variances and error terms (named e1 to e20) indicate the degree of unexplained variance in the observed variables, ultimately representing the measurement error inherent in the model. This configuration assesses the model's alignment with the collected data, emphasizing measurement validity through multiple indicators per construct. This visual representation aids in understanding how well the empirical data supports the theoretical framework.

Figure 2

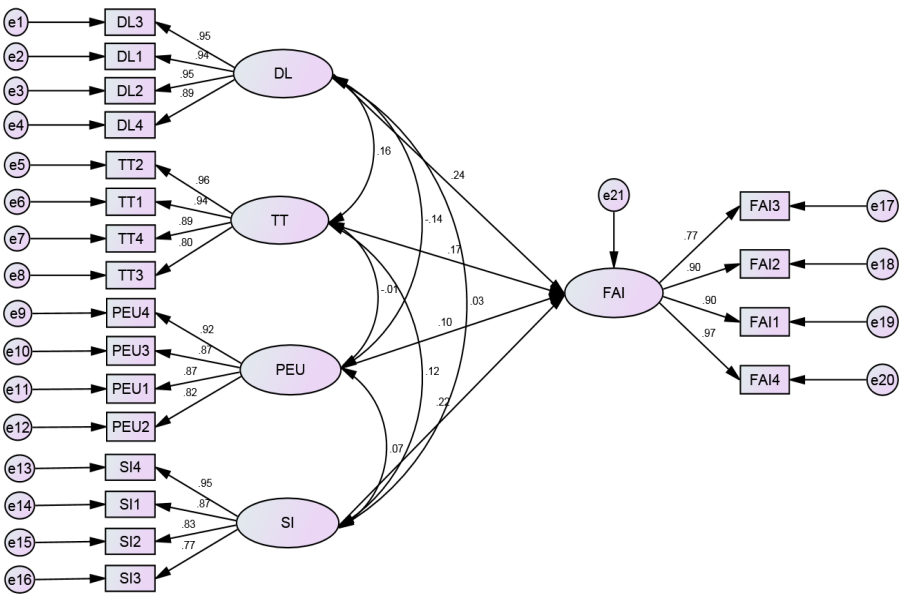
Measurement Model or CFA – Standardized



Note. DL = Digital Literacy, TT = Trust in Technology, PEU = Perceived Ease of Use, SI = Social Influence and FAI = FinTech Adoption Intention

Figure 3

Structural Model



The structural relationships among key constructs influencing FinTech adoption intentions were analyzed using SEM, depicted in Figure 3. SEM, also known as path analysis, is a robust multivariate statistical approach that clarifies causal relationships among variables within a theoretical model. This analysis was conducted using Amos software, which facilitates the examination of complex model structures and hypothesis testing through path analysis, focusing on direct effects among variables. In the model illustrated in Figure 3, the paths between constructs such as DL,TT,PEU, SI, and FAI are quantitatively represented with standardized path coefficients. Such Results and Information are crucial to interpreting the strength and significance of hypothesized relationships. Goodness-of-fit statistics were assessed using standard benchmarks whereby a CFI, TLI, and GFI > 0.90 reflect an acceptable fit (Bentler, 1990; Hair et al., 2010) . Moreover, RMSEA between 0.05 and 0.08 and SRMR less than 0.05 are acceptable. The fit indices for this specific model, reported in Table 6, met these thresholds with CMIN/df at 1.843, GFI at 0.958, TLI at 0.934, CFI at 0.948, SRMR at 0.053, and RMSEA at 0.046, confirming the model's adequacy and supporting the hypotheses tested.

Table 6

Path Analysis

Paths			Path Coefficient	Estimate	S.E.	C.R.	P-value	Decision
DL	--->	FAI	.242	0.238	0.048	5.008	<0.01	Supported
TT	--->	FAI	.168	0.183	0.052	3.481	<0.01	Supported
PEU	--->	FAI	.099	0.102	0.05	2.021	0.043	Supported
SI	--->	FAI	.216	0.232	0.052	4.458	<0.01	Supported

*Note.*The symbol "***" indicates statistical significance at the 0.01 level, DL = Digital Literacy, TT = Trust in Technology, PEU = Perceived Ease of Use, SI = Social Influence, and FAI = FinTech Adoption Intention.

Table 6 represents the results of hypothesis testing using Structural Equation Modeling (SEM), illustrating the hypothesized paths between variables alongside their estimated coefficients, standard errors, critical ratios, and p-values. The findings revealed that Digital Literacy (DL), Trust in Technology (TT), Perceived Ease of Use (PEU), and Social Influence (SI) each significantly impact FinTech Adoption Intention (FAI), supporting the respective hypotheses. Moreover, Digital Literacy (DL) strongly influences FAI, suggesting that increasing digital literacy could significantly boost FinTech adoption. Trust in Technology (TT) also positively affects FAI, indicating that greater trust could enhance the willingness to engage with FinTech solutions. PEU has a smaller yet significant impact, highlighting the importance of user-friendly designs in promoting FinTech adoption. SI significantly impacts FAI, underscoring that peer behaviors and social norms can significantly influence an individual's decision to adopt FinTech. These findings suggest that enhancing digital skills, building trust, simplifying technology use, and leveraging social influence are crucial for increasing FinTech adoption rates.

The results of this study show that DL, TT, PEU, and SI have a significant effect on FAI, are in line with current literature on FinTech adoption behavior and add to existing studies in this regard. For instance, similar to this study, Abed and Alkadi (2024)with the fintech services playing a crucial role in achieving these goals. Although previous research has explored consumer perceptions of novel fintech services, including Buy Now Pay Later (BNPLconfirmed that digital literacy is an important key driver for adopting FinTech technology in Generation Z of Saudi Arabia and highlighted the utility of technological skills in enabling engagement with technology. Likewise, Aggarwal et al. (2023)and Hassan et al. (2022)the acceptance and adoption of fintech services hiked after the outbreak of the virulent coronavirus. With this breakout, the adoption of mobile fintech services (MFSdocumented that trust in technology is a key determinant of FinTech adoption behavior, which aligns with the findings in the present study regarding the influence of TT on FAI.

The positive impact of PEU observed here is consistent with research like Hu et al. (2019) many scholars have studied how information technology is applied to financial services with a focus on extended methods for application. Few scholars have studied the influence mechanism behind the adoption of Fintech services. This paper proposes an improved technology acceptance model (TAMand Phuong et al. (2022), highlighting that usability and simplicity are significant motivators for adopting FinTech services. Additionally, the role of SI in influencing FAI is supported by research such as Rahim et al. (2023) and Yi et al. (2023), which indicates that social norms and peer behaviors strongly affect adoption decisions among millennials and Generation Z.

Moreover, the findings reinforce insights from Solarz and Swacha-Lech (2021), who identified millennials' tendency to be influenced by social and technological factors when adopting innovative FinTech solutions and Mazambani and Mutambara (2020), who highlight similar

patterns in crypto currency adoption in South Africa. The alignment with Meyliana et al. (2019) and Jafri et al. (2024)further emphasized that trust and perceived usability are pivotal in reducing perceived risks and enhancing FinTech acceptance.

These findings contribute to the growing body of knowledge by confirming that digital literacy, trust, usability, and social influence are universal and significant predictors of FinTech adoption, particularly among younger demographics, as evidenced in diverse geographic and cultural contexts. This study offers practical implications for policymakers and FinTech developers in Nepal, suggesting a focus on enhancing digital skills, building trust, simplifying technology interfaces, and leveraging social dynamics to promote FinTech adoption in the region.

V. Conclusion and Implication

This study conclusively demonstrates that Digital Literacy, Trust in Technology, Perceived Ease of Use, and Social Influence are pivotal in influencing the intention of millennials in Karnali Province to adopt FinTech solutions, thereby validating the hypotheses posited. The findings mainly highlight millennials' need to possess the requisite digital skills and knowledge to effectively utilize digital technologies, pointing towards the crucial role of educational and training programs in fostering FinTech uptake. Trust in technology emerges as a cornerstone, with reliable and secure technological solutions essential in cultivating user confidence. The study also confirms that user-friendly and intuitive FinTech services, facilitated by simplified user experiences, are more likely to be adopted. Additionally, the influence of peers and social circles is significant, suggesting that FinTech adoption among millennials can be markedly enhanced by leveraging marketing strategies that employ social proof and peer recommendations.

Building on these insights, the study provides comprehensive implications for broader societal benefits and future research directions. By enhancing digital literacy, greater financial inclusion can be achieved, especially in underserved regions, and more digitally competent youth can be cultivated, ready to engage with advanced financial technologies. The importance of building trust through secure and transparent technologies cannot be overstated, as this is a fundamental pillar supporting the adoption and long-term use of FinTech. Furthermore, the study underscores the potential of user-friendly designs in increasing the accessibility and usability of FinTech applications, which could lead to higher adoption rates. For future research, exploring demographic and cultural influences on FinTech adoption could yield nuanced insights that tailor FinTech development to specific needs. Additionally, examining the impact of policy interventions on FinTech engagement could provide valuable feedback for refining regulatory approaches. Collectively, these efforts can significantly contribute to the strategic growth of FinTech, enhancing economic growth and financial empowerment on a broader scale.

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