

ADOPTION OF FINTECH IN BANKING SECTOR

A Dissertation report submitted to the office of the Dean, Faculty of Management in
partial fulfillment of the requirements for the Master's Degree

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Certification of Authorship

I hereby declare that I have researched and submitted the final draft of dissertation entitled “**Adoption of FinTech in Banking Sector**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Report of Research Committee

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Sincerely,

Sangita Shrestha

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Abbreviations

AVE	Average Variance Extracted
CA	Cronbach's Alpha
CR	Composite Reliability
ECC	Electronic Cheque Clearing
FL	Financial Literacy
HTMT	Heterotrait Monotrait
IMF	International Monetary Fund
IPS	Inter-Bank Payment System
ITAF	Intention to Adopt FinTech
LV	Latent Variables
NRB	Nepal Rastra Bank
PEU	Perceived Ease of Use
PLS- SEM	Partial Least Square- Structure Equation Model
PU	Perceived Usefulness
QR	Quick Response
RTGS	Real-Time Gross Settlement
SE	Self-Efficacy
SI	Social Influence
SPSS	Statistical Package for Social Sciences
SRMR	Standardized Root Mean Square Residual
T	Trust
TAM	Acceptance Model
TRA	Theory of Reasonable Action
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor

Abstract

The main aim of this study is to investigate the determinants (Financial literacy, trust, perceived usefulness, and social influence) of FinTech adoption intention by banking customers in Kathmandu metropolitan city.

The target population of the study is all banking customers who belongs to Kathmandu metropolitan city and in this study, 336 sample size has been used with the assistance of purposive sampling technique. The data are collected with the assistance of primary survey by using structured questionnaires. For this study, the causal and descriptive research methodology has been applied. Likewise, the descriptive statistics are calculated through used of SPSS version 25.0 while the inferential statistics are calculated through use of PLS-SEM method of SMART-PLS version 4.2.

The findings of this research specified that, four out of four paths is significant with p-value smaller than 0.05, therefore that this all four path is significant in 95 percent confidence interval and positive influence in ITAF. Besides, Trust is the most influential variable which affects intentions to adopt FinTech and perceived usefulness. This indicates that users (bank clients) of FinTech at Kathmandu metropolis city believe that, the FinTech service needs to be made trustable and secure. If the providers of FinTech are able to deliver trustable service, then the FinTech is useful for users.

The most important drivers of intention to adoption of FinTech are trust, perceived usefulness, social influence, and financial literacy, respectively. Therefore, the policy makers and FinTech providers should be interested in creating useful and trustworthy FinTech service to increase the adoption rate. Furthermore, they should provide contribution to create financially literate consumer in order to decrease negative social influence and increase adoption rate of FinTech product and service.

Keywords: *Social Influence, Financial Literacy, Trust, Banking Sectors Sector, PLS-SEM.*

CHAPTER I INTRODUCTION

1.1 Background of the Study

Fintech, or financial Technology, refers to the application of technology in the financial sector to improve the efficiency and accessibility of financial services. The term combines "financial" and "technology," highlighting the integration of innovative tools to develop, deliver, and manage financial products effectively. By enabling financial operations through technology, Fintech drives the creation of new business models, applications, processes, and products that significantly influence financial markets, institutions, and service delivery (Raj & Upadhaya, 2020).

In recent times, the adoption of fintech has grown considerably due to ongoing innovations. As a transformative technology, fintech simplifies and improves financial services (Goldstein et al., 2019). It has disrupted the financial services industry, with users transitioning from traditional payment methods to advanced technologies that offer greater convenience and efficiency. Today, digital tools like mobile phones, laptops, and the internet are essential for consumers. Fintech has achieved global reach due to its ability to eliminate barriers in payments and investments (Hong et al., 2020).

Financial service providers now prioritize understanding consumer needs and preferences to create innovative solutions that enhance the financial transaction experience. Fintech services offer multiple benefits, such as reducing risks, improving efficiency, and driving growth. The scope of Fintech has expanded significantly into digital banking and other digital services, presenting immense opportunities for growth (Talwar et al., 2020). Key Fintech services include payments of personal loans, peer-to-peer lending, and credit solutions tailored for public use (Tiwari & Kartika, 2019).

The current global Fintech adoption rate is about 64%, with China and India leading at an equal adoption rate of 87% (Fintech Adoption Index, 2019). According to the IMF (2020), more than 30% of people in Nepal use Fintech for complete financial transactions. However, the NRB Baseline survey on financial literacy in Nepal (2022) indicates that 73.78% of individuals use Fintech payment products, reflecting a compounded growth rate of 58.14%.

This data reveals a 100% increase in Fintech adoption within these two years in Nepal. Globally and within Nepal, Fintech usage continues to rise, demonstrating a sharp growth trend. Currently, numerous Fintech service providers are entering the market, while only a few are succeeding. The primary reason for this happened due to consumers' rapid adoption of advanced and dynamic technologies, influenced by factors such as financial knowledge, perceived usefulness, trust, and social influence. Several studies have explored the variables that drive consumer adoption of new technologies (Lai, 2016). Therefore, this study examines factors influencing Nepalese banking customers' intention to adopt Fintech.

1.2 Problem Statement

The number of Fintech consumers is significantly increasing, reflecting the importance of studying Fintech adoption. Although many Fintech services are available in the market, only a few have proven to deliver effective services. The digital experience has become a key research area due to the efficiency, simplicity, and utility of mobile payment systems (Chiriac et al., 2018). Several factors influence Fintech adoption, including economic, social, and technological aspects, making it essential to explore what motivates users in Nepal to adopt Fintech payment products. So that this is important to study about factor that determine to adoption of Fintech among the payment product user's among banking customers in Nepal.

Hasan et al. (2021) examine the drivers of adoption of Fintech in Netherlands, where the perceived usefulness and perceived ease of use are determinants of attitude towards adopting Fintech. This study revealed that these factors, alongside trust and safety, positively influence adoption. Similarly, Chav and Ou (2021) examined factors affecting consumer intentions to use internet banking and apps in Cambodian banks. The study found significant positive relationships between job relevance, trust, mobility, perceived usefulness, ease of use, attitude, and the intention to use such services.

Taufiq et al. (2023) studied whether financial or digital literacy influences Fintech adoption in Malaysia. They found that perceived ease of use and usefulness, mediated by attitude, strongly influence adoption, with financial literacy playing a critical role. In Bangladesh, Khatun and Tamanna (2020) identified positive relationships between Fintech adoption and

effort expectancy, social influences, facilitating conditions, and perceived reliability, with age significantly moderating these relationships.

Maharjan et al. (2022) explored Fintech adoption among online grocery buyers in Nepal during COVID-19 lockdowns. This study observed a significant positive relationship between attitude and actual e-purchase usage but found no significant relationship between perceived ease of use, value, and Fintech adoption. Mishra et al. (2020) studied mobile banking adoption in Kathmandu, finding that perceived usefulness and attitude significantly affect behavioral intention, with ease of use influencing attitude toward usage intentions.

As of mid-January 2024, 23 million Nepalese use mobile banking, 21 million use wallet, 1.82 million use internet banking, 1.19 million use Connect IPS, and over 15 million use debit and credit card. By mid-June 2023, Nepal saw over 26.29 billion RTGS transactions, 5.39 billion ECC transactions, 4.5 billion Connect IPS transactions, 2.8 billion mobile banking transactions, 2.3 billion wallet transactions, and 3.8 billion QR-based payments. These figures highlight significant growth compared to mid-June 2022, with RTGS transactions declining to 40.5 billion and other categories, such as mobile banking and wallets, experiencing substantial increases (NRB Monthly Payment Systems Indicators, 2024).

Despite this progress, there are some challenges that exist in Nepalese economy. Digital payment systems are predominantly popular in urban areas, while rural areas require collaborative efforts from banks, government, and Nepal Rastra Bank (NRB) to improve financial literacy. The growth of digital payments and the digital economy hinges on seamless interconnectivity among service providers. While some interconnections exist such as mobile banking users transferring funds to wallets across networks comprehensive integration remains limited (Paudel, 2023).

Kongaut and Lis (2017) noted that mobile and smartphone usage has increased globally, however, mobile-based payment adoption remains slow in many developed and developing nations. In contrast, Nepal has witnessed significant growth in Fintech adoption, driven by advancing technology and rising financial literacy. According to the IMF (2020), more than 30% of Nepalese people used Fintech for transactions, while the NRB Baseline survey on financial literacy in Nepal (2022) reported 73.78% adoption of payment systems, marking a

compounded growth rate of 58.14%. These figures indicate a 100% increase in Fintech adoption within two years. So that, this is necessity to conduct more research on payment product users of banking. Thus, to attempt to answer the problem statement, the following research questions have been derived:

- i. What is the perception of users with trust, perceived usefulness, social influence, and financial literacy towards the intention to adopt Fintech?
- ii. What is the relationship between trust, perceived usefulness, social influence, and financial literacy with the intention to adopt Fintech?
- iii. Is there any effect of trust, perceived usefulness, social influence, and financial literacy on the intention to adopt Fintech?

1.3 Objective of the Study

The general objective of the study is to scrutinize the determining factors of Fintech adoption among banking payment product users in Nepal. The underlying specific objective of the study comprises the following:

- i. To analyze the perception of investors with trust, perceived usefulness, social influence, and financial literacy towards the intention to adopt Fintech.
- ii. To access the relationship between trust, perceived usefulness, social influence, and financial literacy with the intention to adopt Fintech.
- iii. To determine the effect of trust, perceived usefulness, social influence, and financial literacy towards the intention to adopt Fintech.

1.4 Hypothesis of the Study

In order to examine and evaluate determining factors of payment product user's to adoption of Fintech in the Nepalese banking context, the following hypothesis has been developed for this study:

H₁: Trust (T) positively affects the intention to adopt Fintech (ITAF).

H₂: Perceived usefulness (PU) positively affects the intention to adopt Fintech (ITAF).

H₃: Financial literacy (FL) positively affects the intention to adopt Fintech (ITAF).

H₄: Social influence (SI) positively affects the intention to adopt Fintech (ITAF).

1.5 Rationale of the Study

This study holds significant value for several reasons. Firstly, it provides critical insights into the factors determining banking payment product user intentions to adopt Fintech services. Such information can assist Fintech-related businesses in designing services and strategies to enhance adoption rates. Additionally, the study benefits regulatory bodies by expanding the understanding of technology adoption, enabling them to protect consumer interests in the rapidly evolving Fintech sector. Overall, this research has the potential to deepen knowledge of user behavior regarding Fintech adoption and shape the direction of the Fintech industry.

The findings of this study also make a meaningful contribution to the existing literature on technology adoption. Consumer behavior concerning technology adoption is frequently explained using models like the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM), which have been widely tested and validated in the context of technology adoption research.

Moreover, this study offers valuable insights for regulators and policymakers. By examining consumer interests and the changing Fintech landscape, policymakers can create balanced regulations that ensure consumer security while fostering innovation and competition. The research provides essential information on consumer preferences and challenges associated with Fintech services, supporting informed policy-making and regulatory decision.

1.6 Limitations of the Study

Rests of all significance, this study has some limitations, such as:

- i. This study focuses solely on financial payment product users in Kathmandu metropolitan city, excluding other fintech stakeholders.
- ii. There might be other variables as well, but this research is limited to trust, perceived usefulness, social influence, and financial literacy.
- iii. Alongside other parts of Nepal, this study is conducted only in Kathmandu metropolitan city.
- iv. The research is based on primary data by using a structured questionnaire.
- v. The descriptive and causal research design is used in this research.

vi. Convenience sampling method is used to select the sample.

CHAPTER II

LITERATURE REVIEW

This chapter covers various aspects of the literature review, including theories developed by scholars related to financial technology adoption. It also reviews empirical evidence specifically focused on variables such as financial literacy, trust, perceived usefulness, social influence, and the intention to adopt Fintech.

2.1 Theoretical Review

In the context of technology adoption, numerous theories have been developed by various scholars, significantly contributing to research in this field. This study focuses on examining the relationship between trust, financial literacy, perceived usefulness, and social influence with the intention of financial payment product users to adopt Fintech. The primary theories supporting the conceptual model include the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), and the Unified Theory of Acceptance and Use of Technology (UTAUT), which are further elaborated below.

2.1.1 Theory of Reasonable Action (TRA)

The Theory of Reasoned Action (TRA) was developed by Fishbein (1967) and later expanded by Fishbein and Ajzen (1975). This theory aims to measure and understand human behavior. It posits that the performance or non-performance of a specific behavior is determined by an individual's intention to perform that behavior and their perception of its outcomes. This framework is valuable for understanding how individuals adopt new technologies, behaviors, or advice.

TRA highlights that demographic, economic, personality, attitudinal, and other individual differences are indirect factors influencing behavior. The theory identifies two primary components that drive an individual's intention to exhibit a specific behavior: Attitude refers to an individual's positive or negative evaluation of performing a behavior and subjective norms represent the social pressures and influences that shape the intention to perform a behavior.

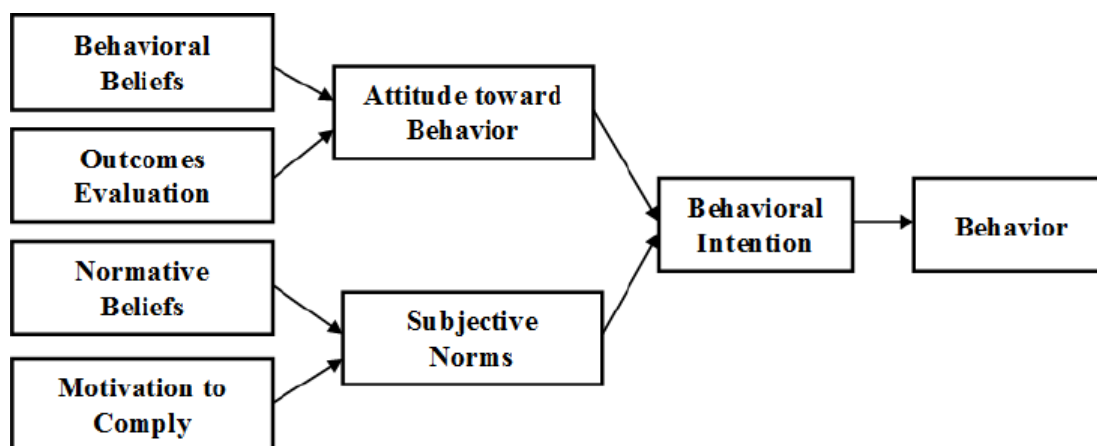
According to TRA, an individual's intention is shaped by the combination of their attitude toward a behavior and their perception of subjective norms. In other words, intention is the

perception of, how individuals view's positively a behavior and the extent to which they perceive social pressure to perform it.

TRA also assumes that individuals have complete control over their actions and tend to behave rationally. Fishbein and Ajzen (1975) assert that intention is a strong predictor of behavior, with the theory emphasizing that individuals are more likely to act on an intention if they think positively about the behavior and believe that significant others support their decision to engage in it.

Figure 1

Theory of Reasonable Action



Source: Fishbein and Azjen (1975)

2.1.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis et al. (1989), was designed to improve the measurement and understanding of factors influencing individuals' intentions to accept and use computer-based technologies. The model emphasizes two key constructs: perceived usefulness and perceived ease of use. It was developed to address the limitations of the Theory of Reasoned Action and incorporate more relevant variables for predicting technology adoption.

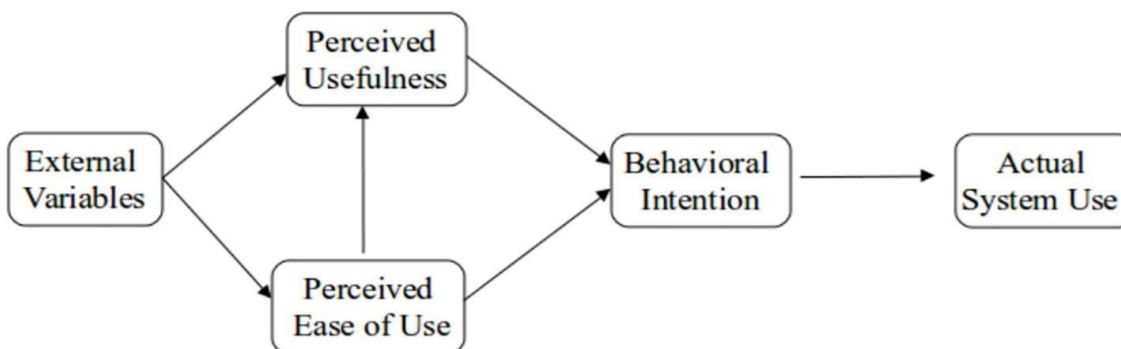
Perceived usefulness refers to the extent to which users believe that adopting a technology will enhance their performance or make financial tasks easier and more efficient. In other words, if a technology proves beneficial and advantageous, users are more likely to form a positive intention to adopt it, and vice versa.

Perceived ease of use reflects the belief that a technology is simple to understand and operate. This construct represents the user's perception of how user-friendly and straightforward the technology is to interact with, taking into account its overall accessibility and simplicity.

Trust was later introduced as an extended variable to the TAM by researchers such as Gefen et al. (2003), Mattila (2003), and Giovanis et al. (2012). Widely accepted in studies focusing on internet-related technologies, trust is considered a critical factor directly influencing perceived usefulness and the intention to adopt technology. According to Gefen et al. (2003), when individuals perceive a technology as trustworthy, they are more likely to adopt and use it.

Figure 2

Technology Acceptance Model



Source: Davis et al. (1989)

2.1.3 Unified Theory of Acceptance and Use of Technology

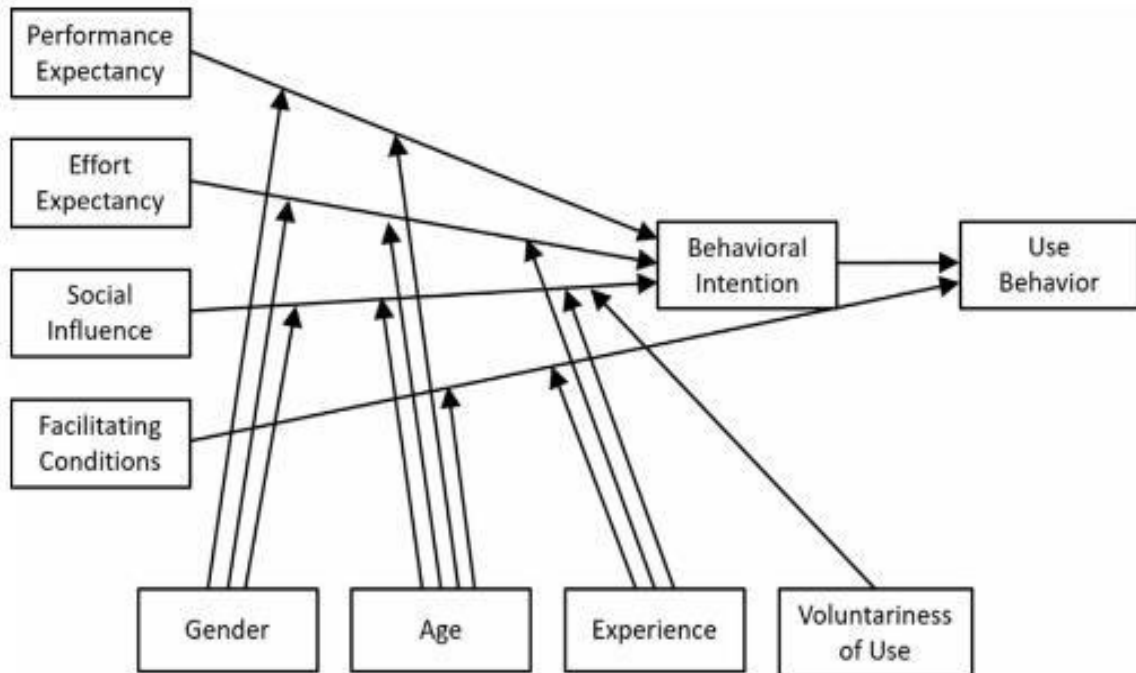
The Unified Theory of Acceptance and Use of Technology (UTAUT), introduced by Venkatesh et al. (2003), aims to explain consumer intentions to use information systems and the resulting actual usage behavior. This theory identifies key determinants of intention to

use technology, including social influence, performance expectancy, effort expectancy, and facilitating conditions. It also incorporates demographic factors such as gender, age, experience, and voluntariness of use as important moderating variables.

UTAUT serves as an expanded version of the Technology Acceptance Model (TAM), providing a more comprehensive framework. According to the theory, these determinants can reliably predict both an individual's intention to adopt technology and their actual usage behavior.

Figure 3

Unified Theory of Acceptance and Use of Technology



Source: Venkatesh et al. (2003)

2.2 Empirical Review

Taufiq et al. (2023) investigated how financial and digital literacy influence consumers' adoption of FinTech in Malaysia. The study used perceived usefulness, perceived ease of use, financial literacy, attitude, and digital financial literacy as key variables. The sample size of 302 was selected using non-probability sampling. The questionnaire was distributed online,

and responses were measured using a four-point Likert scale, ranging from 1 ("strongly disagree") to 4 ("strongly agree"). Data analysis was conducted using SPSS version 26.0, Smart PLS version 3.2.9, and Structural Equation Modeling. The study found that perceived ease of use and perceived usefulness, mediated by attitude, positively influenced consumers' intention to adopt FinTech. Additionally, the research revealed a strong correlation between an individual's financial literacy and their intention to adopt FinTech, while digital literacy showed no significant effect on this intention.

Maharjan et al. (2022) examined FinTech adoption among online grocery buyers during the COVID-19 lockdowns in Nepal. The study used perceived ease of use, perceived value, attitude, and trust as key constructs to measure actual e-purchases. An exploratory research design was employed, with data gathered through structured questionnaires. Both descriptive and inferential statistics, including structural equation modeling, were utilized to analyze the data. A total of 280 respondents participated in the study. The findings indicated that attitude significantly influences actual purchases, whereas trust did not serve as a partial mediator between the dependent and independent variables. The internet has become a crucial element in marketing strategies and customer relationship management in the digital marketplace. Six out of eight constructs (perceived value, perceived usability, attitude, internet, trust, and actual e-purchase) were found to fit and validate the model.

Chan et al. (2022) explored consumer adoption of FinTech, focusing on Open Banking. Using the UTAUT model, they integrated perceived risk, initial trust, and financial literacy into a comprehensive conceptual framework. The study employed a quantitative and empirical approach, gathering data from 456 survey respondents in Australia. Partial least squares structural equation modeling was used to test the hypotheses. The model showed strong explanatory power, with an R² of 69.5%. Key findings highlighted that performance expectancy, effort expectancy, social influence, and perceived risk directly influenced consumers' intention to use Open Banking. Social influence mediated intention through performance expectancy, while initial trust positively impacted the relationship between effort expectancy, performance expectancy, and adoption intention. Higher financial literacy was linked to reduced initial trust in Open Banking, suggesting potential consumer skepticism.

Jariyapan et al. (2022) investigated the factors influencing behavioral intention to use cryptocurrency in an emerging economy during the COVID-19 pandemic, applying the Technology Acceptance Model. The study considered eight variables: subjective norms, experience, computer anxiety, computer self-efficacy, financial literacy, perceived risk, perceived ease of use, and perceived usefulness. Data were collected through a cross-sectional questionnaire from 357 Pakistani business-educated adults, including investors familiar with technology and financial instruments. The research used partial least squares-based structural equation modeling to test the theoretical framework. The PLS model explained 72.1% of the factors influencing behavioral intention. Interestingly, perceived risk was not a major concern, possibly due to respondents' perception of cryptocurrency's insecurity. However, willingness to manage cryptocurrency risk might still hinder broader acceptance. Perceived usefulness was identified as the most critical factor in cryptocurrency adoption, with experience not significantly moderating the relationships. Perceived usefulness also acted as a partial mediator between subjective norm and perceived ease of use.

Hasan et al. (2021) examined the drivers of FinTech adoption in the Netherlands, focusing on the role of perceived usefulness and perceived ease of use as determinants of attitude toward adopting FinTech. The study considered factors such as security, risk, trust, perceived usefulness, perceived ease of use, perceived value earned, and perceived value loss as measuring constructs. A quantitative research method was used, with convenience non-probability sampling. Out of 217 sheet of self-developed questionnaires distributed, 204 valid responses were collected online. The data were analyzed using ANOVA, correlation, and regression analysis. The study found that perceived usefulness, perceived ease of use, security, and privacy had a significant positive impact on the adoption of FinTech.

Chav and Ou (2021) explored the factors influencing consumer intentions to use internet banking and mobile apps in Cambodia. The study used constructs such as mobility, trust, job relevance, perceived usefulness, perceived ease of use, and attitude. A quantitative research method was applied, with a sample size of 250 participants determined through non-probability sampling. The 37 questionnaire was distributed online, and responses were measured using a five-point Likert scale. Data analysis was conducted using IBM SPSS

version 25 and AMOS version 23, including descriptive analysis, exploratory factor analysis, reliability analysis, confirmatory factor analysis, and structural equation modeling (SEM). The findings indicated significant positive relationships between perceived usefulness, perceived ease of use, trust, mobility, job relevance, and attitude toward the intention to adopt mobile banking.

Balcazar et al. (2021) investigated the factors determining the intention to adopt FinTech services by micro and small business owners in Chiclayo, Peru. The study focused on constructs such as attitude, government support, trust, perceived ease of use, brand image, user innovation, perceived risk, and perceived usefulness. Using the extended technology acceptance model, the research applied a quantitative approach to analyze these nine variables. A sample of 101 business owners was chosen through non-probability sampling, and data were collected via a structured online questionnaire. SEM-PLS bootstrapping was used for data analysis. The results revealed that government support and perceived ease of use had only limited effects, while user innovation did not significantly influence the intention to adopt FinTech services.

Xie et al. (2021) examined the impact of perceived value and perceived risk on understanding FinTech platform adoption. The study adopted the UTAUT theory, incorporating constructs such as social influence, performance expectancy, effort expectancy, facilitating conditions, perceived risk, and perceived value. Initially, 314 responses were collected, with 201 valid responses remaining after excluding invalid or incomplete questionnaires. The study employed a quantitative and empirical methodology, using structural equation modeling (SEM) for data analysis. The findings indicated that perceived value, perceived risk, and social influence were strongly correlated with individuals' intention to adopt FinTech. Furthermore, performance expectancy and effort expectancy influenced individuals' perceived value, which subsequently affected their adoption intention.

Setiawan et al. (2021) explored user innovativeness and its impact on FinTech adoption in Indonesia. The study used financial health, financial literacy, brand image, perceived ease of use, perceived usefulness, attitude, user innovativeness, and government support as key constructs. A causal research design was adopted, with data collected via online questionnaires from 485 FinTech users between December 2020 and April 2021. Smart-PLS

3.0 was employed for data analysis and path modeling. The findings revealed that user innovativeness significantly predicts FinTech adoption, both directly and indirectly. Additionally, user attitude was identified as the most important factor influencing FinTech adoption. Interestingly, financial literacy was found to be the least significant predictor of FinTech adoption, suggesting that FinTech services may be accessible even to the unbanked and individuals with low financial literacy.

Le (2021) investigated the factors that influence the intention and loyalty to use FinTech after the COVID-19 lockdown, focusing on post-lockdown behavior as the new normal behavior. The study examined the impact of COVID-19, trust, data security and privacy, quality administrative services, and perceived usefulness on the intention to adopt FinTech. Data was collected from 247 respondents via Mechanical Turk (M-Turk) to ensure human intelligence inclusion. Structural equation modeling was used to predict the factors affecting intention and loyalty towards FinTech use following the COVID-19 lockdown. Harman's single-factor test assessed common method bias. The findings revealed that factors such as the COVID-19 lockdown, trust, data security and privacy, and particularly customer service, all enhance the intention to use FinTech, primarily through perceived usefulness.

Jebarajakirthy and Shankar (2021) investigated the impact of online convenience on mobile banking adoption intention using a moderated mediation approach. The study focused on several convenience factors, including access convenience, search convenience, evaluation convenience, transaction convenience, benefit convenience, post-benefit convenience, along with perceived utilization, perceived hedonic value, and perceived security. This explanatory and quantitative research collected 446 responses from Indian banking users using systematic sampling. Covariance-based structural equation modeling and the PROCESS macro were used to test the hypotheses. The findings revealed that access convenience, transaction convenience, benefit convenience, and post-benefit convenience significantly influenced the intention to adopt mobile banking (m-banking). Additionally, perceived hedonic and utilitarian values were found to mediate the relationship between convenience dimensions and m-banking adoption intention.

Mishra et al. (2020) investigated the adoption of mobile banking among users in Kathmandu Metropolitan City, using the lens of the Technology Acceptance Model. The study focused

on perceived usefulness, perceived ease of use, and attitude as the key constructs influencing behavioral intention. A cross-sectional research design was employed, with correlation coefficients and standard deviations computed, followed by assessing reliability using Cronbach's alpha. Hypotheses were tested using bivariate regression with Ordinary Least Squares (OLS). The study involved a sample of 151 participants, with responses measured on a five-point Likert scale. The findings indicated that perceived usefulness and attitude towards mobile banking had a significant influence on behavioral intention. Additionally, perceived ease of use was found to significantly affect attitudes towards the intention to adopt mobile banking.

Akinwale and Kyari (2020) examined the factors influencing attitudes and the intention to adopt financial technology services among end-users in Lagos State, Nigeria. The constructs studied included attitude, trust, usefulness, and social influence. The research employed the extended Technology Acceptance Model to identify key factors affecting FinTech adoption. Conducted with 467 end-users in Lagos, the study used structural equation modeling for analysis. All variables were measured using a five-point Likert scale, ranging from '1 = Not sure' to '5 = Most likely'. The results showed that perceived usefulness, perceived ease of use, service trust, and social influence had a positive and significant impact on users' attitudes toward FinTech services. Additionally, users' attitudes significantly influenced their intention to adopt FinTech services, with strong path weights at a 1% level of significance.

Singh et al. (2020) explored the drivers of FinTech adoption through a multi-method evaluation using an adapted technology acceptance model. The study identified security, responsiveness, social influence, usefulness, and ease of use as determinants of users' intention to adopt and use FinTech services. The measurement scale was developed through repeated expert discussions. Data was collected from 439 active internet users via a digital survey, and structural equation modeling and multi-group analysis were used for data analysis. The study found that perceived usefulness and social influence are key determinants of behavioral intention, with social influence having a significant negative effect. Actual use was significantly influenced by ease of use and social influence, but not by behavioral intention or perceived usefulness. Behavioral attributes were significantly impacted by

technological attributes and digital behavior, with age playing a significant role in the perception of security among older users.

Khatun and Tamanna (2020) studied the factors determining the adoption of FinTech in Bangladesh, using the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The study identified eight factors: performance expectancy, effort expectancy, self-efficacy, social influence, facilitating conditions, nervousness, added value, and perceived reliability. A well-structured face-to-face survey was conducted, and data from 265 employees were analyzed using Structural Equation Modeling (SEM) with the Least Squares method. The study revealed a positive relationship between consumer intention to adopt FinTech and factors such as effort expectancy, social influence, facilitating conditions, and perceived reliability. Additionally, the age of respondents was found to significantly moderate almost all factors influencing FinTech adoption.

Dewi and Rahadi (2020) conducted a conceptual study on technology adoption for online mutual fund investment platforms. The study used a descriptive research design and identified several variables, including performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habits, content design quality, user interface, and perceived trust, as determinants of behavioral intention. Multi Linear Regression was used to analyze the data. The study found that performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habits directly influenced behavioral intention, while content design quality, user interface, and perceived trust also impacted behavioral intention to adopt the platform.

Jungaer and Mietzner (2019) studied the adoption of FinTech by German households in the banking sector. They identified self-assessment and financial characteristics as determinants of adoption intention. The research employed a quantitative and empirical methodology, with a sample size of 323 households. Principal component analysis was used to address high collinearity between items. The study found that households' levels of trust and comfort with new technologies, financial literacy, and transparency impact their likelihood of adopting FinTech. Specifically, households with low levels of trust, good financial education, and a preference for transparency were more likely to adopt FinTech. In contrast, household price perceptions did not significantly affect the likelihood of switching to FinTech.

Hu et al. (2019) examined the adoption intention of FinTech services among bank users using an extended technology acceptance model. The study included determinants such as perceived usefulness, ease of use, trust, perceived risk, brand image, government support, user innovativeness, and attitude. A sample of 387 eligible users was analyzed using structural equation modeling (SEM), with statistical analysis conducted using Smart-PLS 3.0. The findings revealed that trust in FinTech services significantly influenced users' attitudes toward adoption. However, perceived ease of use and perceived risk did not significantly affect users' attitudes toward adopting FinTech services.

Lai (2016) examined the Design and Security impact on consumers' intention to use single platform E-payment. The design, perceived ease of use, perceived usefulness and security factors used as construct. The study's total population is 1,370, with a sample size of 450 determined using a non-probability sampling technique. A five-point Likert scale, ranging from "strongly agree" to "strongly disagree," was employed to measure consumers' intention to use a single platform e-payment system. Data analysis was conducted using structural equation modeling (SEM). The analysis revealed that design and security have significant positive relationships with perceived usefulness and perceived ease of use. Additionally, there is a significant positive relationship between security and the intention to adopt a single platform e-payment system, mediated by perceived ease of use and perceived usefulness. The findings suggest that higher security in an e-payment system increases the intention to adopt a single platform e-payment system, mediated by perceived usefulness and perceived ease of use.

Giovanis et al. (2012) studied the adoption of internet banking services in Greece by extending the Technology Acceptance Model (TAM) with innovation diffusion theory and security/privacy risk. The empirical and causal research methods were employed, targeting offline banking customers familiar with the internet. Constructs included compatibility, perceived ease of use, perceived usefulness, perceived security and privacy risks, customers' demographics, and IT competencies. A total of 212 samples were analyzed using personal interviews and a structural questionnaire with the partial least squares method. The study found that service compatibility was the primary factor influencing customers' behavioral intentions to adopt internet banking, followed by TAM constructs and perceived risk.

Perceived security and privacy risks were identified as partial mediators in the relationship between compatibility and adoption intentions, while perceived usefulness partially mediated the relationship between perceived ease of use and adoption intentions.

2.2.1 Empirical review matrix

Table 1

Empirical Review Matrix

S.N.	Author and Year	Title	Objectives	Method	Findings
1	Taufiq et al. (2023)	Does Financial Literacy or Digital Literacy Determine a Consumer Use of FinTech?	To examine the factors influencing consumers' desire to adopt FinTech with a particular focus on the impact of consumers' financial and digital literacy on the willingness to adopt FinTech.	Method: quantitative research method Sampling: non-probability sampling. Sample size: 302 -The SPSS version 26.0 and Smart PLS version 3.2.9 and Structural Equation Modeling were used to analyze data.	PEU and PU, mediated by attitude and FL are positive influenced with consumer use of FinTech. Digital literacy has not significant effect.
2	Maharjan et al. (2022)	FinTech Adoption among Online Grocery Buyers during COVID-19 Lockdowns in Nepal	To understand online grocery buyers' prior knowledge imprint in FinTech adoption during COVID-19 lockdowns	Method: exploratory research design Sampling: Convenience Sample size: 280 descriptive and inferential statistics is used with the help of structural	PV, PEU and T has not significant with actual e-purchase, while, Attitude has significance effect

equation modeling.

3	Chan et al. (2022)	Towards an understanding of consumers' FinTech adoption: the case of Open Banking	To identify key factors driving consumers' adoption of Open Banking	Method: Quantitative & empirical research method. Sampling: Representative Sample size: 456 PLS-SEM was used to analyze data	PE, EE, SI and PR direct significant with intention to adoption while trust is not significant. Also FL not significant as moderator of PE and EE. Trust significant mediating role with PE, EE and PR and PE
4	Jariyapan et al. (2022)	Factors Influencing the Behavioral Intention to Use Crypto currency in Emerging Economies During the COVID-19 Pandemic	To investigate the factors which influence the behavioural intention to use cryptocurrency based on the Technology Acceptance Model 3	Method: Empirical and quantitative research method Sampling method: Cluster area Sample size: 357 Partial least square (PLS)-based structural equation modeling (SEM) was used to analyze data.	SN, PU, PEU and FL are significant with behavior intention and PR is not significant. Also PEU and SN significant with PU and CS significant with PEU, while CA not significant with PEU. Furthermore there is not any moderating effect.

5	Hasan et al. (2021)	Evaluating Drivers of FinTech Adoption in the Netherlands	To ascertain what the main factors are which affect Dutch customers' adoption and experience of mobile payments	Method: quantitative research method Sampling: convenience non probability sampling. Sample size: 204 -ANOVA, correlation and regression were used.	Significant positive impact of PU, PEU, S&P towards adoption of FinTech.
6	Chav and Ou (2021)	The Factors Influencing Consumer Intentions to Use Internet Banking and Apps	To examine the relationships among job relevance, trust, mobility, perceived ease of use, perceived usefulness, attitude toward using, and intention to use of internet banking and apps	Method: Quantitative research. Sampling: convenience, purposive, and snowball. sample size: 250 -SPSS, AMOS and SEM were used to analyze hypothesis.	There is significant positive relationship of PU, PEU, trust, mobility, JR and attitude towards intention to adopt mobile banking.
7	Balcazar et al. (2021)	determining factors of the Intention to Adopt FinTech Services by Micro and Small Business Owners from Chiclayo, Peru	To determine the factors that influence the intention to adopt fintech services by micro and small business owners	Method: Causal Sampling: Convenience Non-probability sampling Sample size: 101 -The PLS-SEM tools are used to analyze and	The study showed that GS and PEU have limited effect, while UI not significant in the intention to adopt FinTech. And other factors significant with intention to adopt FinTech.

test hypothesis

8	Xie et al. (2021)	Understanding FinTech Platform Adoption: Impacts of Perceived Value and Perceived Risk	To investigate the factors that affected individuals' acceptance of FinTech services, especially on internet wealth management platforms	Method: Quantitative & empirical Sample size: 314 collected, 201 responses were obtained. -The structural equation model (SEM) was used to analyze data.	The results indicate that PV, PR, and SI are significant with FinTech adoption intention, whereas PE, EE, and PR affect PV, which in turn influences adoption intention.
9	Setiawan et al. (2021)	User innovativeness and FinTech adoption in Indonesia	To explore user innovativeness and its impact on FinTech adoption in Indonesia	Method: causal research design Sampling: Purposive Sample size: 485 -Data analysis and path modeling was performed using smart-PLS 3.0.	The BI, PU, AT, FL, and UI are significant with intention to adoption of FinTech, while, PEU significant through Mediating path of PU and GS significant through mediating path of FL & UI both. The FH is not significant.

10	Le (2021)	Examining factors that boost intention and loyalty to use FinTech post-COVID-19 lockdown as a new normal behavior	To investigate the factors that influence the intention and loyalty to use FinTech after the COVID-19 lockdown	Method: Qualitative Sampling: Stratified Sample size: 247. -Mechanical Turk (M-Turk), and structural equation modeling was used. The study used Harman's single-factor tests to examine common method of bias.	The findings of the study that, COVID-19 lockdown, T, S&P, and QAS are Significant with intention to use through perceived usefulness.
11	Jebarajakirthy and Shankar (2021)	Impact of online convenience on mobile banking adoption intention: A moderated mediation approach	To investigate the effect of online convenience dimensions on mobile banking adoption intention using a comprehensive moderated mediation framework.	Method: Quantitative Sampling: The systematic Sample size: 446 - Covariance based Structural equation modeling and PROCESS macro was used to examine the hypotheses.	The results revealed that AC, TC, BC, and PBC have a crucial impact on adoption intention. The perceived hedonic values and perceived utilitarian values mediate the effects of convenience aspect on adoption intention.

12	Mishra et al. (2020)	Adoption of Mobile Banking Among Users in Kathmandu metropolitan city Valley: Lens of Technological Acceptance Model	To investigate the adoption of mobile banking among users in Kathmandu Metropolitan City	Method: cross-sectional research design. Sampling: Convenience Sample size: 151 Hypotheses have been tested using bivariate regression using OLS.	The result revealed that, PU and PEU significant effect with AT towards adoption intention.
13	Akinwale and Kyari (2020)	Factors influencing attitudes and intention to adopt financial technology services among the end-users in Lagos State, Nigeria	To investigate the factors influencing the attitudes and intention of the end-users towards using Fintech services	Method: Exploratory Sampling: Convenience Sample size: 467 -Model are analyze through using structural equation model analysis.	The results revealed that PU, PEU, T and SI have positive and significant impact on users' attitude towards FinTech service.
14	Singh et al. (2020)	What drives FinTech adoption? A multi-method evaluation using an adapted technology acceptance model	To examine FinTech adoption and use from the technology acceptance perspective	Method: Quantitative & empirical Sampling: Convenience and random Sample size: 439 -Structural equation modeling and multi-group analysis is used.	PU and SI are found to be significant with intention to use FinTech, while SI negative effect. AU is significantly influenced by PEU and SI but is not significant with intention and PU. Behavioral attributes are significant with technological attributes and digital behavior.

15	Khatun and Tamanna (2020)	Factors determining the adoption of FinTech: a study based on the financial institutions in Bangladesh	To examine the factors influencing the adoption of Fintech in the financial institutions of Bangladesh	Method: Quantitative Sampling: Convenience Sample size: 265 -Structural Equation Modeling (SEM) with Generalized Least Squares method has been used to analyze	The study found that, there is significant positive relationship between EE, SI, FC and PR with intention to adopt FinTech. Additionally the age play the significant moderating effect on almost all the factors expecting PE and SE.
16	Dewi and Rahadi (2020)	A Conceptual Study of Technology Adoption of Online Mutual Fund Investment Platform	To conduct a conceptual study on technology adoption for online mutual fund investment platforms	Method: descriptive research design -a statistical method (Multi Linear Regression) is used to analyze data.	It is found that PE, EE, SI, FC, HM, PV, H, CD, Q, UI and PT have significant direct relation with intention to adoption.
17	Junger and Mietzner (2020)	Banking goes digital: The adoption of FinTech services by German households	To provide insights about the adoption of new technologies and services in the financial industry by German households	Method: Quantitative & empirical Sample size: 323 -The principal component analysis and bivariate regression is used to analyze data	Results indicate that the T, FL, and overall transparency are significant with intention to adopt. While, price perceptions not significant with intention to adoption.

18	Hu et al. (2019)	Adoption Intention of FinTech Services for Bank Users: An Empirical Examination with an Extended Technology Acceptance Model	To improved technology acceptance model that incorporates user innovativeness, government support, brand image, and perceived risk as determinants of trust to investigate how users adopt Fintech service	Method: Quantitative Sampling: Random Sample size: 387 -Structural equation model (SEM) is used to test the hypotheses.	The results reveal that T is very significant with attitudes towards FinTech adoption, along with PU, BI, GS and UI. In addition, PEU and PR do not significant with attitudes toward the FinTech adoption.
19	Lai (2016)	Design and Security impact on consumers' intention to use single platform E-payment	To examine the Design and Security impact on consumers' intention to use single platform E-payment	Method: Empirical and quantitative Sampling: Non-probability Sample size: 450 -The structural equation modeling (SEM) is used to analysis of data.	The result indicate that the D and S have significant impact with intention to adoption through both direct and mediation with PEU and PU.
20	Giovanis et al. (2012)	An extension of TAM model with IDT and security/privacy risk in the adoption of internet banking services in Greece	To study the adoption of internet banking services in Greece by extending the Technology Acceptance Model	Method: The exploratory research method Sampling: Convenience Sample size: 212 -PLS-SEM is used to analyze the hypothesis.	The results found that, ITE insignificant with PEU and PU but significant with C and SPR towards adoption intention. Further the gender not significant with SPR, while other factors significant with intention.

2.3 Research Gap

In the context of FinTech adoption, various researchers have conducted studies that address different aspects of the topic, highlighting gaps that can be explored by future researchers. For instance, Kumari and Lodha (2022) explored the moderating effect of self-efficacy and social influence on e-payment adoption among Indian millennials. They found that social influence had an insignificant moderating effect on the relationship between perceived usefulness and behavioral intention, thus suggesting a gap for future research to explore the role of social influence in different contexts. Similarly, studies by Taufiq et al. (2023), Mishra et al. (2020), Chav and Ou (2021), Hu et al. (2020), Khatun and Tamanna (2020), and Balcazar et al. (2021) focused on various aspects of behavioral intention to adopt different FinTech products and services, also identifying gaps that could be addressed by future studies.

After careful review of the literature on FinTech adoption reveals that Chav and Ou (2021) studied the factors influencing consumer intentions to use internet banking and mobile apps in Cambodia, using the Technology Acceptance Model (TAM). Their study identified key constructs like mobility, trust, job relevance, perceived usefulness, perceived ease of use, and attitude. Building on this, the current study integrates both the TAM and Unified Theory of Acceptance and Use of Technology (UTAUT) models, adding new variables to fill the theoretical gap identified in the works of Chav and Ou (2021) and Khatun and Tamanna (2020).

Moreover, Kumari and Lodha (2022), Hu et al. (2020), and Balcazar et al. (2021) highlighted the need for exploring physiological factors, such as social influence, in the adoption of FinTech. The current study addresses this gap by examining the direct effect of social influence on the intention to adopt FinTech.

Furthermore, Mishra et al. (2020) overlooked important factors such as trust, social influence, and financial literacy, which significantly impact technology adoption. The current study addresses this gap by incorporating these factors into the analysis, thus contributing to a more comprehensive understanding of the factors that influence FinTech adoption.

CHAPTER III

RESEARCH METHODOLOGY

This chapter addresses various aspects of the research methodology, including research design, population of the study, sampling techniques, sources of data, and tools and techniques for data analysis. Additionally, it develops a conceptual framework and identifies the research gap, highlighting the study's unique contribution to the field.

3.1 Research Design

This study employs both causal and descriptive research designs. The descriptive research design is utilized to describe and understand the characteristics of the respondents and their responses. The causal research design, on the other hand, focuses on establishing cause-and-effect relationships by examining how independent variables influence dependent variables. Specifically, the causal research design in this study explores how motivational or influencing factors affect the intention to adopt FinTech among payment product users of banking. The study examines the relationship between independent variables (perceived usefulness, trust, social influence, and financial literacy) representing the cause, and the dependent variable (intention to adopt FinTech) representing the effect.

3.2 Population and Sample, and Sampling design

According to the NRB Baseline survey on financial literacy in Nepal (2022), 73.58% of people from metropolitan cities use FinTech for conducting financial transactions. Therefore, the population for this study consists of 792,804 (NRB Baseline survey on financial literacy in Nepal, 2022) banking customers who use FinTech to make financial transactions within Kathmandu Metropolitan City.

Furthermore, the convenience sampling technique is used in this research. The sample size of this research is determined by using Gefen et al. (2000) and Hair et al. (2019) model. This suggests that the valid sample size for research can be determined by multiplying the number of items by 10, which is a rule of thumb. This approach is widely applied in survey-based studies to establish a valid sample size. In this study, the sample size is determined using this method: (Number of Items \times 10).

The total 24 items are used to assess users' perceptions regarding their intention to adopt FinTech in this research, resulting in a calculated sample size of $(24 \times 10 = 240)$. To ensure robustness in data collection, 350 questionnaires are distributed to respondents, where 336 valid responses are obtained and used for data analysis. The remaining 14 questionnaires are excluded due to incomplete responses, ensuring the quality and reliability of the research findings.

3.3 Nature and Source of Data Collection

This study utilizes both primary and secondary sources of data. Primary data is collected using a survey method, which involves distributing questionnaires and collecting responses from individuals residing in Kathmandu Metropolitan City who have used FinTech at least once. Secondary data is obtained from various sources, including journals, articles, and online resources, to support and validate the study.

The survey questionnaire is designed in a closed-ended (Multiple choice and Likert scale) format and distributed through both online and offline channels to ensure respondent convenience. For the online mode, the questionnaire is shared via social media platforms and email using Google Forms. For the offline mode, the questionnaire is distributed in person to respondents through physical interactions.

Likewise, the basic and variables related information includes a range of question types, like multiple choice and Likert scale questionnaire is structured into two sections. Section "I" focused on capturing the demographic profile of respondents, while Section "II" addresses users' perceptions regarding their intention to adopt FinTech.

The questions in Section "II" are developed using a five-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) to assess users' perceptions of their intention to adopt FinTech. The data collected was quantitative in nature.

The measurement items for the latent variables were derived from the following sources:

Table 1

Source of Measurement Items

Variables	Questionnaires	References
SI	SI1, SI2, SI3, SI4	Vankatesh et al. (2003)
T	T1, T2, T3, T4, T5	Chav &Ou (2021); Le (2021)
FL	FL1, FL2, FL3, FL4, FL5	Ramos (2016)
PU	PU1, PU2, PU3, PU4, PU5	Davis et al. (1989)
ITAF	ITAF1, ITAF2, ITAF3, ITAF4, ITAF5	Chav &Ou (2021); Le (2021)

3.4 Methods of Data Analysis

This study applies both descriptive and inferential statistics to analyze the data. Descriptive statistics, including mean, standard deviation, skewness, and kurtosis, are used to explore the characteristics and understanding of respondents regarding their intention to adopt FinTech.

Descriptive Statistics

Mean (\bar{x})

Mean refers to the average value of responses collected from participants regarding their perceptions of trust, perceived usefulness, financial literacy, social influence, and intention to adopt FinTech. It is computed by dividing the total number of things by the sum of all items.

$$\text{Mean } (\bar{x}) = \frac{\sum fx}{N}$$

Where,

N = number of values

X = individual's values

Σ = summation symbol

Standard Deviation (σ)

Standard deviation is used to measure how much individual responses vary from the mean value of a single variable. In this study, it helps to understand the level of variation in responses related to independent variables such as trust, perceived usefulness, financial literacy, and social influence, as well as the dependent variable, intention to adopt FinTech.

$$\text{Standard Deviation (S.D.)} = \sqrt{\frac{\sum (X - \bar{X})^2}{n-1}}$$

Where,

SD = standard deviation

n = number of observations

\bar{X} = arithmetic mean

Σ = summation symbol

Skewness

Skewness measures the asymmetry of the distribution of responses around the mean. In this study, it helps to understand how participants feel about key factors like trust, perceived usefulness, financial literacy, social influence, and their intention to adopt FinTech.

$$SK = \frac{\sum_{i=1}^N (X - \bar{X})^3}{(N-1)S^3}$$

Where,

Σ = summation symbol

X_i = individual data point

\bar{X} = mean of the distribution

N = number of observations in the sample

S = standard deviation of the sample

Kurtosis

Kurtosis refers to the statistical measure that describes the shape of a variable's distribution. In this study, kurtosis helps assess the concentration of responses around the mean for variables

such as trust, perceived usefulness, financial literacy, and social influence.

$$\text{Kurtosis} = \frac{\sum_{i=1}^N (x - \bar{x})^4}{(N-1)S^4}$$

Where,

Σ = summation symbol

X_i = individual data point

\bar{X} = mean of the distribution

N = number of observations in the sample

S = standard deviation of the sample

Inferential Statistics

For inferential statistics, Smart PLS version 4.2 is employed, using Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze measurement and structural models. According to Hair et al. (2014), PLS-SEM is a widely recognized technique for delving into respondent perceptions of exogenous factors.

The measurement model, also known as the outer model, assesses the relationships between latent variables and their constructs. It evaluates construct reliability, validity, discriminant validity, and convergent validity. Following the measurement model assessment, the structural (inner) model is analyzed to examine correlations and causal relationships between latent variables. The structural model assesses inner model collinearity (VIF), hypothesis testing, model explanatory and predictive power, effect size, and goodness of model fit.

To enhance data accuracy, 10,000 subsamples are created using the bootstrapping technique, as recommended by Hair et al. (2022).

3.4.1 Research model

The following model has been accessed from Akiwale (2020) to find out the effect of trust, perceived usefulness, financial literacy and social influence on the intention to adoption of Fintech:

$$ITAF = \beta_0 + \beta_1T + \beta_2PU + \beta_3FL + \beta_4SI + \varepsilon$$

Where,

ITAF = Intention to adopt FinTech

β_0 = Regression coefficients

β_1 = Coefficient of Trust

β_2 = Coefficient of Perceived usefulness

β_3 = Coefficient of Financial literacy

β_4 = Coefficient of Social influence

T = Trust

PU = Perceived usefulness

FL = Financial literacy

SI = Social influence

ε = Error term

3.4.2 Expected outcome of the study

In order to examine and evaluate determining factors of payment product users to adoption of FinTech, the following outcomes are expected:

Table 2

Expected Outcome of the Study

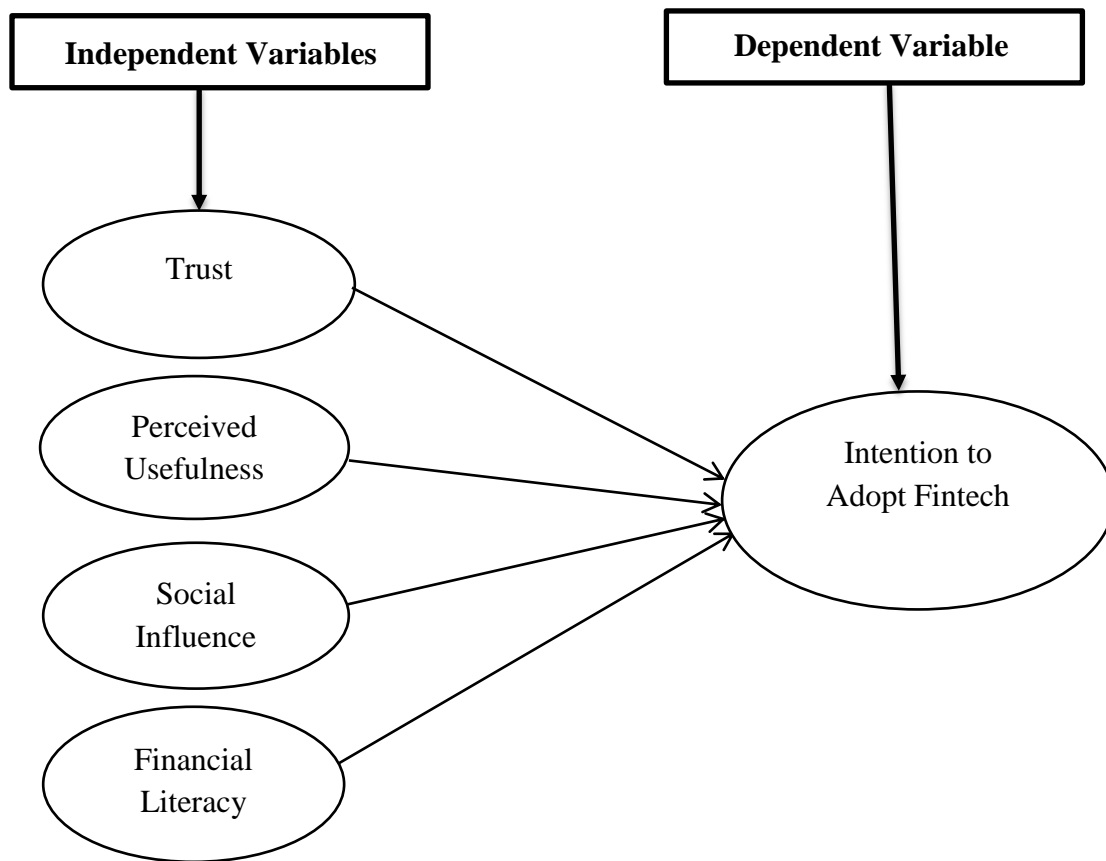
Hypothesis	Statement	Expected sign	Expected result
H ₁	Trust (T) positively affects the intention to adopt FinTech (ITAF).	+	Supported
H ₂	Perceived usefulness (PU) positively affects the intention to adopt FinTech (ITAF)	+	supported
H ₃	Financial literacy (FL) positively affects the intention to adopt FinTech (ITAF)	+	Supported
H ₄	Social influence (SI) positively affects the intention to adopt FinTech (ITAF)	+	Supported

3.5 Conceptual Framework

This study utilizes the Technology Acceptance Model (TAM) to identify the factors determining payment product users' adoption of FinTech. Additionally, the model was employed to explore the impact of perceived usefulness on users' intention to adopt FinTech.

Figure 4

Conceptual Framework



Source: Davis et al. (1989), Vankatesh et al. (2003), and Taufiq et al. (2023)

To enhance its applicability, the TAM framework is extended by incorporating the concept of trust as a key determinant.

These studies have also examined users' confidence, decision-making, and assurance levels regarding specific tasks or their performance while using FinTech. To this end, social influence was included as a measured variable, drawing on the work of Venkatesh et al. (2003). Additionally, financial literacy, introduced into the TAM framework by Taufiq et al.

(2023), was incorporated. This study employs four independent variables perceived usefulness, trust, social influence, and financial literacy and one dependent variable, intention to adopt FinTech.

3.6 Operational Definition of Variable

Trust

Trust refers to an individual's belief or confidence regarding another party or system. It represents the perception of reliance on another party with the expectation that their behavior will align with one's beliefs. Trust can also be understood as the willingness or behavioral intention to engage in a task under the assumption that expectations will not be violated. Conversely, trust is closely linked to risk; if trust is breached, risk arises. In the context of FinTech, trust is defined as the consumer's or user's confidence in the features and operations of FinTech. Users assess how FinTech functions, particularly how information is kept confidential and data is secured, before deciding whether the service is trustworthy (Chav & Ou, 2021). According to Le (2021) trust reflects the user's faith and dependency on a FinTech product, service, or organization. It embodies the belief that FinTech providers act in the user's best interest and ensure the safety and security of personal and financial data. Trust is rooted in the organization's reputation and the reliability of its services.

Perceived usefulness

Perceived usefulness is defined as the user's subjective assessment of the likelihood that using a particular system will enhance their productivity or job performance within an organizational context. In the case of FinTech, it refers to the degree to which consumers believe that adopting FinTech will improve their performance or make financial tasks more efficient and manageable. This suggests that FinTech will provide benefits and advantages in their financial activities (Davis et al., 1989). The Technology Acceptance Model (TAM) defines perceived usefulness as the extent to which a person believes that using technology will enhance their performance. Several factors influence perceived usefulness, including the features, functionality, and benefits of the FinTech system. A FinTech product or service that offers valuable features can strengthen a user's trust and confidence in the product's ability to meet their needs and solve their financial problems (Lai, 2016).

Financial literacy

Financial literacy refers to the ability to understand financial concepts, which provides significant benefits to users of financial products or services. Users with higher financial literacy or knowledge can derive greater benefits from financial products or services and are better equipped to select the most suitable options that reduce their costs or efforts (Jungaer & Mietzner, 2019). Financial literacy enhances individuals' ability to understand and navigate financial matters effectively. In today's world, having strong financial knowledge is crucial, as it enables consumers to make informed financial decisions, particularly when adopting new financial technologies to improve their personal financial well-being (Jariyapan et al., 2022).

Social influence

Social influence is defined as the degree to which individuals perceive the value and opinions of others in their society, particularly the influence of those closest to them, who they believe are using an important system or technology. This factor directly determines the intention to adopt technology. Social influence has a wide range of contingent effects on technology adoption, and different demographic factors, such as age and caste, can influence how individuals perceive the value of others' opinions. These factors help determine whether an individual's perceptions are influenced by others (Venkatesh et al., 2003). Essentially, the environment and people surrounding an individual play a crucial role in shaping their behavior. Similarly, those in close proximity can significantly affect a user's intention to adopt FinTech. If individuals perceive that important of others believe they should use a new system, this influence becomes a key factor in their decision-making process (khatun & Tamanna, 2020).

Intention to adopt FinTech

Intention to adopt FinTech refers to a user's mindset or willingness to use FinTech products and services in the future or reuse the technology when needed. This means that if a user consistently engages with the same FinTech product over time, it reflects their intention to adopt and continue using FinTech. In other words, this represents user loyalty to FinTech. If a user speaks positively about the service, uses the same FinTech product multiple times, and has a good user experience, it indicates their loyalty and intention to adopt FinTech. Several

factors influence the intention to adopt FinTech, including service quality, product quality, interactivity, trust, usefulness, simplicity, and financial literacy (Le, 2021).

CHAPTER IV RESULTS AND DISCUSSION

This chapter deals with the presentation and analysis of data. The data were collected from the 336 banking customers who live in Kathmandu metropolitan city and use FinTech. The data were obtained through survey method. This chapter has been divided into various sections like, demographic profile of respondents, inferential analysis, hypothesis test and major findings respectively. The demographic profile of the respondents was presented through used of SPSS, inferential analysis was conducted through the used of measurement and structural model of Smart-PLS, hypotheses were also tested through used of Smart-PLS, and the fourth section were completed through present the result of the different analysis and findings.

4.1 Demographic Profile of the Respondents

This section deals with presentation of the demographic profile of the respondents. The gender, age, education and experience of FinTech used were included in this demographic profile. The demographic data of the respondents are collected through used of categorical unit, so that only percentage and frequency were used to describe the profile of respondents.

Tables 4 represent the demographic profile of the respondents. This data show that majority of the respondent are female, so that female respondents are the major factor of determine the final result of this research. Moreover, majority of the respondents are between 21 to 25 years of age group which show that, the major determining age group who affect more rather than other age group in conclude this research is 21 to 25 years of age group.

Similarly, the majority of the respondents have bachelors level of education. This shows that most of the respondents have high level of literacy and advanced degree which are directly impact the intention to adoption of FinTech. Furthermore, most of the respondents have 1 to 3 years of experience of the use FinTech; this is concluding that the use of FinTech behavior is developed and increasing trend in recent time in Kathmandu metropolitan city.

Table 4

Demographic Profile of the Respondents

Title	Category	Frequency	Percent
Gender	Male	151	44.9
	Female	185	55.1
	Other	0	0
Age	Below 20	18	5.4
	21-25	154	45.8
	26-30	70	20.8
	31-35	48	14.3
	36-40	30	8.9
	Above 40	16	4.8
Educational qualification	Secondary or below	3	0.9
	High school	18	5.4
	Bachelors	185	55.1
	Masters or above	130	38.7
Experience of using FinTech services	less than 1 year	81	24.1
	1-3 year	108	32.1
	3-5 year	92	27.4
	Above 5 year	55	16.4
Key determining factors of Fintech adption	Trustworthy	100	29.76
	Useful	89	26.5
	Social influence	80	23.80
	Financial knowledge	40	11.90
	Other	27	8.035
Total		336	100

(Source: Field survey, 2024)

Finally, majority of the respondents agree that the trust factor is the main determine factor of their use of FinTech. The 100 respondents agree with this factor and financial knowledge factors is less determine factor of use the FinTech. This is concluding that the trust, usefulness and social influence is the more determine factors respectively to intention to adoption of FinTech to the users in Kathmandu metropolitan city.

4.2 Descriptive Statistics of Latent Variables

This section deals with presentation of the descriptive statistics of the variable. The standard deviation, mean, and test scale are present in this section.

4.2.1 Trust

To assess the relationship between trust, perceived usefulness and the intention to adopt FinTech, five questions were asked to the participants. The table 5 provides the information about descriptive statistics of trust, where the statement two (T2), received highest average mean 3.74, other three statements (T1, T3, T4) received more than 3.6 average mean and statement five (T5) received lowest average mean 3.34. All items T1, T2, T3 ,T4 and T5 received above scale mean score, so that there is moderating agreement with the statement provided by respondents. Furthermore, the highest standard deviation is received by statement five (T5), which indicates the highest deviation in response, and the lowest Standard deviation is received by statement two (T2), which indicates the lowest deviation in response among the five statement.

Table 5

Descriptive Statistics of Trust

Code	Items	Mean (Test Scale = 3)	S.D.
T1	FinTech service is trustworthy.	3.61	0.860
T2	FinTech services keep customers best interest in mind.	3.74	0.769
T3	FinTech services make truthful claims.	3.61	0.800
T4	FinTech services keep its promises and commitments.	3.65	0.833
T5	I trust in this FinTech service's capability to safeguard my privacy.	3.34	1.030

(Source: Field survey, 2024)

According to Iacobucci and Churchill (2022), Those standard deviation is lower, which is less than 1.1 in a Five-point Likert scale. So that, in this variable (Trust) the standard deviation is less than 1.1, which means there is the lowest deviation in responses of the respondents.

4.2.2 Perceived usefulness

To assess the relationship between perceived usefulness and the intention to adopt FinTech, five questions were asked to the participants. The table 6 provides the information about descriptive statistics of perceived usefulness, where statement five (PU5), received highest average mean 4.08, and statement three (PU3) received lowest average mean 3.92. This all items PU1, PU2, PU3, PU4, and PU5 received above scale mean score, i.e, 4.05, 3.96, 3.92, 4.02 and 4.08, so that there is moderating agreement with the statement provided by respondents. Furthermore, the highest standard deviation is received by statement (PU1), which indicates the highest deviation in response, and the lowest Standard deviation is received by statement (PU2), which indicates the lowest deviation in response among the five statements.

Table 6

Descriptive Statistics of Perceived Usefulness

Code	Items	Mean (Test Scale = 3)	S.D.
PU1	This FinTech service is useful in daily life for doing my financial transactions.	4.05	0.920
PU2	Using FinTech service would helpful to conducting securities transactions.	3.96	0.756
PU3	Using FinTech can meet my service needs.	3.92	0.879
PU4	The use of FinTech service saves my time.	4.02	0.786
PU5	The use of FinTech service would enhance my effectiveness of investment on stock market.	4.08	0.856

(Source: Field survey, 2024)

According to Iacobucci and Churchill (2022), Those standard deviation is lower, which is less than 1.1 in a Five-point Likert scale. So that, in this variable (Perceived Usefulness) the standard deviation is less than 1.1, which means there is the lowest deviation in responses of the respondents.

4.2.3 Financial literacy

To assess the relationship between financial literacy, perceived usefulness, and the intention to adopt FinTech, five questions were asked to the participants. Table 7 provides the information about descriptive statistics of financial literacy, where statement one (FL1),

received the highest average mean 3.18 and statement two (FL2) received the lowest average mean 2.5. Other three statements (FL2, FL4 and FL5) received less than 3 average mean i.e, 2.50, 2.83, and 2.94, which shows there is low agreement with the statement provided by respondents. Except for FL1 and FL3, which received above & equal scale mean score. Furthermore, the highest standard deviation is received by statement four (FL4), which indicates the highest deviation in response and the lowest standard deviation is received by statement three (FL3), which indicates the lowest deviation in response among the five statements.

Table 7

Descriptive Statistics of Financial Literacy

Code	Items	Mean (Test Scale = 3)	S.D.
FL1	I know how to use online share trading.	3.18	1.076
FL2	I understand the importance of long-term financing for financial management.	2.50	1.133
FL3	I make appropriate decisions about personal finance on my own.	3.00	1.069
FL4	I know how to keep my personal information safe when I use FinTech services such as e-wallet.	2.83	1.183
FL5	I intend to learn more about personal finance in the future.	2.94	1.082

(Source: Field survey, 2024)

According to Iacobucci and Churchill (2022), Those standard deviation is lower, which is less than 1.1 in a Five-point Likert scale. So that, in this variable (Financial Literacy) the standard deviation of FL1, FL3, FL5 are less than 1.1, which means there is the lowest deviation in responses of the respondents. Other two statements FL2 and FL4 are below under neutral point, which shows less agreement in the statement.

4.2.4 Social influence

To assess the relationship between social influences, perceived usefulness, and the intention to adopt FinTech, four questions were asked to the participants. Table 8 provides the information about descriptive statistics of social influence, where statement four (SI4), received the highest average mean 4.08 and statement two (SI2) received the lowest average

mean 3.9. All items SI1, SI2, SI3, and SI4 received above scale mean score, i.e, 3.94, 3.90, 3.92, and 4.08, so that there is moderate agreement with the statement provided by respondents.

Table 8

Descriptive Statistics of Social Influence

Code	Items	Mean (Test Scale = 3)	S.D.
SI1	People who influence my behavior think that I should use the FinTech system.	3.94	0.808
SI2	People who are important to me think that I should use the FinTech system.	3.90	0.770
SI3	People who are interacting with me are helpful in the use of FinTech system.	3.92	0.799
SI4	In general, the FinTech provider has supported the use of the FinTech system.	4.08	0.714

(Source: Field survey, 2024)

According to Iacobucci and Churchill (2022), Those standard deviation is lower, which is less than 1.1 in a Five-point Likert scale. So that, in this variable (Social Influence) the standard deviation is less than 1.1, which means there is the lowest deviation in responses of the respondents.

4.2.5 Intention to adopt FinTech

To assess the relationship between intention to adopt FinTech and the other variables, five questions were asked to the participants. Table 9 provides the information about descriptive statistics of intention to adopt FinTech, where statement one (ITAF1), received the highest average mean 4.15, other three statements (ITAF1, ITAF3, ITAF4 and ITAF5) received more than 4 average mean i.e, 4.15, 4.10, 4.04 and 4.07 and statement two (ITAF2) received the lowest average mean 3.99. All items received above the scale mean score, which suggests there is moderate agreement with the statement provided by respondents. Furthermore, the highest standard deviation is received by statement two (ITAF2), which indicates the highest deviation in response and the lowest Standard deviation is received by statement five (ITAF5), which indicates the lowest deviation in response among the five statements.

Table 9

Descriptive Statistics of Intention to Adopt FinTech

Code	Items	Mean (Test Scale = 3)	S.D.
ITAF1	I intend to continue using FinTech services in the future.	4.15	0.837
ITAF2	I would use FinTech service for my financial transaction needs.	3.99	0.859
ITAF3	I will recommend using FinTech services to others.	4.10	0.816
ITAF4	If I have access to FinTech services, I want to use it as much as possible.	4.04	0.802
ITAF5	I intend to use FinTech services when the opportunity arises.	4.07	0.783

(Source: Field survey, 2024)

According to Iacobucci and Churchill (2022), Those standard deviation is lower, which is less than 1.1 in a Five-point Likert scale. In this variable (Intention to adopt fintech) the standard deviation is less than 1.1, which suggests the lowest deviation in responses of the respondents.

4.2.6 All latent variables (LV)

To assess the influencing factors of stock market individual investors to adoption of FinTech, thirty-three questions of different latent variables were asked to the participants. The table 10 provides the information about descriptive statistics of latent variables. The data of trust, perceived usefulness, social influence and intention to adopt FinTech suggests that respondents provide positive view on given latent variables, with some variations in their opinions for different statement; overall, there is moderate agreement in given statement.

Furthermore, the data of financial literacy suggest that, respondents provide lower positive view on given statement, with some variation in their opinion for different statement, this conclude that there is lower agreement in given statement provided by respondents.

Table 10

Descriptive Statistics of Latent Variables

Code of LV	Mean	S.D.	Skewness	Kurtosis
T	3.5905	0.65465	-0.379	1.143
PU	4.006	0.62864	-0.959	2.528
FL	2.8905	0.83643	0.248	-0.255
SI	3.9606	0.59611	-0.583	1.544
ITAF	4.0690	0.68205	-0.953	1.986

(Source: Field survey, 2024)

According to Griffin and Steinbrecher (2013), the acceptable value of skewness falls between -3 to +3, and the acceptable value of kurtosis falls between -10 to +10 in SEM. The table 13 suggests the higher skewness value of FL with 0.248 and lower skewness value of PU with -0.959; which falls between minimum and maximum acceptable limits. The five latent variables have left skewed data, which suggests that the majority of responses are above the mean value, which means there is more agreement in the given statement. Furthermore, the higher kurtosis value of PU with 2.528 and lower value of FL with -0.255 value; this data is between minimum and maximum acceptable value of kurtosis.

In conclusion, table 10 shows that there is moderate agreement provided by respondents, in the context of latent variables, which determines to adoption of FinTech in Kathmandu metropolitan city.

4.3 Measurement Model Assessment

According to Hair et al. (2014) measurement model is also called outer model, which is used to find out the relationship between latent variables and their constructs. In this model, the construct reliability and validity, discriminant validity and convergent validity are analyzed.

Figure 4

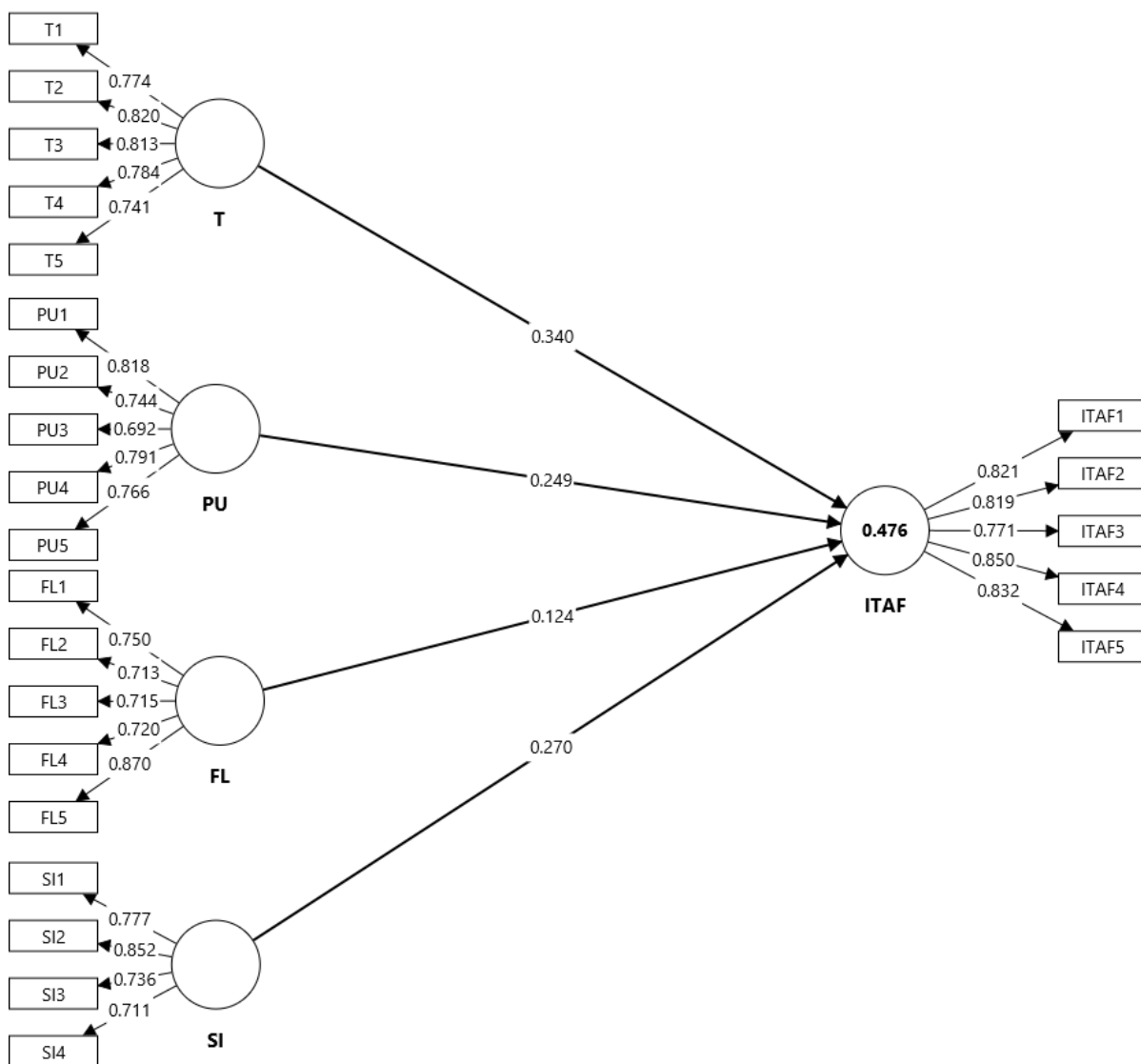
Measurement Model Assessment

Figure 5 provide the measurement model assessment. The outer loadings, outer weight and Cronbach alpha can be seen in this figure.

4.3.1 Reliability and validity

In this study under the reliability and validity, the Cronbach's alpha is measure to test internal consistency of the construct and to find out the, how strong level of internal consistency exists? The composite reliability (CR) is used, furthermore to find out the model convergent validity for access the correlation of the construct with each other, the average variance extracted (AVE) and outer loading were used (Fornell & Larcker, 1981).

Table 11

Reliability and Validity

Latent Variables	Items	Loadings	Cronbach's Alpha	CR	AVE
Trust	T1	0.774			
	T2	0.819			
	T3	0.813	0.847	0.89	0.619
	T4	0.784			
	T5	0.741			
Perceived usefulness	PU1	0.818			
	PU2	0.744			
	PU3	0.692	0.822	0.874	0.583
	PU4	0.791			
	PU5	0.766			
Financial literacy	FL1	0.75			
	FL2	0.713			
	FL3	0.715	0.824	0.869	0.571
	FL4	0.72			
	FL5	0.87			
Social influence	SI1	0.777			
	SI2	0.852	0.771	0.854	0.594
	SI3	0.736			
	SI4	0.711			
Intention to adopt FinTech	ITAF1	0.822			
	ITAF2	0.819			
	ITAF3	0.771	0.877	0.911	0.671
	ITAF4	0.851			
	ITAF5	0.832			

(Source: Field Survey, 2024)

According to Hair et al. (2019) acceptable value of the Cronbach's alpha and composite reliability is equal to or more than 0.70 but Cronbach's alpha should not above 0.95, acceptable value of factor loading is more than or equal to 0.708 but more than 0.50 is considerable (Hair et al., 2014) and acceptable value of average variance extracted (AVE) is equal to or more than 0.50. The table 11 indicates all the criteria are meeting, so that the reliability and validity (internal consistency, composite reliability and model convergent validity) are established in this study.

4.3.2 Discriminate validity

Discriminant validity is used to find out the relation between latent variables each other or to check whether the two variables are correlated with each other or not. In this study the cross loading, Fornell-Larcker Criterion, and HTMT ratios are used to find out the discriminate validity.

4.3.2.1 Cross loading

Table 12

Cross Loading

Items	FL	ITAF	PU	SI	T
FL1	0.75	0.113	-0.051	0.008	0.056
FL2	0.713	0.069	0.134	0.013	-0.017
FL3	0.715	0.081	0.091	0.035	0.015
FL4	0.72	0.033	-0.002	-0.052	-0.06
FL5	0.87	0.164	-0.005	0.022	0.033
ITAF1	0.104	0.822	0.342	0.501	0.416
ITAF2	0.155	0.819	0.44	0.408	0.502
ITAF3	0.152	0.771	0.358	0.41	0.455
ITAF4	0.071	0.851	0.412	0.442	0.54
ITAF5	0.115	0.832	0.391	0.404	0.454
PU1	-0.002	0.445	0.818	0.274	0.278
PU2	0.05	0.29	0.744	0.261	0.299
PU3	0.052	0.274	0.692	0.212	0.318
PU4	0.048	0.39	0.791	0.298	0.338
PU5	-0.022	0.374	0.766	0.205	0.296
SI1	-0.013	0.416	0.248	0.777	0.381
SI2	-0.003	0.475	0.272	0.852	0.466
SI3	0.078	0.334	0.293	0.736	0.375
SI4	0.009	0.386	0.209	0.711	0.349
T1	0.075	0.55	0.304	0.435	0.774
T2	0.048	0.491	0.356	0.398	0.819
T3	-0.008	0.433	0.303	0.409	0.813
T4	0	0.429	0.378	0.395	0.784
T5	-0.043	0.317	0.181	0.368	0.741

(Source: Field survey, 2024)

According to Hair et al. (2017), when compared to its cross loadings on corresponding constructs, a construct's cross loading should be significantly larger than other variable

construct. The table 12 provide greater cross loading in own items of latent variables rather than other variables items, so that the discriminant validity has been established.

4.3.2.2 Heterotrait-Monotrait (HTMT) ratios

The Heterotrait-Monotrait (HTMT) correlation ratio compares the average correlations between items measuring different constructs to the average correlations between items measuring the same construct, providing a relative measure of discriminant validity in Structural Equation Modeling, (Hair et al., 2019).

According to Kline (2011) the maximum threshold of HTMT is 0.85 and according to Hansaler et al. (2015), the maximum threshold of HTMT is 0.90. If HTMT ratio crosses 0.9 thresholds, then there is issue of discriminant validity. The table 13 provides less than 0.65 HTMT values, which means the discriminant validity is established in this study.

Table 13

Heterotrait-Monotrait (HTMT) Ratios

Relation	HTMT
ITAF <-> FL	0.143
PU <-> FL	0.123
PU <-> ITAF	0.545
SI <-> FL	0.079
SI <-> ITAF	0.637
SI <-> PU	0.414
T <-> FL	0.073
T <-> ITAF	0.651
T <-> PU	0.468
T <-> SI	0.626

(Source: Field survey, 2024)

4.3.2.3 Fornell and Larcer criterion

The Fornell and Larcer criterion is the method of check the discriminant validity. In this technique the square root of AVE are taken for check the validity. According to this

technique if the square root of AVE is greater than other latent variable correlations, then the discriminant validity is established (Fornell & Larcker, 1981).

Table 14

Fornell and Larcer Criterion

Variable	FL	ITAF	PU	SI	T
FL	0.756				
ITAF	0.145	0.819			
PU	0.028	0.476	0.763		
SI	0.018	0.528	0.329	0.771	
T	0.027	0.58	0.396	0.513	0.787

(Source: Field survey, 2024)

The table 14 provides the information of Fornell and Larcer criterion, where the value of Fornell and Larcer criterion is greater than other latent variables correlation, so that discriminant validity is established.

4.4 Structural Model Assessment

After the assessment of measurement (outer) model, the structural (inner) model are began to analyze. The structural model is used to find out the correlation and causal relations between latent variables. In this structural model the inner model collinearity (VIF), hypothesis testing, model predictive power, goodness of model fit are used. To complete this all analysis the 10000 sub-sample are created by using bootstrapping technique to make more accuracy of the data, which is recommended by Hair et al. (2021).

Figure 5

Structural Model Assessment

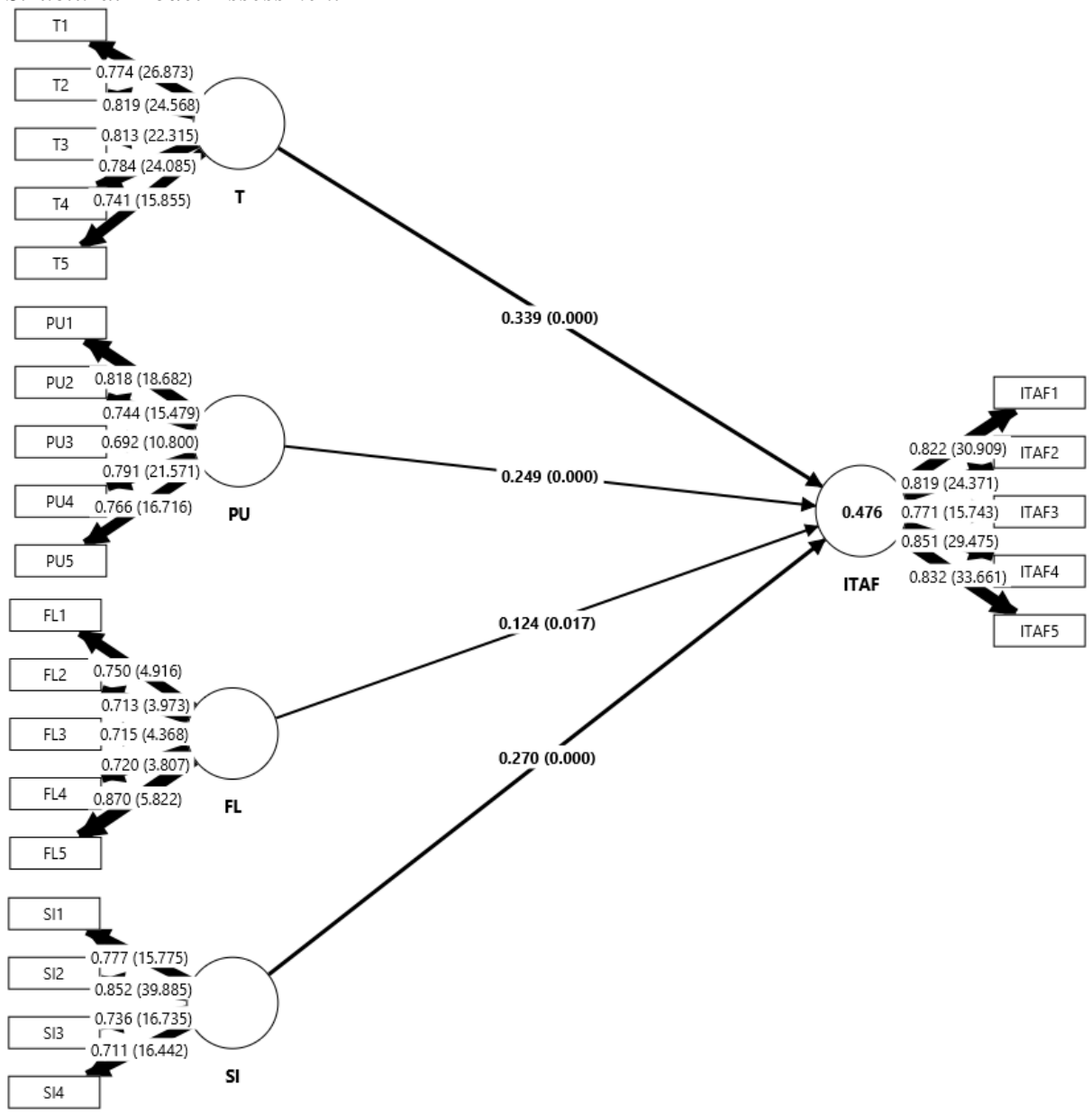


Figure 6 provide the structural model assessment. The T-values, path coefficients and R-square can be seen in this figure. The path are highlighted, more thickness of path means provide more contribution to saturated the model.

4.4.1 Hypothesis testing of direct effect

The hypothesis are tested using bootstrapping technique in PLS with created 10000 sub-samples and the one tailed test used to test the hypothesis of latent variables. If the path of

the hypothesis is pre-determined “negative or positive” the one tailed test are reasonable and it also chance of reduced the type II error, (Kock, 2015).

Table 15

Path Coefficient of Direct Effect

Path	Coff.	Mean	T-Value	CI 5%	CI 95%	P values	Result
FL -> ITAF	0.124	0.133	2.126	0.088	0.186	0.017	Supported
PU -> ITAF	0.249	0.258	3.861	0.155	0.365	0	Supported
SI -> ITAF	0.27	0.267	4.391	0.171	0.375	0	Supported
T -> ITAF	0.339	0.334	5.242	0.235	0.448	0	Supported

(Source: Field Survey, 2024)

The table 15 shows that, the p value of five out of five paths is less than 0.05, so that this all three path is significant in 95 percent confidence interval. Furthermore, trust (T -> ITAF) showed the strongest positive influence for user’s intention to adopt FinTech as its beta coefficient is greater than others, followed by social influence (SI -> ITAF), perceived usefulness (PU -> ITAF) and financial literacy (FL -> ITAF) as their beta coefficient is 0.339, 0.27, 0.249 and 0.124 respectively in intention to adopt FinTech. Trust is the strongest factor that influences intentions to adopt FinTech, indicating that users of FinTech in Kathmandu metropolitan city valley believes using FinTech services is trustable and secure.

4.4.2 Model explanatory and predictive capability

R-squared (R^2) is a measurement instrument that, in a model, reflects the percentage change in the dependent variable that each independent variable indicates (Wright, 1921). According to Hair et al. (2011) the R-square value is substantial if value is more than 0.75, moderate in between 0.50 to 0.75, weak in 0.25 to 0.50 value of R-square and Cohen, (1988) provide the R-square value 0.26 is substantial, 0.13 is moderate and 0.02 is weak. Furthermore, Q-square (Q^2) is predictive relevance method, that measure the model prediction is relevance. Q-square value more than zero indicate the model is relevance, (Hair et al. 2021).

Table 16

Model Explanatory and Predictive Capability

Path	R²	Q²
ITAF	0.476	0.435

(Source: Field Survey, 2024)

The table 16 provides information about model explanatory and predictive relevance capability. R-square value of ITAF is 0.476, which is under more than 0.26, so that the explanatory power of this model is substantial according to Cohen et al. (1988). These means 47.6 percent variation of intention to adopt of FinTech is explained by trust, perceived usefulness, social influence and financial literacy. Remaining 52.4 percent variation of intention to adopt FinTech is explained by other variable which is not access by this model. Moreover, the Q-square value of the ITAF model is 0.435, which is far greater than zero this means the predicted model relevance is established.

4.4.3 Assessment of effect size (F²)

If the exogenous variable removed from the model, that time the value of R-square is change, those change in r-square is the value of the effect size of the exogenous variable. According to Cohen et al. (1988), effect sizes are categorized as small if they are greater than or equal to 0.02, medium if they are greater than or equal to 0.15, and large if they are greater than or equal to 0.35. F-square values under 0.02 suggest the lack of the effect. Table 17 indicates that the trust, social influence, perceived usefulness, and financial literacy have small effects to generating R- square of ITAF model.

Table 17

Assessment of Effect Size (F²)

Path	Coff.	Mean	CI 5%	CI 95%
FL -> ITAF	0.029	0.133	-0.249	-0.043
PU -> ITAF	0.097	0.258	0.042	0.042
SI -> ITAF	0.100	0.267	0.036	0.036
T -> ITAF	0.149	0.334	0.038	0.038

(Source: Field survey, 2024)

4.4.4 Model fit

According to Henseler et al. (2015), Hu and Bentler (1999), the standardize root mean square residual (SRMR) is the popular method to test and analyze the whether the model and data are good and fit to further processing or not. In this study the SRMR is also analyze to test the fitness of the model using PLS-SEM. The SRMR value of less than 0.08 indicates an excellent model fit, according to (Hair et al., 2010).

Table 18

Model fit

Model	Coff.	Mean	CI 95%	CI 99%
Saturated model	0.065	0.054	0.064	0.109
Estimated model	0.065	0.054	0.064	0.109

(Source: Field survey, 2024)

A SRMR score smaller than 0.085, also indicates a good fit according to Henseler et al. (2015). Furthermore, Hu and Bentler (1999) provide threshold, defining a good fit as an SRMR score below 0.10. The table 18 provides information of the model fitness. The score of saturated model fit is 0.065 and the estimated model fit score is 0.065. This indicates the model are excellent fit according to Hair. (2010), because of saturated and estimated model fit score are less than 0.08, and the score are in between positive confidence interval in both 95 percent and 99 percent.

4.4.5 Summary of hypothesis testing

Table 19

Summary of Hypothesis Testing

Hypothesis	Statement	P-values	Result
H ₁	Trust (T) positively affects the intention to adopt FinTech (ITAF).	0	Supported
H ₂	Financial literacy (FL) positively affects the intention to adopt FinTech (ITAF).	0.017	Supported
H ₃	Perceived usefulness (PU) positively affects the intention to adopt FinTech (ITAF).	0	Supported
H ₄	Social influence (SI) positively affects the intention to adopt FinTech (ITAF).	0	Supported

(Source: Field Survey, 2024)

In this study the four hypotheses are formed and tested. Table 19 provide that H_1 (T \rightarrow ITAF), H_2 (FL \rightarrow ITAF), H_3 (PU \rightarrow ITAF), and H_4 (SI \rightarrow ITAF), hypotheses are supported by this study as there p value is less than 0.05. Hence, trust, financial literacy, perceived usefulness, and social influence positively affect the intention to adoption of FinTech.

4.5 Specification of the Model

Based on the all analysis, the following model has been set, as per the model of the research, which present in chapter III;

Model-1:

The following first model has been accessed from Akiwale and Kyari (2020) to find out the effect of independent variables (trust, financial literacy, social influence, and perceived usefulness) on the dependent variable (intention to adoption of FinTech):

$$ITAF = \beta_0 + \beta_1T + \beta_2FL + \beta_3PU + \beta_4SI + \varepsilon$$

$$ITAF = \beta_0 + 0.339T + 0.124FL + 0.249PU + 0.27SI + \varepsilon$$

Where,

ITFA = intention to adopt fintech

β_0 = Regression coefficients

β_1 = Coefficient of Trust

β_2 = Coefficient of Financial literacy

β_3 = Coefficient of Perceived usefulness

β_4 = Coefficient of Social influence

ε = Error term

4.6 Discussion

This study examines the determining factor of banking customers to adoption of FinTech in Kathmandu metropolitan city. Out of four exogenous factors all four factors (Financial literacy, trust, social influence and perceived usefulness) have significance effect with

adoption of FinTech to the banking customers by direct path. By examining the determining factors of intention to adoption of FinTech, this study provides significance contribution for previous social science research and for future study.

The descriptive statistics of determining factor of banking customers to adoption of FinTech show that there is interrelationship between the different variables. The financial literacy, trust, social influence and perceived usefulness are positively significant with intention to adoption of FinTech. This result is also match with previous studies of Taufiq et al. (2023), Jariyapan et al. (2022), Chav and Ou (2021), Hsu and Lu (2004), Lee and Cheung (2011).

In the context of financial literacy, this study finds that there is significant positive relationship through direct path between financial literacy and intention to adoption of FinTech. This finding suggests that if people are more literate on financial matter, then they understand usability of FinTech and they more intent to adoption of financial technology. This finding also aligns with previous study of Taufiq et al. (2023), Jariyapan et al. (2022), Setiawan et al. (2021) and Akram et al. (2023). The result revealed that if users are able to understand financial matter more clearly and if they have knowledge of financial product and service, that time they can understand which financial product is more useable and benefitted to them.

Moreover, this study provides significant positive relationship between trust and intention to adoption of FinTech. This findings is consistent with previous study of Hasan et al. (2023), Chav and Ou (2021), Balcazar et al. (2021), Le (2021), Akinwale and Kyari (2020) and Hu et al. (2019). People who have faith in FinTech are more likely to use it than people who don't. The adoption of FinTech is significantly affected by trust, as it is an indication of the technology's perceived reliability and security. Users are more willing to use and refer others to technology if they are considered to have faith in it.

Similarly, there is significant positive relationship of perceived usefulness with intention to adoption of FinTech. This result also align with previous study of Hasan et al. (2023), Jariyapan et al. (2022), Kumari and Lodha (2021), Le (2021), Singh et al. (2020), Lai (2016) and Giovanis et al. (2012). According to this all previous study if the technology are useful then user are more intent to adopt it, if the service is less useable in user activities; they do

not think to adopt it. If FinTech providers want to create intent to adoption of FinTech in users mind, then they need to make it more useable, quicker and easier than traditional channel of transactions. FinTech provider need to design the features that improve user experience by minimizing task repetition, improving information availability, and minimizing the requirement for operate the service. Moreover, FinTech providers need to make less error system to make it more and more useable.

The results of the study also confirm that there is significant effect of social influence on the intention to adoption of Fintech. These results also align with previous research of (Kulviwat et al., 2009). It implies that people may be slightly more likely to adopt FinTech, if social influence is increase. This could mean that the adoption intention of FinTech may be increase by social norms or influence.

CHAPTER V

SUMMARY AND CONCLUSION

In this chapter, the discussion was completed through comparing the previous evidence, which is provided by past researchers, with the findings of the current study. According to findings and discussion, the conclusion has been drawn, and the recommendations are provided to the stakeholders.

5.1 Summary

Fintech, by enabling financial operations through technology, drives the creation of new business models, applications, processes, and products that significantly influence financial markets, institutions, and service delivery. Financial services providers now prioritize understanding customer needs and preferences to create innovative solutions that enhance the financial transaction experience. Fintech services offer multiple benefits like reducing risks, improving efficiency, and driving growth. Key fintech services include payments of personal loans, peer-to-peer lending, and credit solutions tailored for public use. Globally and within Nepal, fintech usage continues to rise. Although many FinTech providers are entering the market, few succeed due to the rapid adoption of advanced technologies, driven by factors like financial literacy, perceived usefulness, trust, and social influence.

The primary objective of this study is to identify the determining factors of banking customers in the adoption of FinTech. The specific objectives include: evaluating the perception of customers regarding trust, perceived usefulness, social influence, and financial literacy towards the intention to adopt FinTech, determining the effect of trust, perceived usefulness, social influence, and financial literacy on the intention to adopt FinTech and assessing the relationship between trust, perceived usefulness, social influence, and financial literacy to adopt FinTech in the Nepalese banking sector.

The study adopts both descriptive and causal research designs. Descriptive research design is used to summarize the respondents' characteristics and their perceptions toward the determining factors of FinTech adoption, while causal research design helps identify the relationship between dependent variable (intention to adopt fintech) and independent variables (trust, perceived usefulness, social influence and financial literacy). A standardized survey collected the data from 336 valid participants on a convenience sampling basis. SPSS

and Smart PLS were utilized to conduct data analysis for descriptive statistics and inferential statistics, respectively. The hypotheses were tested applying PLS-SEM, which comprises both correlation and regression analysis to assess the strength and direction of relationships among variables.

Among the predictors, trust was the strongest predictor of FinTech adoption, followed by perceived usefulness and social influence. Financial literacy was comparatively weaker. Strong to high average scores reflected agreement with intention to use FinTech, perceived usefulness, and social influence, but relatively weaker for financial literacy. The results reflected a general tendency towards strong agreement with positive items, except for financial literacy. The measurement model was found to have good validity and reliability with acceptable results for indicators such as average variance extracted, internal consistency, and composite reliability. Discriminant validity was confirmed based on several criteria, and issues of multicollinearity did not exist. Path analysis identified that trust, financial literacy, perceived usefulness, and social influence significantly and positively affected FinTech use intention. Trust was the strongest predictor. The model explained a high rate of variance of adoption intention and presented strong predictive fitness. The effect sizes were small, but the overall model fit was regarded to be excellent. Thus, all four hypotheses (H1–H4) were supported, indicating that trust, financial literacy, perceived usefulness, and social influence are significant and positive antecedents of FinTech adoption among banking consumers in Kathmandu metropolitan city.

5.2 Conclusion

This study used trust (T), perceived usefulness (PU), financial literacy (FL), and social influence (SI) as major variables to examine the factors influencing banking customers' intention to adopt FinTech in Kathmandu Metropolitan City. This research has proven that all the major factors (T, PU, FL, SI) have a significant and positive effect on intention to adopt fintech.

Among all factors, Trust was found to be the most impactful factor, showing there is a strong positive correlation between trust and intention to adopt fintech. This suggests that users tend to embrace FinTech services more when they are assured that the system is secure, reliable, trustworthy, and capable of safeguarding their personal and financial data. The results

indicate that fostering customer trust is crucial for encouraging broader acceptance of FinTech services. When customers believe that FinTech providers act in their best interest, they are more willing to use such fintech services regularly.

Perceived usefulness was also found to have a positive correlation with the intention to adopt FinTech. This suggests that users tend to embrace Fintech services more when they are assured that the fintech is useful, less time-consuming, effective, and capable of conducting securities transactions. Moreover, Fintech providers should focus on making a less error-prone system for a better experience for the fintech users.

Social influence was also found to have a positive correlation with the intention to adopt FinTech, indicating that people are influenced by their friends, family, and society when choosing to use FinTech services. People may be slightly more likely to adopt fintech if social influence increases.

Although financial literacy had relatively less impact compared to the other variables, it still showed a significant positive relationship with FinTech adoption. This indicates that numerous respondents might have inadequate financial education, which restricts the overall influence of this element on FinTech adoption. Enhancing financial awareness initiatives could increase confidence and encourage greater engagement with FinTech services.

5.3 Implications

On the basis of findings and conclusion, the following implications were drawn for the regulators, FinTech providers, and further researchers:

The FinTech service providers for users in Nepal are banks and financial institutions, as well as non-banking financial institutions (NEPSE, CDSC, brokerage firm). The regulator of BFIs is the Central Bank of Nepal. The regulators need to focus on creating a trustworthy financial environment to increase the adoption rate of FinTech. They need to make and implement effective rules and regulations (such as security and privacy-related laws) to create a trustworthy environment, which helps to boost the adoption rate of FinTech. Another factor they need to focus on is financial literacy. The campaign program needs to be run to make financially literate and aware users, which helps to increase the adoption rate of FinTech.

The major predictors of intention to adopt FinTech are trust, perceived usefulness, social influence, and financial literacy, accordingly. So, FinTech providers need to focus on making useful and trustworthy FinTech services to increase their product and service adoption rate. Also, they need to provide contributions to make consumers financially literate to boost the adoption rate of their FinTech product and service. FinTech providers need to focus on create secure features, and need to take care of the confidentiality of users. Additionally, develop a system with fewer mistakes to give customers a more dependable and trustworthy environment. Furthermore, they need to create a useful system rather than only easy to get, learn to boost the adoption rate. To make a useful system, providers need to design the features that improve user experience by minimizing task repetition, improving information availability, and minimizing the requirement to operate the service. Moreover, they need to avoid negative social influence by positive word of mouth, which helps to increase the intention to adopt fintech. Also, FinTech providers need to run the campaign to make financially literate consumer, which help to understand the usability, feature and advantage of FinTech service.

Current study evaluates the determining factor of banking customers to adoption of FinTech in Nepal by integrating the factors of TAM and UTAUT model. The model explanatory power of this research is 47.6 percent, which indicates there are other factors (such as, security & privacy, facilitating condition, attitude, effort expectancy, performance expectancy etc.) are also determine the intention to adopt FinTech to the banking customers. The major determining factors of this study are trust, perceived usefulness, social influence, and financial literacy. So, future researchers must need to focus on these factors and they can also check the effect of other factors on the intention to adopt FinTech within another regions and contexts. In this study the perceived usefulness is taken as an independent variable. Future researchers can add this variable as a mediating variable and check the mediating effect of this factor among other variables to the intention to adopt FinTech. Also, in this study, the social influence is taken as an independent factor. So, future research can add this as a moderating factor. The convenience sampling technique has been used in this study but future researchers can use other methods of sampling, such as probability sampling, snowball sampling, and others.

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APPENDIX

Questionnaires

Dear Respondent,

I am Sangita Shrestha, an MBS pursuant at the Sankar Dev Campus, Tribhuvan University, Kathmandu. I am conducting research on “**Adoption of Fintech in banking sector**” in partial fulfillment of the requirements for the degree of Master of Business Studies. I intend to analyze the factors that payment product users consider and their impact on the adoption of the service. I humbly request that you spare a few minutes of your time to respond to the questionnaire. Your responses will be held in strict confidentiality, and the data collected will be used solely for academic purposes.

.....

Thank you!

Sangita Shrestha

All questions are compulsory.

SECTION I: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Please tick any one of the options in the following questions.

Name*:

1. Gender *

Male Female Other

2. Age*

Below 20 21-25 26-30 31-35
 36-40 Above 40

3. Educational qualification *

Secondary or below High School Bachelors Masters or above

4. Experience of using FinTech services *

Less than 1 year 1-3 year 3-5 year Above 5 years

5. Key determining factor of FinTech adoption *

Trustworthy Useful Social influence financial knowledge Other

SECTION II: QUESTIONS RELATED TO DETERMINING FACTORS OF PAYMENT PRODUCT USER’S TO ADOPTION OF FINTECH

Please tick the appropriate response for each of the following statements based on your opinion regarding the FinTech service you are currently using. (SD) = Strongly disagree, (D) = Disagree, (N) = Neutral, (A) = Agree, (SA) = Strongly Agree

S.N	Variables and Their Measurement	1 SD	2 D	3 N	4 A	5 SA
	III) Trust (Trust refers to the belief in the services or reputation of a company)					
T1	FinTech service is trustworthy.					
T2	FinTech service keeps customers’ best interests in mind.					
T3	FinTech services make truthful claims.					
T4	FinTech service keeps its promises and commitments.					
T5	I trust in this FinTech service's capability to safeguard my privacy.					
	IV) Perceived usefulness (Perceived usefulness is the degree to which the user believes that using the technology will enhance his/her performance).					
PU1	This FinTech service is useful in daily life for doing my financial transactions.					
PU2	Using FinTech service would helpful to conducting securities transactions.					
PU3	Using FinTech service can meet my service needs.					
PU4	The use of FinTech service saves my time.					
PU5	The use of FinTech service would enhance my effectiveness of investment on stock market.					
	V) Financial literacy (Ability and knowledge of FinTech)					
FL1	I know how to use online share trading.					
FL2	I understand the importance of long-term financing for financial management.					
FL3	I make appropriate decisions about personal finance on my own.					
FL4	I know how to keep my personal information safe when I use FinTech services such as e-wallet.					
FL5	I intend to learn more about personal finance in the future					
	VI) Social influence (individual perceives that important others believe he or she should use the new system)					

SI1	People who influence my behavior think that I should use the FinTech system.					
SI2	People who are important to me think that I should use the FinTech system.					
SI3	People who are interacting with me are helpful in the use of FinTech system.					
SI4	In general, the FinTech provider has supported the use of the, FinTech system.					
	VII) Intention to adopt FinTech					
ITAF1	I intend to continue using the FinTech service in the future.					
ITAF2	I would use FinTech service for my financial transaction needs.					
ITAF3	I will recommend using FinTech services to others.					
ITAF4	If I have access to FinTech services, I want to use it as much as possible.					
ITAF5	I intend to use FinTech service when the opportunity arises.					

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