

Innovations

Fintech Adoption among Bank Customers in Ethiopia: Evidence from Structural Equation Model (SEM)

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Abstract

The rise of fintech represents a significant milestone in the financial sector, gaining widespread interest and popularity in recent years. This research delves into the factors influencing the adoption of fintech in Ethiopia, focusing on attitude and trust as mediating variables. Data was gathered from 430 respondents using a convenient sampling method, and a structured questionnaire was utilized for data collection. The study employed structural equation model analysis through Amos software to investigate the impact of exogenous variables on fintech adoption. The study has used integration of constructs from various theories such as UTUAT, TTM and TRA to make the investigation of FinTech adoption more comprehensive. The results indicate that behavioral intention significantly and positively affects the actual usage of fintech services. Also study found that factors such as performance expectancy, effort expectancy, social influence, facilitating condition, attitude and trust have significant influence on behavioral intention. Additionally, the study reveals that attitude and trust partially mediate the relationship between effort expectancy and behavioral intentions. Consequently, the study suggests that banks should prioritize delivering an intuitive and seamless user experience to cultivate a positive attitude towards electronic banking. Ensuring the reliability of the technology, minimal downtime, and swift resolution of any technical issues can instill confidence in customers to embrace the technology.

Keywords: FinTech, Adoption, Banking, Attitude, Trust, SEM

1. Introduction

The rise of e-banking has significantly impacted the banking sector globally. The rapid advancement of technology in recent decades has presented both

opportunities and challenges (Dequanter et al., 2022). This technological progress has led to the emergence of financial technology, which integrates information and financial technologies (Feyen et al., 2021).

The advancement of technology has enabled banks to revolutionize their traditional approach to creating value by separating the production and delivery of financial services into independent entities. This transformation has shifted conventional retail banking business models (Noman & Rana, 2013). Technology has also influenced the competitiveness of banks (Goal, 2020). In order to better serve customers with speed and efficiency, the banking industry has wholeheartedly embraced technology, moving away from paper-based and branch-centric operations to digital platforms. These platforms are about speed and efficiency and a customer-centric approach, demonstrating the industry's commitment to serving their needs (Kumar, 2018; Saleem & Rashid, 2011).

In Africa, developing nations such as Ethiopia endeavor to integrate financial technologies to modernize their financial systems (Jerene & Sharma, 2020). Ethiopia has made considerable progress in broadening access to banking services in the past few decades, primarily through the promising avenue of mobile banking technology (Jerene & Sharma, 2018). However, accepting financial technologies from the consumers' side faces many challenges. It shows that financial technology adoption in developing economies, particularly in Ethiopia, requires more emphasis and studies.

In Ethiopia, very few studies are conducted to investigate fintech adoption. For instance, Muche (2020) has conducted study using Technology Acceptance Model (TAM) and found that attitude mediates and significantly influences behavioral intention. However, the explanatory power of TAM to explain the intention and usage of technology is low (Momani, 2020). Few studies have used descriptive statistics or regression or both descriptive and regression analysis to analyze the relationship between the influencing factors and the intention of technology adoption. These are (Vijay & Asefa, 2011; Jerene & Sharma, 2018). However, using descriptive or regression analysis in such kinds of study is not appropriate since the latent variables are mostly incorporated to study the technology adoption. Also, some other methodologies (e.g., CFA) are not applied in descriptive or regression analysis. However, the structural equation method is a pre-eminent method for multivariate data analysis. So, this study used the structural equation model to examine the relationship between exogenous, endogenous, and mediating variables.

The aim of this study is to analyse the factors influencing bank customers' adoption of Fintech in Ethiopia. It involves a comprehensive examination of the complex process, considering personal, social, psychological, and behavioral aspects. Additional variables should be included to thoroughly understand consumers'

intention towards the acceptance and use of Fintech. As such, this study integrates insights from the Unified Theory of Acceptance and Use of Technology (UTUAT), the Theory of Trust Model (TTM), and the Theory of Reasoned Action (TRA) to explore the factors affecting the intention to adopt FinTech services. This research represents the first attempt to combine these theories, providing a holistic understanding of Fintech use. Furthermore, this study used attitude and trust as mediating variables with UTAUT constructs. To the best of our knowledge, despite the vast literature on FinTech use, only a few scientists understand the importance of UTAUT, TTM, and TRA variables. Hence, this research is significant in its aim to bridge this gap in the literature.

2. Review of Literature

FinTech, the innovative use of technology in financial services, has the potential to create new business models (Lall et al., 2021). Banks currently offer a variety of service delivery methods, such as mobile banking, automated teller machines, and internet banking. By digitizing or replacing brick-and-mortar services, technological alternatives enable banks to reduce operating expenses and enhance client convenience (Ozili, 2018). In addition to benefiting banked communities, financial technologies are increasingly recognized as important and powerful tools to enhance financial inclusion.

Researchers conducted studies using various technology acceptance theory models. However, Venkatesh et al. (2003) developed a new called Unified Theory of Acceptance and Use of Technology (UTAUT) model. According to Momani (2020), the explaining power of UTUAT constructs to understand behavioral intention and usage behavior is higher than previous theories. Thus, UTUAT has a variance of 69% to explain the technology option, which is higher than 17% to 40% of variance (previous theories result). This indicates that the recent theory model (UTUAT) is more favorable than old theories in studying acceptance of technology.

Moreover, there is a pressing requirement to gain insights into the factors preceding the use of FinTech by employing a comprehensive multi-theory approach. This study investigated bank customer's behavioral intention and FinTech use by integrating the theory of UTAUT constructs, attitude and trust plays a vital role in influencing. So, it is essential to identify determinants on behavioral intention from both the UTAUT perspective (Venkatesh et al., 2003), TTM (Challender et al., 2019) and TRA (Ajzen & Fishbein, 1975). The UTAUT explains the antecedents to behavioral intention; TTM provides the basis for trust as a precursor to behavioral intention; and TRA shows circumstances of attitude for behavioral intention.

2.1. Hypothesis Development and Research Model

Performance Expectancy (PE)

Venkatesh et al. (2003) explained performance expectancy, which is the extent to which the use of technology will provide an advantage to consumers in carrying out certain activities. Performance expectancy is the various attributes of information systems. It can provide benefits to users. If individual customers believe the existing technology can benefit them, they will be more interested and inclined to adopt it (Alalwan et al., 2017; Venkatesh et al. 2003). Research conducted by Zhou et al. (2010) shows that intentions to use mobile banking are significantly affected by performance expectations. An individual's perceptions can affect the intention to adopt new technology to allow banks to provide services.

H1a: Performance Expectancy has a significant and positive influence on behavioral intention

H1b: Performance Expectancy has a significant and positive influence on attitude

H1c: Performance Expectancy has a significant and positive influence on trust

Effort Expectancy (EE)

Effort expectancy is the simplicity and ease associated with using technology by bank customers (Venkatesh et al., 2003). The perception of customers of ease of use of technology is useful in attracting their attention. Mostly, the motive of clients to adopt technology emanates from the intention of taking advantage of the innovation (Cudjoe et al., 2015). As is the nature of payments, bank services require minimum knowledge, skill, and effort. So, effort expectancy had a significant effect on influencing the customer's intention to use this technology (Gu et al., 2009; Riquelme and Rios 2010; Oliveira et al., 2014; Alalwan et al. 2017).

H2a: Effort Expectancy has a significant and positive influence on behavioral intention

H2b: Effort Expectancy has a significant and positive influence on attitude

H2c: Effort Expectancy has a significant and positive influence on trust

Social Influence (SI)

Family, friends, and colleagues influence individual perceptions about using technologies like banking technology or services. Social influence, as the extent of others' impact on customers' beliefs about novel innovations and technologies (Oliveira et al. 2014; Venkatesh et al., 2003), is a key factor in technology adoption. The influence of social networks on consumer adoption of financial technologies has been consistently demonstrated in prior studies (Amnas et al, 2023; Kim et al., 2014; Jaradat & Al Rababaa, 2013; Nawayseh, 2020 ; Bin-Nashwan, 2022), validating the importance of this research.

H3a: Social Influence has a significant and positive influence on behavioral intention

H3b: Social Influence has a significant and positive influence on attitude

H3c: Social Influence has a significant and positive influence on trust

Facilitating Condition (FC)

Resources and facilities, such as individual support, must be supplied to use new technologies to provide banking services. Therefore, support and availability of resources determine the perception of customers to use banking technologies (Venkatesh et al., 2003). A facilitating condition can affect the user's behavior and behavioral intention when using the technology. According to the findings of various studies (Amnas et al., 2023; Hassan et al., 2024; Savitha et al., 2022), facilitating conditions are determinant factors on the behavioral intention of customers to use fintech services.

H4a: Facilitating Conditions have a significant and positive influence on behavioral intention

H4b: Facilitating Conditions have a significant and positive influence on attitude

H4c: Facilitating Conditions have a significant and positive influence on trust

Attitude (AT)

Attitude, as defined by Ajzen & Fishbein (1975), is a person's emotional response to something, someone, or a situation, and how that feeling influences a particular action or object. TRA Theoretical model has demonstrated that attitude is a prerequisite for an individual's intention to develop a specific behavior (Ajzen & Fishbein, 1975; Pee et al., 2008). This understanding is crucial in the context of technology adoption, where attitude plays a significant role (Ajzen & Fishbein, 2005). The motive to use new technologies greatly influences people's attitudes. Shahzad et al. (2022) and Mohd et al., (2024) found that consumer perceptions of the usability and creativity in fintech services significantly influenced customers' attitudes towards its adoption and behavioral intentions. So, Attitude is a crucial factor influencing FinTech intentions (Li & Zhang, 2005). Previous studies (Naveed et al., 2020; Aderonke & Charles, 2010; Aderonke & Charles, 2010; Nicholas-Omoregbe et al., 2017; Pratama, 2021; Ho et al. 2020; Liébana-cabanillas et al., 2014) state that attitude is vital in influencing an individual to adopt new technology.

H5a: Attitude has a significant and positive influence on behavioral intention

H5b: Attitude has a mediation effect between performance expectancy and behavioral intention

H5c: Attitude has a mediation effect between effort expectancy and behavioral intention

H5d: Attitude has a mediation effect between effort social influence and behavioral intention

H5e: Attitude has a mediation effect between facilitating conditions and behavioral intention

Trust (TR)

A leap of faith of individuals matters when committing to the new technology. This leap of faith is trust (Bahmanziari et al., 2016). Trust has always influenced consumer behavior and is highly significant in uncertain environments (Pavlou, 2014). In e-banking, trust is the most effective strategic method to reduce uncertainty and risk (Gefen, 2000; Hart & Saunders, 1997). It encompasses the subjective belief that institutions, particularly banks in this case, will act in ways consistent with positive expectations, fostering confidence in their operations and security measures (Cegielski et al., 2014). Trust positively influences and enhances customer's intention to adopt fintech (Malaquias & Hwang, 2016; Hu et al., 2019; Okello et al., 2019). Trust becomes an important factor in overcoming the substantial uncertainty which pervades the development and deployment of artificial intelligence (Lukyanenko et al., 2022). According to a study by Dawood et al. (2023), people's trust mediates the intention and acceptance of FinTech in adopting financial company models.

H6a: Trust has a significant and positive influence on behavioral intention

H6b: Trust has a mediation effect between performance expectancy and behavioral intention

H6c: Trust has a mediation effect between effort expectancy and behavioral intention

H6d: Trust has a mediation effect between effort, social influence, and behavioral intention

H6e: Trust has a mediation effect between facilitating conditions and behavioral intention

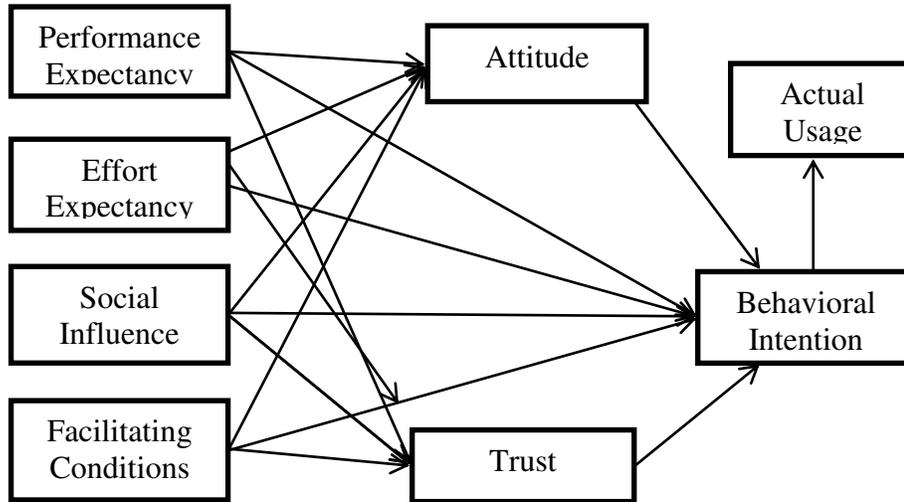
Behavioral Intention (BI)

Ajzen (1991) states that intention is the motivational factor that influencing the behavior of individuals. Behavioral Intention is expressed as the individual willingness to perform a behavior. In the context of Fitech, behavioral intention is explained as customers' acceptance of the use of existing banking technologies. Most of the time, customers' use of technology depends on how willing they are to use it. The positive information and recommendations play a role in using intention on new technologies and innovations (Farzin & Fattahi, 2018a). Studies have shown that when people spread positive word of mouth about a product or service, they are more likely to use it (Farzin et al., 2022). Venkatesh et al. (2003) found that behavioral intention is a determinant of influence on the actual usage of technology.

H7a: Behavioral Intention has positive and significant influence on Fintech Actual Usage

As illustrated in Figure 1, our study features a research model that integrates eight key constructs. This comprehensive model, a cornerstone of our study, is designed to provide a holistic understanding of consumers' Fintech adoption behavior. In line with UTUAT, TRA and TTM, our theoretical model uses behavioral intention and actual usage as a dependent variable and attitude and trust as mediating variables. We rigorously test the hypothesized relationships to predict consumer intention to use E-banking in the Ethiopian context.

Figure 1: Proposed Model



3. Methodology of Research

3.1. Questionnaire design

A meticulously structured questionnaire has been developed to procure primary data from Fintech users in Ethiopia. A pilot study involving a sample of 30 respondents was undertaken to evaluate the efficacy of the instrument and to gain a comprehensive understanding of any challenges encountered by the respondents during its completion. The findings from this pilot study precipitated minor modifications to the questionnaire.

3.2. Data collection

The purpose of this study is examining the factors influencing the behavioral intentions of Fintech users. Eight different constructs were used to explore the potential factors influencing the adoption of fintech services in a developing country like Ethiopia. Hence, the population considered for the study is active Ethiopian E-banking users with at least one year of banking technology services experience. The target respondents are sampled randomly. The primary data is gathered from 430 respondents.

3.3. Data Analysis Tools

Version 23.0 of Software Package for Social Sciences (SPSS) and 23.0 of Analysis Moment of Structures (AMOS) are used for data analysis. Confirmatory factor analysis (CFA) is used to examine constructs' validation, followed by SEM analysis. In addition, bootstrapping has been made with a 95% confidence interval to investigate both the direct and indirect influence of exogenous variables on endogenous variables.

Table 1 show that the study had 73.3% male and 26.7% female respondents. The study had 37.4% (18-30 age group), 51.3% (31-50 age group), and 11.3% (above 50 age group) respondents. Moreover, 45.9% of respondents had 1-5 years' experience, 40.9% had 6-10 years' experience, and 14.2% had above 10 years' experience using financial technology services. 91.4% of respondents had a degree or above education status.

Table 1: Summary of Respondents Demographic Profile

Characteristics		Frequency	Percent	CP (%)
Gender	Male	315	73.3	73.3
	Female	115	26.7	100
Age	18-30	161	37.4	37.4
	31-50	221	51.3	88.7
	Above 50	48	11.3	100
Experience of Using Fintech	1-5 Years	196	45.9	45.9
	6-10 Years	176	40.9	86.8
	Above 10 Years	58	14.2	100
Education	Diploma	37	8.6	8.6
	Degree	201	46.7	55.3
	Masters	134	31.2	86.5
	Above Masters	58	13.5	100

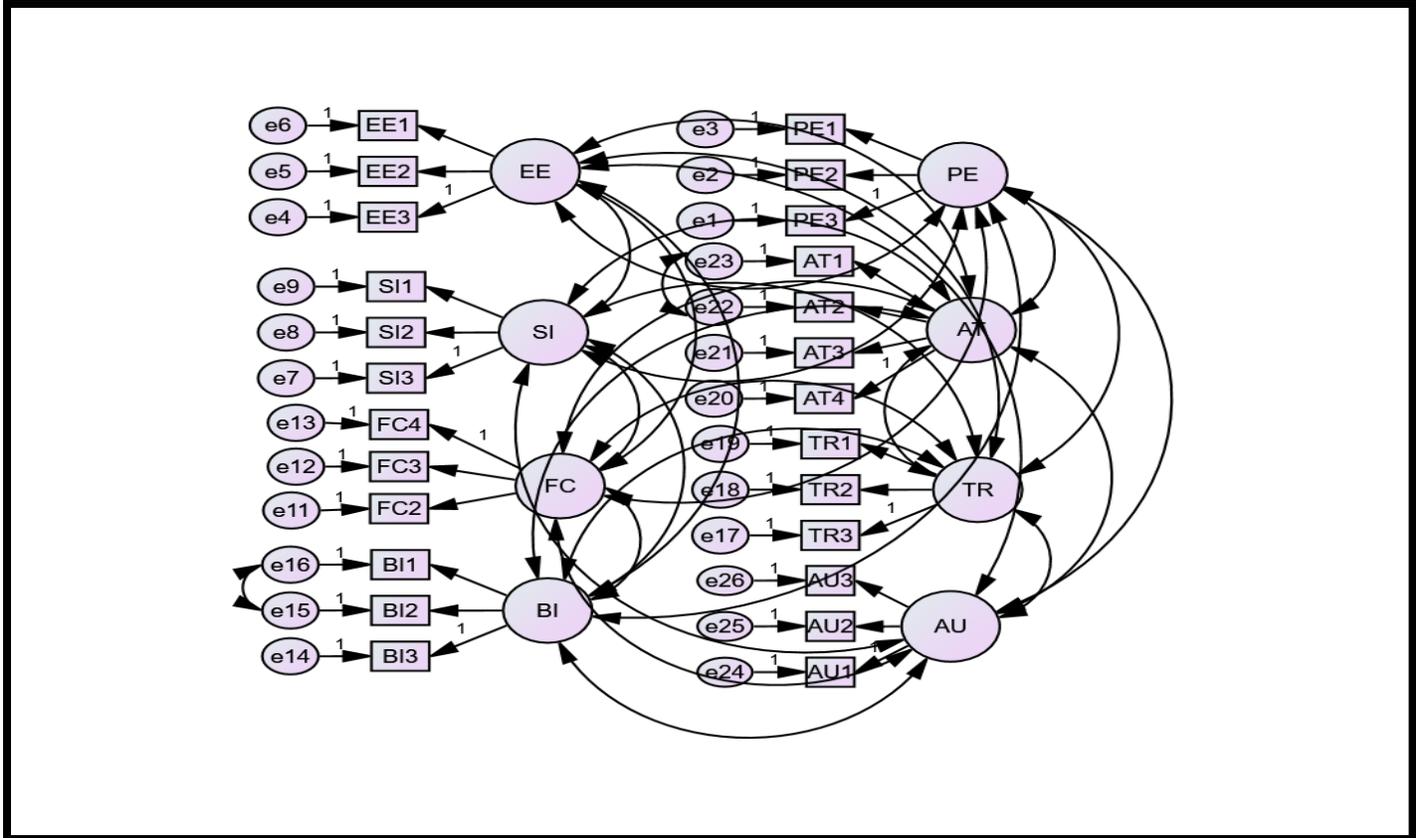
Source: Survey result (2023/24)

4. Data analysis and Result

4.1. Measurement model

The study used the structural analysis model based on two basic stages. Confirmatory factor analysis (CFA) is conducted in the first stage to check the validity of the measurement model. The second stage is the structural equation model (SEM) analysis using Amos (23.0) software.

Figure 2: Proposed CFA model



The result of the initial measurement presented in Table 2 has improved by making some modifications to get the final model fitness of the measurement. From the proposed model (figure 1), CF1, the indicator for facilitating conditions, is removed due to its load value being 0.33 (below 0.50 is not acceptable), and covariance between e23 (AT1) and e22 (AT2) is done. As shown in Table 2, the goodness-of-fit analysis of the revised model shows an acceptable fit. The value of each fit index in the revised CFA model indicates fulfilled the criterion of cut of point. Therefore, the model unidimensionality is already established, and the model fitness is confirmed (Byrne, 2010; Hair et al., 2013).

Table 2: The Result of Measurement Model (CFA)

Fit Indices	Cut Point	Initial Measurement of the Model	Revised Measurement of the Model
CMIN/DF (Chi-Square)	<3	1.747	1.509
GFI (Goodness of Fit Index)	>0.90	0.932	0.937
AGFI (Adjusted Goodness of Fit Index)	>0.90	0.910	0.917

CFI (Comparative Fit Index)	>0.90	0.958	0.972
Normed fit index (NFI)	>0.90	0.908	0.922
RMR (Root Mean Residual)	<0.08	0.058	0.050
RMSEA (Root mean Square Error of Approximation)	<0.08	0.042	0.034
TLI (Tucker Lewis Index)	>0.90	0.948	0.966

Source: Amos result 2023/2024

4.2. Reliability and validity of CFA

The reliability of constructs was evaluated using Cronbach’s alpha and composite reliability assessment. It is shown in Table 3. Thus, each construct’s Cronbach’s alpha and composite reliability value is above 0.7, the threshold limit. That indicates the internal consistency of each construct is adequate (Nunnally & Bernstein, 1995; Hair et al., 2013). Also, standardized factor loadings, average variance extracted, maximum shared variance, and average shared variance and composite reliability are used to assess convergent validity. Generally, standardized factor loadings greater than 0.50, CR value > 0.70 and AVE >0.50 demonstrate adequate convergence (Hair et al., 2013). The standardized factor loadings of all observed variables are well above the minimum cut-off limit of 0.5, with the highest value of 0.949 and the lowest value of 0.706. AVE ranging from 0.627 to 0.856 exceeds the minimum cut-off limit of 0.5. CRs of constructs exceeded 0.7 limits, ranging from 0.830 to 0.948. In addition, MSV and ASV for all constructs are less than their respective AVE. Therefore, all conditions for the convergent validity are met.

The AVE should be greater than the squared correlations between the constructs, which could demonstrate the discriminant validity (Fornell & Larcker, 1981). As shown in Table 4, the value of AVE is greater than squared correlations for all constructs. Hence, discriminant validity is demonstrated.

Table 3: Reliability and Validity of Constructs

Latent variable	Observed variables	Loading	CR	AVE	MSV	Cronbach’s Alpha
PE	PE3	0.862	0.89	0.73	0.079	0.890
	PE2	0.886				
	PE1	0.813				
EE	EE3	0.672	0.77	0.528	0.256	0.769
	EE2	0.77				
	EE1	0.735				
SI	SI3	0.729	0.749	0.504	0.252	0.741
	SI2	0.815				

	SI1	0.562				
FC	FC4	0.826	0.812	0.593	0.278	0.804
	FC3	0.816				
	FC2	0.656				
BI	BI3	0.609	0.758	0.513	0.278	0.74
	BI2	0.755				
	BI1	0.773				
TR	TR3	0.792	0.816	0.597	0.235	0.814
	TR2	0.761				
	TR1	0.77				
AT	AT4	0.8	0.802	0.512	0.216	0.81
	AT3	0.854				
	AT2	0.571				
	AT1	0.574				
AU	AU1	724	0.857	0.669	0.216	0.851
	AU2	917				
	AU3	801				

Source: Amos Result 2023/2024

Table 4: Discriminant validity

Constructs	AT	PE	EE	SI	FC	BI	TR	AU
AT	0.715							
PE	0.172	0.855						
EE	0.259	0.090	0.726					
SI	0.267	0.239	0.344	0.710				
FC	0.283	0.080	0.311	0.299	0.770			
BI	0.465	0.285	0.501	0.500	0.511	0.730		
TR	0.408	0.217	0.321	0.285	0.258	0.470	0.773	
AU	0.307	0.022	0.232	0.206	0.392	0.465	0.291	0.818

4.3. Structural Equation Model (SEM) Analysis

After the CFA measurement model, the structural equation model (SEM) path analysis is examined to test the hypothesized causal relationships. The structural model is tested, and the adequacy of the structural model is examined using chi-square, GFI, AGFI, RMR, CFI, NFI, TLI and RMSEA. All indices goodness-of-fit statistics are in the acceptable ranges (CMIN/DF is 1.645, RMR is 0.066, GFI is 0.928, AGFI is 0.908, NFI is 0.912, TLI is 0.956, CFI is 0.963, and RMSEA is 0.039. Generally, model fit indices such as GFI, AGFI, NFI, and CFI ≥ 0.9 to indicate a good model fit

(Hair et al., 2013. An RMSEA value which is ranging from 0.05 to 0.08 is acceptable. Thus, all fit indices suggest that the model fit is acceptable.

4.4. Hypothesis Testing

The causal relationship among the various variables is tested using the path analysis. Table 5 depicts the results of hypothesis testing, unstandardized regression estimate, standardized path coefficient, critical ratio, and significance level observed for each hypothesized path. The results show that bank consumers' behavioral intention to adopt fintech is jointly predicted by performance expectancy (PE, $\beta=0.101$, $p=0.036$), effort expectancy (EE, $\beta=0.223$, $p=0.000$), social influence (SI, $\beta=0.210$, $p=0.000$), facilitating conditions (FC, $\beta=0.301$, $p=0.000$), attitude (AT, $\beta=0.201$, $p=0.000$), and trust (TR, $\beta=0.176$, $p=0.002$). The result indicates that 0.58 percent of the variance of behavioral intention is explained by these variables ($R^2=0.58$). Therefore, the proposed hypothesis *H1a-H6a* for this study is supported.

The result in Table 5 revealed that UTAUT constructs predict the attitude and trust of customers to use Fintech. Their influence of variables on attitude is positive PE ($\beta=0.114$, $p=0.039$), EE ($\beta=0.157$, $p=0.018$), SI ($\beta=0.138$, $p=0.043$), and FC ($\beta=0.188$, $p=0.003$). Their influence on trust is positive PE ($\beta=0.156$, $p=0.005$), EE ($\beta=0.228$, $p=0.000$), SI ($\beta=0.136$, $p=0.046$), and FC ($\beta=0.142$, $p=0.022$). So, *H1b-H4b* and *H1c-H4c* are supported. The influence of behavioral intention on technology adoption is positive ($AU<---BI$, $\beta=0.496$, $p=0.000$). Thus, *H7a* is supported.

Table 5: Path Analysis Result

Hypothesis	Path	Estimate	Standardized regression weights	S.E.	C.R.	Significant level	Supported or not
<i>H1a</i>	BI<---PE	0.074	0.101	0.035	2.096	0.036*	Supported
<i>H1b</i>	AT<---PE	0.066	0.114	0.032	2.060	0.039*	Supported
<i>H1c</i>	TR<---PE	0.114	0.156	0.04	2.829	0.005**	Supported
<i>H2a</i>	BI<---EE	0.279	0.223	0.074	3.790	***	Supported
<i>H2b</i>	AT<---EE	0.155	0.157	0.066	2.370	0.018*	Supported
<i>H2c</i>	TR<---EE	0.281	0.228	0.082	3.413	***	Supported
<i>H3a</i>	BI<---SI	0.214	0.210	0.059	3.610	***	Supported

							d
H3b	AT<---SI	0.111	0.138	0.055	2.023	0.043*	Supported
H3c	TR<---SI	0.137	0.136	0.069	1.996	0.046*	Supported
H4a	BI<---FC	0.253	0.301	0.046	5.477	***	Supported
H4b	AT<---FC	0.124	0.188	0.042	2.970	0.003**	Supported
H4c	TR<---FC	0.118	0.142	0.051	2.291	0.022*	Supported
H5a	BI<---AT	0.255	0.201	0.069	3.702	***	Supported
H6a	BI<---TR	0.178	0.176	0.057	3.150	0.002**	Supported
H7a	AU<---BI	0.576	0.496	0.076	7.614	***	Supported

Notes: *p <0.05; **p <0.01; ***p <0.001

The bootstrapping method is used with 5000 re-samples to examine and assess the significance of the indirect effects of predictor variables on BI (Baron & Kenny, 1986; Preacher & Hayes, 2004). The reports in Table 6 show the results of indirect effects of predictor variables on BI. The results of bootstrapping indicate that the indirect effect of SI, PE, FC, and EE on the behavioral intention with mediating variable attitude (AT) is $\beta=0.017$ $p = 0.057$, $\beta =0.040$ $p = 0.019$, $\beta =0.028$ $p = 0.028$ and $\beta =0.032$ $p = 0.008$ respectively. Additionally, the study has investigated the mediation role of trust between influencing factors and behavioral intention. The result shows the indirect effect of PE, EE, SI, and FC on the behavioral intention with mediating variable (Trust) is $\beta=0.019$ $p = 0.041$, $\beta=0.047$ $p = 0.005$, $\beta=0.023$ $p = 0.07$, and $\beta=0.02$ $p = 0.058$ respectively.

Table 6:Mediation effect of Attitude and Trust

Hypothesis	Path	Estimate	Lower	Upper	P-Value	Support or not
H5b	BI<---AT<---PE	0.017(ns)	-0.001	0.044	0.057	Not Supported
H5c	BI<---AT<---EE	0.040*	0.006	0.099	0.019	Supported
H5d	BI<---AT<---SI	0.028*	0.003	0.076	0.028	Supported
H5e	BI<---AT<---FC	0.032**	0.007	0.077	0.008	Supported
H6b	BI<---TR<---PE	0.019*	0.001	0.052	0.041	Supported

<i>H6c</i>	BI<---TR<---EE	0.047**	0.012	0.116	0.005	Supported
<i>H6d</i>	BI<---TR<---SI	0.023(ns)	-0.001	0.074	0.070	Not Supported
<i>H6e</i>	BI<---TR<---FC	0.02(ns)	0.00	0.071	0.058	Not Supported

Notes: *Significant at $p < 0.05$; ** Significant at $p < 0.01$; ns is not significant

The results in Table 6 show that AT has a mediating effect on the relationship between effort expectancy and behavioral intention, social influence and behavioral intention, and facilitating conditions and behavioral intention. TR also has a mediating effect on the relationship between performance expectancy and behavioral intention and effort expectancy and behavioral intention.

5. Discussion

This study examines the factors influencing bank customers' behavioral intention to adopt fintech and the mediating role of attitude and trust in using FinTech services. The study's statistical results prove that the path from performance expectancy to behavioral intention shows a causal relationship with a weight of 0.101 (*H1a*). The implication is that if customers perceive the advantages and benefits of Fintech, they will be more motivated to accept and use it. Results are consistent with findings from other prior studies (Alalwan et al., 2017; Venkatesh et al. 2003; Zhou et al., 2010).

The study results indicate that effort expectancy positively affects the intention to use FinTech services ($\beta=0.223$) (*H2a*), aligning with previous research (Venkatesh et al., 2012; Gu et al , 2009; Oliveira et al., 2014; Alalwan et al. 2017). The result suggests that customers are more inclined to adopt FinTech platforms when they recognize that these services are easy, require minimal effort and are user-friendly. Financial technology applications need to be easily operated by banking customers to make financial inclusion more effective.

Social influence directly and significant impact on behavioral Intention ($\beta=0.214$) (*H3a*) implies that individuals' decisions to use fintech services are affected by the opinions, behaviors, and endorsements of others. Ethiopian bank fintech users tend to rely on the advice referents give when using FinTech services. Also, other previous studies found that peer influence and social networks are key factors driving user adoption of FinTech platforms (Amnas et al, 2023; Nawayseh, 2020 ; Bin-Nashwan, 2022).

The study found that facilitating conditions have a strong influence ($\beta=301$) (*H4a*) and are identified to be the primary and positive determinant of the intention of consumers to use fintech, which aligns with prior research findings (Amnas et al., 2023; Hassan et al. 2024; Venkatesh et al., 2003). The result indicating that through

these technologies, users anticipate and experience real advantages regarding convenience, efficiency, and cost-effectiveness in managing their finances.

The behavioral intention of electronic banking customers is significantly influenced by attitude ($\beta=201$) (*H5a*). It suggests that how customers perceive electronic banking, whether positively or negatively, plays a crucial role in their decision to adopt and use these services. This study's finding aligns with the theory developed by (Ajzen, 1991). Various studies found that attitude has a positive influence on customer's intention to use electronic banking services (Naveed et al., 2020; Aderonke & Charles, 2010; Baraghani, 2008, Al-smadi, 2012 and Takele & Sira, 2014). This study found that attitude is partially mediating the adoption of technology. It confirms the findings of previous studies (Sun et al. 2020; Gunnoo et al., 2023). Surprisingly, AT does not have a mediating effect between performance expectancy and the behavioral intention of customers.

The finding of the study shows that customer trust has played a major role in the intention of technology adoption ($\beta=0.176$) (*H6a*), highlighting the importance of building and maintaining trust to encourage customers to adopt new technologies. Also, previous studies found that Trust positively influences the intention of customers to adopt fintech (Malaquias & Hwang, 2016; Hu et al., 2019; Okello et al., 2019; Lukyanenko et al., 2022). Furthermore, the study found that trust partially mediates the effect of performance and effort expectancy on behavioral intention. It is consistent with the study findings by (Dawood et al, 2023; Karunasingha & Abeysekera, 2022). But trust doesn't have a mediation role on the effect of social influences and facilitating conditions on behavioral intention. The study finding shows that the behavioral intention of bank customers has a direct and significant effect on the technology use of bank customers (0.496) (*H7a*). The study finding is consistent and in line with previous studies finding (Venkatesh et al., 2003; Farzin & Fattahi, 2018b; Farzin et al., 2022), but the finding of this study is different from the study by Agudo-peregrina et al. (2014) found that no relation between intention and technology uses.

6. Conclusion

The structural equation model (SEM) was implemented using Amos to examine the influence of factors on fintech adoption. Thus, based on the findings, the study supports the hypotheses that various factors, including PE, EE, SI, FC, AT, and TR, significantly influence the customer's intention to adopt fintech. The study's findings show that behavioral intention is a highly influencing factor among the factors facilitating conditions. It is followed by effort expectancy, social influence, attitude, trust, and performance expectancy.

Additionally, the study findings show that attitude mediates relations between EE, SI, and FC and behavioral intention except PE. Also, trust mediates relations between PE and EE and behavioral intention but not mediate SI and FC. The mediation effect of attitude and trust is partial mediation since the direct effect of variables on behavioral intention is significant.

7. Theoretical Contributions

The study used UTUAT with TTM and TBA theories, which have eight integrated constructs. Hence, the study identifies the relative importance of facilitating conditions, social influence and effort expectancy in adopting fintech. The mediation role of attitude and trust in UTUAT constructs relation would bring insight and understanding. Thus, the study can clarify future research for refining existing theories related to financial technology adoption. They are more likely to experiment with advanced functionalities and integrate the technology into various aspects of their lives. These users frequently customize and adapt technologies to better meet their personal needs. However, most researchers have neglected the mediation of attitude and trust in fintech adoption. The findings of this study can attract the interest of practitioners and practitioner-researchers and motivate them to analyze how attitude and trust influence customers' attitudes. The current study represents a major contribution to existing knowledge regarding the online technology acceptance area in general. In fact, in Ethiopia, financial technology has not been well evaluated so far, so this study provides valuable direction for existing knowledge.

7. Practical Implication

FinTech is an emergent technology that can benefit financial institutions (banks) and users. This study has significant implications for practitioners, policymakers, and researchers in the FinTech industry. Financial technology companies should prioritize enhancing the infrastructure and support systems that make fintech usage easier for consumers. Fintech companies should offer educational resources, workshops, or in-app guidance to help consumers feel more confident using their services. To improve the uptake of fintech services, companies should focus on making their platforms more accessible by removing barriers to access; companies can encourage a broader range of consumers to adopt their services. Fintech companies should collaborate with influencers, industry experts, or thought leaders to enhance the perceived credibility of fintech products. To foster a positive attitude toward electronic banking, banks should focus on providing an intuitive and seamless user experience. It includes designing user-friendly interfaces, ensuring fast and reliable transactions, and minimizing technical glitches. A smooth

experience can lead to a more favorable attitude and a stronger intention to use electronic banking. Consistency in service quality builds trust.

8. Limitations and Further Study

The first limitation concerns the sample, as the respondents are financial technology users in the banking industry. Further research could include the opinion of Ethiopia's active customers who are not using banking technologies. The other limitation of this study is related to the region where the data was collected. Ethiopia is a country with much diversity. Further studies and research could verify whether the fintech adoption influencing factors are constant between different Ethiopian regions. Also, this study did not analyze important factors such as price value, hedonic motivation, and habit. Therefore, future studies should integrate these variables to understand the issue. The study has focused on investigating fintech adoption of existing technologies, in general, in Ethiopia's banking industry. Future studies may have room to investigate the adoption rate and its influencing factors. Since the information was gathered all at once, it offers a momentary view of the attitudes and actions of users. Data collected longitudinally could offer more detailed information regarding the factors and their influence on adopting fintech over time. Additionally, applying qualitative research methods is important to provide a deeper understanding and to create more motivation for customers to adopt Fintech. Hence, future research should incorporate data-gathering tools such as in-depth interviews and focus group discussions.

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