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Fintech: An Inquisitive Disruptive Technology for Small Retailers

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Abstract

The study investigates the factors responsible for adoption and actual use of fintech services by examining the precedents of consumer perception for technology adoption amongst retail grocery shopkeepers of Varanasi district, Uttar Pradesh, India. The study has used Technology Acceptance Model (TAM) as an underlying model. Based on valid responses from 214 users, the data is statistically analyzed using SPSS 26.0 software. The collected quantitative data is evaluated through exploratory factor analysis (EFA) and multiple-linear regression. The study has used Sobel test to analyze the mediation effect. The findings of the study suggested that perceived usefulness, perceived ease of use and perceived security have a significant positive impact on attitude and behavioral intention to use fintech services and other related outcomes. These findings may be used to assist Fintech service providers in implementing their user growth plans, as well as serve as a reference for future studies.

Keywords: Fintech; perceived usefulness; perceived ease of use; perceived security; perceived risk; attitude towards using; behavioral intention to use; actual use behaviour.

1. Introduction

Fintech is an abbreviation of financial technology which can be understood as a fusion of bank expertise, modern information technology and the computer (Bettinger, 1972).Schueffel (2016) has defined fintech as a new financial industry that utilize technology for making the financial services better and advanced. In simpler words, Fintech can understood as the innovations used by businesses to enhance the manner in which financial services are offered, delivered and used (Mention, 2021). Many tremendous changes has been brought by fintech in the digital economy, especially in India, China and United Kingdom (Phuc et al., 2019). There is a plethora of Fintechs established in almost all segments of financial services, i.e. financing, payments, asset management, lending and insurance etc. Fintech provides digitized services which are more consumer friendly, convenient and secure for the users. Fintech services have the capability to enhance efficiency, lower risk, and lead to more equitable growth (RBI Report, 2018).FinTech services have been adopted by 64 percent of the world's population, with China and India leading the way with an acceptance rate of 87 percent (EY Fintech Adoption Index, 2019).

Because Fintech Service is a cutting-edge high-tech product, using Fintech Service as a research issue and TAM to examine customers who use Fintech Service or have the potential to use Fintech Service to see if consumer attitudes about Fintech Service have a substantial influence on behavioral intentions to use Fintech Service is becoming a hot topic (Chuang et al., 2016).Fintech acceptance is still very much in debate, despite the fact that many experts and practitioners believe it has the potential to transform the financial industry's future (Ryu, 2018). To adopt Fintech services, the financial sector first needs to understand the consumer's acceptance level towards the adoption of technology in financial services. Multiple technological innovations have resulted in a disruptive

structural change in the traditional financial service industry. The incumbent financial institutions are facing a severe challenge because of the omnipresence of fintech innovations (McWaters et al., 2015). Since 2015, an increase in awareness and adoption of fintech can be seen (EY Fintech Adoption Index, 2019). Although, the number of fintech users has increased, however users are showing a selective adoption of only few fintech services, i.e. money transfer and payment services.

This study will investigate the factors responsible for adoption and actual use of fintech services by examining the precedents of consumer perception for technology adoption. To do so, the study has proposed a framework based on the Technology Acceptance Model (TAM), where consumer perception towards ease of use, usefulness, security and risk for fintech services is combined with attitude towards using, intention and actual use of Fintech services.
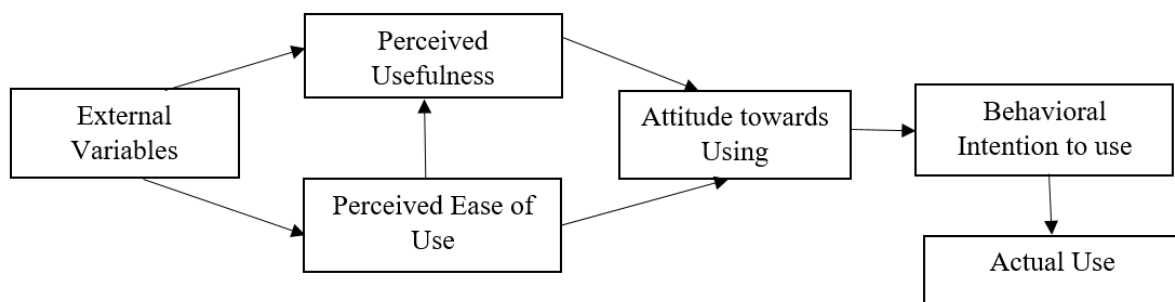
The study has been presented in six sections. The first section provides a brief introduction of the study providing a perfect launching pad for the current study. The second section presents the review of literature on technology adoption and use while explaining the effect of various factors. The next section has proposed the research framework and has formulated the associated research hypotheses. Thereafter, steps for empirical study, data collection process and methodology are explained and the next section presents the results, main research findings and implications. In the final section, limitations of the study and future research directions are provided.

2 Literature Review

2.1 *Conceptual Model*

The study has used Technology Acceptance Model (TAM) as a base for the purpose of examining the factors determining the fintech adoption decision of users. TAM model was first presented by Fred Davis in 1985. Many studies have used the model in the adoption of advanced technologies such as wireless internet, telemedicine technology, e-learning, e-commerce etc. (Lu et al. 2003; Hu et al. 1999; Masrom et al. 2007; McCloskey 2004)

The model hypothesizes that, the actual use of a proposed system is majorly dependent on user's overall attitude towards using the system. Meanwhile, perceived ease of useand perceived usefulnessare two major beliefs determining the user's attitudetowards using a system. Perceived ease of use can be understood as the degree to which the user perceives the system to be used effortlessly or with a little effort. Additionally, Perceived usefulness refers to the user's perception for the system to increase the work performance. (Davis, 1985)

Source: Davis, 1985

Figure 1.Technology Acceptance Model (TAM)

The researcher proposes a conceptual framework based on the TAM (Davis, 1985) for the study. Considering the findings of other studies as a base, the researcher has modified the model, accordingly. The study first examines the influence of perceived ease of use (PEOU), perceived usefulness (PU), perceived risk (PR) and perceived security (PS) on user's attitude towards using fintech (ATT) and behavioral intention to use fintech (BIU). The study also examines whether there is any relationship between ATT and BIU. The study further examines, the influence of ATT and BIU on AU. The study also aims to examine whether BIU plays a mediating role between ATT and AU.
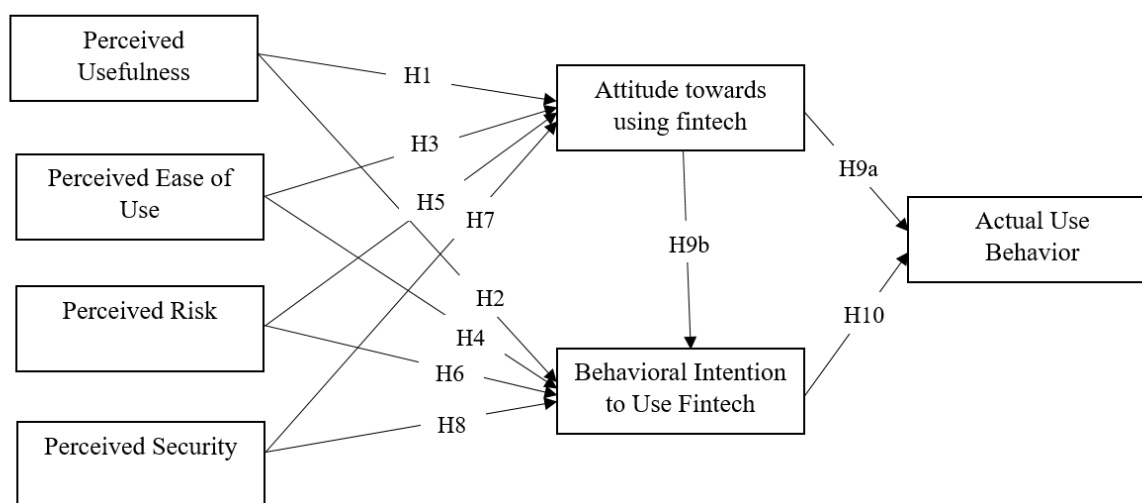

Figure 2.Proposed Conceptual Framework

2.2   Hypothesis Development for the Proposed Model

The study has used Technology Acceptance Model (TAM) as an underlying model, as fintech services are considered to be a blend of finance and technology. Although the usage of TAM is very high in the previous studies for ascertaining the elements determining the users' intention for technology adoption, few studies have listed out the shortcomings of TAM model in predicting the user intention to adopt new technology. (Ahmad et al. 2018; Ajibade et al. 2018). In order to eliminate the shortcomings of the TAM and to increase its efficacy and functionality, researchers have modified the model by including new alternative factors. (Phuc et al. 2019; Chuang et al. 2016; Lee et al. 2018).

Considering the above reasoning as a base, the study plans to include PR and PS to modify the TAM and to examine the fintech adoption more extensively. The researcher also plans to ascertain the impact of PU, PEOU, PR and PS directly on 'BIU'.

2.2.1   Perceived Usefulness (PU)

PU refers to the extent to which user perceives the system to increase the work performance (Davis, 1985). For the users to accept using fintech services, they must consider these services to be useful and efficient enough to bring some benefits to them.

BIU refers to an estimate of the probability of an individual adopting the system (Davis, 1985). Many studies have concluded that the BIU is positively influenced by PU (Lee et al. 2018; Phucet al. 2019; Singh et al. 2020; Hasan et al. 2021). The researcher has denoted PU by using 5 indicators. These are-being quick, time saving, effort saving, cost saving and overall usefulness.

Attitude refers to a critical opinion corresponding to a person's perception of liking or disliking a particular object (Fishbein and Ajzen 1980). Studies have shown a positive relation between PU and ATT (Guritno andSiringoringo, 2013; Weng et al. 2018; Bugembe, 2010; Raza et al. 2017; Gunawan et al. 2019; Moses et al. 2013). Given the widespread availability of Fintech services, as well as their ease, it will be fascinating to investigate the impact of PU on BIU and ATT.

Based on the above reasoning, the study has proposed following hypotheses:

H_1: Perceived usefulnesshas a positive impact on Behavioral intention to use fintech services.

H_2: Perceived usefulnesshas a positive impact on Attitude towards using fintech services.

2.2.2 Perceived Ease of Use (PEOU)

PEOU can be understood as the degree to which the user perceives the system to be used effortlessly or with a little effort (Davis, 1985). Research by Nanginet el., (2020) suggested a positive relationship between PEOU and user's BIU. Ramayah, (2006) conducted a study in Malaysia to examine the impact of PEOU on user's behavioral intention to use online library, the study identified a positive relationship between the two variables. Similarly, many other studies have suggested a positive relationship between PEOU and BIU (Singh et al. 2020; Phuc et al. 2019; Hasan et al. 2021; Denaputriand Usman, 2019; Setiawan andSetyawati, 2020).

Studies have also shown a positive and significant impact of PEOU on ATT (Kanchanatanee et al. 2014; Raza et al. 2017; Shroff et al. 2011). Few studies have suggested that there is no significant impact of PEOU on ATT. (Moses et al. 2013; Suleman and Zuniarti, 2019).

Based on the above review, the study has proposed following hypotheses:

H_3: Perceived ease of use has a positive impact on Behavioral intention to use fintech services.

H_4: Perceived ease of use has a positive impact on Attitude towards using fintech services.

2.2.3 Perceived Risk (PR)

PR can be understood as the feeling of uncertainty, discomfort and anxiety as a consequence of a buying/adoption decision (Dowling and Staelin, 1994). According to Bauer (1960) PR can be understood as "a combination of uncertainty plus seriousness of outcome involved- associated with each category of product". Featherman (2001) has included PR in the Technology Acceptance Model (TAM) to extend the model.

Studies have suggested that there is a significant negative relationship between PR and BIU (Wessels and Drennan, 2010; Chen, 2013; Fadare et al. 2016; Nguyen and Nguyen, 2017; Kesharwani and Bisht, 2012). Lee et al. (2009) conducted a study to examine the factors affecting the adoption of

internet banking. The study analyzed the impact of five facets of risk, i.e. financial, security, performance, social and time risk on the user's ATT and intention to use internet banking. The findings of the study suggested that these risks have a negative impact on the user's attitude towards using internet banking.

Based on the above investigation, the study proposes following hypotheses:

H$_5$: Perceived Risk has a negative impact onBehavioral intention to use fintech services.

H$_6$: Perceived Risk has a negative impact on Attitude towards using fintech services.

2.2.4   Perceived Security (PS)

PS can be understood as the degree to which a prospective user perceives that the system has a technical assurance for completing the transaction and disseminating sensitive data in a protected way (Casaló et al., 2007). An absence of PS leads to hindrances in using the technology products, as the customers become skeptical regarding the security of the transactions (Casaló et al., 2007). One of the main reasons why people, regardless of whether or not they utilise the internet, do not engage in online financial transactions is a lack of trust in the transactions' security (Gefen and Straub, 2003).A significant impact of PS and privacy can be seen on customer's level of trust towards online shopping (Chen andBarnes, 2007).

Many studies have suggested a positive impact of PS on BIU (Kumar et al. 2018; Belanche et al. 2015; Patel and Patel 2018).

Based on the above reasoning, the present study has proposed following hypotheses:

H$_7$: Perceived Security has a positive impact onBehavioral intention to use fintech services.

H$_8$: Perceived Security has a positive impact on Attitude towards using fintech services.

2.2.5   Attitude towards using fintech services (ATT)

Attitude towards using a behavior can be defined as a positive or negative opinion of a person regarding that behavior (Ajzen, 1991). Armitage and Conner (2001) suggested that ATT significantly influences BIU. Several other studies have also suggested a positive and significant impact of ATT on the BIU(Teo and Lee, 2010; Shanmugam et al. 2014; Letchumanan and Tarmizi, 2011; Teo and Zhou, 2014).

Considering the above analysis as a base, the present study has developed following hypotheses:

H$_{9a}$: Attitude towards using fintech services has a positive impact onActual Use Behavior.

H$_{9b}$:Attitude towards using fintech services has a positive impact onBehavioral intention to use fintech services.

2.2.6   Behavioral intention to use fintech services (BIU)

With the introduction of Fintech and its infusion with the traditional financial institutions, behavioral intention for use seems to have become a key component to signal the likelihood of people using and adopting Fintech services (Feng et al., 2014).BIU refers to an estimate of the probability of an individual adopting the system (Davis, 1985). The speed of technology innovation in financial services compared to customer awareness has a major impact on a user's behavioral intent (Singh et al., 2020).Though, practically, it is not simple to get a fair minded estimation of a person's intention to engage in a behavior. Several studies have suggested a significant interconnection between intention to engage in a behavior and actual behavior (Dabholkar andBagozzi, 2002;Vijayasarathy, 2004). Based on the above review, the present study has proposed the following hypothesis:

H_{10}: Behavioral intention to use fintech services has a positive impact on Actual Use Behavior.

3 Research Methodology

3.1   Data Collection

The study aims to analyze the factors influencing the attitude and behavioral intention to use fintech service. The study is conducted on the retail grocery shop keepers of Varanasi district, Uttar Pradesh, India. Data is collected through interview schedule. The data has been collected from August, 2021 to September 2021. The researcher has received responses from 286 respondents, after excluding incomplete and invalid responses, the study is conducted with 214 valid responses (74.83%).

Table 1.Sample Characteristics

Demographic Variable	Category	Frequency	Percentage
Gender			
	Male	150	70.1
	Female	64	29.9
Age			
	Under 25	18	8.4
	26-35	83	38.8
	36-45	65	30.4
	46-55	48	22.4
Marital status			
	Married	170	79.4
	Unmarried	44	20.6
Level of Education			
	Illiterate	20	9.3
	Less than High School	47	22.0
	High School	38	17.8
	Intermediate	41	19.2
	Bachelor's Degree	68	31.8
Annual Household Income			
	₹ 25,000 - ₹ 50,000	20	9.3
	₹ 50,000 - ₹ 100,000	73	34.1
	More than ₹ 100,000	121	56.5

SPSS 26.0 software is used to statistically evaluate the data. Table 1 shows descriptive statistical results of sample characteristics from 214 respondents. Male participants make up 70.1 percent of the total, while female participants make up 29.9 percent. The majority of the participants (38.8 percent) are between the ages of 26 and 35. In terms of annual household income, most of the respondents (56.5 percent) earn more than ₹100,000, followed by ₹50,000-₹100,000 (34.1 percent), while only 9.3 percent earn between ₹25,000 and ₹50,000. In terms of education, the majority of respondents have Bachelor's degrees (31.8 percent), less than high school (22.0 percent), Intermediate (19.2 percent), High school (17.8 percent), and illiterate (9.3 percent).Married individuals make up 79.4 percent of the total, while unmarried people make up 20.6 percent.

3.2 Instrument Design for measurement

The present study has developed the survey design by modifying the instruments used in prior researches in accordance with the purpose of the current study. The questionnaire is developed on the basis of the constructs of PU, PEOU, PR, PS, ATT, BIU and AU. The measurements of PU and PEOU has been taken from the criterion defined by Cheng et al. (2006) and Huh et al. (2009); measurements for PR has been adapted from Hu et al. (1999) and Marakarkandy et al. (2017); PS and ATT has been adjusted from Cheng et al. (2006); BIU has been modified from Pateland Patel, (2018); Marakarkandy et al. (2017) and Cheng et al. (2006). The scale consists of 7 factors. Each factor is made up of 3 to 5 observed variables. The observed variables are measured by Likert scale of 5 levels with 1 - strongly disagree and 5 - strongly agree.

The collected quantitative data is evaluated by the reliability of the scale through Cronbach's Alpha coefficient, then conducted the exploratory factor analysis (EFA) and multiple-linear regression. The study has used Sobel test to analyze the mediation effects.

Table 2.Measurement Instruments

Items	The observed Variables	Source
	Perceived Usefulness (PU)	
PU1	Fintech services can improve the efficiency of personal financial activities.	Huh et al. (2009);
PU2	I think that using fintech services would enableme to accomplish my tasks more quickly.	Cheng et al. (2006)
PU3	I think that usingfintech services would makeit easier for me to carry out my tasks.	
PU4	I think Fintech services would help me in maintaining my books of accounts properly.	
PU5	Overall, I think that using fintech services isadvantageous.	
	Perceived Ease Of Use (PEOU)	
POEU1	I believe using fintech services easy for me.	Cheng et al. (2006)
POEU2	I believe interaction with fintech applications requires very little mental effort.	Cheng et al. (2006)
PEOU3	It is easy for me to learn how to use devices used for	Huh et al. (2009);

	Fintech services.	
PEOU4	Overall, I find fintech services can be used very easily.	Cheng et al. (2006)
	Perceived Risk (PR)	
PR1	I believe that the money is easy to be stolen by using Fintech services.	
PR2	I believe personal privacy will be disclosed by using Fintech services.	Hu et al. (1999);
PR3	Overall, I feel Fintech services are risky.	Marakarkandy et al. (2017)
	Perceived Security (PS)	
PS1	I would feel secure sending sensitive information across fintech applications.	Cheng et al. (2006)
PS2	I would feel totally safe providing sensitive information about myself over the fintech apps.	
PS3	Overall, fintech apps are safe to transfer sensitive information.	
	Attitude towards Using Fintech Services (ATT)	
ATT1	Using fintech services is a good idea.	
ATT2	I perceive that using fintech services is pleasant.	Cheng et al. (2006)
ATT3	In my opinion, it would be preferable to use fintech services.	
ATT4	Overall, In my view, using fintech services is a wise decision.	
	Behavioral Intention to Use Fintech Services (BIU)	
BIU1	I would like to use Fintech services soon.	Pateland Patel (2018); Marakarkandy et al. (2017)
BIU2	I will recommend Fintech services to my friends.	
BIU3	I would see myself using the fintech services for my financial needs.	Cheng et al. (2006)
	Actual Use Behavior (AU)	
AU1	Currently I am using fintech services and satisfied.	
AU2	I am using fintech services regularly.	
AU3	I am using fintech services for the past few years.	

4 Data Analysis and Interpretation

4.1   Exploratory factor analysis (EFA)

The researcher has used EFA to figure out the factor structure of the measurement instrument and to examine its reliability. The study has used principal component analysis (PCA) as the coefficient method with varimax rotation and eigenvalue 1.0 as cutoff criterion. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is used to check whether the factors are sufficient enough to make groupings. The measure of KMO test should be more than 0.5. In order to measure the internal consistency of the data Cronbach's α value was calculated shown in Table 3. In order to ensure sufficient reliability the cronbach's α coefficient should be more than 0.7 (Bland andAltman, 1997).

TheCronbach's α values of all the constructs were found to be greater than 0.80 of which, PR, BIU and PEOU have the highest values, 0.934; 0.921 and 0.907 respectively. This means that likert scale is suitable and reliable for further analysis.

Table 3.Factor loadings (from SPSS exploratory factor analysis)

	Factor loadings	Cronbach's α
PU		0.886
PU1	0.687	
PU2	0.688	
PU3	0.659	
PU4	0.604	
PU5	0.639	
PEOU		0.907
PEOU1	0.825	
PEOU2	0.629	
PEOU3	0.647	
PEOU4	0.528	
PR		0.934
PR1	-0.802	
PR2	-0.807	
PR3	-0.794	
PS		0.880
PS1	0.838	
PS2	0.743	
PS3	0.772	
ATT		0.837
ATT1	0.794	
ATT2	0.825	
ATT3	0.757	
ATT4	0.751	
BIU		0.921
BIU1	0.779	
BIU2	0.681	
BIU3	0.859	
AU		0.876
AU1	0.751	
AU2	0.817	
AU3	0.844	

The KMO value is 0.900 which means that the items are adequate and sufficient for making prediction. The Bartlett's test indicates, the probability or significance value is 0.000, which is less than 0.05 confirming that the variables are adequately correlated, which generally accommodates an acceptable basis for factor analysis.

Table 3 shows total cumulative variance explained by all seven factors is 82.675% that means the seven new factors extracted from the original 25 items, are efficient enough to illustrate over 82.675% variance. 13.708% variance is demonstrated by PU, 13.105% by PEOU, 12.856% by PR, 11.189% by PS, 10.914% by ATT, 10.696% by BIU and 10.207% by AU. The results of rotated factor matrix demonstrate that the factor loadings for all the factors of every variable are larger than 0.5. This represents an acceptable significant level of internal validity. The factor loadings ranged from 0.604 to 0.688 for PU, 0.528 to 0.825 for PEOU, 0.743 to 0.838 for PS, -0.794 to -0.807 for PR, 0.751 to 0.825 for ATT, 0.681 to 0.859 for BIU and 0.751 to 0.844 for AU. Since all factor loadings were of an acceptable significant level, all 25 questionnaire items were retained for further analysis.

4.2   Multiple Linear Regression Analysis

Multiple linear regression is performed using SPSS 26.0 software. The values of the independent and dependent variables are calculated by the average of the observed variables of each factor extracted in the EFA.

Firstly, the study has analyzed the impact of PU, PEOU, PR and PS on BIU using multiple linear regression. The results of the analysis are shown in Table 4, Table 5, and Table 6.

Table 4.Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
BIU	0.858[a]	0.737	0.732	0.629
a. Predictors: (Constant), PS, PU, PEOU, PR				

According to the Model Summary Table adjusted R square is 0.732 means that the independent factors in the model (PU, PEOU, PS, and PR) explain 73.2% variation of the dependent variable (Behavior Intention to Use).

Table 5.Anova

Model		Sum of Squares	Df	Mean Square	F	Sig.
BIU	Regression	230.956	4	57.739	146.137	0.000
	Residual	82.576	209	0.395		
	Total	313.533	213			

The ANOVA variance analysis shows that F = 146.137 is statistically significant, which proves the regression model is consistent with the data and variables in the analysis model.

Table 6.Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.[*]
		B	Std. Error	Beta		
Behavioral intention	(Constant)	7.175	0.600		11.949	0.000
	PU	0.189	0.049	0.174	3.834	0.000
	PEOU	0.294	0.060	0.332	4.878	0.000
	PR	-0.927	0.089	-1.027	-10.386	0.000
	PS	0.721	0.098	0.675	7.347	0.000

Dependent Variable: BIU
* $p < 0.05$

The results of the multiple linear regression indicate that PU, PEOU and PS all have a positive and statistically significant impact on the behavioral intention to use. However, PR has a significant but negative impact on the behavioral intention to use. Therefore, the hypotheses H_1, H_3, H_5 and H_7 are accepted.

Next, the impact of PU, PEOU, PR and PS on ATT has been analyzed using multiple linear regression. The results of the analysis are shown in Table 7, Table 8, and Table 9.

Table 7.Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
ATT	0.693[a]	0.481	0.471	0.741
a. Predictors: (Constant), PS, PU, PEOU, PR				

According to the Model Summary Table adjusted R square is 0.471 means that the independent factors in the model (PU, PEOU, PS, and PR) explain 47.1% variation of the dependent variable (ATT).

Table 8.Anova

Model		Sum of Squares	Df	Mean Square	F	Sig.
ATT	Regression	106.365	4	26.591	48.413	0.000
	Residual	114.796	209	0.549		
	Total	221.161	213			

The ANOVA variance analysis shows that F = 48.413, is statistically significant (Sig. = 0.000), which proves the regression model is consistent with the data and variables in the analysis model.

Table 9.Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig[*].
		B	Std. Error	Beta		
ATT	(Constant)	1.754	0.708		2.477	0.000
	PU	0.125	0.058	0.137	2.144	0.000
	PEOU	0.185	0.071	0.249	2.603	0.000
	PR	-0.029	0.105	-0.039	-0.279	0.000
	PS	0.313	0.116	0.349	2.709	0.000
Dependent Variable: ATT						
* $p < 0.05$						

The results of the multiple linear regression indicate that PU, PEOU and PS all have a positive and statistically significant impact on ATT. However, PR has a significant but negative impact on ATT. Therefore, the hypotheses H_2, H_4, H_6 and H_8 are accepted.

Theimpact of ATT on BIU has been analyzed using bivariate regression. The results of the analysis are shown in Table 10, Table 11, and Table 12.

Table 10.Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
BIU	0.609[a]	0.371	0.368	0.964
a. Predictors: (Constant), ATT				

According to the Model Summary Table adjusted R square is 0.368 means that the independent factor in the model (ATT) explain 36.8% variation of the dependent variable (BIU).

Table 11.Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
BIU	Regression	116.380	1	116.380	125.145	0.000
	Residual	197.153	212	0.930		
	Total	313.533	213			

The ANOVA variance analysis shows that F = 125.145, is statistically significant (Sig. = 0.000), which proves the regression model is consistent with the data and variables in the analysis model.

Table 12.Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig[*].
		B	Std. Error	Beta		
BIU	(Constant)	1.189	0.256		4.652	0.000
	ATT	0.725	0.065	0.609	11.187	0.000
Dependent Variable: BIU						
* p<0.05						

The result of the bivariate regression indicates ATT has a positive and statistically significant impact on BIU. Therefore, the hypothesis H_{9b} is confirmed.

The impact of ATT and BIU on AU is examined using multiple linear regression. The results of the analysis are shown in Table13, Table14, and Table 15.

Table 13.Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
AU	0.442[a]	0.196	0.188	1.117
a. Predictors: (Constant), BIU, ATT				

According to the Model Summary Table adjusted R square is 0.188 means that the independent factors in the model (BIU and ATT) explain 18.8% variation of the dependent variable (ATT).

Table 14.Anova

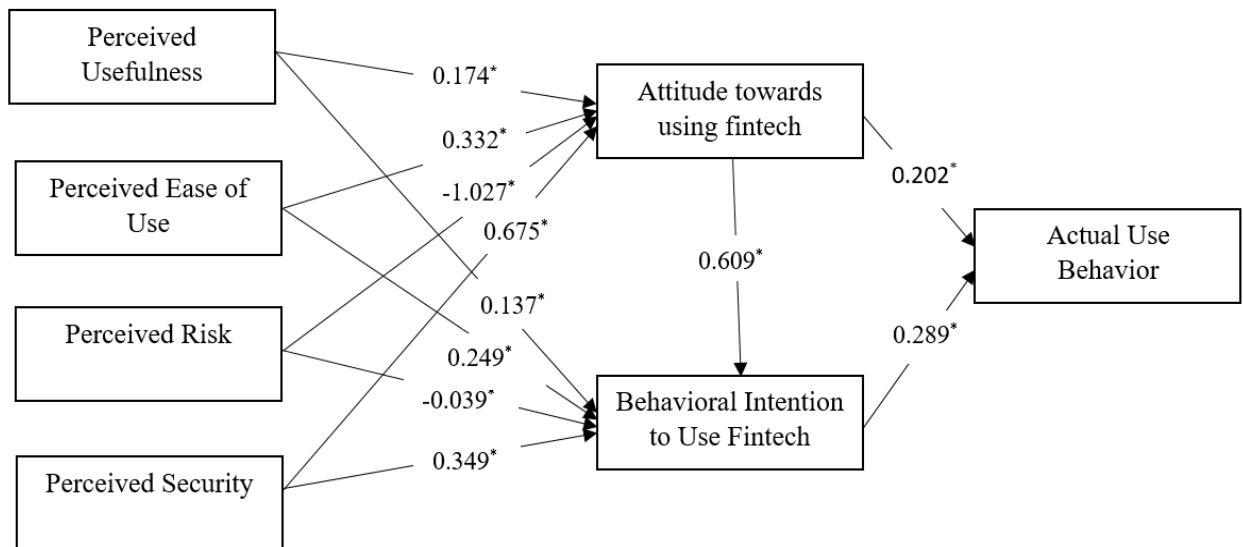| Model		Sum of Squares	Df	Mean Square	F	Sig.
AU	Regression	64.035	2	32.018	26.653	0.000
	Residual	263.346	211	1.248		
	Total	327.382	213			

The ANOVA variance analysis shows that F = 26.653, is statistically significant (Sig. = 0.000), which proves the regression model is consistent with the data and variables in the analysis model.

Table 15.Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig*.
		B	Std. Error	Beta		
AU	(Constant)	0.861	0.311		2.768	0.006
	BIU	0.352	0.095	0.289	2.713	0.000
	ATT	0.206	0.080	0.202	2.595	0.010
Dependent Variable: AU						
* p<0.05						

The results of the multiple linear regression indicate that ATT and BIU both have a positive and statistically significant impact on AU. Therefore, the hypotheses H_{9a} and H_{10} are confirmed.

Note: * Value is statistically significant at 0.05 level of significance.

Figure 3.The Research Model

The research model consisted of seven constructs namely PU, PEOU, PR, PS, ATT, BIU and AU. All the hypotheses proposed in the study were supported by the results as displayed in Figure 3.

4.3 Mediation Analysis

The current study looks at establishing BIU as a mediating factor between ATTand AU.

Also, this study looks at establishing if the mediating factor is full or partial. Mediation can either be full or partial. In complete mediation, the entire effect of the independent variable on the dependent variable is transmitted through the mediator variable and hence there is no direct effect of the independent variable on the dependent variable. In a partial mediation, there is a direct effect of independent variable on the dependent variable and the indirect effect is passed on by the mediating variable.

First, the direct effect of ATT (independent variable) on AU (dependent variable) is analyzed. The results of the bivariate analysis can be seen in Table 16.

Table 16.Bivariate Regression of ATT on AU

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig[*].
		B	Std. Error	Beta		
AU	(Constant)	1.106	0.300		3.685	0.000
	ATT	0.502	0.076	0.412	6.588	0.000
Dependent Variable: AU						
* p<0.05						

The bivariate regression of ATT on AU shows a beta coefficient of 0.502 and is statistically significant.

Next, the direct effect of ATT on BIU (mediating variable) is examined. The bivariate regression of ATT on BIU shows a beta coefficient of 0.725 and is statistically significant (Results of the bivariate analysis can be seen from Table 12).

Further, the impact of ATT and BIU on AU is examined using multiple linear regression. The results of the analysis are shown in Table13, Table14, and Table 15.

The multiple regression of ATT and BIU on AU show beta coefficients of 0.206 and 0.352 respectively, and are statistically significant.

Using the Preacher KJ, online web page of Sobel test, we get:

Table 17.Sobel Test for Mediation Analysis

	Input		Test- statistic	Std. error	p-value
a	0.725	Sobel Test	3.52870671	0.07501445	0.0004176
b	0.352				
S_a	0.065				
S_b	0.095				

The result of the sobel test confirms the mediating role of BIU between ATT and AU. Further, ATT was found to have both direct and indirect significant impact on AU, resulting in a partial mediation case.

5. Conclusion and Implications

The study investigates the factors responsible for adoption and actual use of fintech services by examining the precedents of consumer perception for technology adoption amongst retail grocery

shopkeepers of Varanasi district, Uttar Pradesh, India. The six precedents of consumer perception for technology adoption are identified as PU, PEOU, PS, PR, ATT and BIU. The study adopted empirical techniques to fulfil the objectives of the study on a sample of 214 retail grocery shopkeepers of Varanasi district. All the ten proposed hypotheses were found to be in line with the conceptual framework of the study.

The findings of the study revealed that PU, PEOU and PS have a positive and significant impact on ATT. This is because, the users accept using fintech services when they consider these services to be useful, easily accessible and secure enough to bring some benefits to them. These findings are in cognizance with the results of Gunawan et al. 2019,Raza et al. 2017, and Kumar et al. 2018. However, the study shows a significant negative impact of PR on ATT, which is also supported by the findings of Lee et al. 2009 and Nguyen and Nguyen, 2017.

PU, PEOU and PS were found to have a significant positive impact on the BIU. These findings are in line with the studies conducted by Hasan et al. 2021, Setiawan and Setyawati, 2020 and Belanche et al. 2015. The customers will intend to adopt and use fintech services only when they perceive these services as useful and easy to use. Meanwhile, a significant negative impact of PR on the BIU has been shown in the study, which is in accordance with the previous studies of Wessels and Drennan, 2010, Chen et al. 2013 and Fadare et al. 2016.

Finally, mediation test confirmed the role of BIU as a partial mediator between ATT and AU. The users who possess positive attitude towards fintech services intend to adopt these services. BIU was found to be positively influenced by the ATT, supported by the findings of the studies of Shanmugam et al. 2014, Letchumanan and Tarmizi, 2011 and Teo and Zhou, 2014. ATT and BIU showed a positive impact on AU, which confirms the findings of earlier studies of Dabholkar and Bagozzi, 2002,Vijayasarathy, 2004 and Armitage and Connner 2001.

The present study adds to the existing body of literature by identifying the significant predictors of consumer perception for technology adoption in the context of Indian retailers. The study holds significant implications for academic practitioners to conduct further researches in the area of fintech usage in retailing, for fintech service providers to develop awareness among the customers regarding the usefulness, ease of use and security provided by the fintech services. This study provides a better understanding of the antecedents of consumer perception regarding fintech services that directly influence their intention to adopt these services and the way these factors can be used by the fintech service providers for facilitating a wide-ranging fintech adoption.

6. Limitations and Future Directions

There are three major limitations in this study that must be addressed in the future.

The first constraint has to do with the sample size of the study. Only 214 valid responses out of a total of 286 were obtained for this investigation. In comparison to the amount of people who utilize Fintech services in Varanasi, this would contribute the responses of only a minor quantity.

As a result, bigger sample sizes may be considered in future studies to improve reliability and total representativeness.

Secondly, the study is conducted only on the retail shopkeepers of Varanasi district, Uttar Pradesh. Hence the finding could be biased and may not totally apply to the rest of the country/ world. Future studies could be conducted including other districts from different states.

Thirdly, the study has incorporated only the unorganized retailers. Future researches could be conducted taking into account the responses from the organized retailers.

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