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Study of Consumer's Intention to Use of E-Wallet: with Extended UTAUT2 Reward and Technological Innovation

Shivam Upadhyay
(Research Scholar),
Department of Commerce & Business Administration,
University of Allahabad

Dr. Akhilesh Chandra Pandey
(Assistant Professor)
Department of Commerce & Business Administration,
University of Allahabad

Correspondence E-mail - Shivamupadhay530@gmail.com

Introduction

Consumers in the 21st century are living in a world transformed by contactless transactions, a product of the digital revolution. This technology is woven into the fabric of daily life, offering solutions for everything from morning coffee purchases to late-night bill payments. From shopping and salons to education, food delivery, money transfers, and public transport, contactless payments are ubiquitous. This constant presence fosters a consumer behavior that embraces new technologies and innovation. The rise of mobile payments, driven by advancements in technology, has fundamentally altered the payment landscape. Consumers now have the power to turn their smartphones into convenient payment tools.

The emergence of the Internet and smartphones in the 21st century has made information technology an essential aspect of human existence, which were mostly accessible to organizational users in the late 20th century. Research on technology adoption and diffusion is well-established in the current literature on information systems (IS). IS researchers are constantly seeking to comprehend the different factors that influence individuals' acceptance and utilization of emerging information technology (IT) (Hughes et al., 2016, 2017, Hughes et al., 2020). This extensive research field has seen a variety of research methods being used to study a wide range of technologies in different countries. The existing literature has uncovered numerous theories, contexts, units of analysis, and research methods (Dwivedi & Williams, 2008; Choudrie & Dwivedi, 2005; Williams et al., 2009). The diverse research contexts, which include technology, user type, location, adoption time, and task done, have led to the emergence of numerous conflicting theories and models. The Technology Acceptance Model (TAM), Diffusion of Innovation (DoI), Theory of Planned Behaviour (TPB), and Task Technology Fit (TTF) Theory have been commonly used to study various aspects of adoption and diffusion (Dwivedi et al., 2006, 2007; Dwivedi and Weerakkody, 2007; Kapoor et al., 2014). Venkatesh et al. (2003) created the Unified Theory of Acceptance and Use of Technology (UTAUT) by thoroughly examining eight prominent technology adoption models. This theory focuses on the practical value (external motivation) that technology brings to users in an organizational setting. It eliminates any overlapping or repetitive concepts to streamline the theory (Venkatesh et al., 2003). The emergence of consumer technologies required the

expansion of the UTAUT model to include the consumer context, with a focus on the hedonic value (intrinsic motivation) of technology users. As a result, three additional concepts, namely hedonic motivation, price value, and habit, were included in the original UTAUT model. This updated version is known as UTAUT2. However, in UTAUT2, the concept of voluntariness of use was eliminated as a moderator because customers do not have any organizational mandate. Additionally, in many cases, consumer behavior is voluntary (Venkatesh et al., 2012). The UTAUT2 hypothesis has a significantly greater predictive power compared to UTAUT. It can explain around 74 percent of the variation in customers' behavioral intention and 52 percent of the variation in consumers' technological usage of the focus technology (Venkatesh et al., 2016).

Literature Review

This study investigates the associations among perceived Internet risk, personal innovativeness, computer/web self-efficacy, and intentions to make online transactions. The results indicate a strong correlation between perceived Internet risk, personal innovativeness, computer/web self-efficacy, and purchase intention.The reference "Boyle et al., 2006" is provided.The UTAUT model was expanded in size, resulting in a match with the original article's findings.(Dwivedi et al., 2011)The variables of PE (Perceived Enjoyment), EE (Perceived Ease of utilize), SI (Social Influence), information quality, and system quality have a significant correlation with the intention to utilize the E-Syariah Portal. The citation is from Yahya, Nadzar, and Rahman's work in 2012. The key consideration in embracing m-banking service is security.(Mashagba & Nassar, 2014) The presence of risk and lack of trust significantly contribute to the occurrence of unsuccessful mobile money transfers in Kenya.The study conducted by Omwansa et al. (2015) found that consumer intention is influenced by both culture and perceived security. (Junadi & Sfenrianto, 2015) is a valuable resource for the education community, particularly for researchers, professors, government officials, and students interested in virtual learning agents. (Ramli, Nathan, and Wei, 2015) This framework specifically incorporates the concept of research context and cross-context theorizing into the theory evaluation framework proposed by Venkatesh, Thong, and Xu (2016).The study indicated that both SI (Social Influence) and brand image did not have a statistically significant impact on consumers' intention to make online purchases. (Wani, Ali, & Farooq, 2016)High technology (HT), high mobility (HM), and perceived enjoyment (PE) have a considerable impact on buying intention. However, ease of use (EE) and social influence (SI) do not have a significant effect on purchase intention.The study conducted by Fard et al. in 2017.The deposits in business intelligence are significantly influenced by factors such as private equity (PE), employee engagement (EE), human capital management (HM), predictive analytics (PV), and trust (Tarhini, El-Masri, Ali, & Serrano, 2016). The reference "Abdallah et al., 2017" is cited. The results indicate that perceived technological security has a substantial positive link with the adoption of WeChat mobile payment. On the other hand, the relationships between PE, EE, FC, and SI and BI in adopting WeChat mobile payment are favorable but not significant. (Havidz, Aima, & Wiratih, 2018) The client must embrace mobile banking based on the influence of security, computer self-efficacy, perceived ease of use, and perceived financial cost, in that specific sequence. (Singh, 2018) Utaut2's variable government support influence payment internet (Acharya et al., 2019) Trustworthiness significantly affects the use of e-wallets, whileSI affects lowest.(Nag & Gilitwala, 2019) HT,PSe,PS&Trust Lebanon and England affect customer BI in both countries. While PE is the key indicator in Lebanon, PV in England and SI and HM is insignificant in both countries. (Merhi et al., 2019) satisfaction,trust,perceived enjoyment, have positive effect of BI.(Chao, 2019)EE,SI,HM, and trust are influencing customer loyalty in use LinkAja but PE,FC and perceived technology security did not significant influence customer loyalty.(Tamara et al., 2020) HM, PSe, GP, FC, PE, PS and SI, and PV play a positive role in e-wallet adoption, but HT and EE are negative.(Soodan &Rana, 2020)

Factors	Definitions
Performance Expectancy (PE)	Refers to the extent to which the use of e-wallet technology will offer advantages to consumers when engaging in e-wallet activities.
Effort Expectancy (EE)	Refers to the level of convenience that consumers experience when using e-wallet technology.
Social Influence (SI)	Refers to how much customers believe their influential others, like family and friends, support their use of e-wallets for purchasing intentions.
Facilitating Condition (FC)	Consumer perception of their possessions, like smartphones, and resources, such as funds for internet data and compatible shopping apps, influences their intention to use e-wallets for purchases.
Hedonic Motivation (HM)	Refers to the enjoyment or pleasure that individuals have when using e-wallet technology.
Habit (H)	Refers to the degree to which individuals tend to utilise e-wallets automatically for the purpose of making purchases, driven by their understanding of e-wallet technology.
Price Value (PV)	Refers to the cognitive trade-off made by consumers between the perceived benefits of utilizing e-wallets for shopping and the monetary cost associated with their usage.
Reward (Re)	Reward is the collection of advantages obtained from purchases made with an electronic wallet. Reward refers to various incentives such as cashback, discounts, coupons, referral bonuses, promotional offers, and promo codes.
Technological Innovations (TI)	Encompass technological changes, innovation, upgrading, creativity, fresh exploration, and Artificial Intelligence, among other things.
Purchase Intention (PI)	PI is a customer's willingness to buy a product or service, influenced by various external and internal factors. PI is a dependent variable

Research Methodology

Identification of Research gap

Literature review done so for revealed that UTAUT 2 has been tested with seven factors and further extensions such as Trust, Perceived security, Perceived savings, Perceived Risk, Perceived Cost, Perceived Satisfaction, personnel innovations etc. have been added however, Rewards (cash back, discount coupons, offers and promo code) and Technological up- gradation has been indirectly ignored and has been yet not discussed directly further these are an important factor that may have impact over customers intention. As far as today‘s markets are concern the mode of transaction has shifted towards digital mode. People now prefer to purchase products online rather than visiting to markets. Hence E-wallets have now become an indispensable part of their life however; there intention to use E-wallets is affected by a vast group of factor. Rewards and Technological up-gradation being one of those play amajor role in influencing customer‘s intention.

Research Objectives

The study seeks to analyze the current seven elements and expand upon them by incorporating rewards and technological innovation to assess their influence on the intention to use e-wallets while buying durable goods. The study's primary objectives are listed below.

1. To study the factors of UTAUT model affecting consumer's purchase intention to use e-wallet for consumer durables.
2. To analyze the factors of UTAUT2 hedonic motivation Price value and Habit with intention to use e-wallet for consumer durables.
3. To Extend the UTAUT2 model with Rewards (cash back, discount coupon, offers and promo code) and Technological Innovation

Research Hypothesis

The literature review done so far reveals the seven factors which has been pre-stated and tested in previous researches, additionally two others factors have been extended to be tested in my study.

H1: There is a positive relationship between Performance Expectancy and intention to use E-wallets.

H2: There is a positive relationship between Effort Expectancy and intention to use E-wallets.

H3: There is a positive relationship between Social Influence and intention to use E-wallets.

H4: There is a positive relationship between Facilitating Condition and intention to use E-wallets.

H5: There is a positive relationship between Hedonic Motivation and intention to use E-wallets.

H6: There is a positive relationship between Habit and intention to use E-wallets.

H7: There is a positive relationship between Price Value and intention to use E-wallets.

H8: There is a positive relationship between Reward and intention to use E-wallets.

H9: There is a positive relationship between Technological Innovations and intention to use E-wallets.

Development of a Final Theoretical Model

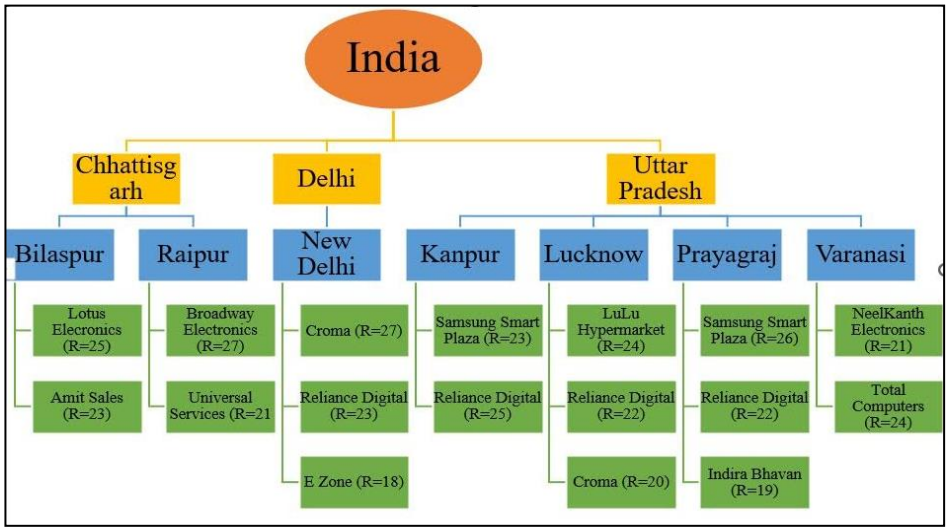
On the basis of a thorough review of literature and interviews with experts on the research problem chosen, a conceptual model for the inter-association of dependent and independent variables was created after filtering the potential variables. Out of fifteen technology acceptance variables identified, ten potential variables were chosen to form the final research model with the help of interviews with expert suggestions. The research indicators were structured with closed-ended questions, and there were a total of nine latent variables: performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), habit (H), hedonic motivation (HM), price value (PV), rewards (Re), and technological innovation (TI). Additionally, there was one dependent variable, which was purchase intention (PI).

Research Design

Nature of the Study	Empirical Research
Research Instrument	Close-Ended Questionnaire
Nature of Data	Primary Data
Sampling Technique Used	Non-Probability Mall Intercept Method
Scale	Five- Point Likert Scale
Sampling Unit Selection	Smartphone/e-wallet users
Sample Size	390 Respondent
Model	UTAUT2
Software use	SPSS20 and Smart PLS-SEM4

Area of the Study

Mall intercept method was used to get the responses from customers. The study was administrated by visiting either two or three electronic gadget stores located in selected 7 cities like- Bilaspur, Raipur, Delhi, Kanpur,Lucknow, Prayagraj, Varanasi



Sampling method

This study focuses on durable goods and employs a non-probability sampling technique using the mall intercept method to investigate technology acceptance. It specifically examines a range of durable products such as smartphones, laptops, TVs, smartwatches, and multimedia devices.

Scaling Technique

The scaling technique based on a 5-point Likert scale ranges from strongly disagreeing to strongly agreeing, with the following possible responses: 1 for strongly agree, 2 for Agree, 3 for Neutral, 4 for Disagree, and 5 for strongly disagree.

Data Analysis

Table 1 Demographic Profile

Descriptive Statistics	Frequency	Percentage (%)
Gender		
Male	232	59.9
Female	153	39.5
Transgender	2	.5
Age		
15-25	172	44.4
25-35	182	47.0
35-45	21	5.4
45 & above	12	3.1
Education		
Higher Secondary	72	18.6
Graduate	63	16.3
Post graduate	116	30.0
Research scholar	136	35.1
Occupation		
Student	206	53.2
Businessman	66	17.1
Farmer	57	14.7
Employee	58	15.0

Table 2 Measurement model (construct reliability and validity)

Construct	Indicators	Loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Performance Expectancy (PE)	PE1 <- PE	0.852	0.916	0.917	0.941	0.733
	PE2 <- PE	0.853				
	PE3 <- PE	0.875				
	PE4 <- PE	0.843				
Effort Expectancy (EE)	EE1 <- EE	0.872	0.925	0.930	0.944	0.718
	EE2 <- EE	0.867				
	EE3 <- EE	0.898				
	EE4 <- EE	0.855				
	EE5 <- EE	0.734				
Social Influence (SI)	SI1 <- SI	0.647	0.809	0.819	0.886	0.583
	SI2 <- SI	0.763				
	SI3 <- SI	0.864				
Facilitating Conditions (FC)	FC1 <- FC	0.885	0.856	0.868	0.903	0.606
	FC2 <- FC	0.814				
	FC3 <- FC	0.720				
	FC4 <- FC	0.677				
Hedonic Motivation (HM)	HM1 <-HM	0.824	0.858	0.859	0.913	0.668
	HM2 <-HM	0.780				
	HM3 <-HM	0.846				
Habit (H)	H1 <- H	0.624	0.842	0.872	0.903	0.647
	H2 <- H	0.807				
	H3 <- H	0.949				
Price Value (PV)	PV1 <-PV	0.814	0.841	0.845	0.905	0.643
	PV2 <-PV	0.826				
	PV3 <-PV	0.763				
Purchase Intention (PI)	PI1 <- PI	0.896	0.907	0.907	0.941	0.764
	PI2 <- PI	0.852				
	PI3 <- PI	0.874				

Reward (Re) formative construct(All the Outer Loadings p values = 0.000, VIF<3)	Re1 -> Re	0.865	**Formative construct**
	Re2 -> Re	0.883	
	Re3 -> Re	0.794	
	Re4 -> Re	0.865	
	Re5 -> Re	0.704	
	Re6 -> Re	0.685	
	Re7 -> Re	0.811	
	Re8 -> Re	0.724	
Technological innovation (TI) formative construct (All the OuterLoadings p values = 0.000, VIF<3)	TI1 -> TI	0.912	**Formative construct**
	TI2 -> TI	0.928	
	TI3 -> TI	0.840	
	TI4 -> TI	0.791	

Table 3: Discriminant Validity Test based on Fornell-Larcker Criteria (Note: Values shown in the bolded label are the square root of AVE values.)

	EE	**FC**	**H**	**HM**	**PE**	**PI**	**PV**	**SI**
EE	**0.847**							
FC	0.971	**0.778**						
H	0.626	0.739	**0.804**					
HM	0.820	0.953	0.751	**0.817**				
PE	0.916	0.879	0.650	0.830	**0.856**			
PI	0.838	0.885	0.732	0.82	0.832	**0.874**		
PV	0.852	0.958	0.839	0.953	0.853	0.886	**0.802**	
SI	0.935	0.986	0.773	0.89	0.866	0.884	0.913	**0.763**

Table 4: Discriminant validity - Hetrotrait-Monotrait ratio (HTMT) matrix

	EE	FC	H	HM	PE	PI	PV	SI
EE								
FC	**0.972**							
H	0.617	**0.745**						
HM	0.823	0.966	**0.753**					
PE	0.917	0.881	0.641	**0.831**				
PI	0.839	0.884	0.727	0.820	**0.831**			
PV	0.856	0.963	0.845	0.953	0.855	**0.888**		
SI	0.942	0.983	0.772	0.893	0.865	0.877	**0.911**	

Structural Model

Table 5 : Multicollinearity - Variance Inflation Factor (VIF)

Indicators	VIF	Indicators	VIF
EE1	3.708	HM1	2.795
EE2	3.501	HM2	2.27
EE3	4.09	HM3	1.911
EE4	3.318	PE1	3.17
EE5	1.784	PE2	3.088
FC1	2.555	PE3	3.048
FC2	2.311	PE4	2.658
FC3	1.83	PI1	2.936
FC4	1.654	PI2	2.997
H1	1.972	PI3	2.947
H2	2.074	PV1	2.727
H3	1.953	PV2	2.724
Re1	3.227	PV3	1.567

Re2	3.132	SI1	1.984
Re3	3.113	SI2	2.097
Re4	2.157	SI3	1.52
Re5	3.099	TI1	2.705
Re6	3.001	TI2	2.983
Re7	2.994	TI3	3.257
Re8	2.429	TI4	2.281

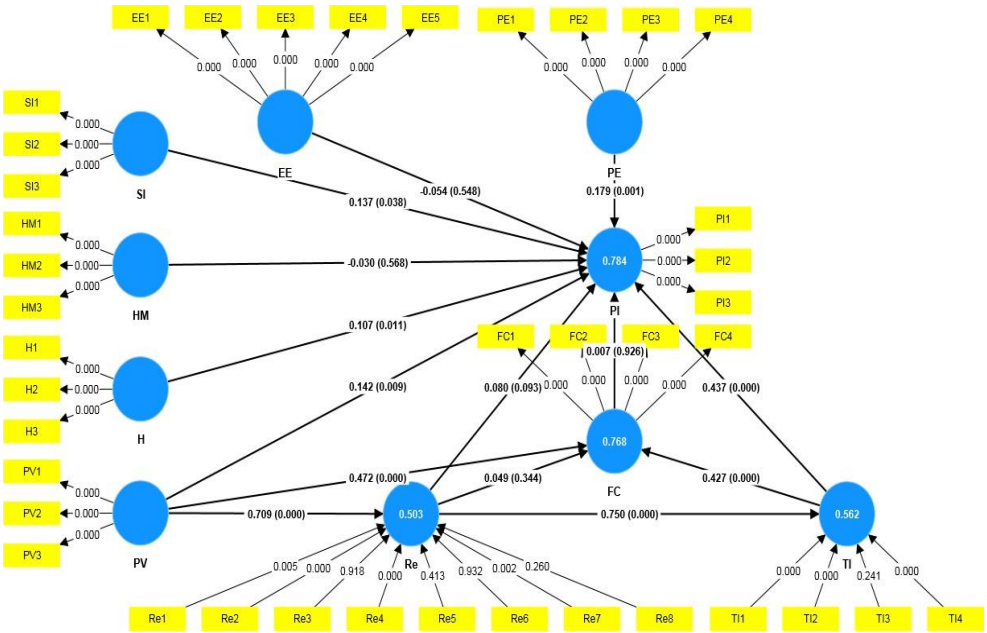


Figure 3: Proposed extended UTAUT2 Model

Table 6: Bootstrapped Critical Ratio Test with 5000 Sub-Samples for the proposed extended UTAUT2 model

Path	**P values**	**Hypothesis**	**Results**
PE -> PI	0.001	(H1)	Significant
EE -> PI	0.548	(H2)	Not Significant
SI -> PI	0.038	(H3)	Significant
FC -> PI	0.926	(H4)	Not Significant
HM -> PI	0.568	(H5)	Not Significant
H -> PI	0.011	(H6)	Significant
PV -> PI	0.009	(H7)	Significant

Re -> PI	0.043	(H8)	Significant
TI -> PI	0.000	(H9)	Significant

The symbols *=ρ<.05 (95%), **= ρ< .01 (99%), and ***= ρ<.001 (99.99%) represent different levels of statistical significance. H. stands for Hypothesis. S represents significant, NS represents not significant, and Sig. represents significance.

Conclusions

The technology behind electronic wallets is an intriguing subject of interest that should be investigated and analyzed, particularly when taking into consideration the primary difficulties that are associated with the implementation of such technology. This was expanded by integrating reward and technological innovation as independent factor. These characteristics have been extensively cited as one of the most important predictors of the desire to make a purchase and the use of electronic wallet. The primary statistical findings provided evidence that the conceptual model's purchasing intention to use an electronic wallet does, in fact, have predictive value. The following are the conclusions that can be drawn from the findings of this inquiry. In the extended version of the UTAUT2 model, it was discovered that the dimensions of Performance Expectancy (PE), Social Influence (SI), habit (H), Price Value (PV), Reward (Re), and Technological Innovativeness (TI) were all deemed to be significant predictors of the Purchase Intention (PI). On the other hand, it was discovered that the influence of Effort Expectancy (EE), Facilitating Conditions (FC), and Hedonic Motivation (HM) on Purchase Intention (PI) did not seem to be statistically significant.

Limitation and future research

However, the constraint is evident in the research. The survey questionnaire had a restricted distribution, limited to specific locations in seven cities in India. The analysis would be subject to variation if the questionnaire could be effectively distributed across all states in India. The reliability of the e-wallet approach for spending purchase intention may be considerably impacted by the diverse cultures and lifestyles among the seven cities in the states.

Therefore, it is recommended that future researchers carry out a more extensive study by including a larger population and incorporating a wider range of stores and both urban and rural locations in India in order to enhance the accuracy of the study. Furthermore, future investigations should consider examining consumers' loyalty and happiness as factors that influence consumer behavioral intention to use the Touch 'n Go e-wallet service. In addition, it is advisable for future study to employ the Structure Equation Model (SEM-AMOS) for data analysis in order to enhance the dependability and accuracy of the data.

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