Original Article

Factors Affecting Continuance Intention to Use E-wallet among University Students in Bangladesh

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Abstract - E-wallets are becoming increasingly popular as more people use digital payments for everyday transactions. The research is determined to assess the relationship among essential factors for usage intention to use e-wallets among some selected undergraduate university students in Bangladesh. The researchers took a more precise approach by combining the TAM and TPB models to conduct this research. Primary and secondary data collection are required for investigation. About 347 data have been collected. Data were analyzed through SPSS as well as SmartPLS software. Collected data was analyzed through a mix of descriptive and inferential statistics. Students' adoption of electronic wallets at public universities was studied using inferential statistics. Researchers used descriptive statistics to break down the demographics and personalities of e-wallet users. The sample of users for e-wallets who provided the data is representative of the general population. Using structural equation modelling, the researchers discovered support for all but two of their hypotheses. Thus, the study concluded that both positive attitudes toward e-wallets and high estimates of their usefulness are significantly associated with long-term intentions to use them. The study's implication, combining TAM and TPB models, was empirically evaluated at some selected universities to identify students' persistent intent to use electronic wallets. In addition, developers of e-wallet apps bear in mind the aspects of e-wallet adoption by users as they create their apps.

Keywords - E-Wallet, Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), Continuance intention, Undergraduate university students.

1. Introduction

The advanced insurgency proceeds to convert most aspects of people's lifestyles. Specifically, the progressive transformation has occurred within the vertical meeting of business channel capacities [1]. FinTech, a brief shape of monetary innovation, alludes to the inventive segment consolidating innovation with the finance industry [2]. Economic growth is facilitated in the financial sector, so for innovation to reduce user costs and risks, financial innovation is necessary [3]. In addition, FinTech brings convenience to users by enhancing the straightforwardness and effectiveness of money-related handles [4]. Nowadays, Consumers use smartphones for banking, instalments, budgeting, shopping, or stock exchange. As a result, FinTech industries are expanding their businesses into smartphone industries. The advancement of innovation also contributes to an increase in the number of smartphone clients who subscribe to FinTech administrations [5]. The smartphone's development has changed how people communicate with others over the last decade. Researchers can do diverse assignments using the internet on smartphones, such as purchasing cinema tickets, online shopping, and sending archives etc. Above those features lead to users being comfortable and relaxed [6].

Another step within the computerized transformation is changing the time-honoured conventional physical wallet into E-wallet [7]. These days, clients can utilize smartphones for instant financial transactions through digital wallets [8]. An E-wallet is regarded as an m-wallet, a digital wallet [9]. E-wallet is a web or program benefit that allows users to control and store their online transactions in the central repository, for example, passwords, logins, credit card, and shipping addresses information.

E-wallet gives on a single platform capability in smart cards, eliminating the need for different cards. E-wallets permit clients to make electronic payments rapidly and safely. A digital transaction using an e-wallet reduces the complications of money-related exchange and promotes the point of interest of a cashless economy[10].

Concurring to specialists, the electronic wallet market in Bangladesh has been expanding since 2019. A worldwide study estimates its development range from 250 billion USD by 2024 to over 100 billion USD in Bangladesh [11]. Mobile financial services are used by

over 50 million, regulated by 15 banking institutions in a conducive administrative environment in Bangladesh[12]. Several e-wallets that are used in Bangladesh are iPay, Rocket, bKash, SureCash Nagad, NexusPay, Upay, GPAY, Easy.com.bd, Dmoney, etc., where 346.37 lac active financial accounts involved in Bangladesh in March 2021.

Transactions accounted for around 59642.41 crores BDT, 8.3% higher than the previous month [13]. The overall value proposition of the portable wallet is that it is basic, secure, easy to store, and can exchange cash using portable gadgets [14]. Brand dependability and ease of purchase are important factors when choosing a portable wallet. Clients are facing challenges in case of safety and security [15]. Within the portable wallet, genuine cash is changed into electronic money and can be exchanged from one versatile supporter to another [16].

The primary issue researchers must address for the e-payment system is verification, which recognizes the buyer and reduces the possibility of identity theft. Data judgment implies that information is not modified with privacy during transactions. However, the security of reserves and dependence on web associations are major reasons for less acceptance [9].

Past inquiries on e-wallets have primarily focused on planning suitable e-wallet frameworks in selected municipal regions, evaluating their benefits quality, and measuring their client fulfilment issues regarding wallet services in Bangladesh. Few studies have been conducted about the impacts and variables of e-wallet using E-wallets among university undergraduate students in Bangladesh.

This research is different from the other study regarding students' perspectives. Different variables are influential to e-wallet usage, but here, this study focused on university students in Bangladesh. Thus, two main objectives are derived for this study:

RO1: To identify the influential factors of e-wallet usage intention among university students in Bangladesh.

RO2: To measure the influential factors of e-wallet usage intention among university students in Bangladesh.

2. Materials and Methods
2.1. Literature Review
2.1.1. E-wallet

Since e-wallets will significantly impact the country's economic landscape, financial markets, and payment infrastructure, they are of a widespread and present interest in Bangladesh. It eliminates the need for many cards and facilitates fast and safe electronic commerce transactions by providing the available features of a recent wallet on a single card. An electronic wallet is a method of conducting business via an online service that consolidates all of a user's payment, membership, and loyalty card details in one convenient location. According to research by [7], it has been vital to develop electronic payment systems in

Bangladesh after the commencement of the banking system enabled by the internet. It has several similarities to traditional wallets. People's greater interest in digital expenditures is one of the main reasons for the growth in using mobile wallets to replace conventional wallets and a transition from cash-based transactions to cashless payment systems.

According to research, consumers want faster, cheaper, and more convenient banking technology. E-wallets can fill this demand, according to [17]. [18] E-wallets can fill this demand. [Singh et al., 2020] acknowledged as the need for e-wallets is growing due to cashless transactions [18]. People worldwide are switching from conventional payment gateways to e-wallets for speedier transactions. An encrypted password system, therefore, safeguards E-wallet security. For this reason, it may apply to buying food, computers, aircraft reservations, highly expensive products, services, etc. [19].

2.1.2 TAM

Several theories have been put forth to try to decipher what motivates consumers to adopt new information system technologies. Several researchers conducted TAM for their academic and research works.[20]. It facilitates a framework for learning how people will embrace and use new technologies [21]. Basically, TAM adopts TRA's framework and postulates that a customer's willingness to adopt new technology is based on users' desire to do so voluntarily. The intention is founded on how one feels about and thinks the technology will help them. Many researchers have worked with the TAM model then they used it in a variety of recent technologies, such as electronic learning [22,23], mobile technology [24], SMS advertising [25], telemedicine [26], enterprise resource planning [ERP] adoption [27], E-banking [28] and also the adoption of website [29].

2.1.3. TPB

The theory of Reasoned Action (TRA) is an integral part of the Theory of Planned Behavior (TPB) [30–32]. [33] established TPB, one aspect that defines a person's behavioural intention. It deals with the social cognitive theory, which predicts and explains behaviors via attitude, controlling individual perceived behaviour and subjective norms. According to [32], TPB extends perceived behaviour control with TRA, which is a TPB predictor of intention along with Behavior. Individual conduct is predicted by one's intention, which is predicted by one's behavior, norms and attitudes. [34] stated that The TPB has been used to understand better how people act. It is a well-supported social psychological theory for forecasting human Behavior.

2.1.4 Continuance Intention to Use

Several academic works [35,36] have been devoted to investigating issues that contribute to the adaption and uses of these technologies.

However, the initial implementation of a new technology does not always ensure the continued

application of that technology or its commercial success. For instance, once Pokémon Go was released in July 2016, it almost immediately became the most downloaded app worldwide [37]. However, by the middle of September of that same year, it had lost 79% of its players in the United States [38]. The term "IS continuity intention" was coined by Bhattacherjee (2001) [39] to describe whether a new user wants to continue using the new information systems or not, regardless of first-time uses of those technologies. In this type of research area, he is in the leading position to separate the concepts of technological acceptance and continuing behavior.

The researcher conducts much research about the continuous intention to use a diversity of digitalized technology sectors. The popular research using Mobile apps uses [40,41], e-learning [42], online banking [39,40], e-commerce [43], sharing economy platforms [44], social networking [45,46] and also online services [47].

A group of Chinese researchers studies mobile transaction services led by [48] using the TAM-TPB methodology. A combined TAM-TPB model was shown to be useful for assessing the likelihood of interest in using various mobile commerce services. The TAM-TPB methodology was also used by [49] to investigate four Norwegian mobile services. This work combines TAM and TPB to better recognise the elements that motivate university students to keep using e-wallets.

2.1.5. Self-Efficiency, PEOU and Perceived Usefulness

In future, in many future scenarios where one can accomplish one's job perfectly despite having lots of undesired and stimulating situations is called one's self-efficiency [50]. While [51] stated that self-efficacy is an individual's assessment of one's capacity to plan and execute actions needed to achieve specific goals. It is not about skills but about what one can do with them. Technology-oriented mobile [Ex. mobile banking or other technology] requires competence and literacy, along with the capacity to operate so it can intervene readily. This is called self-efficacy [52]. The users have self-efficacy and self-confidence. To intervene easily, mobile technology demands talent, knowledge, and competence. From multiple studies, it is seen that there is a connection between PEOU and self-efficacy [53–56]. When people have a good experience with computers and online banking, they experience more control in their lives and are more productive overall.

The 'Ease of Use' factor is thus related to the above perception [57]. Perceived usefulness perception was found alike with self-efficacy [20]. If it is considered that if the new technology becomes easy to use, the user eagerly will take this technology considering its usefulness. [19] found that it is reasonable to anticipate that strong self-efficient people have a better strength to adjust to new technology and develop favourable perceptions towards the ease of use and thus consume the utility of technology.

A connotation between self-efficiency and the latent variable "Perceived Usefulness" has also been discovered [58,59]. From the discussion, researchers established the following hypotheses.

H1:   Self-efficacy positively impacts ease of use.

H2:   Self-efficacy positively impacts perceived usefulness.

2.1.6. Perceived Enjoyment, Perceived Usefulness and PEOU

According to Davis [1989] conducted that PE indicates how much activity is enjoyed independently of performance [20]. When a person uses technology in his daily life and feels more comfortable because of it, this is called "perceived enjoyment." This is also known as "hedonic technology" [60]. In a study by [61], "Intrinsic Motivation" [also known as "Enjoy"] is derived from an activity's inherent qualities and outcomes, making this activity more pleasurable than similar ones because it allows the participant to directly engage with the computer and a technical system over which they have some measure of control. This highlights the practical and pleasurable qualities that are supposed to have significant role-playing in consumers' technology adoption. Numerous studies have shown that the TAM Model works best when "Enjoyment" or "Intrinsic Motivation" are emphasized [59]. Predicting the utilization of web enabled IS was studied by [62]. Their results showed that PE positively but indirectly effects on BI via usability. Furthermore, their results indicate that PE indirectly improves BI through usability. From above deduction, researchers formulate the hypothesis as below:

H3: Perceived Enjoyment positively impacts ease of use.

H4: Perceived Enjoyment positively impacts perceived usefulness.

2.1.7. Computer Anxiety, Perceived Usefulness, and PEOU

Computer anxiety is concerns or fears about using computerized systems [127]. A large amount of literature regarding information science and computer anxiety has underlined psychology's significance by showing its impact on important dependent variables. Researchers have a working hypothesis that, based on the broad framework provided, common computer fear exerts an adverse impact on the perceived ease of using a recent edition of any system. Conventional anxiety theories [64] provide the theoretical underpinnings for such a relationship. These theories propose that one of the outcomes of worry has a detrimental impact on cerebral responses, particularly method anticipations. The previous study provides additional evidence that computer anxiety affects how easily computers may be used and how useful they are thought to be. Computer anxiety, as stated by [20,65], results in a reduction in the perceived ease of using the system and its overall utility. So, the hypotheses can be drawn:

H5: Computer Anxiety negatively impacts ease of use.

H6: Computer Anxiety negatively impacts perceived usefulness.

2.1.8. Perceived Usefulness, Ease of Use and Attitude

PEOU is regarded as the user's anticipations of minimal effort in utilizing a system [Davis,1989]. In addition, he stated that users naturally give up on a complicated system as they view that system as being less valuable. Many academics in the banking sector have shown a connection between user-friendliness and openness to trying new technologies [66,67]. Perceived ease of use affects the usage of individual-directed technologies, especially the Internet, as found by O'Cass & Fenech [2003] [68]. All studies show that the impression of direct or indirect "Ease of Use" impacts "Intention to Use," either via "Perceived Usefulness" or "Attitude towards Using." Research has shown that this is the case [59,69–71]. Over the course of the past decade, researchers have gathered a wealth of data demonstrating that users' impressions of how simple something is to use have influential impacts on their likelihood of actually doing so [20,65,69,72–75]. From the above information, researchers conducted the following hypothesis:

H7: Perceived ease of use significantly impacts Perceived usefulness.
H8: Perceived ease of use significantly impacts on attitude.

2.1.9. Perceived Attitude, Usefulness and Continuance Intention

According to Davis [1989], perceived usefulness is regarded as the belief of users that their efficiency will rise for employing a given information system[76]. Many researchers revealed an association between perceived attitude and usefulness through studies of how various technologies were adopted. According to research in the field of information systems [77,78], individuals' perspectives on the value of technology's potential applications directly influence their attitudes toward adopting and utilizing such tools. When it comes to making financial transactions on the go via a mobile device, Riquelme & Rios [2010] conducted that perceptions and usefulness of users' in Fintech had strong effects on their attitudes and willingness to use the technology [79]. According to research [80], consumers prefer to use and adjust to new technologies if they notice they are helpful, user-friendly, and simple to implement. Yje, the perceived utility is a source of a positive attitude toward internet use, as was also discovered by [81,82]. Perceived usefulness has a favourable influence on a client's intentions to utilize a new piece of technology, according to a significant empirical research regarding adoption of information technology over the previous decade [83,84]. It has also been shown by other researchers that e-learning users' perceptions of its usefulness are correlated with their plans to utilize it in future learning [44,85–89]. Thus, formulated hypotheses are as below:

H9: Perceived Usefulness significantly impacts the user's attitude.

H10: Perceived Usefulness significantly impacts the user's Continuance intention.

2.1.10. Subjective Norms and Attitudes

The term "subjective norms" describes the influence of peers, superiors, and other participants on her behavior on social networking sites. Research by[Park, 2000] suggests that social attitudes studied in TRA research are more likely to overlap with subjective standards than other attitudes[90]. People from collectivistic societies also tend to have more positive subjective norms and social attitudes, although this factor alone does not help forecast future behavior. [30] states that it is common for people to adopt the behaviors they observe in others. The majority of students eat fast food because their buddies make them, according to a study [87]. [85] argued that subjective norms could significantly influence attitudes by shaping social influence mechanisms. The hypothesis was:

H11: University students' subjective norms affect their attitude towards using the e-wallet.

2.1.11. Attitude and Continuance Intention

Attitude is the person's subjective evaluations and individual preferences about something, while behavior intention is how strongly one intends to do something. Several studies show that a positive mindset increases acquisition intent [91]. According to [76,92], innovation attitudes explain adoption decisions and technological acceptance. Numerous studies have conducted that user attitude has a direct, strong, and optimistic influence on actual customer intentions to use an updated technological system [93–95]. [96] found that attitude predicts patients' m-Health service usage. [128] also noted that psychological factors influence college nursing students' mobile health app use. The classic TAM states that users' opinions of their adaptation intentions and technology are positively correlated, which banking research has validated [97,98]. Finally, clients more favourable toward new-fangled technologies prefer to employ online products and financial services in the present banking structure [99]. The hypothesis was:

H12: Attitude significantly impacts Continuance intention.

2.2. Conceptual Framework

Venkatesh and Davis [1996] incorporated external aspects in their final iteration of the TAM model. It is also called the extended TAM model. The "subjective norm" is about the impression of one's activities. This impression forces one to accomplish one's duty according to the accepted norm, called subjective norm in literature. This subjective norm is not included in TAM, whereas it is a part of the TPB model [30,31]. So [100] developed TAM-TPB Model for technology acceptance [100,101] and took a more precise approach by combining the TAM and TPB models to assess IT usage. They used predictors from both models, including perceived usefulness (adjusted from TAM), attitude toward behaviour (adjusted from TPB/TRA), perceived behaviour control (adjusted from TPB), and subjective norm (adjusted from TPB/TRA).
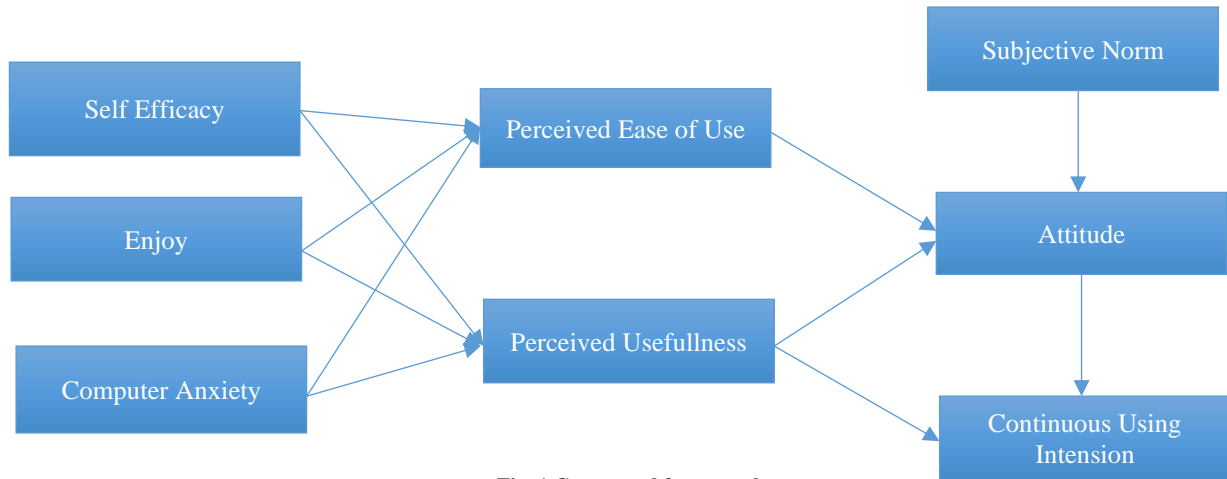
Fig. 1 Conceptual framework

2.3. Methodology

2.3.1. Population Size

For this research, online and offline surveys were conducted with university students of Bangladesh who directly and indirectly use e-wallet services like bKash, mCash, Ucash, Upay, MyCash and etc., to complete their financial transactions. It is tough to determine the actual number of individuals, both directly and indirectly, using e-wallet services in Bangladesh.

2.3.2. Sampling Method

This study is used as a quantitative approach where sample respondents are from Bangladesh, some selected public university students using e-wallets daily. Secondary data collection would also be required to conduct this research. Due to the researcher's job location, Dhaka and Rangpur districts would be prioritized for the investigation and primary data collection. The University of Dhaka, and Begum Rokeya University, Rangpur, would be easier for the researcher to collect respondents because they have been involved in the above public universities in Bangladesh.

2.3.3. Sample Size, Questionnaire, and Data Collection

Total 347 data were collected from students at the University of Dhaka, Begum Rokeya University, Rangpur, Bangladesh University, Daffodil International University, Dhaka University of Engineering and Technology, and Jessore Science and Technology University via an online and offline questionnaire survey, measuring the factors of e-wallet adaptation to their responses to Self-Efficacy (SE), Enjoy (E), Computer Anxiety (CA), Perceived Ease of Use (PEOU). R. H. Holey suggested that carrying out path modelling sample sizes ranging from 100-200 is good. For this reason, researchers targeted to collect a minimum of 250 data to ensure the quality and reliability of this research. This survey contains 29 questions, from which the first 5 questions are in Part A, and the remaining 24 are in Part B. The questions were ranked as five point-Likert scales as 1 denotes strongly disagree while 5 denotes strongly agree.

2.3.4. Data Analysis

Collected data were analysed by using SPSS 25 and Smart PLS 3.2.7. SPSS V.25. was used for descriptive statistics, and Structural Equation Modelling (SEM) was carried out based on partial least squares (PLS).

3. Results

3.1. Demographic Information

Table 1.1 shows that 55.76% are male respondents, and 44.24% are female. Among the respondents, the age of the respondents 40.92% of responses were collected from the age limit between 18-20, 29.68% of responses were collected from ages 21-23, and 29.4% were between 24-26. A total of 189 [54.47%] survey participants were from public universities, whereas 158 [45.53%] were from private universities.

Table 1. Demographic information [Total N=347]

		Frequency [N]	**percentage [%]**
Gender	Male	191	55.76
	Female	156	44.24
Age	18-20	142	40.92
	21-23	103	29.68
	24-26	102	29.4
University	Public	189	54.47
	Private	158	45.53

3.2. Characteristics of e-wallet Users

Here, Table 2 displays some features of e-wallet customers. 89.63% of respondents generally used e-wallets by smartphone, 7.49% by computer, and just 2.88% by tablet PC. It showed that, as smartphones are available for the students, they feel comfortable using mobile phones to use their e-wallets. Most responders, such as 34.01 or 31.12, generally used one or two e-wallet apps for their transactions. 94 [31.12%] respondents stated that their monthly transaction was more than 5000, while only 70 [20.17%] were below 1000. About 109[35.73% of the user used e-wallet from last more than 3 years ,78[22.48%] used from 3 years,73[21.04%] used from 2 years, while 72[20.75%] used from 1 years.

3.3. Measurement Model

Of the results, the constructs' reliability and validity confirm the accuracy of any proposed measurement model. For this purpose, testing of discriminate validity, convergent validity, and internal reliability is required for the measurement model [102]. So [103] suggested that validity and reliability must be tested before testing the selected hypotheses.

3.4. Internal Reliability

For analysis, Cronbach's alpha and composite reliability tests were done so that internal reliability could be examined [104]. Accepted values of Cronbach's alpha are more than 0.60 [105], and composite reliability's acceptance value is more than 0.70. If the values are above the mentioned range, it is said to be satisfied for reliability [106]. In addition, Hair & Tatham [2006] stated that

Cronbach's alpha and CR must be greater than 0.70. For assessing internal reliability, the calculated Cronbach's alpha and composite reliability values are presented in Table 3. Excluding self-efficacy, other factors' values of Cronbach's alpha range from 0.67 to 0.79 and the values of composite reliability range from 0.76 to 0.88, except computer anxiety, which is larger than recommended value of 0.7. Thus, it is clear that most of the structures exhibit high levels of internal consistency.

3.5. Convergent Validity

It is measured by Convergent validity how much each item is positively correlated with other items in the same construct [102]. Fornell & Larcker [1981] suggested that AVE values of 0.50 or higher are necessary to guarantee the convergent validity of the construct. AVE values in Table: 2 are above the recommended levels (except for computer anxiety). Both the indicator and the outer loading must be more than 0.708. However, if deleting the indication does not compromise the composite's dependability, it can be disregarded as being between 0.4 and 0.7. So, the study meets the criterion of convergent validity.

3.6. Discriminant Validity

Cross-loading and the square root of the average variance extracted (AVE) are required to measure Discriminant validity [108]. Henseler et al. [2009] found that the correlation between AVE and other constructs should be lower than the square root of AVE. Table 4 indicates that the correlation between AVE and other constructs is lower than AVE's square root.

Table 2. Characteristics of e-wallet users [Total N=347]

Characteristics		Frequency [N]	percentage [%]
Device for Internet Usage	Smartphone	311	89.63
	Tablet PC	10	2.88
	Computer	26	7.49
Number of e-wallet apps usage	1	118	34.01
	2	108	31.12
	3	72	20.75
	More than 3	49	14.12
Monthly transaction [approx.]	Below 1000	70	20.17
	1000-3000	79	22.77
	3000-5000	90	25.94
	More than 5000	108	31.12
Using e-wallet since	1 year	72	20.75
	2 years	73	21.04
	3 years	78	22.48
	More than 3 years	124	35.73

Table 3. Findings from measurement model

Variables	Items	Factor Loading	Cron-bach's Alpha	rho_A	Composite Reliability	Average Variance Extracted [AVE]
Attitude						
A1	e-wallet is good	0.85	**0.754**	**0.768**	**0.858**	**0.669**
A2	e-wallet is desirable	0.754				
A3	e-wallet is pleasant	0.847				
Computer Anxiety						
CA3	Using an e-wallet feels uncomfortable.	0.977	**0.667**	**-2.766**	**0.54**	**0.368**
Enjoy						
E1	The app is enjoyable to use.	0.851	**0.788**	**0.79**	**0.876**	**0.703**
E2	Using the app is more interesting	0.84				
E3	Totally enjoy the e-wallet	0.823				
Perceived Ease of Use						
PEOU1	The actions of the app are clear and understandable	0.754	**0.751**	**0.76**	**0.858**	**0.669**
PEOU2	Easier app to run	0.871				
PEOU3	Easier to use to get required demands	0.823				
Perceived Usefulness						
PU1	Using the app improves performance and productivity	0.802	**0.759**	**0.763**	**0.862**	**0.675**
PU2	Using an e-wallet saves time.	0.813				
PU3	Using an e-wallet is useful in life.	0.849				
Self-Efficiency						
SE1	I could use the app if nobody told me	0.797	**0.511**	**0.528**	**0.753**	**0.506**
SE2	I could use the app without using experience	0.695				
SE3	I could use the app myself by seeing others.	0.634				
Subjective Norms						
SN1	Influencing people's thoughts of my	0.764	**0.725**	**0.737**	**0.844**	**0.644**
SN2	My important people's thoughts on using this app.	0.852				
SN3	Opinions of classmates/friends about using e-wallet has important to me.	0.789				
Continuance Intentions						
CI1	Use the e-wallet system regularly from now	0.855	**0.755**	**0.76**	**0.86**	**0.672**
CI2	Use the e-wallet frequently from now	0.824				
CI3	Stalwartly commend others for to use e-wallet.	0.778				

Table 4. Outcomes of discriminate validity

	A	CA	CI	E	PEOU	SE	PU	SN
A	0.818							
CA	-0.144	0.606						
CI	0.644	-0.108	0.82					
E	0.568	-0.181	0.523	0.838				
PEOU	0.698	-0.139	0.559	0.633	0.818			
SE	0.682	-0.171	0.66	0.569	0.647	0.822		
PU	0.47	-0.056	0.428	0.552	0.541	0.505	0.712	
SN	0.621	-0.066	0.538	0.463	0.543	0.638	0.379	0.803

Note: A= Attitude; CA=Computer Anxiety; CI= Continuance Intentions; E= Enjoy; PEOU= Perceived Ease of Use; SE= Self-Efficiency; PU= Perceived Usefulness; SN= Subjective Norms

Table 5. Path-coefficient and hypothesis test results

Hypothesis	Relationships	Original Sample [O]-Beta	Sample Mean [M]	Standard Deviation [STDEV]	T Statistics [|O/STDEV|]	P Values	Decision
H1	SE-> PEOU	0.278	0.277	0.054	5.141	0	Accepted
H2	SE-> PU	0.162	0.161	0.047	3.476	0.001	Accepted
H3	E -> PEOU	0.473	0.472	0.059	7.979	0	Accepted
H4	E -> PU	0.198	0.199	0.058	3.391	0.001	Accepted
H5	CA -> PEOU	-0.038	-0.03	0.058	0.656	0.512	Rejected
H6	CA -> PU	-0.067	-0.06	0.058	1.156	0.248	Rejected
H7	PEOU -> PU	0.424	0.423	0.058	7.277	0	Accepted
H8	PEOU -> A	0.39	0.391	0.053	7.389	0	Accepted
H9	PU -> A	0.285	0.284	0.061	4.664	0	Accepted
H10	PU -> CUI	0.412	0.413	0.06	6.914	0	Accepted
H11	SN -> A	0.227	0.228	0.057	4	0	Accepted
H12	A-> CUI	0.363	0.362	0.071	5.089	0	Accepted

[Here SE=Self-efficiency; PEOU=Perceived Ease Of Use; PU= Perceived Usefulness; E=Enjoy; CA=Computer Anxiety; A=Attitude; CUI=Continuous Using Intention; SN=Subjective Norms]

3.7. Structural Model

The researcher tested the proposed hypothesis using the structured equation model (SEM) [104]. Table 5 represents coefficients, t-statistics, p-value, and decisions. Three external characteristics, such as Self-Efficiency, Enjoy and Computer Anxiety, were tested. It is seen from the results that a positive relationship exists between Self-Efficiency and Perceived Ease of Use, Self-Efficiency and Perceived usefulness. Enjoy has also seemed to have a positive relationship with Perceived Ease of Use and Perceived Usefulness. But Computer Anxiety does not negatively impact Perceived Ease of Use and Perceived Usefulness. While Perceived Usefulness and Attitude have seemed to have been influenced by Perceived Ease of Use.

This Perceived Usefulness positively affects Attitude and Continuous Using intentions likewise. Besides, Subjective Norms also have a positive relationship with attitude. Finally, this attitude encourages users to use this e-wallet regularly. Therefore, the proposed hypotheses, H1, H2, H3, H4, H7, H8, H9, H10, H11 and H12 were supported. On the other hand, H5 & H6 were found to be unsupported. The structural model explains that perceived ease of use can be explained by 45.5% of the variation in three independent variables, perceived usefulness can be explained by 48% of the variation in four independent variables, 60.8% of the change in attitude can be explained in three independent variables, and at last 50.6% of the variance in attitude and perceived usefulness can be explained by using an e-wallet continuously.

4. Discussion

Researchers applied extended TAM in this work to determine which factors continuously influence using e-wallets in Bangladesh. From this analysis, researchers found that self-efficiency, Enjoy, Computer Anxiety, Perceived Usefulness, Perceived Ease of Use, Subjective Norms and attitude influence e-wallet adoption. Most defined constructs and hypothesized relations are supported by experiential results, which are unswerving with the findings of prior revisions using TAM in e-wallet implementation.

The study's findings denote a significant positive association between self-efficacy and Perceived Usefulness, self-efficiency and Perceived Ease of Use [H1 & H2], supporting previous studies using any technology [110,111]. If the users are capable of using different latest technologies, they will see the technology as comfortable and more beneficial. Likewise, perceived enjoyment positively influences Perceived Usefulness & Perceived Ease of Use [H3 & H4].
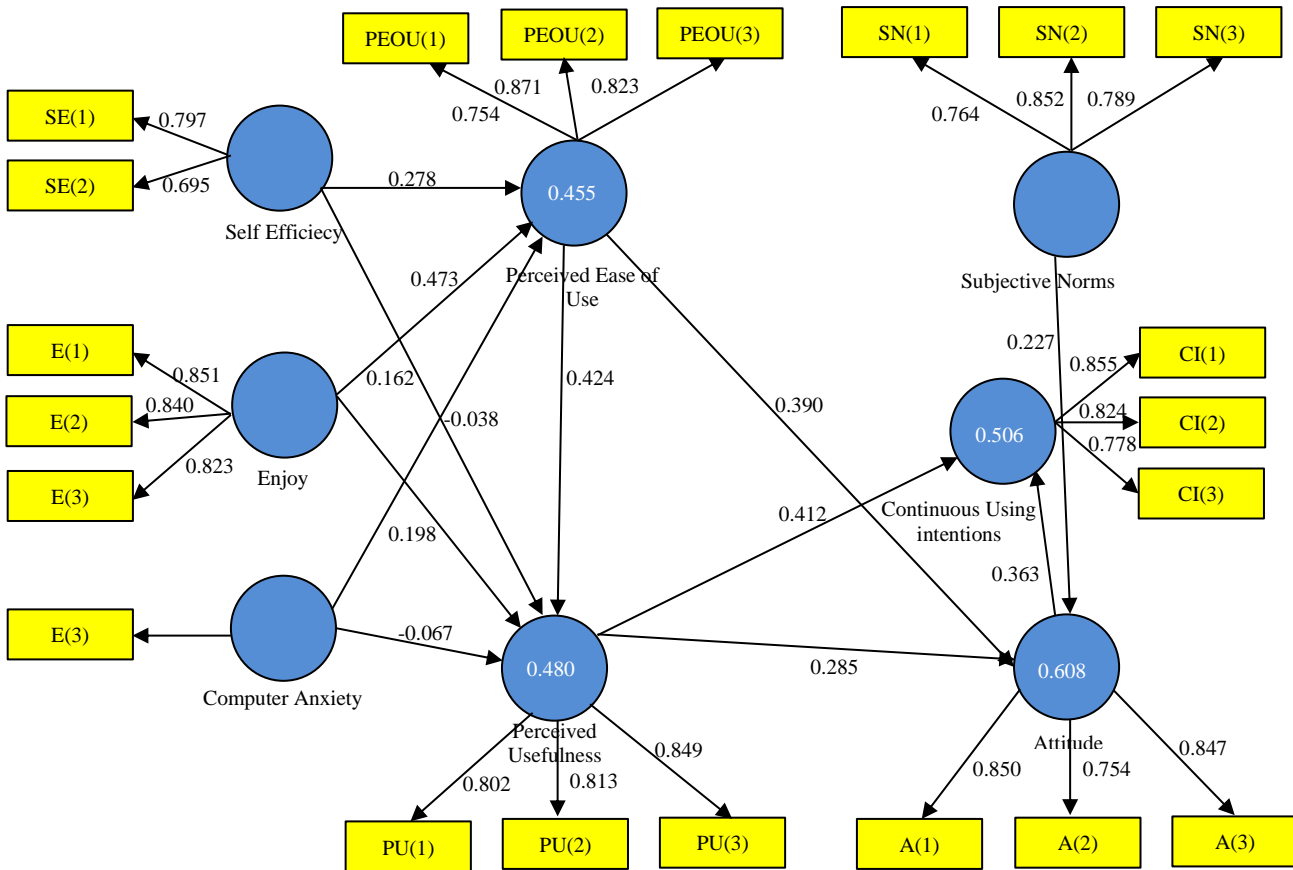
Fig. 2 Result of SmartPls

These results are the same as [111–114]. These outcomes denote that the more perceived enjoyment occurs while using new technology, the greater the acceptance, perceived ease of use, and perceived usefulness.

However, an insignificant association was found between computer anxiety and Perceived Usefulness [H5] & Perceived Ease of Use [H6] which contrasts with the results of previous studies [115–117]. The sample used in this study consisted entirely of some selected university students, which explains why these findings hold true. That way, they can embrace new technologies without any apprehension and even get enthusiastic about them. The research also shows that perceived ease of use is a determinant of perceived usefulness [H7]. This outcome is in concurrence with previous studies representing that ease of use, such as simple navigation, enhances the experience of users [118–120]. The easier technology must be considered useful.

From the earlier research study, researchers found that perceived ease of use [H8] and perceived usefulness [H9] both are sturdy forecasters of people's attitudes regarding a new system [121,122]. The findings of this researcher found similarities with this statement. Besides, the researcher found a substantial affiliation between continuance intention and perceived usefulness [H10]. From the earlier study, it is seen that perceived usefulness positively impacts user usage behaviour [123].

The connection between individual norms and perspectives has yet to receive much research. However, Results from the analysis are consistent with[89] in showing that subjective norms have a straight effect on individuals' attitudes [H11]. Finally, the connotation between attitude and continuous use of e-wallets was examined [H12], and a positive relationship was identified, consistent with previous information system research [89,124,125].

4.1. Theoretical Implication
First, this study is a joint theoretical model of university students' continuous intention to use an e-wallet. It builds on the TAM and TPB models and validates them empirically at public and private universities. Second, researchers incorporate TAM and TPB into the study model and present a new conceptual framework (external characteristics of e-wallets). Overall, the results lend credence to university students' plans to stick with electronic wallets. Consequently, a new study model has been formed thanks to this seminal contribution. At last, the results can serve as a springboard for additional research into e-wallet usage in developing countries, allowing for the accumulation of more complete and nuanced information on the topic.

4.2. Practical Implication
App creators and users alike will benefit from this study's deeper comprehension of the elements influencing college students' intention to continue using e-wallets. App

developers must create electronic wallet apps with a smaller memory footprint, increase the functionality of apps on a granular level, and improve the user experience. In short, stockholders of e-wallet parties will benefit from considering this research.

5. Conclusion

Online payment methods using e-wallets are increasingly popular. This work is anticipated to contribute to financial technology (Fintech), particularly e-wallets. Therefore, in the future, this study might be used as a model for additional e-wallet or mobile payment studies. Regarding the constant aim, this study may provide some important information for businesses that process electronic payments. Financial Technology companies are widely expanding into smartphones for banking activities, share market, shopping, payments, and budgeting. The importance of the findings was then discussed, along with ideas for supplementary study. This research has limitations and focuses on some particular university (public and private) students in Bangladesh. Further research should broaden the scope of the research model applied in this study to gain in-depth knowledge of the factors influencing e-wallet adoption.

5.1. Limitations and Further Scope of the Research

This study has a few limitations, such as only being centered on some particular university students. Future researchers have the opportunity to work with big data for more accurate analysis. Individuals from diverse eras have diverse needs and want, so it may be difficult to grasp the benefits of e-wallets.

Findings and other information from this study will give a superior knowledge of the rule and provide references to some app developers for improving the services that are found as not perfect from the analysis. Furthermore, future researchers can remove unessential factors. Diverse elements can be taken into account by future researchers in different periods when going for related research.

Conflicts of Interest

Acknowledgements

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