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CUSTOMERS' ADOPTION AND SATISFACTION OF E-WALLET AND UPI PAYMENT SYSTEM: EVIDENCE FROM INDIA AND BANGLADESH

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Abstract *This article explores the impact of selected factors in adopting online payment platforms (AOPP) in India and Bangladesh by applying the extended Technology Acceptance Model (TAM). The factors considered are perceived trust (PT), perceived ease of use (PEU) and perceived usefulness (PU). The impacts of these factors are studied on the adoption and satisfaction of E-Wallet and UPI Payment System in India and Bangladesh. Data was collected from a sample of 199 individuals from India and Bangladesh who uses E-Wallet systems for online financial transactions. The authors have utilised the structural equation modelling (SEM) technique for testing the hypothesised relationships. It was found that three factors: PT, PEU and PU, have a significant impact on the AOPP, and the AOPP, in turn, has a positive impact on customer satisfaction (CS). It is a study of its own kind which identifies the factors impacting the AOPP using the extended TAM model and to establish a relationship between the AOPP and CS in the context of India and Bangladesh. This type of exploratory study can be helpful to the service providers for the development of strategies for the betterment of E-Wallet and UPI services.*

Keywords: *Online Payment System, UPI and E-Wallet Systems, Users' Intention, Users' Perception, Technology, Extended Technology Acceptance Model, SEM*

INTRODUCTION

The attitude of consumers towards electronic payment systems and their adoption has undergone a significant change due to increased demand for cashless transactions around the world (Leong et al., 2013; Alalwan et al., 2017). Subrahmanyam et al. (2021) in his study has revealed how digital banking systems has reduced customer's efforts and reduced hassle in conducting financial transactions and has led to financial inclusion (Sofi & Zamir, 2019). The most recent development on cashless transaction system has been UPI (Unified Payments Interface) and E-Wallet system, which has replaced the traditional use of leather wallets and plastic cards. (Leong et al., 2013, Cao, 2021). According to Karim et al. (2022), an E-Wallet, also known as an electronic wallet, is used on a digital device such as a smartphone or computer to make transactions online. While various studies made by Shin (2009); Schierz et al. (2010); Thakur and Srivastava (2014); Slade et al. (2015); Abhishek and Hemchand (2016); Alawan et al. (2017); Ramos de Luna et al. (2019); pointed out that consumers prefer a single platform regarding electronic payment system which clearly signifies the importance of Unified Payments Interface (UPI) system. These payment platforms not only provide ease and speed (Teo et al., 2015) by eliminating the need to carry and utilise cash (Pham & Ho, 2015) but also provide multiple usages (Lee, 2019), customer satisfaction (CS) (Liébana-Cabanillas et al., 2014) and security (Apanasevic et al., 2016; Madan & Yadav, 2016; Barry & Jan 2018; Chawla & Joshi, 2019). The studies conducted by Singh et al. (2020) and Karim et al. (2022) both highlight the significant growth of technology in the financial payment services sector from the view point of online-based money transfer services. These services, such as E-Wallet and UPI (Unified Payments Interface), have become increasingly popular and widely adopted by users.

In India, various financial service platforms, including Google Pay, Amazon Pay and PhonePe, have introduced

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E-Wallet and UPI services to facilitate seamless and secure money transfers for users. These platforms have gained considerable traction and acceptance among consumers, making them a preferable choice for online transactions in the country.

Similarly, in Bangladesh, financial service providers like UPay, Bkash and Rocket have also emerged as prominent players in the online-based money transfer services market. These platforms are able to increase the popularity of digital payment methods and are quite successful in capturing a significant portion of the market.

On the whole, the E-Wallet system and the Unified Payments Interface (UPI) transactions have made life easier for consumers (Upadhyay & Jahanyan, 2016; Punwatkar & Verghese, 2018). However, consumers are worried about information leaks and sharing of personal information while making digital transactions (Hossain et al., 2019). In order to overcome these challenges and to further increase the usage of E-Wallets, research studies have proposed a few key factors that may affect the intention to use mobile payment services (Rana et al., 2015).

Most of the studies pointed out that the growth of technology in the financial payment services sector has been driven by the convenience and efficiency of online-based money transfer services like E-Wallet and UPI. These services have revolutionised the way financial transactions are conducted and have become an integral part of consumers' daily lives in both India and Bangladesh.

Numerous theories have been put forward to comprehend the consumer's embrace of information system technology. Among these, the Technology Acceptance Model (TAM) has garnered significant attention in various literature (Davis, 1989). The TAM is a widely used theoretical framework that offers insights into understanding the factors influencing the adoption and usage of specific technologies by individuals. Originally proposed by Davis in 1986, TAM has been extensively researched and expanded upon by numerous scholars across various domains. However, Dauda and Lee (2015) highlight the relevance and applicability of TAM in understanding how users perceive and accept new technologies in information services. TAM posits that two main factors, perceived usefulness (PU) and perceived ease of use (PEU), significantly influence users' attitudes towards adopting a technology. PU refers to the user's belief that a technology will enhance their performance or productivity, while PEU relates to the user's perception of how easy it is to use the technology.

As technology and research have evolved, TAM has been applied in various domains beyond information services. For example, in e-learning, Cheung and Vogel (2013) and Al-Maroof and Al-Emran (2018) employed TAM to examine students' acceptance of e-learning platforms. In the realm of mobile-based technology, Barry and Jan (2018) explored how TAM can shed light on users' adoption of mobile apps. Additionally, TAM has been used to study the acceptance of short message service (SMS) advertising by users, as seen in the work of Muk and Chung (2015). Vijayasarathy (2004) pointed out that TAM is a suitable model for researchers studying the acceptance of new technologies because it offers a robust and comprehensive set of factors to analyse users' attitudes and behaviours towards technology adoption. By understanding users' perceptions of usefulness and ease of use, researchers can gain valuable insights into the drivers and barriers of technology adoption, leading to better-designed technologies and improved user experiences. TAM is a widely renowned and accepted model for the expansion of academic research to study the acceptance of the latest technologies (Aydin & Burnaz, 2016). In this study, the modified TAM has been used in which Perceived Ease of Use (PEOU), PU, Perceived Trust (PT) and subjective norms are some significant factors that have a significant influence on user's intention and, ultimately, on continued usage of technology (Dwivedi et al., 2017a, b). Furthermore, after reviewing several previous TAM studies, a new research model has been developed by incorporating CS (Hsu et al., 2010; Thakur & Srivastava, 2014; Kapoor et al., 2015; Oliveira et al., 2016; Duarte et al., 2018; Phuong et al., 2020; Islam 2020) to study the adoption rate of online payment portals like E-Wallet and UPI services among consumers in India and Bangladesh with help of an extended TAM.

The novelty of this present study is two-fold; on the one hand, the TAM is extended for understanding the adoption of E-Wallet and UPI services, and on the other hand, the impact of the adoption of online payment platforms (AOPP) on CS has been studied with respect to cross-cultural perspectives (inspired from the studies made by Zolkepli & Kamarulzaman, 2015; Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Marinković & Kalinić, 2017; Kizgin et al., 2018; Xu & Du, 2018).

REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESES

Indeed, the financial services industry has witnessed significant technological advancements in recent years, especially in the area of online money transfer services. Platforms like Google Pay and Amazon Pay in India and Bkash and Nagad in Bangladesh have emerged as prominent players in this domain (Jawad et al., 2021). Such AOPP facilitates electronic fund transfers rather than physical transfers (Morawczynski, 2009). In this context, various variables relating to the adoption of new technology have been explored by different researchers (Thakur & Srivastava,

2014; Ramos et al., 2016; Upadhyay & Jahanyan, 2016; Liébana et al., 2017; Madan & Yadav, 2018; Ramos et al., 2019, Aggarwal & Patel, 2023) and the TAM is widely regarded as the most robust and influential model for studying new technology acceptance and usage behaviour (Davis et al., 1989; Pavlou, 2003). It is regarded as one of the most essential frameworks for comprehending technological adoptions (Blanche et al., 2012). In their research, Teo et al. (2008) and Geo et al. (2017) used a modified TAM framework. According to Shin (2009), researchers are using several extensions of TAM and when properly modified, it is the most effective tool for investigating factors related to the adoption of new technology. This is also evident from the study made by Jaradat (2013). However, from the study made by Liébana-Cabanillas et al. (2014a) and Liébana-Cabanillas et al. (2014b), it is found that the perceived ease of use and PU are the key variables affecting consumer behavioural intentions. Dahlberg et al. (2015); and Verkijika (2018) found that trust and perceived risk are the most vital factors affecting the consumer's viewpoint regarding the adoption of new technology. The results are also validated with respect to the Indian perspective (see Thakur & Srivastava 2014; Madan & Yadav, 2018), and they found that perceived risk, trust, PU and perceived ease of use affect the behavioural intentions. Very recent studies made by (Kee et al., 2022) revealed that PT and CS are the key variables affecting the behavioural intentions of Malaysian Customers. All these respective studies raise one important research question how far the extended TAM affects the AOPP, and how does it influence CS from a cross-cultural perspective?

Development of Hypotheses

Perceived Ease of Use (PEU) and Adoption of Online Payment Platforms (AOPP)

PEU, which stands for Perceived Ease of Use, is defined as an individual's evaluation of the mental effort required to use a new technology (Davis, 1989). Building upon this concept, Venkatesh (2000) identified several factors influencing PEU within the TAM framework, incorporating internal control factors such as computer self-efficacy and external control factors like facilitating conditions. Based on the previous research findings, it is reasonable to put forward the hypothesis that the perceived ease of use (PEU) of mobile-based online banking positively affects the PU of the technology. This hypothesis suggests that when customers perceive the technology to be easy to use and navigate, they are more likely to find it useful in performing banking tasks.

The studies by Davis (1986, 1989) and the research conducted in the context of mobile-based online banking by Wang et al. (2003), Philips et al. (1994) and Tom (2021) provide evidence for the positive relationship between PEU and PU. When users perceive a technology to be easy to use, it enhances their perception of its usefulness and value.

In the case of mobile-based online banking, the user-friendly nature of the interface and the simplicity of the processes can contribute to improved technology utilisation, reduced transfer costs and enhanced work performance (Kesharwani & Bisht, 2012). Customers are more likely to embrace and adopt Internet-based mobile transaction services when they find the technology easy to use, as it reduces barriers to entry and enhances their overall experience.

Therefore, it can be hypothesised that a positive relationship exists between PEU and PU in the context of mobile-based online banking. This hypothesis suggests that the perceived ease of use of the technology influences customers' perception of its usefulness, which, in turn, affects their willingness to adopt and utilise mobile banking services. Further research can be conducted to examine and validate this hypothesis.

H1. PEU has a significant positive impact on the AOPP.

Perceived Usefulness (PU) and Adoption of Online Payment Platform (AOPP)

PU refers to the extent to which a user believes that the adoption of a specific technology will enhance their performance (Davis, 1989). In the context of mobile-based virtual payment methods, several predictors contribute to the PU, such as seamless transactions encompassing online utility bill payments, mobile recharges, TV and OTT subscriptions, money transfers, mobile shopping, balance transfers and ticket bookings (Shankar & Datta, 2018). Prior to adopting and utilising a new technology, potential adopters carefully evaluate the advantages they stand to gain from its usage. In a study by Kim et al. (2010) examining user-centric characteristics of online payment systems, it was found that PU has a significant positive impact on the adoption of mobile-based online payments. Empirical validation across various studies has consistently identified PU as a critical factor influencing the adoption of new technologies (Apanasevic et al., 2016; Arvidsson, 2014; Duane et al., 2014; Keramati et al., 2012; Kim et al., 2010; Chen, 2008). Based on these insights, we propose the following hypotheses to be tested:

H2. PU has a significant positive impact on the AOPP.

Perceived Trust (PT)

Trust is a crucial factor in the adoption and acceptance of technology, particularly in the domain of electronic services

and online payment methods. Researchers have defined trust as the positive expectation that users have towards service providers (Mayer et al., 1995). It consists of three essential components: integrity, ability and benevolence (Palvia, 2009).

Integrity refers to the service provider's capability to fulfil their obligations and maintain ethical conduct. Ability relates to the technical expertise and knowledge of the service provider to deliver on their promises. Benevolence pertains to the service provider's genuine concern for safeguarding the interests and well-being of users.

In the context of electronic services and online payment methods, trust plays a vital role in shaping consumer perceptions and acceptance (Yan et al., 2009; Mallat, 2007). Users' acceptance of electronic payment methods relies on their belief that their concerns will be addressed and that the service providers will act in their best interests (Gupta & Sareen, 2001).

Several studies have highlighted the significance of trust in the adoption of mobile-based online payments. Srivastava et al. (2010) conducted an empirical study in Singapore and identified trust as the most significant factor among other determinants. Perceived ubiquity, perceived ease of use (PEU) and perceived security were found to significantly influence initial trust, which, in turn, predicts the intention to use mobile-based online payments (Zhou, 2011).

Trust transfer theory and the valence framework have been used to develop trust-based decision-making models for virtual payments, emphasising the substantial impact of trust on cross-environmental relationships and technology adoption (Lu et al., 2011). Additionally, information and service quality have been found to positively affect trust, which, in turn, impacts users' sustained usage of mobile-based online payments (Zhou, 2013).

Given the nature of online payment platforms that involve sharing personal and financial information, trust assumes a critical role in the adoption and usage of mobile-based online payments (Duane et al., 2014; Kim et al., 2010). Trust has been extensively studied as a multidimensional construct across various social science domains, consistently highlighting its significance in the adoption of any technology (Roca et al., 2009; Bhattacherjee, 2002).

Based on the arguments made so far by the scholars, we propose to test the following hypothesis:

H3: PT has a significant positive impact on the AOPP.

Adoption of Online Payment Platform (AOPP) and Customer Satisfaction (CS)

According to Amin et al. (2015), technological ease of use is not the key factor influencing consumer behavior and the increased use of E-Wallet services generally increases the concern regarding the levels of CS (Karim et al., 2022). And if the customer gets satisfied by using more E-Wallet services, the customer will develop a higher intention to use online payment platforms (see Kee et al., 2022). Therefore, we propose to test the following hypothesis:

H4: AOPP has a significant positive impact on customer satisfaction.

Theoretical Model

Based on the above hypotheses and literature review, the proposed theoretical model is presented in Fig. 1.

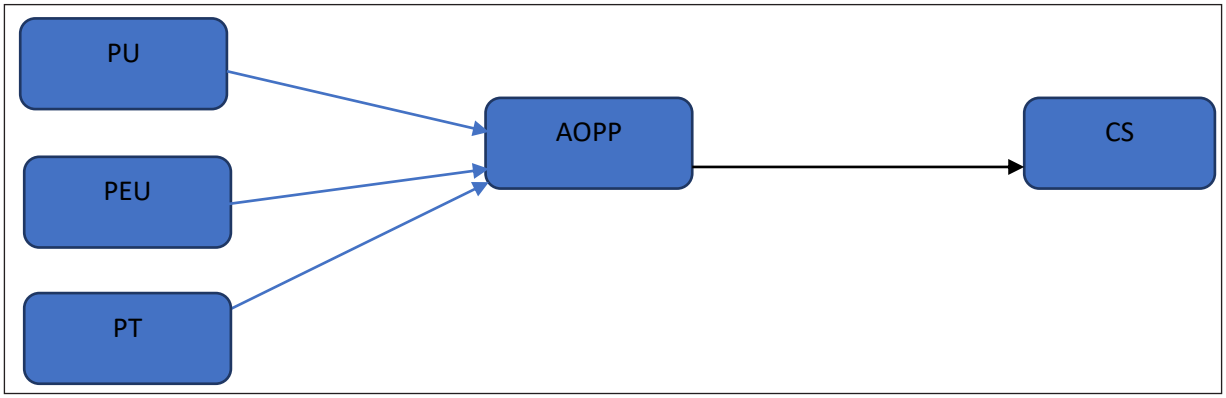

Fig. 1: Theoretical Models

DATABASE AND METHODOLOGY

For the building of the model, five major constructs, namely PU, PEU, PT, AOPP and CS, have been used in the present study. Table 1 shows the measurable structure for the factors of the proposed model. A structured questionnaire has been prepared based on five constructs, and all items under the five constructs have been measured based on a five-point Likert scale where 5 means strongly agree, and 1 means strongly disagree. Primary data have been collected by applying the direct interview method as well as the online survey method. For selecting the respondents for the study convenience sampling method has been applied. A total of 199 valid questionnaires have been collected from India and Bangladesh. Structural Equation Modelling (SEM) has been applied with the help of R Programming language to examine the significance of the hypothesised paths for the proposed model. The internal consistency has been checked by using Cronbach's α.

Table 1: Measurable Structure for the Factors of the Proposed Model

Construct	Variables	Adapted From
Adoption of Online Payment Platform (AOPP)	AOPP1. I always try to use payment-related services of the app in my daily life for financial transactions. AOPP2. I plan to switch my payment-related work to E-Wallets and UPI apps. AOPP3. I intend to increase my usage of E-Wallet and UPI payment services.	Sinha, N., & Singh, N. (2022).
Perceived Usefulness (PU)	PU1. The E-Wallet payment system is time-saving for me. PU2. The E-Wallet payment system is useful for me. PU3. The E-Wallet payment system is convenient for me. PU4.E-Wallet payment system improves my effectiveness as a consumer. PU5. Overall I find the E-Wallet payment system Useful.	Barry and Jan (2018)
Perceived Ease of Use (PEU)	PEU1. I find it easy to use E-Wallet payment system. PEU2. The E-Wallet payment system has made my life easier than before. The PEU3.E-Wallet payment system has made our life safe and secure during the pandemic times. PEU4. Overall, I find the E-Wallet payment system easy to use.	Kesharwani and Bisht (2012) Wang et al. (2003)
Perceived Trust (PT)	PT1: Trust in the service providers is important for adopting any E-Wallet payment system. PT2: I use an online payment platform after carefully verifying it. PT3: Although I am using the E-Wallet system carefully, I am afraid of my personal data being compromised.	Shankar and Datta (2018), Zhou (2013), Lu et al. (2011)
Customer Satisfaction (CS)	CS1. I am satisfied with the E-wallet system which I am currently using. CS2. The E-wallet system is a pleasant experience. CS3. Overall, I am satisfied with the E-wallet payment system. CS4. Using an E-wallet and UPI payment system gives me satisfaction and convenience.	Ghani et al. (2017)

ANALYSIS AND FINDINGS FOR INDIA

The measurement model showing the construct, items and factor loadings for India is shown in Table 2. It is found that the values of all the constructs exceed the minimum value of 0.7 (see Lin & Huang, 2008). The Cronbach's α for the PT of Indians is least while it is maximum for the perceived ease of use (PEU) followed by CS. The average variance extracted (AVE) is greater than the minimum requirement of 0.5, and all the factor loadings are found to be greater than 0.7, which concludes the good fitness of the model, demonstrating the soundness of discriminant and convergent validity. The composite reliability holds good for all the constructs, and the best results have been given by Perceived Ease of Use (PEU) and CS. The commonality factor also reflects the same scenario.

The correlation matrix of constructs from Table 3 explains the correlation between various factors and the square root of average variance extracted (AVE) for each construct. The square root of each factor's AVE is greater than its corresponding correlation coefficients with other factors (see Fornell & Larcker, 1981; Liao et al., 2006). Hence, it shows good discriminant validity. It is also seen that for Indian customers, the discriminant validity for the PT is a lesser value than any other construct value. Another criterion to determine the cross-loadings is discriminant validity, and it is found that the self-construct indicator loadings are

superior to the cross-loading of any other construct (see Chin, 1998).

This situation is also verified in Table 4.

To analyse and interpret the structural model, several hypotheses are formulated. Those research hypotheses are investigated by using the bootstrapping approach. By using the bootstrapping approach, t-statistics and p-values are obtained to examine the hypotheses, and the results are reported in Table 5. In this case, H1 shows that PU has a positive and direct impact on the AOPP where the slope (β) = 0.378 and $p < 0.001$. The result is similar to the study conducted by Oliveira et al. (2016), and H2 also validated the significant empirical evidence of the existence of a positive relationship between perceived ease of use (PEU) and AOPP where the slope (β) = 0.408; p-value < 0.001 and this result is very much similar to the studies made by Ramos de Luna, Montoro Ríos, Liébana-Cabanillas & Luna, (2017) and Ramos de Luna et al. (2019).On the other hand, Hypothesis 3 signifies that PT does not have a significant positive impact on the adoption of the use of online payment procedure (AOPP). (β = 0.107; p-value >0.001) and this statement is supported by the lowest Cronbach's α and the composite reliability of the construct PT. This result is very much similar to Anh Tho To and Thi Hong Minh Trinh (2021), and it is just opposite to the studies made by Duane et al. (2014) and Shaw (2014). Hypothesis 4 shows that the AOPP has a positive impact on CS, and this was found to be statistically significant where the slope is 0.801 and the p-value is less than 0.001. This finding is in line with gross perception embedded from the studies made by Hsu et al. (2010); Selvakumar (2015); and Duarte et al. (2018); where the results clearly indicate that consumer perceived satisfaction is directly influenced by the flexibility of adopting technology regarding online payment procedure.

The goodness of fit indicators can satisfy all the recommended values, and this clearly confirms the structural analysis validated by Table 1 and Table 6. And the final diagram, Fig. 2, finally shows the path coefficients and their consequences. From the figure, it is evident that the PU and the PEU have a positive impact on the AOPP, while the PT has a negative impact on AOPP. However, PU, PEU and PT are influencing each other positively. Another significant positive relationship is found between AOPP and CS, which implies that the AOPP is influencing the CS most extensively.

Table 2: Factors Loading with Communality and Redundancy, Convergent Validity, Reliability and Internal Composite Reliability

Construct	Item	Factor Loading	Communality	Redundancy (P-Value)	Average Variance Extracted (AVE)	Cronbach's α	Composite Reliability (Dillon-Goldstein's Rho)
PU					0.613	0.843	0.889
	PU1	0.715	0.511	0.000			
	PU2	0.758	0.575	0.000			
	PU3	0.830	0.688	0.000			
	PU4	0.793	0.629	0.000			
	PU5	0.813	0.662	0.000			
PEU					0.714	0.867	0.909
	PEU1	0.845	0.714	0.000			
	PEU2	0.845	0.714	0.000			
	PEU3	0.820	0.672	0.000			
	PEU4	0.869	0.756	0.000			
PT					0.527	0.719	0.798
	PT1	0.783	0.614	0.000			
	PT2	0.914	0.836	0.000			
	PT3	0.863	0.532	0.000			
AOPP					0.720	0.806	0.886
	AOPP1	0.850	0.723	0.023			
	AOPP2	0.859	0.738	0.019			
	AOPP3	0.836	0.699	0.012			
CS					0.698	0.855	0.902
	CS1	0.893	0.798	0.013			
	CS2	0.828	0.685	0.040			
	CS3	0.769	0.592	0.030			
	CS4	0.846	0.716	0.030			

Source: Authors own calculation.

Table 3: Discriminant Validity (Fornell-Larcker Criterion: Correlation matrix of Constructs and Square Root of AVE (in Bold)

	PU	PEU	PT	AOPP	CS
PU	0.783				
PEU	0.727	**0.845**			
PT	0.562	0.614	**0.726**		
AOPP	0.615	0.617	0.356	**0.849**	
CS	0.730	0.745	0.451	0.801	**0.835**

Source: Authors own calculation.

Table 4: Cross Loadings of Measurement Model

	PU	PEU	PT	AOPP	CS
PU					
PU1	0.715	0.539	0.416	0.41224	0.5238
PU2	0.758	0.509	0.369	0.40505	0.5133
PU3	0.830	0.576	0.413	0.43207	0.5435
PU4	0.793	0.537	0.417	0.57769	0.5844
PU5	0.813	0.674	0.566	0.53295	0.6688
PEU					
PEU1	0.660	0.845	0.559	0.49555	0.6559
PEU2	0.590	0.845	0.460	0.58144	0.6259
PEU3	0.564	0.820	0.494	0.50588	0.5832
PEU4	0.648	0.869	0.573	0.49223	0.6541
PT					
PT1	0.481	0.399	0.783	0.23364	0.3175
PT2	0.489	0.616	0.914	0.35814	0.4369
PT3	0.145	0.194	0.363	0.00756	0.0722
AOPP					
AOPP1	0.530	0.548	0.352	0.85040	0.6777
AOPP2	0.508	0.454	0.314	0.85891	0.6314
AOPP3	0.524	0.561	0.245	0.83597	0.7229
CS					
CS1	0.700	0.706	0.443	0.67847	0.8935
CS2	0.616	0.607	0.377	0.73776	0.8277
CS3	0.472	0.492	0.265	0.55331	0.7693
CS4	0.631	0.666	0.403	0.68628	0.8464

Source: Authors own calculation.

Table 5: Hypothesis Testing and Structural Model Evaluation

$AOPP				
	Estimate	**Std. Error**	**t Value**	**Pr(>|t|)**
Intercept	-3.86e-16	0.0598	-6.47e-15	1.00e+00
PU	3.78e-01	0.0891	4.25e+00	3.72e-05
PEU	4.08e-01	0.0933	4.37e+00	2.25e-05
PT	1.07e-01	0.0775	1.38e+00	1.70e-01
$CS				
	Estimate	**Std. Error**	**t Value**	**Pr(>|t|)**
Intercept	5.07e-16	0.0477	1.06e-14	1.00e+00
AOPP	8.01e-01	0.0477	1.68e+01	7.24e-37

Source: Authors own calculation.

Table 6: Goodness-of-Fit Indicators for the Structural Model

Fit Indices	Structural Model Value	Recommended Value	References
gfi	0.970	> .90	Hair et al. (2010)
agfi	0.951	> .80	Hu and Bentler (1999)
nfi	0.986	> .90	Bentler and Paul (1996)
cfi	0.921	> .90	Bentler and Paul (1996)
rmsea	0.079	< .08	Hu and Bentler (1999)
srmr	0.061	< .07	Hu and Bentler' (1999)

Source: Authors own calculation.

ANALYSIS AND FINDINGS FOR BANGLADESH

For Bangladesh, the factor loadings, items and construct demonstrated in the measurement model are shown in Table 7. Cronbach's α is used to check the internal consistency. All the construct values exceed the minimum value of 0.7 (see Lin & Huang, 2008). In Bangladesh, it is found that Cronbach's α for PU is least while it is maximum for CS, followed by perceived ease of use (PEU). It is found that the average variance extracted (AVE) is greater than the minimum value of 0.5, and here also, all the factor loading are found to be greater than 0.7, which validates the sound fitness of the model, demonstrating a healthy discriminant and convergent validity. The composite reliability score is better for all the constructs, and the best results have been given by CS followed by Perceived Ease of Use (PEU). Here, the difference is that the commonality factor

for the CS and the AOPP is superior to other constructs' commonality factor. From Table 8, it is clear that the square root of each factor's AVE is greater than its corresponding correlation coefficients with other factors, and this reflects good discriminant validity (see Fornell & Larcker, 1981; Liao et al., 2006). It is also seen that for Bangladeshi customers, the discriminant validity for the PU is a lesser value than any other construct value. Discriminant validity is another criterion to determine the cross-loadings, and it is seen that the self-construct indicator loadings are superior to the cross-loading of any other construct, and it is verified in Table 9 (see Chin, 1998).

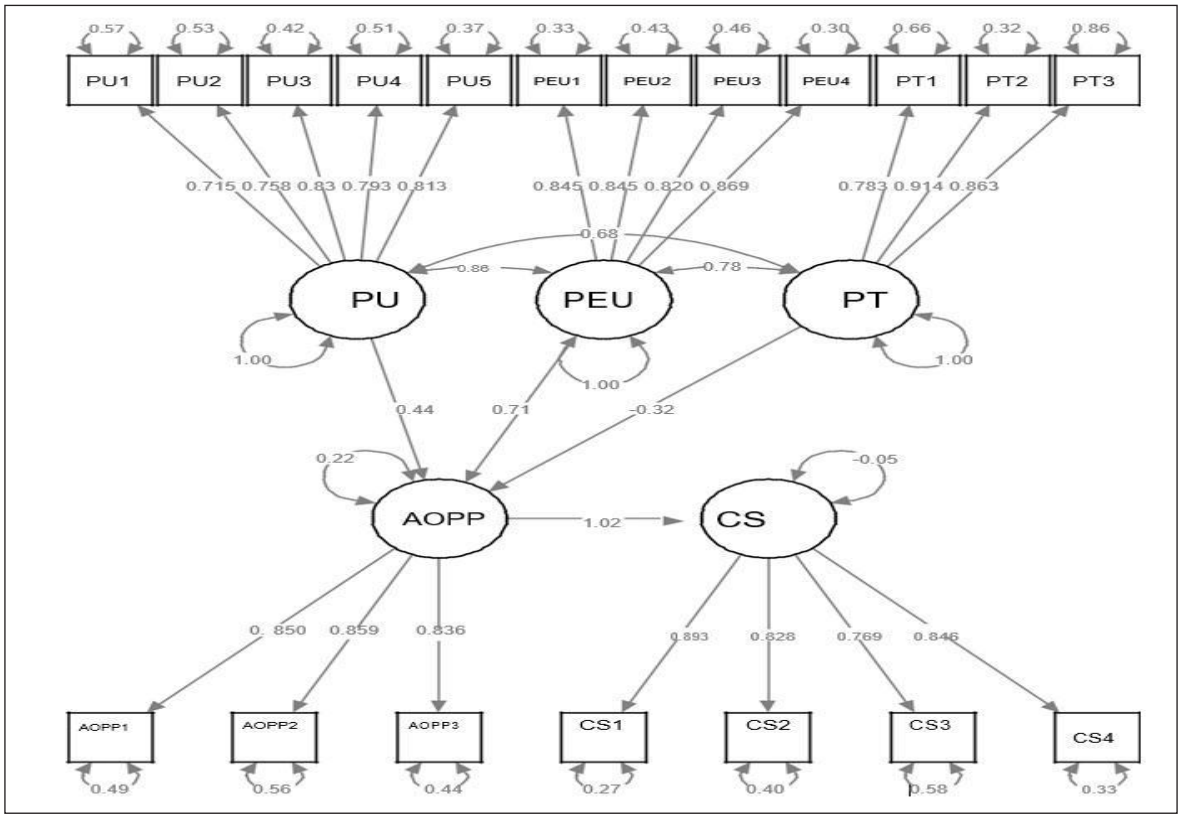

Fig. 2: The Customer Satisfaction on Online Payment Platform

Similarly, several hypotheses are drawn to analyse and interpret the structural model. By using the bootstrapping approach (see Vinzi et al., 2010), t-statistics and p-values are obtained and this is evident from Table 10. Here H1 shows that PU has a positive and direct impact on the AOPP where the slope (β) = 0.302 and p < 0.001. The result is similar to the study conducted by Oliveira et al. (2016); also supported by the earlier findings reported by Kim et al. (2010), Keramati et al. (2012), Arvidsson (2014), Duane et al. (2014) and Apanasevic et al. (2016). Hypothesis 2 demonstrates the same significant positive relationship between perceived ease of use (PEU) and AOPP where the slope (β) = 0.311; p-value < 0.001. The result is very much close to the results from Wang et al. (2003) and Kesharwani and Bisht (2012). On the other hand, H3 also depicts that PT also has a significant positive impact on the AOPP. (β = 0.264; p-value <0.001). This result is consistent with the findings from Shankar and Datta (2018), Zhou (2013), Lu et al. (2011) and Srivastava et al. (2010). H4 also supports the fact that the AOPP has a positive impact on CS where the slope is 0.262, and the p-value is less than 0.001, and this is statistically significant. The results follow a similar perception made from the studies of Miltgen et al., 2013 and Oliveira et al., 2016.

The goodness of fit indicators satisfies all the recommended values, and this is quite evident from Table 7 and Table 11. From Fig. 3, it is evident that the PU, the perceived ease of use (PEU) and the PT are influencing each other positively, and the PU, PEU and PT have a positive impact on AOPP and the significant positive relationship is also found between AOPP and CS.

Table 7: Factors Loading with Communality and Redundancy, Convergent Validity, Reliability and Internal Composite Reliability

Construct	Item	Factor Loading	Communality	Redundancy (P-value)	Average Variance Extracted (AVE)	Cronbach's α	Composite Reliability (Dillon-Goldstein's Rho)
PU					0.598	0.831	0.882
	PU1	0.782	0.565	0.000			
	PU2	0.772	0.595	0.000			
	PU3	0.835	0.698	0.000			
	PU4	0.773	0.598	0.000			
	PU5	0.796	0.633	0.000			
PEU					0.704	0.859	0.905
	PEU1	0.835	0.698	0.000			
	PEU2	0.836	0.699	0.000			
	PEU3	0.805	0.648	0.000			
	PEU4	0.877	0.770	0.000			
PT					0.713	0.798	0.882
	PT1	0.830	0.688	0.000			
	PT2	0.885	0.783	0.000			
	PT3	0.816	0.666	0.000			
AOPP					0.739	0.824	0.895
	AOPP1	0.864	0.746	0.0484			
	AOPP2	0.869	0.755	0.0022			
	AOPP3	0.846	0.716	0.0367			
CS					0.785	0.909	0.936
	CS1	0.912	0.833	0.0071			
	CS2	0.887	0.788	0.0340			
	CS3	0.839	0.703	0.0482			
	CS4	0.903	0.815	0.0359			

Source: Authors own calculation.

Table 8: Discriminant Validity (Fornell-Larcker Criterion: Correlation Matrix of Constructs and Square Root of AVE (in Bold)

	PU	PEU	PT	AOPP	CS
PU	0.773				
PEU	0.700	**0.839**			
PT	0.023	0.047	**0.844**		
AOPP	0.526	0.535	0.285	**0.860**	
CS	0.013	0.032	0.669	0.262	**0.886**

Source: Authors own calculation.

Table 9: Cross Loadings of Measurement Model

	PU	PEU	PT	AOPP	CS
PU					
PU1	0.68189	0.4985	0.02018	0.336	0.0360
PU2	0.77158	0.4850	0.00381	0.367	0.0416
PU3	0.83519	0.5499	0.04615	0.393	0.0799

	PU	PEU	PT	AOPP	CS
PU4	0.77309	0.4973	-0.03344	0.453	-0.0762
PU5	0.79591	0.6600	0.05451	0.460	-0.0095
PEU					
PEU1	0.63061	0.8353	0.07660	0.426	0.0951
PEU2	0.56677	0.8363	0.01650	0.487	0.0135
PEU3	0.52838	0.8050	-0.00382	0.409	-0.0299
PEU4	0.62388	0.8773	0.06653	0.466	0.0292
PT					
PT1	-0.04824	0.0217	0.82952	0.214	0.5891
PT2	0.02772	0.0427	0.88507	0.255	0.6459
PT3	0.06968	0.0513	0.81630	0.250	0.4616
AOPP					
AOPP1	0.46800	0.4792	0.24433	0.864	0.1576
AOPP2	0.43607	0.4153	0.25857	0.869	0.2514
AOPP3	0.45127	0.4828	0.23345	0.846	0.2642
CS					
CS1	0.02778	0.0734	0.64175	0.278	0.9124
CS2	0.00499	-0.0162	0.55031	0.220	0.8875
CS3	0.01335	0.0254	0.53226	0.207	0.8386
CS4	-0.00575	0.0195	0.63532	0.211	0.9026

Source: Authors own calculation.

Table 10: Hypothesis Testing and Structural Model Evaluation

$AOPP				
	Estimate	**Std. Error**	**t Value**	**Pr(>|t|)**
Intercept	-1.12e-18	0.0555	-2.03e-17	1.00e+00
PU	3.02e-01	0.0777	3.88e+00	1.42e-04
PEU	3.11e-01	0.0778	4.00e+00	9.00e-05
PT	2.64e-01	0.0555	4.75e+00	3.93e-06
$CS				
	Estimate	**Std. Error**	**t Value**	**Pr(>|t|)**
Intercept	5.74e-17	0.0688	8.35e-16	1.000000
AOPP	2.62e-01	0.0688	3.81e+00	0.000187

Source: Authors own calculation.

Table 11: Goodness-of-Fit Indicators for the Structural Model

Fit Indices	Structural Model Value	Recommended Value	References
gfi	0.923	> .90	Hair et al. (2010)
agfi	0.901	> .80	Hu and Bentler (1999)
nfi	0.951	> .90	Bentler and Paul (1996)
cfi	0.945	> .90	Bentler and Paul (1996)
rmsea	0.073	< .08	Hu and Bentler (1999)
srmr	0.068	< .07	Hu and Bentler' (1999)

Source: Authors own calculation.

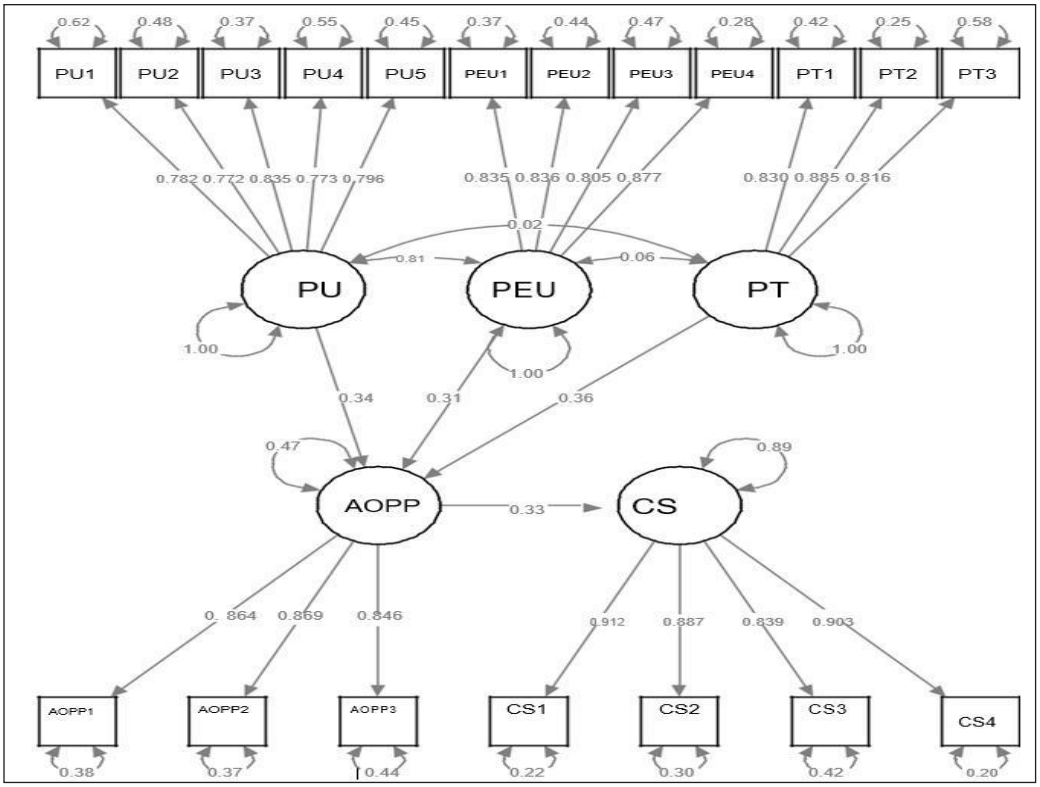

Fig. 3: The Customer Satisfaction on Online Payment Platform

CONCLUSION AND DISCUSSION

The main aim of this present study is to study the adoption rate of online payment portals like E-Wallet and UPI services among consumers in India and Bangladesh with help of an extended TAM Model and to analyse the impact of the AOPP on CS. In this study, Perceived Ease of Use (PEOU), PU and PT are used as significant factors, and with the help of this extended TAM model, the relationship between the AOPP and CS of customers in India and Bangladesh has also been explained. The major findings from the study are jotted down below:

The PU have a positive impact on the AOPP for both Indian and Bangladeshi customers, findings are consistent with Wang et al. (2003) and Philips et al. (1994), Kesharwani and Bisht (2012). Findings throw a light on the fact that consumers do find online payment systems like E wallet and UPI as time saving, convenient and useful option for making financial payments.

The PT factor for the Indian customers has a negative impact on AOPP and findings are very much similar to Anh Tho To and Thi Hong Minh Trinh (2021), and it is just opposite to the studies made by Duane et al. (2014) and Shaw (2014). The main reason behind lack of trust can be increasing rate of online frauds taking place.

On the other hand PT have a positive impact on AOPP for Bangladeshi customers this results is consistent with Mayer et al. (1995), (Palvia, 2009), Yan et al., 2009; (Mallat, 2007), (Gupta & Sareen, 2001), positive impact of trust on AOPP establishes the fact that customers do place faith and trust in online payment systems and would like to use it more for financial transactions.

PEU perceived showed positive impact on AOPP for both India and Bangladeshi customers and this result is very much similar to the studies made by Ramos de Luna, Montoro Ríos, Liébana-Cabanillas and Luna (2017) and Ramos de Luna et al. (2019). Results reveal the easy adoptability and user-friendly interface of these payment methods.

The PU, the PEU and the PT factors are influencing each other positively, and the PU, PEU, and For Bangladeshi and Indian customers, significant positive relationship has been found between AOPP and CS. Study has proved that AOPP is positively affecting CS. The results are following the similar perception made from the studies of Miltgen et al., 2013 and Oliveira et al., 2016. This finding is of great importance for financial service providers to improve upon online payment methods as it proves to enhance CS.

Indian consumers have lesser PT, but Bangladeshi consumers have lesser PU with respect to online payment platforms.

From the major findings of the study, it may be concluded that PEU, PU and PT have an impact on the AOPP, and AOPP has a strong positive relation on CS of customers in India and Bangladesh.

MANAGERIAL IMPLICATIONS OF THE STUDY

The current study establishes the fact that the model is relevant to study the adoption of online payment methods by consumers (Huynh et al., 2021; Willis et al., 2021). The present study contributes by extending adoption to CS. It reveals that customer AOPP brings satisfaction among consumers in their day-to-day financial transactions (consistent with the studies made by Liébana-Cabanillas et al., 2018 and Kee et al., 2022). From the managerial perspective, a better understanding of variables, namely AOPP and CS, which are influenced by factors perceived as ease of use, usefulness and trust, will help payment companies to redefine their marketing strategies and offer a system, which is convenient and perceived as valuable by customers. This study also reflects the difference in behavioural perspective with reference to India and Bangladesh, and overall, it is evident that CS is achieved by the adoption of online payment methods, so they will work on improving online payment methods.

LIMITATIONS OF THE STUDY

This study is confined only to India and Bangladesh; it can be extended to other countries as well. Also, this study can be conducted for merchants. The future study may also review the effect of demographics such as gender, age, income and business size by the number of stores or employees, nature of business, etc., on the AOPP and satisfaction of customers.

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