



Analysis of determinant Factors of User Adoption of Mobile Payment System by Registered Entrepreneurs in Tamil Nadu. Evidence from Post COVID-19 Scenario.

R.Guhan^{#1}, Dr.Harish.M^{#2},

^{#1}-School of Management, SASTRA Deemed University, Thanjavur, India.

^{#2}- B.Com Bank Management, Srimad Andavan Arts and Science College, Tiruchchirappalli, India.

¹guhan@sastra.ac.in

²harishnzmtvl@gmail.com

Article History

Volume 6, Issue 12, 2024

Received Date: 20 May 2024

Acceptance Date: 28 June 2024

Doi:

10.48047/AFJBS.6.12.2024.3378-3392

Abstract-- The “Micro, Small and Medium Enterprise (MSME)” sector of India is considered as one of the major contributors of GDP in our country by the enormous industrial activities throughout the nation. With the implementation of the 'Digital India' initiative by the Government of India, digital payments are getting popular among these business enterprises throughout the country. In the case of digital payments, Mobile payments play a vital role in the digital transaction with the help of UPI (Unified Payment Interface) particularly after the COVID-19 pandemic outbreak in India. According to the National Payments Corporation of India (NPCL), UPI saw transactions worth Rs.4.9 trillion and another digital payment platform Immediate Payment Service (IMPS) saw a 15% increase in the volume of transactions to 349.76 million in July over June 2021. There are plenty of studies available on mobile payment in various sectors. But there are few studies that discussed the mobile payment adoption by the entrepreneurs of MSMEs, especially after the COVID-19 scenario. This study dealt with mobile payment technology adoption in India using the extended UTAUT model with the variables like social influence, perceived susceptibility, perceived trust, Relative advantage, Perceived compatibility and Habit which affects the mobile payment adoption intention in Post COVID-19 scenario. The “partial least squares-structural equation modelling (PLS-SEM)” approach is used to validate the suggested model. The results of this study aid in a better understanding of the factors that drive mobile payment adoption in Tamil Nadu and other states.

Keywords-- COVID-19, MSME, Mobile payment, UPI, UTAUT.

I. INTRODUCTION

Mobile devices' widespread use in our daily lives, particularly in the field of financial transactions, has had a tremendous influence on our daily routines. Mobile payment (also known as M-payment) has achieved significant adoption in a variety of businesses in recent

years. According to World Pay, mobile payments accounted for “22 percent of total worldwide point-of-sale spending in 2019”, with that number expected to rise to 29.6 percent by 2023. [1] Since its discovery in December of this year, the new corona virus (COVID-2019) has been rapidly spreading over the world. According to the WHO, COVID-19 has been confirmed in 66,243,918 cases throughout the globe as of this writing (December 7, 2020), with 1,528,984 deaths as a consequence of the disease. [2]. Revenues from mobile payments are expected to cross \$1 trillion in 2019, a considerable rise from \$450 billion in 2015. Mobile commerce is expected to reach a market value of \$4.58 trillion by 2023, accounting for around 35% of worldwide e-commerce sales. Several prior research have contributed significantly to our understanding of M-payment adoption intentions in various circumstances [4]. [5] [6]. Although there has been progress in developing the diversity and theoretical foundation of many perspectives in emergency situations, there are still certain gaps to be addressed. [7]. Independent of the kind of mobile technology utilised, most modern definitions of mobile payment include the transfer of monetary value as a component of their scope of usage. [8]. Because mobile payments are contactless, consumers may have higher mental and physical expectations that their transaction processes would be supported, as well as that their security will be maintained throughout their transactions. The use of mobile payments in India has expanded dramatically with the adoption of COVID-19. Customers' payment habits and business models evolved away from conventional face-to-face transactions and toward contactless mobile payments, allowing many companies to survive and prosper throughout the epidemic. As a consequence, the social economy thrived, and many firms managed to stay afloat. As a consequence, what considerations do consumers consider while deciding whether or not to utilise M-payment during the epidemic? It is critical for important academics and stakeholders to understand consumer behaviour during a pandemic. Economists all around the world are getting increasingly interested in mobile payments since they may be used as an alternative to traditional payment methods such as cash, cheques, and debit or credit cards. They were previously recognised as a component of products developed in response to the widespread use of mobile technology and intended to provide particular banking solutions prior to the introduction of mobile payments [8]. In this year's budget statement, the Finance Minister proposed a Rs. 1,500 crore commitment to accelerate the adoption of digital payments across the country. According to experts, the government would use this fund to refund micro, small, and medium-sized enterprises (MSMEs) for losses incurred when processing specific digital payments, such as UPI transactions. By lowering MSMEs' losses, the government intends to encourage them to offer a broader range of digital payment options to their customers. This is a positive start, particularly in India, where MSMEs contribute considerably to GDP and employment but continue to function in a fragmented and traditional manner

II. REVIEW OF LITERATURE

The “TAM (the technology acceptance model)” developed by Davis (1989) and “UTAUT (the unified theory of acceptance and use of technology)” developed by Venkatesh V. M., (2003) and its enhancement, UTAUT2 [9], which are based on the “TAM and UTAUT” models, dominate the adoption and usage literature in the mobile payments domain. Despite the fact that This research found that the behavioural characteristics uncovered by these models had a considerable influence on use, The grounds for extending the models have been identified by IS researchers. [10]. Digital money appears to be associated with two independent phenomena, both of which have helped in the fight against the epidemic. Initially, it was alleged that the virus was spread

through banknotes and coins, and cash transactions were referred to as "dirty money." [11][12]. With government regulations in place in various parts of India, internet delivery companies encouraged clients to pay via digital payment options like mobile payments or credit/debit cards.[13]. Contactless payment adoption adds as much to total card sales and whether by engaging more consumers, expelling non-card payments, or both, the quantity of card sales and numbers as it does to total card sales and numbers. The usage of contactless cards in the taxi industry benefits payments but has a detrimental influence on the allocation of sales quantities, resulting in contactless card sales being cannibalised by competitors.[14]. Consumers' willingness to pay with contactless credit cards is strongly influenced by perceptions of risk and compatibility. Nevertheless, the key TAM constructs are not taken into account by consumers in their use intention[15]. The key factors that influence NFC adoption include possible risk, ease of usage, use, and cost. There is enough reliability, discriminant validity, and convergent validity as a result of all this.[16]. Contactless payment technology has its own set of advantages and disadvantages.[17].

TABLE I
DEFINITIONS OF CONSTRUCTS USED IN THIS STUDY

Variable	Definition
Relative advantage	According to [18], "Relative advantage refers to the extent to which an innovation or a technology is perceived as being more useful than its precursor".
Habit	It refers to the "consistency of the earlier behaviour"[19], a unconscious stimulation, a non-contemplative, frequent behaviour [20] and the very efficacious form of trust [21]
Perceived compatibility	It is defined as the "alignment and operational effectiveness of a new service compared to traditional values of existing services"[22]
Perceived trust	"Trust refers to the exchange relationship with the customer and seller".[23]
Perceived Susceptibility	This metric explicitly looks at how many people feel that both technical and organisational infrastructures are in place to make using a certain technology easier. [24].
Social Influence	What matters is whether or not a person feels that key "persons believe he or she should use the new system".[24]

III. THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESIS

a. Relative Advantage

According to [18], a relative advantage refers to "the length of time that people consider an innovation or technical progress to be more useful than its predecessor." When relative advantage and critical mass are coupled, customer intentions to switch from online to mobile payment services are favourably affected. [25]. Another study found that when relative advantage was paired with social influence and compatibility, the likelihood of accepting NFC-enabled mobile payment was positively predicted. [26]. According to [27], travellers' opinions about the adoption of QR code payment systems are heavily impacted by relative advantage combined with observability, innovation, and compatibility, and as a result, they utilise

technology more when travelling. Users' views of the benefits they perceived and the expenses they experienced were used to determine how much value they put on mobile payment services (such as security concerns and perceived price). [28]. As a consequence, it's possible to infer that relative advantage influences behaviour intention positively. As a consequence, this research proposes the following theories.

H1: "Relative advantage has a significant impact on Behaviour Intention of entrepreneurs to use Mobile payment during COVID-19".

b. Habit

Habit refers to the consistency of the earlier behaviour [19], a unconscious stimulation, a non-contemplative, frequent behaviour [20] and the very efficacious form of trust [21]. In many previous studies, the character of habit in forecasting the usage behaviour of customers has been discussed elaborately [29];[21];[30]. [31]asserted that The function of consumer habits is not to operate as a non-conscious response to specific events; rather, it is to serve as an antecedent of goals to expand the continuation of current behaviour. [30] has suggested and confirmed the association between two variables habit and use intention, as well as the UTAUT2 model, which he calls for further investigation. As a result, it is reasonable to conclude that habit will have a beneficial influence on the behavioural intention to utilise mobile payment.

H2: "Habit has impact the Behaviour Intention significantly to use Mobile payment services among entrepreneurs during COVID-19".

c. Social Influence

Consumers' views of social community pressures on them to embrace or use the innovation in issue are linked to social effect. Before adopting a new product or service, consumers are more likely to interact with one another in order to assuage their worry or uncertainty. [32]. According to [9] and [33], customers feel influential persons believe they should use a certain piece of technological equipment. [34] found a statistically significant and positively associated link between consumers' sentiments and their willingness to utilise mobile payment services. According to [35], social influence had a positive impact on the relationship between "perceived usefulness (PU) and perceived ease of use (PEU)". (PEOU).Furthermore, as previously said, social influence often alters an individual's motivation and has a substantial impact on the user's attitude [36] [37] [38]. Social influence and technological anxiety have mobile payment systems, according to researchers [39], and [40] The stress of using the service and social influence, respectively, were shown to have a considerable impact on user satisfaction and the endorsement of mobile wallet services. The relationship between social influence and consumer behaviour has been thoroughly investigated in the context of mobile technology, and it has been shown that social influence has a positive impact on behavioural intention. [41] [42] [43]. The following theories are offered as a consequence of this investigation.

H3: "Social Influence has a significant impact on Behaviour Intention of entrepreneurs to use Mobile payment during COVID-19".

d. Perceived Trust

The predicted mediation impact of perceived trust on perceived usefulness was modest when examined in terms of perceived usefulness, but large when measured in terms of perceived trust. [44]. The importance of trust in the adoption process has been shown in many research papers in the realm of technology adoption as a strategy for improving customer interactions, boosting system credibility, and increasing perceived security [45]. According to [46]'s study, Businesses

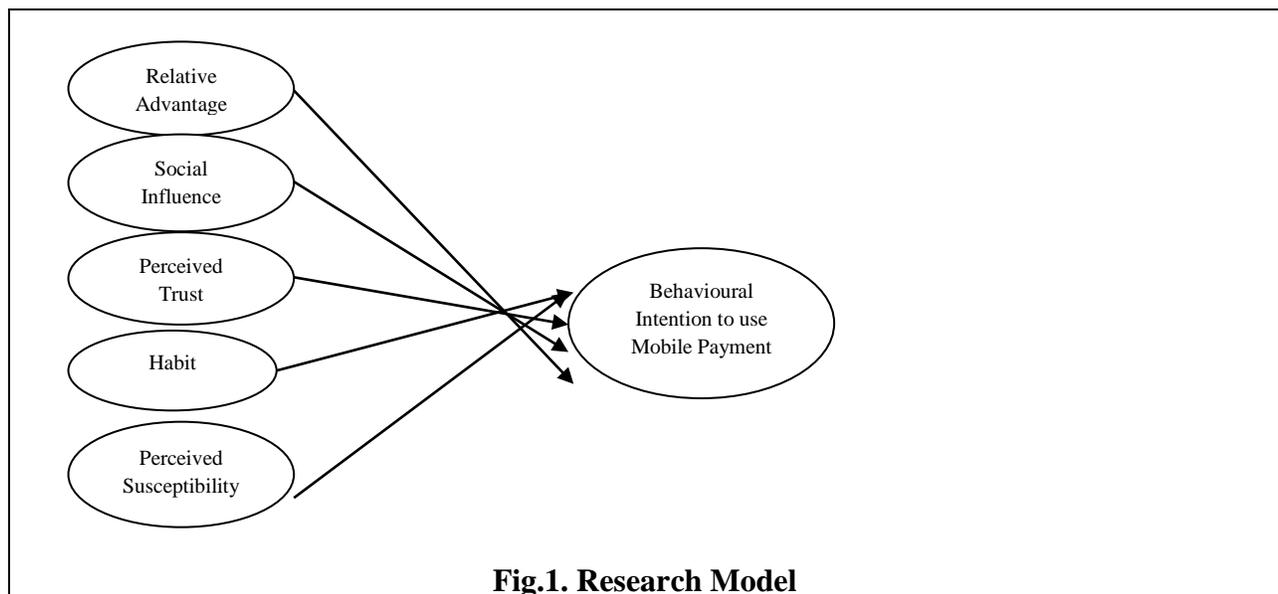
are concerned about system security and privacy problems, believing that such faults have an influence on the system's operation on trust between merchants and consumers in mobile wallet services. As a result, Generally speaking, it is reasonable to infer that perceived trust has a beneficial influence on total behaviour intent. The following theories are offered as a consequence of this investigation.

H4: "Perceived Trust has a significant impact on Behaviour Intention of entrepreneurs to use Mobile payment during COVID-19".

e. Perceived susceptibility

"Perceived susceptibility" is defined as "a person's understanding of the risk of getting a serious illness," while perceived severity is defined as "how the sickness threatens the individual," according to the definition [47]. The perceived susceptibility variable of Health Benefit Model components had a +ve influence on the acceptance of E- payment services, according to a research done by [48]. Furthermore, while confirmation and perceived health threat (including perceived severity and susceptibility) do not directly "influence the intention to continue through confirmation, satisfaction, or perceived usefulness", they do "influence the intention to continue indirectly through confirmation, satisfaction, and perceived usefulness". Many researchers have used the constructs of perceived threat (perceived severity and susceptibility) to investigate technology-based health behaviour, such as (Melzner et al., 2014), who developed an integrated approach by integrating HBM, "the unified theory of acceptance and use of technology (UTAUT), and the theory of planned behaviour (TPB)" in order to categorise Variables that encourage the use of mobile health applications include the following. As a result, the impression of sensitivity to mobile payment has a positive influence on behavioural intention to use mobile payment.. The following theories are offered as a consequence of this investigation.

H5: "Perceived susceptibility has a significant influence on Behaviour Intention of entrepreneurs to use Mobile payment during COVID-19".



IV. RESEARCH METHODS

As part of this study, researchers looked at the use of mobile transaction/payment apps among registered companies in the Indian state of Tamil Nadu. The bulk of the data comes from survey

respondents' responses to a questionnaire. Social influence is one of the questionnaire's five components; the other three are perceived vulnerability, perceived trust, relative advantage, and habit. The issue of social influence is covered in the first of five parts. "A Likert scale with a range of 1 to 5 points was used to create the study's questionnaire. Each question has five alternative responses, and each component of the questionnaire has its own monetary value, which is as follows: 1 denotes strong disagreement, 2 denotes strong disagreement, 3 denotes neutrality, 4 denotes agreement, and 5 denotes strongly agreement". This poll included a total of 240 respondents from the state of Tamil Nadu. They were all registered business owners who used mobile payment applications to run their operations. The convenience sampling strategy was employed to gather samples in this study. "Convenience sampling" is a broad term that refers to a variety of procedures for selecting respondents to participate in research projects like this one. The pool of participants for this study consisted of 196 registered entrepreneurs who completed their transactions using a mobile payment application. All respondents who complete transactions using the mobile payment app, which will function as the research's survey instrument, will get questionnaires based on a preset set of questions. The "Partial Least Squares-Structural Equation Modeling (PLS-SEM)", which is employed in SmartPLS 3.2.7, is used to analyse the conceptual model. [49]. We use a two-stage analytical procedure, with the first stage including the assessment of a valid and reliable measurement model and the second stage involving the evaluation of a structural model, as described further down this section. [50]. The structural model outlines how each construct is measured, whereas the measurement model shows how the constructs are connected to one another. The authors claim that using PLS-SEM in this study was warranted since it allows for simultaneous analysis of both the measurement and the structural model, resulting in more precise parameter estimations [51].

TABLE 2
CHARACTERISTICS OF PARTICIPANTS

Characteristics	Values	Frequency	Percentage (%)
Gender	Male	109	55.6 %
	Female	87	44.4 %
Age	Below 20	26	13.3 %
	21-30	111	56.6 %
	31-40	41	20.9 %
	41-50	17	8.7 %
	Above 50	1	0.5 %
Residence	Rural	54	27.6 %
	Semi-urban	59	30.1 %
	Urban	83	42.3 %
Education	Up to School education	21	10.7 %
	Graduate	83	42.3 %
	Post Graduate & Above	92	46.9 %
Types of Mobile Banking using	UPI based (IMPS)	107	55 %

	NEFT RTGS	&	99	45 %
--	--------------	---	----	------

Source: Primary Data computed by using SPSS 16.0

4.1. Profile and characteristics of respondents

Totally 196 responses from mobile payment using registered entrepreneurs in Tamil Nadu were collected for this study. Table 2 lists the characteristics of the participants. “Males accounted for 55.6 percent of those who responded to the survey (N = 109)”, while “females accounted for 44.4 percent (N = 87)”. In addition, there were two major age groups of respondents were registered: 56.6 percent aged 21 to 30, and 20.9 percent aged 31 to 40. In terms of educational qualifications, the results revealed that 46.9% of respondents have a postgraduate degree or above and 42.3 percent have a bachelors degree. And the majority of the respondents (42.3%) lived in an urban location, followed by 30.1 percent who lived in a semi-urban area. In terms of mobile payment options, 55 percent of respondents using UPI-based mobile banking, while 45 percent using NEFT and RTGS-based mobile banking.

TABLE 3
MEASUREMENT MODEL RESULTS

	“Items”	“Loadings”	“Cronbach’s Alpha”	“Composite Reliability”	“Average Variance Extracted”
Behavioural Intention	BI1	0.721	0.831	0.888	0.667
	BI2	0.849			
	BI3	0.869			
	BI4	0.819			
Relative Advantage	RA1	0.796	0.822	0.883	0.654
	RA2	0.767			
	RA3	0.795			
	RA4	0.873			
Perceived Susceptibility	PSU1	0.790	0.810	0.876	0.638
	PSU2	0.771			
	PSU3	0.809			
	PSU4	0.824			
Social Influence	SI1	0.664	0.807	0.865	0.564
	SI2	0.806			
	SI3	0.715			
	SI4	0.741			
	SI5	0.819			
Habit	HT1	0.813	0.893	0.921	0.699
	HT2	0.870			
	HT3	0.802			
	HT4	0.850			
	HT5	0.842			
Perceived Trust	PT1	0.787	0.871	0.907	0.660
	PT2	0.857			

	PT3	0.775			
	PT4	0.828			
	PT5	0.812			

Source: Primary Data computed by using SmartPLS 3.2.

4.2. Measurement model assessment

Prior to testing hypotheses in the structural model, more data must be used to verify the results of the measurement model analysis (outer model) (inner model). The purpose of the measurement model evaluation is to ensure that the measurements employed are accurate and dependable and accurately represent the theoretical characteristics stated. The measurement model's validity like Discriminant and Convergent validity and reliability like "Composite reliability and Cronbach's Alpha" are investigated. "Cronbach's Alpha values ranged from 0.807 to 0.893, suggesting that they were all higher above the 0.7 threshold value". According to finding, the "composite reliability (CR) values ranged from 0.865 to 0.927", suggesting that they were all higher than the recommended threshold of 0.7. "Cronbach's Alpha and CR" are indeed validated in terms of internal consistency dependability. The measurement of how similar distinct objects are in concept is referred to as convergent validity. The convergent validity of the "average variance extracted (AVE)" was investigated in this study [52]. The factor loadings values satisfied the criteria, with the majority of them above the required threshold of 0.7, as shown in Table 3. The AVE values ranged from 0.564 to 0.699 in Table 3, suggesting that they were all higher above the recommended threshold of 0.5. [53]. As a result of these findings, convergent validity is obtained. The "Heterotrait-Monotrait ratio (HTMT)" was proposed by Henseler's research team as a novel metric for determining discriminant validity [54]. When compared to the previous criteria, the HTMT ratio has been shown to perform better in this scenario. The HTMT criteria for evaluating discriminant validity were explored in this study, as indicated by [52] and based on previous hypotheses. Because the majority of the results were lower than the intended value of 0.9, the HTMT criteria were met, as shown in Table 4.

TABLE 4
HETEROTRAIT-MONOTRAIT (HTMT) RATIO

	Behavioural Intention	Relative Advantage	Perceived Susceptibility	Social Influence	Habit	Perceived Trust
Behavioural Intention						
Relative Advantage	0.985					
Perceived Susceptibility	0.987	0.979				
Social Influence	0.418	0.391	0.392			
Habit	0.415	0.411	0.413	0.675		
Perceived Trust	0.543	0.529	0.529	0.607	0.687	

Source: Primary Data computed by using SmartPLS 3

TABLE 5
HYPOTHESES TESTING FUNCTION

Hypotheses	Relationship	Std Beta	Std Error	Standard Deviation	T-value	P-value	Decision
H1	Relative Advantage → Behavioural Intention	0.443	0.064	0.098	4.572	0.000	Supported
H2	Habit → Behavioural Intention	-0.034	0.018	0.021	1.558	0.120	Not Supported
H3	Social Influence → Behavioural Intention	0.050	0.022	0.019	2.360	0.019	Supported
H4	Perceived Trust → Behavioural Intention	0.035	0.021	0.022	0.886	0.376	Not Supported
H5	Perceived Susceptibility → Behavioural Intention	0.540	0.065	0.096	5.531	0.000	Supported

Source: Primary Data computed by using

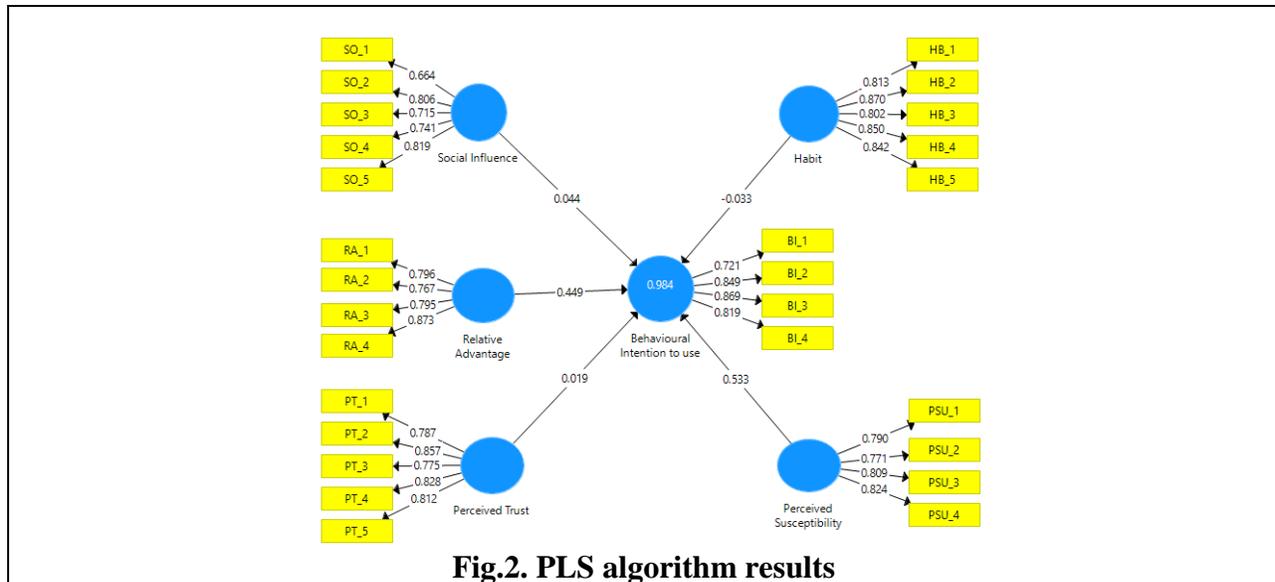
SmartPLS 3.2.7

4.3. Structural model assessment

After the analyses of the model has been reviewed and accepted. The path coefficients and coefficients of determination (R^2) in this model must be computed using a bootstrapping procedure with 5000 re-samples. [50]. The SMA, as illustrated in Table 5 and Fig. 2, enables for the testing of hypotheses that have been suggested. According to the research, registered entrepreneurs' behavioural intention to accept mobile payments in the future is strongly influenced by their assessed vulnerability. As an outcome, H5 ($\beta = 0.540$, $t = 5.531$) is supported. As a result, H1 ($\beta = 0.443$, $t = 4.572$) is supported. Furthermore, the research discovered that social influence had a statistically significant and large impact on the behavioural intention of registered businesses to accept mobile payments. As a result, H3 has been validated ($\beta = 0.050$, $t = 2.360$). Additionally, the data revealed that perceived trust and habit had a strong negative impact on registered entrepreneurs' behavioural intention to use mobile payment services in their enterprises. As a result, neither H2 ($\beta = -0.034$, $t = 1.558$) nor H4 ($\beta = 0.035$, $t = 0.886$) are validated.

4.4. Common method bias (CMB)

To ensure that the data gathered did not contain CMB, the Harman single-factor with six components ("social influence, habit, perceived trust, relative advantage, perceived vulnerability, and behaviour intention") was employed. After then, the eight structures were joined to create a single factor, which was then tested. According to the statistics, a single component accounted for 38.933 percent of the variation, which is less than the required 50% [55]. As a result, given on the information provided, the data gained suggests that there is no need to be concerned about CMB.



Source: Primary Data computed by using SmartPLS 3.2.7

V. RESEARCH METHODS

According to the UTAUT extended model, this research expands understandings of the effects of social influence, perceived security, perceived compatibility, relative advantage, habit, perceived trust, and perceived susceptibility in the intention to use mobile payments among registered entrepreneurs in Tamil Nadu. The sub-sections that follow elaborate on the preceding descriptions of the observed results.

5.1. The influence of relative advantage on a person's desire to utilise a certain behavior

According to the results, relative advantage has a significant impact on registered Tamil Nadu entrepreneurs' behavioural intention to use mobile payment. This finding differs from what has already been found in the literature[18][25][26][27][28], and this might be explained that transfer money through mobile payments. If they want to transfer below Rs.1 lakh, they can choose IMPS (UPI) and if they want transfer a bulk amount above Rs.2 Lakhs, they can use RTGS. So comparing to laptop or computers it is easy to transfer payment and handy to operate. As a result, mobile payment technology has a relative advantage of mobile payment using registered entrepreneurs.

5.2. The influence of perceived trust on a person's propensity to utilise a product

According to the study, a registered entrepreneur's willingness to employ mobile payments is unaffected by his or her appraisal of the effort needed.As a result, these results are in accordance with past research[44][45][46]. Even though there are many security firewall are improved in both online and mobile banking, still some set of entrepreneurs uses physical or CDM transaction (through e-lounge in banks) due to fear of loss by cyber theft. As a result, mobile payment technology has had minimal impact on registered businesses' usage of mobile payments.

5.3. The effect of social influence on a person's decision to take a substance

According to the data, social influence has a significant impact on registered businesses' willingness to use mobile payments. This discovery is in line with previous study findings. According to [32] [9][33][34][35][36][37][38][39][40][41][42][43], social pressure from customers, business partners, family, and friends has a significant impact on registered entrepreneurs' behavioural intention to accept mobile payments.

5.4. The influence of habit on the intention to utilise in a certain situation

In terms of habit, it has a negligible influence on the behavioural intention of registered entrepreneurs to accept mobile payments. Furthermore, this outcome contradicts previous research findings [19][20][21][29][9], in which many entrepreneurs are hesitant to use mobile payment as a habit due to the physical cash liquidity for their daily labour and other business needs. As a result, habit insignificantly influenced the behavioural intention to use mobile payment among registered entrepreneurs.

5.5. The influence of perceived susceptibility on the desire to use in a certain situation

According to the results of this study, Perceived susceptibility has a significant impact on behavioural intention to utilise contactless and mobile payment. As a result, these findings are in agreement with past research. [47],[48] The stronger people's awareness of health and safety, the better their positive behavioural intention to use such systems. As a result, registered entrepreneurs in Tamil Nadu who use mobile payment should be more aware of the risk of diseases like COVID-19 spreading and seriously affecting their lives and transactions.

VI. IMPLICATION TO THEORY AND PRACTICES

This study indicates that significant contributions to theory and in practice have been made. The UTAUT model has been effectively expanded and deployed in a new environment and context, notably mobile payment usage by registered entrepreneurs in Tamil Nadu, in terms of theoretical implications. Furthermore, the UTAUT model, which produced significant findings in the existing mobile payment research, is used to expand several of the common factors (i.e., relative advantage, social influence and perceived susceptibility). Entrepreneurs have a multiple financial transactional needs. Meanwhile, the digital payment facility is growing rapidly. As a result of convenience, pressure from the society and current pandemic scenario, entrepreneurs are supposed to do their financial transaction through the mobile payment. In spite of all of these factors, some entrepreneurs still hesitate habitually interested in omni-channel financial transaction etc., As a result, banks and third party payment aggregators should provide more awareness about the mobile payment among entrepreneurs. Particularly for business transaction they should increase the transaction security in some cases to gain the confidence of entrepreneurs to use mobile payment for their business transactions.

VII. CONCLUSION AND FUTURE DIRECTIONS.

The purpose of this research was to find out more about: 1) To study the demographic profile of the registered entrepreneurs of Tamil Nadu those are using mobile payment, 2) To understand the influence of mobile payment among registered entrepreneurs of Tamil Nadu. 3) To understand the relationship between relative advantage social influence, habit, perceived trust, perceived susceptibility, and behavioural intention of mobile payment users 4) To explore the significant predictors of the behavioural intention of mobile payment usage in amid of COVID-19 lockdown period. Based on the research article mentioned above that has extended the UTAUT model in the mobile payment adoption context were critically analyzed. Only three factors (vulnerability perception, social influence, and relative advantage) were shown to have a statistically significant relationship with behavioural intention to use mobile payment, according to the findings. According to the study, perceived susceptibility is the most important predictor of mobile payment users' behaviour intention to use, followed by relative advantage and social influence. The findings of this study are hoped to aid service providers (banks), application developers, and other stakeholders in developing secure mobile payment infrastructure and ensuring that mobile payment can provide robust financial transactions more securely and efficiently, as well as the benefits of hygienic transactions in an emergency.

REFERENCES

- [1] Worldpay. (2020.) Global Payments Reports.. [Online]. <https://worldpay.globalpaymentsreport.com/>
- [2] WHO. (2020) WHO Coronavirus Disease (COVID-19) Dashboard. [Online]. <https://covid19.who.int/>
- [3] Statista. (2019) Mobile payment revenue worldwide 2015-2019". [Online]. www.statista.com/
- [4] K. Sonawane, "'Mobile payment market by size, share and industry analysis - 2023'", 2018.
- [5] Di Pietro, "The Integrated Model on Mobile Payment Acceptance (IMMPA): An empirical application to public transport.," *Transp. Res. Part C Emerg. Technol.*, p. 463–479., 2015.
- [6] Q. Cao and X. Niu, "Integrating context-awareness and UTAUT to explain Alipay user adoption.," *Int. J. Ind. Ergon.* , p. 9–13, 2019.
- [7] T. Dahlberg, J. Guo, and J. Ondrus, "A critical review of mobile payment research. ," *Electron. Commer. Res. Appl.* , p. 265–284., 2015.
- [8] P. G., Schilke, O., & Wirtz, B. W. Schierz, "Understanding Consumer Acceptance Of Mobile Payment Services: An Empirical Analysis.," *Electron Commerce Resource Application*, 9(3), , p. 209–216, 2010.
- [9] V., Thong, J. Y., & Xu, X. Venkatesh, "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. ," *MIS quarterly*, , pp. 157-178., 2012.
- [10] M. M. M. A., Grant, K., & Edgar, D. Riffai, "Big TAM in Oman: Exploring the promise of on-line banking, its adoption by customers and the challenges of banking in Oman.," *International journal of information management*, 32(3), , pp. 239-250, 2012.
- [11] B. Gardner, "Dirty banknotes may be spreading the coronavirus," 2020.
- [12] M. K. Samantha, "Dirty money: The case against using cash during the coronavirus outbreak.," 2020.
- [13] S. Bhandari, "Ahmedabad says no to cash on delivery to stop spread of COVID-19.," 2020.
- [14] David Bounie and Youssouf Camara , "Card-Sales Response to Merchant Contactless Payment Acceptance," *HAL*, pp. 1-37, 2020.
- [15] Yu-Min Wang and Wei-Cheng Lin , "Understanding consumer intention to pay by contactless credit cards in Taiwan," *International Journal Mobile Communications*, pp. 1-23, 2019.
- [16] Amir Museli and Nima Jafari Navimipour , "A model for examining the factors impacting the near field communication technology adoption in the organizations," *Kybernetes*, pp. 1378-1400, 2018.
- [17] Ł., Czerwonka, P., & Zajdel, R. Zakonnik, "Contactless payments in poland-advantages and disadvantages based on surveys of a selected group of users over the years 2011-2018.," *SHS web of conferences (Vol. 57) EDP Sciences.*, 2018.
- [18] E., Rogers, "Diffusion of Innovations.," *Free Press, New York*, 2005.
- [19] I. Ajzen, "Predicting dishonest actions using the theory of planned behavior.," *Journal of*

- research in personality*, 25(3), pp. 285-301, 1991.
- [20] E., & Lyttkens, C. H. Lindbladh, "Habit versus choice: the process of decision-making in health-related behaviour.," *Social Science & Medicine*, 55(3), , pp. 451-465., 2002.
- [21] C. M., Hsu, M. H., Lai, H., & Chang, C. M. Chiu, "Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents. ," *Decision Support Systems*, 53(4), pp. 835-845, 2012.
- [22] N., Rossi, M., Tuunainen, V. K., & Oorni, A. Mallat, "The impact of use situation and mobility on the acceptance of mobile ticketing services.," *In Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)*, 2006.
- [23] S.W., Ngamsiriudom,W. and Hsieh, C.H. Wang, ""Trust disposition, trust antecedents, trust, and behavioral intention", ," *The Service Industries Journal*, Vol. 35 No. 10, , pp. pp. 555-572., 2015.
- [24] V., Morris, M. G., Davis, G. B., & Davis, F. D. Venkatesh, "User acceptance of information technology: Toward a unified view.," *MIS quarterly*, pp. 425-478, 2003.
- [25] Xiaoping Zhang Liu Fan and Laxmisha Rai, "Mobile Payment: The Next Frontier of Payment Systems? - An Empirical Study Based on Push-Pull-Mooring Framework," *Journal of Theoretical and Applied Electronic Commerce Research*, 2021.
- [26] Athapol Ruangkanjanases and Nicharee Sirikulprasert , "Predicting Consumer Intention to Adopt Near Field Communication Enabled Mobile Payment in Thailand," *Journal of Telecommunication, Electronic and Computer Engineering*, 2018.
- [27] Liguu Lou, Zilu Tian , and Joon Koh , "Tourist Satisfaction Enhancement Using Mobile QR Code Payment: An Empirical Investigation," *Sustainability*, 2017.
- [28] Kuan-Yu Lin, Yi-Ting Wang , and Travis K. Huang , "Exploring the antecedents of mobile payment service usage Perspectives based on cost–benefit theory, perceived value, and social influences.," *Online Information Review*, 2019.
- [29] C. H., Chang, J. J., & Tang, K. Y. Hsiao, "Exploring the influential factors in continuance usage of mobile social Apps: Satisfaction, habit, and customer value perspectives. ," *Telematics and Informatics*, 33(2), pp. 342-355., 2016.
- [30] V., Thong, J. Y., & Xu, X. Venkatesh, "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. ," *MIS quarterly*, , pp. 157-178, 2012.
- [31] W. L., & Luo, M. M. Shiau, "Continuance intention of blog users: the impact of perceived enjoyment, habit, user involvement and blogging time.," *Behaviour & Information Technology*, 32(6), pp. 570-583, 2013.
- [32] E., Straub, D. W., & Chervany, N. L. Karahanna, "Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs. ," *MIS quarterly*, pp. 183-213., 1999.
- [33] E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M. D. Slade, "Modeling consumers' adoption intentions of remote mobile payments in the United Kingdom: extending UTAUT with innovativeness, risk, and trust. ," *Psychology & Marketing*, 32(8), , pp. 860-873., 2015.
- [34] P. G., Schilke, O., & Wirtz, B. W. Schierz, "Understanding consumer acceptance of mobile payment services: An empirical analysis. ," *Electronic commerce research and applications*, 9(3), , pp. 209-216., 2010.

- [35] N., Marquet, M., Palmer, A., & Zhao, A. L. Koenig-Lewis, "Enjoyment and social influence: predicting mobile payment adoption. ," *The Service Industries Journal*, 35(10), pp. 537-554., 2015.
- [36] C., & DeFranco, A. Morosan, "It's about time: Revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. ," *International Journal of Hospitality Management*, 53, pp. 17-29., 2016.
- [37] L. F., Oliveira, A., & Costa, C. J. Rodrigues, "Playing seriously—How gamification and social cues influence bank customers to use gamified e-business applications.," *Computers in human behavior*, 63, , pp. 392-407., 2016.
- [38] S. F. Verkijika, "Factors influencing the adoption of mobile commerce applications in Cameroon. ," *Telematics and Informatics*, 35(6), , pp. 1665-1674., 2018.
- [39] JungKun Park and Jiseon Ahnb, "Examining the role of anxiety and social influence in multi-benefits of mobile payment service," *Journal of Retailing and Consumer Services*, pp. 140-149, 2019.
- [40] Nidhi Singh, "Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence," *International Journal of Information Management*, pp. 191- 205, 2020.
- [41] J. C., Lee, S. C., & Suh, Y. H. Gu, "Determinants of behavioral intention to mobile banking. ," *Expert Systems with Applications*, 36(9), , pp. 11605-11616., 2009.
- [42] Hong and Tam , "Understanding the adoption of multipurpose information appliances: The case of mobile data services.," *Information systems research*, 17(2), pp. 162-179., 2006.
- [43] J., Yao, J. E., & Yu, C. S. Lu, "Personal innovativeness, social influences and adoption of wireless Internet services via mobile technology.," *The Journal of Strategic Information Systems*, 14(3), , pp. 245-268, 2005.
- [44] Nidhi Singh and Neena Sinha , "How perceived trust mediates merchant's intention to use a mobile wallet technology," *Journal of Retailing and Consumer Services*, 2020.
- [45] F., Marinkovic, V., de Luna, I. R., & Kalinic, Z. Liébana-Cabanillas, "Predicting the determinants of mobile payment acceptance: A hybrid SEM-neural network approach.," *Technological Forecasting and Social Change*, pp. 117-130., 2018.
- [46] F., & Bradford, T. Hayashi, "Mobile payments: Merchants' perspectives," *Economic Review*, 99, pp. 5-30., 2014.
- [47] Champion, "Instrument development for health belief model constructs.," *Advances in Nursing Science*. , pp. 73-85, 1984.
- [48] C.C Sreelakshmi and SK Prathap, "Continuance adoption of mobile based payments in Covid-19 context: an integrated framework of health belief model and expectation confirmation model," *International Journal of Pervasive Computing and Communications*, 2020.
- [49] Wend Ringle, "SmartPLS 3. Beonningstedt: SmartPLS," Retrieved from, <http://www.smartpls.com>., 2015.
- [50] J. Hair and C.L. Hollingsworth , "An updated and expanded assessment of PLS-SEM in information systems research," *Ind. Manag. Data Syst.* 117 (3), p. 442–458, 2017.
- [51] D. Barclay and C. Higgins , "The Partial Least Squares (PLS) Approach to Casual Modeling: Personal Computer Adoption Ans Use as an Illustration," *Technology Studies*, 1995.

- [52] G.T.M. Hult, C. Ringle, M. Sarstedt J.F. Hair Jr., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," *Sage Publications*, 2016.
- [53] J.F. Hair, G.T.M. Hult, , C. Ringle , and M. Sarstedt , "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," *Sage Publications*, 2014.
- [54] J., Ringle, C. M., & Sarstedt, M. Henseler, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *Journal of the academy of marketing science*, 43(1), pp. 115-135, 2015.
- [55] P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. Podsakoff, "Common method biases in behavioral research: a critical review of the literature and recommended remedies.," *Journal of applied psychology*, 88(5), p. 879, 2003.
- [56] Mallat, ""Exploring consumer adoption of mobile payments – a qualitative study”," *The Journal of Strategic Information Systems*, Vol. 16 No. 4, pp. 413-432, 2007.
- [57] J. Y. Wong and T. C. Lai, "Celebrity attachment and behavioral intentions: The mediating role of place attachment.," *International Journal of Tourism Research*, 17(2), pp. 161-170, 2015.
- [58] I. R., Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. De Luna, , 2019.
- [59] Park and Ohm , "Determinants of player acceptance of mobile social network games: An application of extended technology acceptance model.," *Telematics and Informatics*, 31(1), pp. 3-15, 2014.
- [60] M.G. Morris, G.B. Davis, F.D. Davis, V. Venkatesh, "User acceptance of information technology toward a unified view," *MIS Q.* 27 (3), p. 425–478, 2003.
- [61] Emma Slade and Michael Williams , "Exploring consumer adoption of proximity mobile payments," *Journal of Strategic Marketing*, pp. 1-15, 2014.
- [62] Y., Li, H., & Carlsson, C. Liu, "Factors driving the adoption of m-learning: An empirical study.," *Computers & Education*, 55(3), pp. 1211-1219, 2010.
- [63] Jin-Myong Lee and Bohan Lee , "Determinants of mobile payment usage and the moderating effect of gender: Extending the UTAUT model with privacy risk," *International Journal of ElectronicCommerce Studies*, 2019.
- [64] C. Morosan and A. DeFranco, "It’s about time: Revisiting UTAUT2 to examine consumers’ intentions to use NFC mobile payments in hotels," *Int. J. Hosp. Manag.*, p. 17–29, 2016.
- [65] G., Demoulin, N. T., & Zidda, P. De Kerviler, "Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers? ," *Journal of Retailing and Consumer Services*, 31, pp. 334-344, 2016.
- [66] J. Park, J. Ahn, T. Thavisay, and T. Ren, "Examining the role of anxiety and social influence in multi-benefits of mobile paymentservice.," *J. Retail. Consum. Serv.*, p. 140–149, 2019.
- [67] K., Upadhyaya, S., Joa, C. Y., & Dowd, J. Magsamen-Conrad, "Bridging the divide: Using UTAUT to predict multigenerational tablet adoption practices. ," *Computers in human behavior*, pp. 186-196, 2015.
- [68] Y. T. Chang, "Dynamics of internet banking adoption.," 2005.
- [69] A. S., Al-Madadha, A., & Zvirzdinaite, Z. Al-Adwan, ". Modeling students’ readiness to adopt mobile learning in higher education: An empirical study.," *International Review of Research in Open and Distributed Learning*, , 2018.

- [70] Kanishk Gupta and Nupur Arora , "Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective," *South Asian Journal of Business studies*, 2019.
- [71] V. Brown & Venkatesh, "Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle.," *MIS quarterly*, pp. 399-426, 2005.
- [72] T. L., Carr, C. L., Peck, J., & Carson, S. Childers, "Hedonic and utilitarian motivations for online retail shopping behavior. ," *Journal of retailing*, 77(4), , pp. 511-535, 2001.
- [73] H. Van der Heijden, "User acceptance of hedonic information systems.," *MIS quarterly*, pp. 695-704, 2004.
- [74] J. Y., Hong, S. J., & Tam, K. Y. Thong, "The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance," *International Journal of human-computer studies*, 64(9), pp. 799-810, 2006.
- [75] Zhang Jiaxin, Yan Luximon , and Yao Song , "The Role of Consumers' Perceived Security, Perceived Control, Interface Design Features, and Conscientiousness in Continuous Use of Mobile Payment Services," *MDPI*, pp. 1-16, 2019.
- [76] Mario Silic and Andrea Back , "Mobile contactless payments adoption challenge in the complex network actor ecosystem," *27th Bled eConference*, pp. 306-317, 2014.
- [77] Withaya Kaewratsameekul, "An examination of behavioral intention to use contactless mobile payment: Rapid transit system in Thailand," *Science, Engineering and Health Studies*, pp. 85-101, 2018.
- [78] Ekaterina Semerikova, "What hinders the usage of smartphone payments in Russia? Perception of technological and security barriers," *Technological Forecasting & Social Change*, 2020.
- [79] A. Bandura, "Self-efficacy: The exercise of control," *New York: Freeman.*, 1997.
- [80] C. S. Yu, "Consumer switching behavior from online banking to mobile banking.," *International Journal of Cyber Society and Education*, 7(1), , pp. 1-28, 2014.
- [81] S. C. Chan, "Understanding internet banking adoption and use behavior: A Hong Kong perspective. ," *Journal of Global Information Management (JGIM)*, 12(3), pp. 21-43, 2004.
- [82] S. I. D. D. H. A. R. T. H. A., Paul, R. I. K., & Fuloria, S. A. N. J. A. Y. Dasgupta, "Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India.," *Romanian journal of marketing*, (1), 6, 2011.
- [83] P., & Lin, H. H. Luarn, "Toward an understanding of the behavioral intention to use mobile banking.," *Computers in human behavior*, 21(6), , pp. 873-891, 2005.
- [84] M. H., & Chiu, C. M. Hsu, "Internet self-efficacy and electronic service acceptance. ," *Decision support systems*, 38(3), pp. 369-381, 2004.
- [85] P. Ifinedo, "Acceptance and Continuance Intention of Web-based Learning Technologies (WLT) Use among University Students in a Baltic Country," *The Electronic Journal of Information Systems in Developing Countries*, 23(1), , pp. 1-20, 2006.