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Examining the Determinantsof Mobile CommerceAdoptionthrough UTAUT: A Structural Equation Modelling

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Abstract: In the past couple of decades, there has been a substantial improvement in mobile commerce development. Despite the development of mobile commerce, its adoption rate is still low in Malaysia compared to other countries in the region, such as Indonesia, Thailand, and the Philippines. This study aims to examine the determinants of mobile commerce adoption among users in Malaysia. This study introduces novel research that offers a complete perspective on the unified theory of acceptance and use of technology (UTAUT) and its correlation with perceived trust in mobile commerce transactions. This study used a convenient sampling by employing a survey from consumers in Malaysia with certain criteria. The study also employed structural equation modelling (SEM) based on analysis of momentum structure (AMOS). The findings showed that the adoption intention of mobile commerce is significantly influenced by perceived trust, performance expectancy, and effort expectancy. Furthermore, the adoption of mobile commerce is greatly affected by the adoption intention of mobile commerce and the facilitating conditions. This study provides an understanding of perceived trust and the adoption of mobile commerce among consumers in Malaysia. We suggest that mobile commerce providers improve their platforms and services to enhance the adoption rate of mobile commerce in Malaysia.

Keywords: Mobile commerce, adoption, intention, perceived trust, UTAUT, Malaysia

Introduction

Electronic commerce,also called e-commerce,began in the late 1990s due to the growing use of desktop computers and the Internet, changing traditional commerce (Van et al., 2020). Traditional commerce involves in-person interactions between customers and corporate personnel, whereas e-commerce involves interactions between customers and a company's online platform (Thinh et al., 2019). E-commerce allows individuals to use a desktop computer connected to the Internet at home or in

a corporate office to access information on companies' websites and purchase desired goods or services (Mullick et al., 2023).

Advancements in telecommunications, communication technology, and wireless Internet have transformed e-commerce into a new phase known as mobile commerce. Mobile commerce allows clients to shop without being restricted by physical location or temporal constraints (Lucas et al., 2023). Consumers can use a handheld device connected to the wireless Internet to search for information, interact, and make purchasing decisions about their favourite things or services. Due to this benefit, mobile commerce is anticipated to thrive in the upcoming years (Mullick et al., 2023).

Recent improvements in mobile technology have sparked inventiveness. Mobile devices provide easy access to a range of services like mobile social networks, mobile payments, and mobile commerce, thanks to adaptable communication networks that are not limited by time or location (O'Dea, 2020). Mobile devices are increasingly becoming the primary method of accessing communication. Mobile networks are more cost-effective than landlines and provide consumers greater flexibility and convenience (Asampana et al., 2022). Mobile devices are increasingly the primary means for conducting commercial transactions in emerging and developing countries, revolutionising enterprises in all sectors.

The increase in mobile device usage for business transactions has significantly influenced traditional corporate practices, with wireless telecommunications becoming the main method to update traditional infrastructure using standard technology (Nokia et al., 2023; Jain et al., 2021). The growing use of mobile devices and the progress of mobile technology has resulted in the rise of a new business practice called mobile commerce. Businesses can now transform their connections with potential clients through the communication revolution facilitated by wireless technology and mobile devices. As a result, nations are likely to account for over 90% of new smartphone connections soon since they are upgrading their mobile services at a rapid pace (Ashraf et al., 2021).

Mobile commerce offers benefits to consumers, corporations, and governmental agencies. Businesses benefit from mobile commerce by cutting operating costs as they do not need to invest resources in physical branches or offices for in-person consumer interactions (Jahanshahi et al., 2011). Portable devices such as smartphones, tablets, or personal digital assistants connected to the wireless Internet allow individuals to access information, engage with businesses' websites, and purchase items or services (Van et al., 2020). Through mobile commerce, businesses can benefit from deep integration into the local and global economy (Barry et al., 2024c). Technology is metaphorically diminishing the size of our world and erasing the physical boundaries between countries. International interactions and exchanges between individuals and businesses from other countries are significant.

Mobile commerce is gaining momentum globally, driven by younger populations and technological advancements. Malaysian adults under 50 use smartphones for

online shopping, with increased mobile subscriptions and a shift to 5G networks (Chan et al., 2022). This has boosted mobile commerce apps, making them essential for daily life (Barry et al., 2024b). Mobile commerce sales reached 710 billion, with over 1 billion consumers having 5G connections in 2023 (Barry et al., 2024c). A new survey predicts this number will increase to over 2 billion by 2025. The rise in smartphone adoption is expected to continue driving this growth. (Barry et al, 2024a). Despite the high penetration rate of smartphone in Malaysia, the adoption rate of mobile commerce is very low compared to some neighboring countries in the region (Barry et al., 2024a; Yahaya et al., 2022). Therefore, this study aims to examine the determinants of mobile commerce adoption among customers in Malaysia.

Literature Review and Hypothesis Development

Mobile Commerce

Mobile commerce refers to conducting business in a wireless setting.Mollick, Cutshall, Changchit, and Pham (2023) defined mobile commerce as encompassing all transactions carried out through mobile devices, in other words, using the relatively new wireless mode of sale and purchase. According to the current research study, mobile commerce is any form of purchasing and selling, including transferring product ownership or rights, carried out using mobile devices connected to a computer network.

However, previous studies on users' adoption and usage of mobile commerce have employed the unified theory of acceptance and use of technology(UTAUT) model (Tannady et al., 2024; Chand & Kumar, 2024).After reviewing previous studies, we used this model as the theoretical foundation for the current investigation into the behavioral intention to adopt and user adoption of mobile commerce.This study summarizes the literature from numerous scholars and researchers following the proposed research methodology (see Figure 1). Moreover, the hypotheses were proposed after reviewing earlier research. This study adds perceived trust to the variables included in the unified theory of acceptance and use of technologymodel, including performance expectancy, effort expectancy, and facilitatingconditions.However, this study excluded social influence (Sair& Danish, 2018; Do Nam Hung, Azam, &Khatibi, 2019).

Adoption of Mobile Commerce

Several variables influence the behaviour of mobile commerce usage. Sari and Subriadi (2022) highlight the impact of external factors such as the Covid-19 pandemic and attitudes towards social distancing on customers' inclination to engage in mobile commerce. In their studies, Jia et al. (2022) investigate the impact of intrinsic and extrinsic motivators and technology use behaviours on the continued usage of mobile commerce applications. Al-Gasawneh et al. (2022) investigate the variables that influence the adoption of mobile commerce and the behaviour of consumers after

making a purchase. Misra et al. (2022) examine the influence of demographics and the various types of mobile commerce services on the impacts under consideration. Al-Gasawneh et al. (2022) highlight the significance of mobile-customer relationship management, perceived simplicity of use, and usefulness. Liu et al. (2022) highlight that performance, ease-of-use expectations, social impact, and degree of involvement influence shopping intentions and usage behaviour. Hence, drawing on prior research, this study selects attitude, perceived behavioural intention, subjective norm, security, and intention as the independent variables. At the same time, mobile commerce usage behaviour is chosen as the dependent variable.

Intention to Adopt

Previous scholars have investigated how intention affects the acceptance of mobile commerce (Barry et al., 2024a). For instance, Abdullah et al. (2024) discovered that the intentiongreatlyimpacts the adoption of mobile payments. Furthermore, Barry and Jan (2018) established a direct correlation between the intention to engage in m-commerce and its acceptance, highlighting trust and security as crucial determinants. In their study, Srinivas (2024) emphasised the significance of brand equity in influencing individuals' willingness to acquire smartphones. In their study, Munaet al. (2024)used the UTAUT model with the dedication-constraint perspective to improve satisfaction and raise the costs associated with migrating to a different mobile payment system. Yassin et al. (2024) highlighted the impact of performance expectancy, facilitating conditions, and health consciousness on the intention to utilise mobile health applications. Allahhamand Ahmad (2024) examined the effects of anxiety produced by artificial intelligence on adopting mobile payment systems in supply chain companies. The present study examines the determinants of mobile commerce adoption rather than focusing on behavioural intentions. Therefore, based on these studies, the following hypothesis is proposed:
H1:Theadoption of mobile commerce is positively affected by theadoptionintention.

Perceived Trust

Trust in technology refers to the degree to which a user is willing to depend on a technology and its outcomes (Mayer et al., 1995, p. 718). In addition, the word trust, which also means electronic trust, describes a customer's qualified reliance on information they have found on a website or app. The customer gains the confidence needed to transact business online as a result. It is predicated on the notion that a reliable and exceedingly honest business possesses attributes like talent, integrity, equity, and accountability (Basdekidou&Papapanagos, 2024). In general, trust plays a significant role in mobile commerce since consumers are less likely to make transactions when they feel a lot of risk and uncertainty (Liébana-Cabanillas et al., 2024). This study examines the determinants that influence online reviews' credibility and the impact that credibility has on consumers' purchase intentions to understand

better how consumers assess the reliability of online reviews.Therefore, the researchers proposed the following hypotheses:
H2:Theadoptionintentionof mobile commerce is positively affected by perceived trust.

Performance Expectancy

According to Venkatesh et al. (2003), performance expectancy pertains to the extent to which an individual believes that using the system would assist them in improving job performance. However, Venkatesh, Thong, and Xu (2012) assert that performance expectancy is one of the most important components of behavioral intention. User performance is calledperceived usefulness (performance expectancy) in mobile commerce scenarios (Barry &Jan, 2016). According to Chand and Kumar (2024), performance expectancy significantly impacts intention among m-payment users in the Western region of Fiji. Their findings also showed that performance expectancy and facilitation conditions affect users' intentions to use m-payment. Barry and Jan (2018) found a significant link between usefulness and intention to adopt mobile commerce. Thus, considering these investigations, we put up the following hypothesis:
H3:The adoption intention of mobile commerce is positively affected by performance expectancy.

Effort Expectancy

Effort expectancy pertains to the system's ease of use (Venkatesh et al., 2003). According to Venkatesh et al. (2012), effort expectancy is one of behavioral intention's most significant components. Effort expectancy characterizes user-friendliness in mobile commerce (Barry et al., 2024a). Moreover, Tannady, Dewi, and Gilbert (2024) defined effort expectancy as the degree to which users perceive the effectiveness of using mobile commerce. According to Chand and Kumar (2024), effort expectancy significantly impacts intention among m-payment users in the Western region of Fiji. Barry and Jan (2018) found a significant link between perceived ease of use and intention to use mobile commerce. Thus, considering these investigations, we put up the following hypothesis:
H4: The adoption intention of mobile commerce is positively affected by effort expectancy.

Facilitating Conditions

The term facilitating conditions refers to the extent to which an individual believes that there is an organisational and technical infrastructure in place to allow the use of the system (Venkatesh et al., 2003). Like the preceding constructs, facilitating conditions have demonstrated high predictive power for behavioral intention (Venkatesh et al., 2012). The term facilitating conditions in mobile commerce refers to the organizational, technical, and human support needed to use

technologies like mobile commerce. Facilitating conditions refers, according to Shaikh and Amin (2024), to the extent that a person believes that organizational and technical infrastructure exists to help the users.According to Chand and Kumar (2024), enabling conditions significantly impact intention among m-payment users in the Western region of Fiji. Their findings also showed that performance expectancy and facilitation conditions affect users' intentions to use m-payment. Thus, the following hypotheses are put out considering these studies:

H5: The adoption intention of mobile commerce is positively affected by facilitating conditions.

H6: The adoption of mobile commerce is positively affected by facilitating conditions.

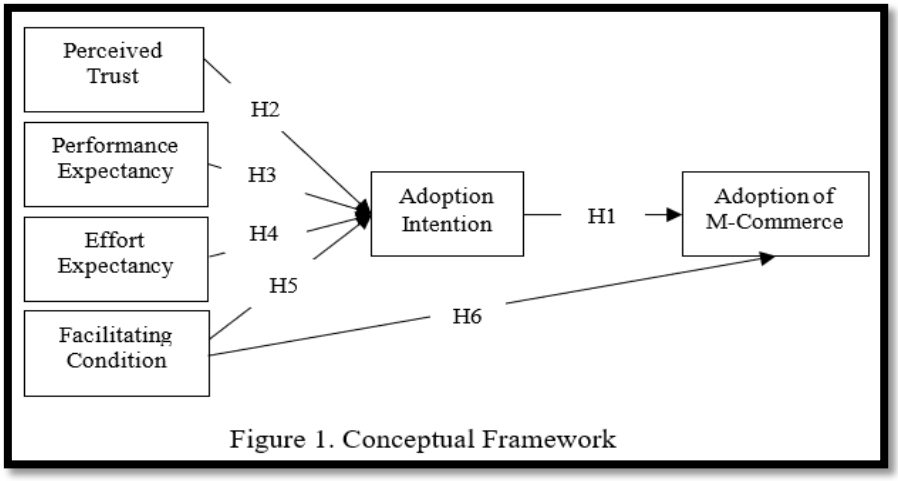

Figure 1. Conceptual Framework

Research Methodology

Convenience sampling was used in this study, and 400 survey questionnaires were collected from smartphone users in Klang Valley area of Malaysia.The400 questionnaires that were collected, according to Hair et al. (2010), seemed to be adequate for data analysis. However, before doing the primary analysis in this study, all data screening procedures were correctly followed.Using SPSS software, the primary analysis, which included reliability analysis, descriptive analysis, factor analysis, and structural equation modeling, was carried out after the data screening. The measurement model is evaluated for convergent and discriminant validity and goodness-of-fit using the analysis of momentum structure (AMOS) software. The structural model is then run to validate the model and ascertain the study's hypothesis.

Measurements

A questionnaire that respondents self-administered was used to adopt the UTAUT model. The following constructs were modified and adapted from Venkatesh et al. (2012) for the adoption intention of mobile commerce apps: performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), adoption intention (AI), and adoption of mobile commerce (AMC). Furthermore, Gulati, Sousa, and Lamas's (2019) perceived trust (PT) items were modified to fit the needs of the current study. The

Likert scale, which has five points, with 1 indicating strong disagreement and 5 indicating strong agreement, was employed to moderate the answers to the questionnaire questions. However, for data analysis, the study used the Analysis of Momentum Structure (AMOS-SEM) and Statistical Package for Social Science (SPSS) software (Hair et al., 2010). Furthermore, factor, descriptive, and reliability analyses were carried out. The measurement model and the study's structural model are then determined using a two-stage structural equation modeling procedure. Ultimately, the study's hypotheses were established (Hair et al., 2010).

Result and Discussion

Demographic Characteristics of the Respondents

Of the 500 surveys that were sent out, only 420 were returned. The data collected resulted in 385 valid answers (refers to Table 1), of which 211 (55%) were female and 174 (45%) were male. Most of the responders, 135 (35.1%) and 130 (33.8%), were in the 18–23 and 24-29 age ranges, respectively. Of the responses, only 73 (19%), 35 (9.1%), and 12 (3.1%) were from those in the age ranges of 35–35, 36–40, and 41 and above, respectively. There were just 45 married respondents (11.7%), compared to 340 single respondents (88.3%). There were 351 (91.2%) Malaysian and only 34 (8.8%) non-Malaysians. Regarding their educational background, 175 (45.5%) of them were Undergraduate students, followed by 95 (24.6%) Master students and 58 (15.1%) Diploma students.There were just 57 (14.8%) PhD students.

Table 1: Demographics profile of the respondents

Demographic variables		Research Sample (n = 385)	
Gender		Frequency	Percentage (%)
	Male	174	45.0
	Female	211	55.0
Age	18 – 23	135	35.1
	24 – 29	130	33.8
	30 – 35	73	19.0
	36 – 40	35	9.1
	41 – Above	12	3.1
Nationality	Malaysian	351	91.2
	Non-Malaysian	34	8.8
Marital Status	Single	340	88.3
	Married	45	11.7
Level of Education	Diploma	58	15.1
	Bachelor	175	45.5
	Master	95	24.6
	PhD	57	14.8

Source: Authors' Computation

KMO and Bartlett's Test of Sphericity

The degree of unidimensionality of the scales was evaluated using the KMO and Bartlett's Tests (Table 2). For the sphericity tests, the p-values for each of the seven

sample groups were less than 0.001. Furthermore, results of 0.915 confirmed the sample's suitability.

Table 2. KMO and Bartlett's Tests

KMO and Bartlett's Test		
KMO Sampling Adequacy Measurement		0.915
Sphericity Test	Approx. Chi-Square	8249.246
	Degree of Freedom	830
	Significance	0.000

Source: Authors' computation

Exploratory Factor Analysis

According to the factor analysis result, each survey item was verified to have loaded into the appropriate component using the factor loadings (refer to Table 3). The results indicate that sixdeterminants accounted for 77.163% of the variance in the survey items. Items with factor loadings below the suggested threshold of 0.5 (Hair et al., 2010) were not included in the data analysis, and each component's Cronbach's alpha following exploratory factor analysis was above 0.7, as Hair et al. (2010) advised.

Table 3. Reliability of scale

Variables	Items	Loadings	Cronbach's α	CR	AVE
Effort Expectancy Mean=4.084 SD=1.023	EF1	0.727	0.908	0.910	0.669
	EF2	0.784			
	EF3	0.804			
	EF4	0.766			
	EF5	0.711			
Facilitating Conditions Mean=3.611 SD=1.188	FC1	0.778	0.891	0.897	0.686
	FC2	0.825			
	FC3	0.856			
	FC4	0.787			
Adoption of Mobile Commerce Mean=3.977 SD=1.110	AMC1	0.777	0.905	0.903	0.702
	AMC2	0.807			
	AMC3	0.855			
	AMC4	0.840			
Behavioural Intention Mean=4.027 SD=1.033	INT1	0.728	0.932	0.933	0.778
	INT2	0.661			
	INT3	0.736			
	INT4	0.755			
Performance Expectancy Mean=3.747 SD=1.117	PE1	0.817	0.823	0.820	0.537
	PE2	0.812			
	PE3	0.642			
	PE4	0.584			
Perceived Trust Mean=2.814 SD= 1.209	PT1	0.831	0.770	0.779	0.543
	PT2	0.751			
	PT3	0.883			

Source: Authors' computation

Convergent and Discriminant Validity

In evaluating the convergent validity, the average variance extracted (AVE) for each construct was calculated to ensure that it was more than 0.5, as shown in Table 4 (Barry et al., 2024a). Examining the discriminant validity, the square root of AVE was computed and compared to the inter-construct correlations. The results in Table 4 demonstrate that the discriminant validity is validated since the square root of the AVE of the constructs was greater than the correlations of the construct with each other construct (Barry et al., 2024b).

Table 4. Construct Validity and Reliability

	CR	AVE	MSV	ASV	PE	EE	PT	INT	AMC	FC
PE	0.820	0.537	0.476	0.266	0.732					
EE	0.910	0.669	0.542	0.317	0.637	0.818				
PT	0.779	0.543	0.030	0.007	-0.020	0.075	0.737			
INT	0.933	0.778	0.542	0.344	0.690	0.736	0.172	0.882		
AMC	0.903	0.702	0.361	0.202	0.371	0.601	0.091	0.569	0.838	
FC	0.897	0.686	0.284	0.211	0.470	0.530	0.003	0.533	0.476	0.828

Source: Author's Computation

Confirmatory Factor Analysis

The findings of the measurement model's confirmatory factor analysis indicate that the RMSEA index is below the cut-off point of 0.08 (0.064), the DF is 329, the Chi-square (χ^2) is 842.396, the Normed Chi-square (χ^2/DF) is below the cut-off point 5.0 (2.560), and the CFI, GFI, TLI, and IFI, with respective values of 0.937, 0.932, 0.927, and 0.937, are all above the cut-off point 0.90 ranges (Barry et al., 2024a). These findings suggest that evaluating the applicability of the structural model is reasonable.

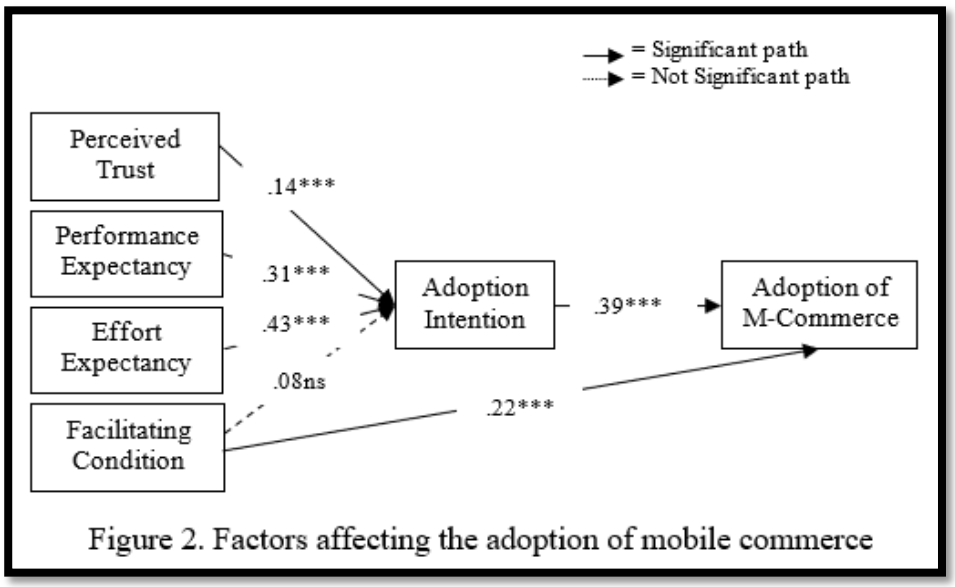

Figure 2. Factors affecting the adoption of mobile commerce

Research Hypothesis Verification

The hypotheses were confirmed using AMOS software. According to the findings, the RMSEA index is below the cut-off point 0.08 (0.065), the DF is 332, the Chi-square (χ^2) is 869.720, the Normed Chi-square (χ^2/DF) is below the cut-off point 5.0 (2.620), and the CFI, GFI, TLI, and IFI, with values of 0.934, 0.928, 0.924, and 0.934, respectively, are all above the cut-off point 0.90. According to the structural model results, the hypothesized model thus shows the best result in terms of fit indices and factor loadings. The structural model hypothesis test's result is therefore considered sufficient. The hypothesis's outcome is displayed in Table 5 below.

Table 5. Hypotheses testing

Hypotheses	Paths	*β*	*t-test*	*P-value*	Supported
H1	INT----> AMC	0.386	7.341	***	YES
H2	PT ----> INT	0.139	3.736	***	YES
H3	PE -----> INT	0.310	4.765	***	YES
H4	EE -----> INT	0.431	7.216	***	YES
H5	FC ------> INT	0.088	1.914	0.056	NO
H6	FC -----> ACC	0.217	4.217	***	YES

Note: *** indicates significance level < 0.001
Source: Authors' computation

Results of the Hypothesis Testing

As shown in Table 5 above, five regression coefficient paths out of the six proposed in the conceptual model were statistically significant. Assessment of the path revealed that intention has a significant impact on adoption (β = 0.386, p <0.001) providing support for hypothesis 1. There was a statistically significant relationship between perceived trust and intention (β = 0.139, p <0.001) providing support for hypothesis 2. In addition, there was also statistical significance relationship between performance expectancy and intention (β = 0.310, p <0.001) providing support to hypothesis 3. However, effort expectancy (β = 0.431, p <0.001) significantly predict intention providing support for hypothesis 4. Moreover, facilitating conditions (β = 0.088, p =0.056) does not significantly predicts intention proving no support for hypothesis 5. Finally, there was a statistically significant relationship between facilitating condition and adoption (β = 0.217, p <0.001) providing support for hypothesis 6**.**

Discussion

The purpose of this study was to examine the determinants of mobile commerce adoption. However, the significant effect of "perceived trust" on the adoption "intention of mobile commerce" indicates that ensuring security is crucial to establishing consumer confidence in mobile commerce platforms. Mobile commerce users require assurance in the security of transactions, protection of data, and prevention of payment information misuse. Consumers are more likely to utilisemobile commerce systems that provide robust security measures (Sutrisno et al.,

2023). Integrity is essential for establishing consumer trust in mobile commerce. According to Lee and Jin (2019), customers expect platforms to act ethically and refrain from deception or manipulation. Platform users desire precise and reliable information on product descriptions and pricing (Sutrisno, 2023). Consumer's good intentions are influenced by their trust level in the mobile commerce platform. Consumers anticipate that items and services will meet their expectations. Being responsive and providing efficient client service helps to establish trust. Establishing reliable linkages between consumer and mobile commerce platforms necessitates trust (Siau&Shen, 2003). The level of trust customers have in a platform's security, integrity, service quality, and other aspects will directly impact the growth of mobile commerce and transactions. Therefore, mobile commerce providers must proactively establish and sustain consumer confidence to expand and embrace their platform.

"Performance expectancy" indicates a significant effect on the adoption intention of mobile commerce. One potential reason for this discovery is that mobile commerce priorities the convenient availability of goods and services. Mobile devices enable users to access various products and services through online platforms (Ghazali et al., 2018). They have become independent of physical stores and computers for shopping. They are increasingly interested in mobile commerce because they feel it would enhance the convenience of online buying. Consumers place importance on both accessibility and affordability. They anticipate that m-commerce will provide more affordable deals and discounts unavailable in physical businesses. The allure of lower prices or exclusive deals can incentivize consumers to utilise mobile commerce platforms. Therefore, the adoption of mobile commerce is influenced by consumers' optimistic anticipation of its effectiveness and advantages (Mollick et al., 2023). These determinants contribute to the growth and adoption of mobile commerce in the constantly evolving online purchasing environment.

"Effort expectancy" revealed a significant effect on the adoption intention of mobile commerce. This outcome indicates that consumers are more inclined to engage in mobile commerce if they perceive it as convenient (Barry et al., 2024b); however, the convenience of using the mobile commerce platform while transacting leads to increased user adoption. Ease of navigation is also crucial. Rodríguez-Torrico et al. (2020) discovered that consumers desire a seamless and effortless experience while accessing the extensive array of products and services provided by mobile commerce. Users expect a meticulously crafted, user-friendly interface that streamlines platform utilisation. Customers' likelihood of using mobile commerce positively correlates with their perception of its ease of use and interactivity. To enhance the adoption of mobile commerce, providers should prioritise incorporating these characteristics within the platform's architecture. Customers are more inclined to utilise mobile commerce if it is characterised by simplicity and directness. This element influences users' adoption of mobile commerce and contributes to the growth of the mobile internet shopping ecosystem.

"Facilitating conditions" have shown a significant effect on the "adoption of mobile commerce". This result indicates that the association between the availability and accessibility of technology and the acceptance of m-commerce by consumers is logical. This is because consumers who utilise mobile devices and have dependable internet connections are more inclined to participate in mobile commerce, as stated by Barry et al. (2024a). Facilitating conditions (ease of use) are crucial for the adoption of mobile commerce. The ease of use of platforms also impacts the adoption of mobile commerce. Consumers must see the UI as user-friendly. The software includes a user-friendly design, efficient navigation, and clear user assistance. Consumers should have convenient access to information about mobile commerce products and services (Barry et al., 2024c). Users should have convenient access to comprehensive information about the product, including details, pricing, and feedback from other customers. Ensuring the accessibility and organisation of this information aids in facilitating conditions. Companies and mobile commerce providers can enhance consumers' adoption of mobile commerce by ensuring these criteria are advantageous (Sutrisno, 2023). Facilitating conditions enhance the perception of mobile commerce as convenient, secure, and effective, increasing consumers' propensity to use it.

Managerial Implications

Consumers' adoption intention of mobile commerce will improve if mobile commerce providers develop technology, such as websites or applications, that are reliable, useful, and user-friendly. This is because there is a significant correlation between perceived trust, performance expectancy, and effort expectancyon the adoption intention of mobile commerce. To increase the adoption of mobile commerce among consumers, mobile commerce providers should use a few strategic marketing decisions and integration strategies.

Additionally, developers of mobile commerce apps or websites should provide seminars or training sessions to userson the features and usage procedures of mobile commerce, given the substantial influence that intention and facilitating conditions have on the adoption of mobile commerce. They should also have a support structureforusers' problems or queries when using mobile commerce. Mobile commerce providers must ensure that their websites or application interfaces are user-friendly and straightforward, enabling usersto engage with technology effortlessly. They should also contactusers, addressing any worries about confidentiality and data protection and reminding them of the security and privacy measures in place while they use mobile commerce. In other words, they should protect users' financial information while conducting mobile commerce. As a result, this will encourage users' involvement in mobile commerce and develop the mobile commerce industry in Malaysia, which will also significantly contribute to the Malaysian Economy.

Malaysian policymakers, including The Malaysian Communication and Multimedia Commission (MCMC), should implement policies that enable

telecommunication industries to provide good internet connections. This may empower mobile commerce providers to offer good services encouragingusers to conduct mobile commerce activities. The mobile commerce providers should also work closely with platform designers, smartphone providers, and telecommunication industries to offer services that may increase the adoption of mobile commerce among mobile users in Malaysia.

Conclusion

This study reports on the adoption of mobile commerce among users. The main determinantsaffectingtheadoptionof mobile commerce among users aretheir intention and facilitating conditions. performance expectancy, effort expectancy, and perceived trust influence users' intentions to use mobile commerce. On the other hand, it was discovered that perceived trust, performance expectations, and effort expectationssignificantly influenced the adoption intention of mobile commerce.

Hence, the results of this study will provide academic scholars with a valuable source of literature. The study examines important determinants and conducts empirical tests to discover the determinants affecting consumer adoption of mobile commerce in Malaysia. This research makes a significant contribution to the current body of knowledge. The study will also benefit mobile commerce providers by enabling them to make well-informed strategic decisions to improve the adoption rate of mobile commerce among consumers in Malaysia. This is becausemobile commerce systems with low entry barriers can facilitate expanding providers' customer base, leading to more sales and the development of more jobs (Barry et al., 2024). As a result, it will positively impact the Malaysian economy. Furthermore, this study contributes to the UTAUT theory by incorporating perceived trust as an additional variable to discover the elements that affect the adoption of mobile commerce among consumers in Malaysia.However, perceived trust, performance expectancy, and effort expectancy indirectly affect the adoption of mobile commerce through adoption intention. Additionally, adoption intention and facilitation conditions directly affect the adoption of mobile commerce. Therefore, those determinants, directly and indirectly, affecting the adoption of mobile commerce include perceived trust, performance expectancy, effort expectancy, facilitating condition, and intention.

Limitations and Suggestions for Future Research

The following provides a comprehensive recommendation for future researchers. Like all other research, this study has limitations in terms of conduct and content due to workforce, material, and time constraints.However, the core structure of this research is either the model itself or the extension developed from the model. Consequently, a new variable, perceived trust, is added to the original variables of the UTAUT theory. All the determinants are one-dimensional, and the results are more abstract. Performance expectancy can be divided into four categories: work

performance, convenience, entertainment value, and social impact, further divided into the impact of colleagues and classmates. This will facilitate the development of more comprehensive adoption models and concrete recommendations for adopting mobile commerce among consumers.

Numerous aspects that affect a user's adoption of mobile commerce can be the subject of future research. This study only looks at consumers over 18 years old who own smartphones and use mobile commerce individually. It looks at elements like the adoption intention of mobile commerce, performance expectancy, effort expectancy, facilitating conditions, and perceived trust to explore how smartphone owners among consumers behave when using it. Future research may include alternative study methodologies considering perceived cost, individual creativity, privacy, and security. Future research may also compare consumers from various nations to ascertain their adoption of mobile commerce. Future studies may also consider the research model of this study in a different context to determine consumers' adoption of new technology such as e-payment or social commerce. Another limitation of this study is that the study excluded social influence from the original UTAUT theory. Therefore, future studies may include this variable to examinethe determinants affecting the adoption of mobile commerce among consumers.

Considering how new mobile commerce is, more research is needed to demonstrate its impact on the scope of the educational process. Further research is needed to determine the usefulness and usage of mobile commerce by consumers to provide ideas for improving its adoptionamongconsumers in Malaysia.

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