PAYMENTS IN DIGITALIZATION ERA: FACTORS INFLUENCING DIGITAL PAYMENTS ON F&B DELIVERY APPLICATIONS IN PHNOM PENH

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Abstract
The rapid growth of digital payment systems in emerging markets has reshaped consumer behavior patterns, particularly in cash-dependent economies like Cambodia. This study investigates the determinants of digital payment adoption within Cambodia's food and beverage (F&B) delivery application. This research reviews the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). From an analysis of 329 samples in Phnom Penh, the results reveal that perceived usefulness, ease of use, social influence, government support, and service quality significantly drive adoption. Notably, security and trust, which are often emphasized in prior literature, exerted negligible direct effects, suggesting these factors are now perceived as basic expectations. The findings identify the significant role of user-friendly interfaces, peer networks, and policy frameworks in accelerating cashless transitions. The study recommends simpler user interfaces, using social media to connect with users, and strong collaborations with governments and businesses to speed up the shift to digital payment systems. Theoretically, this research also contributes to technology adoption theories by contextualizing their applicability in emerging economies and offers actionable insights for stakeholders navigating Cambodia's evolving digital landscape.

Key words: *Digital payments; F&B delivery applications; service quality; TAM; UTAUT.*

JEL Classification: *M30*

I. INTRODUCTION

In the current era, food and beverage (F&B) delivery industry has experienced a significant transformation in the presence of digital revolution. Widespread smartphone adoption and internet penetration have not only accelerated the growth of on-demand delivery apps but have also paved the way for advanced digital payment solutions to increase consumer convenience (Statista, 2024). Meanwhile, the secure and seamless digital transactions enabled by mobile wallets, QR codes, and integrated banking systems has further redefined consumer expectations and business models on a global scale.

In emerging markets such as Cambodia, where many consumers originally relied on cash-based transactions, the development in digital technologies has caused a dramatic evolution in payment behaviors. Especially, with a breakout of COVID-19 pandemic and surge in internet usage in 2020, Cambodian consumers are now using electronic devices to access delivery applications (Prasetyo et al., 2021). Research suggests that adopting e-payments contributes to time savings, improved security, and additional benefits such as discounts (Pheng & Ou, 2022). In other words, digital payment systems not only reduce transaction time and travel costs but also enhance the overall customer experience by linking payments directly with banking systems and e-payment service providers.

Current trends in digital payments are not limited to basic mobile banking. The industry is witnessing a tremendous growth in contactless transactions, integration of artificial intelligence (AI), and the emergence of "Buy Now, Pay Later" (BNPL) schemes that allow consumers to defer payments. These evolutions are reshaping business strategies and consumer finances (Rogers, 2025; McCarthy, 2025). Moreover, business transformation in the digital era is being driven by strategic investments in innovative payment systems that not only facilitate transactions but also generate valuable real-time data. This data empowers companies to analyze consumer behavior, forecast demand, and streamline supply chain operations—factors that contribute to increased profitability and competitive advantage (Davis, 1989; Gefen et al., 2003).

In the F&B context, these developments are complemented by advancements in data analytics and

unified commerce systems, which enable F&B companies to optimize operations, personalize customer interactions, and improve inventory management. For example, F&B delivery platforms in Phnom Penh such as Nham24, Foodpanda, Wownow, and E-Gets have incorporated multiple payment options (cash, digital banking systems, and proprietary e-wallets) into their mobile applications. These integrated solutions are designed with elements such as practicality, ease of use, trust, and contextual relevance in mind, which significantly shape consumers' attitudes toward mobile banking (Chav & Ou, 2021).

Despite these technological advances, significant barriers remain to hinder digital payment adoption in many regions. Especially in cash-dependent economies like Cambodia, factors such as limited financial literacy, inadequate trust in online platforms, and restricted internet access continue to obstruct the full transition to digital payments. Therefore, the National Bank of Cambodia are also promoting the use of digital payment systems in order to facility financial inclusion and digital economy. Although with government intervention, further understanding these challenges is critical. Studies based on the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) highlight that usefulness, ease of use, trust, and social influence play crucial roles in the adoption of digital payment technologies (de Luna et al., 2019; Venkatesh et al., 2012). Therefore, addressing them through targeted strategies and policy interventions can help enhance digital literacy and facilitate a more inclusive and efficient digital economy, especially in digital payment context.

Consequently, this paper aims to examine the influencing factors of digital payment acceptance in Cambodia's F&B delivery sector. By investigating key factors such as perceived usefulness, ease of use, trust, security, social influence, government support, and service quality, the study develops a model that explains the drivers behind digital payment adoption among Cambodian consumers. Additionally, the research explores how these digital payment systems can enhance the overall delivery experience, stimulate economic growth, and support Cambodia's broader digital transformation efforts. The findings are expected to provide practical guidance to stakeholders, policymakers, and industry leaders, ultimately contributing to the evolution of a more efficient and inclusive digital economy.

II. LITERATURE REVIEW

Previous studies on digital payment adoption mainly relied on established theoretical frameworks that explain why and how users accept new technologies. They reviewed TAM and UTAUT frameworks as well as related literatures to security, trust, government support, and service quality. TAM posits that perceived usefulness and perceived ease of use drive technology acceptance (Davis, 1989). Perceived usefulness refers to the degree to which an individual believes that using a particular system will enhance their performance, for example by enabling faster transactions and improving customer experience. Perceived ease of use, on the other hand, describes how effortless it is to operate the system. These constructs are crucial in explaining user behavior in various digital payment scenarios, including mobile and QR code transactions (Bhuiyan et al., 2024).

Furthermore, UTAUT extends TAM by incorporating additional factors such as social influence and facilitating conditions (Venkatesh et al., 2003). Social influence reflects the impact of peers, cultural norms, and recommendations on an individual's decision to adopt new technologies. This factor is particularly significant in environments where social norms heavily influence behavior. Facilitating conditions, which include external support like technological infrastructure and policy frameworks, further help explain the variance in technology usage across different contexts.

Moreover, government acts as a critical external factor that can accelerate the adoption of digital payment systems. Initiatives such as regulatory reforms, infrastructural investments, and public awareness campaigns help reduce barriers to adoption. For instance, government-backed projects aimed at financial inclusion can create an enabling environment that not only supports the implementation of cashless technologies but also builds consumer confidence in these systems (Sánchez-Torres et al., 2018).

Beyond the usability and performance dimensions, security and trust are critical in shaping users' adoption decisions. Security concerns address the protection of sensitive financial data and the prevention of unauthorized access (Chen, 2008; Kim et al., 2010). Trust is defined as the confidence in the reliability and integrity of a digital payment system. This factor plays a complementary role by reducing perceived risks. To make it simple, when users trust the system, they are more likely to engage in digital transactions, even if potential security issues exist (Pheng & Ou, 2022).

Finally, service quality is an essential determinant that influences user satisfaction and sustained use of digital payment platforms. High service quality (i.e., reliability, responsiveness, and assurance) ensures that

users have a positive experience when interacting with digital payment systems. In the context of F&B delivery apps, efficient service quality minimizes errors and delays, thereby reinforcing user trust and encouraging continuous adoption (Parasuraman et al., 1985; Belanche et al., 2020).

Hypotheses Development

Perceived Usefulness (PUS), Perceived Ease of Use (PEU), Digital Payment Adoption (DPA)

Perceived usefulness represents the users' perception of productivity and efficiency of the technology. In digital payments context, this means enabling faster transactions and improving customer experiences (Davis, 1989; Bhuiyan et al., 2024). Research confirms that perceived usefulness is a key factor shaping consumer attitudes toward adoption (Davis, 1989; Park et al., 2014). Specifically, the benefits of QR code payments significantly influence behavioral intentions (Liébana-Cabanillas et al., 2015; Ibrahim et al., 2019; Oliveira et al., 2016; Yan et al., 2021). Therefore, payment service providers should highlight the practical advantages of their solutions to drive user adoption (Tounekti et al., 2019). However, its impact is not uniform across all user groups. Rafferty and Fajar (2022) found that perceived usefulness did not affect retailers' adoption which questions variability of its influence.

Simultaneously, perceived ease of use is described as how user-friendly a technology system is (Davis, 1989), and this factor plays a crucial role in enhancing convenience and acceptance (Taylor & Todd, 1995). Previous research highlighted its importance in fostering interest and intention to use digital payments (Sarkam et al., 2022). When it comes to QR code payments, ease of use has been found to strongly influence consumer adoption (de Luna et al., 2019; Ibrahim et al., 2019). However, some studies suggest that ease of use does not necessarily shape behavioral intentions of digital payment (Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Yan et al., 2021). Furthermore, Rafferty and Fajar (2022) argue that although ease of use influences mobile payment adoption, its effect is found to be minimal.

Beyond its direct influence, perceived ease of use also indirectly affects adoption by enhancing perceived usefulness. Indeed, when a system is easy to use, users are more likely to perceive it as useful (Davis, 1989). Research supports the idea that convenience and usability positively correlate with users' perception of a technology's utility (Liébana-Cabanillas et al., 2015). Likewise, Andavara et al. (2021) further demonstrate that ease of use indirectly drives mobile payment adoption by reinforcing perceived usefulness, emphasizing the interconnected nature of these two factors in technology acceptance. Given these discussions, we apply these concepts in F&B context and propose the following hypotheses as shown in Figure 1:

H1: Perceived usefulness positively impacts digital payment adoption in F&B delivery apps.
H2: Perceived ease of use significantly influences digital payment adoption in F&B delivery apps.
H3: Perceived ease of use enhances perceived usefulness of digital payment in F&B delivery apps.

Security (SEC) and Trust (TRU)

Although digital payments are widely acknowledged for their safety and efficiency (Slozko & Pelo, 2015), concern on security of the system still remains as users place high importance on secure transactions. Since early period, consumers are worried about potential security breaches, such as unauthorized access to credit card details or passwords (Jiménez & San Martín, 2010). Currently, users further demand robust protective measures, making security a priority for digital payment providers (Tounekti et al., 2019). Research confirms that security and confidentiality are critical in shaping consumer behavior, directly impacting adoption decisions (Chen, 2008; Kim et al., 2010). Despite these concerns, some consumers feel satisfied with existing security features and do not consider them a primary factor in their adoption choices (Schuh & Stavins, 2016).

In addition, trust is defined as confidence in a system's reliability, and it plays an important role in reducing perceived risks such as financial loss while promoting adoption. The concept of propensity to trust further reinforces this trust dynamic (Singh & Sinha, 2020). In other words, it refers to a psychological tendency where individuals believe in others based on positive interactions. Studies identified trust as a crucial factor influencing the intention to use mobile payments, with its absence discouraging online transactions (Cao et al., 2016). For merchants, trust is particularly significant, as it strengthens customer relationships and fosters long-term engagement (Partel et al., 2019). Additionally, research links trust to broader technology adoption, emphasizing its role in mitigating perceived risks (Kanojia & Lal, 2020). Overall, when combined with security, trust enhances e-commerce adoption, highlighting their interconnected role in building user confidence (Nilashi et al., 2015). This implies that security and trust factors can be an extension in F&B delivery apps research. These arguments lead us to the below development of hypotheses:

H4: Security positively impacts digital payment adoption in F&B delivery apps.

H5: Trust positively impacts digital payment adoption in F&B delivery apps.

Social Influence (SOI)

The UTAUT highlights social influence as an influential factor of behavioral intention (Venkatesh et al., 2003). This construct describes the impact of opinions, behaviors, and recommendations of others on individual when accepting new technologies (Khatimah et al., 2019). Recent studies in mobile technology services have consistently demonstrated that incorporating social influence into research models has a positive effect on the intention to adopt particular innovations (Chen et al., 2019). For example, Oliveira et al. (2016) found that social influence plays a significant role in guiding consumers' decisions to use QR codes during transactions. Interestingly, digital payment adoption in Cambodia is strongly influenced by social norms and peer recommendations (Pheng & Ou, 2022). In contrast, Imani and Anggono (2020) observed that social influence did not have a measurable impact on QR code adoption among merchants, suggesting that its effect may vary according to the context and target user group. These contrasting findings imply that while social influence is a robust predictor in consumer-centric settings, its impact may be less pronounced in professional or merchant contexts, where other factors such as usefulness or ease of use might be more powerful in technology adoption decisions (Chen et al., 2019). Therefore, we formulate the following hypothesis in F&B mobile delivery context:

H6: Social influence significantly affects consumers' adoption of digital payments in F&B delivery apps.

Government Support (GOS)

As aforementioned, government initiatives can boost financial inclusions and the shift to cashless economies. For example, Cambodia's blockchain-based Bakong system exemplifies a government-led effort to promote cashless transactions. This is complemented by government's cashless policies and high smartphone penetration, which further accelerating rapid adoption across Southeast Asia (Statista, 2024). Research consistently shows that government support is essential for the successful implementation of innovative information technologies. Sánchez-Torres et al. (2018) argued that such support is indispensable for projects like e-learning, while additional studies confirm its significant impact on adopting advanced technologies (Chaouali et al., 2016; Hung et al., 2016). Furthermore, governmental policies not only influence people's intentions to use electronic payment systems but also play a direct role in the execution of mobile payment projects (Mondego & Gide, 2020). In fact, Chen et al. (2019) noted that increased government support is directly associated with acceptance rates of mobile payments among Chinese consumers. Despite these supportive measures, challenges such as infrastructure gaps and limited financial literacy still continue to hinder this progress (Asian Development Bank, 2021). In addition to policy support, incentives like rewards, discounts, and promotions are found to significantly boost the adoption of these technologies (Bick et al., 2021). This allows us to propose the following assumption in F&B mobile delivery:

H7: Government support positively impacts digital payment adoption in F&B delivery apps.

Service Quality (SEQ)

In service industry, quality is a major concern for most researchers and practitioners. Indeed, high quality of service provided can lead to critical decisions among users. In other words, when users experience reliable, responsive, and secure service from an app, they are more likely to trust and use its digital payment features. For example, established models of service quality—such as those outlined by Parasuraman, Zeithaml, and Berry (1985)—highlight dimensions like reliability, responsiveness, assurance, and empathy that are essential to fostering customer satisfaction and trust. In the context of F&B delivery, these elements translate into timely deliveries, accurate order fulfillment, and effective customer support, all of which reduce uncertainties related to digital transactions (Cheng et al., 2021). Platforms like Nham24 and Foodpanda have demonstrated that seamless digital payment can enhance customer experiences by minimizing transaction errors and delays (Bhuiyan et al., 2024). Empirical evidence further indicates that when service quality is ensured, customers are more comfortable in using digital payment options, as their positive experiences enhance trust in the system (Saad, 2021). Moreover, enhanced service quality such as the accuracy of order processing and the professionalism of delivery personnel can directly influence the willingness of customers to use digital payment methods and their continuous behavior (Belanche et al., 2020). In summary, by ensuring service quality, F&B delivery apps not only improve overall customer satisfaction but also create a more secure and trustworthy environment for digital transactions. This can accelerate the adoption of cashless payments, which is vital for the growth and efficiency of the digital payment within the mobile F&B delivery

sector, proposing the below hypothesis:

H8: Service quality positively impacts digital payment adoption in F&B delivery apps.

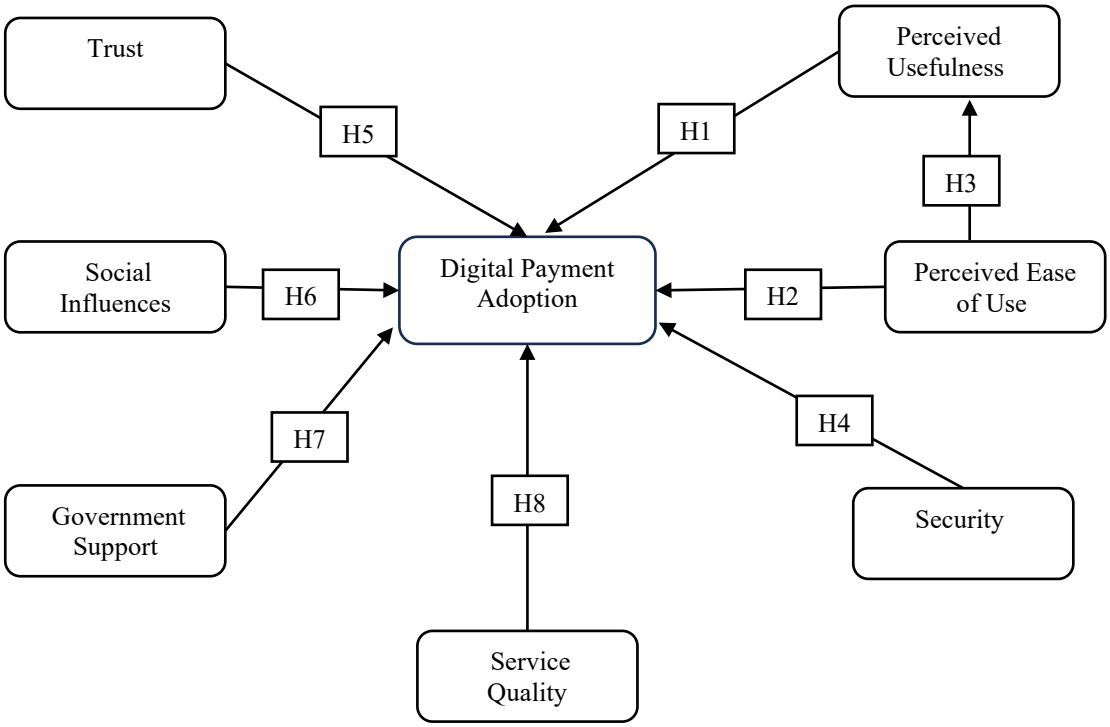


Figure 1 – Conceptual Framework

III. METHODOLOGY

This study employed a quantitative method by using questionnaire surveys to collect primary data from 329 respondents to examine the factors of digital payment adoption via F&B delivery applications in Phnom Penh city. Phnom Penh is the capital of Cambodia and a center of economy. Therefore, companies, restaurants, consumers of F&B services, and digital service providers, i.e., mobile delivery apps and digital payment providers, are concentrated in Phnom Penh. In terms of sampling methods, we randomly distributed the questionnaires to consumers using platforms such as Messenger, Telegram, and Instagram. We also used self-administered questionnaires to collect data from major locations in the city center. For data analysis, we first used Statistical Package for the Social Sciences (SPSS) to conduct frequency, descriptive, and factor analysis. Then, we employed Analysis of Moment Structures (AMOS) to test the model in Confirmatory factor analysis (CFA) and structural equation modeling (SEM).

The measurement scales used in this study are adapted from established literature to assess factors influencing digital payment adoption (DPA) in Cambodia's food delivery sector. Perceived Usefulness (PU) is measured using items such as "Digital payments make food ordering more convenient" and "Using digital payments saves me time compared to cash payments" (Venkatesh et al., 2003). Perceived Ease of Use (PEU) evaluates the simplicity of digital payments with statements like "Using digital payment methods for ordering food is easy for me" and "I find it simple to navigate digital payment applications like ABA Pay" (Liébana-Cabanillas et al., 2015). Security (SEC) is assessed by items including "Digital payment platforms ensure secure authentication processes" and "I trust the encryption technologies used by digital payment platforms" (Dotzauer & Haiss, 2017). Trust (TRU) is measured using statements such as "I trust that my personal information is safe when using digital payment systems" and "I believe digital payment systems are reliable for completing transactions" (Mondego & Gide, 2020). Social Influence (SOI) is analyzed through items like "My friends and family encourage me to use digital payments" and "Seeing others use digital payments influences

my decision to adopt them" (Nor & Pearson, 2008). Government Support (GOS) includes indicators such as "The government's initiatives promote the adoption of digital payments" and "I am aware of the government policies supporting digital payment platforms" (Chen et al., 2019). Service Quality (SEQ) is captured through statements like "With digital payment, booking and orders are easy" and "Digital payments are readily available whenever I need them" (Kim et al., 2021). Finally, Digital Payment Adoption (DPA) is assessed with items such as "I intend to adopt digital payment in the next few months" and "I will recommend that friends and family use digital mobile payment" (Yamin & Abdalatif, 2024; Lu, 2024). These scales provide a comprehensive framework for understanding consumer adoption of digital payment systems.

IV. RESEARCH FINDINGS

Respondents' demographics

The study obtained a total of 329 valid responses from the survey. The demographic profile of respondents reveals several key characteristics that influence digital payment adoption for food delivery services in Cambodia. The majority of participants are young, with 79.3% falling between the ages of 16 and 25, and 63.2% are students. This aligns with the fact that most respondents (86.1%) have at least an undergraduate education, suggesting a strong correlation between education and digital payment usage. The findings also show that most respondents earn less than $500 per month (79.7%), indicating that affordability could play a significant role in their adoption of digital payment systems. In terms of banking preferences, ABA Bank and ACLEDA Bank are the most frequently used institutions, with a combined share of 82%, highlighting their dominance in Cambodia's digital financial ecosystem. Despite a high frequency of usage, with 54.1% of respondents using digital payments daily or weekly, 27.1% report rarely using them, pointing to potential barriers such as trust issues or limited digital literacy. Overall, the demographic data suggests that younger, educated, and cost-sensitive consumers are the primary users of digital payments, while challenges remain in enhancing accessibility and trust to drive broader adoption.

Factor Analysis and Reliability Test

The result of factor analysis of all research variables demonstrates that the scores of the factor loading, KMO, cumulative percentage, and eigenvalue meet the threshold of the rule of thumb suggested by Hair et al. (2019). For examples, PUS consists of four items with factor loading values (0.763 to 0.875), KMO (0.807), eigen value (2.784), cumulative percentage (69.60%), inter-total correlation (0.603 to 0.756), and Cronbach alpha (0.854). In addition, all other constructs (such as PEU, SEC, TRU, SOI, GOS, and SEQ) also satisfied the requirement of factor analysis and reliability. Based on specifications recommended by Hair et al. (2019), all research items were accepted to conduct further analysis.

Confirmatory Factor Analysis (CFA)

Table 1 presents key CFA results, including standardized loadings, t-values, p-values, average variance extracted (AVE), composite reliability (CR), and standard errors for each indicator, which are essential for evaluating construct validity and reliability. These findings confirm that all indicators significantly contribute to their respective constructs, ensuring construct validity. In this study, all constructs have AVE values greater than 0.50 the threshold value, with the lowest AVE of 0.752 for TRU. Additionally, all constructs have CR values above 0.70, confirming their internal consistency. The lowest CR value is 0.856 for PUS, well above the acceptable threshold. These results demonstrate strong convergent validity for the measurement model. Thus, the measurement model is reliable.

The overall fit of the measurement was evaluated using a CFA. The results as shown in Figure 2 are as follows: Chi-square to degree of freedom (χ^2/d.f.) = 1.241, Goodness-of-Fit Index (GFI) = 0.902, Adjusted GFI (AGFI) = 0.868, Normed Fit Index (NFI) = 0.936, Comparative Fit Index (CFI) = 0.987, Root Mean Square Error of Approximation (RMSEA) = 0.027. These results collectively affirm that the measurement model is valid for further analysis.

Table 1. Confirmatory Factor Analysis

Indicator			Standardized Loading	t-value >1.96	p-Value	AVE>0.50	CR >0.70
PUS2	<---	PUS	0.820	A	***	0.771	0.856
PUS5	<---	PUS	0.804	16.831	***		
PUS1	<---	PUS	0.808	16.868	***		
PUS4	<---	PUS	0.651	12.683	***		
PEU1	<---	PEU	0.847	A	***	0.785	0.890

PEU2	<---	PEU	0.833	19.011	***		
PEU4	<---	PEU	0.778	17.082	***		
PEU3	<---	PEU	0.745	15.981	***		
PEU5	<---	PEU	0.723	15.578	***		
SEC5	<---	SEC	0.788	16.044	***	0.753	0.868
SEC2	<---	SEC	0.789	A	***		
SEC1	<---	SEC	0.766	18.134	***		
SEC3	<---	SEC	0.705	13.914	***		
SEC4	<---	SEC	0.716	14.190	***		
TRU2	<---	TRU	0.815	15.332	***	0.752	0.868
TRU3	<---	TRU	0.823	15.472	***		
TRU4	<---	TRU	0.738	A	***		
TRU1	<---	TRU	0.735	13.716	***		
TRU5	<---	TRU	0.650	13.598	***		
SOI4	<---	SOI	0.776	A	***	0.779	0.886
SOI5	<---	SOI	0.771	18.000	***		
SOI2	<---	SOI	0.725	16.453	***		
SOI1	<---	SOI	0.823	15.957	***		
SOI3	<---	SOI	0.801	15.105	***		
GOS4	<---	GOS	0.856	A	***	0.833	0.919
GOS3	<---	GOS	0.854	20.332	***		
GOS1	<---	GOS	0.858	20.427	***		
GOS5	<---	GOS	0.811	20.886	***		
GOS2	<---	GOS	0.784	17.568	***		
SEQ5	<---	SEQ	0.832	18.111	***	0.821	0.912
SEQ4	<---	SEQ	0.844	18.678	***		
SEQ3	<---	SEQ	0.802	17.331	***		
SEQ2	<---	SEQ	0.809	18.891	***		
SEQ1	<---	SEQ	0.816	A	***		
DPA4	<---	DPA	0.881	20.449	***	0.833	0.919
DPA3	<---	DPA	0.849	19.516	***		
DPA2	<---	DPA	0.839	A	***		
DPA1	<---	DPA	0.815	19.444	***		
DPA5	<---	DPA	0.779	16.957	***		

Note: **p<0.05, *p<0.01, ***p<0.001

Table 2. Hypotheses Testing

Path Relationship	Standardized Coefficient (β)	t-value	p-value	Result
H1: PUS-->DPA	0.195	3.782	***	ACCEPTED
H2: PEU-->DPA	0.342	3.114	0.002	ACCEPTED
H3: PEU-->PUS	0.878	14.111	***	ACCEPTED
H4: SEC-->DPA	0.020	0.561	0.575	NOT ACCEPTED
H5: TRU-->DPA	0.045	1.114	0.265	NOT ACCEPTED
H6: SOI-->DPA	0.203	4.796	***	ACCEPTED
H7: GOS-->DPA	0.311	6.530	***	ACCEPTED
H8: SEQ-->DPA	0.317	6.491	***	ACCEPTED

Note: **p<0.05, *p<0.01, ***p<0.001

Structural Equation Modeling (SEM)

In this study, SEM was employed to identify the determinants influencing digital payment adoption in food delivery service apps among Cambodian consumers. The goodness-of-fit statistics presents the following results: χ^2/d.f.= 2.303, GFI = 0.908, AGFI = 0.845, NFI = 0.906, CFI = 0.943, RMSEA = 0.063, p = 0.000. According to Hair et al. (2019), these values indicate a satisfactory fit for the model, suggesting that the proposed relationships align well with the observed data. In Figure 3, all indicators displayed standardized loadings exceeding 0.70, signifying robust construct reliability. From the hypotheses testing results in Table 3,

except H4 and H5, all hypotheses H1, H2, H3, H6, H7, H8 are accepted.

V. DISCUSSION IMPLICATIONS AND FUTURE RESEARCH

Discussion

The findings align with the TAM, which posits that users are more inclined to adopt a technology if they believe it will enhance their performance and provide convenience (Davis, 1989). First, the analysis indicates that PUS affects DPA in food delivery apps ($\beta = 0.195$, $p < 0.001$). For Cambodian consumers, the tangible benefits such as faster transactions and improved service experiences in the F&B delivery apps are influential factors in shaping their adoption decisions, which is consistent with previous research (Bhuiyan et al., 2024; Tounekti et al., 2019). Second, PEU significantly impacts DPA in food delivery apps ($\beta = 0.342$, $p < 0.05$). PEU is known to lower the barriers to technology adoption by making systems more accessible and less intimidating (Taylor & Todd, 1995). The findings imply that when digital payment platforms are user-friendly, consumers are more likely to use them. The results validate preceding research studies (Sarkam et al., 2022) that emphasizes the importance of PEU in DPA. Third, the study demonstrates a robust positive relationship between PEU and PU ($\beta = 0.878$, $p < 0.001$). This result further validates substantiates TAM's assertion that PEU indirectly boosts the PUS of a technology (Davis, 1989). In practice, if a digital payment system in the F&B apps is easy to navigate, users are more inclined to perceive it as advantageous—confirming earlier findings by Andavara et al. (2021).

In contrast to prior studies, i.e., Chen (2008), Kim et al. (2010), Tounekti et al. (2019), general perceptions of security did not significantly influence digital payment adoption ($\beta = 0.02$, $p = 0.575$). This suggests that in the current digital payment landscape in Cambodia, security is viewed as a basic requirement rather than a differentiating factor. Consumers may now assume a standard level of security in these platforms, reducing its role as a unique driver of adoption. Similarly, trust did not emerge as a significant predictor ($\beta = 0.045$, $p = 0.265$), which contradicts the literature highlighting its importance in mitigating perceived risks (Kanojia & Lal, 2020; Pheng & Ou, 2022). This finding might that in a well-established digital payment ecosystem in F&B delivery applications, the basic trust in these systems is already assumed by users, thereby reducing its direct impact on adoption decisions, supporting Schuh and Stavins (2016).

The results show that social influence significantly affects digital payment adoption ($\beta = 0.203$, $p < 0.001$). This contributes to the UTAUT, which emphasizes that peer recommendations and societal norms are critical factors in technology adoption (Venkatesh et al., 2003; Venkatesh et al., 2012). In Cambodia, where social media plays a pivotal role, particularly among younger demographics, these findings underscore the importance of leveraging social networks to drive adoption. The outcomes further support the crucial role of social influence in digital payment, consistent to the arguments in previous literatures of digital payment systems of different context (Oliveira et al., 2016; Pheng & Ou, 2022).

Meanwhile, GOS shows a strong positive impact on DPA ($\beta = 0.311$, $p < 0.001$), validating its role as a crucial external driver of digital payment. This is in line with previous studies that demonstrate how regulatory frameworks, policy initiatives, and infrastructural investments enhance the acceptance of financial technologies (Chen et al., 2019; Mondego & Gide, 2020). In Cambodian context, initiatives such as tax incentives and digital payment subsidies appear instrumental in creating a conducive environment for adoption. Indeed, Cambodia's government, i.e., National Bank of Cambodia, are taking full actions in promoting the adoption of digital payment to facilitate financial inclusions and digital economy. This also applies to F&B delivery applications. As Bick et al. (2021) mentioned, aside from policy support, incentives like rewards, discounts, and promotions are also essential in adoption of these technologies.

Finally, high SEQ is an important determinant of DPA ($\beta = 0.317$, $p < 0.001$), as evidenced by its positive influence on user satisfaction and trust in the system. Although specific statistical values were not detailed in this section, the literature consistently shows that reliable, responsive, and efficient service delivery enhances user confidence (Parasuraman et al., 1985; Belanche et al., 2020). In F&B sector in Cambodia, seamless service quality, i.e., timely deliveries and accurate order fulfillment, helps minimize uncertainties and encourages continuous use of digital payment options, which is in accordance to earlier discussions by different studies such as Bhuiyan et al. (2024), and Saad (2021). In other words, SEQ not only improves overall customer satisfaction but also create a more trustworthy environment for digital transactions, which in turns enhance digital payment acceptance among Cambodian consumers.

Theoretical and Managerial Implications

The study validates the core constructs of the TAM by confirming that PUS and PEU are robust

predictors of DPA. First, PEU not only directly influences adoption but also reinforces the PUS of the technology, and these two constructs enhance DPA, supporting TAM's proposition. Second, the findings extend the UTAUT by showing that social influence plays a decisive role in technology acceptance, particularly in markets like Cambodia where peer recommendations and social media are highly influential. Third, the study supports existing theories of SEC and TRU by revealing that while security is expected, enhanced privacy measures have become essential in mature digital ecosystems. Finally, the significant effects of GOS and SEQ highlight the importance of external factors (i.e., regulatory initiatives, infrastructural investments, and reliable service delivery) in promoting DPA in the F&B delivery apps.

In terms of practical implications, the integration of digital payment systems into food delivery services offers significant managerial opportunities to enhance user engagement and operational efficiency. First and foremost, strengthening user experience and making payment interfaces simple can lead to faster transaction times and increased customer satisfaction. Additionally, leveraging social influence through targeted digital marketing strategies, such as influencer partnerships and referral incentives, can effectively boost adoption rates, especially in F&B context. Meanwhile, strengthening regulatory support and policy frameworks, i.e., financial incentives and infrastructure development, is crucial for fostering a supportive environment for digital payment growth. On the other hand, although security and trust perception are found to be insignificant, emphasizing robust security and privacy measures, such as data encryption and secure authentication, is still essential to build consumer trust and encourage widespread adoption. Finally, by implementing these strategies, businesses can enhance operational efficiency, improve customer satisfaction, and drive the adoption of digital payment systems in the F&B sector.

Limitations and Future Research Directions

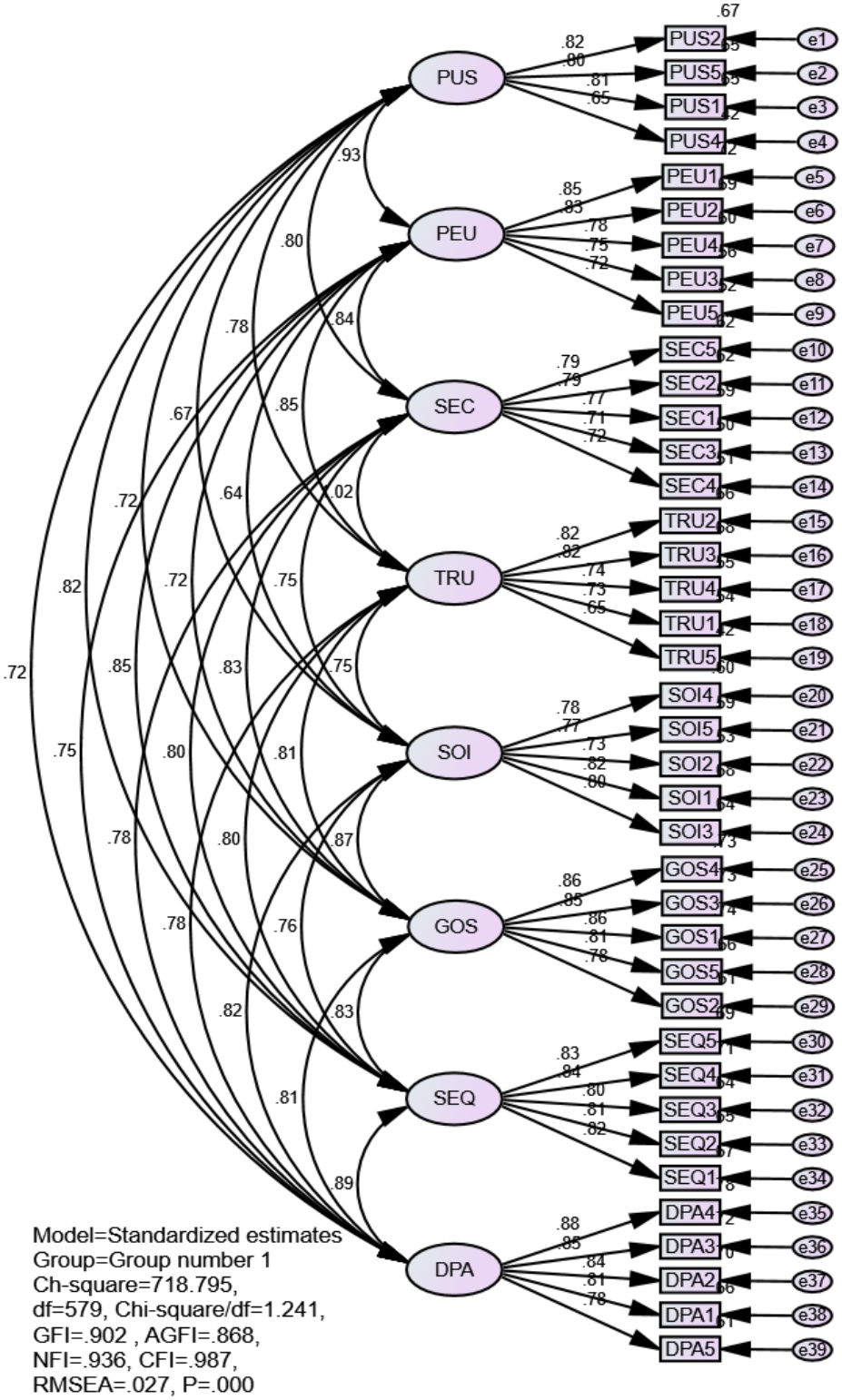
While this study contributes valuable insights into the factors influencing digital payment adoption in Cambodia's F&B sector, several limitations must be acknowledged. Firstly, this research is focused on Cambodian consumers. Given that cultural, economic, and technological factors vary across different countries, the results may not fully reflect the dynamics in other developing or developed markets. Thus, caution should be exercised when applying these findings to broader contexts. Secondly, the research model does not account for all potential factors influencing digital payment adoption. Variables such as transaction costs, loyalty or rewards programs, and customer service experiences could also play significant roles in shaping consumer decisions.

To address the limitations highlighted above, future research should extend the scope of the study to other Southeast Asian countries or other emerging markets to compare digital payment adoption trends across different cultural and economic contexts. This will offer a better understanding of the factors that drive adoption in different environments and identify region-specific strategies for promoting digital payments. Simultaneously, future studies should also explore other determinants that may influence digital payment adoption, such as transaction fees, cashback rewards, and the overall reliability of the service. Investigating how these factors interact with perceived usefulness and ease of use could offer deeper insights into the adoption process, allowing businesses to tailor their strategies more effectively.

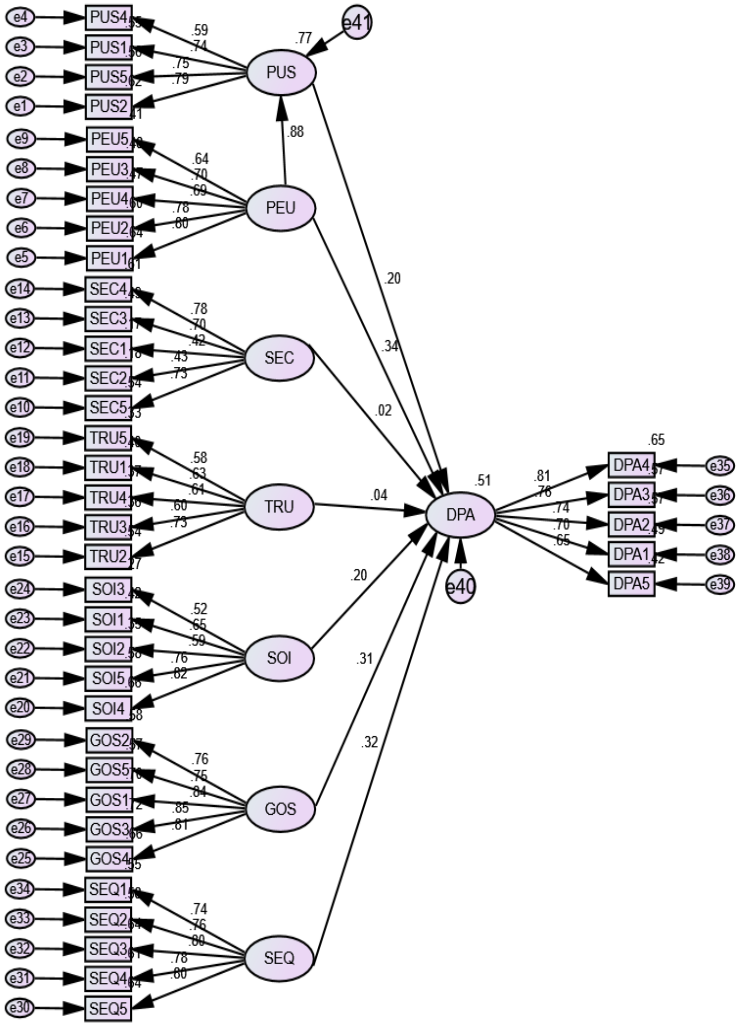
VI. CONCLUSION

This study elucidates the determinants of digital payment adoption within Cambodia's food and beverage delivery sector, offering critical insights for both academic discourse and practical implementation. Grounded in the TAM and UTAUT theories, the findings confirm that PUS and PEU are pivotal drivers of adoption, reinforcing their foundational roles in technology acceptance frameworks. Notably, PEU also influences PUS, showing the association between PEU and PUS. SOI and GOS emerged as significant external motivators, highlighting the cultural and policy-driven dimensions of adoption in Cambodia's digitally evolving landscape. SEQ further solidified its importance, emphasizing reliability and efficiency as cornerstones of user confidence. Contrary to prior studies, SEC and TRU did not significantly influence adoption, suggesting these factors are now perceived as baseline expectations rather than differentiators in Cambodia's maturing digital ecosystem. This shift signals a transition in consumer priorities toward functions and quality over basic assurances of security. Practically, the study recommends simpler user interfaces, using social media to connect with users, and strong partnerships between governments and businesses to speed up the shift to cashless systems. Future research to explore cross-cultural comparisons and variables such as loyalty programs or transaction costs. This approach not only bridges theoretical and practical gaps but also provides a roadmap for enhancing financial inclusion in cash-dependent economies.

VII. APPENDIX



Appendix A: Figure 2 – CFA Result



Appendix B: Figure 3 – SEM Result

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