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Extended UTAUT Model of E-Government Adoption Intention Among Civil Servants in Cambodia

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ABSTRACT

This study examined the factors influencing government personnel's behavioral intention to adopt and use e-government services across three institutions in Cambodia. A quantitative approach was adopted, employing a multi-stage sampling technique that combined stratified random sampling with purposive sampling. Data were collected from 500 government officials across three Cambodian ministries who had prior experience using e-government services. Structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used to test the validity, reliability, and hypothesized relationships among the study constructs. The results showed that social influence, accessibility, facilitating conditions, performance expectancy, trust in government, and trust in the internet all significantly predicted behavioral intention, with social influence exerting by far the strongest effect, followed by accessibility, facilitating conditions, performance expectancy, trust in government, and trust in the internet. Effort expectancy, by contrast, did not significantly predict behavioral intention. Behavioral intention, in turn, significantly predicted actual user behavior. These findings extend the Unified Theory of Acceptance and Use of Technology by demonstrating that, among government personnel, social and institutional factors carry greater explanatory weight than perceived ease of use, a pattern that departs from findings typically reported for citizen populations. The results offer practical guidance for government agencies seeking to strengthen e-government adoption, particularly through measures that build institutional trust, improve service accessibility, and mobilize social endorsement among users.

Keywords: Accessibility, Effort Expectancy, Facilitating Conditions, Performance Expectancy, Social Influence, User Behavior

INTRODUCTION

Information and communications technology (ICT) has reshaped public administration in the twenty-first century. Governments worldwide have adopted electronic government (e-government) platforms to expand the reach of public services, and empirical evidence shows that adoption in emerging economies continues to grow in both scale and sophistication (Sheik et al., 2026). Recent global disruptions accelerated this shift further, compelling institutions to treat digital transformation not as an option but as an operational necessity for maintaining continuity of service (Eom & Lee, 2022). Southeast Asian governments have been part of this movement, with ICT investment across the region expanding steadily over the past decade as national governments pursue more competitive, digitally enabled economies (Ha & Chuah, 2023). Because policy outcomes ultimately depend on how citizens and public employees respond to these systems, understanding the drivers of e-government adoption has become essential for effective digital governance.

This study examines the behavioral intention of government personnel toward e-government adoption in Cambodia. It extends a line of prior research that has investigated the adoption behavior of hard-to-reach and marginalized population groups in digital public service contexts, where limited connectivity, low digital literacy, and weak institutional trust have been shown to constrain participation (Djarmiko et al., 2025). Whereas that body of work has focused chiefly on citizens facing structural barriers, comparatively little research has examined the government employees responsible for delivering these same services.

The perspective of public sector employees, in particular, has seldom been examined through a well-established theoretical lens. Most prior studies concentrate on the general public's behavior toward e-government use. Fewer investigate the government agencies tasked with implementing these systems, even though institutional attention and readiness for digital technologies have been shown to shape adoption outcomes considerably, as demonstrated in research on AI assimilation within Saudi public-sector organizations (Alshahrani et al., 2022). A related Indonesian study similarly found that system quality and institutional transparency, rather than social pressure alone, were the strongest predictors of citizen-facing e-government adoption, underscoring how much of the adoption story originates on the institutional side of the interaction (Sabani et al., 2023).

Government personnel occupy a dual role in this process, functioning as both implementers and users of e-government systems. They transform traditional bureaucratic procedures into online services while depending on the same systems to carry out their daily duties. Examining how this group perceives e-government implementation can generate insights that citizen-focused research alone cannot capture, and it can help policymakers weigh the comparative merits of in-person and digital service channels.

Public institutions have progressively reformed their internal management practices to become more productive and citizen-responsive, particularly with respect to electronic services. This reflects a broader continuity in public sector reform, where trust in institutions and the public value generated by e-government have become central to how digital transformation is assessed (Abdulkareem & Mohd Ramli, 2022). The resulting shift has replaced many conventional bureaucratic procedures with technology-mediated alternatives, fundamentally altering how citizens and employees alike interact with government institutions.

E-government has consequently become one of the more consequential outcomes of this reform movement. It enables governments to deliver services, procedures, and information through online platforms rather than manual, in-person channels. Beyond convenience, adoption has been linked to measurable gains in cost-effectiveness and processing speed, though these gains depend heavily on whether citizens perceive the underlying systems as secure, private, and trustworthy (Kanaan et al., 2023). Trust remains a recurring determinant across contexts; even peripheral channels such as government social media pages depend on citizens' underlying trust before they translate into service uptake (Khan et al., 2021).

Despite these advantages, e-government implementation continues to face obstacles in many developing nations. Persistent adoption gaps have been attributed to limited digital literacy, infrastructural shortfalls, weak regulatory frameworks, and institutional barriers that constrain both citizens' and employees' engagement with digital public services (Djatkiko et al., 2025). Emerging-economy contexts also tend to show a weaker link between perceived usefulness and behavioral intention than developed economies do, which suggests that ecosystem-level barriers, and not system design alone, substantially shape adoption outcomes (Sheik et al., 2026).

Cambodia illustrates these dynamics closely. Public trust in service delivery remains an evolving feature of the country's institutional landscape, tied to ongoing efforts to strengthen regulatory capacity and human resources. Evidence from Cambodian public institutions show that organizational effectiveness in bodies such as public utility authorities depends substantially on this kind of internal capacity building (Chor et al., 2025), while Cambodian research on mobile payment adoption reinforces the salience of trust and perceived usefulness as determinants of citizens' digital engagement more broadly (Vannak et al., 2025). Against this backdrop, this study addresses the resulting gap in the literature by examining the factors that shape the behavioral intention of Cambodian government personnel to adopt and use e-government services, contributing empirical evidence from an implementer perspective that remains underrepresented in the broader adoption literature.

LITERATURE REVIEW

E-Government: Concept and Evolution

E-government has been widely recognized as a mechanism for improving governance and service delivery to citizens, businesses, and other government agencies. Recent scholarship frames it as a multidimensional construct built on three interlocking dimensions: an empowered relationship with citizens, a hyper-integrated network of services, and an evolutionary systems architecture that adapts as government needs change (Malodia et al., 2021). Rather than treating e-government as a simple matter of moving paper-based services online, this view characterizes it as a broader transformation of how public administration functions, one intended to reduce operating costs, increase transparency, and strengthen accountability across government institutions (Setyarto et al., 2025). For the purposes of this study, e-government is defined as the application of information and communications technology to improve the efficiency, effectiveness, transparency, and accountability of government services.

Because e-government spans multiple domains, from public administration to computer science to citizen relationship management, its implementation tends to unfold gradually rather than all at once. A recent systematic mapping of e-government maturity models confirms that, despite differences in terminology across frameworks, most models describe a broadly similar progression (Okan, 2024). Early implementation typically begins with a limited web presence, where government websites offer only static information such as office contact details. As institutions mature, this presence becomes more dynamic, incorporating downloadable forms, government publications, and links across departments. A further stage introduces genuine interactivity, allowing citizens to submit inquiries, search specialized databases, and exchange documents electronically rather than only viewing static content. The most advanced stages support fully secured online transactions, such as license renewals, permit applications, and passport processing, often consolidated through a single government portal so that citizens no longer need to navigate multiple departments separately. In the most mature form, agency boundaries become largely invisible to the end user, with services delivered as a unified, citizen-centered package rather than a patchwork of separate departmental systems.

Foundational Theories of Technology Acceptance

Several behavioral theories underpin the study of technology adoption, and their evolution reflects an ongoing effort to better explain why individuals accept or reject new systems. The Theory of Reasoned Action (TRA), introduced by Fishbein and Ajzen (1977), was among the earliest frameworks used to examine how attitudes shape behavior, positing that an individual's actual behavior is substantially determined by behavioral intention, which is in turn shaped by attitude

toward the behavior and subjective norms. Although TRA has since been applied across marketing, sociology, and information systems research, it assumed that behavior was largely under an individual's volitional control, a premise that limited its usefulness in situations where people were influenced by external factors, such as workplace mandates or organizational infrastructure (Ajzen, 1991).

To correct this limitation, Ajzen (1991) extended TRA into the Theory of Planned Behavior (TPB) by adding a third construct, perceived behavioral control, to account for circumstances beyond an individual's direct control. This extension preserved TRA's core logic while broadening its explanatory reach, and TPB has since been used to predict intention and behavior across a wide range of contexts. Building on this lineage, Davis (1989) developed the Technology Acceptance Model (TAM) specifically to explain computer and information system acceptance. Unlike TRA and TPB, which were designed to describe behavior in general, TAM narrowed its focus to two central determinants, perceived usefulness and perceived ease of use, and excluded subjective norms altogether. Its narrower scope allowed it to gain particular traction in information systems research; a recent meta-analysis synthesizing nearly 700 technology acceptance studies confirms that TAM constructs remain among the most consistently significant predictors of behavioral intention across contexts and time periods, even as researchers have combined it with newer frameworks (Marikyan et al., 2026).

Unified Theory of Acceptance and Use of Technology (UTAUT)

Despite the contributions of TAM and TPB, both models were found to explain less than half of the variance in user behavior, largely because neither adequately captured the social and institutional factors that shape how people come to accept technology (Venkatesh et al., 2003). To address this gap, Venkatesh et al. (2003) synthesized eight competing acceptance theories into the Unified Theory of Acceptance and Use of Technology (UTAUT), built around four core constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions, that together offer a more complete explanation of behavioral intention and actual use. The model further incorporates gender, age, experience, and voluntariness of use as moderators, allowing the strength of these relationships to vary according to who is using the technology and under what circumstances.

Because UTAUT accounts for a considerably higher proportion of variance in acceptance and use behavior than its predecessors, and because it incorporates social and organizational factors that TAM and TPB largely overlook, it has become one of the most widely applied frameworks for studying technology acceptance across sectors. A recent systematic review of 162 UTAUT-based studies confirms this pattern, finding that performance expectancy consistently emerges as the strongest predictor of behavioral intention across diverse institutional contexts, and that the model continues to be combined productively with complementary frameworks such as TAM to strengthen its explanatory power (Xue et al., 2024).

This combination of empirical robustness and adaptability underlies the decision to adopt UTAUT as the guiding framework for the present study.

RESEARCH METHODOLOGY

The conceptual framework for this study was developed by drawing on the theoretical models reviewed above to examine the factors affecting the acceptance and use of e-government services. It was built around nine variables: trust in government, trust in the internet, performance expectancy, effort expectancy, social influence, facilitating conditions, accessibility, behavioral intention to use e-government services, and user behavior. Figure 1 presents this conceptual framework, illustrating how performance expectancy (PE), social influence (SI), facilitating conditions (FC), accessibility (AC), trust in the internet (TI), trust in e-government (TE), and effort expectancy (EE) are hypothesized to shape behavioral intention to use e-government services (BI), which in turn is hypothesized to shape user behavior (UB) among civil officials in three Cambodian ministries.

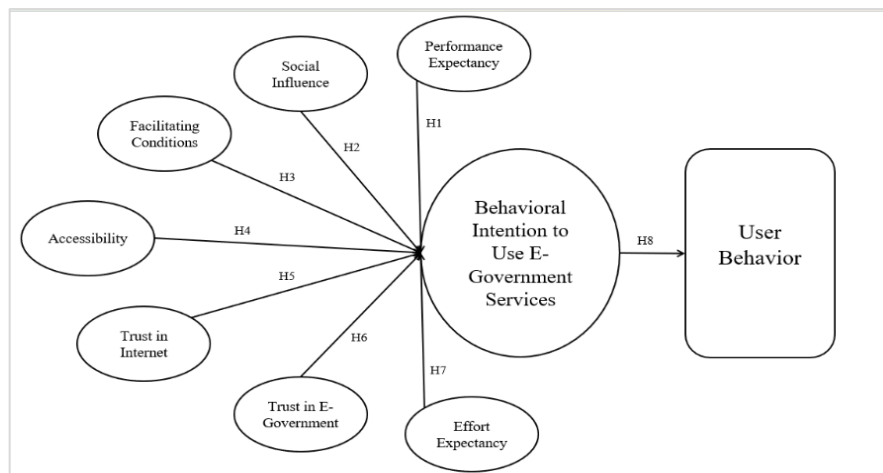


Figure 1 The Conceptual Framework
Source: Proposed by the researchers (2026)

This study adopted a quantitative research approach, using the survey method to collect primary data through structured questionnaires (Creswell & Creswell, 2023). The target respondents were civil officials with prior experience using e-government services, and questionnaires were distributed to three ministries in Cambodia. The questionnaire consisted of three sections. The first contained a screening question to confirm respondent eligibility. The second covered the eight independent variables and one dependent variable, measured using a five-point Likert scale. The third and final section collected demographic information from respondents.

A multi-stage sampling procedure was used to select respondents, combining probability and non-probability techniques across two sequential stages (Rahman et al., 2022). The first stage applied stratified random sampling, dividing the target

population into subgroups based on institutional affiliation, and proportionate stratified sampling was then used to determine how many respondents would be drawn from each subgroup relative to its share of the overall population (Rahman et al., 2022).

Table 1 presents the three institutions from which respondents were drawn. The Ministry of Labor and Vocational Training (MLVT) had the largest number of active officials, at 4,546, followed by the Ministry of Land Management, Urban Planning and Construction (MLMUPC) with 2,588, and the Ministry of Commerce (MoC) with 2,194. Based on this distribution, the proportionate sample size was set at 240 respondents for MLVT, 140 for MLMUPC, and 120 for MoC, for a total target sample of 500 respondents.

Table 1 Summary of Construct Measurement

Institution's Name	Total Official	Percentage	Proportionate Size
Ministry of Labor and Vocational Training (MLVT)	4,546	48%	240
Ministry of Land Management, Urban Planning and Construction (MLMUPC)	2,588	28%	140
Ministry of Commerce (MoC)	2,194	24%	120
Total	9,328	100%	500

Source: Constructed by the researchers based on the ministries' annual reports for 2024 (2026)

The second stage of sampling used a purposive technique to select respondents who possessed relevant knowledge of the issues addressed in the questionnaire (Andrade, 2021). This approach is well suited to research contexts in which participants must meet a specific eligibility criterion, since it allows researchers to draw a sample whose characteristics are defined in relation to the purpose of the study rather than selected at random from the general population (Andrade, 2021). Applying this technique within each ministry's proportionate allocation, the survey was administered between June and July 2025 to civil servants residing in Cambodia who had direct experience using e-government services and could therefore represent the target population accurately.

RESULTS AND DISCUSSION

Demographics of the Respondents

Of the 500 valid respondents, 321 (64.2%) were male and 179 (35.8%) were female. Respondents aged 18–25 accounted for 54 (10.8%) of the sample, those aged 26–35 for 165 (33%), those aged 36–45 for 157 (31.4%), and those aged 46–60 for 124 (24.8%). The majority of respondents fell between 26 and 45 years of age (65%), consistent with the age profile typically associated with active e-government users. In terms of education, 291 respondents (58.2%) held a bachelor's

degree, 201 (40.2%) held a master's degree, and 8 (1.6%) held a doctoral degree, suggesting that respondents were, on average, well positioned to engage meaningfully with digital public services. By institution, 140 respondents (28%) were drawn from MLMUPC, 120 (24%) from MoC, and 240 (48%) from MLVT. Regarding organizational position, 45 respondents (9%) were contracted officials, 220 (44%) were officials, 76 (15.2%) held deputy office positions, 50 (10%) held chief office positions, 50 (10%) were deputy heads of department, 19 (3.8%) were directors of department, and 40 (8%) were deputy directors general. Tenure was fairly evenly distributed: 142 respondents (28.4%) had worked for 0–2 years, 110 (22%) for 3–5 years, 96 (19.2%) for 6–8 years, and 152 (30.4%) for more than 8 years.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was conducted to assess convergent and discriminant validity. As shown in Table 2, all items loaded significantly on their respective constructs, and average variance extracted (AVE) values ranged from 0.622 to 0.916, exceeding the recommended threshold of 0.50 and indicating acceptable convergent validity (Fornell & Larcker, 1981). Discriminant validity was likewise supported, as the square root of each construct's AVE exceeded its correlations with all other constructs (Table 3). Model fit was assessed using the chi-square statistic, the goodness-of-fit index (GFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) across nine measurement models: trust in government, trust in the internet, performance expectancy, effort expectancy, social influence, facilitating conditions, accessibility, behavioral intention, and user behavior (Table 4). The results indicated CMIN/DF = 2.323, GFI = 0.935, AGFI = 0.943, NFI = 0.902, TLI = 0.991, CFI = 0.983, and RMSEA = 0.041, confirming that each item set reflected a distinct underlying construct with acceptable overall fit.

Table 2 Confirmatory Factor Analysis Results, CR and AVE

Construct	Source of Questionnaire	No. of Items	Cronbach's Alpha	CR	AVE
Performance Expectancy (PE)	Venkatesh et al. (2003)	6	0.956	.958	.795
Social Influence (SI)	Venkatesh et al. (2003)	4	0.876	.926	.758
Facilitating Conditions (FC)	Venkatesh et al. (2003)	5	0.933	.945	.778
Accessibility (AC)	Dugdale et al. (2005)	4	0.778	.862	.622
Trust in Internet (TI)	Bélanger and Carter (2008); Carter and Bélanger (2005)	4	0.767	.846	.630

Construct	Source of Questionnaire	No. of Items	Cronbach's Alpha	CR	AVE
Trust in E-Government (TE)	Bélanger and Carter (2008)	4	0.908	.902	.699
Effort Expectancy (EE)	Venkatesh et al. (2003)	5	0.901	.922	.703
Behavioral Intention (BI)	Al-Sobhi et al. (2011), Venkatesh et al. (2003)	4	0.958	.977	.916
User Behavior (UB)	Gefen (2000)	3	0.920	.944	.850

Note: CR = composite reliability; AVE = average variance extracted

Source: Processed Data by Researchers (2026)

Table 3 Discriminant Validity

Construct	AVE	TE	TI	PE	EE	FC	SI	AC	BI	UB
TE	0.699	0.896								
TI	0.630	0.281	0.894							
PE	0.795	0.685	0.450	0.892						
EE	0.703	0.665	0.139	0.679	0.868					
FC	0.778	0.582	0.384	0.731	0.707	0.882				
SI	0.758	0.632	0.497	0.848	0.717	0.642	0.871			
AC	0.622	0.504	0.391	0.727	0.724	0.647	0.752	0.885		
BI	0.916	0.622	0.445	0.824	0.718	0.664	0.889	0.737	0.957	
UB	0.850	0.593	0.388	0.720	0.667	0.742	0.708	0.615	0.682	0.922

Note: Diagonal values represent the square root of AVE for each construct

Source: Processed Data by Researchers (2026)

Table 4 Goodness of Fit (CFA)

Fit Indices	Recommended Value	Obtained Value
CMIN/DF	≤ 3.0 (Schreiber et al., 2006)	2.323
GFI	≥ 0.90 (Bagozzi & Yi, 1988)	.935
AGFI	≥ 0.85 (Schermerle-Engel et al., 2003)	.943
NFI	≥ 0.85 (Kline, 2005)	.902
TLI	≥ 0.90 (Hopwood & Donnellan, 2010)	.991
CFI	≥ 0.90 (Hopwood & Donnellan, 2010)	.983
RMSEA	< 0.05 (Hopwood & Donnellan, 2010)	.041
Model Summary		Acceptable model fit

Source: Processed Data by Researchers (2026)

Structural Equation Model (SEM)

Structural equation modeling was used to test the hypothesized relationships among the study's constructs. Chi-square remains a standard measure for evaluating model fit and the degree of error between the sample and the fitted covariance matrix (Hu & Bentler, 1999). As shown in Table 5, the structural model produced CMIN/DF = 2.457, GFI = 0.946, AGFI = 0.906, NFI = 0.957, TLI = 0.961, CFI =

0.973, and RMSEA = 0.043, all within acceptable ranges and confirming that the structural model provided a good fit to the data.

Table 5 Goodness of Fit (SEM)

Fit Indices	Recommended Value	Obtained Value
CMIN/DF	≤ 3.0 (Schreiber et al., 2006)	2.457
GFI	≥ 0.90 (Bagozzi & Yi, 1988)	.946
AGFI	≥ 0.85 (Schermelleh-Engel et al., 2003)	.906
NFI	≥ 0.85 (Kline, 2005)	.957
TLI	≥ 0.90 (Hopwood & Donnellan, 2010)	.961
CFI	≥ 0.90 (Hopwood & Donnellan, 2010)	.973
RMSEA	< 0.05 (Hopwood & Donnellan, 2010)	.043
Model Summary		Acceptable model fit

Source: Processed Data by Researchers (2026)

Research Hypotheses Testing Results

Performance expectancy had a significant, positive effect on behavioral intention ($\beta = 0.099$, C.R. = 7.127, $p < 0.05$), supporting H1. Social influence exerted the strongest effect on behavioral intention in the model ($\beta = 0.916$, C.R. = 48.768, $p < 0.05$), supporting H2. Facilitating conditions significantly predicted behavioral intention ($\beta = 0.121$, C.R. = 5.123, $p < 0.05$), supporting H3. Accessibility had a significant positive effect on behavioral intention ($\beta = 0.452$, C.R. = 4.007, $p < 0.05$), making it the second-strongest predictor in the model; H4 was therefore supported. Trust in the internet significantly predicted behavioral intention ($\beta = 0.044$, C.R. = 6.546, $p < 0.05$), supporting H5. Trust in government significantly predicted behavioral intention ($\beta = 0.051$, C.R. = 3.716, $p < 0.05$), supporting H6. Effort expectancy, by contrast, had no significant effect on behavioral intention ($\beta = -0.013$, C.R. = -0.852 , $p = 0.394$); H7 was therefore not supported. Finally, behavioral intention had a strong, significant effect on user behavior ($\beta = 0.784$, C.R. = 11.99, $p < 0.05$), supporting H8. These results are summarized in Table 6 and Figure 2.

Table 6 Hypothesis Results of the Structural Model

Hypothesis	Path	Standardized Path Coefficient (β)	S.E.	C.R.	P	Test Result
H1	PE $\rightarrow$ BI	0.099	0.014	7.127	***	Supported
H2	SI $\rightarrow$ BI	0.916	0.019	48.768	***	Supported
H3	FC $\rightarrow$ BI	0.121	0.024	5.123	***	Supported
H4	AC $\rightarrow$ BI	0.452	0.113	4.007	***	Supported
H5	TI $\rightarrow$ BI	0.044	0.007	6.546	***	Supported
H6	TE $\rightarrow$ BI	0.051	0.014	3.716	***	Supported
H7	EE $\rightarrow$ BI	-0.013	0.015	-0.852	0.394	Not supported
H8	BI $\rightarrow$ UB	0.784	0.065	11.99	***	Supported

Note: *** $p < 0.05$

Source: Processed Data by Researchers (2026)

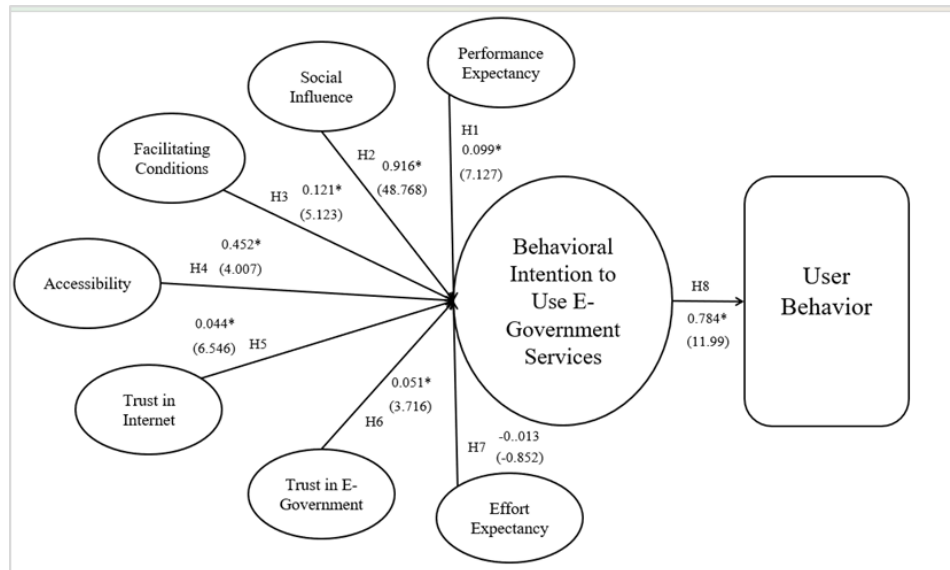


Figure 2 Structural Model Results
Source: Processed Data by Researchers (2026)

Taken as a whole, the results indicate that behavioral intention to use e-government services among Cambodian government personnel is shaped most strongly by social influence, followed at a considerable distance by accessibility, facilitating conditions, performance expectancy, trust in government, and trust in the internet, while effort expectancy exerts no measurable influence. Situating these results against the literature reviewed in the Introduction clarifies where this study confirms existing knowledge, where it extends it into a new population, and where it departs from it in ways that merit explanation.

The dominance of social influence in this model both supports and complicates the broader e-government adoption literature. It aligns with the general UTAUT proposition that social pressure shapes technology-related intention, and it is consistent with trust-centered accounts of e-government adoption in which peer and institutional expectations condition how citizens and employees regard digital services (Khan et al., 2021). At the same time, the magnitude observed here diverges sharply from Sabani et al. (2023) Indonesian study, which found social influence to be only a moderately significant predictor of citizen adoption, well behind system quality and perceived transparency. This divergence suggests that the mechanism differs by population: ordinary citizens appear to weigh institutional performance signals more heavily, whereas government personnel, embedded in hierarchical work environments where supervisors and colleagues visibly endorse or discourage system use, appear considerably more responsive to social pressure. This distinction extends the UTAUT literature by suggesting that the same construct can carry very different explanatory weight depending on whether the population under study is composed of citizens or institutional insiders.

The comparatively modest effect of performance expectancy ($\beta = 0.099$) is similarly informative when read against Sheik et al. (2026) meta-analysis, which identified performance expectancy and service quality pathways as central, often dominant, predictors of e-government adoption across emerging economies. That performance expectancy remains significant but exerts far less influence in this study than in the broader meta-analytic pattern suggests that government employees, many of whom are required to use these systems as part of their official duties, may already take the usefulness of the technology for granted rather than actively weighing it as a discretionary adoption factor. This interpretation is consistent with Alshahrani et al. (2022) finding that institutional readiness and organizational context, rather than individual utility judgments alone, substantially shape how public sector employees engage with new technology. The present findings therefore extend this institutional account by showing that, once usefulness is functionally assumed within a mandated work environment, other factors, particularly social dynamics and access, come to carry disproportionate explanatory weight.

The non-significant effect of effort expectancy (H7) stands in direct contrast to expectations set by the core UTAUT model and to findings from citizen-focused e-government research, where perceived ease of use is frequently reported as a meaningful barrier, particularly for populations with limited digital literacy (Djarmiko et al., 2025). This contradiction is best explained by the composition of the sample: unlike the marginalized and lower-literacy citizen populations examined in Djarmiko et al. (2025), the respondents in this study are civil officials who use these systems routinely as part of their professional duties and are likely to have received institutional training and repeated exposure to the platforms in question. For this group, the ease or difficulty of using the system appears to have already been resolved through familiarity and organizational support, leaving little residual variance for effort expectancy to explain. This finding usefully complicates the assumption that effort expectancy operates uniformly across all e-government user populations, and it suggests that future UTAUT-based studies should treat user familiarity and institutional exposure as boundary conditions rather than as constants.

Finally, the weak but significant effects of trust in government ($\beta = 0.051$) and trust in the internet ($\beta = 0.044$) support the general proposition, advanced by Abdulkareem and Ramli (2022) and Kanaan et al. (2023), that trust meaningfully shapes citizens' and users' willingness to engage with e-government platforms. However, the comparatively small magnitude of these effects relative to the more central role trust plays in citizen-focused studies, including Khan et al. (2021) finding that trust substantially conditions willingness to use social media-based government channels in Pakistan, suggests that institutional insiders may begin from a higher baseline of trust by virtue of their employment within the government apparatus itself. Trust, in other words, appears to function less as a discretionary

adoption barrier for this population than it does for the general public, a pattern that refines rather than contradicts the broader trust-centered literature on e-government adoption.

CONCLUSION

This study examined the factors influencing government personnel's acceptance and use of e-government services across three institutions in Cambodia, using a modified UTAUT model. The model first validated the relationships between performance expectancy, social influence, facilitating conditions, accessibility, trust in government, trust in the internet, effort expectancy, and behavioral intention, and then validated the relationship between behavioral intention and actual user behavior. Data were collected from 500 respondents with direct experience using e-government services across the Ministry of Land Management, Urban Planning and Construction, the Ministry of Commerce, and the Ministry of Labor and Vocational Training, and were analyzed using structural equation modeling.

The results showed that social influence exerted the strongest effect on behavioral intention, followed in descending order by accessibility, facilitating conditions, performance expectancy, trust in government, and trust in the internet, all of which were statistically significant. Effort expectancy was the only construct that did not significantly predict behavioral intention. Behavioral intention, in turn, had a strong and significant effect on actual user behavior. These findings offer theoretical implications for technology adoption research, particularly regarding the relative weight of social and institutional factors over perceived ease of use among government personnel and offer practical implications for public agencies planning or refining e-government implementations, particularly around ensuring that services remain straightforward enough for users to become proficient quickly.

This study is not without limitations. Data were collected only from civil servants across three Cambodian ministries, a deliberate focus given their direct, sustained experience implementing and maintaining e-government services, but one that limits generalizability to private sector users or the general citizenry. The study also did not include private sector respondents, and demographic variables such as gender, age, and experience were not tested as moderators, leaving open the question of whether these variables alter the strength of the relationships identified here. Future research would benefit from testing an expanded model that incorporates additional constructs such as attitude, self-efficacy, personal innovativeness, and perceived risk, drawing on a broader sample that spans both public and private sector users and, ideally, multiple government agencies beyond the three examined here, so that the resulting picture of e-government adoption in Cambodia becomes more comprehensive and more readily generalizable.

RECOMMENDATIONS

The inclusion of trust in government, trust in the internet, and accessibility as additional constructs alongside the core UTAUT variables was warranted by the nature of e-government services themselves: because these services are delivered by government institutions and depend on internet connectivity and personal devices such as computers and mobile phones, trust and accessibility function as necessary preconditions for behavioral intention rather than optional considerations. The results confirm that this extended model performed well, and the analysis supports treating trust in government, trust in the internet, and accessibility as core components of a modified UTAUT framework for e-government contexts specifically.

Based on these findings, several recommendations follow for government institutions seeking to strengthen adoption of e-government services. Ministries should continue to develop and refine e-services in ways that match users' technical ability and should invest in reliable internet infrastructure and legal and technical safeguards against online threats, since both directly reinforce the institutional and internet trust this study found to significantly predict behavioral intention. Given that social influence was the strongest predictor by a substantial margin, agencies should treat peer and institutional endorsement as a deliberate lever, for instance through knowledge-sharing seminars, champion users within departments, and clear channels for addressing negative feedback before it spreads informally. Because accessibility was the second-strongest predictor, agencies should also prioritize the ease with which users can locate, understand, and complete e-government transactions, through user-facing guides, walkthroughs, and readily available support channels. Finally, since facilitating conditions and performance expectancy remained significant, though comparatively modest, predictors, agencies should ensure adequate technical resources and responsive support remain available on an ongoing basis, so that difficulties encountered during use are resolved quickly rather than becoming a source of disengagement.

Overall, the extended model tested in this study performed well, and the evidence supports treating trust in government, trust in the internet, and accessibility as meaningful additions to the UTAUT framework in e-government contexts. That effort expectancy did not significantly predict behavioral intention among this population, despite being one of the original UTAUT constructs, offers a useful counterpoint to the broader literature and suggests that institutional familiarity may substitute for perceived ease of use once a user population has been sufficiently trained and exposed to a system. Government agencies seeking to expand e-government adoption should treat social endorsement, accessibility, and consistent institutional support as their primary levers, while continuing to ensure that users have access to the information and assistance needed to use these services confidently.

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