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# Using an Extended UTAUT Model to Investigate the Adoption of 'Distant Office' Services in Chlef Province, Algeria

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## Abstract:

This study investigates the key factors influencing the adoption "Distant Office" services in Chlef province. By modifying the Unified Theory of Acceptance and Use of Technology (UTAUT), with the incorporation of trust in the e-government system as an additional explanatory factor. Data were collected through face-to-face surveys with 213 respondents and analyzed using structural equation modeling (SEM). The findings reveal that performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), and trust (TR) have significant positive effects on behavioral intention (BI), while both FC and BI positively influence use behavior (UB). Also, SI found to be associated positively with PE. Interestingly, unlike prior studies, the effect of social influence (SI) on BI was found to be negatively significant. Additionally, demographic variables (gender, age, and experience) moderated the relationships between the main constructs. This paper also explores interactions between exogenous variables and emphasizes the role of trust within the proposed model.

**Keywords**: UTAUT; Distant office services; Algerian's e-government; trust.

## Introduction:

Many countries worldwide are increasingly leveraging advancements in information and communication technologies (ICTs) to offer online services to their citizens. This evolution, commonly known as **e-government,** refers to the utilization of ICTs by governments to provide services and information to various stakeholders, including citizens and businesses, at any time and from anywhere (Fang, 2002; Verkijika and De Wet, 2018). Since the early 2000s, Algeria has made significant investments in e-government infrastructure, ranging from fiber optics to online portals. In 2010, Algeria formalized its commitment to digital governance with the launch of the **e-Algeria 2013** initiative, aimed at modernizing public administration through digital service delivery, integrated databases, and improved internet infrastructure.

In pursuit of digital transformation, particularly in public administration, the Algerian government launched the Government Portal of Public Services (GPPS) on December 7, 2022. This portal provides access to over 450 public services spanning 25 ministerial departments (Bawabatic, 2023). However, only 10% of these services are fully executable online, with most requiring in-person procedures like document submission (Sakhri, 2023).

Despite the substantial investment in ICTs—22 billion dollars between 2015 and 2019—Algeria was ranked 112th out of 193 UN member states in the E-Government Development Index (EGDI), published by the United Nations Development Program (UNDP) in 2022 (United Nations, 2022). Notably, the country ranked lowest in the e-participation index (148th out of 193 countries), highlighting a lack of citizen engagement in public policy design and limited access to public information.

This paper focuses on the Distant Office platform, an e-government service launched by the Ministry of Interior, Local Collectivities, and Territory Planning (MILCTP) in June 2021. Initially designed to facilitate the submission of 56 different documents related to citizens' socio-economic affairs (MILCTP, 2021), this platform represents a crucial component of Algeria's e-government strategy.

The research utilizes a modified version of the Unified Theory of Acceptance and Use of Technology (UTAUT) to examine the key factors influencing citizens' intentions to adopt Guichet Distant services in Chlef province. Venkatesh et al. (2003) developed a comprehensive model by integrating eight previous models, including the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Social Cognitive Theory (SCT), Technology Acceptance Model (TAM), Model of PC Use (MPCU), Motivational Model (MM), Diffusion of Innovations (DOI), and the combined TAM and TPB (C-TAM-TPB). According to Venkatesh et al. (2003), this model demonstrated superior explanatory power, accounting for up to 70% of the variance in usage intentions. Numerous empirical studies have confirmed the model's practical importance in technology adoption across different contexts (Al-Awadhi & Morris, 2008; Puspitasari et al., 2019; Marinković, 2019; Ayaz & Yanartaş, 2020; Abbad, 2021).

The original UTAUT model, however, has undergone various adaptations to fit non-organizational settings. For example, UTAUT2, proposed by Venkatesh et al. (2012), introduced additional factors such as hedonic motivation, relevant to technology adoption in consumer contexts.

Extensive research has examined the factors influencing e-government services through the UTAUT model in both developed (Wang & Chou, 2006; Venkatesh et al., 2011; Li, 2021) and developing countries (Al-Awadhi & Morris, 2008; Al-Shafi et al., 2009; Alshehri et al., 2013; Rabaa'i, 2017; Puspitasari et al., 2019; Jacob & Darmawan, 2019). Furthermore, researchers have made numerous modifications to the UTAUT model by incorporating additional variables such as trust (Al-Shehri, 2012; Al-Mansoori, 2017; Li, 2021), perceived risk (Li, 2021), internet ethics (Zeebaree et al., 2022), computer self-efficacy (Hammad & Ahmad, 2019), website quality (Alshehri et al., 2012), and culture (Rabaa'i, 2017; Yavwa & Twinomurinzi, 2018).

This study distinguishes itself from prior research in several ways. First, it responds to the recommendation to refine e-government adoption models for different contexts (Dwivedi et al., 2017; Verkijika & De Wet, 2018; Dwivedi et al., 2019). Second, it integrates e-government trust to investigate factors affecting citizens' intentions and use of Guichet Distant services in Chlef province, following recommendations from various scholars in the field of information systems (Al-Shehri et al., 2012; Gupta et al., 2016; Rodrigues et al., 2016; Jacob et al., 2019; Li, 2021; Hooda et al., 2022). Lastly, this paper explores the interactions between facilitating conditions and effort expectancy, and between social influence and performance expectancy, relationships that have been largely overlooked in previous research, with few exceptions (Herrero et al., 2017; Venkatesh et al., 2019).

## Literature review:

Several studies have examined the adoption of e-government services in developing countries (Alwadhi & Morris, 2008; Al-Shafi et al., 2009; Rodrigues et al., 2016; Al Mansoori et al., 2018; Rai et al., 2020). For example, Alwadhi and Morris (2008) and Al Imarah et al. (2013) highlighted the importance of performance expectancy and effort expectancy in determining behavioral intentions to adopt e-government services in a university context.

Similarly, Alshehri et al. (2013) identified key factors driving Saudi citizens' adoption of e-government services through interviews in diverse locations such as shopping centers, parks, and hospitals. Their findings showed that all UTAUT factors had a significant impact on technology use intention, except social influence. Notably, internet experience was the only significant moderator affecting behavioral intention in KSA.

In Jordan, Rabaa'i (2017) explored the role of culture in e-government adoption using Hofstede's cultural dimensions. The study revealed that the link between social influence and intentions to use technology strengthened in Jordan's high power-distance and low individualism culture.

The Technology Acceptance Model (TAM) constructs were found to significantly influence citizens' intentions to use e-government systems in Gambia (Lin et al., 2011). However, the study noted that poor IT infrastructure in developing countries may prevent users from realizing the full benefits of e-government services.

Rodrigues et al. (2016) studied factors influencing e-government adoption in the UAE using UTAUT. They emphasized the crucial role of trust and security in the success of e-government initiatives, noting that protecting private information directly enhances users' satisfaction with e-government services.

In Tunisia, Chaouali et al. (2016) and Nasri (2019) examined e-government adoption. Chaouali's study used a modified UTAUT model incorporating trust and its antecedents, explaining 84.9% of the variance in citizens' intentions to adopt e-filing. Nasri's study employed a modified TAM model, adding social influence, awareness, and internet connection quality, and found that social influence and effort expectancy were significant predictors of performance expectancy.

Verkijika and De Wet (2018) used a modified UMEGA model to study e-government adoption in Sub-Saharan Africa. They found that performance expectancy, social influence, perceived risk, and computer self-efficacy significantly influenced attitudes toward e-government adoption, while attitudes, facilitating conditions, and trust in government and the internet had a direct effect on behavioral intention.

Lastly, Rai et al. (2020) explored the adoption of G2G systems by public employees in Nepal using the UMEGA model. They stressed that successful technology use in government requires awareness and commitment from senior officials in decision-making, within a transparent environment.

From these studies, it is clear that several factors have been incorporated into the original models to account for the unique environmental contexts of developing countries, which differ from the developed contexts in which the models were initially developed.

**Research model and hypothesis:**

The UTAUT model proposed by Venkatesh et al. (2003) was adopted with several modifications. These adjustments included the incorporation of trust in e-government as an additional factor and an exploration of the interactions between key exogenous variables from the original model.

III.1. **Performance expectancy:**

Performance expectancy is defined as an individual's perception that using an e-government system, such as Distant Office, will result in gains when completing government-provided services (Venkatesh et al., 2012; Verkijika & De Wet, 2018). This construct includes five variables: perceived usefulness, extrinsic motivation, job fit, relative advantage, and outcome expectations (Venkatesh et al., 2003). From a consumer perspective, it relates to task-oriented performance improvements, where an individual anticipates that their performance will enhance through the use of Distant Office services (Krishnaraju et al., 2018).

Research generally agrees that performance expectancy is a key factor explaining users' intention and behavior toward technology (Venkatesh, 2003; Rabaa'i, 2017). However, this association is not universally confirmed; for instance, Krishnaraju et al. (2018) did not find a significant direct effect of performance expectancy on e-government adoption in India. Additionally, previous studies have indicated that performance expectancy may mediate the relationship between effort expectancy and behavioral intention (Alalwan et al., 2017; Herrero et al., 2017; Dwivedi et al., 2017; Verkijika & De Wet, 2018). Despite these findings, we expect that performance expectancy will positively influence effort expectancy, contrary to some researchers' suggestions. This expectation is based on two points: first, a citizen with ample information about a technology's features and benefits is likely to use it more efficiently; second, individuals are generally more motivated to learn and use a technology if they perceive significant benefits from its adoption. On the other hand, the link between performance expectancy and attitude has been well-supported by empirical evidence (Dwivedi et al., 2017; Verkijika & De Wet, 2018). Thus:

H1: performance expectancy has a positive and significant influence on behavioral intention to adopt Distant Office services.

III.2. **Effort expectancy:**

According to Venkatesh et al. (2012), effort expectancy reflects the ease associated with using technology, suggesting that citizens are more likely to adopt an e-government solution, such as Distant Office, if it requires minimal effort (Verkijika & De Wet, 2018). In this study, effort expectancy is assessed through perceptions of ease of use and ease of learning how to use Distant Office services (Rabaa'i, 2017). Previous research has established a positive influence of effort expectancy on both attitudes and intentions to adopt e-government services (Wang & Shih, 2009; Alshehri et al., 2013; Alalwan et al., 2017; Dwivedi et al., 2017). However, some studies have reported exceptions; for example, Verkijika and De Wet (2018) found no evidence of a significant association between effort expectancy and behavioral intention. Similarly, Herrero et al. (2017) and Lallmohamed et al. (2017) also did not find a significant link between effort expectancy and behavioral intention. Thus:

H2: effort expectancy positively affects behavioral intention to adopt Distant Office services.

III.3. **Facilitating conditions**:

Facilitating conditions refer to the extent to which individuals perceive that organizational and technical infrastructure is available to support the use of technology (Rodrigues et al., 2016). In other words, this construct reflects how much a person believes that using the technology can be accomplished with minimal effort (Lin et al., 2011). According to Venkatesh et al. (2012), facilitating conditions are significant determinants of both users' intention and actual behavior regarding technology adoption, including e-government services. Previous empirical studies have confirmed the positive impact of facilitating conditions on both effort expectancy and behavioral intentions (Dwivedi et al., 2017; Verkijika & De Wet, 2018; Dwivedi et al., 2019; Mensah et al., 2020; Rai et al., 2020). However, some research has produced inconclusive results regarding the relationship between facilitating conditions and the intention to adopt e-government services (Sichone et al., 2017; Mansoori et al., 2018). For example, Sichone et al. (2017) found that facilitating conditions were negatively and insignificantly related to citizens' intention to adopt the e-filing system in Tanzania. Thus:

H3a: facilitating conditions positively affects effort expectancy.

H3b: facilitating conditions positively affects intention to adopt Distant Office services.

H3c: facilitating conditions positively affects use behaviour of Distant Office services.

III.4. **Social influence:**

The concept of social influence (or subjective norm) refers to the extent to which an individual perceives that significant others—such as family, friends, and colleagues—approve of using a particular technology (Venkatesh, 2003; 2012; Verkijika & Wet, 2018). This implies that people are more likely to adopt technology if it is endorsed by important others in their lives (Verkijika & Wet, 2018).

According to the theory of reasoned action, people's behavior is influenced by their perceptions of how important others view that behavior and whether they believe it should be pursued or avoided (Al-Swidi & Faaeq, 2019). However, the relationship between social influence and behavioral intention (BI) is not always consistent. For instance, Alshehri (2013) did not find a significant link between social influence and e-government adoption in Saudi Arabia. Additionally, Chaouali et al. (2016) found no significant association between descriptive norms and technology adoption in Tunisia, despite examining four aspects of social influence: injunctive norms, descriptive norms, media influence, and online subjective norms. Most researchers have not found strong evidence supporting the effect of social influence on technology adoption in voluntary contexts, likely due to the focus on its normative component (Hernandez et al., 2011). However, Hernandez et al. (2011) highlighted the significant role of social influence in shaping students' attitudes toward adopting e-learning systems.

Furthermore, we anticipate a positive relationship between social influence and performance expectancy. Individuals are more likely to value the adoption of Distant Office services when encouraged or advised by colleagues or relatives. Observing others endorse the service can enhance one's belief in its value and effectiveness. Thus:

H4: social influence positively affects performance expectancy.

H4b: social influence positively affects behavioural intention to adopt Distant Office services.

III.5. **Trust:**

As noted by Lewis and Wiegert (1985), trust is a complex and multi-dimensional phenomenon from a sociological perspective (McKnight & Chervany, 2001). We will use McKnight and Chervany's (2001) definition of trust in the e-commerce context, which refers to a person's sense of safety, assurance, and comfort in risky situations, such as adopting e-government services.

Schaupp et al. (2010) concluded that citizens must trust the entities providing e-government services for successful adoption. This trust is based on the belief that these entities can deliver reliable electronic services. In other words, trust in e-government systems reduces perceived risk, thereby increasing users' intentions to utilize these systems (Schaupp et al., 2010). Similarly, Al-Saedi et al. (2019) found in their systematic review that perceived risk and perceived trust were the most frequent factors used to extend the UTAUT model to explain mobile payment adoption. Belanche et al. (2012), based on an extended TAM, found that trust positively influences attitudes and intentions to use e-government services. Additionally, Abu-Shanab (2014) identified privacy and security concerns, trust in government, trust in technology, and information quality as key predictors of trust in e-government services among Jordanian citizens. The study emphasized the need to incorporate trust as a major factor in explaining variations in the intention to use e-government services. Furthermore, Zaid Kilani et al. (2023) examined the role of trust in the adoption and continued use of e-wallet services in Jordan and found that users' trust in technology positively influenced their intention to use and continue adopting e-wallets. The study also underscored the importance of trust in shaping users' perceptions of technology's usefulness and effectiveness. Therefore, when citizens trust the technology, they are more likely to develop a favorable attitude toward adopting it. Thus:

H5: trust positively affects behavioural intention to adopt Guichet Distant Office services.

III.6. **Behavioral intention:**

Behavioral intention (BI) is defined as "the degree to which a person has formulated conscious plans to perform or not perform some specified future behavior" (Warshaw and Davis, 1985). Prior studies have identified BI as a critical determinant of technology acceptance and system success, serving as a key driver of actual usage behavior (Venkatesh, 2003; 2012; Al Alwan *et al.,* 2017; Meiranto et al., 2024). However, in contexts where technology has already been implemented, particularly in organizational settings, the influence of BI on usage behavior (UB) may be less significant (Gupta et al., 2008). In our study, we anticipate that BI will remain a crucial factor in explaining Distant Office by citizens in Chlef province. Thus:

H6: behavioral intention positively affects use behaviour of Distant Office services.

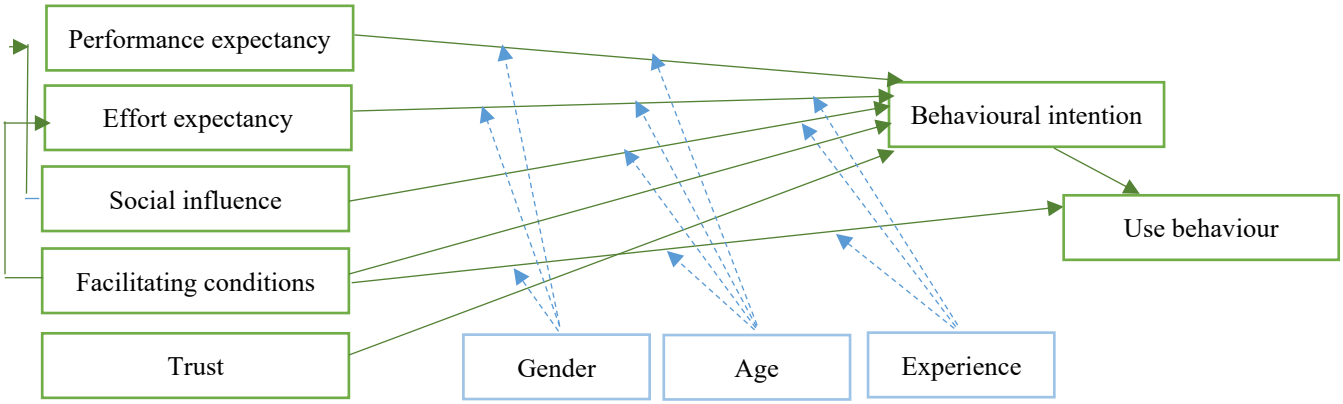
III.7. **The moderation effects**:

In accordance with previous studies (Venkatesh, 2003; Al Khatib and Lee, 2011; Rabaa'i, 2017), the current work attempts to evaluate the moderation effects of gender, age, and experience among the main constructs in the model. Since e-government services to date, are still largely voluntary (Wang and Liao, 2008; Al khatib and Lee, 2011), the fourth moderator construct proposed in the original UTAUT model under the name of voluntary of use was excluded from this study. The empirical results about the effects of demographic variables in e-government adoption models were not conclusive. For instance, Al Shahri *et al.* (2012) found no significant moderating effect of gender, age, and internet experience among the main constructs in the model, except for internet experience when studying e-government adoption by citizens in KSA. Also, Al Mansoori (2016) focused in e-government adoption in Abu Dhabi and confirmed that the influence of EE, PE, and FC on BI were moderated by gender, age, and experience, respectively. However, the other moderation effects were found to be not significant. Thus:

H7a: the effect of PE on BI would be moderated by gender.

H7b: the effect of PE on BI would be moderated by age.

H8a: the effect of EE on BI would be moderated by gender.
H8b: the effect of EE on BI would be moderated by age.
H8c: the effect of EE on BI would be moderated by experience.
H9a: the effect of SI on BI would be moderated by gender.
H9b: the effect of SI on BI would be moderated by age.
H9c: the effect of SI on BI would be moderated by experience.
H10a: the effect of FC on UB would be moderated by age.
H10b: the effect of FC on UB would be moderated by experience.
The research model proposed in this paper is illustrated in figure 1.




**Research methodology:**

In order to validate the proposed model, research survey was developed to collect data from a convenience sample of citizens residing in Chlef province, Algeria. We focused on Chlef city because we adopted a face-to-face survey administration, which is considered more appropriate for the target population. Items for the questionnaire were drowned from existing literature. The items for performance expectancy, effort expectancy, facilitating condition, and behavioural intentions were adapted from Venkatesh *et al.* (2003), Dwivedi *et al.* (2017), Kurfali *et al.* (2017), Verkijika and De Wet (2018). Items for trust and attitude were adapted from Dwivedi *et al.* (2017) and Mensah *et al.* (2020). Items for sociability were adapted from Spake and Megehee (2010) and Agyei *et al.* (2020). All of the scale items were in Likert Response Format (Five point: 1=strongly disagree to 5=strongly agree). A pilot study was first conducted on a sample of 33 respondents, in order to measure the appropriateness of the survey to the target population. Based on respondents' recommendations, modifications were made especially on the wording of some items. Later, a total of 226 questionnaires were distributed and 219 responses were received, of which 6 were excluded from further analysis due to inconsistency. Based on the recommendations of Hair et al. (2018) the sample size should be 15–20 observations per variable for generalizability purposes. The total number of constructs in this research was ten, which indicated the appropriateness of the sample size.

**Results and discussion:**

Appendix A highlights the demographic characteristics of the sample, 79.8% of the respondents are male. 80.3% of the respondents have an age under 41 years. 42.3% of participants are employed and 21.6% are self-employed. 53% of respondents have 5 years or more of experience in using internet technology, and just 8% have an internet experience under one year. The majority of respondents (76.1%) were aware of the Guichet distant services' presence. To evaluate the measurement model, we followed the analytical framework of Akinnuwesi et al. (2022). Exploratory factor analysis (EFA) was conducted using principal component analysis (PCA) with varimax rotation. IBM SPSS 26 was used, and as shown in Table 1, the Kaiser-Meyer-Olkin (KMO) value, along with the significance of Bartlett's test, indicated that our sample size was adequate and suitable for conducting PCA on the correlation matrix (Field, 2018). After dropping two items from PE due to high cross-loadings on two latent constructs, all remaining item

loadings exceeded the 0.6 threshold (Ofosu-Ampong et al., 2023). The extracted components have a Cronbach's alpha (∝) greater than 0.5, indicating acceptable reliability and consistency of the data.

**Table (1):** Results of exploratory factor analysis and reliability.

| **Items** | **Factor loading** | Mean | S. D. | Cronbach's Alpha (∝) |
|---|---|---|---|---|
| PE1 | 0.825 | 4.29 | 0.769 | 0.530 |
| PE2 | 0.625 | 3.76 | 0.997 | |
| EE1 | 0.775 | 3.35 | 1.174 | 0.797 |
| EE2 | 0.675 | 4.08 | 0.928 | |
| EE3 | 0.772 | 3.72 | 1.053 | |
| EE4 | 0.807 | 3.98 | 0.998 | |
| FC1 | 0.839 | 4.00 | 0.888 | 0.734 |
| FC2 | 0.843 | 3.76 | 0.832 | |
| FC3 | 0.669 | 3.27 | 1.041 | |
| SI1 | 0.658 | 4.31 | 0.628 | 0.628 |
| SI2 | 0.764 | 4.29 | 0.549 | |
| SI3 | 0.798 | 4.18 | 0.574 | |
| TR1 | 0.784 | 3.43 | 0.976 | 0.760 |
| TR2 | 0.790 | 2.95 | 1.100 | |
| TR3 | 0.816 | 3.10 | 1.126 | |
| BI1 | 0.636 | 4.24 | 0.610 | 0.685 |
| BI2 | 0.784 | 4.29 | 0.628 | |
| BI3 | 0.826 | 4.30 | 0.632 | |
| KMO= 0.702; Bartlett's test of sphericity $[\mathcal{X}^2(153) = 1199.016; p < .0001]$ | | | | |

**Table (2):** Hypothesis testing results.

| **Direct effects**: | **β*** | **t − value** | **p − value** | **Conclusion** |
|---|---|---|---|---|
| PE ⟶ BI | 0.080 | 3.638 | .000 | H1 supported |
| EE ⟶ BI | 0.488 | 21.559 | .000 | H2 supported |
| FC ⟶ EE | 0.254 | 3.820 | .000 | H3a supported |
| FC ⟶ BI | -0.007 | -0.303 | .762 | H3b not supported |
| FC ⟶ UB | 0.142 | 2.155 | .031 | H3c supported |
| SI ⟶ PE | 0.126 | 1.851 | .064 | H4a supported |
| SI ⟶ BI | -0.218 | -9.965 | .000 | H4 not supported |
| TR ⟶ BI | 0.064 | 2.898 | .004 | H5 supported |
| BI ⟶ UB | 0.191 | 2.883 | .004 | H6 supported |
| **Moderating effects**: | | | | |
| PE —Gender→ BI | 0.045 | 2.051 | .040 | H7a supported |
| EE —Gender→ BI | -0.426 | -19.428 | .000 | H8a supported |
| SI —Gender→ BI | 0.346 | 15.788 | .000 | H9a supported |
| PE —Age→ BI | -0.137 | -6.266 | .000 | H7b supported |
| EE —Age→ BI | -0.239 | -10.906 | .000 | H8b supported |

| | | | | |
|---|---|---|---|---|
| SI $\xrightarrow{\text{Age}}$ BI | 0.354 | 16.136 | .000 | H9b supported |
| FC $\xrightarrow{\text{Age}}$ UB | 0.097 | 1.476 | .140 | H10a not supported |
| EE $\xrightarrow{\text{Experience}}$ BI | -0.234 | -10.669 | .000 | H8c supported |
| SI $\xrightarrow{\text{Experience}}$ BI | 0.211 | 9.637 | .000 | H9c supported |
| FC $\xrightarrow{\text{Experience}}$ UB | 0.129 | 1.973 | .049 | H10b supported |

*: Standardized coefficients; $R^2_{BI} = 0.898$; $R^2_{UB} = 0.090$

The table (2) shows that exogenous variables in the model explain 89.8% of the variance in behaviour intention to adopt e-government services. However, all the factors in the model explain 9% of the variability in use behaviour of Guichet Distant. Because the model was first developed to suit technology adoption in developed economies, the explanatory power of its factors expected to diminish in developing countries context (Al-Shafi *et al.,* 2009; Sichone, 2017). For instance, Rai *et al.* (2020) found that 12 % of EE variability was explained by FC. Also, Sichone *et al.* (2017) found that all factors incorporated in the model explained only 18.8 %of variation in Tanzanian' intention to adopt e-filling, while Al Mansoori *et al.* (2018) found that the actual use of e-government services by people in Abu Dhabi was explained with only 6 %by the model. Hypotheses testing using Amos 24 revealed a significant effect of PE on BI ($\beta = 0.080, p < .001$). Several previous studies affirm a significant relationship between PE and BI. For example, Rabaa'i (2017), found that PE has a positive effect of Jordanian citizen's intentions to adopt e-government services. Similarly, Al Mansoori *et al.* (2018) also discovered a positive association between PE and BI when studying the adoption of e-government services in UAE. Moreover, as shown in the table (2) the effect of PE on adoption of Guichet distant services was positively moderated by gender ($\beta = 0.045, p < .05$), and negatively moderated by age ($\beta = -0.137, p < .0001$). In other words, the intention to adopt Guichet Distant services were higher for younger men who perceived the benefits it provided.

The influence of EE (Effort expectancy) on intention to adopt e-government was found to be the strongest among all other factor in the model ($\beta = 0.488, p < .0001$). This finding is analogous with previous studies like, Wang (2014) and Al-Hujran *et al.* (2015) who conclude that the prediction power of EE is greater in the initial stage as in the case of the current work, compared to post-adoption stages. Moreover, the study results confirmed that gender ($\beta = -0.426, p < .0001$), age ($\beta = -0.239, p < .0001$) and experience ($\beta = -0.234, p < .0001$) negatively moderate the effect of EE on the adoption of Guichet Distant services by the sample under study. This means that the effect of EE on BI become stronger for man, particularly younger man, and particularly at early stage of experience.

TR (trust) had a positive and significant effect on BI ($\beta = 0.064, p < .05$), hence, H is supported. Numerous studies have emphasized the importance of trust in technology adoption both in e-government context (Wu *et al.,* 2011; Chaouali *et al.,* 2016; Alharbi, 2016; Al Mansouri, 2018; Hooda *et al.,* 2022) and other contexts (Pavlou and Fygenson, 2006; Rahmiati, 2019). For instance, Lee and Song (2010) found that effort expectancy was positively impacted by trust in the context of Certified e-Document Authority service in Korea. Also, Alharbi *et al.,* (2016) found trust to be the third most important factor affecting behavioural intention after performance expectancy and habit in the context of Saudi Arabia' e-government. The role of trust increases, especially when the technology is relatively new to citizens like the Guichet distant, which was launched only two years ago. Accordingly, Government should build

trustworthiness relationships with all parties, including citizens, business, and government agencies before attempting to launch e-government system (Abu-Shanab, 2014). However, according to the Networked Readiness Index (NRI) report in 2022, Algeria was ranked 100th out of 131 countries, and it ranks was even worse (114th) in relation to the trust sub-indicator in the same year. This means that the government must devote its efforts through public campaigns in order to enhance the confidence of their citizens toward adopting e-government services.

The results did not show significant relationship between FC (Facilitating conditions) and BI ($\beta = -0.007, p > .05$). However, the results show that FC positively affect EE, which is consisted with previous works (Dwivedi *et al.,* 2017; Rai *et al.,* 2020; and Mensah *et al.,* 2020). Furthermore, the positive association between FC and the actual use of Guichet Distant services was confirmed ($\beta = 0.142, p < .05$). These findings confirm that the link between FC and use behaviour is direct (Al Shafi *et al.,* 2009), and also suggest that investing in the infrastructural support such as training programs will make a technology less complex in the users' perspective (Dwivedi *et al.,* 2017) and therefore more likely to be adopted. Furthermore, the study results confirmed that experience ($\beta = 0.129, p < .05$) positively moderate the effect of FC on the adoption of Guichet Distant services by the sample under study. These means that the effect of FC on UB become stronger with more experienced respondents. However, the results did not support the moderation effect of age between FC and use behaviour.

As was expected the social influence had a positive effect on performance expectancy ($\beta = 0.126, p < .10$). This suggests that citizens in Chlef province are more likely to recognize the value of Distant Office services when they observe their friends and relatives adopting them. Seeing others use the services positively reinforces their perception of its importance.

Unlikely, the effect of social influence on BI was significantly negative ($\beta = -0.218, p < .0001$). These results are inconsistent with previous studies (Al Shafi *et al.,* 2009; Abbed, 2021; Gupta *et al.,* 2022). However, in e-government literature, the link between SI and BI especially in developing countries was not always positive. For instance, Jacob and Darmawan (2018) did not found enough evidence to confirm the association between SI and BI. The same results were obtained by Alshehri *et al.* (2012) when studying e-government adoption in KSA. In Nigeria, Akinnuwesi et al. (2022) identified a negative relationship between social influence and the intention to adopt digital technology for addressing COVID-19. Furthermore, the effect of SI on adoption of guichet Distant services was positively moderated by gender ($\beta = 0.346, p < .0001$), age ($\beta = 0.354, p < .0001$), and experience ($\beta = 0.211, p < .0001$). This means that the influence of SI on use behaviour become stronger with more experienced young women.

Finally, as expected the impact of BI on the use behaviour of the Guichet Distant services was significantly positive ($\beta = 0.191, p < .05$), supporting H. This result is analogous with previous studies (Venkatesh *et al.,* 2012; Al-Hujran *et al.,* 2015; Rabaa'i, 2017; Yarwa and Twinomurinzi, 2018; Dwivedi *et al.,* 2019). For instance, Rabaa'i (2017) found that the adoption of e-government in Jordan was positively affected by BI. Similarly, Yarwa and Twinomurinzi, 2018 demonstrated that E-filling usage of Tanzanian citizens can be predicted by BI. In studying a sample of 880 students in Kuwait, Al Awadhi and Morris (2008) established the positive association between BI and students' use of e-government services. In addition, Al-Hujran *et al.,* (2015) found that the actual e-government use by Jordanian citizens was positively influenced by BI. Also, in a review study that combined a meta-analysis and structured equation techniques, Dwivedi *et al.* (2019) found that BI was contribute significantly in explaining BU in all the three model under comparison.

**Conclusion and limitations**:

This research aimed to identify the factors influencing citizens' behavioral intentions to adopt the Distant Office services in Chlef province. By modifying the UTAUT model to include trust in e-government as an exogenous construct, the study underscores the critical role of trust in shaping both intention and usage

of e-government services. The findings suggest that for e-government initiatives to succeed, the Algerian government must prioritize efforts to build and maintain public trust.

A notable contribution of this study is its examination of the interrelationships between explanatory variables, an aspect often overlooked in prior research, except for a few studies (e.g., Herrero et al., 2017; Verkijika and De Wet, 2018). Interestingly, the research diverges from previous work by finding a negative association between social influence and behavioral intention. This is due to the challenge of finding individuals with sufficient experience, given the novelty of the Distant Office technology initiative.

Despite these contributions, the study has some limitations. The explanatory power of the model was very low for the use behavior, even it was high for behavioral intention. Additionally, this research focused solely on trust in e-government services, neglecting its multidimensional nature (Verkijika and De Wet, 2018). Finally, the sample size and scope limit the generalizability of the findings across all Algerian citizens.

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