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E-GOVERNMENT SERVICES AND E-PARTICIPATION AS PREDICTORS OF EMPLOYEES' BEHAVIORAL DEVELOPMENT

Ma. Dece Joy J. Decenilla and Milagros V. Gutierrez

UM Tagum College
Mabini St., Tagum City, Davao del Norte

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ABSTRACT

This study examined the perceived effectiveness of e-government services and e-participation and their influence on the behavioral development of employees in the public sector. The study's respondents were 263 employees from the Provincial Local Government Unit of Davao Oriental. The study employed a quantitative research design utilizing the correlational technique with regression analysis to determine the relationship and influence of each variable. The statistical tools used were Mean, Pearson's r, and regression analysis. Results revealed that E-Government Services, E-Participation, and Behavioral Development were high. Moreover, the findings showed a significant relationship between e-government services and e-participation to employees' behavioral development. However, regression analysis indicated that e-government services did not significantly influence behavioral development.

In contrast, e-participation showed a more substantial influence. Specifically, Intention to Use and Empowerment emerged as key predictors of employees' behavioral development. Only e-participation significantly predicts employees' behavioral development between the two independent variables.

KEYWORDS: E-Government Services, E-Participation, Behavioral Development, Government Employees

1. INTRODUCTION

A wide range of literature has documented various challenges associated with Behavioral Development in the context of e-government adoption. One significant barrier is the lack of digital literacy among many users, which limits their ability to effectively navigate and use e-government platforms (Heeks & Bailur, 2007). Alshehri, Drew, & Alhussain (2010) found that concerns over the security of personal data and online transactions can make users hesitant to engage with e-government services. Additionally, Norris & Moon (2005) pointed out that issues of accessibility and inclusivity persist, particularly among vulnerable groups such as older people and people with disabilities, who may struggle with digital tools. Moreover, the perceived usefulness and ease of use of e-government services play a crucial role in user adoption. If users do not find the services valuable or easy to use,

they may resist adoption (Venkatesh & Bala, 2008). Furthermore, cultural and social factors, including attitudes toward technology and government, can significantly shape an individual's willingness to embrace e-government systems (Dwivedi et al., 2019).

The modern public workforce is indispensable in delivering essential services, implementing policies, and shaping the overall efficiency and effectiveness of government operations. Understanding how e-government services and e-participation initiatives impact government employees' behavioral development is paramount. This thesis explores the intricate relationship between these two pivotal aspects of digital governance and their consequences on public sector employees' attitudes, behaviors, and performance. As highlighted in the study of Shareef et.al (2011), the success of e-government development is not measured by E-Government Development Level (EGDL) rankings, but by the acceptance and willingness of citizens to use e-government services.

Moreover, Moon (2002) claimed that e-government services encompass many digital tools and platforms to enhance administrative processes, facilitate efficient service delivery, and promote transparency within government institutions. Concurrently, e-participation initiatives harness technology to engage citizens in policymaking, fostering a more inclusive, informed, and participatory form of governance (Bonsón et al., 2012). While the transformative potential of these digital innovations on citizen engagement and public service delivery has been widely acknowledged, their impact on the behavior and professional growth of government employees is an emerging area of research with immense significance.

Although it is known that individual resistance to change affects the adoption and spread of new technologies, the literature currently available on e-government gives little attention to the role of behavioral factors in adopting new technologies. To fill this vacuum, this study aimed to look at the behavioral aspects that affect e-government adoption. The study seeks to answer the research question about what behavioral factors influence the adoption of e-government services and e-participation platforms. The study aimed to provide a nuanced understanding of the attitudinal factors that influence the adoption of e-government from the perspective of the theory of planned behavior. Identifying the behavioral factors that inform the adoption of e-government services and e-participation would contribute to developing deliberate strategies to resolve the culture of resistance to existing and new technologies, primarily found in the public sector.

This study aimed to (1) measure the level of perceived effectiveness of e-government services among employees; (2) evaluate the relationship between perceived effectiveness of e-government services and e-participation towards behavioral development; (3) determine the extent to which e-government services and e-participation influence behavioral development of employees; (4) assess which domains of e-participation most significantly predict behavioral development; and (5) provide actionable recommendations for enhancing e-government services, digital participation and behavioral development among employees in government institutions. This research aimed to investigate the

influence of e-government services and e-participation on the behavioral development among employees in the Provincial Local Government Unit of Davao Oriental.

2. METHODS

Research Respondents. The study's respondents were the full-time regular employees of the Provincial Local Government Unit of Davao Oriental. These employees participate in various capacities in implementing and utilizing e-government services and e-participation platforms. Slovin's formula is commonly used to determine the minimum sample size required from a known population, primarily when little is known about the population's behavior and a simple random sampling technique is intended (Tejada & Punzalan, 2012).

Given a population of 766 and a 5% margin of error, the study requires 263 respondents. Thompson, Steven K. (2012) explains that stratified random sampling is essential in ensuring a representative sample from the population. The Provincial Government of Davao Oriental is a relatively large organization with many full-time employees in various departments. Thus, the stratified random sampling technique is an appropriate tool to ensure that all departments are proportionally represented in the conduct of this study.

The study was conducted in the Provincial Local Government Unit of Davao Oriental, which comprises various departments and offices. The study respondents were the regular or permanent employees of these various provincial government offices in Davao Oriental, regardless of their position, gender, and age.

Materials and Instruments. The study utilized a modified survey questionnaire to examine the relationship and influence of e-government services and e-participation on the employees' behavioral development. The research instrument is a modification of downloaded questionnaires from various published literature. The research questionnaire comprises three (3) parts:

Part I. Figure A depicts the first independent variable, the E-Government Services, which highlights the key indicators: perceived usefulness, service quality, confirmation, and citizen satisfaction. The questions were adopted from the study of E-Government Services Assessment from the Perspective of Citizens Interaction and Satisfaction in Jordan: Pilot Study by Hazem Mohammad Al-Kaseasbeh, Yoshifumi Harada, Umami Naiemah binti Saraih (2019).

Part I.B highlights the concept of the second independent variable, the E-Participation, with the following indicators: performance expectancy, effort expectancy, social influence, facilitating conditions, intention to use, and empowerment. The questions were adopted from the study of Naranjo-Zolotov, M., Oliveira, T., and Casteleyn, S. (2019), on Citizens' intention to use and recommend e-participation: Drawing upon UTAUT and citizen empowerment.

Moreover, Part II depicts the dependent variable of the research, which is the employees' Behavioral Development, with the following salient indicators: attitude, effort expectancy, performance expectancy, perceived risk, trust, subjective norm, perceived behavioral control, self-efficacy, and facilitating conditions. The questions were adopted from the study of Determinants of Intention to Adopt E-Government Services in Pakistan: An Imperative for Sustainable Development Resources by Hasan Zahid & Badariah Haji Din. (2019). Experts qualitatively validated the modified survey questionnaire. Pilot testing was also conducted to quantitatively test the content validity and reliability of the modified questionnaire.

The questionnaire's appropriateness to the local culture and context was evaluated using Cronbach's Alpha. Cronbach's Alpha is a widely used measure of internal consistency or reliability of a set of scale or test items. It indicates how closely related a set of items is as a group. A higher alpha coefficient generally ≥ 0.70 suggests better reliability (Tavakol, M., & Dennick, R., 2011). The modified questionnaires were tested using Cronbach's Alpha; the result from the pilot-testing showed a value higher than 0.70; hence, the reliability of the modified questionnaire was obtained. The respondents were asked to read the Instructions and answer the items of each part carefully. The respondents' responses were analyzed using a 5-point Likert scale.

The scoring guide was categorized into five levels to determine the descriptive level of E-Government Services, E-Participation, and Behavioral Development. A mean score ranging from 4.20 to 5.00 was interpreted as Very High, which indicates that the item is very much observed. Scores from 3.40-4.19 were classified as High, meaning that the embodied item is highly observed. Furthermore, a range of 2.60-3.39 was indicated as Moderate, meaning that the embodied item is moderately observed. Meanwhile, scores between 1.80 and 2.59 were described as Low, meaning that the embodied item is less observed. Lastly, a range of 1.00-1.79 was interpreted as Very Low, meaning that the embodied item is not observed.

Design and Procedure. This study adopted a quantitative non-experimental design, applying the descriptive-correlational methods to measure the relationship and influence of e-government services and e-participation towards the employees' behavioral development. Descriptive-correlational is a statistical approach to research that identifies patterns and relationships among variables in natural settings (Creswell, J. W., 2014). Similar designs were also observed in the locale (Pimentel & Bercilla, 2023; Muico, 2023; Ponte et al., 2023). Additionally, correlational research is a non-experimental method used to measure the relationship or association between two or more variables without manipulating them (Creswell, J. W., 2014)

Descriptive statistics, including mean and standard deviation, were used to measure the level of e-government services, e-participation, and employees' behavioral development during data analysis. Moreover, inferential statistics, including regression and correlation analyses, were used to examine the relationships between e-government services, e-participation, and behavioral development.

Asenahabi (2019) defines correlational research as a study determining the relationship and causes of two or more variables. It is crucial to note that correlational research looks for positive or negative associations or correlations between variables, and that the correlation coefficient determines the degree of correlation.

3. RESULTS

Inferential results were analyzed and interpreted at a 0.05 level of significance. Chronologically, tables and their interpretation were arranged under the following subheadings: Level of E-Government Services, Level of E-Participation and Level of Behavioral Development; Significance of the relationship between E-Government Services and E-Participation to Behavioral Development; and Regression Analysis on E-Government Services and E-Participation as Predictors to Behavioral Development. Data was presented in both tabular and textual form.

Table 1 shows the level of e-government services with an overall mean of 3.97, which indicates a high descriptive equivalence. This displays a generally positive perception of e-government services among employees in the provincial government of Davao Oriental. Perceived Usefulness (4.138) ranked the highest indicator, suggesting that services are helpful for job performance. Confirmation got the mean score of 3.998, which indicates a high descriptive equivalent. This means that users feel the services meet their expectations. On the other hand, service quality, with a mean score of 3.894, and citizen satisfaction, with a mean score of 3.851, were slightly lower but still had a high descriptive equivalent. This displays room for improvement in responsiveness and customization.

Table 1. Level of E-Government Services

Indicators	Mean	SD	Descriptive Equivalent
Perceived Usefulness	4.138	0.592	High
Service Quality	3.894	0.612	High
Confirmation	3.998	0.673	High
Citizen Satisfaction	3.851	0.717	High
Overall	3.970	0.560	High

The table suggests a generally positive perception of e-government services among employees. This confirms the claim of Alawadhi and Morris (2009) that positive perceptions of e-government services are strongly associated with increased adoption and sustained usage, particularly when users perceive the system as beneficial to their daily tasks. Among the indicators, *perceived usefulness* scored the *highest* with a mean of 4.138, indicating that employees view e-government tools as significantly

contributing to their job performance and efficiency. This aligns with the Technology Acceptance Model (TAM) by Davis (1989), which posits that perceived usefulness is one of the primary determinants of user acceptance of new technologies. Meanwhile, *Service Quality* and *Citizen Satisfaction* obtained slightly lower scores, suggesting areas for enhancement, particularly in the dimensions of responsiveness, reliability, and service personalization. These findings resonate with the work of Parasuraman, Zeithaml, and Berry (1988), who emphasized that service quality perceptions are key drivers of overall satisfaction in technology-enabled services.

Finally, the indicator *Confirmation* reveals that most employees feel the services meet their expectations, which is critical to building user trust and long-term engagement. This supports the Expectation-Confirmation Model (ECM) by Bhattacharjee (2001), which asserts that confirmation of expectations leads to satisfaction and continued use of information systems.

As shown in Table 2, the level of e-participation among employees in the provincial government of Davao Oriental was rated as high, with an overall mean of 3.946. This implies that employees perceive e-participation platforms positively. Among the indicators, Intention to Use and Performance Expectancy received the highest mean scores of 4.212 and 4.052, with a standard deviation of 0.693 and 0.69, respectively, which are also classified as high. This reveals employees' willingness and expectation for enhanced performance using these e-participation tools in their respective departments.

Effort Expectancy and Social Influence got the mean scores of 3.981 and 3.841 with a standard deviation of 0.691 and 0.706, respectively, with a descriptive value of high. This implies a strong potential for institutionalizing e-government platforms more deeply into organizational workflows, provided that ease of use and peer influence are continuously supported through training, leadership advocacy, and peer modeling. On the other hand, Facilitating Conditions and Empowerment have the lowest mean of 3.796 and 3.79 with a standard deviation of 0.726 and 0.697, respectively, which still have high descriptive equivalence. This suggests that barriers, such as limited infrastructure or lack of authority, still hinder employees' ability to utilize e-government services and e-participation tools fully.

Table 2. Level of E-Participation

Indicators	Mean	SD	Descriptive Equivalent
Performance Expectancy	4.052	0.690	High
Effort Expectancy	3.981	0.691	High
Social Influence	3.841	0.706	High
Facilitating Conditions	3.796	0.726	High
Intention to Use	4.212	0.693	High
Empowerment	3.790	0.697	High
Overall	3.946	0.581	High

The findings imply a generally favorable perception of e-participation platforms, reflecting employee openness and readiness to engage in digital governance processes. This is consistent with the findings of Zhang and Yang (2009), who asserted that when public sector employees perceive participatory platforms as relevant and efficient, they are more likely to engage in digital initiatives actively. Among the indicators, Intention to Use and Performance Expectancy received the highest mean scores and were classified as high. These results reflect a strong willingness and optimistic expectation among employees regarding the potential of e-participation platforms to improve their job performance. This conforms to the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003), which posits that Performance Expectancy, the degree to which an individual believes technology will enhance job outcomes, is a significant predictor of user adoption and sustained use.

Effort Expectancy and Social Influence also fall within the high descriptive category. These findings indicate that employees perceive e-participation tools as easy to use and that peer and organizational encouragement positively contribute to their digital engagement. This resonates with the claim of Venkatesh et al. (2003) that both factors are crucial in shaping behavioral intention, particularly in institutional settings where leadership advocacy and social norms influence technology use.

On the other hand, the slightly lower mean of facilitating conditions indicates that while support structures such as training and access to resources are generally present, they may not be consistently accessible or perceived as entirely sufficient by all employees. This corresponds with the UTAUT model by Venkatesh et al. (2003), which emphasized that strong facilitating conditions are essential for sustaining technology use, particularly in the long term. Likewise, the slightly lower mean of empowerment suggests an area of concern or opportunity for improvement, particularly in enhancing employees' sense of control and participation in e-government processes. This reflects the claim emphasized by Spreitzer (1995) that psychological empowerment is driven by meaning, competence,

self-determination, and impact. These dimensions may need further nurturing within the organization to ensure technology use translates into real influence over workflows and outcomes.

Table 3 presents the extent of behavioral development, which yielded an overall mean of 4.0 with a *high* descriptive equivalence. This suggests generally favorable employee behavioral outcomes, particularly regarding trust, self-efficacy, and sense of control. Among the indicators, performance expectancy and attitude scored the highest, with a mean score of 4.252 and 4.227, with a standard deviation of 0.572 and 0.581, respectively, which were described as *high*. This indicates substantial positive changes in workplace behavior. In contrast, *Facilitating Conditions* and *Perceived Risk* obtained the lowest mean of 3.767 and 3.868, with a standard deviation of 0.7 and 0.735, respectively, described as *high*. This points to the ongoing concerns related to infrastructure access and digital security.

Also, it shows the extent of behavioral development among employees in the Provincial Government of Davao Oriental, yielding an overall mean of 4.00, interpreted as having high descriptive equivalence. This indicates generally favorable behavioral outcomes, particularly in trust, self-efficacy, and sense of control. These are dimensions critical for adaptive engagement in digital governance. These results affirm that integrating e-government and e-participation tools has positively influenced employee behavior, suggesting enhanced confidence and autonomy in technology use. This is supported by Bandura’s (1997) theory of self-efficacy, which emphasizes that individuals’ belief in their capacity to execute tasks influences motivation, performance, and perseverance in challenging environments.

Table 3. Level of Behavioral Development

Indicators	Mean	SD	Descriptive Equivalent
Attitude	4.227	0.581	Very High
Performance Expectancy	4.252	0.572	Very High
Perceived Risk	3.868	0.735	High
Trust	3.946	0.656	High
Perceived Behavioral Control	3.979	0.688	High
Self-Efficacy	3.962	0.721	High
Facilitating Conditions	3.767	0.700	High
Overall	4.000	0.520	High

Among the indicators, performance *expectancy* and *attitude* scored the highest mean and were classified as *high*. These findings suggest substantial positive changes in workplace behavior, including increased motivation to adopt digital tools and a constructive mindset toward technological transformation. This conforms with the Technology Acceptance Model (TAM) by Davis (1989), which posits that perceived usefulness, which is closely related to performance expectancy and user attitude, is a significant predictor of technology usage behavior.

On the other hand, *Facilitating Conditions* and *Perceived Risk* recorded the lowest mean scores, albeit still within the *high* range. These results point to ongoing concerns related to the adequacy of infrastructure, availability of technical support, and digital security risks, which may hinder full behavioral integration of e-government practices. This reflects the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003), which highlighted that facilitating conditions are foundational in enabling actual system use, while perceived risk, as noted by Featherman and Pavlou (2003), can negatively influence users’ trust and willingness to adopt online services.

Presented in Table 4 is the summary of the significance test on the relationship between E-Government Services and E-Participation as predictors of employees’ Behavioral Development. Pearson r was employed to investigate the relationship between Behavioral Development and the two independent variables. This study found a moderate and strong positive correlation between e-government services and e-participation with behavioral development.

Table 4. Relationship between E-Government Services and E-Participation to Behavioral Development

Independent Variable	Dependent Variable	r-value	r ²	p-value	Decision
E-Government Services	Behavioral Development	0.535*	0.286225	< .001	Reject Ho
E-Participation		0.647*	0.418609	< .001	Reject Ho

*p-value<0.05

The results found a statistically significant moderate positive correlation between E-Government Services and Behavioral Development, as indicated by an r-value of 0.535 and a probability value (p) of < .001. E-Participation demonstrated a more substantial and statistically significant correlation with an r-value of 0.647, and a probability value (p) < .001. This suggests that it may be a strong predictor of employee behavioral development. The null hypothesis is rejected since the p-value is less than 5%.

Remarkably, all indicators demonstrated statistically significant relationships between E-Government Services and E-Participation to Behavioral Development.

The moderate positive relationship between e-government services and behavioral development supported Macintosh's (2004) claim that e-government systems that are primarily transactional, such as digitizing forms and automating workflows, may improve efficiency but do not necessarily foster more profound behavioral transformation unless paired with participatory mechanisms. Additionally, the findings align with TAM and UTAUT models by Davis (1989) and later Venkatesh et al. (2003) which emphasized that even when e-government services are perceived as applicable, users may not fully adopt or integrate these tools into their behavioral routines if organizational norms, support systems, or incentives are weak. This creates a gap between perceived usefulness and actual behavior change.

On the other hand, E-Participation exhibited a more substantial and statistically significant positive correlation with Behavioral Development. This is consistent with Alomari et al. (2012) and Kim and Lee (2012), who emphasized that e-participation mechanisms enhance civic engagement and internal motivation among public sector personnel. The findings suggest that participatory mechanisms play a crucial role in shaping workplace behavior beyond service provision alone. This is anchored with the empowerment theory and digital inclusion frameworks, drawing from Spreitzer's (1995) conceptualization of psychological empowerment and Macintosh's (2004) work on digital participation and inclusion, which argue that individuals who are involved in decision-making and interactive governance processes are more likely to exhibit proactive and adaptive behavior.

Table 5 highlights the regression analysis on E-Government Services and E-Participation's influence on employees' Behavioral Development. The result shows that E-Government Services is not a statistically significant predictor of behavioral development ($p = 0.732$). Since the p-value for the influence of E-Government Services on Behavioral Development is greater than 0.05, the null hypothesis is not rejected. Therefore, E-government services do not significantly influence Behavioral Development. Hence, there is no need to proceed to identify which of its domains significantly influence behavioral development. This means that despite positive perceptions, it does not independently influence behavioral change.

In contrast, E-Participation emerged as a significant predictor ($\beta = 0.625, p < .001$), highlighting its crucial role in shaping employee behavioral outcomes. Since the p-value for the influence of E-Participation on Behavioral Development is less than 0.05, the null hypothesis is rejected. Therefore, E-Participation significantly influences Behavioral Development. The overall model explains 41.9% of the variance in behavioral development ($R^2 = 0.419$), reflecting a moderate level of explanatory power.

Table 5. Regression Analysis on the Influence of E-Government Services and E-Participation on Behavioral Development

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t-value	P-value	Decision
	B	SE	Beta			
(constant)	1.692	0.181				
E-Government Services	0.026	0.075	0.028	0.343	0.732	Do not Reject Ho
E-participation	0.559	0.073	0.625*	7.703	< .001	Reject Ho

Dependent Variable: Behavioral Development

*p-value<0.05

R = 0.648

R² = 0.419

F-value = 93.851

p-value < 0.01

As presented in Table 5, the results showed that E-Government Services is not a statistically significant predictor of behavioral development ($p = 0.732$). These results suggest that e-government services alone do not exert a strong, independent influence on employee behavior. This finding supports the view of Venkatesh et al. (2003), who noted that while perceived usefulness and system quality may contribute to user satisfaction, they often require mediating factors such as social influence, effort expectancy, or empowerment to affect actual behavioral change. Given this nonsignificant result, there is no need to further analyze the individual domains of e-government services, as none show independent predictive power on behavioral development in the regression model. This relates to the findings of Ndou (2004), who explained that in many developing contexts, e-government systems often lack user-centered design and participatory elements, limiting their behavioral and transformational potential.

In contrast, E-Participation emerged as a statistically significant predictor of behavioral development ($\beta = 0.625$, $p < .001$). Since the p-value is less than 0.05, the null hypothesis is rejected, confirming that e-participation significantly influences employee behavior. The beta coefficient ($\beta = 0.625$) indicates a strong, positive relationship, and the overall model explains 41.9% of the variance in behavioral development ($R^2 = 0.419$), reflecting a moderate level of explanatory power. This result underscores the central role of participatory digital mechanisms, such as feedback systems, collaborative platforms, and interactive tools, in shaping workplace behavior. The findings affirm Spreitzer’s (1995) psychological empowerment theory, which emphasizes that autonomy, influence, and participation are essential for behavioral change.

Highlighted in Table 5.1 is the Regression Analysis on the Influence of the Domains of E-Participation on Behavioral Development. The regression analysis identified *Intention to Use* ($\beta = 0.196$, $p = 0.009$) and *Empowerment* ($\beta = 0.200$, $p < .001$) as the only indicators that significantly predict behavioral

development among employees. The null hypothesis is rejected since the p-value for the intention to use and empowerment is less than 0.05. Therefore, intention to use and empowerment significantly influence the domains of e-participation on behavioral development. These findings suggest that employees' willingness to adopt digital platforms and their perceived autonomy and authority are critical drivers of behavioral change.

In contrast, other factors such as Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions did not demonstrate statistically significant effects within the model. Since the p-value for the Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions is greater than 0.05, the null hypothesis is not rejected. Therefore, performance expectancy, effort expectancy, social influence, and facilitating conditions do not significantly influence the domains of e-participation in behavioral development. This indicates that while these components may correlate with behavioral outcomes at the bivariate level, they do not exert a direct or independent influence when other variables are controlled. These insights underscore the importance of promoting digital empowerment and reinforcing individual intention in successfully implementing e-government initiatives.

Table 5.1 Regression Analysis on the Influence of the Domains of E-Participation on Behavioral Development

Indicators	Unstandardized Coefficients		Standardized Coefficients Beta	t-value	P-value	Decision
	B	SE				
(constant)	1.668	0.177				
Performance Expectancy	0.023	0.068	0.03	0.335	0.738	Do not Reject Ho
Effort Expectancy	0.084	0.07	0.112	1.21	0.227	Do not Reject Ho
Social Influence	0.103	0.071	0.141	1.456	0.147	Do not Reject Ho
Facilitating Conditions	0.085	0.059	0.119	1.447	0.149	Do not Reject Ho
Intention to Use	0.147	0.056	0.196*	2.617	0.009	Reject Ho
Empowerment	0.149	0.042	0.2*	3.587	< .001	Reject Ho

Dependent Variable: Behavioral Development

*p-value<0.05

R = 0.653

R² = 0.427

F-value = 31.771

p-value < 0.001

As presented in Table 5.1, these findings suggest that employees' willingness to adopt and engage with e-participation platforms (*intention to use*) and their perceived sense of autonomy, control, and influence (*empowerment*) are critical drivers of behavioral development. This relates to the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasize the centrality of intention in predicting actual technology usage (Davis, 1989; Venkatesh et al., 2003). Spreitzer (1995) highlighted empowerment, particularly through self-determination and perceived impact, as a key dimension of organizational behavioral transformation. He defined empowerment as comprising four dimensions: meaning, competence, self-determination, and impact.

In contrast, other domains such as Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions did not demonstrate statistically significant effects in the regression model. While these components may have shown significant correlations at the bivariate level (as previously indicated in Table 4.2), they do not exert independent predictive influence when examined in a multivariate regression model that controls for the effects of other variables.

This finding implies that perceptions of usefulness, ease of use, peer influence, and facilitating conditions such as training, infrastructure, and technical support are important enablers. However, they are insufficient to produce meaningful behavioral development among employees. These factors may encourage initial system adoption or compliance, but without deeper psychological engagement, they are unlikely to lead to lasting changes in work behavior, attitudes, or motivation. In other words, for digital initiatives, particularly e-participation platforms, to truly transform organizational behavior, employees must not only perceive the tools as functional and accessible. However, they must also feel personally motivated, empowered, and invested in using them. Employees must see themselves not just as passive system users, but as active participants with control, voice, and influence over their use and outcomes.

This adheres to Macintosh (2004), who argued that e-participation must be designed to empower users, not just inform them. Similarly, AlAwadhi and Morris (2008) emphasized that successful adoption of e-government systems requires attention not only to technical and organizational readiness but also to individual-level factors such as motivation, perceived ownership, and readiness to participate. In effect, the success of e-participation and its impact on behavioral development rests on achieving a balance between external enablers like infrastructure and peer influence and internal drivers such as intention to use and empowerment. Without the latter, employees may use the system mechanically, but will not experience the more profound cognitive, emotional, and behavioral shifts that signify real development.

To boil everything down, the findings of this study provided empirical support for the Theory of Planned Behavior. The high Attitude and Performance Expectancy scores align with the TPB's

assertion that positive behavior evaluations lead to stronger intentions to act (Ajzen, 1991). Moreover, the significance of Intention to Use as a predictor of behavioral development affirms TPB's central proposition that intention is the most immediate determinant of actual behavior. Empowerment, which reflects perceived behavioral control, was also a significant predictor, reinforcing TPB's view that individuals are more likely to engage in behavior when they feel capable and supported.

4. CONCLUSION AND RECOMMENDATIONS

Based on the abovementioned findings, the study found a high level of perceived effectiveness of e-government services among employees. This indicates favorable perceptions of the utility, quality, and user satisfaction of e-government services. Meanwhile, e-participation has also achieved a high level. This implies a strong willingness among employees to adopt e-participatory tools, especially when these tools improve task efficiency. Moreover, behavioral development was also rated high, with performance expectancy and attitude emerging as the strongest indicators. However, indicators such as perceived risk and facilitating conditions scored slightly lower, highlighting areas where trust and resource availability still present concerns. Public institutions may need to focus on these critical areas, particularly ensuring data security, minimizing risks, and providing necessary tools and training.

Also, it is found that there is a statistically significant relationship between e-government services and behavioral development among employees. However, despite these favorable perceptions, regression analysis revealed that e-government services do not significantly influence the behavioral development of employees. This suggests that while employees view these systems positively, such views alone do not translate into meaningful changes in behavior without the active use and integration of participatory tools. The bivariate analysis revealed a stronger relationship between e-participation and behavioral development than e-government services. The regression analysis further confirmed that e-participation significantly predicts behavioral development. Intention to use and empowerment influenced behavioral development significantly within their domains. This suggests that employees who feel empowered and motivated to engage digitally exhibit more positive behavioral shifts, such as trust, confidence, and proactive engagement with e-platforms.

Recommendations. Based on the study's findings and guided by the descriptive results, the following recommendations are proposed to sustain and elevate high-performing indicators to a very high level while addressing areas with comparatively lower ratings across e-government services, e-participation, and behavioral development domains.

It is recommended that Local Government Units (LGUs) allocate adequate funds for procuring additional equipment and/or upgrading existing resources, including computers and stable internet connectivity, to ensure uninterrupted access to digital platforms. Policymakers may also integrate discussions into their legislative sessions that support the enactment of appropriation ordinances to fund technology-driven initiatives and digital transformation programs. This will enable government institutions to optimize public service delivery and establish more organized, efficient, and seamless

transaction processes. It is recommended that Local Government Units (LGUs), particularly the Provincial Human Resource Management and Development Office (PHRMDO), in partnership with the DICT, implement quarterly digital literacy skills enhancement and capacity-building activities. It is recommended that government offices' department heads and supervisors maintain employees' motivation by providing recognition or small incentives such as certificates and/or digital badges for employees who regularly use and contribute to digital platforms. Lastly, this study recommends that future researchers explore a mixed-methods approach as it offers more profound insights, particularly on how employees emotionally and cognitively respond to e-government services and e-participation tools.

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