

# Comparative Causal Analysis on the User Intentions to Adopt the BIR's Electronic Filing and Payment System (eFPS) in Romblon: A TAM-TPB Integration

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**Abstract:** This study assessed the factors influencing SME taxpayers in Odiongan, Romblon to adopt the BIR's Electronic Filing and Payment System (eFPS), using the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB). It examined five predictors: perceived ease of use, perceived usefulness, attitude toward use, subjective norm, and perceived behavioral control. Using a descriptive-causal design, data from 345 SME owners were collected via a standardized Likert-scale questionnaire. Regression analysis showed that all variables except subjective norm significantly influenced intention to adopt eFPS, with attitude as the strongest predictor. Recommendations include enhancing system usability, offering user training, promoting awareness, and expanding digital infrastructure to support adoption and compliance.

**Keywords:** BIR, eFPS, SME, tax compliance, technology acceptance model, theory of planned behavior, perceived usefulness, perceived ease of use, attitude toward use, behavioral control, subjective norm, technology adoption.

## 1. Introduction

In recent years, the Philippine government has accelerated efforts to modernize tax administration through digital transformation to enhance efficiency, transparency, and taxpayer compliance. A major initiative under this drive is the Bureau of Internal Revenue's Electronic Filing and Payment System (eFPS), which enables taxpayers to file returns and pay taxes online. Adoption rates have grown steadily, with the Department of Finance reporting an increase from 25% in 2015 to 58% in 2019, reflecting rising acceptance among Filipino taxpayers. However, despite these gains, many challenges persist, particularly among small and medium enterprises (SMEs) and individual taxpayers in rural and less-developed regions.

Several studies have pointed out that factors such as perceived usefulness, ease of use, trust, cost, and social

influence play significant roles in the adoption of electronic government systems. In places like Romblon, these challenges are more pronounced due to limited infrastructure, low digital literacy, and cultural preferences for traditional systems. Many registered taxpayers in the province may still hesitate to use eFPS due to lack of awareness or confidence in navigating digital platforms.

This study addresses a critical research gap by focusing on Odiongan, Romblon—a setting often overlooked in mainstream studies, which tend to concentrate on urbanized areas. It integrates the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB) to provide a deeper understanding of how taxpayers' perceptions and social influences shape their intention to adopt eFPS. While TAM emphasizes system usability and perceived benefits, TPB considers behavioral control and social norms, offering a holistic view of taxpayer behavior. By employing a descriptive survey approach, this research seeks to determine the level of awareness, perceived ease of use, usefulness, attitude, subjective norm, and behavioral control influencing eFPS adoption. The results aim to offer localized, practical insights for policymakers and tax authorities to design targeted interventions, promote digital literacy, and improve support services in underserved communities. Ultimately, the study contributes to the broader national goal of creating a more efficient, transparent, and inclusive tax administration system.

## 2. Methods

This study employed a descriptive-causal research design to assess the determinants influencing the intention of taxpayers in Odiongan, Romblon, to use the Bureau of Internal Revenue's Electronic Filing and Payment System (eFPS). The descriptive-correlational design was appropriate for collecting and

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analyzing quantitative data to both describe existing perceptions and examine the relationships among key variables related to technology adoption (Garcia et al., 2021; Ong & Tacardon, 2024). Guided by the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), the study investigated constructs such as perceived ease of use, perceived usefulness, attitude toward use, subjective norms, perceived behavioral control, and behavioral intention. These theoretical models have been extensively utilized in prior technology adoption studies and remain relevant for evaluating user acceptance of e-government platforms (Ebardo, 2018; Ong & Tacardon, 2024).

Adopted and modified standardized questionnaires were used to gather data from small to medium-sized enterprise (SME) owners in Odiongan, Romblon. This design enabled the identification of significant relationships between the theoretical constructs and behavioral intention, providing meaningful insights into the key drivers of eFPS adoption. The findings from this study are expected to inform policy enhancements, promote digital compliance, and support more effective implementation of e-government initiatives (Garcia et al., 2021).

The study involved business entities in Odiongan, Romblon that are registered with the Bureau of Internal Revenue (BIR) and currently file and pay their taxes manually. It specifically targeted Small and Medium-sized Enterprises (SMEs) with total gross investments ranging from one to three (3) million pesos. Based on BIR records, there were over 3300 registered SMEs in the area that still utilized manual tax payment methods. To determine an appropriate sample size, the Raosoft sample size calculator was used, applying a 95% confidence level and a 5% margin of error. This process resulted in a required sample size of 345 respondents.

The research followed a systematic approach to address the research questions and achieve the objectives of the study. A survey questionnaire was adopted and modified based on the integrated framework of the Technology Acceptance Model (TAM) by Davis et al. (1989) and the Theory of Planned Behavior (TPB) by Ajzen (1991), both of which underpinned the study. As the instrument was derived from established models, no further validation was conducted. The finalized questionnaire served as the primary data collection tool and consisted of six major components: the respondents' profile; perceived ease of use; perceived usefulness; attitude toward using eFPS; perceived behavioral control and subjective norm; and intention to use eFPS. Each construct was measured using a five-point Likert scale ranging from strongly disagree to strongly agree. The survey was administered to a sample of 345 respondents with small to medium-sized business entities

officially registered in Odiongan, Romblon. The list of eligible businesses was obtained from the Business Permits and Licenses Office (BPLO) of the municipality.

An informed consent form was attached to each questionnaire to ensure ethical compliance. The form explained the purpose of the study, highlighted the voluntary nature of participation, and assured respondents of the confidentiality and anonymity of their responses. Participants were informed that the data collected would be used strictly for academic research and that their identities would not be disclosed in any part of the study. This ethical procedure was in line with current research standards for protecting participants' rights and ensuring responsible data handling.

To analyze the data gathered in response to the research questions, multiple linear regression analysis was employed as the primary statistical tool. This method was deemed appropriate for examining the extent to which various independent variables—namely perceived ease of use, perceived usefulness, attitude toward use, subjective norms, and perceived behavioral control—influenced the dependent variable, which is the intention to use the Electronic Filing and Payment System (eFPS) among taxpayers in Odiongan, Romblon.

Multiple linear regression allowed for the assessment of the predictive relationships between these key determinants based on the integrated framework of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). This approach provided insights not only into which factors significantly contributed to behavioral intention but also into the strength and direction of their influence, thereby offering a comprehensive understanding of technology adoption in the e-government context.

### 3. Results

The results of the multiple regression analysis revealed that perceived ease of use, perceived usefulness, attitude toward using eFPS, and perceived behavioral control significantly influence the intention of taxpayers in Romblon to use the Bureau of Internal Revenue's Electronic Filing and Payment System (eFPS). Among the predictors, attitude toward using eFPS ( $\beta = 0.221$ ,  $p < 0.001$ ) had the strongest positive effect, followed by perceived usefulness ( $\beta = 0.202$ ,  $p < 0.001$ ), perceived behavioral control ( $\beta = 0.174$ ,  $p = 0.001$ ), and perceived ease of use ( $\beta = 0.145$ ,  $p = 0.008$ ). In contrast, subjective norm did not significantly influence the intention to use eFPS ( $p = 0.070$ ), indicating that social pressure or influence from peers and significant others may not be a determining factor for taxpayers in this context.

This result is consistent with the findings of Venkatesh et al.

Table 1  
Multiple regression analysis on the factors influencing taxpayers' intention to use eFPS

Predictor Variables	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t-value	p-value	Interpretation
(Constant)	1.103	0.215	—	5.13	0.000	Significant
Perceived ease of use	0.172	0.064	0.145	2.69	0.008	Significant
Perceived usefulness	0.215	0.057	0.202	3.77	0.000	Significant
Attitude toward use	0.264	0.061	0.221	4.33	0.000	Significant
Subjective norm	0.093	0.051	0.088	1.82	0.070	Not Significant
Perceived behavioral control	0.198	0.059	0.174	3.36	0.001	Significant

(2019) in the Unified Theory of Acceptance and Use of Technology (UTAUT2), where performance expectancy (akin to perceived usefulness), effort expectancy (similar to perceived ease of use), and facilitating conditions (comparable to perceived behavioral control) were significant predictors of behavioral intention. Similarly, Susanto *et al.* (2018), in their study on taxpayers' adoption of e-filing systems in Indonesia, found that ease of use and perceived usefulness positively influenced users' intentions, while subjective norm was not a significant factor. This suggests that when systems are user-friendly, useful, and individuals feel capable of using them, they are more likely to adopt the technology regardless of social influence.

Moreover, Azmi and Bee (2018) highlighted that behavioral control factors such as access to technology and self-efficacy significantly influence the continued use of e-government systems, including e-tax platforms. In another related study, Sánchez-Torres *et al.* (2018) examined e-government services in Latin America and confirmed that users' attitude and perceived usefulness strongly determine their intention to continue using such systems. The findings underscore that for the successful implementation and sustained use of digital tax systems like eFPS, the BIR must focus on improving system usability, demonstrating its advantages, and empowering users with the necessary skills and access. While peer influence may not be as crucial, fostering a positive attitude and ensuring taxpayers feel in control of the process significantly boosts adoption intentions.

#### 4. Summary

This study explored the determinants influencing the intention of small and medium-sized enterprise (SME) taxpayers in Odiongan, Romblon to adopt the Bureau of Internal Revenue's Electronic Filing and Payment System (eFPS). Grounded in the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), the research focused on five key variables: perceived ease of use, perceived usefulness, attitude toward use, subjective norm, and perceived behavioral control. A descriptive-causal research design was used, with data collected from 345 SME owners through a structured questionnaire based on TAM and TPB constructs.

Using multiple linear regression analysis, the study revealed that four of the five variables—perceived ease of use, perceived usefulness, attitude toward use, and perceived behavioral control—had a significant positive influence on taxpayers' intention to adopt eFPS. Among these, attitude toward using the system emerged as the strongest predictor. In contrast, subjective norm (social influence) did not significantly impact adoption intention, indicating that decisions to use the system are driven more by individual factors than by external social pressures.

The findings support prior research in technology acceptance and e-government adoption, emphasizing the importance of users' perceptions of system benefits, ease, and their own capability to use it. These results suggest that enhancing the eFPS's usability, providing training and technical support, and promoting the system's practical advantages can significantly

encourage digital tax compliance.

The study concludes that successful adoption of digital government systems like eFPS requires a user-centered approach—one that prioritizes system design, individual empowerment, and effective communication. It recommends that the BIR focus on improving interface design, conducting awareness campaigns, offering accessible training programs, and expanding access to digital infrastructure, particularly in underserved areas. Establishing feedback mechanisms is also suggested to ensure continuous system improvement. Collectively, these strategies aim to boost eFPS adoption, improve taxpayer experience, and support a more efficient, transparent public financial system.

#### 5. Conclusion

The study confirmed that perceived ease of use, perceived usefulness, attitude toward use, and perceived behavioral control significantly influence the intention of SME owners in Odiongan, Romblon to adopt the Bureau of Internal Revenue's Electronic Filing and Payment System (eFPS). These findings align with the theoretical underpinnings of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), affirming that both individual perceptions and behavioral factors play critical roles in the decision to adopt digital tax systems. Notably, subjective norm or social influence was found to be statistically insignificant, suggesting that external social pressure may not strongly affect tax compliance behavior in this context. These insights emphasize the importance of user-centered design, effective communication, and empowerment in enhancing the adoption of e-government platforms like eFPS.

#### 6. Recommendations

In light of these conclusions, several recommendations are proposed to support the wider adoption and effective use of the Electronic Filing and Payment System (eFPS). The Bureau of Internal Revenue (BIR) is encouraged to enhance the system's usability by improving its interface design and simplifying navigation to make it more intuitive. A user-friendly platform can significantly boost users' confidence and reinforce the perception that the system is easy to use. Complementing these technical improvements, the BIR should also implement comprehensive information campaigns to raise awareness of the practical benefits of eFPS, such as increased convenience, accuracy, and time efficiency. These efforts will strengthen perceived usefulness and cultivate more favorable attitudes toward digital tax compliance.

Moreover, offering accessible training programs and technical support services is vital, particularly for SME owners who may lack digital proficiency. Equipping them with the knowledge and tools needed to navigate the system will reinforce their sense of control and readiness to adopt the platform. Adoption strategies should also emphasize self-reliance, highlighting the system's ease and advantages rather than relying on social influence or peer pressure, which was shown to have minimal impact in this context. Ensuring broader

access to digital infrastructure is also crucial, especially in remote or underserved communities. This may include establishing localized eFPS kiosks and working with local government units (LGUs) to extend digital services and support at the grassroots level. Finally, the BIR should establish a structured feedback mechanism to continuously collect insights from users. This data can inform future enhancements to the platform, improving usability, responsiveness, and overall user satisfaction. Collectively, these recommendations can promote greater adoption of eFPS, enhance tax compliance, and support a more efficient and transparent public financial system.

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