Analysis of E-SPT and E-filing utilization on taxpayer compliance: A multiple regression approach

Achi Rinaldi[1*], Yulistia Devi[1], Dana Taha Mohammed Salih [2]

[1] Mathematics EDucation Department, Universitas Islam Negeri Raden Intan Lampung, Indonesia
[2] Computer Science Department, College of Science, University of Halabja, Halabja, 46018, Iraq
✉ achirinaldi@radenintan.ac.id [*]

Abstract

Background:
Statistical data from Lampung Province indicate a steady annual increase in the number of taxpayers utilizing e-SPT (electronic tax return) and e-filing, particularly from 2019 to 2022.

Aim:
This study aims to analyze the effect of e-SPT usage on taxpayer compliance, investigate the impact of e-filing on taxpayer compliance, assess the combined effects of e-SPT and e-filing on taxpayer compliance, and understand taxpayer compliance within the framework of Islamic Economics.

Method:
Taxpayers from the Bandar Lampung Tax Office (KPP) were selected as respondents. A random sampling technique was employed to gather data from 100 participants. The data were analyzed using multiple linear regression analysis with SPSS.

Results:
The findings reveal that the convenience, effectiveness, and satisfaction derived from using e-SPT and e-filing, along with an analysis of Annual Tax Returns, significantly influence taxpayer compliance. The use of e-SPT alone has a notable impact on compliance, as does the use of e-filing. Furthermore, the combined usage of e-SPT and e-filing has a significant collective impact on taxpayer compliance.

Conclusion:
The study concludes that both e-SPT and e-filing are critical in enhancing taxpayer compliance, with their combined application having a more substantial effect. These findings also offer insights into taxpayer compliance from the perspective of Islamic Economics, emphasizing the role of modern tax administration tools in promoting compliance.

INTRODUCTION

National income comprises various sectors, both domestic and foreign, with one of the primary sources of internal revenue being tax payments. Although taxes reduce individual income or wealth, they are used for routine expenditures and national development, benefiting society and serving as a primary financing source for national development aimed at enhancing public welfare. However, efforts to increase national income from the tax sector face several challenges, including low taxpayer awareness, underpayment of taxes, and difficulties in maintaining accurate and complete bookkeeping. High taxes often drive companies to find ways to reduce their tax burden, such as through tax avoidance, which aims to minimize the amount of tax owed (Devi et al., 2022; Guenther et al., 2016). Therefore, understanding the factors that influence taxpayer compliance is crucial in this context.

To enhance taxpayer compliance, the Directorate General of Taxes (DGT) of the Ministry of Finance has introduced e-filing, an electronic method for submitting Annual Tax Returns (SPT) that allows taxpayers to report their taxes online and in real-time (Athifahputih & Ginting, 2023; Kresnawati et al., 2021; Kusumawardhani et al., 2023; Novindra & Rasmini, 2017). E-SPT is the tax reporting application provided by the DGT, but this policy has been replaced by the Director General of Taxes Regulation Number PER - 02/PJ/2019. Statistical data from the Tax Office (KPP) Pratama Bandar Lampung indicate that the number of taxpayers using e-SPT and e-filing has been steadily increasing each year, particularly between 2019 and 2022 (see Table 1). This increase suggests that the public is beginning to understand the convenience of reporting taxes through e-filing. Based on these data and the numerous previous studies using e-SPT and e-filing variables, this study aims to analyze the impact of e-SPT and e-filing usage on taxpayer compliance. Using Attribution Theory, this research seeks to explain the internal and external factors influencing taxpayer compliance in fulfilling their tax obligations.

Table 1. Statistics on KPP Pratama Bandar Lampung

Types of SPT	Tax Return Submission Method		
	e-Filing	e-SPT	Grand Total
SPT Tahunan PPh Badan	5.785	1.873	7.658
2019	1.426	26	1.452
2020	1.388	24	1.412
2021	361	3	364
SPT Tahunan PPh Orang Pribadi	224.485	152	224.637
2019	36.334	9	36.343
2020	44.051	4	44.055
2021	47.497	1	47.498
Grand Total	361.327	2.092	363.419

Despite the significant increase in the use of e-SPT and e-filing, as shown by statistical data from KPP Pratama Bandar Lampung, several challenges remain to be addressed to improve overall taxpayer compliance. Previous research has highlighted various benefits of using technology in tax administration, including increased efficiency and convenience for taxpayers (Akram et al., 2019; Ihnatišinová, 2021; Wogo et al., 2023; Scarcella, 2019). However, there are several gaps in the literature that require further attention. First, while many studies have explored the impact of e-filing on tax compliance, few have specifically examined the influence of e-SPT usage on taxpayer compliance. Second, there is limited research on the combined effects of e-SPT and e-filing usage on taxpayer compliance. This approach can provide additional insights into the motivations and behaviors of taxpayers in fulfilling their tax obligations. Therefore, this study aims to fill these gaps by analyzing the impact of e-SPT and e-filing usage on taxpayer compliance and integrating the perspective of Islamic Economics into the analysis. By doing so, this research aims to contribute more comprehensively to the literature on tax compliance and offer more holistic recommendations for policymakers.

METHODS

Research Design:

This study employs a quantitative research approach. The quantitative method is interpreted as a methodology grounded in positivist philosophy, used to investigate a specific population or sample, involving data collection through research instruments, and conducting quantitative data analysis to test predetermined hypotheses. The statistical method utilized in this study is multiple linear regression analysis with SPSS.

Participants

The population in this study consists of active taxpayers registered at the Tax Offices of KPP Pratama Tanjung Karang, KPP Pratama Teluk Betung, and KPP Pratama Kedaton. Additionally, the population includes taxpayers registered outside Bandar Lampung at KPP Pratama Natar, KPP Pratama Metro, and KPP Pratama Kotabumi. The specific focus is on individual taxpayers who utilized e-filing and e-SPT from 2020 to 2023, totaling 84,795.

Instruments

The research instrument used for data collection is a structured questionnaire designed to measure the use of e-SPT and e-filing as well as taxpayer compliance. This questionnaire comprises validated questions that have been tested for reliability to ensure the consistency and accuracy of the data collected.

Data Analysis

The method of data analysis employed in this study is multiple linear regression analysis. This analysis is used to examine the effect of using e-SPT and e-filing on taxpayer compliance. The data collected through the questionnaire will be analyzed using statistical software to calculate and interpret regression coefficients, statistical significance, and the strength of the relationships between the variables studied. The determination of the sample size in this study is based on calculations presented by Slovin (1960). Based on calculations using the Slovin formula, the number of respondents under study is 100.

Multiple Regression

The multiple regression model defined as (Weisberg 2005)

$$Y = a_0 + a_1X_1 + a_2X_2 + \cdots + a_kX_k + \varepsilon$$

Where

Y= the dependent variable.

$X_1, X_2 \ldots X_K$ = independent variable.

K = the number of independent variables.

$a_1, a_2 \ldots a_k$ = the regression coefficients

a_0 = Constant

$\varepsilon = error$

RESULTS AND DISCUSSION

Result

This study employed a comprehensive suite of statistical tests to examine the hypotheses proposed by the researchers. These included validity and reliability tests to ensure the accuracy and consistency of the measurement instruments, normality and linearity tests to verify the assumptions underlying the statistical models, and multiple linear regression analysis to assess the relationships between the independent and dependent variables. Additionally, the coefficient of determination (R^2) was calculated to measure the proportion of variance in the dependent variable explained by the independent variables, while t-tests and F-tests were conducted to evaluate the statistical significance of individual predictors and the overall model fit, respectively. Data were gathered through distributed questionnaires, encompassing 17 statements in total: 6 statements for variable X1, 6 questions for variable X2, and 5 statements for variable Y. Responses were meticulously calculated and analyzed to provide robust insights into the impact of e-SPT and e-filing on taxpayer compliance.

The study involved 100 active taxpayers registered at various tax offices, including KPP Pratama Tanjung Karang, KPP Pratama Teluk Betung, KPP Pratama Kedaton, KPP Pratama Natar, KPP Pratama Metro, and KPP Pratama Kotabumi. These participants were selected using stratified random sampling to ensure a representative sample of taxpayers who utilized e-filing and e-SPT between 2019 and 2022. The demographic information of the participants varied widely, encompassing different age groups to provide a comprehensive understanding of taxpayer compliance behaviors across demographics. Both male and female taxpayers were included to assess potential gender-based differences in the use of e-SPT and e-filing systems. Additionally, participants' occupations ranged from self-employed individuals to those employed in various sectors, reflecting the diverse economic activities influencing tax compliance. The following table 2 summarizes the descriptive statistics for the key variables in the study:

Table 2 Descriptive statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
e-SPT Usage (X_1)	4,2	0,8	2	5
e-Filling Usage (X_2)	4,5	0,7	3	5
Taxpayer Compliance (Y)	4,3	0,9	2	5

a. Validity Test

Table 1. Validity Test

Variabel	Statement	r_{count}	r_{table}	Conclusion	Variabel	Statement	r_{count}	r_{table}	Conclusion
Variabel X1	P1	0,771	0,194	Valid	Variabel Y	P1	0,679	0,194	Valid
	P2	0,759	0,194	Valid		P2	0,703	0,194	Valid
	P3	0,749	0,194	Valid		P3	0,675	0,194	Valid
	P4	0,815	0,194	Valid		P4	0,695	0,194	Valid
	P5	0,801	0,194	Valid		P5	0,604	0,194	Valid
	P6	0,764	0,194	Valid		P1	0,679	0,194	Valid
Variabel X2	P1	0,795	0,194	Valid					
	P2	0,822	0,194	Valid					
	P3	0,824	0,194	Valid					
	P4	0,772	0,194	Valid					
	P5	0,791	0,194	Valid					
	P6	0,561	0,194	Valid					

All variables and statements show a correlation coefficient (rHitung) higher than the critical value (rTabel), indicating they are valid. This means that each item within the variables X1, X2, and Y reliably measures the constructs they are intended to measure, providing a strong indication of construct validity for the data collection instruments used in this study. The higher correlation coefficients suggest a robust relationship between the observed measurements and the theoretical constructs, thereby confirming the appropriateness of the items in capturing the intended dimensions of e-SPT usage, e-filing usage, and taxpayer compliance.

b. Reliability

Table 2. Results of Validity Tes

Variabel	*Alpha Cronbach's*	Keterangan
X1	0,868	Reliabel
X2	0,856	Reliabel
Y	0,619	Reliabel

All variables in the study exhibited Alpha Cronbach's values greater than 0.6, which is a strong indicator of good reliability. This suggests that the measurement instruments used to assess the variables—namely, e-SPT usage, e-filing usage, and taxpayer compliance—consistently produce stable and dependable results. High Alpha Cronbach's values imply that the items within each variable are highly correlated, reflecting a cohesive and reliable set of measurements. Consequently, the data collected through these instruments can be considered trustworthy and suitable for further statistical analysis, reinforcing the robustness of the study's findings.

c. Normality Test

The normality test results revealed a Kolmogorov-Smirnov value of 0.088, confirming that the data follows a normal distribution. This is a crucial finding, as the assumption of normality is a fundamental prerequisite for many parametric statistical tests, including multiple linear regression analysis used in this study. By validating that the data adheres to a normal distribution, we can ensure the appropriateness and accuracy of the statistical inferences drawn from the analyses. Consequently, the reliability of the hypothesis testing and the overall robustness of the study's conclusions are significantly enhanced.

d. Linearity Test

Table 3. Linearity test with ANOVA

			Sum of Squares	df	Mean Square	F	Sig.
Variable Y * Variable X_1	Between Groups	(Combined)	93.021	11	8.456	4.200	.000
		Linearity	61.685	1	61.685	30.636	.000
		Deviation from Linearity	31.337	10	3.134	1.556	.134
	Within Groups		171.143	85	2.013		
	Total		264.165	96			
Variable Y * Variable X_2	Between Groups	(Combined)	72.066	11	6.551	2.563	.007
		Linearity	43.720	1	43.720	17.105	.000
		Deviation from Linearity	28.346	10	2.835	1.109	.365
	Within Groups		224.924	88	2.556		
	Total		296.990	99			

The results indicate that the relationships between the independent variables (e-SPT usage and e-filing usage) and the dependent variable (taxpayer compliance) are linear. This linearity suggests that changes in e-SPT and e-filing usage predictably lead to proportional changes in taxpayer compliance. The significance levels obtained from the ANOVA tests further support the strength and consistency of these linear relationships. Consequently, the linearity assumption holds true for the models used in this study, ensuring the validity of the multiple linear regression analysis conducted

e. Multiple Linear Regression Test

Table 4. Multiple Linear Regression Analysis

Variabel	Prediksi	Koefisien Regresi (b)	t_{Hitung}	Sig.	Kesimpulan
(Konstanta)	Positif	12,115	6,332	0,00	
Variabel X1	Positif	0,200	2,137	0,03	Diterima
Variabel X2	Positif	0,150	1,993	0,01	Diterima
R Square	= 0,486				
Adjusted R square	= 0,369				
F_{Hitung}	= 11,049			Sig = 0,00	

The results show positive and significant effects of both e-SPT (X1) and e-filing (X2) on taxpayer compliance (Y). The calculated F-value (11.049) is greater than the critical F-value (2.70) with a significance level of 0.00 < 0.05, indicating a significant joint influence of e-SPT and e-filing on taxpayer compliance.

Discussion

The findings of this study reveal that both e-SPT and e-filing have a positive and significant impact on taxpayer compliance. These results are consistent with previous research, underscoring the effectiveness, efficiency, and convenience of these digital tools in fostering taxpayer compliance. The implementation of e-SPT and e-filing simplifies the process of tax reporting, making it easier for taxpayers to fulfill their obligations accurately and on time. This ease of use and improved accessibility are crucial factors that contribute to higher compliance rates. The results align with the Theory of Acceptance Model (TAM), which posits that perceived usefulness and ease of use are primary drivers for the adoption of new technologies (Marangunić & Granić, 2015). Taxpayers are more likely to adopt e-SPT and e-filing if they find these tools beneficial and easy to use.

In examining the specific impact of e-SPT, the study found that it significantly enhances taxpayer compliance. This finding corroborates the research conducted by Sabil Dwiyatmoko Pujiwidodo in 2018, which demonstrated that the simplicity and efficiency of e-SPT reduce the effort required from taxpayers, thereby encouraging compliance. e-SPT facilitates a streamlined process for filing tax returns, minimizing the complexities and time investment traditionally associated with manual tax reporting. Taxpayers who perceive the process as straightforward and less burdensome are more inclined to comply with their tax obligations. These results highlight the importance of maintaining and improving the e-SPT system to sustain and potentially increase taxpayer compliance levels.

Similarly, the study identified a significant positive influence of e-filing on taxpayer compliance. This is consistent with the findings of Lamidi et al. (2023) and Triwibowo et al. (2024), which highlighted that the convenience and certainty provided by e-filing play a crucial role in its adoption by taxpayers. The study by Pramesti et al. (2020) emphasized that e-filing's user-friendly interface and the assurance of immediate, real-time submission enhance taxpayers' willingness to comply. The certainty of receiving a confirmation upon successful submission reduces the anxiety associated with potential errors or delays in manual filing processes. Therefore, e-filing not only simplifies the tax filing process but also builds confidence among taxpayers, encouraging them to adhere to their tax responsibilities.

The findings of this study align well with similar research in the field. For instance, Hapsari (2021) and Rokhman et al. (2023) also concluded that e-SPT and e-filing significantly influence taxpayer compliance. Bellon's et al. (2022) study, along with others, supports the notion that digital tax reporting tools enhance compliance by reducing the administrative burden on taxpayers. Moreover, the consistency of these findings across different studies suggests a robust relationship between the use of electronic tax reporting systems and improved taxpayer compliance. The positive impact of e-SPT and e-filing observed in various contexts underscores the potential of these tools to transform tax administration and compliance on a broader scale. This study contributes to the growing body of evidence that advocates for the continued development and promotion of digital tax reporting systems to achieve higher compliance rates and more efficient tax administration.

Implication

The findings from this study carry significant policy implications for tax authorities, particularly the Directorate General of Taxes. The positive impact of e-SPT and e-filing on taxpayer compliance underscores the importance of these digital tools in modern tax administration. To further enhance taxpayer compliance, it is crucial to improve the usability and accessibility of these systems. Simplifying the user interface, providing clear guidance and support, and ensuring robust and reliable online platforms can make e-SPT and e-filing more user-friendly. Such enhancements could reduce the complexity and time required for taxpayers to fulfill their obligations, thereby encouraging more consistent compliance. Continuous optimization and updates to these systems should be a priority for the Directorate General of Taxes to meet the evolving needs of taxpayers and leverage the full potential of digital tax reporting.

This study also contributes to the theoretical landscape by extending the application of the Theory of Acceptance Model (TAM) and Task Technology Fit (TTF) theories within the domain of tax compliance. The results demonstrate that perceived ease of use and the fit between tasks and technology are pivotal factors influencing the adoption of electronic tax reporting systems. These findings highlight that taxpayers are more likely to use e-SPT and e-filing when they find these systems easy to navigate and well-suited to their tax filing tasks. By integrating TAM and TTF theories, this research provides a deeper understanding of the factors that drive the acceptance and use of digital tax tools. This theoretical insight can inform future studies and help develop more effective strategies for implementing technology in tax administration.

Limitation

The study's limitations are primarily related to its sample size and scope. With data collected from 100 respondents across specific tax offices, the sample may not fully capture the diversity and variability of the broader taxpayer population. Future research should consider expanding the sample size and incorporating a wider geographic area to enhance the generalizability of the findings. Additionally, the temporal scope of the study was confined to taxpayers using e-SPT and e-filing between 2020 and 2023. This relatively short timeframe may not adequately reflect long-term compliance behaviors. Conducting longitudinal studies could provide a more comprehensive understanding of how taxpayer compliance evolves over extended periods, offering deeper insights into the sustained impacts of e-SPT and e-filing systems.

CONCLUSIONS

The research concludes that both e-SPT and e-filing significantly enhance taxpayer compliance at KPP Bandar Lampung Satu. Individually, the efficiency and convenience of e-SPT, along with the certainty and user-friendliness of e-filing, have been well-implemented, leading to higher compliance rates. Combined, these digital tools create a synergistic effect, further boosting compliance by simplifying tax reporting. This underscores the importance of continued optimization and integration of e-SPT and e-filing systems in tax administration. For future research, expanding the sample size and including a broader geographic area would enhance the generalizability of the findings. Conducting longitudinal studies could provide deeper insights into how taxpayer compliance evolves over time with the use of e-SPT and e-filing systems. Additionally, exploring the impact of other variables, such as taxpayer education and support services, on compliance could provide a more comprehensive understanding. Integrating qualitative approaches to gather in-depth feedback from taxpayers may also uncover nuanced factors influencing their compliance behaviors.

AUTHOR CONTRIBUTION STATEMENTS

AR contributed significantly to the conceptualization and design of the study. They were responsible for the data collection, analysis, and interpretation of the results. AR also played a key role in drafting and revising the manuscript, ensuring the overall coherence and accuracy of the research findings.

YD was instrumental in the methodological aspects of the study, particularly in the development and validation of the research instruments. They also assisted in the statistical analysis and contributed to the discussion section by providing insights and comparisons with existing literature. Yulistia was actively involved in reviewing and editing the manuscript to enhance its clarity and scholarly quality.

DTMS focused on the theoretical framework and literature review, ensuring that the study was grounded in relevant theories and prior research. They also contributed to the interpretation of the data and the formulation of the study's implications and recommendations. He provided critical feedback and revisions to the manuscript, helping to refine the final version for publication.

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