

Effectiveness and Efficiency of the *E-Filing* System in Enhancing Taxpayer Compliance

Darwis Lannai

Department of Accounting, Faculty of Economics and Business, Universitas Muslim Indonesia,
Makassar

darwis.lannai@umi.ac.id

Submitted: Sept 1, 2024

Accepted: Oct 3, 2024

Published: Oct 7, 2024

ABSTRACT

This study aims to evaluate the effectiveness and efficiency of the e-filing system in improving taxpayer compliance. The issue of taxpayer compliance is a significant concern in the field of taxation, especially in Indonesia, where taxpayer compliance remains relatively low. This is particularly alarming when compared to the growth of businesses in the country. As technology becomes increasingly integral to tax administration, understanding how the e-filing system affects taxpayer compliance is crucial. The study population consists of 130,000 taxpayers registered at KPP Pratama Makassar Utara. A sample of 100 taxpayers was selected using the Slovin formula. The research employed field research methods with quantitative data and primary data sources. Data were collected through a survey by distributing questionnaires to taxpayers. Data analysis was conducted using multiple linear regression with the aid of SPSS software. The results indicate that both the effectiveness and efficiency of the e-filing system have a positive and significant impact on taxpayer compliance. These findings provide important insights into how the e-filing system can motivate taxpayers to better fulfill their tax obligations, which in turn can enhance overall tax compliance and administrative efficiency.

Keywords: *Effectiveness, Efficiency, E-filing system, Taxpayer compliance, Tax Administration*

INTRODUCTION

Taxpayer compliance is essential for optimizing national revenue from taxes. This issue is critical globally, impacting both developed and developing nations. Tax compliance is vital as taxes represent the primary source of government revenue used for national development and public welfare. Taxes significantly influence national progress, with their benefits directly and indirectly affecting daily life, such as through education, transportation, healthcare, and public facilities (Pratiwi & Heriyanto, 2024).

The challenge of taxpayer compliance is a major concern in the tax sector. In Indonesia, the level of taxpayer compliance is still considered low, which is troubling compared to the country's business growth (Sudirman et al., 2020). As of April 1, 2019, only 11.309 million of the expected taxpayers had filed their annual tax returns. Yustinus Prastowo, Executive Director of the Center for Indonesia Taxation Analysis (CITA), noted that this low figure indicates poor compliance. "Formal compliance remains insufficient. This figure only reflects the submission of tax returns, not the accuracy of the information provided," he explained (Mulyati & Ismanto, 2021).

Improving taxpayer compliance can be achieved through easier tax reporting methods. In response, the government has developed tax applications to simplify reporting and payment processes. One such tool is the e-filing system, introduced by the Directorate General of Taxes (DJP). E-filing allows taxpayers to electronically submit their tax returns (e-SPT) via the DJP's official website with a straightforward and efficient online process, accessible anytime according to the reporting and payment deadlines (Lannai & Insyirah, 2024). This system adheres to the Technology Acceptance Model (TAM) by (Davis et al., 1989), which assesses the perceived ease of use and benefits of technology. Since its launch in 2013, e-filing has made it easier for taxpayers to meet deadlines, thereby enhancing compliance and increasing national revenue (Pawama et al., 2021). The introduction of e-filing is expected to boost taxpayer compliance by offering perceived

benefits and ease of use. If the system proves effective and efficient, it is anticipated to significantly improve compliance rates among taxpayers.

LITERATURE STUDY

Taxes

According to Rochmat (Mardiasmo, 2016) states that "tax is a contribution from the people to the state treasury based on applicable laws, without receiving direct services from the government, and used to cover general public expenditures." Meanwhile, S.I. Djajadiningrat defines *tax* as "an obligation to contribute a portion of wealth to the state treasury, arising from circumstances, events, and actions that play a specific role, but not as a punishment, as regulated and enforced by government regulations, without direct reciprocal services from the state, for the purpose of maintaining the state in general." However, according to (Sari & Handini, 2021) in Abdu Rahman (2010), tax is a compulsory levy from the public to the state, which is owned by those obligated to pay it according to the law, and does not yield direct benefits, used to finance the government's general expenditures

Taxpayer Compliance

According to (Pangestu, 2024), *tax compliance* can be defined as a state where taxpayers fully meet their tax obligations and carry out their tax duties. (Hidayat, 2024) identifies taxpayer compliance through several indicators: self-registration, timely submission of tax returns, accurate calculation and payment of taxes owed, and settling any outstanding arrears. Therefore, taxpayer compliance means taxpayers fulfill entirely their tax obligations and exercise their rights. These obligations include self-registration, paying and calculating the taxes due, settling any overdue payments, and submitting tax returns (Damanik & Susilawaty, 2022).

Effectiveness

According to Supriyono (2000), effectiveness refers to the relationship between output and the responsibility for achieving goals. The greater the results in meeting these goals, the more influential the unit can be. Meanwhile, (Sedarmayanti, 2010) defines effectiveness as how an organization can fulfill its needs through its activities and development processes, utilizing the various available resources (Juhardini, 2013).

Efficiency

(Mardiasmo, 2016) states that efficiency is closely related to productivity. Efficiency measurement is done by comparing the outputs produced and the inputs used (cost of out). Implementing activities can be called efficient if a particular product or job can be obtained using the lowest resources and costs (spending well). Efficiency indicators describe the relationship between an organizational unit's resource inputs (employees, wages, and administrative costs) and the outputs produced (Pangkey & Pinatik, 2016).

E-filing

The Application System Provider (ASP) initially introduced the E-filing electronic system, which the Director General of Taxes approved under Regulation No. KEP-05 / PJ / 2005, which outlines the procedures for submitting Annual Tax Returns (SPT) through an online system on the Director General of Taxes (DJP) website (DJPOonline.pajak.co.id) or other application service providers. Taxpayers who wish to submit tax returns via E-filing must have an Electronic Filing Identification Number (E-FIN) issued by the tax service office upon the taxpayer's request, which is used for submitting tax returns through E-filing. According to (Lado & Budiantara, 2018), implementing E-filing is expected to enhance satisfaction and convenience for taxpayers in meeting their tax obligations, thereby improving overall taxpayer compliance (Rahmadani et al., 2024).

Technology Acceptance Model

The Technology Acceptance Model (TAM) is a widely used framework for analyzing the factors that influence whether an information system is accepted. The model was first introduced by (Davis, 1985), building upon the Theory of Reasoned Action (TRA). TAM aims to explain and predict user acceptance of information systems. Additionally, it provides a theoretical foundation

for understanding the factors that affect the acceptance of information systems and technology and the causal relationships between beliefs, behavior, goals/needs, and the use of information systems (idthesis.com, 2018). According to TAM, an information system is more likely to be accepted if perceived as valuable and easy to use. Users are more likely to benefit from the system if they believe it will provide advantages for them (Ramlawati et al., 2022).

Task Technology Fit (TTF)

Task Technology Fit (TTF) was developed by (Goodhue & Thompson, 1995). TTF refers to how technology helps individuals perform their tasks or job duties. More specifically, TTF involves aligning the requirements of tasks, individual abilities, and technological functions. TTF focuses on the interaction between tasks, technology, and individuals. A specific type of task requires corresponding technological functions (Syahnur et al., 2020). This model suggests that performance will improve when technology provides the appropriate features and support needed for the task.

METHODS

The research will be conducted at the KPP Pratama Makassar Utara, with the study planned to span three months, from June to August 2022. The data used in this study will be quantitative, comprising scores or values based on responses to questions in a questionnaire. The primary data source will be direct responses from participants without intermediaries obtained through their answers to the questionnaire. Data collection techniques will include surveys, questionnaires, and documentation. Surveys will involve collecting primary data from sources through oral or written questions, establishing a direct connection between the researcher and respondents. Questionnaires will gather data related to the implementation of e-filing and taxpayer compliance, enabling respondents to provide feedback. Documentation will involve collecting written works or images and analyzing documents created by the researcher. The population for this study consists of 130,000 taxpayers registered with KPP Pratama Makassar Utara. The sample will be determined using probability sampling, which ensures that every element in the population has an equal chance of being selected. The sample size will be calculated using the Slovin formula:

$$n = N / (1 + (N \times e^2))$$

Where:

- n = sample size
- N = population size
- e = margin of error (10%)

Thus,

$$n = 130.000 / (1 + (130.000 \times 0,1^2))$$

$$n = 130.000 / (1 + (130.000 \times 0,01))$$

$$n = 130.000 / (1 + 1.300)$$

$$n = 130.000 / 1.301$$

$$n = 99,9232, \text{ It was rounded to } 100.$$

Therefore, the sample size for this study will be 100. Data analysis will employ regression analysis using SPSS software, which assists in performing statistical calculations on a computer. The analysis will include several stages: instrument testing with descriptive statistical analysis; data quality testing including validity and reliability tests; classical assumption testing involving normality, multicollinearity, and heteroscedasticity tests; and hypothesis testing with multiple linear regression; R^2 (coefficient of determination), F-test (simultaneous test), and t-test (partial test).

RESULT

Characteristics of respondents

The questionnaires were distributed randomly using a purposive sampling method, resulting in 132 completed questionnaires. Of these, 100 were deemed suitable for further data analysis. The following are the characteristics of the respondents, categorized by gender, education level, age, and occupation.

Table 1 Respondent Characteristics

Variables	Indicators	Total	Percentage
Gender	Male	35	35%
	Female	65	65%
Educational Background	High School	28	28%
	D1/D2/D3	8	8%
	S1	60	60%
	S2	4	4%
Age	21-31 years old	64	64%
	32-40 years old	19	19%
	> 40 years old	17	17%
Occupation	PNS/TNI/POLRI	17	17%
	BUMN/Private	19	19%
	Self-employed	64	64%

Based on gender, the survey of 100 taxpayers registered at KPP Pratama Makassar Utara revealed that 35 are male, accounting for 35 percent of the respondents, while 65 are female, representing 65 percent of the respondents. Regarding educational background, among the 100 respondents, 28 have a high school diploma, which constitutes 28 percent of the respondents; 8 hold diplomas (D1/D2/D3), making up 8 percent; 60 have a bachelor's degree, accounting for 60 percent; and 4 have a master's degree, representing 4 percent. In terms of age, 64 respondents are between 21 and 31 years old, making up 64 percent of the total; 19 are between 32 and 40 years old, representing 19 percent; and 17 are over 40 years old, constituting 17 percent. Finally, concerning occupation, 17 respondents are employed as civil servants, military, or police, which constitutes 17 percent of the total; 19 work in state-owned or private companies, making up 19 percent; and 64 are self-employed, representing 64 percent.

The variables used in this study are Effectiveness of using e-filing (X1), Efficiency of using e-filing (X2) and Increased taxpayer compliance (Y). These variables will be tested with descriptive statistics.

Table 2 Descriptive statistical analysis results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Effectiveness of E-Filing Use	100	3,00	5,00	4,1433	,58843
Efficiency of E-Filing Use	100	3,00	5,00	4,1450	,50650
Taxpayer Compliance	100	3,00	5,00	4,2200	,43479
Valid N (listwise)	100				

Table 2 presents the descriptive statistics for the variables in this study as follows:

- Effectiveness of E-filing (X1):** According to Table 2, e-filing (X1) has a minimum value of 3.00, a maximum value of 5.00, and a mean of 4.1433. This indicates that respondents generally agree with the effectiveness of e-filing. The standard deviation is 0.58843, reflecting the variability in respondents' answers around the mean.
- Efficiency of E-filing (X2):** Table 2 shows that e-filing (X2) efficiency ranges from a minimum of 3.00 to a maximum of 5.00, with a mean of 4.1450. This suggests that respondents predominantly agree on the efficiency of e-filing. The standard deviation is 0.50650, indicating the extent of deviation from the average response.
- Increase in Taxpayer Compliance (Y):** As per Table 2, the increase in taxpayer compliance (Y) has a minimum value of 3.00, a maximum value of 5.00, and a mean of 4.2200, showing a general agreement among respondents on improved compliance. The standard deviation of 0.43479 demonstrates the response variation relative to the average.

Data instrument test results



Validity and Reliability Test

Table 3 Instrument Data Test Result

Variables	Indicators	R _{Result}	R _{Table}	Cronbach Alpha (a)	Information	
Effectiveness of E-filing (X1)	X1.1	0,825	0.1966	0,719	Valid	Reliable
	X1.2	0,827	0.1966		Valid	Reliable
	X1.3	0,752	0.1966		Valid	Reliable
Efficiency of E-filing (X2)	X2.1	0,719	0.1966	0,714	Valid	Reliable
	X2.2	0,756	0.1966		Valid	Reliable
	X2.3	0,798	0.1966		Valid	Reliable
	X2.4	0,663	0.1966		Valid	Reliable
Increase in Taxpayer Compliance (Y)	Y1	0,557	0.1966	0,708	Valid	Reliable
	Y2	0,606	0.1966		Valid	Reliable
	Y3	0,646	0.1966		Valid	Reliable
	Y4	0,691	0.1966		Valid	Reliable
	Y5	0,685	0.1966		Valid	Reliable
	Y6	0,639	0.1966		Valid	Reliable

Based on the validity test results presented in Table, all items in the questionnaire for the variables of Effectiveness of E-filing (X1), Efficiency of E-filing (X2), and Taxpayer Compliance (Y) are valid. This is indicated by all calculated R-values greater than the R-table value of 0.1966. Therefore, the validity test results for all these variables confirm that the validity test aligns with the statements in the data analysis methods, as Ghozali (2016). outlined

Furthermore, the Table shows that the reliability test for each variable has a Cronbach's Alpha greater than 0.60. This suggests that the statements in the questionnaire distributed to respondents have a high level of reliability, making the questionnaire a suitable instrument for research. Consequently, the reliability test results are consistent with the statements in the data analysis methods, according to Sunyoto (2013).

Classical Assumption Test

Normality Test

The data normality test is used to determine whether in a regression model, the resulting error has a normal distribution or not. In this study, to test the normality of the data, the Normal P-P Plot of Regression Standardized Residual graph was used, the test results of which can be seen in the figure below:

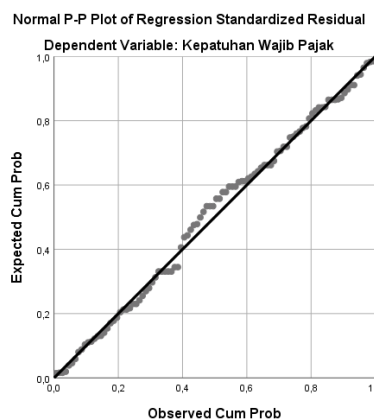


Figure 1 Normality Test

Based on Figure 1, it can be seen that the points spread around the diagonal line, and the direction of the spread follows the direction of the diagonal line. This shows that the regression model is suitable for use because it fulfills the assumption of normality.

Multicollinearity Test



The multicollinearity test aims to assess whether there is a high correlation among the independent variables in a multiple linear regression model. High correlations among independent variables can disrupt the relationship between the independent and dependent variables. One can examine the Tolerance and Variance Inflation Factor (VIF) values to test for multicollinearity. If the VIF value is less than ten and the Tolerance value is more significant than 0.1, the model is considered free from multicollinearity (Sunjoyo et al., 2013). The results of the multicollinearity test are presented in the following table:

Table 4 Multicollinearity Test Result

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Effectiveness of E-Filing Use	,846	1,182
	Efficiency of E-Filing Use	,846	1,182

a. Dependent Variable: Taxpayer Compliance

Based on Table, it is evident that the variables for the effectiveness of e-filing and the efficiency of e-filing both have tolerance values greater than 0.1 and VIF values less than 10. This indicates that there is no multicollinearity in the regression model, allowing the data to be used in this research.

Heteroscedasticity Result Test

The heteroskedasticity test aims to determine whether there is a difference in the variance of the residuals from one observation to another. Heteroskedasticity can be detected using a scatterplot method, where the spread of data points should be random, without forming any specific pattern, and distributed both above and below the zero line on the Y-axis. The results of the heteroskedasticity test are shown in the figure below:

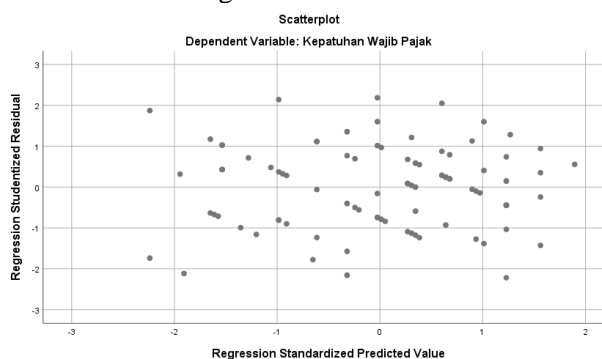


Figure 2 Heteroscedasticity Result Test

Based on Figure 2, the scatterplot graph shows that the data points are dispersed along the Y-axis without forming a distinct pattern. This indicates that heteroskedasticity is not present in the regression model. Consequently, the regression model is deemed suitable for predicting taxpayer compliance, considering the influencing variables: the effectiveness of e-filing and the efficiency of e-filing.

Hypothesis Testing

Simultaneous Test Result

Table 5 Simultaneous Test Result

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10,759	2	5,379	65,583	,000 ^b
	Residual	7,957	97	,082		
	Total	18,716	99			

a. Dependent Variable: Taxpayer Compliance
 b. Predictors: (Constant), Effectiveness of E-Filing Use, Efficiency of E-Filing Use

The Simultaneous Test (F-Test) is used to determine whether all independent variables have the same effect on the dependent variable. This test is conducted by comparing the critical value of F (F-table) with the computed F value from the ANOVA table. The F-Test helps assess whether the variables such as the effectiveness of e-filing (X1), the efficiency of e-filing (X2), and taxpayer compliance (Y) collectively influence the dependent variable. To conduct this hypothesis test, we compare the significance level (sig.) or the probability value from the ANOVA output. If the significance level is less than 0.005, the hypothesis is accepted; if it is greater than 0.005, the hypothesis is rejected. According to the SPSS output in Table 5, the significance level is 0.000, which is less than 0.05. This indicates that both the effectiveness of e-filing (X1) and the efficiency of e-filing (X2) have a significant simultaneous effect on taxpayer compliance (Y), with a probability of 0.000. Since this probability is much smaller than the significance threshold of 0.05, the regression model is deemed appropriate for predicting improvements in taxpayer compliance.

Multiple linear regression analysis

Table 6 Regression Equation Model

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,195	,266		4,494	,000
	Effectiveness of E-Filing Use	,291	,053	,394	5,476	,000
	Efficiency of E-Filing Use	,439	,062	,511	7,100	,000

a. Dependent Variable: Taxpayer Compliance

Multiple linear regression analysis is used to determine the relationship between one variable and another. Regression is a tool used to measure the extent to which independent variables influence a dependent variable. According to Table 6, the regression equation obtained from the calculations is:

$$Y = 1,195 + 0,291 X1 + 0,439 X2$$

This model can be interpreted as follows:

1. The constant value of 1.195 indicates that if both the effectiveness of e-filing (X1) and the efficiency of e-filing (X2) are zero, the taxpayer compliance variable (Y) will be 1.195.
2. Based on Table 6, the regression test results show that the effectiveness of e-filing (X1) has a positive regression coefficient of 0.291. This means that an increase in the effectiveness of e-filing (X1) will lead to an increase in taxpayer compliance (Y).
3. Additionally, Table 6 reveals that the efficiency of e-filing (X2) has a positive regression coefficient of 0.439. This indicates that an increase in the efficiency of e-filing (X2) will also result in an increase in taxpayer compliance (Y).

Partial Test Result

Based on the results of the t-test presented in Table 6, the analysis reveals significant findings for both hypotheses. For the first hypothesis, the variable "Effectiveness of e-filing" (X1) has a significance level of 0.000, which is less than the threshold of 0.05. This result confirms that "Effectiveness of e-filing" (X1) has a significant positive effect on the dependent variable, "Taxpayer Compliance" (Y), as indicated by a t-value of +5.476. Similarly, the second hypothesis shows that the variable "Efficiency of e-filing" (X2) also has a significance level of 0.000, which is below 0.05, indicating that "Efficiency of e-filing" (X2) significantly impacts "Taxpayer Compliance" (Y). The positive effect is further supported by a t-value of +7.100. These findings underscore the substantial influence of both the effectiveness and efficiency of e-filing on taxpayer compliance.

Coefficient Determination

The coefficient of determination is used to measure the proportion of variance in the dependent variable that is explained by the independent variables. This metric assesses the overall impact of the independent variables on the dependent variable. The results of the coefficient of determination test are presented in Table below.



Table 7 Result of Coefficient Determination

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,758 ^a	,575	,566	,28640
a. Predictors: (Constant), Effectiveness of E-Filing Use, Efficiency of E-Filing Use				
b. Dependent Variable: Taxpayer Compliance				

Based on the coefficient of determination test (R^2) results shown in Table 7, the Adjusted R-Square value is 0.575. This indicates that 57.5% of the variance in taxpayer compliance (Y) is explained by the variables of e-filing effectiveness (X1) and e-filing efficiency (X2). The remaining 42.5% of the variance is attributed to other factors not included in the model.

DISCUSSION

The Impact of E-Filing Effectiveness on Taxpayer Compliance

The electronic filing system (E-filing) was first introduced by the Application System Provider (ASP) and approved under the Directorate General of Taxes regulation No. KEP-05/PJ/2005, which outlines the procedures for submitting Annual Tax Returns (SPT) through an online system on the Directorate General of Taxes (DJP) website (DJPonline.pajak.co.id) or other application service providers. Taxpayers wishing to submit their SPT via E-filing must obtain an Electronic Filing Identification Number (E-FIN) from the tax office upon request. This number is required to submit SPT through E-filing. Lado and Budiantara (2018) state that E-filing is expected to provide satisfaction and convenience for taxpayers in fulfilling their tax obligations, thereby improving taxpayer compliance.

The presence of the E-filing system is anticipated to enhance taxpayer compliance in meeting their tax obligations. Perceptions of usefulness and ease of use can encourage taxpayers to file their SPTs. If the E-filing system is effective and efficient, it is expected to improve taxpayer compliance further.

The study's findings indicate that the effectiveness of the E-filing system significantly impacts taxpayer compliance. This means that the better the effectiveness of the E-filing system implemented by the KPP Pratama Makassar Utara, the more positive the effect on taxpayer compliance (Lannai, 2024). Conversely, a more effective E-filing system will positively affect compliance. This is supported by the responses in Table 9 on page 52, where respondents most frequently agreed with the statements provided, and the least agreed responses were minimal. The most dominant indicator of e-filing effectiveness is that it makes users more productive.

This study aligns with the Technology Acceptance Model (TAM) and Task Technology Fit (TTF) theory. TAM provides a theoretical foundation for understanding the factors affecting the acceptance of information systems and technology and the causal relationships between beliefs, behavior, goals/needs, and the use of information systems. TTF refers to how technology assists individuals in performing their tasks or job duties. Specifically, TTF represents the alignment between task requirements, individual capabilities, and technology functions. The priority of TTF is the interaction between tasks, technology, and individuals. Various tasks require different technological functions. This model indicates that performance improves when technology provides the right features and support related to the task.

According to Supriyono (2000), effectiveness is the relationship between output as a form of responsibility toward achieving goals. The greater the results from this responsibility in achieving goals, the more influential the unit is. This research is consistent with the study by (Rahim et al., 2023), which found that the effectiveness of E-filing positively impacts taxpayer compliance. The results demonstrate that the effectiveness of E-filing has a positive and significant effect on improving taxpayer compliance. Thus, the better the effectiveness of E-filing, the more significant the improvement in taxpayer compliance.

The Impact of E-Filing Efficiency on Taxpayer Compliance

The electronic filing system (E-filing) was initially introduced by the Application System Provider (ASP) and approved under the Directorate General of Taxes regulation No. KEP-

05/PJ/2005. This regulation outlines the procedures for submitting Annual Tax Returns (SPT) through an online system on the Directorate General of Taxes (DJP) website (DJPonline.pajak.co.id) or other application service providers. Taxpayers wishing to file their SPT via E-filing must obtain an Electronic Filing Identification Number (E-FIN) from the tax office upon request. This number is essential for submitting SPT through E-filing. According to Lado and Budiantara (2018), implementing E-filing is expected to enhance taxpayer satisfaction and convenience in fulfilling their tax obligations, thereby improving taxpayer compliance.

The E-filing system is expected to increase taxpayer compliance by making it easier to meet tax obligations. Perceptions of its usefulness and ease of use can encourage taxpayers to report their SPT. If the E-filing system is both practical and efficient, it is anticipated to enhance taxpayer compliance further.

The study found that e-filing efficiency significantly impacts taxpayer compliance. This is supported by the results in Table 10 on page 54, which indicate that respondents predominantly agreed with the statements provided, with minimal disagreement. The most dominant indicator of e-filing efficiency is the ability to prepare the required data before filling out the SPT.

This research aligns with the Technology Acceptance Model (TAM) and Task Technology Fit (TTF) theory. TAM provides a theoretical foundation for understanding the factors that influence the acceptance of information systems and technology and the causal relationships between beliefs, behavior, goals/needs, and the use of information systems. TTF, on the other hand, refers to the degree to which technology assists individuals in performing their tasks or job duties. Specifically, TTF represents the alignment between task requirements, individual capabilities, and technology functions. The priority of TTF is the interaction between tasks, technology, and individuals. Various tasks require different technological functions, and the model suggests that performance improves when technology provides the appropriate features and support related to the tasks.

According to (Mardiasmo, 2016), efficiency is closely related to productivity. Efficiency indicators describe the relationship between the input of resources (such as employees, wages, and administrative costs) and the output produced (Pangkey & Pinatik, 2015). This study aligns with the research by (Sudirman et al., 2020), which found that the efficiency of personal income tax reporting and the implementation of E-filing have a positive impact. E-filing facilitates tax reporting, allowing taxpayers to file their taxes anytime and anywhere without visiting the tax office. As a result, taxpayers find the E-filing system to be efficient and beneficial.

The Impact of E-Filing Efficiency on Taxpayer Compliance

The electronic filing system (E-filing) was initially introduced by the Application System Provider (ASP) and approved under the Directorate General of Taxes regulation No. KEP-05/PJ/2005. This regulation outlines the procedures for submitting Annual Tax Returns (SPT) through an online system on the Directorate General of Taxes (DJP) website (DJPonline.pajak.co.id) or other application service providers. Taxpayers wishing to file their SPT via E-filing must obtain an Electronic Filing Identification Number (E-FIN) from the tax office upon request. This number is essential for submitting SPT through E-filing. According to (Lado & Budiantara, 2018), E-filing is expected to enhance taxpayer satisfaction and convenience in fulfilling their tax obligations, thereby improving taxpayer compliance.

The E-filing system is expected to increase taxpayer compliance by making it easier to meet tax obligations. Perceptions of its usefulness and ease of use can encourage taxpayers to report their SPT. If the E-filing system is practical and efficient, it is anticipated to enhance taxpayer compliance further.

The study found that e-filing efficiency significantly impacts taxpayer compliance. This is supported by the results in Table 10 on page 54, which indicate that respondents predominantly agreed with the statements provided, with minimal disagreement. The most dominant indicator of e-filing efficiency is the ability to prepare the required data before filling out the SPT.

This research aligns with the Technology Acceptance Model (TAM) and Task Technology Fit (TTF) theory. TAM provides a theoretical foundation for understanding the factors that influence the acceptance of information systems and technology and the causal relationships between beliefs, behavior, goals/needs, and the use of information systems. TTF, on the other hand, refers to the degree to which technology assists individuals in performing their tasks or job duties.

Specifically, TTF represents the alignment between task requirements, individual capabilities, and technology functions. The priority of TTF is the interaction between tasks, technology, and individuals. Various tasks require different technological functions, and the model suggests that performance improves when technology provides the appropriate features and support related to the tasks.

According to (Mardiasmo, 2016), efficiency is closely related to productivity. Efficiency indicators describe the relationship between the input of resources (such as employees, wages, and administrative costs) and the output produced (Pangkey & Pinatik, 2015). This study aligns with the research by (Sudirman et al., 2020), which found that the efficiency of personal income tax reporting and the implementation of E-filing have a positive impact. E-filing facilitates tax reporting, allowing taxpayers to file their taxes anytime and anywhere without visiting the tax office. As a result, taxpayers find the E-filing system to be efficient and beneficial.

For future research, it is recommended to explore additional factors that may influence taxpayer compliance beyond the effectiveness and efficiency of E-filing. Further studies could consider variables such as technical support, tax knowledge, and system accessibility. Additionally, it would be valuable to assess how direct user experiences affect their perceptions of the E-filing system. This research could provide insights for designing better policies and improvements to the system to enhance overall taxpayer compliance.

CONCLUSION

Based on the research findings, it can be concluded that both the effectiveness and efficiency of the E-filing system significantly impact taxpayer compliance. The effectiveness of E-filing, which includes ease of use and satisfaction in the tax reporting process, has been shown to positively enhance taxpayer compliance. Similarly, the efficiency of E-filing, which facilitates optimal data preparation before filling out tax returns, also positively affects taxpayer compliance. Both variables, effectiveness and efficiency, contribute importantly to improving tax compliance, demonstrating that the E-filing system can be an effective tool in managing tax obligations.

REFERENCES

- Damanik, D. N., & Susilawaty, T. E. (2022). Meningkatkan Kesadaran Kaum Muda Dengan Memahami Penghasilan Tidak Kena Pajak (PTKP) Bagi Siswa/Siswi SMA N 3 Medan. *Jurnal Pengabdian Kepada Masyarakat Nusantara*, 3(2), 597–601.
- Davis, F. D. (1985). *A technology acceptance model for empirically testing new end-user information systems: Theory and results*. Massachusetts Institute of Technology.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). *USER ACCEPTANCE OF COMPUTER TECHNOLOGY: A COMPARISON OF TWO THEORETICAL MODELS* *. 35(8), 982–1003.
- Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly*, 213–236.
- Hidayat, F. (2024). Analisis Faktor–Faktor Kepatuhan Wajib Pajak UMKM Di KPP Pratama Padang Dua. *Jurnal Ekonomi Dan Bisnis Digital*, 1(3), 535–550.
- Juhardini, R. (2013). Efektivitas Elektronik Surat Pemberitahuan Pajak Pertambahan Nilai (e-SPT PPN) di Kantor Pelayanan Pajak (KPP) Pratama Surabaya Sawahan. *Publika*, 1(3).
- Lado, Y. O., & Budiantara, M. (2018). The Effect of Implementing the E-Filing System on the Compliance of Individual Taxpayers for Civil Servants With an Understanding of the Internet as a Moderating Variable (Case Study at the Yogyakarta Department of Industry and Trade). *Mercu Buana Accounting Research Journal*, 4(1), 5984.
- Lannai, D. (2024). Enhancing Audit Judgment: The Role of Auditor Experience in Moderating Task Complexity and Time Budget Pressure. *Seybold Report Journal*, 19(3), 101–114. <https://doi.org/0.5110/77.1123>
- Lannai, D., & Insyirah, A. A. (2024). Persepsi Kemudahan dan Keamanan Data dalam Pembayaran Pajak Kendaraan Bermotor Melalui Aplikasi E-Commerce. *Jesya (Jurnal Ekonomi Dan Ekonomi Syariah)*, 7(2), 1958–1970.
- Mardiasmo, M. B. A. (2016). *PERPAJAKAN–Edisi Terbaru*. Penerbit Andi.
- Mulyati, Y., & Ismanto, J. (2021). Pengaruh Penerapan E-Filing, Pengetahuan Pajak dan Sanksi Pajak terhadap Kepatuhan Wajib Pajak pada Pegawai Kemendikbud. *Jurnal Akuntansi Berkelanjutan Indonesia*, 4(2), 139–155.

- Pangestu, D. A. (2024). *Pengaruh sosialisasi perpajakan dan program samsat setempat terhadap kepatuhan wajib pajak kendaraan bermotor di kota Pangkalpinang*. Institut Agama Islam Negeri Syaikh Abdurrahman Siddik.
- Pangkey, I., & Pinatik, S. (2016). Analisis efektivitas dan efisiensi anggaran belanja pada dinas kebudayaan dan pariwisata provinsi Sulawesi Utara. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 3(4).
- Pawama, S. D., Sondakh, J. J., & Warongan, J. D. L. (2021). Pengaruh kesadaran wajib pajak, transparansi pajak dan Penggunaan aplikasi e-filing terhadap kepatuhan wajib pajak orang pribadi pada umkm di kota Manado. *JURNAL RISET AKUNTANSI DAN AUDITING" GOODWILL"*, 12(2), 167–178.
- Pratiwi, R. A., & Heriyanto, H. (2024). Analisis Faktor yang Mempengaruhi Kepatuhan Wajib Pajak Dalam Membayar Pajak Kendaraan Bermotor di Kantor Samsat Soreang. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 5(1), 139–150.
- Rahim, S., Rati, S., & Syahnur, K. N. F. (2023). Tax Morale dan Kepatuhan Pajak: Studi Empiris pada UMKM di Kota Makassar. *Jurnal Ekonomi Bisnis, Manajemen Dan Akuntansi (JEBMA)*, 3(3), 863–874.
- Rahmadani, E. G., Kusbandiyah, A., Mudjiyanti, R., & Pramurindra, R. (2024). Pengaruh Firm size, ROA, Thin capitalization Terhadap Penghindaran Pajak Dengan Kepemilikan Institusional Sebagai Variabel Moderasi. *Journal of Accounting and Finance Management*, 5(3), 438–455.
- Ramlawati, R., Bahari, A. F., & Syahnur, M. H. (2022). Company's Performance as Measured by the Application of Big Data Analysis Capabilities for Customers. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, 9(1), 109–126.
- Sari, P. A., & Handini, B. T. (2021). Pengaruh Kepemilikan Manajerial, Institusional Dan Komite Audit Terhadap Pengungkapan Corporate Social Responsibility. *EL MUHASABA: Jurnal Akuntansi (e-Journal)*, 12(2), 102–115.
- Sedarmayanti. (2010). *Sumber Daya Manusia dan Produktivitas Kerja*. CV Mandar Maju.
- Sudirman, S. R., Lannai, D., & Hajering, H. (2020). Pengaruh Norma Subjektif, Kewajiban Moral Dan Pemahaman Peraturan Pajak Terhadap Kepatuhan Wajib Pajak Pada Kpp Pratama Makassar Utara. *Amnesty: Jurnal Riset Perpajakan*, 3(2), 164–190.
- Syahnur, M. H., Basalamah, J., & Gani, A. A. (2020). Customer Experience Factor Analysis Towards Customer Satisfaction Online Shopping. *Jurnal Analisis Bisnis Ekonomi*, 18(2), 83–94.