The effects of e-government, e-billing and e-filing on taxpayer compliance: A case of taxpayers in Indonesia

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ABSTRACT

The purpose of this study is to analyze the effects of the application of e-government, e-billing and e-SPT on taxpayer compliance. This type of research is quantitative research. The variables in this study consist of one dependent variable and three independent variables. The dependent variable is taxpayer compliance, while the independent variables are application of e-government, application of e-billing, and application of e-filing (e-SPT). The population in this study is Indonesian taxpayer. The sample in this research was 430 respondents who filled out the Likert Scale questionnaire. The sampling technique in this study was incidental sampling, with research instruments using online questionnaires distributed via social media. The data analysis technique in this study used a structural equation model (SEM) with SmartPLS 3.0 software. The results of this study indicate that the application of e-government had a positive and significant effect on taxpayer compliance, the application of e-billing had a positive and significant effect on taxpayer compliance, and the application of e-SPT had a positive and significant effect on taxpayer compliance.

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Keywords: e-government e-Billing e-Filing Taxpayers Taxpayer Compliance Indonesia

1. Introduction

Advances in information and communication technology in the era of the industrial revolution 4.0 have encouraged the development of electronic applications in government affairs, commonly known as e-government. E-government is made with the aim of improving service quality which refers to the principle that performance becomes better, cheaper, faster and can be well received by users (deliverable) (Widyawati et al., 2020). Besides being able to improve service quality, e-government applications can also improve good governance. According to Adnyana et al. (2020), the implementation of e-government aims to make the public service process from government administrators to the community more effective, efficient and responsive. The purpose of implementing an Electronic-Based Government System (SPBE) besides being able to realize better governance, can also improve the quality of public services and increase community participation in implementing development. According to Bhuasiri et al. (2016), the use of information technology in e-government can be applied in various forms. At the simplest level, it can be a web page, which informs the virtual existence of an institution. At a higher level, it can be an application created to serve a certain function. Application development aims to increase efficiency, simplify and expand the reach of public services (Sahade & Adi, 2021).

The Self-Assessment System is used to collect taxes in this country (Adnyana et al., 2020). It is a tax collection system that allows taxpayers to know for themselves how much tax they must pay each year, according to tax laws and regulations (Aliah

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ISSN 2561-8156 (Online) - ISSN 2561-8148 (Print)
© 2023 by the authors; licensee Growing Science, Canada.
doi: 10.5267/j.jdnds.2022.12.007
et al., 2020; Amin et al., 2021). Taxpayers are trusted to calculate their own taxes, track taxes owed and pay themselves, report taxes owed, and account for taxes owed. To make this system work, taxpayers must be aware and understand how important it is to pay taxes continuously, honestly, openly and on time, as required by laws and regulations in Indonesia. In recent years, the number of taxpayers paying taxes has increased, but this number is still considered low (Amin et al., 2021; Bhuasiri et al., 2016). This is because it seems that many taxpayers are still trying to cover their real income so that their taxes are lower than their obligations. This is also compounded by ignorance of existing tax laws and sanctions (Bhuasiri et al., 2016).

At present time, the development of Internet technology has reached very rapid development (Adnyana et al., 2020). Internet applications have been used for e-commerce and are developing for the use of Internet applications in government environments known as e-government (Bhuasiri et al., 2016). E-government is the use of information and telecommunications technology for efficient and effective administration of government, as well as providing transparent and satisfactory services to the public. The successful development of e-government cannot be separated from the application of good governance in the application of e-government. The principles applied in e-government are participation, law enforcement, transparency, equality, responsiveness, foresight, accountability, supervision, efficiency & effectiveness, and professionalism. Its application aims to control the organization and can be carried out (Badiyono et al., 2019). Furthermore, electronification is often associated with internet usage. The internet is a network of computer circuits that are connected through several circuits. An organization can limit their network access only to members of the organization by using the internet (Bhuasiri et al., 2016).

However, in establishing communication with external companies, extranets and the internet are easy and practical solutions. With the internet, the process of searching for data, information, and even the process of communication becomes much faster. This provides effectiveness and efficiency for its users, apart from saving more in terms of time and cost, the use of the internet in searching for data and information provides more complete and accurate results. E-government is the application of internet-based information technology and other digital devices managed by the government for the purpose of conveying information from the government to the public, business partners, employees, business entities and other institutions online (Amin et al., 2021; Anwar et al., 2021).

The government continues to strive to bring in more tax money by updating services for taxpayers and improving the way taxes are regulated and implemented (Putri et al., 2022). In the form of e-billing, the use of new information technology to report tax obligations is a sign of further modernization as a concrete manifestation of the Director General of Taxes (DCT) to show what taxpayer is doing. This is done by modernizing information technology with electronic systems, such as e-system, e-SPT, e-filing, and e-billing. E-Billing is the payment of a tax that is carried out electronically and uses a billing code. By using a billing code, tax payments can be made like a bank or postal service (Harianto et al., 2020; Hussein et al., 2011). This is due to lack of socialization from DGT and most taxpayers do not know how to use the internet to file taxes. So, taxpayers think it will be more difficult using e-billing than doing it manually. The use of e-billing, on the other hand, will make it easier for taxpayers to file SPTs and ensure their accuracy (Hung et al., 2006; Lubis et al., 2020). However, sometimes taxpayers complain that they must wait a long time just to generate a Billing Code due to the unavailability of adequate computers. On the other hand, if the system has problems or is down, taxpayers wait a while to generate a Billing Code, and many people still lie about how much money they made when they filled in their Billing Code. All taxpayers who do not comply with the law will receive an administrative sanction. Administrative sanctions for tax assessments and tax bills include fines, interest and increases. For violating tax laws and regulations, criminal penalties come in the form of confinement and imprisonment. Some taxpayers still do not know and do not understand enough about taxes and taxpayers who say that they will only get into trouble if they do not submit their Annual SPT (Lubis et al., 2020; Putri et al., 2022).

2. Literature Review

2.1 Electronic Government (e-government)

Studies on e-government have been carried out in various parts of the world, especially to explain the transformation of government services through online media. This research includes e-government problems from the perspective of weak legislative coordination, a case study in the European Union. Huang et al. (2002) explore the success factors of e-government in Australian public services, where the dominant factor is determined by perceived ease of use and perception usefulness. Furthermore, these factors were further explored by Wuarmmanuk et al. (2019) and Zulita et al. (2018) related to the determinants of the level of individual acceptance of the implementation of e-gov case study in Taiwan. The aim of developing e-gov in Indonesia is to develop (using) electronic-based governance to improve the quality of public services effectively and efficiently. To achieve this goal, the development of e-government is directed at 4 (four) main objectives, namely: (1) Formation of a network of information and public service transactions that have quality and scope that can satisfy the wider community and can be reached in all regions of Indonesia; (2) Formation of interactive relations with the business world in order to increase the development of the national economy and strengthen the ability to deal with changes and competition in international trade; (3). Formation of mechanisms and channels of communication with state institutions and provision of public dialogue facilities for the public so that they can participate in the formulation of state policies; (4). Establishment of management systems and work processes that are transparent and efficient as well as facilitate transactions and services between government agencies and autonomous regional governments. The implementation of e-government in Indonesia has not been fully successful. According to Zulita et al. (2018) stated the causes of the failure of e-government implementation, namely:
(1) Lack of public awareness in participating in the use of e-government. (2) Inadequate preparation of human resources for positions that are in accordance with their level of education and expertise, including the availability of adequate numbers of human resources; (3) Support in the form of a budget that is not a top priority in e-government development. (4) Lack of Information Technology infrastructure provided for the public to facilitate access to services. Related to organizational support in e-government implementation, Zulita et al. (2018) explained that the success of e-government implementation is influenced by 4 (four) factors, namely human resources, budget, infrastructure and leadership. However, Parent (2009) states that the use of the internet to transact with the government has a significant positive impact on public trust and political expediency. Thus, government organizations need to introduce e-government to increase public trust in bureaucracy and government.

2.2 Tax E-Filing

E-Filing taxes is an application designed to make it easier for taxpayers to fill out tax returns electronically (Wuarmanuk et al., 2019; Zulita et al., 2018). Tax Return (SPT) is a letter used by taxpayers to report the calculation and/or payment of taxes, tax objects and/or non-objects, and/or assets and liabilities in accordance with the provisions of the tax laws and regulations. SPT consists of Periodic SPT and Annual SPT. Periodic SPT is a tax return for a tax period, while annual SPT is a tax return for a tax year or part of a tax year. Submission of this SPT is also a manifestation of the implementation of a self-assessment tax system. Wijayaa et al. (2021) conducted research on the factors that influence the behavior of taxpayer acceptance of e-filing in Indonesia using the Technology Acceptance Model (TAM) method. The results of some other studies also show that the application of e-filing causes no significant effect of Behavioral Intention on Actual Use (Yusup et al., 2015; Juwaini et al., 2022; Wuarmanuk et al., 2019; Zulita et al., 2018). Besides that, complexity has a significant influence on Actual Use, as well as Gender also has a significant influence on Perceived Ease of Use. Thus, the perceived complexity of users is a major factor for the success of e-filing. In addition, the gender factor needs to be considered in increasing taxpayer perceptions of e-filing (Rosalina & Wardhani, 2020).

3. Method

The variables in this study consist of one dependent variable and three independent variables. The dependent variable is taxpayer compliance while the independent variables are application of e-government, application of e-billing, and application of e-filing (e-SPT). The population in this study is the Indonesia taxpayer. The sample in this study was 430 respondents who filled out the Likert Scale questionnaire. The sampling technique in this study used the incidental sampling through online questionnaires distributed by media social. The data analysis technique in this study used structural equation modeling (SEM) with SmartPLS 3.0 software tools.

The research hypothesis is:

**H1:** Implementation of E-government has a positive and significant effect on taxpayer compliance.

**H2:** Implementation of E-Billing has a positive and significant effect on taxpayer compliance.

**H3:** Implementation of E-SPT has a positive and significant effect on taxpayer compliance.
4. Result and Discussion

This research model will be analyzed using the Partial Least Square (PLS) method and assisted by the SmartPLS 3.0 software. There are 3 values, namely Fornell-Larcker Criterion, Cross Loading and Heterotrait-Monotrait Ratio. The Fornell-Larcker Criterion value is the value that is on the diagonal and is compared with the correlation value of the construct below it. This value must be above the construct correlation value. It turns out that the values obtained are all above the construct values.

Table 1
Fornel-Laker Criterion

<table>
<thead>
<tr>
<th>Construct</th>
<th>E-government</th>
<th>e-Billing</th>
<th>E-SPT</th>
<th>taxpayer compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-government</td>
<td>0.814</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e-Billing</td>
<td>0.187</td>
<td>0.809</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-SPT</td>
<td>0.209</td>
<td>0.176</td>
<td>0.876</td>
<td></td>
</tr>
<tr>
<td>taxpayer compliance</td>
<td>0.307</td>
<td>0.487</td>
<td>0.367</td>
<td>0.712</td>
</tr>
</tbody>
</table>

After the Fornell-Laker Criterion value is checked, the next check is Cross Loading. Cross Loading check is to check an indicator that belongs to a certain variable by looking at the highest value. To make it easier to see Cross Loading. The loading factor value is bigger than 0.7 which is claimed to be valid, during this study, the loading factor limit used was 0.7.

Table 2
Construct Reliability and Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-government</td>
<td>0.806</td>
<td>0.808</td>
<td>0.826</td>
<td>0.643</td>
</tr>
<tr>
<td>e-Billing</td>
<td>0.803</td>
<td>0.845</td>
<td>0.808</td>
<td>0.634</td>
</tr>
<tr>
<td>E-SPT</td>
<td>0.813</td>
<td>0.865</td>
<td>0.909</td>
<td>0.729</td>
</tr>
<tr>
<td>taxpayer compliance</td>
<td>0.834</td>
<td>0.808</td>
<td>0.807</td>
<td>0.876</td>
</tr>
</tbody>
</table>

The next check is the Construct Reliability and Validity check. The reliability check is represented by 3 values, namely Cronbach’s Alpha, rho_A and Composite Reliability. The value of the Rule of Thumbs is above 0.7. If only one of them is reliable, then the construct is reliable. The AVE value has also exceeded the Rule of Thumbs by over 0.5. So it can be ascertained that all values are valid.

Based on the estimation results of the PLS model in the picture above, all indicators have a loading factor value above 0.5 so that the model has met the convergent validity requirements. The next evaluation is to see and compare discriminant validity and the square root of average variance extracted (AVE). According to Purwanto and Sudargini (2021) the measurement model is assessed based on the measurement of cross-loading with the construct. If the correlation between the constructs with each indicator is greater than the size of the other constructs, then the latent construct predicts the indicator better than the other constructs. According to Hair et al. (2018) if the value is higher than the correlation value between the constructs, good discriminant validity is achieved (if AVE> 0.5). The following are the measurement results with AVE for each indicator.
The number of R-Square is 0.559, which means that 3 research variables explain 55.9% of the research model. There are 3 categories 0.75, 0.5 and 0.25 indicating a strong, moderate and weak model.

Hypothesis testing is carried out based on the findings of the inner model, which comprises the r-square output, parameter coefficient, and t-statistic, according to Hair et al. (2017). SmartPLS (Partial Least Square) 3.0 software was used to conduct the hypothesis testing for this study. The t-statistic > 1.96 was utilized in this investigation, with a significance threshold of p-value 0.05 (5 percent) and a positive beta coefficient. The value studied in testing the hypothesis is the value in the t-statistic derived from the PLS output by comparing it to the t-table value.

### Table 3

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>T Statistics</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of E-government - taxpayer compliance</td>
<td>2.820</td>
<td>0.000</td>
</tr>
<tr>
<td>Implementation of E-Billing - taxpayer compliance</td>
<td>5.360</td>
<td>0.000</td>
</tr>
<tr>
<td>Implementation of E-SPT - taxpayer compliance</td>
<td>3.160</td>
<td>0.000</td>
</tr>
</tbody>
</table>

4.1 The Effect of Implementing E-government on Taxpayer Compliance

Based on the results of multiple linear regression analysis, the significance is 0.05 (= 5%) or (0.000 < 0.05), which means that this data has a significant effect, the implementation of e-government has a positive and significant effect on taxpayer compliance. Advances in information and communication technology in the era the industrial revolution 4.0, has encouraged the development of electronic applications in government affairs, commonly called e-government. E-government is made with the aim to improve service quality which refers to the principle that performance becomes better, cheaper, faster and can be well received by users (deliverable). Besides being able to improve service quality, e-government applications can also improve good governance. According to Adnyana et al. (2020) the implementation of e-government aims to make the public service process from government administrators to the community more effective, efficient and responsive. The purpose of implementing an Electronic-Based Government System (SPBE) besides being able to realize better governance, can also improve the quality of public services and increase community participation in implementing development. According to Bhuasiri et al. (2016) The use of information technology in e-government can be applied in various forms. At the simplest level, it can be a web page, which informs the virtual existence of an institution. At a higher level, it can be an application created to serve a certain function. Application development aims to increase efficiency, simplify, and expand the reach of public services.
4.2 The Effect of Implementing E-Billing on Taxpayer Compliance

Based on the results of multiple linear regression analysis, the significance is 0.05 (= 5%) or (0.000 <0.05), which means that this data has a significant effect, the application of e-billing has a positive and significant effect on taxpayer compliance in the city of Padang. This means that the ease of use and services offered by this system have a major effect on how well the taxpayer makes a payment. E-billing can make it easier for taxpayers to pay bills. On the other hand, if e-billing is not easy and cheap to use, it will reduce the number of taxpayers who pay bills on time. Based on the research results, it is known that the public can already use e-billing. This can be seen from the fact that the respondents were able to do it. This means that the public's answers regarding the use of billing in the good category show that the ease of paying taxes is the most important factor in using e-billing. In this study, taxpayers have been very good at following the rules. This can be seen from the fact that 82% of those asked gave the correct answer. This makes it the most important indicator. E-billing is an electronic system used to handle taxes. Some people describe e-billing as the use of a billing code as a transaction code in paying taxes via electronic means. E-billing is used to simplify and facilitate tax payments for taxpayers because it saves time, is easy and can be implemented anywhere. That way, services can be done quickly and well. E-billing can certainly make taxpayers happier and more satisfied. If e-billing is easier to use and makes taxpayers happy and satisfied, then personal taxpayer will be more responsible in paying taxes. Tjondro et al. (2019) performed a study and reported that work culture, digital governance, and employee happiness have the influence of work culture on the happiness index, so that work culture and e-governance jointly affect the happiness index. These results provide an illustration that there is a positive relationship between happiness: (1) the amount of free time that can be found at work; (2) interpersonal relationships that occur in the workplace; (3) work environment and safety; (4) facilities in the workplace; (5) life autonomy, which gives freedom to people to make their own choices in the workplace; and (6) integrative functioning and satisfaction found in the workplace.

4.3 Effect of the implementation of the E-SPT on Taxpayer Compliance

From the multiple linear regression analysis, the significant significance is 0.05 (= 5%) or (0.000 <0.05), which means that this data has a significant effect, the implementation of the e-SPT variable has a positive and significant effect on the compliance taxpayer. As for those who give influence, namely e-SPT, because this is a component for a tax administration system. That is, a taxpayer can provide his tax obligations, the e-SPT system must function properly, and the taxpayer must understand how it works. Based on research findings, people can use e-SPT. This can be seen from the fact that the respondents passed the test. This means that the public's response to the use of billing in the good category is that outreach to taxpayers is the most important indicator in using e-billing. The findings of this study reinforce Rahayu's theory, which states that a tax administration system functions effectively if it is supported by strong tax institutions. Tax officers and individuals will find it easier to check their tax obligations, pay their taxes, and report them as a result. Apart from that, the research findings agree with the research conducted by Santhanamery et al. (2014) and Tjondro et al. (2019) who found that the use of e-SPT has a significant effect on taxpayer compliance. Meanwhile, research from Syahril et al. (2022) shows that the use of e-SPT has a significant and beneficial effect on taxpayer compliance. Of course, it shows that taxpayers will be more obedient to the law if the e-SPT system, which is a component of the state administration system is implemented. Public service innovation needs to be supported by the application of technology. The use of technology can also help connectivity between agencies in completing various administrative services and other supporting tasks. That way, it can provide convenience for apparatus in organizing and managing databases and administration. The speed of technology will affect the services provided. Public services must be based online using information technology. The use of technology is one aspect that supports public services in government. With technology, public services can be completed quickly and precisely, easily and cheaply. This is what became known as electronic government (e-gov). The results of this study provide evidence that increasing service quality will increase customer satisfaction. Many academics and researchers agree that customer satisfaction is a specific measure for each transaction. This is also supported by several previous studies which also state that there is a close and positive relationship between the quality of services provided and user satisfaction. Research conducted by Lubis et al. (2020) and Putri et al. (2022) show that there is a dominant influence between service quality and customer satisfaction, besides that the results of the study show that service quality and customer satisfaction have a very strong correlation or have a significant influence on customer satisfaction. Furthermore, Hussein et al. (2011) and Hung et al. (2006) in their research show that service quality, information quality and system quality are positively related to user satisfaction with a very strong and significant correlation.

According to Hung et al. (2006), Lubis et al. (2020) and Putri et al. (2022), the tax modernization program was created to produce better, integrated and personalized services, one of which can be achieved is by making the most of IT. E-filing is a modernization program designed to make the most of IT. To use e-filing, taxpayers need a set of computers that are connected to the internet network and must have a good understanding of IT. With a system like this, taxpayers no longer need to come to the tax office so that it will save time and costs incurred by taxpayers. This shows that the use of IT in tax modernization is very useful in improving services to taxpayers. By utilizing IT, taxpayers are provided with various facilities in carrying out their tax obligations so that it is hoped that taxpayers will be satisfied with the system and services provided by the tax office. However, in practice e-filing is not yet fully a form of e-government and is not in accordance with the objectives of the modernization program, namely the application of full automation because to obtain e-FIN taxpayers must come to the Tax Service Office and fill out all registration forms manually. E-government is defined as an interaction mechanism between
the government and the community using information technology which aims to increase the effectiveness and efficiency of services to the community. The application of full automation means that all service processes to the community are carried out through online media which aims to provide more effective and efficient services so that they are in line with the intent of e-government. The role of the e-filing program can be seen from how effectively e-filing can eliminate factors which affect the level of compliance of taxpayers in carrying out their tax obligations. These factors consist of individual differences, feelings of injustice, perceptions of low risk and risk taking. The first factor is the factor of individual differences, elderly taxpayers or parents tend to be reluctant to do e-filing, they prefer to report SPT manually or come directly to the tax office, this is due to their lack of knowledge about IT. E-filing is a system created to support the implementation of good governance, in accordance with the goals of tax modernization. The e-filing system is designed to reduce or even eliminate direct interaction between taxpayers and tax officials so that the potential for Corruption, Collusion and Nepotism (KKN) can be prevented. The third factor is the perception of low risk. E-filing is a new program from the Directorate General of Taxes, to introduce eFiling, the Pratama Tax Service Office apparatus has conducted outreach to various agencies and also through other means such as placing banners, distributing brochures and appealing via SMS Broadcast.

5. Conclusion

Based on the results of the study it was concluded that the application of e-government had a positive and significant effect on taxpayer compliance, the application of e-billing had a positive and significant effect on taxpayer compliance, the application of e-SPT had a positive and significant effect on taxpayer compliance. Several factors supporting the implementation of e-government include adequate facilities and infrastructure, adequate human resources, coordination, and cooperation between e-government implementers, as well as security systems and adequate data and information backups. The inhibiting factors of implementing e-government include inadequate facilities and infrastructure, human resources that run e-government, poor coordination between e-government implementers and inadequate security and data and information backup systems.

References


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