The Effect of PBB-P2 Online Service Quality on Taxpayer Compliance with Taxpayer Satisfaction as an Intervening Variable in Sidoarjo Regency

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Abstract. The use of technology in government institutions has become increasingly widespread, including in the tax system. One such technology-enabled service is the online platform for the Rural and Urban Land and Building Tax Sector (PBB-P2). In Sidoarjo Regency, PBB-P2 is a regional tax that is associated with high complexity of problems, high arrears, and suboptimal realization rates in 2021. These factors indicate that the level of taxpayer compliance may be low, possibly due to poor service quality or a lack of satisfaction among taxpayers. This research aims to investigate the indirect impact of PBB-P2 online service quality on taxpayer compliance through the mediation of taxpayer satisfaction. To collect data, an online survey was distributed to 70 taxpayers in Sidoarjo Regency. The data were analyzed using Partial Least Square (PLS) with SmartPLS 3.3.5 software. The study findings reveal that taxpayer satisfaction can mediate the relationship between PBB-P2 online service quality and taxpayer compliance.

Keywords: PBB-P2 Online Service Quality · Taxpayer Satisfaction · Taxpayer Compliance

1 Introduction

Tax revenue can be said to be successful, depending heavily on taxpayers who are aware of paying taxes. Gomies and Pesoth [1] explained that the taxpayer is the main factor that can determine success or failure of tax collection and collection activities. Therefore, taxpayers need to be given the most honorable place, such as getting the best service and guaranteed legal certainty. Providing the best service to taxpayers is a form of positive appreciation for their willingness to contribute and willing to pay taxes. However, in reality there are still many service processes that have many obstacles.

Widjaja [2] says that generally bureaucracy in the sense of society is often associated with things that are slow, convoluted and formalities. This causes the process of completing services and all matters to be delayed, which in the end the taxpayer does not want to complete his obligations. The community as taxpayers has the right to get services that are not slow, clean and satisfying [3].

Before the COVID-19 pandemic, service activities for taxpayers could come directly to the tax service office with face-to-face interaction as usual. However, since the pandemic, tax service activities in each region have changed. At the end of March 2020, regulations regarding Large-Scale Social Restrictions (PSBB) were issued, which caused tax service offices throughout Indonesia to temporarily close so that both taxpayers and service activities were advised to be carried out online. The tax service inevitably has to adapt to the pandemic so that it can still provide the best service for taxpayers.

The utilization of technology in tax service activities, particularly during the COVID-19 pandemic, is essential in providing efficient and effective services while overcoming existing process problems. The adoption of various service activities without physical face-to-face interactions can strengthen the relationship between the government and society. Aguzarova [4] highlighted the potential benefits of technology in the taxation system, such as increasing the speed of taxation processes, reducing administrative and control costs, simplifying the taxation process, and facilitating payments. Therefore, it is crucial for the government to explore the potential of information and communication technology to optimize the implementation of e-Government activities [5] to enhance the service quality of tax and increase taxpayer compliance.

The implementation of e-Government has also been carried out by the Regional of Tax Service Agency (BPPD) in Sidoarjo Regency which has been serving taxpayers online since May 30, 2020. The Sidoarjo Regency BPPD has shifted face-to-face service activities to online services via Whatsapp and email as a precaution against the spread of COVID-19. The online local tax service, especially Whatsapp, serves all types of local taxes.

Taxpayers in Sidoarjo Regency can provide services starting from the taxpayer registration stage, determination, payment, reporting, and tax collection. In fact, currently taxpayers can access Regional Tax Returns (SPTPD), Tax Returns Payable (SPPT), supervise the service process for taxpayer files, and print PBB arrears online through the official website of the Sidoarjo Regency BPPD.

According to Yanuardi and Niswah [6], of several types of local taxes in Sidoarjo Regency, the Rural and Urban Land and Building Tax sector (PBB-P2) is a regional tax that has the highest level of complexity of problems. This is because there are several factors, such as taxpayers who do not want to pay or avoid, taxpayers often complain about the amount of PBB-P2 owed, there is limited time for taxpayers to come to the payment counter, and in some cases there are taxpayers who are no longer able to pay taxes. Occupy the area so that the SPPT is not submitted and the taxpayer does not pay.

In addition, data on receivables for PBB-P2 until June 2021 has accumulated up to Rp 410 billion which is considered unreasonable because it has exceeded the PBB-P2 revenue target in 2021 [7]. Data on PBB-P2 arrears in Sidoarjo Regency which is very high shows that there are taxpayers who still have not fulfilled their tax obligations. This is also reinforced by data on the target of PBB-P2 revenue for Sidoarjo Regency in 2021 which can only be fulfilled at 74% of the target (www.pajakarea.sidoarjokab.go.id). Based on these data, it shows that the taxpayer compliance in Sidoarjo Regency is still quite low.

Taxpayers who do not pay or do not comply are suspected to be due to a decrease in service quality or unfulfilled taxpayer satisfaction [1]. To enhance the quality of online

services on taxpayers, an electronic-based information system can be measured by a method called e-Government Quality (e-Govqual). This is supports research by Septa et al. [8], analyzed the quality of e-Government services with the e-Govqual approach.

When providing a service, the service provider must refer to the main goal of service, namely taxpayer satisfaction. Research by Silalahi et al. [9] states that taxpayer satisfaction is influenced by the services of quality. If the taxpayer is satisfied with the services that have been given by the tax officer, it can affect on the taxpayer to comply in carrying out his tax obligations. This is supported by Ariani and Biettant [10] which states that taxpayer satisfaction as an intervening variable between service quality variable and taxpayer compliance variable has a significant effect. However, in contrast to the research by Dewi et al. [11] explaining that, the tax service factor did not affect the taxpayer compliance during a pandemic.

Previous studies have tended to focus on non-administrative service activities, specifically e-payments located at the Tax Service Office (KPP), rather than services provided by local governments, such as the BPPD. Furthermore, there is a scarcity of research that examines the time period during the COVID pandemic. Therefore, the novelty of this research lies in its focus on the online services provided by BPPD Sidoarjo Regency during the COVID-19 pandemic. These services are targeted towards taxpayers who need to take care of administrative files related to local taxes, such as PBB-P2. By examining the provision of online services during a time of crisis, this research seeks to shed light on the effectiveness and efficiency of online government services, as well as their ability to meet the needs of taxpayers during challenging times. Understanding the impact of the pandemic COVID-19 on online government services is critical, as it can inform future policy decisions and help governments to better serve their citizens.

2 Literature Review

2.1 Attribution Theory

This theory explains how humans evaluate and determine the causes of other people's behavior. According to Heider [12], the behavior of others can be caused by situations originating from external factors or dispositional originating from internal factors. External factors can come from environmental forces such as situational pressures that influence a person's behavior, while the internal factors come from the psychological elements of a person such as traits and characters that affect a person's behavior. This study uses theory of attribution because it makes an analogy that the compliance behavior of taxpayers as individuals can be controlled by internal and external factors. External factors in this study are the quality of PBB-P2 online services, and internal factors in this study are taxpayer satisfaction.

2.2 Taxpayer Compliance

Ariani and Biettant [10] explain that the taxpayer compliance is a condition where the taxpayer has fulfilled all obligations and exercised his taxation rights. According to Nurmantu [13], a taxpayer compliance consists of two types of compliance, that is

material and formal compliance. The formal compliance is a situation when the taxpayer performs his obligations formally in accordance with tax regulations, including:

1. Taxpayers pay have taxes on time.
2. Taxpayers pay have the right amount of tax.
3. Taxpayers have no dependents.

Meanwhile, material compliance is a where that the taxpayer substantially complies with all tax rules in confirmation with the content of the tax law, including:

1. Taxpayers want to provide report tax-related information, if the tax officer needs information.
2. Taxpayers assists officers in the tax administration process.
3. Taxpayers believe that fulfilling tax obligations is an act of good citizens.

2.3 PBB-P2 Online Service Quality

Service is to serve the needs of the community related to taxation in accordance with established rules [14], while the quality of online services is connected to the assessment of services provided online. The services provided on the tax officials to PBB-P2 taxpayers include:

1. Determination of PBB-P2.
2. Determination of the tax return payable (SPPT) that is fair and in accordance with reality.
3. Reduction or objection to the imposition of PBB-P2 granted.
4. Counseling on information, especially in the field of PBB-P2.
5. Ease of payment of PBB-P2.

PBB-P2 services provided by the Sidoarjo Regency BPPD since May 30, 2020 have been carried out online via e-mail and Whatsapp including SPPT mutations, SPPT corrections, SPPT cancellations, PBB objections, PBB reductions, and registration of new objects. In addition, PBB-P2 services through the official website of the Sidoarjo Regency BPPD include viewing PBB bills, printing PBB-P2 SPPT independently, monitoring service files that are being submitted, and there is an explanation of the requirements along with the forms required by taxpayers if they will carry out PBB-P2 services. However, in 2022 the Sidoarjo Regency BPPD has made several changes, the PBB-P2 online service is carried out only on one Whatsapp number covering the entire Sidoarjo Regency area. This service is known as the Tax Hotline Service (WA).

2.4 E-Govqual

E-Government quality is a technique developed by Papadomichelaki and Mentzas [15] to assess the effectiveness of electronic information systems in delivering to the public. It is a method for evaluating the quality of e-government services provided by public agencies. The goal of E-Govqual is to measure the level of satisfaction of citizens with e-services offered by a government agency, as well as to identify areas for improvement in these services. This methodology is considered a valuable tool for governments and public agencies to ensure the high-quality electronic services to citizens. The e-Govqual
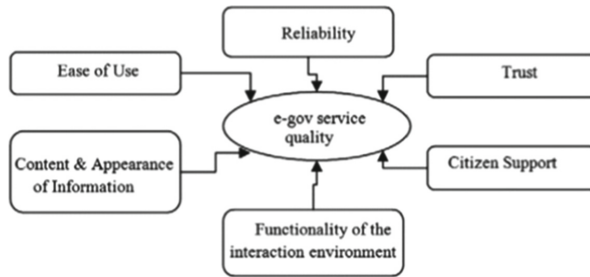
Fig. 1. Dimension e-Govqual.

method consists of six dimensions, namely, e-services offered by a government agency (Fig. 1) [15]:

1. Ease of Use (navigation, technical efficiency and personalization), namely the dimensions of the level of ease of use.
2. Trust (privacy, security), namely the dimensions of the level of user trust.
3. Interaction functionality (support in filling out forms), namely the dimension of the service's ability level in interacting with users to collect information.
4. Reliability, namely the dimension of reliability or with regard to the ability to provide accurate and reliable services without making any mistakes.
5. Content and Display of Information, namely of information quality and display of information provided to users.
6. Citizen Support (Interactivity), namely the dimension of support or related to the ability to help solve problems faced by users.

2.5 Taxpayer Satisfaction

Silitonga in Ariani and Biettant [10], explains that satisfaction and dissatisfaction are a person's opinion to the discrepancy difference between perceived expectations and the actual performance that is felt after its use. According to Kotler and Susanto [16], satisfaction is the level of a person's feelings, such as happy or disappointed, after they compare the impression of their perceived performance with their expectations. If a taxpayer is satisfied when fulfilling its tax obligations, next tax avoidance and tax evasion which are still often carried out by taxpayers can be reduced. Taxpayer satisfaction can be seen from the variables of services provided and expected services.

2.6 DeLone and McLean Model

Information success model was first proposed by DeLone and McLean [17] and was further developed and adapted in 2003. This model outlines the causal relationship between the different dimensions of the information system success model created by DeLone and McLean as in Fig. 2 [17]. A system is considered successful if it encompasses all six dimensions in the model and if these dimensions have an impact on each other. The six of dimensions include system quality, information quality, service quality, intention
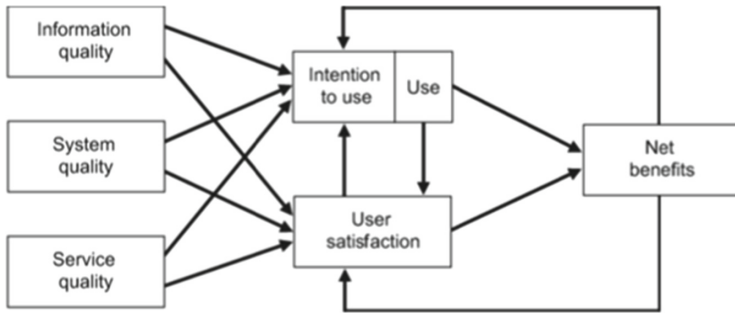
Fig. 2. DeLone and McLean model.

to use, use, user satisfaction, and net benefits. The current study focuses on the connection between service quality and user satisfaction. Overall, the information success model is a worthwhile tool for meaning and evaluating the success of information systems, and then can be applied in various contexts to improve the quality of these systems.

2.7 Hypothesis

1) Hypothesis 1 (H1): The quality of PBB-P2 online services has a positive effect on taxpayer satisfaction.
2) Hypothesis 2 (H2): Taxpayer satisfaction has a positive effect on taxpayer compliance.
3) Hypothesis 3 (H3): PBB-P2 online service quality has a positive effect on taxpayer compliance through taxpayer satisfaction as an intervening variable (Fig. 3).

3   Methods

This study utilized a convenience sampling technique to select individual and corporate taxpayers who have utilized PBB-P2 online services provided by BPPD Sidoarjo Regency as the study population. Sample in this research, was determined with the
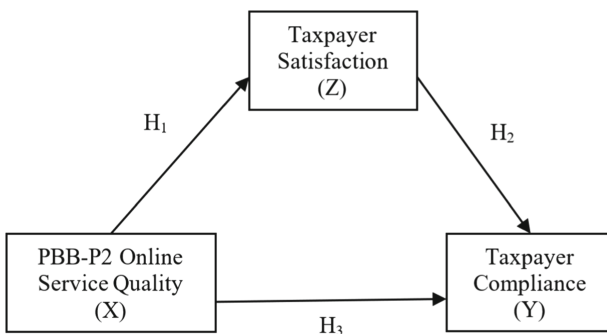

Fig. 3. Hypothesis.

Table 1. Path coefficients results.

	Original sample	Sample mean	Standard deviation	T-statistics	P-values
X > Z	0,767	0,780	0,065	11,761	0,000
X > Y	−0,083	−0,075	0,231	0,360	0,359
Z > Y	0,461	0,445	0,194	2,377	0,009

Description: X = PBB-P2 Online Service Quality, Z = Taxpayer Satisfaction, Y = Taxpayer Compliance.

Table 2. Indirect effects results.

	Original sample	Sample mean	Standard deviation	T-statistics	P-values
X > Z > Y	0,353	0,342	0,150	2,355	0,009

Description: X = PBB-P2 Online Service Quality, Z = Taxpayer Satisfaction, Y = Taxpayer Compliance.

Table 3. Research hypothesis test results.

	Hypothesis	**Original sample**	**T-statistics**	**P-values**	**Details**
H1	PBB-P2 Online Service Quality → Taxpayer Satisfaction.	0,767	11,761	0,000	Accepted
H2	Taxpayer Satisfaction → Taxpayer Compliance.	0,461	2,377	0,009	Accepted
H3	PBB-P2 Online Service Quality → Taxpayer Satisfaction → Taxpayer Compliance	0,353	2,355	0,009	Accepted

Lemeshow formula [18] as the population size could not be identified, resulting in a sample of 70 respondents. Data analysis was conducted using Partial Least Square (PLS) with the aid of SmartPLS 3.3.5 software for statistical data processing. The use of PLS is beneficial in this study because it can analyze the relationship between latent variables and observed variables, as well as modeling the complex relationships among variables.

4 Results

4.1 Structural Model Evaluation (Inner Model)

Path Coefficients
In this study, an intervening variable has been employed to examine the indirect effect

of the quality of PBB-P2 online services to taxpayer compliance (Tables 1, 2 and 3). The indirect effect is demonstrated through Indirect Effects analysis, which reveals that the quality of PBB-P2 online services has a significant impact on taxpayer compliance through the mediating variable of taxpayer satisfaction. When the relationship between the quality of PBB-P2 online services and taxpayer compliance is indirect and mediated by taxpayer satisfaction, it is referred to as full mediation [19]. Thus, the satisfaction of taxpayers in this study serves as a full mediator, indicating that quality in PBB-P2 online service has a significant and positive influence on taxpayer compliance, but only indirectly through taxpayer satisfaction. Overall, understanding the indirect effects of online government services on taxpayer compliance through mediating variables can provide valuable insights for governments seeking to improve the effectiveness of their online services and enhance taxpayer compliance.

R-Square (R^2)

Based on the Table 4, the R2 values in this study of 0.75, 0.50, and 0.25 represent strong, medium, and weak effects. R2 can show the influence of the independent variable to the other variables, namely the intervening and dependent variables. Table 4 shows that 58.2% of taxpayer satisfaction influenced by the quality of PBB-P2 online services. Then, 13.5% of taxpayer compliance influenced by the quality of PBB-P2 online services. The research path diagram which briefly describes the results of the outer loading (loading factor), R-square, and path coefficients is as follows (Fig. 4):

Table 4. R-square results.

	R-square	R-square adjusted
Taxpayer satisfaction	0,588	0,582
Taxpayer compliance	0,160	0,135
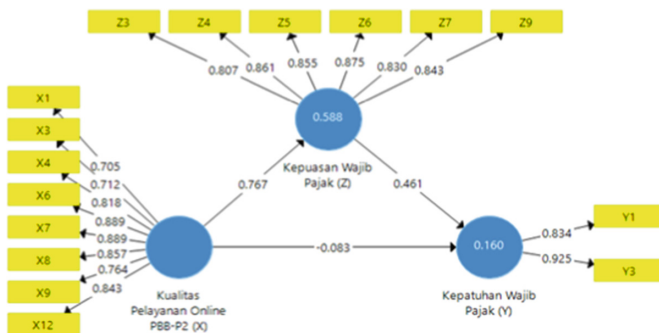
Fig. 4. Path diagram.

5 Discussion

This study examines the influence of PBB-P2 online service quality on taxpayer compliance through taxpayer satisfaction in Sidoarjo Regency. Taxpayer compliance in this study is analogous to individual behavior that can be affected by internal factors (taxpayer satisfaction) and external factors (quality of PBB-P2 online service) according to Heider's [12] attribution theory explanation. The following is a further discussion of the results of research testing:

5.1 Hypothesis 1

Based on the test results, it is evident that the quality of online PBB-P2 services, has a direct and significant positive impact on taxpayer satisfaction. This finding can be explained by the fact that the quality of services given meets the expectations of taxpayers, leading to high levels of satisfaction. This result is consistent with previous studies conducted by Widiani and Abdullah [5] and Silalahi et al. [9], which found a positive influence between service quality and customer satisfaction. However, this finding contradicts the research of Wulan and Joharis [20], which found that service quality did not meet the expectations of taxpayers. The results of this research are also endorsed by the model proposed by DeLone and McLean [17], which suggests that is a relationship between service quality dimensions and user satisfaction dimensions. Overall, this study highlights the importance of providing high-quality online government services that meet the expectations of taxpayers in order to increase satisfaction levels and improve compliance with tax obligations.

5.2 Hypothesis 2

Based on the test results shows that taxpayer satisfaction directly has an effect on taxpayer compliance. Taxpayer compliance is influenced by taxpayer satisfaction, which has a positive and significant influence on their behavior to fulfill their tax obligations. The level of satisfaction of taxpayers can affect their decision-making and individual behavior, thereby impacting their obedience towards paying taxes. This finding is endorsed by previous research owned by Albari [21], which revealed that individual taxpayers who were satisfied with the dimensions of responsiveness and empathy during the tax payment process were more likely to comply with their tax obligations. However, this finding contrasts with the results of Setiawan's [22] study, which found that reliability, assurance, and empathy had a significant impact on taxpayer compliance, when tangibles and responsiveness did not significantly impact taxpayer compliance. Overall, understanding the factors that contribute to taxpayer compliance is crucial for governments to ensure that tax systems are effective and efficient, and that taxpayers are feel satisfied with all the services that have been carried out by tax authorities.

5.3 Hypothesis 3

On this test results, it indicated that the direct effect of PBB-P2 online service quality, has no significant effect on taxpayer compliance. However, based on the indirect effect,

the quality of PBB-P2 online services has a positive and significant impact on taxpayer compliance through taxpayer satisfaction. The results of this study, can be referred to as full mediation [19] when the independent variable cannot significantly influence the dependent variable without going through the intervening variable.

The incorporation of technology in tax service activities is an essential factor that serves as a tool to improve services for taxpayers, thereby simplifying and accelerating the service process. Consequently, taxpayers will be content with the provided services, leading to a reduction in costs required for taxpayers to satisfy with tax regulations. This study's results are supported by Ariani and Biettant's [10] research, which discovered that service quality has a significant influence to taxpayer compliance through taxpayer satisfaction. However, this differs from Dewi et al. [11] findings, which assert that tax services' effectiveness is insignificant due to the PSBB rules that pose numerous challenges to online service activities.

6 Conclusion and Recommendation

6.1 Conclusions

This study shows that service quality and satisfaction of online taxpayers PBB-P2 has an effect on taxpayer satisfaction in Sidoarjo Regency. This results of this study can also prove that taxpayer satisfaction is full mediation or has an influence as a mediation between the quality of online PBB-P2 services and taxpayer compliance in Sidoarjo Regency.

6.2 Recommendations

Based on this results of the research, the Sidoarjo Regency BPPD still needs to innovate according to developments and always update data for online services provided, so that service delivery can be more effective, efficient, and interactive. This in turn can improve taxpayer compliance and reduce PBB-P2 tax arrears.

Next, further researchers can increase the sample size, extending the time for distributing the questionnaires, and expand the scope of research, so that research data is more accurate. In addition, researchers can compare the scope of research between tax service offices with one another, and furthermore researchers can also add the other variables that theoretically can influence to taxpayer satisfaction and taxpayer compliance, including taxpayer motivation, system tax payments, knowledge of taxpayers, and economic level of taxpayers.

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