Optimizing regional tax revenue with taxpayer compliance as a moderating variable in Yogyakarta

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Abstract

This study uses a quantitative approach to test the effect of the quality of tax services and digitalization of tax administration on tax revenues moderated by taxpayer compliance. The population and sample in this study were taxpayers registered with the BPAKD of Yogyakarta City and made regional tax payments. The sampling technique used was probability sampling employing the Cochran formula. Structural Equation Modeling (SEM) based on variants or Partial Least Square (PLS) with the SmartPLS version 4.0 was applied as an analysis tool. The results of this study indicate that the quality of tax services, digitalization of tax administration, and taxpayer compliance have a positive and significant effect on tax revenues. In addition, the quality of tax services and digitalization of tax administration have a positive and significant effect on taxpayer compliance. Taxpayer compliance is proven to successfully mediates the relationship between the quality of tax services, digitalization of tax administration, and tax revenues. This study offers a practical insights for the Yogyakarta City government as a regulator which emphasize the importance of improving the quality of tax services provided to taxpayers and how the digitalization system of tax administration can maximize the potential for regional tax revenues. Moreover, this study contributes to the scientific understanding and expansion of research on regional taxes.

Introduction

Regional tax revenues play a crucial role in maintaining the fiscal stability of a region amidst the current dynamics of economic development and the increasing demands for public services. As stated in the Regional Revenue and Expenditure Budget (APBD), tax is one of the three regional revenues included in the Regional Original Income (PAD) that has a great potential as a source of regional government revenue. Taxes are also a means for central and regional governments to carry out the mandate of the Undang-undang Dasar 1945, one of which is to create a just and prosperous society. Regional development will continue to be carried out by regional governments in a sustainable manner aiming to improve community welfare, both material and spiritual. Therefore, the potential for tax revenue to make a significant contribution that influences development financing is crucial for making the government's economic performance more effective (Lin & Jia, 2019; Mallick, 2021; Mpofu, 2022; Maryantika et al, 2022; Mlambo, 2022). Tax revenue will be maximized if there is cooperation between the community as taxpayers and the government as the tax collection authority.

Table 1 shows that the annual contribution of tax revenues to Original Regional Income is above 60% each year, emphasizing the importance of tax revenues for the functioning of a region's economy. The table also indicates that PAD tends to continuously increase to meet the operational needs of the region's economy. In accordance with the principle, the greater the contribution of

PAD to regional revenues, the more independent the region can be considered in carrying out its governance (Syam & Zulfikar, 2022). Gombar et al. (2022) state that high tax revenues are supported by the external and internal factors of the taxpayer. The external factors include tax socialization and tax control, and the internal factors encompass tax motivation and taxpayer compliance. Lukman et al. (2023) also mention that tax compliance, tax ratios, government policies, and the quality of tax services altogether influence tax revenues.

Table 1. Percentage of Regional Tax Revenue in Original Regional Income

Year	Regional Tax Revenue	Original Regional Income	Percentage
2019	451,285,948,031	689,049,725,509	65%
2020	342,780,587,013	563,174,371,396	61%
2021	372,462,884,357	598,121,885,337	62%
2022	482,269,519,901	725,577,542,997	66%
2023	447,281,800,000	666,746,687,031	67%

Source: Badan Pengelola Keuangan dan Aset Daerah (BPKAD) Pemerintah Kota Yogyakarta (2023)

Based on the above phenomenon, the first factor that influences tax revenue is taxpayer compliance. Mayapada et al. (2021) state that taxpayer compliance needs to be improved in order to achieve optimal tax targets. Tax compliance is an important indicator in efforts to increase tax revenue (Marlyna et al, 2022). There is a significant relationship between taxpayer compliance and tax revenue. The higher the level of taxpayer compliance, the higher the tax revenue (Prasetyo & Setiawan, 2021). However, mere compliance with tax provisions is not a strategic approach to increasing tax revenues (Ischabita & Hardiwinoto, 2022). Also, Nirvana et al. (2020) suggest that there is no influence of compliance on acceptance variables. This inconsistency implies the need to investigate other factors that influence tax revenues. Taxpayer compliance can also be viewed from the taxpayer's perspective, such as in the context of the government's good governance.

The government has implemented a series of measures to continuously increase revenue from the tax sector. One initiative is improving the quality of service provided by the tax authorities or officials. Better institutional quality and the simplification of tax payment process are the main factors that can improve tax performance in developing countries (Apeti & Edoh, 2023). Process quality cannot be achieved without service quality, making effective organizational management necessary. Tax authorities are expected to have the ability, knowledge, and experience required in tax policy, administration, and law. Moreover, as public servants, the tax authorities must uphold honesty, professionalism, and responsibility (Firmansyah & Layli, 2022). The recent issues involving tax officials have given rise to negative perceptions among taxpayers who may feel that their tax payments are not managed properly which in turn affects tax revenues. However, the researchers acknowledge that this is a subjective viewpoint because not all tax services can be assessed solely from such issues, and this highlights the urgency of this research. Hutapea and Wardhani (2023) state that if tax authorities' services excel, the perception of taxpayers will improve and ultimately increase tax revenues.

BPKAD, as an agency directly supervised by the regional government, continues to innovate and is responsible for collecting taxes from the community while making efforts to secure tax revenues, including improving the public's perception of BPKAD image, improving the effectiveness of tax administration, and strengthening tax monitoring. This manifests the implementation of long advocated reform in tax sector by the central government through the DJP. The tax reform includes two areas, namely policy reform and tax administration reform. The latter is carried out through modernization of tax administration which includes four areas: (1) organizational restructuring; (2) enhancing business processes through optimizing the use of ICT; (3) improving HR management; (4) implementation of good governance. This modernization of tax administration is expected to improve voluntary taxpayer compliance, public trust, and productivity and integrity of tax officials.

Empirical evidence of the link between digitalization of tax administration and tax revenues has been presented by Darmawan et al. (2023), who argue that digitalization of tax administration benefits an agency because it can increase tax revenues when accompanied by consistent design and implementation of tax laws. Similarly, according to Bassey et al. (2022), a success in implementing digitalization of tax administration is essential for the government because taxes are unavoidable and provide the government with a broad reach in ensuring societal prosperity through tax revenues. The higher the level of digitalization in tax administration, the greater the increase in tax revenues (Tambun & Riandini, 2022). Digitalization of tax administration integrates the government and society across the country, allowing for better supervision of the tax system (Sinambela & Putra, 2021).

The government can maximize regional income through tax revenues, which are a crucial factor in supporting the regional economy. In addition, efforts have been made by the government to enhance tax services through reforms in both policy and human resources. It is hoped that these improvements will encourage greater taxpayers' compliance. However, despite the efforts, there is still instability in tax revenues at BPKAD Yogyakarta City.

Table 2. Ratio of Target Revenue to Realized Regional Tax Revenue

Types of Tax	Ratio of Target Revenue to Realized Regional Tax Revenue (Percent per Year)				
	2019	2020	2021	2022	2023
Hotel Tax	135	65	57.5	99	98
Restaurant Tax	148.4	102	108.5	92.8	92
Entertainment Tax	94.9	28.8	22.4	107.4	100
Advertisement Tax	120.6	99.4	118.5	94.9	95.6
Street Lighting Tax	102.7	105.4	99.6	90.8	91.2
Parking Tax	99.5	61	68.1	96.4	98.7
Groundwater Tax	129.8	79.5	142.1	91.1	90.2
Land and Building Tax	106.9	118	106.7	106.3	110.3
BPHTB	118.9	149	118.3	91.5	91.8

Source: Badan Pengelola Keuangan dan Aset Daerah (BPKAD) Pemerintah Kota Yogyakarta (2024)

Based on the table, there are nine regional tax posts in Yogyakarta City, and several of them still have actual revenues below the predetermined target. Land and Building Tax is the largest contributor to Yogyakarta City's tax revenues because the number of taxpayers in this category is greater than that in other categories (Warta Kota Jogja). Land and Building Tax is also the most stable tax post in terms of its tax revenue ratio. This shows that certain factors contribute to the fulfilment of Yogyakarta City's regional tax revenues.

BPKAD Yogyakarta City, as a government agency, continues to improve the quality of the organization in both services and human resources. This is proven by the launch of the QRISNA application to facilitate and simplify the tax payment process for taxpayers. At the same time, Jogja Smart Service application has been enhanced as a one-stop platform by integrating tax features for reporting and monitoring tax obligations for Yogyakarta City regional taxpayers. These initiatives reflect the adaptation to the development of modern era. Therefore, the final factor to be examined is the digitalization of taxation as implemented in Yogyakarta City.

Literature Review

Stewardship Theory

This theory assumes a correlation between satisfaction and the success of an organization. Organizational success is defined by maximizing utility within the organization to further foster individual satisfaction among its members. In the context of this research, the government serves as the steward who is responsible to manage resources, while the community is the principal who owns the resources. Stewardship theory is heavily dependent on trust, reciprocity, responsibility, and

mission alignment. When one of these qualities is not achieved, stewards will strive to reach an agreement rather than oppose it. This happens because stewards recognize that pursuing shared interests and collaborating with the principal are rational strategies for achieving organizational goals. Stewardship theory is particularly relevant in to tax accounting research. Since the beginning, tax accounting has been designed as a means of fulfilling information needs between the government (steward) and the public (principal). The tax sector also shows that there is an agreement between the government and society based on trust to achieve organizational goals. Even though the interests of the government and society may differ, the government remains committed in upholding the collective values because both entities shared the goals to promote community welfare.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) explains that taxpayer non-compliance behavior will affect related variables such as attitudes, subjective norms, and perceived behavioral control. Therefore, TPB is often used to speculate on behavioral intentions with a high level of accuracy. According to this theory, behavioral intentions are shaped by three key factors, namely behavioral beliefs – belief that is oriented towards the results of behavior; normative beliefs – behaviors that are influenced by an individual's environment; and control beliefs – attitudes related to behavior that reflect a taxpayer's understanding of tax payment mechanism and benefits of tax rate simplification. Supervisory behavior can be enforced by imposing tax sanctions on a taxpayer who violates tax regulations which may influence the taxpayer to comply (Putra & Osman, 2019). Theory of Planned Behavior also highlights how an individual's mindset shapes his intentions or beliefs before taking an action. A person's belief in the results of his behavior will influence whether or not he will fulfill his tax obligations. Taxpayers who are aware of the importance of paying taxes the state administration are more likely to fulfill their tax obligations (behavioral beliefs). Taxpayers who fulfill their tax obligations may be motivated because they expect reciprocity or confidence from other surrounding people.

Fiscus Quality Services

The quality of tax services is a value based on public perception of the provision of services. Hong et al. (2022) and Yahaya et al. (2023) state that service quality is also interpreted as how well the level of service meets client satisfaction which shows the general characteristics of a product or service and its ability to fulfil consumer needs. According to the Decree of the Minister of Administrative and Bureaucratic Reform Number 63 of 2004, quality of tax service can be measured through six indicators, namely service procedures, service time, service costs, service products, facilities and infrastructure, and service provider competence. Meanwhile, the indicators of service quality, according to Jeany and Siagian (2020) and Maryati and Khoiri (2022), are tangibility, reliability, responsiveness, assurance, and empathy.

Digitalization of Tax Administration

Digitalization of tax administration is a process to ensure that taxpayers have easy access to tax administration by optimizing the use of information technology that in turn foster their moral commitment to fulfilling their tax obligations (Saifudin & Rahmawati, 2020). The indicators of digitalization of tax administration referring to the research of Wulandari (2021) are ease of submitting SPT, cost savings, faster and more accurate tax calculations, ease of filling in SPT, availability of complete data to fill in SPT, environmentally friendly and hassle-free.

Taxpayer Compliance

Taxpayer compliance can be defined as the ability and willingness of taxpayers to comply with their tax obligations in accordance with the applicable laws, accurately declare their SPT, and pay the amount of tax owed on time (Hassan et al., 2021; Syamsudin et al., 2023). There are two types of

compliance, namely formal and material compliance. Formal compliance is a situation that requires taxpayers to fulfill tax obligations in accordance with the provisions of the applicable law. Meanwhile, material compliance is a condition that substantively describes taxpayers reporting SPT honestly, completely and on time. Mayapada et al. (2021) states that the indicators of taxpayer compliance involve compliance in registering as a taxpayer, compliance in submitting SPT, compliance in accurately reporting principal tax calculations and payments, and compliance in paying tax arrears.

Tax Revenue

Okonkwo et al. (2022) define tax revenue as the income collected by the government through the tax sector based on the policies imposed on taxpayers to fulfill their obligations and responsibilities to the society, including routine expenditures and infrastructure development. Tax revenues can also be defined as the income collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on ownership and transfer of property, and other taxes (Ogbodo & Nweze, 2021; Ndum et al., 2019). From the definitions above, it can be concluded the importance of tax revenues to the development of a region. The tax revenue indicators according to Permana and Susilowati (2021) encompass appropriate tax rates, tax revenues allocated for development, revenue increases in accordance with calculations, tax revenues administered, and tax revenues reported publicly.

The Influence of Fiscus Service Quality on Tax Revenue

Quality service is a service that provides satisfaction to taxpayers which meets the reliable and continuously applicable service quality standards. Improving the quality of service can be done in the form of improving the technical capabilities of the tax authorities, improving infrastructure and its facilities, and utilizing technology to facilitate taxpayers in carrying out their obligations (Firmansyah & Layli, 2022). Quality service provided by the tax authorities is a concrete manifestation of steps to optimize tax revenue. Excellent service provided by the tax authorities makes taxpayers feel satisfied and provides reciprocity for their contribution to tax revenue. In accordance with the stewardship theory regarding the relationship between taxpayer satisfaction and the government which is oriented towards mutual success, when the tax authorities can meet the needs of taxpayers for the services provided with the indicators of taxpayer satisfaction, this becomes a benchmark for the government success in the effort to increase tax revenue. Silalahi et al. (2015) conducted a study which found that the quality of service given by the tax authorities can have an impact on tax revenue. Taxpayers assess the quality of the service based on aspects, such as neatness, cleanliness, politeness, enthusiasm, and supporting facilities that create comfortable environment to carry out tax obligations and later contribute to the increase in state tax revenues. In addition, Hong (2022) conducted a study on business actors in Vietnam which showed that tax services had an impact on increasing state revenues. The quality of services provided by the tax authorities is an important factor in increasing tax compliance because taxpayers consider that the completeness and timeliness of the services are the keys for improving the compliance and increasing state revenues. Research conducted by Hutapea and Wardhani (2023) strengthens the role of the quality of tax authorities' services in state tax revenues. This explains that the services provided by the tax authorities make taxpayers feel comfortable and help them when making payments and reporting taxes, so it improves tax compliance and increase state revenues. However, Widaryanti (2021) found different results. She argues that the quality of tax authorities' services has no effect on state tax revenues because taxpayers currently do not feel it is too important to get services from the tax authorities directly because with advances of technology and digitalization, starting from the calculation process, payments, to tax reporting can be done online without having to meet face to face with the tax authorities. Given the conflicting research findings, this study proposes the following hypothesis:
H_1: Fiscus service quality has a positive effect on tax revenue.

The Effect of Digitalization of Tax Administration on Tax Revenue

The quality of tax digitalization can impact the development process of a region. Muvidah and Andriani (2022) argue that tax digitalization encourages taxpayers to voluntarily fulfill their tax obligations because taxpayers assess the government's ability to implement the principle of convenience through modern information technology (Ermanis et al., 2021). When taxpayers trust and directly experience the benefit of digitalization, tax revenue optimization can be achieved. Stewardship Theory discusses on achieving target outcomes. When the principle of convenience is properly implemented, the desired results are more likely to be realized. This theory is also relevant to this study because basically this theory supports the application of tax accounting. Tax accounting itself is a means of information for taxpayers regarding tax regulations. Digitalization can enable this information to be conveyed effectively and efficiently. Tax digitalization is one form of convenience in carrying out tax obligations (Pratiwi & Sofya, 2023). This is supported by Bassongui and Houngbédji (2023) who conducted research using a literature study approach and involved fourteen SSA (Sub-Saharan Africa) countries. The results of the study concluded that the digitalization of tax administration had a positive and significant impact on tax revenues in SSA member countries. They found that only 27% of SSA countries carried out tax reforms since 2005, making digitalization a relatively new yet promising to implement in the region. In addition, Opiso et al. (2023) said that if digitalization could be utilized properly, it would allow tax revenues to be improved. Ermanis et al. (2021) found that the convenience felt by taxpayers in terms of calculation, payment, deposit, and reporting digitally had consequences on tax compliance. Taxpayers who have an understanding of and are able to use digital tax applications can contribute to the increase in tax revenues. Based on the explanation, the following hypothesis is formulated:
H_2: Digitalization of tax administration has a positive effect on tax revenue.

The Effect of Tax Compliance on Tax Revenue

Tax revenue is influenced by several factors, one of which is the level of tax compliance. This level can be described through taxpayers' obedience and awareness in fulfilling their tax obligations. Taxpayer compliance is closely related to tax revenue. When taxpayers comply with tax regulations and fulfil their tax obligations, state tax revenue will indirectly increase. This relationship can be explained through the theory of stewardship which emphasizes on maximizing the utility of a principle in meeting target results. If the government can optimize the resources and policies to benefit the taxpayers, the taxpayers will be more compliant. As the taxpayers' compliance increases, tax revenue will be likely to increase significantly (Kastolani & Ardiyanto, 2017). This relationship is also supported by the research conducted by Parhusip et al. (2024) which states that there is a close relationship between the two variables. Riyadi et al. (2021) argue that the more obedient and compliant taxpayers are in fulfilling their tax obligations, the greater the impact will be on tax revenue. Research conducted by Dewi et al. (2023) found that tax compliance had an influence on Land and Building Tax payments during the pandemic and after the pandemic which affected an increase in the realization of regional tax revenue because the government applies the principle of an official assessment system. Mahendra and Sukartha (2014) explain that achieving optimal state tax revenue requires high level of tax compliance demonstrated by timely payment and reporting. However, Ischabita et al. (2022) present a contrasting finding which states that there is no influence of tax compliance on tax revenue due to the tax incentive policy provided by the government during the Covid-19 pandemic. Therefore, the following hypothesis is proposed:
H_3: Taxpayer compliance has a positive effect on tax revenue

The Influence of Fiscus Service Quality on Tax Compliance

Research conducted by Jaeng and Yadnyana (2024) shows a positive and significant relationship between service quality variables and taxpayer compliance. Taxpayers fulfilling their tax obligations

are influenced by the quality of services provided by the tax authorities. The tax authorities are expected to provide excellent service to help overcome the problems faced by taxpayers (Sumule & Erawati, 2023). The excellent service quality will increase taxpayers' compliance because if the taxpayers' needs are met, they are likely to voluntarily fulfil their tax obligations. This aligns with the Theory of Planned Behavior (TPB), which highlights behavioral beliefs—the idea that decisions are influenced by the observed behaviors of others. In this context, when tax authorities provide professional and responsive services, taxpayers develop greater trust and confidence in fulfilling their tax responsibilities. Based on this explanation, the following hypothesis is proposed:

H_4: Taxpayer service quality has a positive effect on taxpayer compliance

The Effect of Digitalization of Tax Administration on Tax Compliance

The digitalization of taxation, driven by technological advancements, allows taxpayers to flexibly access tax services, making it easier for them to report and pay their tax obligations (Pratiwi & Sofya, 2023). A digital tax system enables taxpayers to save time and reduce costs since services can be accessed anytime and anywhere, without time constraints. The Theory of Planned Behavior (TPB) highlights behavioral control (control beliefs), which influence an individual's attitude toward taking action. This suggests that when the tax system is convenient and efficient, taxpayers perceive direct benefits through government oversight, increasing their willingness to voluntarily fulfill their tax obligations. This is supported by research conducted by Hidayat and Defitri (2024), Pratiwi and Sofya (2023), Tambun and Riandini (2022), and Muvidah and Andriani (2022), all of which found a positive and significant relationship between tax digitalization and taxpayer compliance. An effective digital taxation system encourages greater compliance among taxpayers. Therefore, the proposed hypothesis is as follows:

H_5: Digitalization of tax administration has a positive effect on taxpayer compliance

The Influence of Fiscus Service Quality on Tax Revenue through Tax Compliance Mediation

Ghozali and Dwinita (2016) explain that service quality and taxpayer material compliance together makes a large contribution to tax revenue. The optimization of tax revenues depends on how tax authorities provide efficient and accessible services to taxpayers to foster their awareness and compliance with tax obligations. This awareness ultimately benefits taxpayers in the long run. The Stewardship Theory emphasizes trust and mission alignment. When taxpayers experience high-quality service from tax authorities and develop confidence in how their resources are managed by the government, they are more likely to comply voluntarily. Shared objectives between the government and taxpayers encourage greater tax revenue realization. Similarly, the Theory of Planned Behavior (TPB) suggests that individual decisions are influenced by beliefs and perceptions. Taxpayers who fulfill their tax obligations often seek reciprocity or normative validation from their environment, which in turn motivates them to remain compliant. Therefore, excellent service from tax authorities plays a crucial role in enhancing taxpayer compliance and ensuring sustained contributions to their country or region. Thus, the hypothesis is formulated as follows:

H_6: Taxpayer compliance positively mediates tax service quality on tax revenue

The Effect of Digitalization of Tax Administration on Tax Revenue through Mediation of Tax Compliance

Digitalization of taxation allows the tax authorities to have detailed data regarding taxpayers, thus simplifying the services provided by the tax authorities. On the other hand, the digitalization of taxation allows taxpayers to access services online, making it easier for taxpayers (Mimi & Mulyani, 2022). Technological trends applied by the government to taxation will reduce compliance costs, thereby increasing taxpayer compliance (Erin, 2021). Increased taxpayer compliance will result in tax revenues experiencing a significant upward trend. BPKAD Yogyakarta City has carried out

digital transformation of taxation through Jogja Smart Service (JSS). JSS is a one-stop application that allows taxpayers to access several services in one application. Control beliefs and behavioral beliefs in the Theory of Planned Behavior are relevant to this application since it causes taxpayers to have the perception that the taxes paid have been used well. A good perception will create an intention to comply with tax obligations. Therefore, BPKAD Yogyakarta City continues to intensify digitalization in order to provide taxpayers with seamless and accessible services, ultimately promoting mutual success. This approach aligns with the principles of Stewardship Theory, emphasizing trust, responsibility, and mission alignment between the government and taxpayers. Thus, the proposed hypothesis is as follows.

H_7: Digitalization of tax administration has a positive effect on tax revenue which is mediated by taxpayer compliance

The research framework is based on the concept of Stewardship Theory and Theory of Planned Behavior that discusses an individual's decision which is based on the behavior of other people to achieve a common goal. This research discusses regional taxation and uses tax revenue as the dependent variable. Other variables that influence tax revenues are the quality of tax services and the modernization of tax administration. However, in order to achieve the maximum results, taxpayer compliance is necessary to be inserted as the mediating variable.
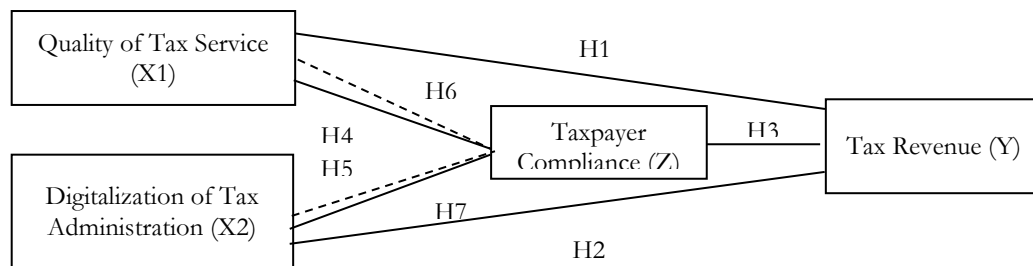

Figure 1. Research Framework

Research Methods

This study employs a quantitative approach, utilizing two types of data: primary data, collected through questionnaires, and secondary data, derived from laws, guidebooks, and records obtained from BPKAD. The survey method was chosen for data collection due to its practicality in gathering large-scale data within a relatively short time frame. However, this method is not without limitations, as it can be subject to biases, such as variations in respondents' interpretations and responses that may not accurately reflect the actual situation (Fahmi & Suryanti, 2019). The data were collected through a questionnaire survey targeting taxpayers who receive services across nine types of regional taxes, including Land and Building Tax (PBB), Land and Building Acquisition Fee (BPHTB), Restaurant Tax, Entertainment Tax, Hotel Tax, Advertising Tax, Parking Tax, Groundwater Tax, and Street Lighting Tax.

Table 3. Population of Taxpayers in Yogyakarta

Area	Population	Area	Population
Tegalrejo	9,371	Mantrijeron	8,862
Jetis	5,920	Kraton	4,782
Gondikusuman	9,149	Gondomanan	3,473
Danurejan	4,318	Pakualaman	2,536
Gedongtengen	4,325	Mergangsan	8,072
Ngampilan	3,971	Umbulharjo	21,785
Wirobrajan	6,132	Kotagede	9,561

Source: BPKAD Regional Yogyakarta (2023)

The population in this study are taxpayers registered with the BPKAD Yogyakarta City, which is divided into 14 ministries and nine types of regional taxpayers. The total registered taxpayers in 2023 were 102,257 distributed as follows.

The sampling technique used was probability sampling with cluster sampling to make it possible to take a random sample from the population based on space, such as geographical location (Ghozali, 2021). Cochran's formula calculates the sample size with the required level of precision and level confidence to estimates the proportions in the population and is very suitable for large populations (Nanjundeswaraswamy, 2021). Cochran's formula is as follows:

$$n = \frac{Z^2 . p . q}{e^2}$$

n = Number of samples required
Z = The level of confidence required in the sample is 5% with a value of 1.96
P = Probability of correct 50% and q= Probability of incorrect 50%
E = Error

The minimum number of samples taken based on the Cochran formula above is:

$$n = \frac{1.96^2 \; x \; 0.5 . 0.5}{0.1^2}$$

n = 96.04
n = 100 respondents

Operational Variable Indicators

Table 4. Operational Variable Indicators

Variable	Definition	Indicator	Source
Quality of Tax Service (X1)	The quality of tax services is a value based on public perception of the provision of services.	1. Tangibility 2. Reliability 3. Responsiveness 4. Assurance 5. Empathy	1. Jeany & Siagan (2020) 2. Maryati & Khoiri (2022)
Digitalization of Tax Administration (X2)	Digitalization of tax administration is a process to ensure taxpayers have easy access to tax administration which optimizes the use of information technology to shape their moral commitment to fulfilling their tax obligations.	1. Ease of submitting SPTPD 2. Cost savings 3. Faster and more accurate tax calculations 4. Ease of filling in SPT 5. Availability of complete data for filling in SPT 6. Environmentally friendly and hassle-free process	Wulandari (2021)
Taxpayer Compliance (Z)	Taxpayer compliance can be defined as the ability and willingness of taxpayers to comply with their tax obligations in accordance with applicable laws	1. Compliance in registering as a taxpayer 2. Compliance in submitting SPT 3. Compliance with correct reporting of principal tax calculations and payments 4. Compliance in paying tax arrears.	Putra & Osman (2019)
Tax Revenue (Y)	Tax revenue is income collected by the government through the taxation sector based on the applicable policies and charged to taxpayers as a means of fulfilling their obligations.	1. Tax rates 2. Tax revenues allocated for development 3. Revenue increases in accordance with calculations 4. Tax revenues administered 5. Tax revenues reported publicly	Permana & Susilowati (2021)

Source: Data processed

Data Analysis Method

The method used in this research is the variance-based Structural Equation Modeling (SEM) method, specifically Partial Least Square (PLS) by utilizing SmartPLS version 4.0. SEM-PLS analysis can be said to be a multivariate analysis which is intended to estimate the influence between variables simultaneously as a prediction study (Hair et al, 2017). This PLS Structural Equation Modeling (SEM) analysis is based on variance which can simultaneously test the measurement model (Outer model) and the structural model (Inner model).

The outer model is carried out to test the validity and reliability of the constructs of each indicator. The purpose of the validity test itself is to assess whether a questionnaire is valid or not. Furthermore, there is a reliability test which aims to test whether the measuring instrument used is reliable. Hair et al (2017) explain that the reflective measurement model test includes convergent validity which which assesses how well measurement items explain the variance in a given variable. Convergent validity value is measured using the Average Variance Extracted (AVE)with an acceptable threshold value of at least 0.50 (Hair et al, 2017). Discriminant validity ensures that a latent variable is distinct from other constructs both theoretically and empirically (Yamin, 2023). It is assessed using the Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT). The Fornell-Larcker criterion is met if the square root of the AVE is greater than the correlation between variables. The HTMT criterion is based on the ratio of the average correlation between measurement items of different variables to the geometric mean of correlations between items measuring the same variable. An HTMT value below 0.90 indicates that discriminant validity is acceptable.

The structural model (inner model) is assessed based on R-Squared values and significance levels. The R-Squared value measures the degree of variation in the dependent variable explained by the independent variables (Hair et al., 2017). R-Squared values of 0.75, 0.50, and 0.25 indicate strong, moderate, and weak explanatory power, respectively (Hair et al., 2019). The second criterion for evaluating the structural model is significance. Yamin (2023) states that commonly used significance thresholds (two-tailed tests) include a t-value of 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.58 (significance level = 1%).

Results and Discussion

Convergent Validity

Convergent Validity is a reflective measurement model that reflects an indicator based on the correlation between item scores or component scores through data processing in SmartPLS. The reflective size is said to meet the criteria if the outer loading value is > 0.70 (Hair et al., 2021).
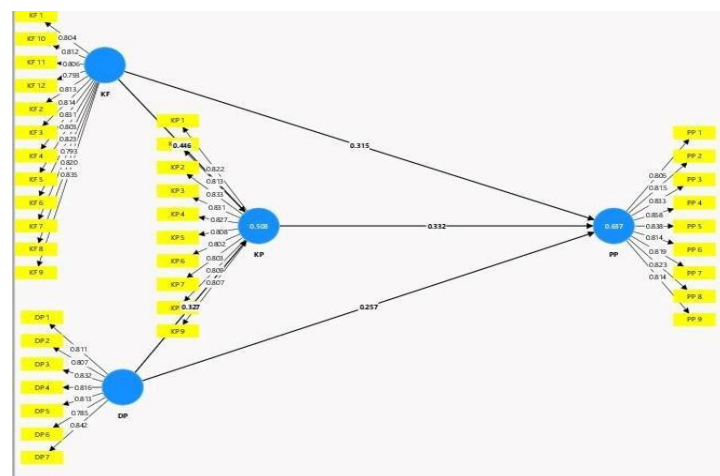

Figure 2. Path Outer Model
Source: Data processed

Reliability Test

SmartPLS produces Cronbach alpha and composite reliability values as requirements for the reliability test. Reliability testing was carried out to prove the accuracy and consistency of the instrument in measuring the research model construct.

Table 5. Reliability Test

Variable	Cronbach Alpha	Composite Reliability
Quality of Tax Service (X_1)	0.953	0.959
Digitalization of Tax Administration (X_2)	0.916	0.933
Taxpayer Compliance (M)	0.944	0.952
Tax Revenue (Y)	0.941	0.950

Source: Data processed

Table 5 shows that the Cronbach alpha and composite reliability values are met, showing values > 0.70 for Cronbach alpha and composite reliability. This means that this research model is reliable to explain the overall construct.

Multicollinearity Test

The VIF test was conducted to test for the absence of multicollinearity symptoms. VIF is a factor that measures the magnitude of the increase in the variance of the regression coefficient compared to the independent variable. VIF is met if the VIF value is <5. The test results demonstrate that multicollinearity symptoms do not occur because each variable has a VIF value <5.

Table 6. VIF Test

Variable	VIF
$X_1 \rightarrow Y$	2,327
$X_2 \rightarrow Y$	2,140
$M \rightarrow Y$	2,033
$X_1 \rightarrow M$	1,922
$X_2 \rightarrow M$	1,922

Source: Data is processed

Hypothesis Test

The following are the results of the hypothesis test using SmartPLS:

Table 6. Hypothesis test

Hypothesis	Part Coefficient	P-Value	Part Coefficient		F-Square
			Lower Limit	Upper Limit	
$X_1 \rightarrow Y$	0.315	0.000*	0.170	0.473	0.118
$X_2 \rightarrow Y$	0.257	0.000*	0.126	0.403	0.085
$Z \rightarrow Y$	0.332	0.000*	0.135	0.509	0.149
$X_1 \rightarrow Z$	0.446	0.000*	0.252	0.625	0.210
$X_2 \rightarrow Z$	0.327	0.002*	0.121	0.527	0.113
$X_1 \rightarrow Z \rightarrow Y$	0.109	0.020*	0.047	0.270	0.220
$X_2 \rightarrow Z \rightarrow Y$	0.148	0.010*	0.030	0.209	0.120

Note: Significance at *p < 0,05
Source: Data processed

R-Squared Test

The SmartPLS inner model test through R-squared was used to assess each dependent and mediating latent variable influenced by the independent latent variable.

Table 7. R-Squared Test

Variable	R-Square
Tax Compliance	0.508
Tax Revenue	0.637

Source: Data Processed

This study includes one dependent variable, tax revenue, and one mediating variable, tax compliance, which is influenced by two independent variables: the quality of tax services and the digitalization of tax administration. Table 7 shows an R-squared value of 0.637 for the tax revenue variable. This indicates that tax service quality, digitalization of tax administration, and taxpayer compliance collectively explain 63.7% of the variation in tax revenue, while the remaining 36.3% is influenced by other variables not included in this research model. For the taxpayer compliance variable, the R-squared value is 0.508, meaning that tax service quality and digitalization of tax administration explain 50.8% of taxpayer compliance, while the remaining 49.2% is attributed to other factors. According to Ghozali (2021), the R-square values for both tax revenue and taxpayer compliance fall within the moderate to high category, indicating a reasonable explanatory power of the model.

Q-Squared Test

Q-Squared measures the extent to which a good level of observation is produced by the model for each parameter. A model is considered good when it has a predictive relevance value of the Q-square value>0. The Q-square value has a range of 0<Q2<1. The model is considered better if the Q-square approaches 1. Measuring Q-square is obtained from:

$Q^2 = 1- (1-R^2)$
$= 1 - (1-0.637^2)$
$= 1 - (1-0.4057)$
$= 1 - (0.594)$
$= 0.406$

The result of the Q-Square calculation in this study is 0.406, so it can be interpreted that 40.6% of the independent variables in this study are able to explain the dependent variable, namely tax revenue. While the estimate of Q-squared for the mediating variable is as follows:

$Q2 = 1 - (1-R2)$
$= 1 - (1 - 0.5082)$
$= 1 - (1 - 0.258)$
$= 1 - (0.742)$
$= 0,258$

Thus, the independent variables of tax service quality and digitalization of tax administration can explain the mediating variable in this study as much as 0.258 or 25.8%.

Goodness if Fit (GoF)

The final evaluation of the fit model is by looking at the GoF results which are the interpretations of purification and refinement of the validity or reliability test of the construct which indicates the

combined performance of the outer model and inner model. The GoF value is in the range of 1-0 with the categories of 0.1 (Small GoF), 0.26 (Moderate GoF), and 0.36 (High GoF). To assess GoF the following formula is used:

$$GoF = \sqrt{ComxR2}$$

Com is Average Variance Extracted (AVE) obtained in the convergent validity test, amounting 0.6675. R2 is the average value of the dependent variable R-Squared, which is 0.3185 (0.637/2). The calculation of GoF in this study is as follows:

$$GoF = \sqrt{ComxR2}$$
$$GoF = \sqrt{0.6675x0.3185}$$
$$GoF = \sqrt{0.2125}$$
$$GoF = 0.4609$$

The results of the GoF calculation of this research model show a value of 0.4609 > 0.36. It indicatess that this research model has a high ability to explain empirical data.

The Influence of Fiscus Service Quality on Tax Revenue

The results of the hypothesis test show a path coefficient value of 0.315 and a p-value of 0.000 (<0.05), indicating that the quality of tax services has a positive and significant effect on tax revenue. The services provided by tax authorities to taxpayers represent one of the government's key functions in serving the community. Good service quality encompasses responsiveness, reliability, accuracy, quality assurance, and empathy. As the tax authority entrusted by the central government to administer regional taxes, the Yogyakarta City Government must continually strive to meet taxpayers' expectations. This effort aims to foster synergy between the community and the government to optimize tax revenue. Key indicators of successful service delivery include well-developed facilities and infrastructure and the professionalism of tax authorities in addressing taxpayer concerns. The findings of this study align with Stewardship Theory, which highlights the reciprocal relationship between taxpayer satisfaction and government performance. When the Yogyakarta City Government provides high-quality services, taxpayers are more likely to reciprocate voluntarily, thereby contributing to increased regional tax revenue. Taxpayers feel more comfortable when tax authorities offer direct assistance and position themselves as partners, particularly for those with limited tax knowledge. Conversely, if tax services fail to meet expectations and appear coercive, taxpayers may become reluctant to comply or even attempt to evade their tax obligations, negatively impacting regional tax revenues. These results are consistent with previous studies by Silalahi et al. (2015), Hong (2022), and Hutapea and Wardhani (2023), which also demonstrate a significant relationship between tax service quality and tax revenue.

The Effect of Digitalization of Tax Administration on Tax Revenue

Based on the results of the data analysis, the second hypothesis (H2)—which states that the digitalization of tax administration has a significant effect on tax revenue—is supported. This is evidenced by a path coefficient value of 0.257 and a p-value of 0.000 (<0.05), confirming that the hypothesis is accepted. The more advanced the tax digitalization system implemented by the Yogyakarta City Government, the greater its positive impact on regional tax revenue. These results further demonstrate that the convenience provided by digitalizing tax administration helps tax authorities enhance tax revenue collection. By consolidating all tax-related information into a single integrated system, tax authorities can more efficiently manage and recapitulate data. For example, the Coretax System, recently introduced by the Directorate General of Taxes, serves as an integrated national tax system. Similarly, at the local level, the Yogyakarta City Government has implemented the Jogja Smart Service (JSS), an integrated system designed to facilitate regional tax payments. This

innovative one-stop application is a significant advancement, as not many regions currently utilize such comprehensive digital platforms. The continuous development of this technology is expected to positively impact tax revenue, as the more sophisticated and user-friendly the system, the easier it becomes for taxpayers to comply (Andika & Yasa, 2020). Digitalization also streamlines and eliminates complex administrative procedures, allowing taxpayers to fulfill their tax obligations more efficiently and in real time. These findings align with Stewardship Theory, which suggests that when tax digitalization enhances accessibility and efficiency, it facilitates the achievement of tax revenue targets. Taxpayers are more likely to comply voluntarily when the process is perceived as simple and fast. Conversely, if tax payment and reporting procedures are overly complicated, taxpayers may be discouraged from fulfilling their obligations, ultimately leading to lower regional tax revenue. These findings are consistent with previous studies conducted by Ermanis (2021), Pratiwi and Sofya (2023), Bassongui (2023), and Opiso et al. (2023), which also confirm a positive and significant relationship between tax digitalization and tax revenue.

The Effect of Tax Compliance on Tax Revenue

Based on the results of the data analysis, the relationship between taxpayer compliance and tax revenue was evaluated using the bootstrapping method, yielding a path coefficient value of 0.332 and a p-value of 0.000 (<0.05). These results confirm that H3 is supported, indicating that taxpayer compliance has a positive effect on tax revenue. The Yogyakarta City Government continues to implement strategies to enhance taxpayer compliance, one of which is providing rewards to local taxpayers who consistently fulfill their tax obligations. This initiative aims to foster synergy between the government and taxpayers, ultimately optimizing tax revenue collection. Additionally, active socialization efforts are conducted whenever changes occur in the taxation system, ensuring taxpayers remain informed and engaged. These efforts contribute to building taxpayer trust in local government, further reinforcing compliance. Taxpayer compliance is a key factor in increasing tax revenue. When a greater number of taxpayers adhere to their tax obligations, they directly contribute to the growth of tax revenue. This aligns with Stewardship Theory, which emphasizes maximizing government utility in achieving target outcomes. The more taxpayers comply, the more likely the tax revenue targets will be met. However, achieving compliance also requires taxpayer awareness—when awareness increases, compliance follows. The findings of this study are consistent with previous research conducted by Kastolani and Ardiyanto (2017), Riyadi et al. (2021), Dewi et al. (2023), and Parhusip et al. (2024), all of which confirm a positive and significant relationship between taxpayer compliance and tax revenue. Ultimately, cooperation between tax authorities and taxpayers serves as a benchmark for a region's tax revenue success. In essence, taxpayer compliance is a crucial tool for achieving tax revenue optimization.

The Influence of Fiscus Service Quality on Tax Compliance

Based on the results of the analysis, it was found that the quality of tax authorities' services has a direct influence on taxpayer compliance. This was confirmed through a bootstrapping test, which yielded a path coefficient of 0.446, indicating that for every one-point increase in the quality of tax authorities' services, taxpayer compliance increases by 0.446. Additionally, the test results show a significant influence of tax service quality on taxpayer compliance, as evidenced by the p-value of 0.000 (<0.05), confirming that H4 is supported. Taxpayers, as subjects of regional taxation, play a crucial role in tax compliance. Thus, tax authorities are expected to consistently provide high-quality services to address taxpayer concerns effectively. For instance, during tax system transformations that may cause confusion, tax authorities must be at the forefront in providing guidance and clarification. Similarly, when new regional taxpayers register for NPWPD, tax authorities must assist them in fulfilling their tax obligations. These efforts contribute to taxpayer satisfaction, and satisfied

taxpayers are more likely to comply with tax regulations. Therefore, tax authorities must possess up-to-date knowledge of tax regulations to provide competent and effective services.

The provision of high-quality services by tax authorities facilitates taxpayer compliance, as it simplifies tax obligations and fosters trust in the tax system. This aligns with the Theory of Planned Behavior, which suggests that behavioral beliefs influence an individual's decisions based on expected outcomes. When taxpayers' needs are met, they are more likely to voluntarily comply with tax regulations. Furthermore, these findings are consistent with previous research conducted by Jaeng and Yadnyana (2024) and Darmayanti (2023), which also concluded that high-quality tax services have a positive and significant effect on taxpayer compliance. The quality of tax services is not solely determined by competent human resources but also by the availability of supporting facilities and infrastructure. Taxpayers are more likely to voluntarily comply with their tax obligations when they perceive a fair exchange for their contributions.

The Effect of Digitalization of Tax Administration on Tax Compliance

The bootstrapping test results indicate a path coefficient of 0.446, demonstrating the influence of the digitalization of tax administration on taxpayer compliance. At a 95% confidence level, the effect ranges between 0.252 and 0.625, meaning that if tax administration digitalization is further optimized, taxpayer compliance could increase by up to 0.625. The p-value of 0.000 (<0.05) confirms that H5 is accepted, indicating a significant relationship between tax administration digitalization and taxpayer compliance. Digitalization has become a crucial compliance tool, enabling taxpayers to easily access tax information and fulfill their tax obligations. One example is the QRIS barcode system for tax payments, which eliminates the need for taxpayers to expend additional effort in making payments, thereby reducing compliance costs. To further enhance taxpayer compliance, the digitalization of tax administration must continuously evolve, keeping pace with technological advancements and societal trends.

This finding aligns with the Theory of Planned Behavior, which emphasizes the role of perceived control in decision-making. Digitalization serves as a government-driven initiative to facilitate tax compliance, reflecting the broader integration of digital solutions across all aspects of modern life. As a result, simplifying tax obligations through digitalization directly enhances taxpayer compliance. Additionally, these results are consistent with previous studies by Hidayat and Defitri (2024), Pratiwi and Sofya (2023), Tambun and Riandini (2022), and Muvidah and Andriani (2022), all of which demonstrate a positive and significant relationship between tax administration digitalization and taxpayer compliance.

The Influence of Fiscus Service Quality on Tax Revenue through Tax Compliance Mediation

The hypothesis testing results for the influence of tax service quality on tax revenue through taxpayer compliance were obtained using the bootstrapping method. The findings, presented in the specific indirect effect section, indicate a path coefficient of 0.109 and a p-value of 0.02 (<0.05). This confirms that taxpayer compliance successfully mediates the relationship between tax service quality and tax revenue. The magnitude of this mediating effect is reflected in the upsilon v value of 0.22, signifying that taxpayer compliance has a strong influence on the relationship between tax service quality and tax revenue. Additionally, this mediation is classified as partial mediation, meaning that tax service quality still has a direct effect on tax revenue, but its impact is also significantly influenced by taxpayer compliance. Taxpayer trust is largely shaped by the quality of services they receive. Streamlined yet efficient administrative procedures help facilitate tax compliance, while adequate service counters at BPKAD Yogyakarta City ensure accessibility for taxpayers. Furthermore, the approachability and professionalism of tax officers foster a positive taxpayer experience, increasing willingness to comply with tax obligations.

The trust and shared mission between taxpayers and tax authorities play a crucial role in Yogyakarta City's regional tax revenues. This aligns with Stewardship Theory, which suggests that when tax authorities build taxpayer trust, taxpayers are more likely to contribute to increasing tax revenues. Additionally, the Theory of Planned Behavior supports this notion by emphasizing decision-making based on beliefs and perceptions. When tax authorities—specifically BPKAD Yogyakarta City—effectively instill confidence in taxpayers, tax compliance naturally follows, leading to higher regional tax revenues. These findings are consistent with Ghozali and Dwinita (2016), who found that tax service quality and taxpayer compliance collectively have a significant impact on tax revenues.

The Effect of Digitalization of Tax Administration on Tax Revenue through Mediation of Tax Compliance

Based on the data analysis results using the bootstrapping method, the findings indicate a specific indirect effect path coefficient of 0.148 and a p-value of 0.01 (< 0.05). This confirms that taxpayer compliance successfully mediates the effect of digitalization of tax administration on tax revenue, thereby supporting H7. The mediating role of taxpayer compliance is classified as partial mediation, with a moderate influence, as evidenced by an upsilon v value of 0.12 (> 0.075). Jogja Smart Service (JSS), a one-stop application, serves as a platform for public access to government information, including tax-related transparency. Beyond providing clear and accessible tax information, JSS integrates QRISNA reporting and payment features, streamlining tax administration within a single digital platform. This represents a significant advancement from traditional, manual tax administration methods, improving time efficiency and administrative effectiveness. By consolidating tax data into one integrated system, tax authorities can make more informed policy decisions, which will be continuously evaluated and refined in response to technological advancements.

The adoption of digital technology in taxation serves as a means to enhance compliance by reducing compliance costs. As society increasingly embraces digital solutions, the principle of convenience becomes a crucial factor in optimizing tax revenues. This aligns with Stewardship Theory, which emphasizes the collaborative relationship between taxpayers and the government in achieving mutual success. Additionally, it supports the Theory of Planned Behavior, which highlights the role of control beliefs and behavioral beliefs in shaping decision-making. Through digitalization, taxpayers perceive tangible benefits from technological advancements, making them more likely to voluntarily comply with tax regulations.

Conclusion

The hypothesis testing results indicate that the quality of tax services and the digitalization of tax administration have a positive and significant effect on both regional tax revenues and taxpayer compliance. Furthermore, tax compliance successfully moderates the relationship between tax service quality, tax digitalization, and regional tax revenues.

Based on the findings, this study has several implications for the regional tax collection authority, specifically the Yogyakarta City Government as follows: 1. Enhancing Taxpayer Services – The government should focus on improving service quality to encourage voluntary taxpayer compliance; 2) Optimizing the Digital Tax System – The Yogyakarta City Government should evaluate and enhance the tax digitalization system, ensuring that it prioritizes ease of use and aligns with taxpayer needs. The QRISNA payment system is an important innovation, simplifying tax payments. Additionally, the digital tax reporting system has proven to be efficient and effective, warranting further development; 3) Policy Formulation and Transparency – The study provides valuable input for policymakers in fostering a transparent, fair, and accountable governance system. By ensuring that tax revenues are used appropriately, the government can strengthen public trust, which in turn promotes social harmony and equitable development. In addition, this study also

contributes to **theoretical development including:** 1) It serves as a reference for future research, particularly regarding the application of Stewardship Theory and Planned Behavior Theory in understanding taxpayer compliance and tax revenue optimization. 2) The findings are expected to expand knowledge for both future researchers and the broader community, encouraging further exploration of tax-related variables.

This study has limitations that may cause inaccuracy of data in the research taken and should be considered for further research, including: 1) The study was only conducted in the Yogyakarta city government, so generalizations cannot be made to other areas that have different characteristics and organizational cultures; 2) the use of questionnaires can cause bias because respondents have the potential to fail to understand some of the question items which results in a lack of data accuracy.

Based on the limitations, the future research should 1) involve several regions that have different characteristics, so the research results can be generalized for testing regional tax revenues; 2) use a mixed method for the research method and interview instruments to obtain the data that reflect the actual situation to collect more accurate data; 3) Add more independent variables to measure tax revenue, such as tax socialization, tax sanctions, reward mechanisms, sunset policies, and tax supervision to provide more diverse insights.

References

Andika, K.D., & Yasa, I.N.P. (2020). Pengaruh Technology Acceptance Model terhadap Penggunaan e-Filing (Studi pada Wajib Pajak Orang Pribadi di KPP Pratama Singaraja). *Jurnal Ilmiah Akuntansi dan Humanika*, 10(*3*): 267-275. https://doi.org/10.23887/jiah.v10i3.26191.

Apeti, A.E., & Edoh, E.D. (2023). Tax Revenue and Mobile Money in Developing Countries. *Journal of Development Economics*, 161: 1-24. https://doi.org/10.1016/j.jdeveco.2022.103014.

Bassey, E., et al. (2022). A Conceptual Framework for Digital Tax Administration - A Systematic Review, *Government Information Quarterly*, 39(*4*): 1-15. https://doi.org/10.1016/j.giq.2022.101754.

Bassongui, N., & Houngbédji, H. (2023). Impacts of Tax Digitalisation on Tax Revenues in Sub-Saharan Africa: A Systematic Review. *Research Square*. 1-10. https://doi.org/10.21203/rs.3.rs-2429085/v1.

Darmawan, A., et al. (2023). Pengaruh Sistem Administrasi Perpajakan Modern dan Aplikasi E-Tax Terhadap Penerimaan Pajak pada KPP Palembang Ilir Timur. *Ekono Insentif*, 17(*1*): 59-70. https://doi.org/https://doi.org/10.36787/jei.v17i1.1161.

Dewi, F., et al. (2023). Pengaruh Kepatuhan Wajib Pajak Terhadap Pembayaran Pajak Bumi Dan Bangunan Saat Pandemi Dan Setelah Pandemi Tahun 2020-2022 Di Wilayah Kabupaten Karawang. *INNOVATIVE: Journal Of Social Science Research*. 3(*4*): 9978–9984.. https://doi.org/10.31004/innovative.v3i4.4758.

Erin, E. (2021). The Effectiveness of Tax Administration Digitalization to Reduce Compliance Cost Taxpayers of Micro Small, and Medium Enterprises. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal). 4(4).* 7508-7515. https://doi.org/10.33258/birci.v4i4.2666.

Ermanis, Y., et. (2021). Pengaruh Insentif Pajak Pandemi Covid-19, Digitalisasi Administrasi Perpajakan dan Omnibus Law Perpajakan Terhadap Penerimaan Pajak. *Bilancia: Jurnal Ilmiah Akuntansi. 5(4).* 444-453. https://doi.org/10.35145/bilancia.v5i4.1569.

Fahmi, F.A., & Suryanti, H.H.S. (2019). Pengaruh Layanan Informasi dengan Media Film terhadap

Kewaspadaan Siswa tentang Pelecehan Seksual di Kelas VIII-C SMP N 1 Matesih Tahun Pelajaran 2018/2019. *Jurnal Medi Kons*. 34-49.

Firmansyah. F., & Layli, M. (2022). Personal Taxpayer Compliance in Terms of Tax Rates, Understanding of Tax Regulations, and Quality of Service (Case study at the KPP Pratama Pekanbaru Tampan in 2020–2021). *Jurnal Riset Akuntansi Terpadu*. 15*(2)*. 224-234.

Ghozali (2021). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 26 Edisi 10*. Badan Penerbit Universitas Diponegoro.

Ghozali, I.L., & Dwinita, D. (2016). Pengaruh Kualitas Pelayanan Pajak dan Kepatuhan Material Wajib Pajak dan Implikasinya Terhadap Realisasi Penerimaan Pajak (Survei Pada KPP di Kanwil DJP Jabar I*). Jurnal Riset Akuntansi*. 8*(2)*. 2086-0447. DOI:10.34010/jra.v8i2.526.

Gombar, M. et al. (2022). Analytical View on the Sustainable Development of Tax and Customs Administration in the Context of Selected Groups of the Population of the Slovak Republic. *Sustainability,* 14(*3*): 1-22. https://doi.org/10.3390/su14031891.

Hair, J.F., et al. (2017). *Advanced Issues in Partial Least Squares Structural Equation Modeling*. SAGE Publications.

Hassan, I.e., et al. (2021). Voluntary tax compliance behavior of individual taxpayers in Pakistan. *Financial Innovation,* 7(*21*): 1-23. https://doi.org/10.1186/s40854-021-00234-4

Hidayat, M., & Defitri, S.Y. (2024). Digitalization and the Changing Landscape of Tax Compliance (Challenges and Opportunities*). Accounting studies and Tax Journal (COUNT)*. 1*(1)*. 131-139. https://doi.org/10.62207/c2gyc030.

Hong, N.T.P. (2022). Factors Affecting Enforced Tax Compliance of Businesses in Vietnam. *WSEAS Transactions on Environment and Development*. 18: 1174-1197. https://doi.org/10.37394/232015.2022.18.111.

Hutapea, A.T., & Wardhani, I.I. (2023). Pengaruh Efektivitas Penerimaan Pajak, Sistem Pelaporan Pajak, Kepatuhan Wajib Pajak Dan Pelayanan Fiskus Terhadap Penerimaan PPH Pasal 21 Orang Pribadi Pada KPP Medan Belawan. *JSAP: Journal Syariah and Accounting Public*, 6*(2)*: 206-215. https://doi.org/10.31314/jsap.5.1.1-7.2662.

Ischabita, N., et al. (2022). Pengaruh Kesadaran Wajib Pajak, Kepatuhan Wajib Pajak, Penagihan Pajak, Dan Pemeriksaan Pajak Terhadap Penerimaan Pajak. *JAPP: Jurnal Akuntansi, Perpajakan, dan Portfolio*, 2*(2)*: 1-13. http://dx.doi.org/10.24269/japp.v2i2.5586.

Jaeng, T.Y., & Yadnyana, I.K. (2024). Pengaruh Kesadaran Wajib Pajak, Pengetahuan Perpajakan Dan Kualitas Pelayanan, Terhadap Kepatuhan Wajib Pajak Hotel. *Owner: Riset dan Jurnal Akuntansi*, 8*(1)*: 548-9224. https://doi.org/10.33395/owner.v8i1.1818.

Jeany, J., & Siagian, M. S. (2020). Pengaruh Kualitas Pelayanan dan Kepuasan Nasabah terhadap Loyalitas Nasabah pada BPR Artha Prima Perkasa, *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis Dan Inovasi Universitas Sam Ratulangi)*, 7(*2*): 330-341. https://doi.org/10.35794/jmbi.v7i3.30293.

Kastolani, O.J.Y., & Ardiyanto, M.D. (2017). Pengaruh Tingkat Kepatuhan Wajib Pajak dan Pemeriksaan Terhadap Penerimaan Pajak Penghasilan. *Diponegoro Journal of Accounting*, 6(*3*): 669-679.

Lin, B., & Jia, Z. (2019). Tax Rate, Government Revenue and Economic Performance: A Perspective of Laffer Curve. *China Economic Review,* 56: 101307. https://doi.org/10.1016/j.chieco.2019.101307.

Lukman, H., et al. (2023). Factors Affecting Individual Taxpayer Compliance on Tax Return After

Using E-Filling. *International Journal of Application on Economic and Business,* 1(*1*): 133-140. https://doi.org/10.24912/ijaeb.11.133-140.

Mahendra, P.P., & Sukartha, I.M. (2014). Pengaruh kepatuhan, pemeriksaan, dan penagihan pajak pada penerimaan pajak penghasilan Badan. *E-Jurnal Akuntansi Universitas Udayana*, 9(*3*): 633-643.

Mallick, H. (2021). Do governance quality and ICT infrastructure influence the tax revenue mobilisation? An empirical analysis for India. *Economic Change and Restructuring,* 54: 371-415. https://doi.org/10.1007/s10644-020-09282-9.

Marlyna, D., et al. (2022). Evaluasi Kepatuhan Pajak UMKM selama Pandemi Covid 19. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 4(*11*): 5008-5016. https://doi.org/10.32670/fairvalue.v4i11.1832.

Maryantaki, D.D., & Wijaya, S. (2022). Determinants of tax revenue in Indonesia with economic growth as a mediation variable. *Jurnal Penelitian Pendidikan Indonesia,* 8(*2*): 450-465. https://doi.org/10.29210/020221522.

Maryati, M., & Khoiri, M. (2022). Pengaruh Kualitas Produk, Kualitas Pelayanan dan Promosi Terhadap Keputusan Pembelian Toko Online Time Universe Studio. *Jurnal Ekonomi dan Bisnis,* 11(*1*): 542-550. https://doi.org/10.34308/eqien.v11i1.779.

Mayapada, A.G., et al. (2021). The Determinants of Tax Compliance: Loving or Fearing. *Jurnal Akuntansi Kontemporer*, 13(*2*): 122-131. https://doi.org/10.33508/jako.v13i2.3066.

Mimi, & Mulyani, S.D. (2022). Pengaruh Pelayanan, Pengawasan dan Pemeriksaan Pajak terhadap Kepatuhan Wajib Pajak Badan yang dimoderasi Digitalisasi Administrasi Perpajakan. *Jurnal Magister Akuntansi Trisakti*, 9(1): 37-54. http://dx.doi.org/10.25105/jmat.v9i1.10573.

Mlambo, C. (2022). China in Africa: An Examination of the Impact of China's Loans on Growth in Selected African States. *Economies,* 10(7): 1-27. https://doi.org/10.3390/economies10070154.

Mpofu, F.Y. (2022). Taxation of the Digital Economy and Direct Digital Service Taxes: Opportunities, Challenges, and Implications for African Countries. *Economies,* 10(*9*): 1-28. https://doi.org/10.3390/economies10090219.

Muvidah, A.R., & Andriani, S. (2022). Pengaruh pengetahuan dan digitalisasi perpajakan terhadap voluntary tax compliance di mediasi kepercayaan pada industri kecil menengah Jawa Timur. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan,* 4(*11*): 5084–5093. https://doi.org/10.32670/fairvalue.v4i11.1776.

Nanjundeswaraswamy, T.S., & Divakar, S. (2021). Determination Of Sample Size and Sampling Methods In Applied Research. *Proceedings on Engineering Sciences,* 3(*1*): 25-32. https://doi.org/10.24874/PES03.01.003.

Ndum, N.B., et al. (2019). Pension Fund Asset Investment and Economic Growth in Nigeria. *Journal of Global Accounting,* 6(*2*). 57-78.

Nirvana, N., et al. (2020). Pengaruh Pemeriksaan Pajak, Kepatuhan Wajib Pajak dan Kualitas Pelayanan Pajak Terhadap Penerimaan Pajak Pada Kantor Pelayanan Pajak Pratama Samarinda. *Jurnal Ilmu Akuntansi Mulawarman* (JIAM), 5(*1*): 1-15.

Ogbodo, O.C., & Nweze, C.L. (2021). Effect Of Tax Revenue On Economic Development: Evidence From Nigeria. *Research Journal of Management Practice,* 1(*2*): 17-32. www.doi.org/10.46654/RJMP.1226.

Okonkwo, O.O; et al. (2022). Tax Revenue and Productivity of Nigeria. *African Journal of Business*

and Economic Development, 2(*1*): 26-40.

Opiso J., et al. 2023. The digital era of taxation: Analysing the effectiveness of digital tax adoption on petroleum excise duty revenue. *Cogent Business & Management*, 10(2272370): 1-23. https://doi.org/10.1080/23311975.2023.2272370.

Parhusip, A., et al. 2024. Dampak Kepatuhan Wajib Pajak Dan Pemeriksaan Pajak Terhadap Penerimaan Pajak Pada Wajib Pajak Di Kota Medan. *Jurnal Riset Inovasi dan Pembangunan Daerah.* 1(*2*): 1- 9.

Permana, F.T., & Susilowati, E. (2021). Pengaruh Kesadaran Wajib Pajak Terhadap Penerimaan Pajak Dengan Kepatuhan Wajib Pajak Sebagai Variabel Intervening Pada KPP Pratama Surabaya Karang Pilang. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi),* 12(*3*). 1027-1037. https://doi.org/10.23887/jimat.v12i3.34885

Pratiwi, R.Y., & Sofya, R. (2023). Pengaruh Digitalisasi Pajak dan Kesadaran Wajib Pajak Terhadap Kepatuhan Wajib Pajak Orang Pribadi di KPP Pratama Kota Solok. *Jurnal Salingka Nagari,* 2(*1*): 146-154.

Putra, A.F., & Osman, A.H. (2019). The Compliance of MSME's Taxpayer: Implementation of Theory of Planned Behavior. *Journal of Contemporary Accounting*, 1(*1*): 1-10. https://doi.org/10.20885/jca.vol1.iss1.art1.

Riyadi, S.P., et al. (2021). Pengaruh Kepatuhan Wajib Pajak, Pemeriksaan Pajak, dan Pemungutan Pajak terhadap Penerimaaan Pajak Penghasilan Badan. Jurnal Riset Akuntansi dan Perpajakan, 8(*02*): 206-216. https://doi.org/10.35838/jrap.2021.008.02.16

Saifudin, & Rahmawati, M.A. (2020). Digitalisasi Administrasi Perpajakan: Implementasi di KPP Pratama Semarang Selatan. *Jurnal HUMMANSI,* 5(*2*): 70-80. https://doi.org/10.33488/1.jh.2022.2.318.

Silalahi, S., et al. (2015). Pengaruh Kualitas Pelayanan Perpajakan terhadap Kepuasan Wajib Pajak, Kepatuhan Pajak, dan Penerimaan Pajak. *Jurnal Perpajakan*, 1(*1*): 1-5.

Sinambela, E.A. & A.R. Putra. 2021. Self-Assessment System, Tax Technology and Tax Evaison, *Journal of Marketing and Business Research*, 1(*1*), 51-58. https://doi.org/10.56348/mark.v1i1.31.

Sumule, K.A., & Erawati, T. (2023). Pengaruh Pengetahuan Perpajakan, Sosialisasi Pajak, dan Tax Morale Terhadap Niat Untuk Patuh Calon Wajib Pajak. *Jurnal Pendidikan Ekonomi (JUPE),* 11(*3*): 273-280. https://doi.org/10.26740/jupe.v11n3.p273-280.

Syam, F., & Zulfikar, A. (2022). Analisis Kemandirian Keuangan Daerah dalam Peningkatan Kesejahteraan Masyarakat di Kabupaten Kaimana. *Jurnal Terapan Pemerintah Minangkabau,* 2(*2*): 98-114. https://doi.org/10.33701/jtpm.v2i2.2666.

Syamsudin, et al. (2023). Exploring of Tax Compliance: Tax Practitioners Interpretation. *Jurnal Multidisiplin Madani (MUDIMA).* 3(*2*): 392-403. https://doi.org/10.55927/mudima.v3i2.2209.

Tambun, S., & Riandani, R. (2022). Dampak Tax Planning dan Digitalisasi Layanan Pajak terhadap Wajib Pajak Dimoderasi Oleh Nasionalisme. *Owner: Riset dan Jurnal Akuntansi.* 6(*3*): 2993-3004. https://doi.org/10.33395/owner.v6i3.909.

Widaryanti. (2021). Analisis Pengaruh Kepatuhan dan Kualitas Pelayanan Fiskus Terhadap Penerimaan Pajak (Studi pada Wp Op yang Mempunyai Usaha dan Badan KPP Pratama Candisari Kota Semarang). *Riset Ekonomi Akuntansi dan Perpajakan,* 3(*2*): 173-184.: https://doi.org/10.30812/rekan.v3i2.2394.

Wulandari, D.S. (2021). Digitalisasi Sistem Administrasi Perpajakan Dan Biaya Kepatuhan Pajak Terhadap Kepatuhan Wajib Pajak Orang Pribadi. *Journal of Accounting Science,* 5(*1*): 35-67. https://doi.org/10.21070/jas.v5i1.1131.

Yamin, S. (2023). *Olah Data Statistik: SMARTPLS 3, SMARTPLS 4, AMOS & STATA Mudah dan Praktis.* Penerbit Dewangga Energi Internasional.

Yahaya, L., et al. (2023). Reengineering the Relationship Between Tax Knowledge and Voluntary Tax Compliance in Nigeria: The Moderating Role of Tax Service Quality. *International Journal of Academic Research in Economics & Management Sciences,* 12(*1*): 360-372. http://dx.doi.org/10.6007/IJAREMS/v12-i1/15855.