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Digital-Based Public Service Innovation on Taxpayer Compliance through Taxpayer Satisfaction

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Abstract:

The purpose of the study is to analyze the influence of the use of technology and modernization of the tax administration system on taxpayer compliance in increasing economic growth. This research method is quantitative research. The design of this study uses a cross-sectional design method with a sampling technique using purposive sampling. This study uses data analysis with the Partial Least Square (PLS) approach. Data were collected using questionnaires, literature studies, observations, interviews, Focus Group Discussions. The results of the study showed that digital-based Public Service Innovation has a significant effect on Taxpayer Satisfaction and Taxpayer Compliance. Taxpayer Satisfaction has an effect on Taxpayer Compliance.

Keywords: *Service Innovation; Compliance; Satisfaction; MSME.*

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1. Introduction

Tax is an important aspect in the development process of a country, especially in Indonesia, where development aims to realize and improve the welfare of a nation. In this case, the role of tax as a source of financing in development in a country (Adhikara, Maslichah, Diana, & Basyir, 2022; Aliviany & Maharani, 2023; Ariyanto, Rohadi, & Lestari, 2020). Based on data from the Central Statistics Agency (BPS), it shows that in 2022 the realization of tax revenue reached IDR 1,924.94 trillion or reached 78.99% of the total revenue of IDR 2,436.68 trillion. This has increased from previous years. In 2021, state revenue reached IDR 2,011.35 trillion, with a component of 76.96% from the taxation sector, which was IDR 1,547.84 trillion. From the BPS data, it can be seen that state revenue from the tax sector up to 2022 has increased quite significantly. However, in March 2023, Indonesia was shocked by the news that the Head of the General Section of the Directorate General of Taxes, Ministry of Finance, South Jakarta Regional Office II, was named by the KPK as a suspect in a case of alleged receipt of gratuities from taxpayers through a tax consulting company (Bassey, Mulligan, & Ojo, 2022; Chooi, 2020; Dewi Rismawati, 2018).

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The existence of this case could have an impact on reducing public trust in tax institutions (Fjeldstad, Kagoma, Mdee, Sjursen, & Somville, 2020). On March 2, 2023, it was written on the Kompas news page that the case could have an impact on decreasing tax compliance. On the news page, it was stated that the Executive Director of the Institute for Development of Economics and Finance (Indef) Tauhid Ahmad explained that the public's reaction was a form of decreasing trust in tax collection institutions. The decrease in trust is feared to affect public compliance in paying taxes. Therefore, it is important to know what factors can affect taxpayer compliance (Gugushvili, 2022; Hadi & Mahmudah, 2018; Hana & Vitezić, 2022).

The quality of service at the tax office is one of the indicators for assessing individual taxpayers' willingness to pay taxes, especially for the implementation of the self-assessment system which aims to increase tax payment compliance (Hair et al., 2021; Hermanto, Windasari, & Purwanegara, 2022; Irna Triannur Lubis et al., 2024). With the existence of quality tax services, taxpayers will be motivated to report their taxes. Taxpayer satisfaction depends on the service received, both at integrated service locations that provide services in the form of SPT reporting, delivery of letters and NPWP creation, by account representatives in the form of providing consultation and technical guidance on tax issues, or when an audit is carried out with a discussion of the results of the audit as a form of transparency in the tax audit process itself (Khozen & Setyowati, 2023; Lubis & Aristantya, 2024; Mascagni, Mengistu, & Woldeyes, 2021). Some of these things are part of the implementation of the modern tax administration system that applies at the Metro City Tax Office. The following is a picture that explains the level of taxpayer compliance in Indonesia.

The tax projection figures and the realization of tax revenues year 2015-2020 have fluctuated and tended to decrease every year. Digitalization has become a central part of the country's economic activities, making existing traditional tax rules and processes ineffective. As a result, digital era products have become the driving force of all human activities. Information technology dominates the world today and has given birth to the digital economy, e-commerce, and information technology tax systems that have driven transactions at unprecedented speeds and revolutions that have changed the face of tax administration in countries (Fjeldstad et al., 2020; Do et al., 2022; Okunogbe & Pouliquen, 2022). The essence of information technology is to support the activities of tax officers so as to reduce tax avoidance and evasion, and also information technology allows for faster and more accurate analysis of tax data. Countries often use taxes as a means to influence the social space and social life of their citizens (Saptono et al., 2023; Night & Bananuka, 2020; Yuliyana & Suparwo, 2023).

This is the need for the latest innovation in digital-based public services that are easy to understand and accessed by MSMEs in order to create satisfaction so that taxpayer compliance can increase significantly. Although some literature does exist in information technology and effective tax assessment, there are some of them that focus on the influence of information technology on effective tax assessment (Gugushvili, 2022; Hermanto et al., 2022; Hadi & Mahmudah, 2018).

Formulation of the problemin this study is

1. The low tax revenue is caused by the lack of compliance of MSME taxpayers.
2. The low level of digital-based public service innovation experienced by MSMEs.

2. Methodology

Types of research, This is a causal quantitative study, where the variables used in this study consist of one dependent variable, namelytaxpayer complianceand the independent variable, namely digital-based public service innovation and the intervening variable of taxpayer satisfaction.

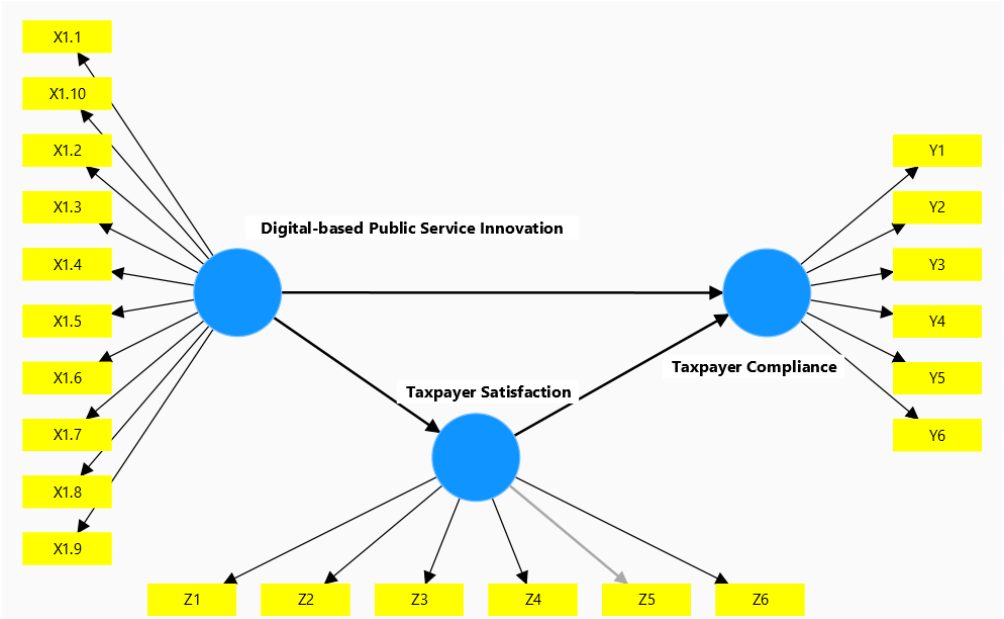
The sampling technique is The population used in this study is The population in this study is MSMEs located in Deli Serdang Regency, North Sumatra. The population of this study is people who have a Taxpayer Identification Number (NPWP). The sampling criteria are individual taxpayers registered with the KPP. The sampling technique in this study used convenience sampling.The number of samples was 91 people.

Table 1. Definition and Indicators of Variables

No	Variables	Indicator	Scale
1	Taxpayer Compliance is the taxpayer's obedience in implementing applicable tax provisions.	1. Judicial Aspect 2. Sociological Aspect 3. Psychological Aspect	Likert
2	Digital-Based Public Service Innovation is a service that is a top priority in the government's efforts to provide information and services to the public, business world, government employees and community organizations..	1. Problem solving process 2. Ease of information 3. Staff courtesy	Likert
3	Taxpayer satisfaction is the fulfillment of taxpayers' needs for tax services according to their expectations.	1. Tangibles 2. Reability 3. Responsiveness 4. Assurance 5. Empathy	Likert

Data collection techniquein this study Field Study, is a technique carried out by going directly to the research field to obtain data related to the research. In this study the researcher used two methods of data collection, namely questionnaires and interviews.

Data Analysis Techniques In this study, the Partial Least Square (PLS) approach was used. PLS is a Structural Equation Modeling (SEM) model based on components or variants.



Picture 2. SEM Model

The data collection method used a questionnaire with a modified Likert scale consisting of 4 answer choices, namely point 4 Strongly Agree (SS), point 3 Agree (S), point 2 Disagree (TS), and point 1 Strongly Disagree (STS) (Syahputra et al., 2021). The data analysis technique used in this study is multiple linear regression analysis, with the following stages:

a) *convergent validity*

The convergent indicator validity test is used to assess convergent validity, namely the loading factor value must be more than 0.7 for confirmatory research and the loading factor value between 0.6-0.7 for exploratory research is still acceptable and the average variance extracted (AVE) value must be greater than 0.5.

b) *discriminant validity.*

Discriminant validity relates to the principle that different construct measures (manifest variables) should not be highly correlated. The cross loading value for each variable should be >0.70.

c) *average variance extracted*(AVE)

It is recommended that the AVE value should be greater than 0.50, meaning that 50% or more of the indicator's variance can be explained.

d) Composite Reliability and Cronbank Alpha.

Reliability testing is carried out to prove accuracy, consistency and the accuracy of the instrument in measuring the construct. The rule of thumb that is usually used to assess the reliability of the construct is that the composite reliability value must be greater than 0.7 for confirmatory research and a value of 0.6-0.7 is still acceptable for exploratory research.

e) Coefficient of Determination/RSquare value.

In assessing the structural model with PLS, we start by looking at the R-Square value for each endogenous latent variable as the predictive power of the structural model.

R-Square values of 0.75, 0.50 and 0.25 can be concluded that the model is strong, moderate and weak.

f) Hypothesis testing.

Hypothesis testing serves to test the research hypothesis, where the t-test can be known from the results of the Path Coefficient test will provide an estimate of the influence between variables and provide very useful significant information regarding the relationship between research variables. The hypothesis is accepted when the significance level is less than 0.05 or the t-value exceeds its critical value. The t statistics value for a significance level of 5% is 1.96.

4. Empirical Findings/Result

Outer Model Test

1. Convergent Validity

According to(Prana Ugiana Gio, Irna Triannur Lubis, Wida Akasah, Rezzy Eko Caraka 2022), predictors or items are declared valid if the loading factor value is > 0.7. From the results of the analysis by running the calculate-PLS algorithm, it was obtained that several indicators had loading factor values <0.7 so that elimination was carried out (see Figure 1). Having an Outer Loadings value <0.7 means that it does not meet the convergent validity requirements so cleaning must be carried out by deleting the indicator. After deleting the indicators that have a loading factor <0.7, retesting was carried out. After testing until all Outer Loadings indicator values were > 0.7 according to SmartPLS 4.0 standardization, the test results can be seen in Figure 1.The outer model test begins by estimating or predicting parameters, namely by calculating the PLS algorithm with the following results.

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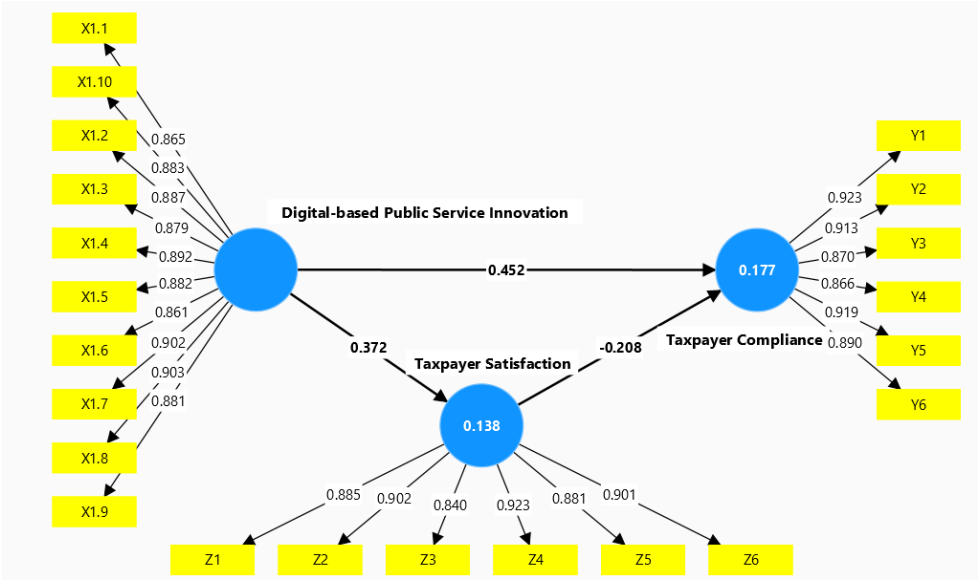

Figure 1. Factor Loading Test

2. Average Variance Extracted (AVE)
   A construct can be said to be valid if it has an AVE value > 0.5.

Table 2. Composite Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_a)	Average Variance Extracted (AVE)
Digital-based Public Service Innovation	0.969	0.969	0.973	0.780
Taxpayer Compliance	0.951	0.953	0.961	0.804
Taxpayer Satisfaction	0.947	0.951	0.958	0.790

Cronbach Alpha, Average Variance Extracted (AVE) Based on Table 2 above, it can be seen that all constructs have an AVE value >0.5 which means that each indicator has a valid construct.

3. Discriminant Validity
   Discriminant validity is a stage carried out to determine whether the variables or indicators in the research conducted have unique values and are only related to the variables or indicators themselves, and not from variables or indicators outside of those expected. A study is said to have good discriminant validity if

the cross loading results show that the indicators of each construct have higher values than the indicators in other constructs.

Table 3. Calculation of Cross Loadings Values

	Digital-based Public Service Innovation	Taxpayer Compliance	Taxpayer Satisfaction
X1.1	0.865		
X1.2	0.887		
X1.3	0.879		
X1.4	0.892		
X1.5	0.882		
X1.6	0.861		
X1.7	0.902		
X1.8	0.903		
X1.9	0.881		
X1.10	0.883		
Y1		0.923	
Y2		0.913	
Y3		0.870	
Y4		0.866	
Y5		0.919	
Y6		0.890	
Z1			0.885
Z2			0.902
Z3			0.840
Z4			0.923
Z5			0.881
Z6			0.901

From table 3 above, it can be seen that the cross loading value of each item on its construct is greater than the loading value with other constructs. In addition to the cross loading value, a study is said to have good discriminant validity if the fornell larcker criterion value, namely the root of AVE on the construct, is higher than the correlation of the construct with other latent variables.

Table 4. Fornell-Larcker Criterion Values

	Digital-based Public Service Innovation	Taxpayer Compliance	Taxpayer Satisfaction
Digital-based Public Service Innovation	0.883		
Taxpayer Compliance	0.374	0.897	
Taxpayer Satisfaction	0.372	-0.040	0.889

From table 4 it can be seen that the AVE root for all variables is greater than its correlation with other variables. So it can be concluded that this study has good discriminant validity.

4. Composite Reliability
   Composite Reliability is used to test the reliability of each indicator in the study. A variable can be said to be reliable if it has a composite reliability value > 0.7. From table 1 it can be seen that all indicators in this study have good reliability because the Composite Reliability value is > 0.7.
5. Cronbach Alpha
   In addition to Composite Reliability, another way to determine the reliability of research indicators is by looking at the value of Cronbach Alpha. An instrument or questionnaire is said to be reliable if the Cronbach's Alpha value is > 0.6. From table 1 it can be seen that each construct has good reliability because the Cronbach's Alpha value is > 0.6.

Inner Model Test

1. R-Square
   The R-Square value is used to see how much the independent variable can explain the dependent variable. Based on table 10, it can be seen that the R-Square value of Taxpayer Satisfaction is 0.129 or 12.9% and the R-Square value of Taxpayer Compliance is 0.159 or 15.9%. From these figures, it can be categorized that the dependent variable can be explained by the independent variable with a moderate scale.

Table 5. R-Square

	R-square	Adjust R-square
Taxpayer Compliance	0.17	0.159
Taxpayer Satisfaction	0.138	0.129

2. F-Square
   The F-Square value shows the strength of the influence of the exogenous latent variable on the endogenous latent variable where the F-Square value <0.02: no influence, value 0.02 <0.15: small influence, value 0.15 <0.35: medium influence, value > 0.35: large influence (Sarstedt M., Ringle CM, and Hair JF 2019).

Table 6. F-Square

	Digital-based Public Service Innovation	Taxpayer Compliance	Taxpayer Satisfaction
Digital-based Public Service Innovation		0.214	0.161
Taxpayer Compliance			
Taxpayer Satisfaction		0.045	

1. The variable of digital-based Public Service Innovation on Taxpayer Satisfaction is 0.161, so it has a fairly large influence.
2. The variable of Taxpayer Satisfaction towards Taxpayer Compliance is 0.045, so it has a small effect.

Hypothesis Testing

Hypothesis testing is carried out by looking at the results of the path coefficient and p-value obtained through the bootstrapping process with an alpha of 0.05 (see Table 6).

Table 7. Path Coefficient

	Sampel Asli (O)	Rata-Rata Sampel (M)	Standar Deviasi (STDEV)	T Statistik (|O/STDEV|)	Nilai P (P values)
Digital-based Public Service Innovation -> Taxpayer Compliance	0.425	0.451	0.107	4.215	0.000
Digital-based Public Service Innovation -> Taxpayer Satisfaction	0.372	0.377	0.132	2.823	0.005
Taxpayer Compliance -> Taxpayer Satisfaction	-0208	-0.205	0.102	2.046	0.041

From table 7 it can be seen that:

1. The digital-based Public Service Innovation variable has a p-value of 0.000 <0.05, so Ho is rejected, meaning that the digital-based Public Service Innovation variable has a significant effect on Taxpayer Satisfaction.
2. The digital-based Public Service Innovation variable has a p-value of 0.000 <0.05, so Ho is rejected, meaning that the digital-based Public Service Innovation variable has a significant effect on Taxpayer Compliance.
3. The Taxpayer Satisfaction variable has a p-value of 0.041> 0.05, so Ho is rejected, meaning that the Taxpayer Satisfaction variable has an effect on Taxpayer Compliance.

5. Discussion

From the research results, it was found that from the independent and moderation variables, the most dominant according to respondents was the public service innovation variable. This is evidenced by the grand mean of respondents' answers of 4.51. Taxpayers feel that the physical appearance of tax officers who are neatly dressed, clean, polite, appear energetic and full of enthusiasm and the facilities provided greatly support them in carrying out their tax obligations. This is supported by Anggun's research (2012) which states that satisfaction with tax services has an effect on taxpayer compliance. Then the research conducted by Hendy (2012) also

supports that the variables of tax socialization and quality of tax services have a positive effect on the level of taxpayer compliance. However, it is different from the research conducted by Siska (2010) which states that the variables of satisfaction with the dimensions of guarantee and physical evidence have not been able to encourage compliance. Other factors that may affect satisfaction and compliance are tax socialization, taxpayer awareness itself and sanctions. This socialization is very necessary so that there are no more taxpayers who are hindered from carrying out their tax obligations, because of their lack of understanding of the regulations set by the government. Tax officers should be able to play an active role in implementing the socialization of the latest tax regulations, so that Taxpayers can immediately implement them. Tax officers need to increase tax socialization so that they can increase public awareness to comply with paying taxes. In this study, the variable of Taxpayer satisfaction is only a moderating variable, namely as a connecting variable to strengthen the influence of Taxpayer compliance on tax receipts, Taxes because even though the service received is not as expected, Taxpayers still carry out their obligations because of the sanctions that will be imposed. Based on the explanation above, it can be concluded that there are still other factors outside the five dimensions of service quality, which can affect Taxpayer satisfaction and compliance. However, digital-based public service innovation needs to be improved, because it has a positive effect on Taxpayer satisfaction and compliance. If Taxpayers are satisfied with the services provided, it will encourage them to comply in carrying out their tax obligations, and this will have an impact on the increasing amount of tax revenue.

6. Conclusions

The results of this study indicate that there are contextualities that must be considered in order to improve services to taxpayers so that a compliant attitude in taxation can be embedded. The variable of digital-based public service innovation which is statistically significant has an effect on encouraging taxpayer compliance in implementing taxation and taxpayer satisfaction which also has an effect on encouraging taxpayer compliance. There are still limitations in the study, so that development is needed for previous research. These limitations are first, it is still relatively limited in appreciating contextuality, so that the gap between taxpayer expectations and the real services received is not equal. Second, the measurement of variables and dimensions of variables that have not considered the context of the locus being studied.

In the context of further research in this field, developments are needed, namely the development of more contextual research variables by considering the conditions and background of the locus being studied. In addition, it is necessary to create a context in developing the dimensions of the research variables, including the form of variable measurement, so that the designed variables and the context of the locus being studied are not too far apart.

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