

# Digital Computer Science for Tax System in SME Taxpayers in Binjai City

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**Abstract:** Computer technology with digital power will bring better tax payment procedures and expectations of compliance levels. The digital world will encourage increasingly widespread use of artificial intelligence components to make tax-related work easier. This research falls under comparative causal studies using a survey method. The population consists of MSME operators (individual taxpayers) in the city of Binjai who have filled out and returned the questionnaire to the researchers. The sample selection was carried out using purposive sampling technique, and data was gathered from the opinions or perceptions of MSME operators (individual taxpayers) in Binjai. The primary data obtained were descriptively analyzed, and the model and the influence of tax rates and tax penalties on taxpayer compliance through tax understanding were examined using path analysis. The findings indicate a significant influence of tax rates and tax penalties on taxpayer compliance both simultaneously and partially, with tax understanding as an intervening variable not fully proving to mediate the relationship between tax rates and penalties on taxpayer compliance. The low path analysis value in this study should be considered by subsequent researchers to include other variables that may affect corporate value.

**Keywords:** Digital Computer; Science; Taxpayers; Tax System

## Introduction

Convergent technological advances have brought changes to the way people consume and use multimedia technology devices (Filho et al., 2021). The changes that occur in various aspects of life, especially advances in technology and science that have developed rapidly, occur along with changes toward digital transformation (Kraus et al., 2021). A manifestation of technological advancement is the emergence of digital platforms. A platform serves as a foundation for creating applications, processes, or other technologies. A digital platform is a virtual environment that offers its users the means to engage, collaborate, conduct transactions, and access other digital service amenities (Aulia & Hambali, 2022).

According to Indonesian regulations, digital platforms can be classified as electronic-system providers, which encompass individuals, government

authorities, businesses, and communities that individually or collectively provide, manage, and/or operate electronic systems to serve the requirements of electronic system users, whether for their purposes or on behalf of other parties (Cahyadi et al., 2023).

The extent of tax contributions to the Indonesian government serves as a compelling rationale for Indonesian authorities to formulate effective and efficient measures in implementing income tax regulations for platforms that utilize digital media for their business (Alfandia, 2020). Tax revenue includes various tax sectors, one of which comes from Micro, Small, and Medium Enterprises (MSMEs). Indonesia's economy is dominated by MSME-based businesses. MSMEs thrive across numerous sectors, as evidenced by data from the Ministry of Cooperatives and Small and Medium Enterprises indicating that by 2022, the number of MSMEs in Indonesia will surpass 8.71 million business units. The current tax collection system in

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Indonesia, namely the self-assessment system, requires taxpayers to calculate, declare, and pay the due taxes at the time of collection. Individual MSME taxpayers must understand tax awareness, which will enhance compliance and knowledge of tax regulations.

The most crucial aspect affecting tax compliance is the tax obligation itself, hence every taxpayer has the responsibility to accurately and timely list, compute, pay, and report taxes, thus increasing state revenue compliance (Gitaru, 2017). Tax compliance can be defined as a behavior in which the taxpayer meets all tax obligations and exercises tax rights. There are two types of compliance: formal and material. Formal compliance is a behavior in which taxpayers strive to meet formal tax obligations according to the formal provisions of tax law. Material compliance is a behavior where taxpayers substantively fulfill all the material provisions of tax law, that is, in accordance with the content and spirit of the tax legislation. Taxpayer compliance in fulfilling tax obligations depends on how tax officials behave and provide the best service to taxpayers.



**Figure 1.** Illustration for Digital Tax System  
Source: <https://news.ddtc.co.id>

Factors influencing taxpayer compliance include taxpayer awareness (Devos, 2013). Awareness is the state of knowing or understanding, while taxation relates to taxes. Thus, tax awareness is the state of knowing or understanding tax matters. A positive public assessment of the state's functions by the government will motivate society to comply with the obligation to pay taxes (Priambodo & Yushita, 2017).

The second factor affecting taxpayer compliance is service quality. The best service quality provided by tax officials to taxpayers is associated with taxpayer compliance (Lukman et al., 2022). The one effort to increase taxpayer compliance is to provide good service to taxpayers (Kira, 2017). Qualified tax officials are those who provide accurate information about tax-related matters and calculation methods and do not commit tax

fraud or other actions contrary to regulations and standard operating procedures.

## Methods

The type of research used in this study is descriptive research with a quantitative and also qualitative approach. The data taken, identified in the following order: data collection; data sorting; data analysis; and conclusion making. As for data analysis, there is a predetermined sequence in accordance with the empirical steps taken, namely as follows: Examination of data; suspected data findings; Data confirmation; Diagnosis; and Action.

This research is a causal comparative study. The population for this study consists of 70 MSME operators in the city of Binjai, with a gross income of less than IDR 4.8 billion in 2022. Once data collection was complete, the next step was data analysis. In this study, data analysis was performed using statistical tests obtained through the SPSS software. Various tests could be conducted, including instrument testing, classical assumption testing, multiple linear regression testing, F-tests, and determination coefficient tests. Following data analysis, hypothesis testing was conducted to determine whether there is a significant relationship between the independent variables, tax rates and tax penalties, and the dependent variable, Taxpayer Compliance, through Tax Understanding.

## Result and Discussion

### *The Digital Model of Tax System*

Indonesia's digital economy is growing at a rapid speed, and this condition brings great potential for the country's economic growth (Ramadhanti & Ismail, 2023). Indonesia's recent decision to unilaterally introduce a digital services tax in accordance with the tax scheme proposed by the European Commission raises a number of interesting points. These are related to the distinctive nature of these levies, which tax the total income collected from multinational corporations but divide the tax proceeds accordingly among single member countries according to the domestic share of digital users (Sidik, 2022).

The digital economy relies on digital knowledge and information as key production factors, and has been continuously driven by innovative information and communication technology. While all countries are advancing in their adaptation of digital technology, their readiness and underlying infrastructure, both soft and hard, vary (Terada-Hagiwara et al., 2019).

Indonesia collects less than half of its potential tax revenue. Given Indonesia's declining tax revenues and

growing spending needs, improvements in both tax policy and administration will be needed to fund Indonesia's (Rahmi et al., 2021). However, ASEAN has great potential as a regional organization to maximize its digital economy through digital taxation (Council, 2019).

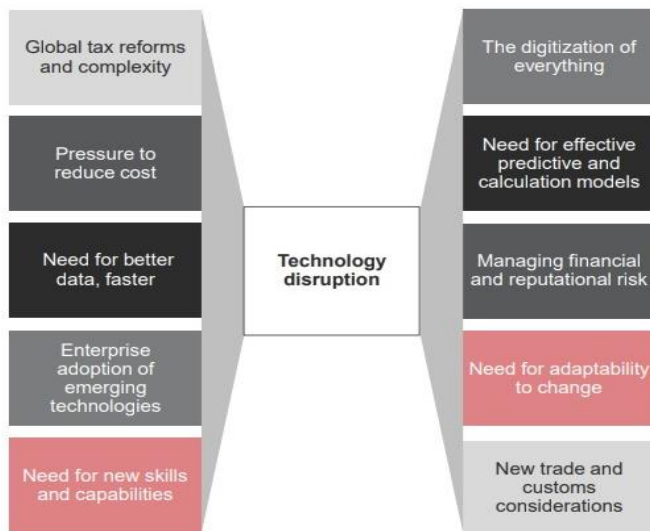
The digitalization of the economy has been a key focus of tax debates in recent years. Political debates have focused on the differences between taxing physical business operations and virtual operations. These debates have intersected with multiple layers of tax policy including consumption and corporate tax policies. Novel policies have also been developed including equalization levies and digital services taxes alongside more common use of gross-based withholding taxes targeted at digital services (Bunn et al., 2020).

Internal and environmental challenges require Tax to be nimble and accurate in providing information the enterprise needs for business decisions as well as complying with increasingly complex rules and calculations for tax jurisdiction reporting (Mikesell, 2007). Tax is a compulsory contribution based on regulations to the government to defray the expenses incurred in the common interest of all, without reference to special benefit conferred (Hartanto, 2021).

today's economy, most businesses have adopted some digital elements into their business practices. Early attempts to implement digital taxes sought to define a digital business model. Across the globe, the pandemic has driven changes in patterns of work, learning, communication, leisure and consumption, with a sharp increase in internet usage and a more rapid uptake of new digital technologies (Jiang & Stylos, 2021).

Multiple concerns are frequently raised in the context digital platform taxation (Köthenbürger, 2020). First, there are concerns that a user-based tax assignment is a special treatment of two-sided digital platforms, which is inconsistent with the tax treatment of other businesses. In the light of principles that underlie current assignment of taxes, a user-based tax system may well not be classified as a ring-fenced system. The location of critical input factors is used to assign tax bases in current tax systems. As explained above, for advertising-driven platforms users become the critical input factor and their location is then to be used to assign taxing rights. Second, many policy proposals (to be reviewed below) recommend taxes on revenues rather than corporate taxes. In the context of two-sided platforms, the distinction between the two becomes more blurred since marginal cost of providing services via platforms (such as advertising space) is negligible, if not zero. At least in the short run, the behavioral responses to the two forms of taxation are the same (Koethenbuerger, 2021).

The Indonesian government also levied a value-added tax (VAT) on the provision of intangible goods or services in Indonesia. Ministry of Finance (MOF) Regulation No. 48/2020 set the rate at 10%, effective on 1 July 2020. Some of the prominent foreign electronic system providers have been appointed as VAT Collectors and have been collecting, remitting and reporting VAT for the goods and services consumed by Indonesian users (Aicha, 2021).



**Figure 2.** Key challenges facing tax  
Source: <https://www.pwc.com>

Moreover, Indonesia will need to expand its tax base by identifying and utilizing new sources of tax revenue. With the rapid globalization and digitalization of the global economy, the question of how countries should approach the taxation of digital multinational corporations has become a topic of international tax policy discussion. Indonesia is considering in implementing OECD measures, including expanding its Value Added Tax to include imported digital goods and services. The Digital Services Tax is a tax on selected revenue streams of multinational digital companies. In

*Tax rates and penalties on taxpayer compliance*

Tax rates, tax penalties, and tax understanding have an effect on taxpayer compliance and influence company performance both partially and simultaneously (Ghani et al., 2020; Nurkhin et al., 2018). The results of this research show that tax rates, tax penalties, and tax understanding have a positive and significant effect on taxpayer compliance among MSME operators in Binjai, with a significant value of 0.000, which is less than 0.05. This suggests that variables such as the role of internal auditors, internal controls, and fraud prevention can simultaneously explain the variable of company performance. These findings are consistent with those of Permata & Zahroh (2022), who found that tax understanding and tax penalties significantly affect taxpayer compliance; directly, tax



understanding and penalties affect taxpayer compliance both partially and simultaneously; indirectly, tax rates and penalties influence taxpayer compliance through tax understanding.

These findings align with those of Luh Putu (2019) who found that tax rates, tax understanding, and tax penalties positively affect taxpayer compliance among MSMEs. Taxpayer understanding of tax regulations, including information on tax rates and penalties, contributes to improving taxpayer compliance. According to the Theory of Planned Behavior, behavioral beliefs explain if an individual's behavior will affect their expectations to behave by understanding the actions and outcomes undertaken by that individual. Tax understanding must include comprehension of rules and systems, as well as the function of taxation in Indonesia.

The influence of tax rates on taxpayer compliance through tax understanding. The second hypothesis testing in this study indicates that there is an influence of tax rates on taxpayer compliance through tax understanding, as seen from the SPSS output results, with regression analysis of each variable showing results according to their significance levels. The regression analysis before mediation shows that there is a positive and significant influence on taxpayer compliance with a tax rate coefficient of 0.559 and a significance of 0.000. The testing with the Sobel test, where the calculated t-value = 0.374 is less than the t-table value at the significance level of 0.05, which is 1.677, it can be concluded that the mediation coefficient of 0.325 is not significant, meaning there is no mediation effect. The tax rate represents the nominal amount that taxpayers are obliged to pay.

In the Theory of Planned Behavior, if an individual experiences a loss or gain from performing a behavior, it will influence their attitude towards performing that behavior (Ajzen, 1985). This study's findings are consistent with the research conducted by Machmudah & Putra (2020). Tax penalties ensure that tax law provisions will be complied with. The implementation of tax penalties ensures taxpayer adherence to existing regulations. Taxpayers will comply with tax obligations if they understand that tax penalties will result in greater loss. It was stated that tax penalties have a positive effect on taxpayer compliance. If tax penalties are socialized to the public, it can support the improvement of taxpayer compliance; moreover, if the public has a good legal awareness and understands the impact and function of taxes on individuals or society, they will voluntarily and disciplinedly carry out tax payments.

The influence of tax penalties on taxpayer compliance through tax understanding. The results of this study show that tax penalties have a positive and significant effect on taxpayer compliance, as seen from the internal control coefficient of 0.490 with a significance of 0.001. The testing with the Sobel test, where the calculated t-value = 0.777 is less than the t-table value at the significance level of 0.05, which is 1.677, it can be concluded that the mediation coefficient of 0.206 is not significant, meaning there is no mediation effect.

The tax penalties have a significant positive effect on the level of compliance of individual taxpayers and is reinforced by the taxpayers' own culture, namely a strong culture called siri na pacce within the taxpayers themselves (Kamil, 2015). This means that knowledge and understanding of taxation influence the compliance of MSME tax payments. These results support previous research conducted by (Rosi, 2018), which found that knowledge of taxation has a significant effect on the compliance of MSME tax payments. Therefore, if the level of knowledge and understanding of taxpayers regarding the applicable tax regulations is high, the level of taxpayer compliance in fulfilling tax obligations will also be higher (Anggadini et al., 2022).

### Conclusion

Some taxpayers that have already interviewed mentioned e-commerce taxation is not clear yet, but they felt there is unfairness in practices between e-commerce (online) stores and conventional brick and mortar (offline) stores. Based on analysis above about e-commerce transaction, we can conclude that socialization of e-commerce taxation and monitoring to e-commerce taxpayers are important. Directorate General of Taxation must coordinate with other

<b>Strategy</b>	<ul style="list-style-type: none"> <li>Align with business and Tax strategic goals – Avoid separate initiatives operating in isolation</li> </ul>
<b>Design</b>	<ul style="list-style-type: none"> <li>Embrace transparency around models and calculations</li> <li>Create a compelling user experience</li> <li>Embed controls</li> </ul>
<b>Develop</b>	<ul style="list-style-type: none"> <li>Implement effective program management – Rigorous testing, training and adaptability is needed to manage the complexity of new, innovative solutions</li> </ul>
<b>Operate</b>	<ul style="list-style-type: none"> <li>Eliminate unintentional bias</li> <li>Guard against malicious attacks</li> <li>Monitor quality of data and effectiveness of models</li> <li>Be mindful of systemic risks and develop an action plan</li> </ul>

Figure 3. The responsible AI framework in Tax (Source: <https://www.pwc.com>)

institutions like e-commerce businesses association, Ministry of Communication and Information Technology, Directorate General of Customs and Excise, banks, delivery companies, etc. Directorate Simultaneously, the tax rate system and tax penalties have an impact on taxpayer compliance through taxpayer understanding, suggesting that the role of tax rates, tax penalties, and taxpayer understanding are related to taxpayer compliance among individual MSME taxpayers in the city of Binjai. Partially, tax rates, tax penalties, and taxpayer understanding have a direct and significant influence on taxpayer compliance. Additionally, taxpayer understanding in the study as an intervening variable was not fully proven to mediate the effect of tax rates and penalties on taxpayer compliance among individual MSME taxpayers in the city of Binjai.

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#### Conflicts of Interest

There is no interest conflict in this research. this research is conducted for scientific studies that are widely disseminated through this journal. Writings that are free of conflicts of interest will be disseminated without fear of the author, so that they can be free to continue working.

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