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Taxpayer Compliance in North Sumatra: The Roles of Digital Transformation, CoreTax, and Batak Philosophical Values

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ABSTRACT

This study investigates taxpayer compliance in the era of digital transformation in North Sumatra by examining the roles of digital transformation, taxpayer knowledge, taxpayer satisfaction, and Batak philosophical values (Hamoraon, Hasangapon, and Hagabeon). A quantitative explanatory design was employed using survey data from 400 individual taxpayers in North Sumatra. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that digital transformation, taxpayer knowledge, taxpayer satisfaction, and Batak philosophical values positively and significantly influence taxpayer compliance. Among these factors, cultural values emerge as important intrinsic drivers of compliance behavior. The findings suggest that improvements in digital tax services, taxpayer understanding, and service quality contribute to higher compliance levels. In addition, the CoreTax Administration System was found to strengthen the relationships between these determinants and taxpayer compliance. This study contributes to the taxpayer compliance literature by integrating digital and socio-cultural dimensions into a single analytical framework. The findings emphasize that sustainable taxpayer compliance requires not only technological innovation but also the incorporation of local cultural values and taxpayer-centered services.

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1. INTRODUCTION

Taxes are the backbone of national and regional development financing; therefore, taxpayer compliance is a crucial factor in ensuring the fiscal sustainability of the state [1]. Previous studies have shown that tax compliance is not solely determined by administrative systems, sanctions, and formal regulations, but is also influenced by social, cultural, and moral factors that shape individuals' intrinsic motivation to comply [2], [3]. In the multicultural context of Indonesia, local wisdom values have strategic potential in shaping economic behavior, including awareness of and compliance with tax obligations

[4]. However, this aspect has received relatively limited attention in behavioral tax compliance research [5]. According to the Law on General Provisions and Tax Procedures (UU KUP), tax is defined as a mandatory contribution to the state owed by individuals or entities, enforceable by law, without direct compensation, and used for state purposes to achieve the greatest prosperity of the people [6]. Tax compliance is not only determined by administrative systems, sanctions, or legal regulations, but is also strongly influenced by social, cultural, and individual moral factors. In Indonesia's multicultural setting, local wisdom values possess significant potential to shape economic behavior, including awareness and compliance with tax obligations [7].

From the perspective of Benno Torgler *tax morale* defined as an individual's intrinsic motivation to pay taxes is heavily influenced by social norms, community values, and moral obligation. In societies with strong social structures, cultural values may become key determinants of tax compliance levels [2]. Within Batak society, particularly among the Batak Toba, the philosophy of Dalihan Na Tolu (DNT) contains moral and ethical values that may indirectly strengthen tax morale. These values include *Somba marhula-hula* (respecting those with higher authority or status), *Elek marboru* (being gentle and cooperative toward certain groups within the customary structure), and *Manat mardongan tubu* (being cautious and respectful toward fellow community members). These principles represent a normative framework that encourages compliance with collective rules. If applied within tax communication, tax authorities could leverage symbols, narratives, and messages aligned with these cultural values.

From the perspective of the Theory of Planned Behavior, subjective norms are interpreted as an individual's perception of social pressure or expectations from significant others regarding certain behaviors [8]. However, in many studies, the concept of subjective norms is often operationalized in a generalized manner without considering specific socio-cultural contexts [9]. In communities with strong cultural bonds, such as Batak communities in North Sumatra, norms are not merely abstract social pressures but are manifested in living customary norms that are binding and passed down through generations. Batak customary norms can be understood as a set of unwritten social rules rooted in kinship systems and social structures, regulating patterns of interaction, rights, and obligations of individuals within the community, and enforced through mechanisms of social sanctions and collective recognition [10], [11].

Furthermore, these customary norms are internalized within Batak philosophy through the values of Hamoraon, Hasangapon, and Hagabeon (3H), which function as ethical guidelines in daily life. *Hasangapon* (honor) emphasizes the importance of maintaining dignity through honest and responsible behavior, while *Hamoraon* (prosperity) relates to maintaining social harmony and balance, and *Hagabeon* (lineage and continuity) reflects an orientation toward generational sustainability and social stability. These three values not only shape individual aspirations for personal achievement but also construct strong social expectations for compliance with collective norms. Thus, within this context, subjective norms in the framework of the Theory of Planned Behavior can be interpreted more contextually as Batak customary norms with strong social binding power, playing a

significant role in shaping individual intentions and behavior, including compliance with tax obligations as part of moral and social responsibility within the community.

On the other hand, the digital transformation of tax administration such as the implementation of CoreTax by the Directorate General of Taxes has altered the context of behavioral control and *perceived behavioral control* [12]. CoreTax was designed as a core administrative system to improve service accessibility, taxpayer profiling, and supervisory capacity. The implementation and quality of digital systems can influence the ease of reporting, thereby enhancing perceived behavioral control, increasing trust in tax administration (which affects attitudes), and increasing the fear of detection (which influences subjective norms and control) [12]. However, the launch of CoreTax has also encountered technical issues during implementation, potentially reducing user satisfaction and generating resistance or partial adoption factors that must be considered when positioning CoreTax as a moderating variable [13].

Taxpayer knowledge (*tax knowledge*) and taxpayer satisfaction with tax services are two practical factors frequently found to influence compliance [14]. Knowledge enhances individuals' ability to report accurately, thereby increasing perceived behavioral control and pro-compliance attitudes, while service satisfaction (e.g., system convenience, service speed, and transparency) fosters positive attitudes toward tax authorities and strengthens intentions to comply [15]. Studies conducted in Medan and within the Regional Office of Directorate General of Taxes North Sumatra indicate positive relationships between knowledge, service quality, and taxpayer compliance, making these variables highly relevant for inclusion in the research model.

Conceptually, the Theory of Planned Behavior provides three primary frameworks. First, attitudes toward tax payment are influenced by trust (e.g., the belief that taxes are used fairly) and service satisfaction. Second, subjective norms should be expanded to include Batak local values (3H), as social pressures and expectations within Batak communities may differ from those of the broader population. Third, perceived behavioral control is influenced by tax knowledge and the availability of reliable digital systems such as CoreTax. Therefore, the proposed research model examines the influence of digital transformation, taxpayer knowledge, and satisfaction on taxpayer compliance, with CoreTax serving as a moderating variable that may strengthen or weaken these relationships within the context of Batak values (*Hamoraon, Hasangapon, and Hagabeon*).

As its primary novelty and contribution, this study explicitly integrates a local wisdom-based tax education approach into the research framework an approach that not only focuses on modern technical and administrative aspects of taxation but also internalizes local cultural values as the foundation for shaping compliant attitudes and norms. This approach positions Batak cultural values as strategic elements for strengthening the effectiveness of tax literacy and acceptance of digital transformation.

In the context of Batak society, internalizing the values of *Hamoraon* (prosperity), *Hasangapon* (honor), and *Hagabeon* (continuity and noble lineage) in tax education can strengthen subjective norms within the Theory of Planned Behavior framework [16]. Consequently, the digitalization of tax systems (CoreTax), improved tax literacy, and service satisfaction are not merely perceived as technical changes but as part of broader

moral and social responsibilities. Thus, local wisdom-based tax education functions as both a conceptual and practical bridge between digital transformation and local cultural identity, enabling the development of more sustainable taxpayer compliance behavior rooted in cultural values and relevant to the characteristics of North Sumatran society. Therefore, this study aims to fill this gap by developing a tax compliance model that integrates behavioral approaches, digital administrative system transformation, and Batak local wisdom, thereby contributing contextual theoretical and empirical insights to the literature on taxation and public policy.

2. METHOD

This study employed a quantitative approach with an explanatory research design to examine the causal relationships among variables through hypothesis testing based on established theories and previous empirical findings. The explanatory approach was selected because the study not only describes phenomena but also systematically analyzes the influence of digital transformation, taxpayer knowledge, taxpayer satisfaction, and Batak philosophical values on taxpayer compliance, with the CoreTax Administration System functioning as a moderating variable. The research was conducted in North Sumatra, Indonesia, from December 2025 to January 2026. North Sumatra was selected as the research setting because the region has a strong socio-cultural attachment to Batak values, which constitute an essential contextual element of this study. Data collection was conducted online using Google Forms to enable wider geographical coverage, improve efficiency, and facilitate respondents' participation across various districts and cities in North Sumatra.

The population of this study consisted of individual taxpayers residing in North Sumatra. Since no comprehensive sampling frame was available for taxpayers possessing the specific characteristics required by this study, a snowball sampling technique was employed. The sampling process began with a limited number of initial respondents who met the inclusion criteria and subsequently expanded through referrals to other eligible participants within their social networks. Respondents were required to satisfy several criteria, namely: (1) being registered as an individual taxpayer; (2) residing in North Sumatra; (3) self-identifying as belonging to a Batak ethnic group; (4) earning income during the previous fiscal year; (5) having experience using digital tax services such as e-Filing, e-Billing, DJP Online, or other electronic tax applications; and (6) having actual experience in accessing or using the CoreTax Administration System during its implementation phase, either for tax reporting, taxpayer account access, information retrieval, or other tax administrative activities. A total of 400 valid questionnaires were collected and included in the analysis.

Data were collected using a structured questionnaire developed from established theoretical constructs and previously validated instruments. The instrument development process involved an extensive review of the literature related to taxpayer compliance, digital transformation, tax morale, and the Theory of Planned Behavior. The questionnaire items measuring digital transformation were adapted from studies on technology acceptance and digital public services, while taxpayer knowledge items were derived from

prior tax literacy studies. Taxpayer satisfaction items were adapted from service quality and trust literature, whereas indicators measuring Batak philosophical values (Hamoraon, Hasangapon, and Hagabeon) were developed based on tax morale theory and relevant socio-cultural studies on Batak communities. Indicators related to the CoreTax Administration System focused on system reliability, accessibility, information quality, and usability. Finally, taxpayer compliance was measured through indicators related to timely filing, accurate reporting, and compliance with tax obligations. Before large-scale data collection, the questionnaire was reviewed by two taxation academics and one tax practitioner to ensure content validity, clarity, and contextual appropriateness. A pilot study involving 30 taxpayers was subsequently conducted to assess the comprehensibility and reliability of the instrument. All variables were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The measurement model consisted of six constructs. Digital transformation was measured through indicators of accessibility, system integration, ease of use, transparency, and efficiency, with an example item stating, "Digital tax systems make tax reporting easier." Taxpayer knowledge was assessed through indicators related to understanding tax regulations, reporting procedures, and taxpayers' rights and obligations, exemplified by the statement, "I understand how to calculate and report my taxes correctly." Taxpayer satisfaction was measured through service quality, responsiveness, convenience, and trust in tax administration, while Batak philosophical values were operationalized through dimensions reflecting Hamoraon, Hasangapon, and Hagabeon, such as "Paying taxes reflects responsibility and maintains personal and family honor." The CoreTax Administration System construct was measured through indicators of system reliability, usability, accessibility, and information quality. Taxpayer compliance, as the dependent variable, was assessed through timely submission, accurate reporting, and consistent fulfillment of tax obligations.

Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was selected because it is appropriate for predictive models involving multiple latent variables and moderating effects. The analysis was conducted in two stages. First, the outer model was evaluated by assessing convergent validity through factor loadings and Average Variance Extracted (AVE), discriminant validity using the Fornell–Larcker criterion and Heterotrait–Monotrait ratio (HTMT), and reliability through Cronbach's Alpha and Composite Reliability. Second, the inner model was assessed by examining the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and path coefficients through bootstrapping procedures with 5,000 resamples. The moderating effect of the CoreTax Administration System was tested using the product indicator approach available in SmartPLS. Interaction constructs were generated between CoreTax and each predictor variable, namely Digital Transformation × CoreTax, Taxpayer Knowledge × CoreTax, Taxpayer Satisfaction × CoreTax, and Batak Values × CoreTax. The significance of these interaction terms was subsequently evaluated through bootstrapping procedures. Significant interaction effects indicate that CoreTax strengthens or weakens the relationship between the independent variables and taxpayer compliance.

This study adhered to ethical standards for research involving human participants. Prior to completing the questionnaire, all respondents were provided with an informed consent statement explaining the purpose of the study, the voluntary nature of participation, anonymity and confidentiality assurances, and respondents' right to withdraw from the study at any time without any consequences. No personally identifiable information was collected, and all responses were analyzed only in aggregated form for academic purposes.

Although the snowball sampling technique enabled researchers to access a specific population of Batak taxpayers with experience using digital tax services and CoreTax, this sampling approach has certain limitations. Because respondents tended to recruit individuals from similar social networks, the resulting sample may exhibit homogeneity and may not fully represent the broader taxpayer population. Furthermore, as a non-probability sampling method, snowball sampling limits the generalizability of findings beyond the study context. Therefore, future research is encouraged to employ probability-based sampling methods to improve external validity and broader population representation.

3. RESULTS AND DISCUSSION

3.1. Results

Data Analysis

Data analysis in this study was conducted using the *Partial Least Squares Structural Equation Modeling* (PLS-SEM) approach with the assistance of SmartPLS. This method was applied to examine the relationships among latent variables, including independent, dependent, and moderating variables within the research model. The results of the data processing produced a structural model that illustrates the relationships among the constructs under study.

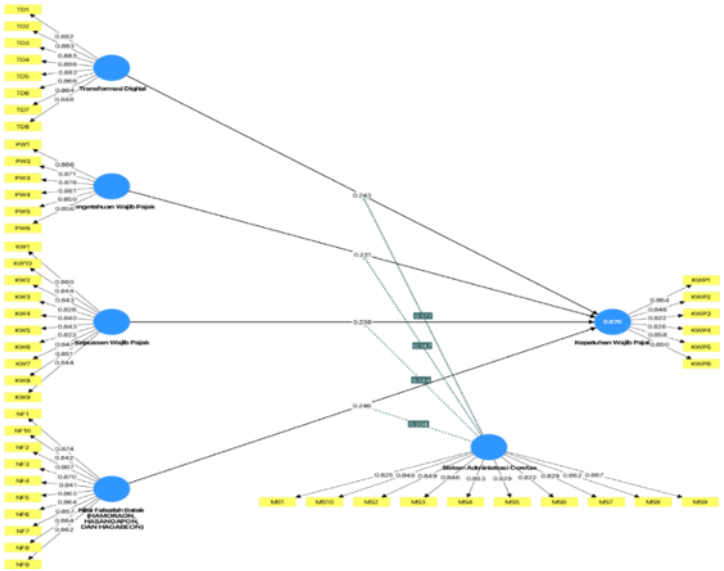

Figure 1. Data Processing (PLS-SEM Model)

Figure 1 presents the structural model generated from the data analysis, reflecting the relationships between digital transformation, taxpayer knowledge, taxpayer satisfaction, Batak philosophical values, and the CoreTax administrative system on taxpayer compliance. This model serves as the basis for testing construct validity and reliability through the evaluation of the outer model and inner model.

3.1.1. Measurement Model (Outer Model)

3.1.2. Convergent Validity

Convergent validity testing was conducted to ensure that each indicator is able to reflect the latent construct being measured. This evaluation was carried out by examining the *outer loading* values of each indicator.

Table 1. Convergent Validity (Outer Loadings)

Variable	Indicator	Loading Factor	Rule of Thumb	Conclusion
Taxpayer Satisfaction	KW1	0.782	0.700	Valid
	KW2	0.790	0.700	Valid
	KW3	0.782	0.700	Valid
	KW4	0.789	0.700	Valid
	KW5	0.801	0.700	Valid
	KW6	0.801	0.700	Valid
	KW7	0.799	0.700	Valid
	KW8	0.772	0.700	Valid
	KW9	0.789	0.700	Valid
	KW10	0.801	0.700	Valid
Taxpayer Knowledge	PW1	0.800	0.700	Valid
	PW2	0.769	0.700	Valid
	PW3	0.802	0.700	Valid
	PW4	0.815	0.700	Valid
	PW5	0.824	0.700	Valid
	PW6	0.811	0.700	Valid
Coretax Administration System	MS1	0.830	0.700	Valid
	MS2	0.782	0.700	Valid
	MS3	0.809	0.700	Valid
	MS4	0.803	0.700	Valid
	MS5	0.792	0.700	Valid
	MS6	0.801	0.700	Valid
	MS7	0.835	0.700	Valid
	MS8	0.818	0.700	Valid
	MS9	0.799	0.700	Valid
	MS10	0.791	0.700	Valid

Variable	Indicator	Loading Factor	Rule of Thumb	Conclusion
Batak Philosophical Values	NF1	0.779	0.700	Valid
	NF2	0.813	0.700	Valid
	NF3	0.794	0.700	Valid
	NF4	0.782	0.700	Valid
	NF5	0.796	0.700	Valid
	NF6	0.790	0.700	Valid
	NF7	0.800	0.700	Valid
	NF8	0.808	0.700	Valid
	NF9	0.764	0.700	Valid
	NF10	0.781	0.700	Valid
Taxpayer Compliance	KWP1	0.803	0.700	Valid
	KWP2	0.800	0.700	Valid
	KWP3	0.801	0.700	Valid
	KWP4	0.789	0.700	Valid
	KWP5	0.784	0.700	Valid
	KWP6	0.792	0.700	Valid
Digital Transformation	TD1	0.804	0.700	Valid
	TD2	0.802	0.700	Valid
	TD3	0.806	0.700	Valid
	TD4	0.821	0.700	Valid
	TD5	0.800	0.700	Valid
	TD6	0.787	0.700	Valid
	TD7	0.791	0.700	Valid
	TD8	0.779	0.700	Valid

Based on the results of the outer loadings test, all indicators for each construct have loading values above the minimum threshold of 0.70. The indicators of Taxpayer Satisfaction, Taxpayer Compliance, Batak Philosophical Values (Hamoraon, Hasangapon, and Hagabeon), Taxpayer Knowledge, the CoreTax Administrative System, and Digital Transformation demonstrate strong contributions in representing their respective latent constructs. Therefore, all indicators are considered valid, and no indicators need to be eliminated.

3.1.3. Composite Reliability

Composite reliability testing aims to assess the internal consistency of each construct within the research model.

Tabel 3. Composite Reliability

Description	Composite Reliability	Rule of Thumb	Conclusion
Taxpayer Compliance	0.884	0.600	Valid
Taxpayer Satisfaction	0.936	0.600	Valid
Batak Philosophical Values	0.935	0.600	Valid
Taxpayer Knowledge	0.894	0.600	Valid
Administrative System	0.941	0.600	Valid
Digital Transformation	0.920	0.600	Valid

The results of the reliability and construct validity tests indicate that all constructs meet the required criteria. The composite reliability values for all constructs are above 0.60, indicating good internal consistency. Therefore, all constructs are considered reliable and demonstrate good convergent validity.

3.1.4. Inner Model Analysis

After conducting the model evaluation and confirming that each construct meets the criteria for convergent validity, discriminant validity, and composite reliability, the next step is to evaluate the structural model. This evaluation includes testing the model fit and R^2. The model fit test is used to determine whether the model adequately fits the data.

3.1.5. Model Fit

The *Normed Fit Index* (NFI) ranges from 0 to 1 and is derived from comparing the hypothesized model with an independent model. The closer the value is to 1, the better the model fit.

Table 4. Model Fit

Index	Saturated Model	Estimated Model
NFI	0.899	0.899

The NFI value ranges from 0 to 1 and is derived from a comparison between the hypothesized model and a specified independent model. A model is considered to have a high level of fit when the value is close to 1. Based on the table above, the NFI value is 0.899, indicating that the model has a good level of fit (Ghozali, 2014).

3.1.6. R-Square (R^2)

The inner model describes the relationships among latent variables based on the underlying theoretical framework. Evaluation is performed by examining the R-Square (R^2) value of the dependent construct to determine how much variance is explained by the independent variables.

Tabel 5. R-Square

Variable	R Square
Taxpayer Compliance	0.537

The inner model (inner relation, structural model, and substantive theory) describes the relationships among latent variables based on the underlying substantive theory. The structural model is evaluated using the R-square (R^2) value for the dependent construct. The R^2 value is used to assess the extent to which endogenous variables are influenced by exogenous variables and whether the effect is substantial (Ghozali, 2014). R^2 values of 0.67, 0.33, and 0.19 indicate that the model is categorized as “strong,” “moderate,” and “weak,” respectively (Ghozali, 2014). Based on Table 5 the R-square value is 0.537. This means that 53.7% of the variation or changes in Customer Satisfaction are influenced by Product Quality, Price, and Promotion, while the remaining 46.3% is explained by other

factors. Therefore, the R-square value for the Customer Satisfaction variable can be classified as moderate, indicating that the model has a fairly good predictive capability.

3.1.7. Collinearity (Variance Inflation Factor/VIF)

Collinearity testing was conducted to ensure that there is no excessive correlation among indicators within the same construct, which could affect model stability. This test uses the Variance Inflation Factor (VIF).

Table 6. VIF Values

Variable	Indicator	VIF
Taxpayer Satisfaction	KW1	2.092
	KW2	2.140
	KW3	2.184
	KW4	2.189
	KW5	2.283
	KW6	2.287
	KW7	2.283
	KW8	2.091
	KW9	2.282
	KW10	2.318
Taxpayer Knowledge	PW1	1.935
	PW2	1.899
	PW3	1.971
	PW4	2.149
	PW5	2.140
	PW6	2.096
Tax Morale	NF1	2.103
	NF2	2.436
	NF3	2.234
	NF4	2.141
	NF5	2.223
	NF6	2.290
	NF7	2.217
	NF8	2.359
	NF9	2.067
	NF10	2.147
Taxpayer Compliance	KWP1	1.997
	KWP2	2.022
	KWP3	1.973
	KWP4	1.937
	KWP5	1.859
	KWP6	1.891
Coretax Administration System	MS1	2.602
	MS2	2.144
	MS3	2.438
	MS4	2.363
	MS5	2.294
	MS6	2.366
	MS7	2.669
	MS8	2.490
	MS9	2.282
	MS10	2.224
Digital Transformation	TD1	2.202
	TD2	2.160
	TD3	2.271
	TD4	2.341
	TD5	2.232
	TD6	2.051
	TD7	2.098
	TD8	2.023

The results of the multicollinearity test on the measurement model show that all outer VIF values of the indicators are below 5. This indicates that there is no multicollinearity problem among indicators within the same construct. Therefore, the measurement model is considered free from collinearity issues.

3.2. Discussion

3.2.1. The Effect of Digital Transformation on Taxpayer Compliance in North Sumatra

Based on the partial hypothesis testing results, the first hypothesis in this study states that Digital Transformation has a positive and significant effect on Taxpayer Compliance. The findings indicate that the Digital Technology variable has a significant influence on Taxpayer Compliance. This is evidenced by the significance value of 0.001 < 0.05. Therefore, it can be concluded that Digital Technology significantly affects Taxpayer Compliance in North Sumatra. The digitalization of services by the Directorate General of Taxes (DGT) represents an effort to transform the delivery and processing of tax data into a more modern and integrated system. The utilization of information technology particularly computer-based systems enables data to be processed into useful information. The implementation of e-system-based technology in tax administration modernization is expected to improve taxpayer compliance while also increasing public trust in the current modern tax administration [17]. With the use of information technology, taxpayers are no longer required to visit the Tax Service Office (KPP) in person, making it easier for them to fulfill their tax obligations. In other words, digital technology in this era greatly facilitates taxpayers in accessing and managing their tax-related data and activities [18].

3.2.2. The Effect of Taxpayer Knowledge on Taxpayer Compliance in North Sumatra

The second hypothesis states that taxpayer knowledge has a positive and significant effect on taxpayer compliance. The results indicate that taxpayer knowledge significantly influences taxpayer compliance, as evidenced by a statistical value of 3.984 > 1.660. Thus, it can be concluded that taxpayer knowledge affects taxpayer compliance. Tax knowledge refers to information that taxpayers use as a basis for decision-making and strategic actions related to their rights and obligations. However, the findings also suggest that a higher level of tax knowledge does not always guarantee higher compliance. External factors, such as public perceptions of government integrity (e.g., corruption issues), may reduce taxpayers' willingness to comply. Interviews with respondents revealed that even with increasing tax knowledge, public trust issues can discourage tax payment. Therefore, it is essential for the government and tax authorities to enhance tax education through socialization programs, outreach, and media to improve taxpayer understanding and ultimately increase compliance. These findings are consistent with previous research by Yulia et al., which found that tax knowledge significantly affects taxpayer compliance [19]. However, these findings differ from those of Wardani & Wati, Haryanti et al., and Hilman, which reported that Taxpayer Knowledge does not significantly affect Taxpayer Compliance [19], [20], [21].

3.2.3. The Effect of Taxpayer Satisfaction on Taxpayer Compliance in North Sumatra

The third hypothesis in this study states that Taxpayer Satisfaction has a positive and significant effect on Taxpayer Compliance. The results show that the taxpayer satisfaction variable has a significant influence on taxpayer compliance. This is evidenced by the significance value obtained of 0.000 < 0.05. Therefore, it can be concluded that taxpayer satisfaction significantly affects taxpayer compliance. Taxpayer satisfaction reflects the efforts of the Directorate General of Taxes (DGT) to provide understanding, information, and guidance to the public in general and taxpayers in particular regarding all matters related to taxation and tax regulations. Higher taxpayer satisfaction is expected to increase compliance, thereby contributing to the achievement of tax revenue targets. Taxpayer compliance itself refers to a condition in which taxpayers fulfill all their tax obligations. An increase in taxpayer compliance can be observed from the growing number of taxpayers who pay, report, and submit their tax returns (SPT), as well as the decreasing number of taxpayers with outstanding liabilities and sanctions, whether administrative or criminal. Compliance can be enhanced through intensive and effective tax socialization programs conducted by the DGT. This means that the more frequently tax education and outreach activities are carried out, the more taxpayers will understand tax rules and sanctions, thereby increasing their awareness and willingness to comply. The findings of this study are consistent with previous research by Wardani & Wati and Haryanti et al., which show that taxpayer satisfaction has a significant effect on taxpayer compliance [21], [22]. However, these results differ from those of Yulia et al., which found that tax knowledge does not have a significant effect on taxpayer compliance [19].

3.2.4. The Effect of Batak Philosophy (Hamoraon, Hasangapon, and Hagabeon) on Taxpayer Compliance in North Sumatra

The fourth hypothesis of this study states that Batak Philosophy (*Hamoraon, Hasangapon, and Hagabeon*) has a positive and significant effect on Taxpayer Compliance. The results of the analysis indicate that the Batak philosophical values variable significantly influences Taxpayer Compliance. This is evidenced by the significance value obtained of 0.002 < 0.05. Therefore, it can be concluded that Batak Philosophy (*Hamoraon, Hasangapon, and Hagabeon*) has a significant effect on Taxpayer Compliance. These three values are interconnected and form a strong identity within Batak society. They believe that success in life is achieved through a balance between wealth, lineage, and honor [23]. This philosophy is not only relevant in the past but continues to serve as a valuable guideline in facing the challenges of modern life [24].

The Role of the CoreTax Administration System in Moderating the Effect of Digital Transformation on Taxpayer Compliance in North Sumatra

Based on the hypothesis testing results, Digital Transformation through the CoreTax Administration System has a positive and significant effect on Taxpayer Compliance in North Sumatra. This finding is consistent with the study by Korat & Munandar, which states that the implementation of the Core Tax Administration System is an important step in improving efficiency and tax compliance [25]. The effectiveness of the CoreTax system in reducing compliance costs can be explained through several

mechanisms, including the automation of administrative processes that reduces processing time, service integration that eliminates duplication of activities, and improved accessibility of information that minimizes search costs. Further analysis indicates that taxpayer characteristics play a significant moderating role in determining the effectiveness of digital systems, where taxpayers with adequate technological capabilities tend to gain more optimal benefits. The use of information technology in modernizing tax administration through e-system-based services is expected not only to enhance taxpayer compliance but also to increase public trust in the current modern tax administration. With the implementation of information technology, taxpayers are no longer required to visit the Tax Service Office (KPP) directly, thereby making it easier for them to fulfill their tax obligations. In other words, digital technology in this era greatly facilitates taxpayers in accessing and managing their tax-related data and activities.

The Role of the CoreTax Administration System in Moderating the Effect of Taxpayer Knowledge on Taxpayer Compliance in North Sumatra

Based on the hypothesis testing results, Taxpayer Knowledge through the CoreTax Administration System has a positive and significant effect on Taxpayer Compliance in North Sumatra. This finding is consistent with the study by Arfah and Aditama which shows that tax knowledge and the modernization of tax administration systems simultaneously have a significant effect on taxpayer compliance [1]. These findings indicate that taxpayer knowledge does not operate independently in driving compliance; rather, its effectiveness is strongly influenced by the presence of a modern, integrated, and easily accessible tax administration system. In the context of the CoreTax Administration System, the system acts as a medium that translates taxpayer knowledge into actual compliance behavior through the simplification of reporting processes, increased transparency, and integration of tax data. Therefore, in line with the findings of Arfah and Aditama it can be assumed that in North Sumatra, the higher the level of taxpayer knowledge supported by the effective utilization of the CoreTax Administration System, the stronger its impact on improving taxpayer compliance [1]. Thus, CoreTax functions as a moderating variable that strengthens the relationship between taxpayer knowledge and taxpayer compliance.

The Role of the CoreTax Administration System in Moderating the Effect of Taxpayer Satisfaction on Taxpayer Compliance in North Sumatra

Based on the hypothesis testing results, Taxpayer Satisfaction through the CoreTax Administration System has a positive and significant effect on Taxpayer Compliance in North Sumatra. This finding indicates that the presence of a modern administrative system strengthens the relationship between taxpayer satisfaction and compliance behavior. However, the results also suggest that taxpayer knowledge derived from educational background does not necessarily guarantee higher compliance in fulfilling tax obligations. In other words, even though tax knowledge continues to increase, external factors such as issues related to government corruption may lead to reluctance among taxpayers to comply. Based on interviews conducted with several respondents, it was found that despite having sufficient knowledge about taxation, taxpayers may still be unwilling to pay taxes when they perceive corruption within the government. Therefore, it is expected that the

government or tax authorities provide continuous initiatives to enhance taxpayer understanding, such as socialization programs, counseling, and information dissemination through various media. By improving both satisfaction and understanding, taxpayer compliance can be strengthened more effectively.

The Role of the CoreTax Administration System in Moderating the Effect of Batak Philosophy (Hamoraon, Hasangapon, and Hagabeon) on Taxpayer Compliance in North Sumatra

Based on the hypothesis testing results, Batak Philosophy (*Hamoraon, Hasangapon, and Hagabeon*) through the CoreTax Administration System has a positive and significant effect on Taxpayer Compliance in North Sumatra. Local cultural values, including Batak philosophy as reflected in *Hamoraon, Hasangapon, and Hagabeon*, play an important role in shaping individuals' attitudes and behavior toward social and economic obligations. Studies on Batak culture show that *Hamoraon* encourages an orientation toward economic prosperity, *Hasangapon* emphasizes honor and social recognition, and *Hagabeon* highlights responsibility toward family and generational continuity. Theoretically, these values can influence taxpayer compliance behavior, either by encouraging compliance as a way to maintain honor and family continuity, or conversely, discouraging it if tax obligations are perceived as reducing economic well-being.

However, the influence of cultural values on tax compliance is neither direct nor static; rather, it is highly dependent on the context of the prevailing tax administration system. Research on culture and tax compliance in Indonesia indicates that local cultural values are more effective in promoting compliance when supported by an administrative system that is transparent, fair, and easily accessible. In this regard, the modernization of tax administration systems has been shown to transform how social and cultural values are translated into actual compliance behavior. Studies by Arfah and Aditama as well as Noldy Chandra et al. found that modern tax administration systems not only have a direct effect on taxpayer compliance but also strengthen the influence of internal factors such as knowledge and awareness [1], [26]. This is consistent with other findings suggesting that digital-based administrative systems can function as an enabling mechanism facilitating and reinforcing the influence of values, attitudes, and social norms on tax compliance. In the context of the CoreTax Administration System, features such as data integration, ease of reporting, process transparency, and legal certainty have the potential to strengthen *Hasangapon* by enhancing perceptions of fairness and legitimacy of tax authorities, reinforce *Hamoraon* by reducing compliance costs and the risk of penalties, and support *Hagabeon* by enabling sustainable fulfillment of tax obligations for the benefit of family and future generations. Thus, CoreTax functions not only as an administrative tool but also as a contextual factor that moderates the relationship between Batak philosophy and taxpayer compliance.

4. CONCLUSION

Based on the results of the study and discussion on taxpayer compliance in the era of digital transformation in North Sumatra from the perspective of Batak philosophical

values (*Hamoraon, Hasangapon, and Hagabeon*), it can be concluded that taxpayer compliance is influenced by both technological and socio-cultural factors in an integrated manner. Digital transformation has proven to have a positive and significant effect on taxpayer compliance, indicating that the modernization of tax administration systems enhances efficiency, accessibility, and transparency, thereby encouraging taxpayers to fulfill their obligations more easily and effectively.

In addition, taxpayer knowledge also plays an important role in shaping compliance behavior. Adequate understanding of tax regulations enables taxpayers to better recognize their rights and obligations. However, this study highlights that knowledge alone is not sufficient to ensure compliance, as external factors such as public trust in government and perceptions of corruption can influence taxpayers' willingness to comply.

Taxpayer satisfaction is another key determinant that significantly contributes to compliance. High levels of satisfaction with tax services reflected in service quality, clarity of information, and effective socialization enhance taxpayers' awareness and willingness to comply with tax regulations. Alongside these factors, Batak philosophical values (*Hamoraon, Hasangapon, and Hagabeon*) also demonstrate a strong influence on compliance behavior. These cultural values, which emphasize economic prosperity, social honor, and generational continuity, serve as moral and social foundations that encourage individuals to fulfill their tax obligations as part of their responsibility to family and society.

Furthermore, the CoreTax administrative system plays a crucial moderating role in strengthening the relationships between the independent variables and taxpayer compliance. CoreTax enhances the impact of digital transformation by improving system integration, automation, transparency, and accessibility. It also bridges taxpayer knowledge into actual compliance behavior by simplifying tax processes and increasing usability. Moreover, the system reinforces the effect of taxpayer satisfaction by providing a more efficient and user-friendly administrative environment. Importantly, CoreTax also strengthens the influence of Batak cultural values by acting as an enabling mechanism that translates cultural norms into real compliance behavior through fairness, convenience, and legal certainty.

Overall, this study demonstrates that taxpayer compliance in the digital era cannot be understood solely from a technical or administrative perspective, but must also consider behavioral and cultural dimensions. The integration of digital transformation, taxpayer knowledge, service satisfaction, and local cultural values supported by a modern administrative system such as CoreTax forms a comprehensive framework for improving sustainable taxpayer compliance.

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