

Digital tax transformation and compliance behaviour: The moderating role of social norms in Indonesian corporate tax system

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ABSTRACT

This study examines whether digital tax transformation improves corporate tax compliance and whether social norms condition that effect. The Indonesian setting is relevant because firms have faced a broader digitalisation of tax administration alongside mandatory e-invoicing under PER-03/PJ/2022. Building on the Slippery Slope Framework and the literature on digital tax administration, we analyse survey and archival data from 566 Indonesian corporations for the 2020-2024 period. The study applies a two-stage procedure: survey-based constructs are first validated through factor analysis, and the hypotheses are then tested using hierarchical regression with interaction terms. The results show that trust in tax authorities, authority power, and e-invoicing implementation are positively associated with corporate tax compliance. More importantly, social norms strengthen each relationship, indicating that formal enforcement and digital systems operate more effectively when firms perceive compliance as the expected conduct among relevant peers. The enhanced e-invoicing index, which combines technical adoption, data quality, system integration, and regulatory adherence, explains more variation than a simple adoption measure. The findings contribute to tax compliance research by showing that digital reform should be assessed not only as a technological intervention but also as an institutional process embedded in social expectations.

Introduction

Corporate tax compliance is central to fiscal capacity, particularly in developing economies that must finance infrastructure, public services, and social protection while working with a relatively narrow tax base. Indonesia illustrates this challenge. Despite its large domestic market, the country has continued to record a comparatively modest tax-to-GDP ratio, and the gap between potential and realised revenue remains a policy concern (Ministry of Finance of the Republic of Indonesia, 2023; World Bank, 2024). For corporations, compliance is not merely a matter of administrative reporting; it reflects how firms respond to tax rules, enforcement signals, institutional credibility, and the expectations of their business environment.

Digitalisation has become one of the main instruments through which tax authorities attempt to reduce reporting gaps. Indonesia strengthened this agenda through the mandatory e-invoicing framework regulated under PER-03/PJ/2022 (Direktorat Jenderal Pajak, 2022b). Evidence from other countries suggests that electronic invoicing can increase reported transactions and improve audit effectiveness, but the effects depend on implementation quality and the surrounding enforcement regime (Bellon et al., 2023; Kotsogiannis et al., 2025). These findings imply that the compliance impact of e-invoicing cannot be inferred from adoption status alone.

Existing studies also show that the main determinants of tax compliance do not always operate consistently across contexts. Trust in tax authorities, enforcement power, and digital reporting systems have been associated with stronger compliance in some settings, yet weaker or non-significant outcomes in others (Batrancea et al., 2022; Cahyonowati et al., 2023; Darmayasa and Hardika, 2024). In the Indonesian corporate context, this inconsistency is particularly important because firms operate within industries and professional networks where tax practices are observed, discussed, and sometimes normalised. The present study therefore treats social norms not as a peripheral behavioural variable, but as a boundary condition that may explain why similar institutional mechanisms produce different compliance responses.

Social norms refer to perceived expectations about what comparable firms usually do and what behaviour is considered acceptable by relevant peers. When compliance is viewed as the standard practice within an industry

or professional network, trust, enforcement, and technology are more likely to reinforce lawful reporting. When aggressive tax minimisation is tolerated, the same mechanisms may be interpreted instrumentally, for example as signals to manage detection risk rather than as reasons to comply. Recent evidence on tax compliance dilemmas and cultural norms supports the view that informal social expectations can shape the effectiveness of formal institutions (Cahyonowati et al., 2023; Cheng et al., 2024).

This study also refines the measurement of e-invoicing implementation. Prior research has often relied on adoption or coverage indicators, whereas compliance outcomes may depend on whether electronic invoices are complete, accurate, integrated with accounting systems, and aligned with regulatory requirements. Accordingly, the present study develops a four-dimensional index consisting of technical adoption, data quality compliance, system integration, and regulatory adherence. This measurement approach is intended to distinguish substantive digital implementation from symbolic adoption.

The study makes three contributions. First, it extends the Slippery Slope Framework by positioning social norms as a contextual condition that shapes the effects of trust and power. Second, it offers a multidimensional measure of e-invoicing implementation that is aligned with Indonesian regulatory requirements. Third, it provides evidence from an emerging economy where digital tax reform, institutional credibility, and peer-based compliance expectations interact in practice.

Literature Review

Theoretical Foundation: The Slippery Slope Framework

The Slippery Slope Framework (SSF) explains tax compliance through two institutional mechanisms: trust in tax authorities and the power of authorities (Kirchler et al., 2008). Trust captures the belief that tax authorities are competent, fair, and oriented toward public interest. Power reflects the perceived capacity of authorities to detect, sanction, and correct non-compliance. The framework is useful for corporate tax research because firms may comply voluntarily when the tax authority is viewed as legitimate, or comply defensively when non-compliance is expected to be detected.

Recent studies continue to support the relevance of the SSF, while also showing that its mechanisms are context dependent. Batrancea et al. (2022), using experimental evidence from eleven countries, found that trust and power increase intended compliance, although they operate through different motivational routes. In Indonesia, Aulia et al. (2022) argue that corporate tax risk should be considered together with trust and power because firms make compliance decisions under uncertainty. Darmayasa and Hardika (2024) further suggest that digital tax administration reform may strengthen both the trust and power dimensions of the SSF.

For this study, the SSF provides the basic logic for the direct effects of trust and power. Trust is expected to support cooperative compliance because firms are more willing to follow tax rules when they believe the authority acts competently and consistently. Power is expected to support enforced compliance because stronger detection and sanction capacity increases the expected cost of non-compliance.

At the same time, the SSF does not fully explain why the same institutional mechanisms work differently across industries, regions, or cultural settings. The present study addresses this limitation by incorporating social norms. Social norms are treated as the social environment in which trust, power, and digital systems are interpreted by firms.

This integration is consistent with the view that tax compliance is both an institutional and a social decision. Formal rules set obligations, but firms also respond to signals from peers, professional advisers, suppliers, and competitors. Consequently, the effectiveness of trust and enforcement is likely to be stronger when the surrounding social environment supports compliant conduct. The following subsections develop the hypotheses by linking the SSF, digital tax administration, and social norms in the Indonesian corporate tax context.

Trust in Tax Authorities and Tax Compliance

Trust in tax authorities refers to the extent to which taxpayers perceive the authority as competent, benevolent, and possessing integrity (Muehlbacher et al., 2011). In corporate tax settings, trust is important because firms often face complex reporting obligations and must rely on the clarity, consistency, and credibility of tax administration. When firms believe that the authority applies rules fairly and uses tax revenues responsibly, compliance is less likely to be perceived merely as a coerced obligation.

Recent evidence supports this argument. Batrancea et al. (2022) show that trust increases intended tax compliance across different institutional contexts. Appiah et al. (2024), in an emerging-economy setting, find that trust in government is a significant predictor of voluntary tax compliance. Indonesian evidence also points in the same direction: Aulia et al. (2022) position trust as one of the central determinants of corporate compliance within an extended SSF model, while Darmayasa and Hardika (2024) argue that digital tax reform may reinforce trust when taxpayers perceive the system as more reliable and transparent.

Nevertheless, trust does not operate automatically. In low-trust environments, firms may view tax administration reforms with caution, especially when previous experiences involve inconsistent enforcement or administrative discretion. Trust is therefore expected to matter most when firms interpret the tax authority as a legitimate public institution rather than simply as an enforcer. On this basis, higher trust should increase the willingness of corporations to report and pay taxes accurately.

Accordingly, this study proposes that trust in tax authorities has a positive effect on corporate tax compliance.
H₁: Trust in tax authorities positively influences corporate tax compliance.

Power of Tax Authorities and Tax Compliance

The power of tax authorities refers to their capacity to detect underreporting, impose sanctions, collect unpaid taxes, and use information systems to monitor taxpayer behaviour. Within the SSF, power encourages enforced compliance because firms face higher expected costs when non-compliance becomes easier to identify and sanction (Kirchler et al., 2008).

Recent studies confirm the importance of enforcement capacity, while also emphasising that power should be perceived as legitimate rather than arbitrary. Batrancea et al. (2022) find that power increases enforced compliance intentions, and Aulia et al. (2022) show that corporate tax risk interacts with trust and power in shaping compliance behaviour. In digital tax administration, enforcement power is increasingly exercised through data matching, electronic audit trails, and risk-based monitoring. Kotsogiannis et al. (2025) show that e-invoicing can improve VAT audit effectiveness, indicating that digital systems may strengthen authority power by improving the quality and timeliness of information available to auditors.

In the Indonesian context, stronger authority power should increase corporate compliance because firms are more likely to anticipate detection when reporting systems are integrated and enforcement is credible. However, the positive effect is expected to depend on whether enforcement is seen as consistent and rule based. Therefore, this study formulates the following hypothesis.

H₂: Power of tax authorities positively influences corporate tax compliance.

E-Invoicing Implementation and Tax Compliance

E-invoicing is a core element of digital tax administration because it creates transaction-level records that can be used for reporting, verification, and audit selection. Under PER-03/PJ/2022, Indonesian taxable entrepreneurs must issue electronic tax invoices in accordance with specified format, timing, and documentation requirements (Direktorat Jenderal Pajak, 2022a). This regulation makes e-invoicing not only a technological tool but also a compliance infrastructure.

International evidence indicates that e-invoicing can improve compliance, but the mechanism is more complex than simple technology adoption. Bellon et al. (2022) find that the transition from paper to electronic invoicing in Peru increased reported sales, purchases, and VAT liabilities in the first year after adoption. Bellon et al. (2023) further show that e-invoicing can generate compliance spillovers through trading networks. Kotsogiannis et al. (2025), using evidence from Rwanda, demonstrate that e-invoicing increases net VAT payments and improves audit efficiency, especially when supported by adequate enforcement policies.

These findings suggest that e-invoicing should be measured by implementation quality. A firm may formally use an e-invoicing system while still submitting incomplete data, correcting invoices frequently, or failing to integrate the system with internal accounting records. Such cases represent compliance with the form of digitalisation but not necessarily with its substance.

This study therefore measures e-invoicing implementation through four dimensions. Technical adoption captures the extent to which transactions are processed electronically. Data quality compliance reflects accuracy, completeness, timeliness, and correction patterns. System integration captures the linkage between e-invoicing and internal accounting or ERP systems. Regulatory adherence reflects conformity with the formal requirements of PER-03/PJ/2022, including digital signatures, invoice numbering, and audit trail retention.

The proposed measure is also consistent with institutional theory, which distinguishes ceremonial adoption from substantive adoption (Meyer and Rowan, 1977). In the present context, ceremonial adoption occurs when firms use the required system mainly to satisfy formal requirements, whereas substantive adoption occurs when e-invoicing changes the quality of transaction recording and tax reporting.

Therefore, firms with higher-quality e-invoicing implementation are expected to demonstrate stronger corporate tax compliance.

H₃: E-invoicing implementation positively influences corporate tax compliance.

The Moderating Role of Social Norms

Social norms are informal expectations regarding acceptable conduct within a relevant group. In tax settings, descriptive norms reflect beliefs about what other firms usually do, while injunctive norms reflect beliefs about

what peers approve or disapprove. These norms are important because corporate tax decisions are often made within professional and industry networks in which firms observe competitors, receive advice from consultants, and evaluate reputational consequences.

Recent research strengthens the theoretical relevance of social norms in tax compliance. Cahyonowati et al. (2023) show that social norms and trust help explain tax compliance dilemmas in the Indonesian setting. Arsal et al. (2025) further demonstrate that regional compliance norms influence tax filing and payment behaviour in Indonesia, while Cheng et al. (2024) show that cultural norms can reduce corporate tax evasion in China. Together, these studies suggest that informal social expectations may condition the effectiveness of formal compliance mechanisms.

Social norms may strengthen the effect of trust in tax authorities. When firms believe that compliant behaviour is expected by peers, trust can translate into reciprocal cooperation. In contrast, when non-compliance is tolerated, trust may be insufficient because firms remain exposed to peer pressure or competitive concerns. Thus, trust is expected to have a stronger positive association with compliance under strong pro-compliance norms.

Social norms may also strengthen the effect of authority power. Enforcement is more persuasive when sanctions are consistent with shared expectations of lawful conduct. Under weak norms, enforcement can be interpreted as an external threat and may encourage defensive or evasive responses. Under strong norms, however, enforcement supports the legitimacy of compliant firms and reinforces the belief that non-compliance is unacceptable.

Finally, social norms may strengthen the effect of e-invoicing implementation. Digital systems increase transparency, but firms still decide how seriously to maintain data quality, integrate records, and correct discrepancies. In a strong normative environment, e-invoicing is more likely to be internalised as part of responsible business practice. In a weak normative environment, firms may use the same system minimally or search for ways to comply only at the surface level.

H₄: Social norms perception positively moderates the relationship between trust in tax authorities and corporate tax compliance.

H₅: Social norms perception positively moderates the relationship between power of tax authorities and corporate tax compliance.

H₆: Social norms perception positively moderates the relationship between e-invoicing implementation and corporate tax compliance.

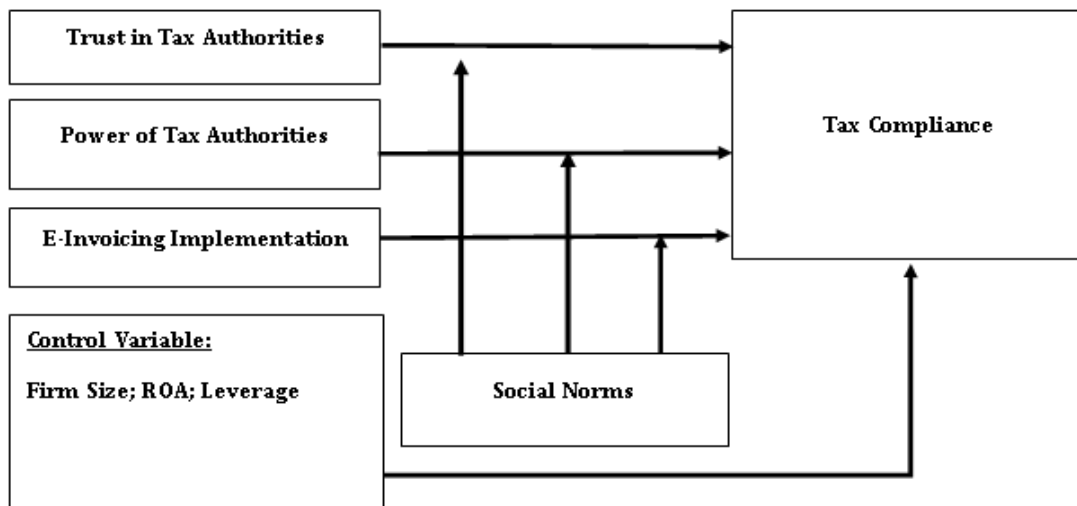


Figure 1. Conceptual Framework

The conceptual framework presented in Figure 1 illustrates the relationships among the variables examined in this study.

Research Method

Research Design and Context

This study uses a quantitative explanatory design that combines primary survey data with secondary archival records. The survey captures managerial perceptions of trust, e-invoicing implementation, and social norms, while archival data provide objective indicators of firm characteristics and tax compliance outcomes. Combining both sources reduces dependence on self-reported measures and allows the analysis to connect behavioural constructs with observable compliance data.

The study focuses on Indonesian corporations during 2020-2024, a period marked by accelerated tax administration digitalisation and the implementation of PER-03/PJ/2022. This period is analytically relevant because firms had to adjust reporting routines, invoice documentation, and internal control processes while operating under changing economic conditions after the COVID-19 disruption.

Variation across industries, regions, and firm sizes provides an appropriate setting for examining why formal tax administration mechanisms may not generate uniform compliance outcomes. The research design therefore allows the study to test both direct institutional effects and the moderating role of social norms.

Population and Sampling Strategy

The population consists of corporations registered with the Directorate General of Taxes as of December 2023. The sampling frame was limited to medium and large enterprises because these firms are more likely to be subject to formal e-invoicing obligations, maintain structured accounting systems, and employ personnel responsible for tax reporting.

A stratified sampling strategy was used to obtain representation across industry classification, geographic region, and firm size. Stratification reduces the risk that the results are driven by one dominant sector or region and enables the analysis to reflect the diversity of Indonesia's corporate taxpayer population. The minimum sample requirement was calculated using Cochran's formula for finite populations, assuming a 95% confidence level, a 5% margin of error, and maximum variability. To accommodate potential non-response and preserve the proportionality of the strata, the target sample was set at 800 firms.

Eligible firms were selected within each stratum based on active registration, verifiable contact information, and the absence of bankruptcy status at the time of selection. Of the 800 firms contacted, 566 provided valid survey responses, corresponding to a response rate of 70.75%. After matching the survey responses with archival data and excluding incomplete records, the final analytical sample consisted of 548 firms and 2,192 firm-year observations for the 2020-2023 period.

Data Collection Procedures

Data collection was conducted in three stages. The first stage covered institutional preparation and data access arrangements. The second stage involved survey administration to CFOs, tax managers, or equivalent officers who were directly involved in corporate tax reporting. The third stage matched the survey responses with archival data using anonymised identifiers. Table 1 summarises the procedures and outputs of each stage.

Table 1. Summary of Data Collection Procedures

Phase	Period	Activities	Outcomes
Phase 1: Institutional Preparation	Oct–Dec 2023	<ul style="list-style-type: none"> – Secured MoU with Directorate General of Taxation (DJP) – Negotiated data-sharing and confidentiality protocols- Obtained endorsements from IAI and APTI – Developed secure data transmission system in collaboration with DJP IT division 	Legal access to taxpayer records granted; institutional support established; secure infrastructure for data exchange finalized
Phase 2: Survey Administration	Jan–Mar 2024	<ul style="list-style-type: none"> – Targeted CFOs/Tax Managers as key informants- Distributed surveys via secure online platform with individual access codes – Implemented follow-up protocol (email reminders, phone calls) – Embedded attention checks and monitored completion time and response patterns 	Achieved high response quality and volume; >50% response increase through structured follow-up; reliable perceptual data collected from qualified informants
Phase 3: Data Integration	April 2024	<ul style="list-style-type: none"> – Matched survey responses with DJP filing data via anonymized IDs – Extracted financial variables from annual reports and databases – Validated firm-level characteristics from multiple sources- Merged perceptual and behavioural data into unified dataset 	Created comprehensive dataset combining subjective and objective tax compliance indicators; ready for multivariate analysis

Variable Measurement

The variables were measured using a combination of archival indicators and survey-based constructs. The dependent variable captures corporate tax compliance as a composite index that combines objective compliance

information and managerial assessment of reporting accuracy. The independent variables consist of trust in tax authorities, power of tax authorities, and e-invoicing implementation. Social norms perception is treated as the moderating variable, while firm characteristics and contextual variables are included as controls. Table 2 presents the operationalisation of each variable.

Table 2. Summary of Variable Measurement and Data Sources

Variable	Type & Components	Indicators / Items	Data Source & Notes
Corporate Tax Compliance (Dependent Variable)	Composite index of objective (70%) and subjective (30%) compliance	Objective (DJP): - On-time filing ratio - Payment timeliness - 1 - Audit adjustments Subjective (Survey): - "We report all income" - "We claim only legitimate deductions" - "Our tax filings are accurate"	Official DJP tax filing records; Survey of CFOs/tax managers; composite formula: $0.7 \times \text{Avg}(\text{Objective}) + 0.3 \times \text{Avg}(\text{Subjective})$
Trust in Tax Authorities (Independent Variable)	Latent construct with 3 dimensions: Competence, Benevolence, Integrity	- "Tax authorities have expertise" - "Officials help taxpayers" - "Revenues used transparently", etc. (8 items)	Survey (5-point Likert); Adapted from Muehlbacher et al. (2011) ; $\alpha > 0.85$
Power of Tax Authorities (Independent Variable)	Provincial enforcement index (z-score composite)	- Audit intensity - Penalty rate - Conviction rate - Collection effectiveness	DJP regional enforcement data; all indicators standardized and averaged
E-Invoicing Implementation (Independent Variable)	4 equally weighted dimensions (25% each)	Technical Adoption (DJP): % transactions, coverage, value Data Quality (DJP): Error rate, completeness, timeliness System Integration (Survey): ERP linkage, real-time checks Regulatory Adherence (Mixed): Signature, audit trail, sequence compliance	Composite index combining survey and administrative records; aligned with PER-03/PJ/2022
Social Norms Perception (Moderating Variable)	Descriptive and injunctive norms (6 items)	- "Most firms comply" - "Tax evasion harms reputation" - "Partners expect compliance", etc.	Survey-based, 5-point Likert scale; Cronbach's $\alpha = 0.874$
Control Variables	Firm and contextual characteristics	- Firm Size (ln assets) - Firm Age (years) - ROA (3-year avg) - Leverage (debt/equity) - Industry dummies (KBLI) - Ownership type (public/private) - Region (Java = 1) - Big 4 auditor (binary)	Secondary data from annual reports, DJP, IDX, and public registries

Analytical Strategy

The empirical analysis was conducted in sequential stages to ensure that measurement quality was assessed before hypothesis testing.

Preliminary Analyses

Preliminary analysis included checks for missing data, outliers, common method bias, and non-response bias (see Table 3). Measurement validation was then conducted for survey-based constructs using factor analysis and reliability and validity tests. This procedure ensured that the latent variables used in the regression models were psychometrically acceptable before structural relationships were interpreted.

Table 3. Summary of Preliminary Analyses

Category	Procedures	Purpose	Outcome
Data Quality Checks	<ul style="list-style-type: none"> - Little's MCAR test for missing data - Outlier detection using standardized residuals (>3.5) - Harman's single-factor test for common method bias - Non-response bias test (early vs late respondents) 	To ensure data completeness, distribution integrity, and absence of bias or systemic error	No significant missing patterns; outliers addressed; no dominant single factor; no significant non-response bias observed
Measurement Validation	<ul style="list-style-type: none"> - Exploratory Factor Analysis (EFA) on split sample - Confirmatory Factor Analysis (CFA) on remaining sample - Reliability assessment via Cronbach's α and Composite Reliability - Validity assessment via AVE and discriminant validity (HTMT) 	To assess the structural soundness and psychometric robustness of survey-based constructs	All constructs met reliability ($\alpha > 0.80$) and validity thresholds (AVE > 0.50; HTMT < 0.90); factor structure confirmed

Main Analysis Approach

The main analysis consisted of construct validation, composite index construction, and hierarchical regression (see Table 4). First, the survey-based constructs were validated. Second, the e-invoicing implementation index was constructed from the four dimensions described earlier and standardised. Third, hierarchical regression models were estimated by entering control variables, main predictors, the moderator, and interaction terms sequentially. This approach allows the incremental explanatory power of each block to be evaluated.

Table 4. Summary of Main Analytical Procedures

Stage	Procedure	Purpose	Key Considerations
Stage 1: Survey Construct Validation	<ul style="list-style-type: none"> - Exploratory Factor Analysis (EFA) with principal component extraction and varimax rotation - Factor score extraction via regression method 	To confirm dimensionality and ensure reliability and validity of survey-based constructs (e.g., trust, social norms)	Based on Hair et al. (2019) scores standardized and adjusted for measurement error
Stage 2: Composite Variable Construction	<ul style="list-style-type: none"> - Construction of weighted index for e-invoicing implementation - Equal weights assigned to four dimensions (25%) - Standardization via z-scores 	To build a theoretically grounded index reflecting PER-03/PJ/2022 compliance dimensions	Components include Technical, Data Quality, Integration, and Regulatory adherence
Stage 3: Hierarchical Regression Analysis	<ul style="list-style-type: none"> - Model 1: Controls only - Model 2: Adds main predictors (trust, power, e-invoicing) - Model 3: Adds moderator (social norms) - Model 4: Adds interaction terms 	To test hypotheses sequentially and evaluate variance explained (ΔR^2) at each step	Uses OLS regression with robust standard errors clustered at firm level
Stage 4: Interaction Interpretation	<ul style="list-style-type: none"> - Simple slopes analysis at ± 1 SD of moderator - Interaction plots for significant effects 	To interpret moderation and visualize conditional effects of predictors	Based on Aiken and West (1991) ; supports interpretation of H4–H6

Classical Assumption Tests

Before interpreting the regression results, diagnostic tests were conducted to assess the assumptions of linear regression. Residual normality was evaluated using the Shapiro-Wilk test, heteroscedasticity using the Breusch-Pagan test, multicollinearity using Variance Inflation Factors, autocorrelation using the Durbin-Watson statistic, and model specification using residual plots and the RESET test.

The diagnostic results indicate that the data are suitable for regression analysis. Mild heteroscedasticity was addressed by using robust standard errors clustered at the firm level. The remaining diagnostics did not indicate serious violations that would undermine the interpretation of the regression results. These checks support the use of hierarchical regression with robust standard errors for testing the proposed hypotheses.

Robustness Tests

Robustness tests were conducted to assess the stability of the findings across alternative specifications. The models were re-estimated using an objective-only compliance measure, an industry-level proxy for social norms, and alternative e-invoicing measures. These tests evaluate whether the findings depend on the specific operationalisation of the main variables.

Potential endogeneity and sample-selection issues were also considered. A two-stage least squares specification was estimated using historical trust as an instrument for current trust perceptions, and a Heckman correction was used to address possible non-response bias. Additional subsample analyses were conducted by industry and firm size.

Finally, fixed-effects and random-effects panel specifications were compared using Hausman tests, and the four e-invoicing dimensions were examined separately. The findings remained consistent in direction and significance across these checks.

Addressing Methodological Challenges

Table 5 summarises the main methodological challenges and the corresponding mitigation strategies. These procedures were used to reduce bias arising from mixed data sources, common method variance, and the limits of causal interpretation in a non-experimental design.

Table 5. Strategies for Addressing Methodological Challenges

Challenge	Description	Mitigation Strategy
Mixed Data Sources	Use of both survey (subjective) and archival (objective) data introduces differences in scale, timing, and reliability	Standardized all variables; used contemporaneous data where available; emphasized objective indicators in composite measures
Common Method Bias (CMB)	Risk of inflated associations due to self-reported survey items	Applied temporal separation (survey in Q1 vs. archival full-year data); varied response formats; conducted Harman's single-factor test (no dominant factor found); used marker variable technique to confirm minimal bias
Causal Inference Limitation	Cross-sectional design restricts ability to infer causality	Findings interpreted as associations; recommendation for future longitudinal studies to confirm causal directions

Result and Discussion

Descriptive Statistics and Preliminary Analyses

Table 6 reports the descriptive statistics and correlations for the main variables. The results provide an initial overview of corporate tax compliance, institutional perceptions, e-invoicing implementation, and social norms in the sample.

Table 6. Descriptive Statistics and Correlations

Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6
1. Tax Compliance	3.47	0.89	1.23	5.00	1.00					
2. Trust in Authorities	2.89	1.02	1.00	5.00	0.42***	1.00				
3. Power of Authorities	0.00	1.00	-2.34	2.87	0.31***	0.18***	1.00			
4. E-Invoice Implementation	3.78	0.83	1.45	5.00	0.56***	0.34***	0.27***	1.00		
5. Social Norms	3.31	0.94	1.00	5.00	0.48***	0.51***	0.22***	0.43***	1.00	
6. Firm Size (log)	14.23	1.89	9.87	19.45	0.21***	0.15**	0.19***	0.38***	0.24***	1.00
7. ROA	0.087	0.076	-0.123	0.345	0.18***	0.12**	0.09*	0.22***	0.16***	0.19***
8. Leverage	0.567	0.234	0.023	1.456	-0.14**	-0.08	0.07	-0.11**	-0.09*	0.23***

*N = 548. ***p < 0.01, **p < 0.05, *p < 0.10

The mean tax compliance score of 3.47 on a five-point scale indicates a moderate level of compliance, suggesting that there remains room for improvement among Indonesian corporations. The average trust score is lower than the e-invoicing implementation score, indicating that digital adoption may have progressed faster than institutional confidence. The correlations are positive for all key predictors, with e-invoicing showing the strongest bivariate association with tax compliance.

Measurement Model Validation

The survey-based constructs were validated before hypothesis testing.

Table 7. Factor Analysis and Reliability Results

Construct	Items	Factor Loadings	Cronbach's α	CR	AVE
Trust in Authorities			0.891	0.916	0.611
- Competence dimension	3	0.74-0.82	0.823		
- Benevolence dimension	3	0.71-0.79	0.794		
- Integrity dimension	2	0.76-0.83	0.781		
Social Norms	6	0.68-0.84	0.874	0.903	0.609
E-Invoice Integration	3	0.79-0.87	0.856	0.891	0.732

All constructs met the conventional thresholds for reliability and convergent validity, with Cronbach's alpha and composite reliability values above 0.70 and AVE values above 0.50. The measurement model results in Table 7 confirm that the survey constructs are internally consistent and sufficiently valid for subsequent analysis. These results reduce concern that the regression findings are driven by poorly measured latent variables.

Classical Assumption Tests

Diagnostic tests were conducted before estimating the hypothesis-testing models.

Table 8. Diagnostic Test Results

Test	Statistic	p-value	Interpretation
Shapiro-Wilk (Normality)	W = 0.982	0.094	Residuals approximately normal
Breusch-Pagan (Heteroscedasticity)	$\chi^2 = 23.45$	0.076	Mild heteroscedasticity present
Mean VIF (Multicollinearity)	2.34	-	No serious multicollinearity
Durbin-Watson (Autocorrelation)	1.89	-	No autocorrelation
RESET (Specification)	F = 2.17	0.091	Model correctly specified

Because mild heteroscedasticity was detected, all regression models report robust standard errors. Table 8 indicates that the residuals are approximately normally distributed, multicollinearity is not severe, and autocorrelation is not evident. The RESET test supports the chosen model specification. Taken together, the diagnostics support the suitability of the data for hierarchical regression analysis.

Hypothesis Testing: Main Effects and Interactions

Table 9 reports the hierarchical regression results for the direct effects and interaction effects.

Model 2 shows that trust, authority power, and e-invoicing implementation are positively and significantly associated with corporate tax compliance. E-invoicing has the largest coefficient among the three predictors, indicating that digital reporting infrastructure is strongly related to compliance outcomes. Model 3 shows that social norms add explanatory power beyond the main predictors. Model 4 confirms that all three interaction terms are significant, supporting H4, H5, and H6. The final model explains 56.7% of the variance in tax compliance.

Table 9. Hierarchical Regression Results

Variables	Model 1	Model 2	Model 3	Model 4
	Controls	Main Effects	+Moderator	+Interactions
Main Effects				
Trust in Authorities		0.178*** (0.047)	0.142*** (0.045)	0.134*** (0.044)
Power of Authorities		0.213*** (0.039)	0.187*** (0.038)	0.171*** (0.037)
E-Invoice Implementation		0.411*** (0.051)	0.367*** (0.049)	0.342*** (0.048)

Moderator				
Social Norms			0.203*** (0.046)	0.187*** (0.045)
Interactions				
Trust*Social Norms				0.127** (0.051)
Power*Social Norms				0.089** (0.045)
E-Invoice*Social Norms				0.156*** (0.049)
Controls				
Firm Size (log)	0.124*** (0.038)	0.087** (0.035)	0.076** (0.034)	0.071** (0.033)
ROA	0.892*** (0.342)	0.743** (0.321)	0.687** (0.314)	0.654** (0.309)
Leverage	-0.287** (0.123)	-0.234** (0.117)	-0.219** (0.114)	-0.208* (0.112)
Firm Age	0.003 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)
Industry Dummies	Yes	Yes	Yes	Yes
Region Dummy	Yes	Yes	Yes	Yes
Ownership Dummy	Yes	Yes	Yes	Yes
Model Statistics				
R ²	0.134	0.487	0.523	0.567
Adjusted R ²	0.119	0.474	0.509	0.552
ΔR ²	-	0.353***	0.036***	0.044***
F-statistic	8.76***	37.89***	39.87***	41.23***
N	548	548	548	548

*Robust standard errors in parentheses. ***p < 0.01, **p < 0.05, *p < 0.10

Interpreting the Interactions

The interaction patterns were examined using simple slopes and interaction plots.

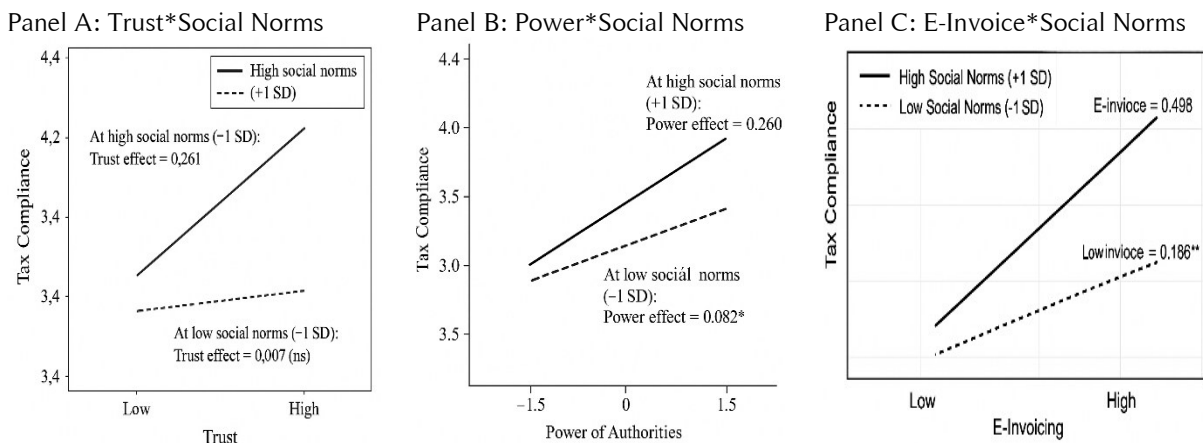


Figure 2. Interaction Effects of Social Norms

Figure 2 shows that the positive effect of trust is concentrated among firms reporting stronger social norms. Under weak norms, trust has a limited association with compliance. The effect of authority power is also stronger when social norms support compliance, indicating that enforcement is most effective when it aligns with collective expectations. E-invoicing remains positively associated with compliance across normative conditions, but the effect is substantially stronger when social norms are high.

E-Invoicing Measurement: Traditional vs Enhanced

The enhanced e-invoicing measure was compared with a traditional technical-adoption measure to evaluate whether implementation quality adds explanatory value.

Table 10. Comparing E-Invoicing Measurements

Model	Measurement Type	B	SE	R ²	ΔR ² vs Base
Base	Controls only	-	-	0.134	-
Traditional	Technical adoption only	0.267***	(0.048)	0.387	0.253***
Enhanced	4-dimensional index	0.411***	(0.051)	0.487	0.353***
Difference		0.144***			0.100***

Table 10 shows that the enhanced four-dimensional measure explains more variance than the adoption-only measure. This supports the argument that compliance outcomes depend on the quality of digital implementation rather than on system use alone.

Dimensional Analysis of E-Invoicing

Table 11 examines the separate contribution of each e-invoicing dimension.

Table 11. E-Invoicing Dimensions and Tax Compliance

Dimension	β	SE	Partial R ²	Rank
Data Quality Compliance	0.198***	(0.047)	0.089	1
Regulatory Adherence	0.167***	(0.043)	0.071	2
Technical Adoption	0.124***	(0.041)	0.048	3
System Integration	0.089**	(0.039)	0.032	4

The dimensional analysis shows that data quality compliance has the strongest association with tax compliance, followed by regulatory adherence, technical adoption, and system integration. This pattern supports the view that accurate and complete transaction data are more consequential for compliance than adoption status alone.

Robustness Tests

Robustness checks were conducted to assess whether the findings are sensitive to alternative model specifications.

Table 12. Summary of Robustness Tests

Test Type	Description	Key Finding	Interpretation
Alternative Specifications			
Objective DV only	Using only archival compliance data	β(e-invoice) = 0.389***	Results hold with objective measures
Lagged predictors	t-1 predictors, t compliance	β(e-invoice) = 0.367***	Addresses reverse causality
Subsample Analyses			
Large firms only	Top tercile by assets	β(e-invoice) = 0.456***	Effects stronger for large firms
Manufacturing only	N = 192	β(e-invoice) = 0.398***	Consistent across industries
High-trust regions	Top 5 provinces	Interactions stronger	Social context matters more
Endogeneity Checks			
IV regression	Historical trust as instrument	β(trust) = 0.214**	Endogeneity not driving results
Heckman selection	Correct for response bias	λ = 0.087 (ns)	No significant selection bias
Alternative Methods			
Panel FE	Firm fixed effects	β(e-invoice) = 0.287***	Within-firm variation confirms
Tobit model	Bounded DV	β(e-invoice) = 0.443***	Accounts for ceiling effects
Measurement Sensitivity			
Each dimension alone	Test dimensions separately	All positive, significant	Robust to measurement approach
Industry-level norms	Replace firm-level norms	β(interaction) = 0.119**	Effect persists at industry level

The robustness tests confirm the stability of the main findings. As shown in Table 12, the coefficients remain consistent across alternative dependent variables, alternative social-norm proxies, endogeneity checks, subsample analyses, and panel specifications.

Additional Insights: When Do Interventions Fail?

Additional analysis was conducted on firms in the lowest quartile of social norms to understand when institutional interventions have limited effects (see Table 13).

Among firms with weak pro-compliance norms, trust in tax authorities does not significantly predict compliance. Authority power remains positive but is weaker than in the full sample, while e-invoicing retains a

significant association with compliance. These results indicate that digital systems can still support compliance under weak norms, but trust-based and enforcement-based mechanisms become less effective when firms do not perceive compliance as socially expected.

Table 13. Effects in Low Social Norm Environments

Intervention	Effect in Bottom Quartile	SE	p-value
Increase trust by 1 SD	Δ Compliance = 0.023	(0.067)	0.732
Increase power by 1 SD	Δ Compliance = 0.094	(0.054)	0.082
Improve e-invoicing by 1 SD	Δ Compliance = 0.187	(0.071)	0.009
Improve social norms by 1 SD	Δ Compliance = 0.298	(0.083)	0.000

Post-Hoc Analysis: Industry Patterns

The post-hoc analysis provides a more detailed view of how corporate tax compliance differs across industries and how these differences help explain the varying effects of trust, authority power, e-invoicing, and social norms. The results support the three main-effect hypotheses. Trust in tax authorities is positively associated with corporate tax compliance, suggesting that firms are more likely to comply when they perceive the tax authority as credible, reliable, and procedurally fair. This finding is consistent with recent studies showing that institutional trust remains an important behavioural foundation of voluntary tax compliance, particularly in emerging economies where taxpayer confidence in public institutions strongly shapes compliance decisions (Appiah et al., 2024; Darmayasa and Hardika, 2024).

Authority power is also positively associated with corporate tax compliance. This result indicates that credible enforcement, audit capacity, and sanction certainty remain relevant for corporate taxpayers. However, the finding should not be interpreted as support for coercive enforcement alone. Within the Slippery Slope Framework, power is more likely to produce sustainable compliance when it is perceived as legitimate and accompanied by trust. Recent corporate tax compliance evidence in Indonesia also shows that power, trust, and tax risk need to be understood jointly rather than as isolated determinants of compliance behaviour (Aulia et al., 2022; Darmayasa and Hardika, 2024).

Among the main predictors, e-invoicing shows the strongest direct effect. This result suggests that digital reporting systems improve compliance not merely by requiring firms to use an electronic platform, but by increasing transaction traceability, reducing information asymmetry, and improving the auditability of reported data. Evidence from Peru shows that VAT e-invoicing increased reported firm sales, purchases, and VAT liabilities, while evidence from Rwanda indicates that e-invoicing can strengthen VAT compliance and improve the effectiveness of tax audits (Bellon et al., 2022; Kotsogiannis et al., 2025).

Table 14. Industry Patterns in Corporate Tax Compliance

Industry	N	Mean Compliance	Social Norms	E-Invoice Effect
Financial Services	67	4.12	4.23	0.234***
Manufacturing	192	3.54	3.41	0.398***
Trade/Retail	137	3.21	2.98	0.467***
Construction	89	2.89	2.67	0.523***
Agriculture	63	3.67	3.78	0.312***

Source: Authors' data analysis, 2026. Note: ***p < 0.01.

Table 14 shows that financial services have the highest mean compliance and the strongest social norms, whereas construction records the lowest compliance and weakest normative environment. At the same time, the e-invoice effect is strongest in construction and trade/retail. This pattern suggests that digital tax systems may have a stronger corrective role in sectors where compliance norms are weaker, transactions are more fragmented, and reporting discipline is less institutionalised. Conversely, in sectors such as financial services, where formal reporting routines and reputational pressures are more developed, the marginal effect of e-invoicing is smaller because compliance norms are already relatively strong.

These industry patterns help explain why previous studies have reported inconsistent effects of trust, enforcement, and digitalisation. Institutional mechanisms are more effective when they operate in environments where compliance is socially reinforced. Where non-compliance is normalised or strategically accepted, the same mechanisms may produce weaker outcomes. This interpretation is consistent with recent behavioural evidence showing that social norms and trust jointly shape tax compliance dilemmas, as well as corporate evidence that informal cultural norms can influence tax avoidance and reporting behaviour (Cahyonowati et al., 2023; Cheng et al., 2024).

The findings extend the Slippery Slope Framework by positioning social norms as a boundary condition. The framework explains why trust and power matter, but the present findings clarify that their effects depend on the normative environment in which firms operate. Trust becomes more persuasive when firms believe that compliant behaviour is expected by peers, while enforcement becomes more acceptable when it is perceived as protecting fair competition rather than merely imposing administrative pressure.

The findings also contribute to institutional theory by distinguishing between ceremonial adoption and substantive implementation of digital tax systems. Firms may formally adopt e-invoicing to satisfy regulatory requirements, but compliance gains are more likely to emerge when adoption is accompanied by accurate data, system integration, regulatory adherence, and reliable audit trails. This distinction is important because recent studies show that the effectiveness of digital tax administration depends not only on platform usage, but also on whether the system improves the quality and verifiability of tax information (Bellon et al., 2022; Kotsogiannis et al., 2025).

Theoretical Implications

The findings offer several theoretical implications for tax compliance research. First, the study refines the Slippery Slope Framework by showing that trust and authority power do not operate in isolation. Their effects are shaped by the social environment in which firms interpret tax rules, enforcement signals, and peer behaviour. This means that trust may encourage voluntary compliance when firms perceive compliance as socially expected, while authority power may strengthen deterrence when enforcement is viewed as legitimate and consistent. In contrast, when tax evasion is socially normalised, trust may be misread as regulatory leniency and enforcement may be perceived as an adversarial intervention rather than a legitimate governance mechanism.

Second, the study helps resolve the paradox of inconsistent findings in prior tax compliance literature. Differences in empirical results may arise not only from measurement, sample, or institutional differences, but also from variation in social norms across industries. Trust, power, and technology may produce stronger effects in sectors where accurate reporting is treated as a professional standard, but weaker effects in sectors where aggressive reporting practices are tolerated. This finding supports recent research showing that social norms and informal institutions can shape how taxpayers respond to formal rules and administrative interventions (Cahyonowati et al., 2023; Cheng et al., 2024).

Third, the study contributes to institutional theory by showing that the compliance effect of digital tax reform depends on implementation quality rather than adoption alone. The enhanced e-invoicing measure has stronger explanatory power because it captures data quality, system integration, and regulatory adherence. This supports the argument that substantive implementation is more important than ceremonial compliance. In this context, digitalisation changes the information environment, but its effectiveness depends on whether firms embed digital reporting into internal control, accounting systems, and tax governance processes.

Fourth, the study connects behavioural and technological perspectives in tax compliance research. Digital tax systems improve the observability and traceability of transactions, but social norms influence how firms respond to this increased visibility. Firms operating in strong-norm environments are more likely to interpret digital reporting as part of responsible governance, whereas firms in weak-norm environments may treat it primarily as a monitoring device to be managed or circumvented. This insight explains why technology alone is insufficient to produce sustainable compliance. It must be supported by credible enforcement, administrative reliability, and a normative environment that values accurate reporting.

Table 15. Summary of Theoretical Contributions

Theoretical Area	Contribution of the Study	Implication for Tax Compliance Research
Slippery Slope Framework	Shows that trust and power are conditional on social norms	Extends the SSF by identifying social norms as a boundary condition
Institutional Theory	Distinguishes substantive implementation from ceremonial adoption	Explains why implementation quality matters more than formal system use
Digital Tax Administration	Demonstrates the centrality of data quality, integration, and auditability	Shifts the focus from adoption rates to implementation quality
Behavioural Tax Compliance	Links peer expectations with responses to trust, enforcement, and technology	Explains why similar reforms may produce different outcomes across industries
Corporate Tax Compliance	Highlights industry-level variation in compliance behaviour	Encourages sector-sensitive models of corporate tax compliance

Source: Authors' synthesis based on empirical findings, 2026.

Table 15 summarises the theoretical contributions of the study. The central implication is that corporate tax compliance should be understood as the outcome of interaction between formal institutions, digital

infrastructure, and social expectations. The findings do not reject existing compliance theories; instead, they refine them by showing that institutional mechanisms become more effective when supported by a normative environment that makes accurate reporting socially expected and professionally legitimate.

Overall, this study advances tax compliance theory by integrating the Slippery Slope Framework, institutional theory, and digital tax administration into a more contextual model of corporate compliance. Trust and power explain why firms may comply, digitalisation explains how compliance becomes more traceable, and social norms explain when these mechanisms become stronger or weaker. This integrated view is particularly relevant for emerging economies, where formal tax reforms often operate alongside sectoral practices, informal business expectations, and varying levels of administrative trust.

Practical Implications

The findings of this study indicate that the practical value of digital tax reform should not be assessed merely from the extent to which firms adopt e-invoicing, but from the extent to which the system improves the quality, traceability, and reliability of tax reporting. For tax authorities, this implies a shift from a compliance strategy that relies primarily on sanctions and incentives toward a more integrated approach that combines data quality, risk-based supervision, procedural fairness, and sectoral norm-building. Recent evidence shows that e-invoicing can improve reported sales, purchases, and VAT liabilities, but its impact is stronger when digital records are supported by enforcement capacity and compliance risk management (Bellon et al., 2022; Kotsogiannis et al., 2025).

Tax authorities should therefore evaluate e-invoicing systems through implementation-quality indicators rather than adoption rates alone. Error frequency, correction behaviour, completeness of invoice fields, timeliness of uploads, invoice sequencing, and audit-trail consistency provide richer signals of compliance risk than a simple measure of whether a firm has used the system. This approach is consistent with recent fiscalization guidance, which emphasizes that high-quality and timely transaction data enable tax administrations to detect mismatches, provide early alerts, benchmark firms against peers, and target audits more effectively (Aslett et al., 2024; Pires et al., 2023).

For corporate taxpayers, the results suggest that e-invoicing should be treated as part of the internal control architecture rather than as a narrow administrative submission tool. The integration of tax, accounting, inventory, procurement, and sales systems can reduce reporting errors, strengthen audit readiness, and improve the credibility of tax positions. This implication is supported by studies showing that digital tax systems improve compliance when taxpayers experience the system as useful, reliable, and operationally embedded in business processes (Kusumawardhani et al., 2024; Okunogbe and Pouliquen, 2022).

The findings also underline the importance of social norms in shaping corporate tax behaviour. Compliance decisions are not formed only by economic calculation or fear of sanctions; they are also influenced by what firms perceive as acceptable conduct within their industry and business networks. Evidence from Indonesia shows that stronger societal compliance norms increase filing compliance, while recent corporate evidence from China indicates that informal cultural norms can reduce tax evasion by strengthening the normative expectation to comply (Arsal et al., 2025; Cheng et al., 2024).

Professional associations, chambers of commerce, and industry groups can therefore play a constructive role in tax reform. Their involvement is not limited to training or technical dissemination; they can help define what constitutes responsible tax reporting within a sector. When compliant behaviour becomes visible and socially expected, digital monitoring and enforcement are less likely to be perceived as coercive interventions and more likely to be accepted as part of fair market discipline. This point is particularly relevant for sectors with weaker compliance norms, such as construction and trade, where peer benchmarking, industry-specific communication, and practical guidance may be more effective than generic campaigns.

The results further suggest that enforcement remains necessary, but it should be predictable, explainable, and proportionate. Digital records increase the capacity of tax authorities to detect anomalies, but firms are more likely to respond constructively when audit selection, correction procedures, and sanction mechanisms are transparent. This balanced approach is consistent with the Slippery Slope Framework, in which compliance is strengthened not only by power, but also by trust in the legitimacy and reliability of tax administration. Recent Indonesian studies on corporate tax compliance and the Core Tax Administration System similarly emphasize that digital integration can strengthen authority power first, but sustainable compliance depends on whether that power is followed by improved service quality and taxpayer trust (Aulia et al., 2022; Darmayasa and Hardika, 2024).

The policy implication is that digital tax reform in emerging economies should be designed as a multidimensional governance reform, not merely as a technology project. E-invoicing generates value when transaction data are reliable enough to support verification, audit selection, taxpayer self-control, and policy evaluation. OECD (2024) notes that modern tax administrations increasingly use digital tools to adopt more proactive approaches to influencing taxpayer compliance, while also managing larger and more connected datasets that require strong governance and trust protection.

Accordingly, tax authorities should monitor reform effectiveness through a broader set of indicators, including adoption, system integration, data quality, correction behaviour, audit outcomes, taxpayer perceptions, and sectoral compliance norms. A reform that increases system usage but leaves recurring invoice errors, weak integration, or distrust unresolved may produce only formal compliance. In contrast, a reform that improves data accuracy, strengthens internal controls, builds sectoral expectations, and maintains predictable enforcement is more likely to produce sustainable compliance.

The Indonesian Context: Lessons for Emerging Economies

The Indonesian case offers lessons for other emerging economies implementing digital tax reform. The findings show that Indonesia's collectivist social context can support compliance when peer expectations favour lawful reporting, but it can also reinforce non-compliance when avoidance practices are normalised. Policy design should therefore work with existing social networks rather than treating taxpayers as isolated decision makers.

E-invoicing also demonstrates the potential and limits of digital leapfrogging. The strong direct effect indicates that digital records can improve compliance, but the moderation results warn that technology cannot be separated from social and institutional conditions. Implementation details are particularly important. The difference between data quality, regulatory adherence, technical adoption, and system integration suggests that digital reform should be assessed by how well firms use the system, not merely by whether the system is present.

The trust results also offer a practical lesson. In settings where institutional trust is modest, tax authorities may need to demonstrate reliability through system performance, consistent guidance, and fair enforcement before trust-based cooperation can be expected to produce strong compliance effects. Accordingly, trust should be understood as both an input and an outcome of reform. It can support compliance, but it also develops through repeated experience with transparent and dependable administration.

The Indonesian evidence therefore suggests that effective digital tax reform requires coordinated attention to technology, enforcement, and social expectations.

Conclusion

The findings indicate that corporate tax compliance should be understood as an interaction between technical systems, institutional mechanisms, and social expectations. Digital systems improve the information environment, but they do not automatically change taxpayer motivation. Trust and power remain important, but their effects are stronger when compliance is socially supported. This helps explain why similar reforms can produce different outcomes across contexts.

The study therefore cautions against treating tax compliance as a purely technical problem. Sustainable compliance requires reliable systems, credible enforcement, and a business environment in which accurate reporting is considered the expected standard. This interpretation is especially relevant for emerging economies where formal institutions and informal norms coexist strongly in shaping firm behaviour.

Several limitations should be acknowledged to clarify the scope of interpretation and to guide future research. Although this study combines survey responses with archival data, the research design remains observational; therefore, the findings should be interpreted as robust associations rather than definitive causal effects. Future studies may employ longitudinal, panel, or quasi-experimental designs to examine how firms adjust their compliance behaviour before and after phased digital tax reforms. This direction is particularly relevant because recent evidence on e-invoicing and electronic tax filing shows that digital tax systems may affect compliance over time through reporting accuracy, audit exposure, and reduced opportunities for informal interaction with tax officers (Bellon et al., 2022; Kotsogiannis et al., 2025; Okunogbe and Pouliquen, 2022).

The study also focuses on medium and large corporations, which generally have more formal accounting systems, stronger internal controls, and better digital readiness than small and micro enterprises. As a result, the conclusions may not fully capture the constraints faced by smaller taxpayers, particularly those operating with limited digital capability, informal transactions, and lower administrative capacity. Future research should examine whether the relationships among digital tax implementation, institutional trust, enforcement, social norms, and compliance remain consistent across MSMEs and informal business segments. Recent Indonesian evidence suggests that digital tax services and service quality can support MSME compliance, but their effectiveness depends on taxpayer capability and the perceived ease of using the system (Kusumawardhani et al., 2024).

Another limitation concerns the measurement of social norms. This study measures social norms through managerial perceptions rather than direct observation of peer behaviour or sector-level compliance practices. While perception-based measures are relevant because compliance decisions are shaped by what managers believe other firms do, future studies could strengthen this approach by combining survey measures with objective industry-level indicators, peer-network data, or experimental designs. This is important because recent experimental evidence from Indonesia shows that social norms can strengthen the effect of fines on compliance, although their role in audit-related responses may be less consistent (Cahyonowati et al., 2022).

The study identifies moderation effects but does not fully unpack the behavioural mechanisms through which managers interpret peer behaviour, enforcement signals, and digital reporting obligations. Future research could use qualitative interviews, field experiments, or mixed-method designs to examine how tax managers translate digital audit trails, perceived fairness, and sectoral expectations into reporting decisions. This agenda becomes increasingly important as tax administrations adopt automated validation, data matching, and AI-based audit selection. Recent research indicates that algorithmic audit selection may influence perceived procedural fairness, but its effect depends on trust in administration, perceived consistency, and the transparency of decision processes (Decuyper and de Vijver, 2025; OECD, 2024).

Future studies may extend this research by examining the dynamic evolution of compliance norms, comparing countries with different institutional and cultural environments, and testing the behavioural micro-foundations of tax compliance through experiments. Cross-country research would be useful to determine whether social norms play a stronger moderating role in collectivist, relationship-based, or high-informality business environments. In addition, future studies could examine how digital tax reform should be sequenced with enforcement, taxpayer service, and trust-building initiatives. Recent work on Indonesia's Core Tax Administration System suggests that digital reform is more likely to support sustainable compliance when it strengthens both the power and trust dimensions of tax administration rather than relying on technological control alone (Darmayasa and Hardika, 2024).

Overall, future research should move beyond the question of whether digital tax systems improve compliance and examine the conditions under which such systems produce durable behavioural change. More specifically, subsequent studies can investigate how digital infrastructure, enforcement predictability, procedural fairness, taxpayer trust, and sectoral norms interact over time. Such an agenda would provide a more complete explanation of corporate tax compliance in emerging economies, where formal institutional reforms often operate alongside informal business practices and socially embedded compliance expectations.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage. <https://books.google.com/books?id=LcWLUyXcmnKC>
- Appiah, T., Domeher, D., & Agana, J. A. (2024). Tax knowledge, trust in government, and voluntary tax compliance: Insights from an emerging economy. *SAGE Open*, 14(2). <https://doi.org/10.1177/21582440241234757>
- Arsal, Y., Rosid, A., & Satyadini, A. (2025). Do taxpayers embrace social norms to comply? empirical evidence from Indonesia. *Asian-Pacific Economic Literature*, 40(1), 29–41. <https://doi.org/10.1111/apel.12459>
- Aslett, J., González, G., Hamilton, S., & Pecho, M. (2024). *Tax administration: Essential analytics for compliance risk management*. International Monetary Fund. <https://doi.org/10.5089/9798400260063.005>
- Aulia, S., Rosdiana, H., & Inayati, I. (2022). Trust, power, and tax risk into the “slippery slope”: A corporate tax compliance model. *Sustainability*, 14(22). <https://doi.org/10.3390/su142214670>
- Batrancea, L. M., Nichita, A., & others. (2022). A self-employed taxpayer experimental study on trust, power, and tax compliance in eleven countries. *Financial Innovation*, 8(1). <https://doi.org/10.1186/s40854-022-00404-y>
- Bellon, M., Dabla-Norris, E., & Khalid, S. (2023). Technology and tax compliance spillovers: Evidence from a VAT e-invoicing reform in Peru. *Journal of Economic Behavior & Organization*, 212, 756–777. <https://doi.org/10.1016/j.jebo.2023.06.004>
- Bellon, M., Pomeranz, D., & Castro, P. E. G. (2022). Digitalization to improve tax compliance: Evidence from {VAT} e-invoicing in Peru. *Journal of Public Economics*, 210, 104661. <https://doi.org/10.1016/j.jpubeco.2022.104661>
- Cahyonowati, N., Ratmono, D., & Juliarto, A. (2022). The moderating role of social norms on tax compliance model: A laboratory experimental evidence in Indonesia. *Contemporary Economics*, 16(4), 410–423. <https://doi.org/10.5709/ce.1897-9254.491>
- Cahyonowati, N., Ratmono, D., & Juliarto, A. (2023). The role of social norms and trust in authority in tax compliance dilemmas. *Cogent Business and Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2174084>

- Cheng, C. S. A., Francis, B. B., Li, Z., Shen, Y., & Wu, Q. (2024). Do creditor control rights impact corporate tax aggressiveness? Evidence from debt covenant violations. *Journal of Business Finance and Accounting*, 51(5–6). <https://doi.org/10.1111/jbfa.12742>
- Darmayasa, I. N., & Hardika, N. S. (2024). Core tax administration system : The power and trust dimensions of slippery slope framework tax compliance model. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2337358>
- Decuyper, A., & de Vijver, A. (2025). AI: Friend or foe of fairness perceptions of the tax administration? a survey experiment on citizens' procedural fairness perceptions. *Government Information Quarterly*, 42(1), 102002. <https://doi.org/10.1016/j.giq.2024.102002>
- Direktorat Jenderal Pajak. (2022a). *Peraturan Direktur Jenderal Pajak Nomor PER-03/PJ/2022 tentang Faktur Pajak*. Direktorat Jenderal Pajak. [Peraturan PER-03/PJ/2022](https://www.pajak.go.id/id/PPS)
- Direktorat Jenderal Pajak. (2022b). Program Pengungkapan Sukarela. <https://www.pajak.go.id/id/PPS>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis (8th ed.)*. Cengage Learning. <https://www.scirp.org/reference/referencespapers?referenceid=2975006>
- Kirchler, E., Hoelzl, E., & Wahl, I. (2008). Enforced versus voluntary tax compliance: The "slippery slope" framework. *Journal of Economic Psychology*, 29(2), 210–225. <https://doi.org/10.1016/j.joep.2007.05.004>
- Kotsogiannis, C., Salvadori, L., Karangwa, J., & Murasi, I. (2025). E-invoicing, tax audits and vat compliance. *Journal of Development Economics*, 172, 103403. <https://doi.org/10.1016/j.jdevec.2024.103403>
- Kusumawardhani, A., Gunawan, F. K., Sany, S., Tjondro, E., & Eoh, T. S. (2024). Tax service quality and digital tax implementation for MSME tax compliance in Surabaya. *International Journal of Organizational Behavior and Policy*, 3(1), 53–62. <https://doi.org/10.9744/ijobp.3.1.53-62>
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363. <https://doi.org/10.1086/226550>
- Ministry of Finance of the Republic of Indonesia. (2023). *Nota keuangan beserta RAPBN tahun anggaran 2024*. Ministry of Finance of the Republic of Indonesia.
- Muehlbacher, S., Kirchler, E., & Schwarzenberger, H. (2011). Voluntary versus enforced tax compliance: Empirical evidence for the "slippery slope" framework. *European Journal of Law and Economics*, 32(1), 89–111. <https://doi.org/10.1007/s10657-011-9236-9>
- OECD. (2024). *Global Corporate Sustainability Report 2024*. OECD Publishing. <https://doi.org/10.1787/8416b635-en>
- Okunogbe, O., & Pouliquen, V. (2022). Technology, taxation, and corruption: Evidence from the introduction of electronic tax filing. *American Economic Journal: Economic Policy*, 14(1), 341–72. <https://doi.org/10.1257/pol.20200123>
- Pires, J. M., Howlin, S., & van Brunschot, F. (2023). *How to implement electronic fiscal reporting (fiscalization)* (Issue 2023/003). <https://doi.org/10.5089/9798400251641.061>
- World Bank. (2024). *World Development Indicators (WDI)*. <https://databank.worldbank.org/source/world-development-indicators>