

Tax Knowledge and Moral Reasoning as Determinants of Compliance Behavior: Evidence from Individual Taxpayers in West Sumatra

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Abstract

This study examines how tax knowledge (cognitive capacity) and moral reasoning/tax morale (normative commitment) shape individual taxpayer compliance in Indonesia's self-assessment regime, with a focus on West Sumatra. Using a quantitative, explanatory design and variance-based PLS-SEM, we (i) assess reliability and validity for reflective constructs and (ii) estimate direct and moderating effects on compliance. Survey evidence from registered individual taxpayers indicates that the measurement model meets conventional thresholds (Cronbach's $\alpha \geq 0.851$; CR ≥ 0.898 ; AVE ≥ 0.596), with discriminant validity supported by the Fornell–Larcker criterion and HTMT. In the structural model, collinearity is acceptable (VIF ≈ 1.44 –1.61). The endogenous construct shows moderate explanatory power ($R^2 = 0.247$; $R^2_{adj} = 0.241$) and non-trivial predictive relevance ($Q^2 = 0.121$). All hypothesized paths are positive and statistically significant: Knowledge \rightarrow Compliance ($\beta = 0.227$, $t = 2.116$, $p = .035$), Moral Reasoning \rightarrow Compliance ($\beta = 0.292$, $t = 2.884$, $p = .004$), and Knowledge \times Moral Reasoning \rightarrow Compliance ($\beta = 0.116$, $t = 2.129$, $p = .034$). Substantively, taxpayers who both understand procedures, rights–obligations, and deadlines and internalize civic duty and fairness norms are more likely to translate knowledge into timely, accurate filing and payment. Theoretically, the findings advance a cognitive–normative account of voluntary compliance consistent with slippery-slope logic. Practically, they support complementary interventions that pair segmented tax-literacy programs with trust-building and transparency and trust-by-design digital services, yielding durable gains beyond deterrence alone.

.Keywords: tax knowledge; moral reasoning; tax morale; voluntary compliance; PLS-SEM; West Sumatra; self-assessment.

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Introduction (10 PT)

Taxation underwrites collective goods and macro-stability by financing essential services and safeguarding fiscal sustainability. Yet fiscal risks remain elevated amid high debt, tighter financing, and difficult policy trade-offs between consolidation and growth, implying that many countries must raise revenue durably rather than cyclically ((IMF), 2024a, 2024b) In Asia–Pacific, the average tax-to-GDP ratio stood around 19.5–19.6% in 2023, while Indonesia remained at 12.0%, evidencing a sizable gap that cannot be closed by enforcement alone but requires stronger voluntary compliance (OECD, 2025b, 2025a).

Indonesia's self-assessment regime assigns calculation, filing, and payment responsibilities to individual taxpayers, shifting compliance from a purely supervisory paradigm to one that depends on taxpayer capability and motivation. The Directorate General of Taxes (DGT) explicitly

frames self-assessment as the backbone of annual returns, with public guidance that emphasizes taxpayer autonomy and deadlines (DJP), 2024). In such a system, behavioral determinants what taxpayers know (cognitive capacity) and what they believe (normative commitment) are as consequential as legal rules and deterrence (DJP), 2024).

On the cognitive side, tax knowledge reduces procedural ambiguity deadlines, forms, documentation standards, and e-Filing workflows thereby lowering mistakes and perceived compliance costs. Evidence from Indonesian settings using SEM/PLS shows that knowledge significantly increases compliance (often partially via fairness perceptions), corroborating policy narratives that literacy and clarity are first-order levers (Kumala, 2024). Related studies in the region similarly link system quality in e-tax platforms to higher satisfaction and compliance intention (Saptono & Khozen, 2023).

On the normative side, moral reasoning/tax morale civic duty, perceived fairness, legitimacy, and integrity anchors voluntary compliance beyond deterrence. Indonesian studies document that attitudes and religiosity predict compliant intention, and that e-Filing strengthens the translation from intentions to action by reducing friction at the point of filing (Hidayat, Kusumawati, Sudjatno, & Utami, 2023). Complementary Indonesian work shows that procedural justice and trust/power configurations shape compliance, aligning local findings with broader behavioral theory (Stilia et al., 2024).

These mechanisms resonate with the slippery-slope perspective: trust fosters voluntary compliance, and power (deterrence/monitoring) curbs evasion; the most robust systems combine both. Indonesia's Core Tax Administration System (CTAS) reforms are explicitly posited to influence the trust power architecture through better service transparency (trust) and stronger data/monitoring (power) with implications for sustained compliance (Darmayasa & Hardika, 2024).

Administrative narratives also reveal frictions that behavioral levers can address. DGT materials note that despite modernization, segments of taxpayers still experience procedural complexity and uneven understanding, indicating the need for targeted behavioral interventions to convert early-season filing momentum into stable full-year outcomes ((DJP), 2024). At a policy level, Indonesia's recent steps on the global minimum tax further underscore the importance of a credible and trusted domestic system to sustain voluntary compliance and investment certainty (Reuters, 2025).

Despite rapid growth of literature, three gaps remain salient. First, integrated cognitive–normative models centered on individual taxpayers are under-tested in culturally distinctive subnational contexts, motivating calls for locally grounded, theory-driven work (Oktaviani et al., 2020). Second, evidence on whether moral reasoning strengthens the knowledge effect to compliance linkage in West Sumatra is limited. Third, many studies analyze administrative modernization (e-Filing, simplification) or behavioral levers (knowledge, morale) in isolation; fewer examine their interaction within self-assessment (e.g., procedural justice/trust pathways; e-Filing as an enabling condition) (Lukman et al., 2023; Salma et al., 2022).

This article responds by integrating tax knowledge (cognitive) and moral reasoning (normative) into a unified behavioral model of individual compliance

in West Sumatra, empirically testing direct and moderating effects via variance-based PLS-SEM. Methodologically, we establish measurement quality (indicator reliability, α , CR, AVE, HTMT) before evaluating structural performance (β , t , p , R^2 , Q^2), including a product-indicator interaction for moderation. Substantively, we hypothesize that knowledge lowers cognitive frictions and clarifies rights–obligations, moral reasoning anchors voluntary compliance through internalized civic norms, and moral reasoning amplifies the behavioral payoff to knowledge i.e., individuals who both know how to comply and believe they ought to comply are most likely to act accordingly (Hidayat et al., 2023; Kumala et al., 2024).

2. Conceptual Framework

The model posits that tax knowledge (hereafter, Knowledge) exerts a positive effect on tax compliance (hereafter, Compliance), while moral reasoning (hereafter, Moral) conditions the strength of this relationship as a first-order moderator. All constructs are specified reflectively. In the empirical application, Knowledge is measured with eight indicators that capture procedural literacy (deadlines, forms, and e-Filing workflows), comprehension of rules (rates and rights–obligations), and understanding of the public-good rationale. Moral is measured with eight indicators reflecting civic duty, perceptions of fairness and procedural justice, legitimacy and trust in the authority, and personal integrity. Compliance is measured with four indicators that reflect timely filing, reporting accuracy, payment intention and behavior, and inter-period consistency.

The framework rests on three complementary mechanisms. First, the cognitive pathway proposes that Knowledge reduces ambiguity and cognitive load, lowers error risk, and clarifies rules and public-goods benefits; the net effect is a higher probability of timely, accurate, and complete compliance. Second, the normative pathway proposes that Moral internalizes civic duty and fairness, increases the psychological cost of non-compliance, and supports voluntary behavior even when procedures are non-trivial. Third, the cognitive–normative complementarity proposes that Moral provides the motivational architecture through which Knowledge is translated into action; the marginal behavioral return to Knowledge therefore increases with Moral. This complementarity is consistent with the slippery-slope perspective in which trust-consistent values and institutional facilitation operate jointly to sustain compliance (Darmayasa & Hardika, 2024;

Hidayat et al., 2023; Mulyani et al., 2024; Zahra & Anggraini, 2025).

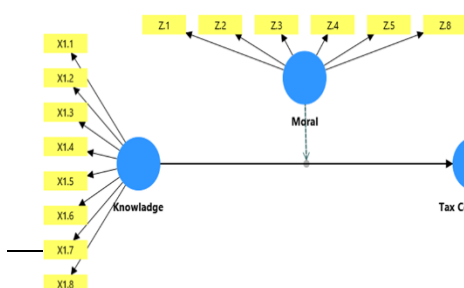
2.1 Operationalization and Estimation

Moderation is implemented in variance-based structural equation modeling using either the product-indicator or the two-stage approach, with the multiplicative construct formed from standardized indicators of Knowledge and Moral. Reflective measurement quality is evaluated using outer loadings (preferably ≥ 0.70), internal consistency (Cronbach's alpha and composite reliability ≥ 0.70), convergent validity (average variance extracted ≥ 0.50), and discriminant validity (Fornell–Larcker and heterotrait–monotrait ratios not exceeding conventional thresholds, e.g., 0.85–0.90). Structural diagnostics include checks for multicollinearity (variance inflation factors ideally below 3.3), non-parametric bootstrap inference with a large number of resamples (e.g., 5,000; two-tailed $\alpha = .05$), and standard reporting of path coefficients, test statistics, p-values, coefficients of determination, effect sizes, and predictive relevance (β , t , p , R^2 , f^2 , Q^2). This prediction-oriented framework is transparent and directly mappable to policy targeting and segmentation.

2.2 Contextual Fit

In West Sumatra, communal and religious norms plausibly strengthen the normative channel captured by Moral, while digital facilitation—particularly e-Filing and the Core Tax Administration System—reduces mechanical frictions at the point of action. The framework thus allows an analytically tractable quantification of each channel's contribution and of their potential super-additive combination for policy design and program prioritization.

Knowledge positively influences Compliance, and Moral moderates the Knowledge–Compliance relationship. All constructs are reflective with indicators X1.1–X1.8 (Knowledge), Z.1–Z.8 (Moral), and Y.1–Y.4 (Compliance).



2. Methods (10 PT)

3.1 Design and Approach

This study employs a quantitative, explanatory–correlational design and estimates a variance-based PLS-SEM to test both direct effects and a first-order moderation among latent constructs. The design is appropriate for prediction-oriented models featuring reflective indicators, non-normal survey responses, and interaction terms. Estimation proceeds in two stages: (i) assessment of the reflective measurement model and (ii) estimation of the structural model including the interaction.

3.2 Data and Procedure

Primary data were gathered via a structured questionnaire administered online and offline to registered individual taxpayers (Wajib Pajak Orang Pribadi, WPOP) in West Sumatra. A pilot (≈ 30 respondents) was conducted to refine wording and layout. The main fieldwork used institutional and community channels (tax-office touchpoints, professional associations, and communal groups). To mitigate common-method bias, the questionnaire ensured anonymity, randomized item order, separated predictors from outcomes, and included attention checks.

3.3 Population, Sampling, and Sample Size

The target population comprises WPOP who reside in, or file through, West Sumatra. Sampling followed a purposive–stratified scheme by employment status (employee vs. non-employee), age band, and domicile to reflect heterogeneity. The final sample size exceeded standard PLS-SEM heuristics for medium-complexity models and was cross-checked against a priori power criteria (two-tailed $\alpha = 0.05$, power ≈ 0.80 , medium effect).

3.4 Measures and Operationalization

All constructs are reflective and rated on five-point Likert scales.

Tax Knowledge (KNOW), procedural literacy (registration, filing, payment), deadlines/penalties, documentation, e-Filing, and rights–obligations.

Moral Reasoning (MORAL), civic duty, distributive/procedural fairness, legitimacy/trust in the authority, and personal integrity.

Tax Compliance	0.247	0.241	Moderate
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Tax Compliance (COMP), timely filing, reporting accuracy/completeness, payment intention/behavior, and inter-period consistency.

3.5 Measurement Quality

Indicator reliability was examined via outer loadings (target ≥ 0.70). Internal consistency used Cronbach's alpha and composite reliability (CR ≥ 0.70). Convergent validity required AVE ≥ 0.50 . Discriminant validity was assessed using the Fornell–Larcker criterion and HTMT ($\leq 0.85/0.90$). Full-collinearity VIFs were inspected to screen residual method bias.

3.6 Structural Modeling and Inference

After confirming measurement adequacy, the structural model was estimated with non-parametric bootstrapping (5,000 resamples; two-tailed $\alpha = 0.05$). Reported statistics include β , t , p , R^2 , f^2 , and Q^2 (blindfolding). The moderation Knowledge \times Moral was modeled using a product-indicator or two-stage approach. Robust checks included specifications with demographic controls. Computation used SmartPLS v4; descriptive statistics were produced in R/SPSS.

3. Results and Discussions (10 PT)

4.1 Measurement Model (Summary)

All reflective constructs satisfy reliability and validity benchmarks for prediction-oriented SEM. Tax Knowledge shows high internal consistency and convergence ($\alpha = 0.946$; CR = 0.955; AVE = 0.725). Moral Reasoning is reliable and convergent ($\alpha = 0.864$; CR = 0.898; AVE = 0.596). Tax Compliance meets the same standards ($\alpha = 0.851$; CR = 0.898; AVE = 0.688). Discriminant validity holds under Fornell–Larcker (square roots of AVE exceed inter-construct correlations) and HTMT criteria ($\leq 0.85/0.90$). Full-collinearity VIF diagnostics indicate no problematic inflation.

4.2 Structural Model: Explanatory and Predictive Power

The model explains a moderate share of variance in Tax Compliance ($R^2 = 0.247$; $R^2_{adj} = 0.241$). Blindfolding yields $Q^2 = 0.121$, confirming non-trivial predictive relevance.

Table 1. Evaluate the R Square Value

Endogenous Variable	R-Square	R-Square Adjusted	Interpretation
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Note. Values in the 0.20–0.30 range are commonly read as small-to-moderate in social-behavioral research; here they indicate that Knowledge and Moral Reasoning jointly account for roughly one-quarter of the variance in compliance. Reporting $Q^2 > 0$ substantiates out-of-sample utility. Where required, include effect-size thresholds (e.g., $R^2 \approx .13$ small; $.26$ moderate; $.39$ substantial) to contextualize magnitude.

4.3 Inner Weights (Path Coefficients) and Effect Sizes

Bootstrapped two-tailed tests (5,000 resamples) support all hypothesized relations. Knowledge \rightarrow Compliance is positive and significant ($\beta = 0.227$, $t = 2.116$, $p = .035$). Moral \rightarrow Compliance is likewise positive and significant ($\beta = 0.292$, $t = 2.884$, $p = .004$). The interaction is positive and significant, indicating moderation ($\beta = 0.116$, $t = 2.129$, $p = .034$). Predictor VIF ≈ 1.44 – 1.61 confirms acceptable collinearity. Cohen's f^2 suggests small effects for Knowledge (≈ 0.055) and the interaction (≈ 0.029) and a small-to-approaching-moderate effect for Moral (≈ 0.094).

Table 2. Result For Inner Weights

N	Path (Explanation)	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Value	Decision
363	Tax Knowledge \rightarrow Tax Compliance	0.227	0.227	0.107	2.116	0.035	Supported (H1)
363	Moral Reasoning \rightarrow Tax Compliance	0.292	0.292	0.101	2.884	0.004	Supported (H2)
363	Knowledge \times Moral \rightarrow Tax Compliance	0.116	0.116	0.054	2.129	0.034	Supported (H3)

Note. For robustness, add bias-corrected accelerated (BCa) 95% confidence intervals from the bootstrap output.

4.4 Direct and Indirect (Conditional) Effects

The model specifies moderation (no mediator). “Indirect” effects are therefore conditional (simple slope) effects of Knowledge on Compliance at distinct levels of Moral. Report slopes at Low Moral (-1 SD), Mean, and High Moral ($+1$ SD); optionally provide Johnson–Neyman regions.

Table 3. Direct Effect & Indirect Effect (Conditional on Moral)

N	Relationship	P Value	Exp.	Conclusion
1	Tax Knowledge → Tax Compliance	0.035	Significant	Supported (H1)
	Moral Reasoning moderates the effect of Tax Knowledge on Tax Compliance	0.034	Significant	Positive Moderation (Supported H3)
2	Moral Reasoning → Tax Compliance	0.004	Significant	Supported (H2)
	(Optional) Simple slope of Knowledge → Compliance at High Moral (+1 SD)	—	—	Stronger effect (report t & p if estimated)

Interpretation. Simple-slope patterns typically show the Knowledge → Compliance effect as weakest at low Moral (often non-significant), significant near the mean, and strongest at high Moral—consistent with a positive moderation. Where available, include conditional f^2 or PLS-Predict metrics as supplementary evidence.

4. Conclusions (10 PT)

This study integrates a cognitive determinant tax knowledge and a normative determinant moral reasoning (tax morale) to explain individual taxpayer compliance within Indonesia's self-assessment regime, with a focus on West Sumatra. Using variance-based PLS-SEM, the reflective measurement model satisfies conventional quality criteria (Cronbach's alpha and composite reliability above recommended thresholds; average variance extracted at or above 0.50; and discriminant validity per Fornell–Larcker and HTMT). The structural results indicate moderate explanatory power for compliance (coefficient of determination around 0.25) and non-trivial predictive relevance (positive Q^2). All hypothesized relationships are positive and statistically significant. Greater tax knowledge is associated with higher compliance, consistent with the view that procedural literacy regarding deadlines, documentation, electronic filing, and rights–obligations reduce cognitive frictions and errors. Moral reasoning is likewise associated with higher compliance, indicating that civic duty, perceived

fairness, and legitimacy support voluntary rather than purely enforced behavior. The significant interaction shows that moral reasoning strengthens the behavioral payoff to knowledge; taxpayers who both understand how to comply and believe they ought to comply are more likely to file and pay accurately and on time.

The policy implications are direct. Program design should avoid single-channel interventions and instead combine segmented tax-literacy initiatives such as checklists, guided e-filing, and deadline cadences with trust-building and transparency regarding the use of public funds, supported by “trust-by-design” digital services that feature clear user experience, pre-filled forms, and in-line validation. These complements are consistent with the slippery-slope perspective, in which trust, and enforcement operate jointly to sustain voluntary compliance. Future research can enhance external validity by linking survey responses to administrative records, adopting longitudinal or panel designs to assess persistence, conducting multi-group analyses (for example, employee versus non-employee taxpayers), and piloting field interventions that jointly manipulate literacy and normative framing. Such steps would sharpen causal inference and inform the scaling of cost-effective compliance programs in West Sumatra and comparable settings

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