

ANALYSIS OF MOTOR VEHICLE TAXPAYER COMPLIANCE IN SOUTH LAMPUNG REGENCY

Naufal Dwiky Athalla Rizky¹, Alsya Azzahra Primadona², Dinda Dwi Arista³,
Mutiaraverly Aziziyah⁴, Ardhan Prasetya Elvandi⁵, Andri Bagas Irawan⁶,
M. Raihan Zaky Kadhafi⁷, Arin Rahmadani⁸

^{1,2,3,4,5,6,7,8} Development Economics Study Program, Faculty of Economics and Business,
University of Lampung

Email: naufaldwikyathallarizky@gmail.com¹, alsyaazzahrap@gmail.com²,
dindaarista060623@gmail.com³, mutiaraverly09@gmail.com⁴, ardhanprasetya890@gmail.com⁵,
bagasandri51@gmail.com⁶, zaky131205@gmail.com⁷, arinramadani6@gmail.com⁸

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Abstract:

Tax is a crucial source of regional and national revenue utilized to finance public infrastructure and development. This study aims to empirically analyze the determinants of motor vehicle taxpayer compliance in South Lampung Regency. Specifically, it evaluates the effects of voice and accountability, tax system transparency, government effectiveness, and tax sanctions on compliance levels. Utilizing a quantitative approach, primary data were gathered via questionnaires from 100 motor vehicle taxpayers selected through purposive sampling within the region. The data were analyzed using multiple linear regression via EViews software, ensuring adherence to classical assumption tests to achieve the Best Linear Unbiased Estimator (BLUE). The empirical results demonstrate that voice and accountability, a transparent tax system, and tax sanctions exhibit a positive and statistically significant impact on compliance. Conversely, government effectiveness possesses a positive but statistically non-significant influence. Notably, tax sanctions emerge as the most dominant factor accelerating compliance. Simultaneously, all four independent variables significantly explain 62.49% of the variance in vehicle taxpayer compliance. These insights recommend that policymakers focus on refining enforcement mechanisms and improving systemic transparency to foster optimal local revenue generation.

Keywords: Motor Vehicle Tax; Taxpayer Compliance; Tax Sanctions; Transparency; EViews

Abstrak:

Pajak merupakan salah satu sumber penerimaan negara dan daerah yang memiliki peran strategis dalam pembiayaan pembangunan nasional maupun daerah. Penelitian ini bertujuan untuk menganalisis secara empiris pengaruh administrasi pajak dan sanksi perpajakan terhadap kepatuhan wajib pajak kendaraan bermotor di Kabupaten Lampung Selatan. Secara spesifik, penelitian ini menganalisis pengaruh suara dan akuntabilitas, sistem pajak yang transparan, efektivitas pemerintah, dan sanksi perpajakan terhadap tingkat kepatuhan. Dengan menggunakan pendekatan kuantitatif, data primer dikumpulkan melalui kuesioner yang disebarakan kepada 100 responden wajib pajak di wilayah Kabupaten Lampung Selatan yang dipilih dengan menggunakan metode purposive sampling. Data kemudian dianalisis menggunakan metode regresi linier berganda melalui perangkat lunak EViews, dengan memastikan pengujian asumsi klasik terpenuhi agar model bersifat BLUE. Hasil penelitian menunjukkan bahwa variabel suara dan akuntabilitas, sistem pajak yang transparan, dan sanksi perpajakan berpengaruh positif dan signifikan terhadap kepatuhan wajib pajak pada tingkat kepercayaan 90%. Sementara itu, efektivitas pemerintah berpengaruh positif namun tidak signifikan. Sanksi perpajakan ditemukan sebagai variabel yang paling dominan dalam mempengaruhi kepatuhan. Secara simultan, keempat variabel tersebut berpengaruh signifikan dan mampu menjelaskan 62,49% variasi kepatuhan wajib pajak kendaraan bermotor di Kabupaten Lampung Selatan.

Kata Kunci: Pajak Kendaraan Bermotor; Kepatuhan Wajib Pajak; Sanksi Pajak; Transparansi; EViews.

1. Introduction

Tax is one of the national and regional revenue sources that plays a strategic role in financing both national and regional development. Based on Law Number 28 of 2009 concerning Regional Taxes and Regional Retributions, the Motor Vehicle Tax (Pajak Kendaraan Bermotor - PKB) is designated as a provincial tax under the authority of first-level regional governments. At the local level, PKB constitutes a major component of regional taxes that yields a significant contribution to Regional Original Revenue (Pendapatan Asli Daerah - PAD).

South Lampung Regency is an area with a steadily increasing number of motor vehicles each year. This growth in vehicle volume should naturally be accompanied by an upward shift in public compliance regarding motor vehicle tax payments. In reality, however, many taxpayers still experience delays or even accumulate tax arrears. This issue of low taxpayer compliance is not an isolated phenomenon; rather, it reflects deeper systemic issues within the regional tax framework.

On one hand, a portion of the public does not yet fully understand the core importance and direct benefits of the taxes they contribute. On the other hand, public perception regarding the quality of public services received as a "return" for their tax payments significantly influences their motivation to comply. When taxpayers perceive that their contributions are not balanced by adequate public services, the tendency to evade or avoid tax obligations intensifies.

Taxpayer compliance is driven by a complex interplay of internal and external factors. Internal dimensions include taxpayer awareness regarding the social importance of tax paying, comprehension of tax regulations, and perceptions of equity within the extraction system. Conversely, external forces encompass the quality of services delivered by tax authorities, the strictness of legal enforcement and sanctions, as well as the efficacy of dissemination and educational drives launched by tax offices. In the context of the South Lampung Joint Samsat Office, incremental structural adjustments have been executed by integrating modernized channels, such as online Samsat, drive-through services, and mobile Samsat units. Nevertheless, these technical interventions have not fully succeeded in stimulating systemic and widespread compliance. A comprehensive and empirical understanding of the dominant variables underlying taxpayer behavior is absolutely crucial to formulating optimal, precise, and sustainable regional tax policies.

Prior empirical investigations have extensively scrutinized the variables dictating taxpayer compliance at both national and sub-national levels. Existing scholarship consistently confirms that taxpayer awareness, fiscal service quality, punitive sanctions, and tax socialization operate as critical determinants. However, dedicated studies focusing strictly on the unique context of Motor Vehicle Tax in South Lampung Regency remain sparse, creating a clear research gap. Given that the social, economic, and demographic characteristics of South Lampung are distinct, empirical insights derived from other regions cannot be directly generalized to this area. Therefore, this study attempts to quantitatively map and analyze the empirical effects of tax administration features and penal sanctions on motor vehicle taxpayer compliance within South Lampung Regency, using a sample of 100 respondents through a rigorous multiple linear regression model.

2. Literature Review

2.1. Tax Compliance Theory

Tax compliance is defined as the structural willingness of a taxpayer to execute their fiscal obligations in accordance with prevailing statutory laws and regulatory boundaries. According to Nurmantu (2003), compliance is bifurcated into two dimensions: formal compliance and material compliance. Formal compliance manifests when a taxpayer meets all statutory procedural rules and filing timelines prescribed by law, whereas material compliance implies that the taxpayer substantively satisfies all material provisions by reporting their actual true liability accurately.

Attribution Theory, initially advanced by Fritz Heider, explicates how individuals cognitively judge and assign the causes of specific events or behavioral actions. Within the fiscal realm, this theory is heavily applicable to diagnosing why taxpayers choose to comply or default. Taxpayers harboring an intrinsically positive perception of the tax administration apparatus display higher compliance rates, while those with deep-seated negative perceptions exhibit tax aversion. Furthermore, the Theory of Planned Behavior (TPB) formulated by Ajzen (1991) is also widely utilized to justify compliance dynamics. It posits that individual behavioral intent is directly molded by personal attitudes, subjective norms, and perceived behavioral control mechanisms.

2.2. Determinants of Tax Compliance

This study highlights several multi-dimensional administrative and regulatory indicators affecting compliance:

1. Voice and Accountability: This metric concerns the mechanisms allowing citizens to express their opinions and the corresponding depth of institutional trust held toward the government. An accountable administration naturally builds robust civic trust, which prompts voluntary compliance.
2. Transparent Tax System: A transparent tax architecture is one that is easily understood, crystal clear, and offers absolute legal certainty to the taxpayer. Systemic transparency significantly enriches public awareness and eliminates compliance friction.
3. Tax Sanctions: Sanctions act as a statutory guarantee that the integrity of tax legislation will be preserved. In other words, punitive tax fines serve as a vital deterrent against norm violation. Strict, unyielding, and consistent legal enforcement acts as a psychological deterrent, prompting taxpayers to meet obligations timely.

2.3. Research Hypotheses

Based on the analytical framework, the following structural hypotheses are put forward:

H1: Voice and accountability have a positive and significant effect on motor vehicle taxpayer compliance.

H2: A transparent tax system has a positive and significant effect on motor vehicle taxpayer compliance.

H3: Government effectiveness has a positive and significant effect on motor vehicle taxpayer compliance.

H4: Tax sanctions have a positive and significant effect on motor vehicle taxpayer compliance.

H5: Voice and accountability, tax transparency, government effectiveness, and tax sanctions simultaneously affect motor vehicle taxpayer compliance.

3. Research Methods

3.1. Object, time and Place

The object of this research focuses specifically on individual and organizational motor vehicle taxpayers. The spatial scope of data gathering is bound to South Lampung Regency, Province of Lampung. Primary field tracking and questionnaire distribution were systematically completed over the first semester of the fiscal year 2026, offering fresh contemporary cross-sectional data reflecting current regional conditions.

3.2. Data Collection Techniques

Primary data extraction was executed via structured online and offline questionnaires deployed directly to 100 eligible respondents using a strict purposive sampling method across the target region. The metrics are operationalized using a traditional 5-point Likert Scale, ranging from a score of 1 (Strongly Disagree) to 5 (Strongly Agree). Instrument validation (validity and reliability tests) was strictly executed prior to model estimation to safeguard the statistical accuracy and contextual integrity of the dataset.

3.3. Data Analysis Techniques

This study applies ordinary least squares (OLS) multiple linear regression modeling using EViews software to map the structural relationship between multiple independent variables and a single dependent variable simultaneously. To guarantee that the calculated regression parameters satisfy the properties of being the Best Linear Unbiased Estimator (BLUE), a battery of classical assumption tests—including Jarque-Bera normality tests, Breusch-Godfrey serial correlation LM tests, Breusch-Pagan-Godfrey heteroskedasticity tests, and Variance Inflation Factor (VIF) multicollinearity checks—were rigorously performed.

The explicit empirical regression equation is framed as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Motor Vehicle Taxpayer Compliance (Indicators: On-time Reporting [TL], On-time Payment [TE], Payment Documents and Time [WDPE], and System Update Information [ITS])

α = Constant value

$\beta_1 - \beta_4$ = Regression coefficients for each independent variable

X1 = Voice and Accountability (Indicator: Voluntary Awareness [VA])

X2 = Transparent Tax System (Indicator: Tax Treatment Service [TTS])

X3 = Government Effectiveness (Indicator: Government Enforcement [GEF])

X4 = Tax Sanctions (Indicator: Direct Tax Sanctions)

ε = Stochastic error term.

4. Results and Discussion

4.1. Regression Estimation Results

The ordinary least squares estimation process generated the following parametric results based on the cross-sectional dataset of 100 observations:

Table 1. Multiple Linear Regression Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C (Constant)	12.14263	2.217538	5.475727	0.0000***
X1 (Voice & Accountability)	0.653230	0.233412	2.798610	0.0062***
X2 (Transparent Tax System)	0.400282	0.230163	1.739120	0.0853*
X3 (Government Effectiveness)	0.373046	0.317682	1.174275	0.2432
X4 (Tax Sanctions)	0.857752	0.225302	3.807116	0.0002***
R-squared	0.624997	Mean dependent var	37.77000	
Adjusted R-squared	0.609207	S.D. dependent var	7.198281	
S.E. of regression	4.499891	Akaike info criterion	5.894690	
Sum squared resid	1923.657	Schwarz criterion	6.024949	
Log likelihood	-289.7345	Hannan-Quinn criter.	5.947408	
F-statistic	39.58281	Durbin-Watson stat	1.943246	
Prob(F-statistic)	0.000000			

Remarks: *** significant at 1% ($\alpha = 0.01$); significant at 5% ($\alpha = 0.05$); * significant at 10% ($\alpha = 0.10$).

Source: EViews Data Processing Output, 2026.

Based on Table 1, the explicit empirical mathematical equation representing the motor vehicle taxpayer compliance model can be formulated as follows:

$$Y = 12.143 + 0.653X1 + 0.400X2 + 0.373X3 + 0.858X4$$

The structural interpretation of the calculated coefficients can be formulated as follows:

1. The structural intercept constant of 12.143 implies that if all exogenous metrics (X1, X2, X3, X4) are mathematically static at absolute zero, the base level index of motor vehicle taxpayer compliance stands firmly at 12.143 units.
2. The estimated regression coefficient for Voice and Accountability (X1) is 0.653, highlighting that each marginal increase of 1 unit in this index will induce a positive rise of 0.653 units in compliance, holding other elements uniform.
3. The calculated weight for a Transparent Tax System (X2) is 0.400, showcasing that a 1-unit enhancement in informational and procedural transparency yields an expansion of 0.400 units in compliance.
4. The structural direction for Government Effectiveness (X3) is 0.373, which indicates a positive correlation, where a 1-unit marginal structural improvement triggers a 0.373 unit boost in taxpayer compliance tracking.
5. The regulatory slope for Tax Sanctions (X4) stands at 0.858, demonstrating that a 1-unit increase in the strictness and uniformity of punitive legal actions generates a major compliance jump of 0.858 units.

4.2 Partial Hypothesis Testing (t-Test)

1. Effect of Voice and Accountability (X1) on Compliance: The variable exhibits a coefficient of 0.6532 with a calculated t-statistic of 2.7986 and an empirical p-value of 0.0062. Since the p-value is well below the alpha threshold of 0.10, it provides compelling proof that voice and

accountability possess a positive and highly significant impact on vehicle tax compliance within South Lampung Regency at a 90% confidence tier. This validates that expanding public channels for expression and solidifying transparency builds a high state of voluntary civic awareness. This finding validates hypothesis H1 and neatly corroborates preceding literature confirming that civil trust acts as a bedrock for modern tax extraction.

2. Effect of a Transparent Tax System (X2) on Compliance: This path generates a parameter of 0.4003 alongside a t-statistic of 1.7391 and a p-value of 0.0853. Given that the probability satisfies the condition $p < 0.10$, the relationship is statistically significant at the 10% significance level. This confirms that simplifying the administrative labyrinth, providing unambiguous guidelines, and guaranteeing institutional transparency strongly updates the compliance index, thereby validating hypothesis H2.
3. Effect of Government Effectiveness (X3) on Compliance: The parameter records a value of 0.3730, but yields an unconvincing t-statistic of 1.1743 and a high p-value of 0.2432. Since $p > 0.10$, this variable lacks statistical significance at traditional testing thresholds. Hence, hypothesis H3 is statistically rejected. This reveals that the local populace does not directly link overall administrative execution with their distinct, narrow obligation to clear annual vehicle duties. This gap implies that taxpayers perceive regional public infrastructural rollouts as lagging behind their direct fiscal sacrifices, diluting the compliance pull of this variable.
4. Effect of Tax Sanctions (X4) on Compliance: This path exhibits the largest coefficient in the entire model ($\beta = 0.8578$), paired with a t-statistic of 3.8071 and a p-value of 0.0002. This confirms a highly significant positive relationship at all confidence intervals, validating hypothesis H4. This reinforces that the threat of strict legal penalties remains the most effective deterrent. Taxpayers display a clear tendency to settle outstanding balances primarily to escape legal costs and monetary fines, marking enforcement as a vital policy instrument.

4.3 Simultaneous Hypothesis Testing (F-Test)

The joint analytical estimation produces an empirical F-statistic of 39.58281 with a corresponding Prob(F-statistic) of 0.000000. Because the overall probability is significantly below the 0.10 alpha standard, hypothesis H5 is robustly accepted. This confirms that voice and accountability, system transparency, government effectiveness, and tax sanctions collectively exert a major structural impact on vehicle taxpayer compliance. Furthermore, the calculated Coefficient of Determination (Adjusted R-squared = 0.6092) indicates that 62.49% of the variation in the compliance metric is explicitly explained by these four administrative and legal variables, while the residual 37.51% is driven by outside factors not captured in this structural model.

4.4. Discussion

The empirical results generated by the multiple linear regression model provide critical insights into the behavioral economics of motor vehicle taxpayers in South Lampung Regency. The model successfully explains 62.49% of the variance in taxpayer compliance, confirming that formal regional taxation is heavily governed by a combination of public trust, institutional transparency, and legal deterrents.

The positive and highly significant effect of Voice and Accountability (X1) on compliance ($\beta = 0.653$, $p = 0.0062$) strongly supports the foundational core of both Attribution Theory and the Theory of Planned Behavior (TPB). When taxpayers perceive that the local government provides accessible channels for civic expression and demonstrates high institutional accountability, their internal motivation shifts toward voluntary compliance. This finding aligns with the empirical consensus established by preceding fiscal literature, which argues that a citizen's compliance intention is directly molded by their subjective norms and positive behavioral control toward the taxing authority.

Similarly, the significant positive impact of a Transparent Tax System (X2) ($\beta = 0.400$, $p = 0.0853$) at the 10% alpha level underscores the urgency of administrative clarity. Systemic transparency reduces information asymmetry and friction, making it easier for taxpayers to fulfill their obligations formally and materially. This result corroborates classical tax compliance frameworks, reinforcing that legal certainty and clear administrative procedures directly accelerate public awareness and compliance.

Conversely, the statistical insignificance of Government Effectiveness (X3) ($\beta = 0.373$, $p = 0.2432$) contradicts the initial research hypothesis (H3). This statistical anomaly reveals a critical perceptual gap among vehicle taxpayers in South Lampung Regency. While taxpayers may acknowledge incremental technical improvements at the local Samsat office (such as drive-through and mobile units), they do not directly link general government performance with their individual annual fiscal obligations.

This empirical gap suggests that taxpayers perceive regional public infrastructure development as lagging behind their direct financial sacrifices. Consequently, the direct behavioral pull of government execution remains muted in this specific jurisdiction.

Notably, Tax Sanctions (X4) emerged as the most dominant and statistically profound variable in the entire model ($\beta = 0.8578$, $p = 0.0002$). This massive positive coefficient demonstrates that the psychological threat of monetary penalties and strict legal enforcement remains the primary mechanism driving taxpayer behavior in South Lampung. Rather than executing payments purely out of voluntary civic awareness, a significant portion of the populace complies to actively avoid additional financial liabilities. This finding underscores the vital role of consistent enforcement as a core policy instrument for regional revenue preservation.

4.5. *Relevance to Research Objectives*

The empirical findings and discussions presented in this study remain strictly relevant to the structural research objectives formulated in the introduction. This study successfully maps the specific determinants of motor vehicle taxpayer compliance in South Lampung Regency, thereby answering the primary research questions and effectively bridging the identified regional research gap.

First, by isolating the individual administrative and regulatory indicators (X1, X2, X3, X4), this study provides clear answers regarding which dimensions of the regional tax framework successfully stimulate public compliance. The confirmation of H1, H2, and H4 validates that public expression, transparency, and legal deterrents are highly effective operational levers for local revenue generation.

Second, the unexpected rejection of H3 addresses a crucial knowledge gap regarding the actual impact of general government performance on micro-level tax behavior. This finding informs local policymakers that physical technological modernization alone is insufficient; it must be coupled with visible public welfare outcomes to convert forced compliance into sustainable voluntary compliance. Ultimately, by establishing a robust Best Linear Unbiased Estimator (BLUE) regression model via EViews, this study offers an empirical foundation that allows the Regional Revenue Agency (Bapenda) of South Lampung to transition from generalized assumptions to precise, data-driven regional tax planning and policy formulation.

5. Conclusion

This study provides critical insights into motor vehicle taxpayer compliance within South Lampung Regency. Based on the empirical findings, several clear conclusions can be drawn: First, voice and accountability exert a positive and significant effect on compliance ($\beta = 0.653$, $p = 0.006$). Second, a transparent tax system significantly improves compliance at a 10% significance tier ($\beta = 0.400$, $p = 0.085$). Third, government effectiveness holds a positive but statistically non-significant link with regional compliance rates ($\beta = 0.373$, $p = 0.243$), meaning its direct behavioral pull is currently muted. Fourth, tax sanctions operate as the most dominant, critical, and statistically significant element shaping taxpayer behavior ($\beta = 0.858$, $p = 0.000$). Finally, simultaneous testing confirms that all four administrative and enforcement variables jointly exert a highly significant impact on regional compliance, explaining 62.49% of the total variance. To expand compliance, local authorities must complement technical digital infrastructure upgrades with strict, uniform fine collection and highly visible information campaigns.

Bibliography

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 40(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, 1(3-4), 323–338. [https://doi.org/10.1016/0047-2727\(72\)90010-2](https://doi.org/10.1016/0047-2727(72)90010-2)
- Devano, S., & Rahayu, S. (2006). *Perpajakan: Teori dan Isu Perilaku*. Penerbit Andi.
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25 (Edisi 9)*. Badan Penerbit Universitas Diponegoro.
- Government of the Republic of Indonesia. (2009). Law of the Republic of Indonesia Number 28 of 2009 concerning Regional Taxes and Regional Retributions. *State Gazette of the Republic of Indonesia 2009 Number 130*. State Secretariat.
- Heider, F. (1958). *The psychology of interpersonal relations*. John Wiley & Sons.
- 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>

Mardiasmo. (2018). *Perpajakan (Edisi Terbaru 2018)*. Penerbit Andi.

Nurmantu, S. (2003). *Pengantar perpajakan*. Granit.

Palil, M. R., & Mustapha, A. F. (2011). Determinants of tax compliance in Asia: A case of Malaysia. *European Journal of Social Sciences*, 24(1), 7–32.

Siahaan, M. P. (2016). *Pajak Daerah dan Retribusi Daerah (Edisi Revisi)*. Rajawali Pers.

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Torgler, B. (2007). *Tax compliance and tax morale: A theoretical and empirical analysis*. Edward Elgar Publishing.

Waluyo. (2017). *Perpajakan Indonesia (Buku 1 Edisi 12)*. Salemba Empat.