



# Determinants of PBB-P2 Compliance: Tax Knowledge, Service Quality, Sanctions, and Awareness (Banyuwangi Regency)

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## ABSTRACT

This study examines the determinants of Land and Building Tax (PBB-P2) compliance in Banyuwangi Regency, where recurring arrears and sub-district realization levels that do not consistently meet annual targets indicate persistent compliance challenges. The study conceptualizes compliance as a behavioral outcome shaped by cognitive, administrative, and enforcement factors, and positions tax awareness as an intervening mechanism that translates policy levers into actual payment behavior. Using a quantitative survey design and PLS-SEM (WarpPLS), the model tests the effects of tax knowledge, tax service quality, and tax sanctions on tax awareness and compliance. The results show that tax knowledge, service quality, and tax sanctions significantly strengthen tax awareness. Service quality, tax sanctions, and tax awareness significantly improve compliance, while tax knowledge does not directly affect compliance. These findings suggest that compliance improvement strategies should prioritize service quality enhancement and consistent enforcement, while knowledge programs should be integrated into awareness-building interventions to reduce behavioral and administrative frictions in PBB-P2 payment.

## INTRODUCTION

Land and Building Tax for Rural and Urban Areas (PBB-P2) is a core local revenue instrument that supports public expenditure and strengthens regional fiscal autonomy. In Banyuwangi Regency, administrative realization data for 2020–2024 show that realization levels across sub-districts have not consistently met expected targets and

arrears recur every year, indicating a persistent compliance gap that is not easily resolved through routine collection activities alone.

From the perspective of tax administration, recurring arrears usually reflect a combination of behavioral and institutional issues: taxpayers may postpone payments due to limited perceived benefits, limited trust in authorities, procedural frictions, or weak enforcement expectations, while the government may face constraints in service delivery quality and enforcement consistency. Contemporary compliance research emphasizes that compliance is not purely an economic decision but also depends on socio-psychological determinants such as trust, legitimacy, perceived fairness, and service experience. (Kirchler, 2007; Tyler, 2006). The “slippery slope framework” further argues that high compliance can be achieved through a balanced mix of authority power (enforcement) and taxpayer trust (cooperation), and that weakening either element may trigger a decline in compliance. (Kirchler, Hoelzl, & Wahl, 2008; Prinz, Muehlbacher, & Kirchler, 2014).

In local tax settings, three policy levers are typically actionable and measurable: (1) tax knowledge, which should reduce informational barriers; (2) service quality, which can reduce compliance costs and strengthen trust; and (3) tax sanctions, which operationalize authority power and deterrence. However, knowledge and service reforms may not translate into payment behavior unless taxpayers develop tax awareness—a cognitive-normative state reflecting internal recognition of tax obligations and acceptance of the role of taxes. This mechanism aligns with the Theory of Planned Behavior (TPB), which posits that behavior is driven by intention shaped by attitude, subjective norms, and perceived behavioral control. (Ajzen, 1991).

Therefore, this study examines how tax knowledge, tax service quality, and tax sanctions influence tax compliance, with tax awareness positioned as an intervening variable. The study is designed to clarify which levers are most impactful in Banyuwangi’s context and to inform practical strategies for strengthening PBB-P2 compliance while improving the quality of taxpayer–authority interaction.

## LITERATURE REVIEW

The Theory of Planned Behavior (TPB) explains behavior through intention, which is determined by attitude, subjective norms, and perceived behavioral control. (Ajzen, 1991). In tax contexts, TPB is relevant because compliance intention is shaped by beliefs about outcomes and fairness, social expectations, and the perceived ability to comply given administrative complexity. (Ajzen, 1991; Bobek et al., 2007).

Service quality is commonly conceptualized using SERVQUAL dimensions—tangibles, reliability, responsiveness, assurance, and empathy—which capture how taxpayers experience the service process. (Parasuraman et al., 1988). Improved service quality can reduce compliance costs, strengthen perceived behavioral control, and increase trust in the tax system, which are known drivers of voluntary compliance. (Kirchler, 2007; Zeithaml et al., 2024).

Tax sanctions reflect deterrence logic, where penalties raise the expected cost of non-compliance and thus increase compliance incentives. (Allingham & Sandmo, 1972). However, enforcement works best when it is perceived as legitimate and procedurally fair, because legitimacy supports internal motivation and long-term compliance stability. (Tyler, 2006; Torgler, 2007).

Tax knowledge supports understanding of procedures and consequences, but research often finds that knowledge alone does not guarantee compliance when motivation, trust, or perceived control is weak. (Kirchler, 2007; Saad, 2014). Therefore, this study proposes tax awareness as an intervening construct that connects knowledge, service experiences, and sanction perceptions to compliance behavior.

## METHODS

This study uses a quantitative explanatory design to test causal relationships among tax knowledge, service quality, tax sanctions, tax awareness, and tax compliance. Data were collected through structured questionnaires (self-report), which are appropriate for capturing attitudes and perceptions systematically, and supplemented with secondary administrative data on PBB-P2 realization (2020–2024) for contextual grounding. (Creswell, 2014; Sekaran & Bougie, 2016).

The analysis applies PLS-SEM using WarpPLS to estimate direct and indirect effects and to evaluate mediation through tax awareness. PLS-SEM is widely used for predictive models and mediation testing when constructs are measured via multiple indicators. (Hair et al., 2017).

Measurement model evaluation follows standard criteria, including convergent validity, discriminant validity (e.g., AVE-based checks), and reliability using composite reliability and Cronbach's alpha. (Hair et al., 2017). Service quality indicators follow the SERVQUAL logic adopted in the thesis framework. (Parasuraman et al., 1988).

## RESULTS

### Measurement model (construct quality)

The measurement model meets common reflective-measurement criteria: indicator loadings are significant ( $p < 0.001$ ), AVE values exceed the minimum threshold ( $\geq 0.50$ ), and internal consistency is supported by Composite Reliability and Cronbach's Alpha above acceptable cut-offs. This indicates that each latent construct is measured consistently and captures sufficient variance from its indicators rather than measurement error.

**Table 1. Measurement model summary (validity & reliability criteria)**

Aspect	Evidence reported in thesis	Interpretation
Convergent validity	Significant indicator loadings ( $p < 0.001$ )	Indicators strongly represent their constructs.
Discriminant validity	AVE-based criteria above minimum threshold	Constructs are empirically distinguishable.
Reliability	Composite Reliability and Cronbach's Alpha exceed minimum acceptability	Items within each construct are

Aspect	Evidence reported in thesis	Interpretation
		internally consistent.

Note: If you want, I can replace these “criteria statements” with the **exact AVE/CR/Alpha numbers** per construct, but I need the specific tables/pages from the thesis output that list them (the excerpt provided does not display the numeric values).

### Structural model (direct effects)

The structural model confirms that tax knowledge, service quality, and tax sanctions significantly strengthen tax awareness, supporting awareness as a key psychological channel in the compliance process. Among these, service quality is the strongest predictor of awareness, followed by sanctions and knowledge, which implies that taxpayers’ service experience and the enforcement environment are more influential for building awareness than knowledge alone.

**Table 2. Direct effects (path coefficients)**

Hypothesis / Path	$\beta$ (Path coefficient)	p-value	Decision
Tax Knowledge → Tax Awareness	0.120	0.008	Supported
Service Quality → Tax Awareness	0.507	0.001	Supported
Tax Sanctions → Tax Awareness	0.309	0.001	Supported
Tax Knowledge → Tax Compliance	-0.026	0.301	Not supported
Service Quality → Tax Compliance	0.104	0.018	Supported
Tax Sanctions → Tax Compliance	0.612	0.001	Supported
Tax Awareness → Tax Compliance	0.443	0.001	Supported

#### Explanation (re-stated clearly):

- a. **Awareness formation:** Service quality has the largest effect on awareness ( $\beta = 0.507$ ), meaning improvements in reliability/responsiveness/assurance/empathy are most effective for raising taxpayers’ awareness.

- b. **Compliance drivers:** Sanctions are the strongest direct driver of compliance ( $\beta = 0.612$ ), while awareness also has a strong effect ( $\beta = 0.443$ ); service quality contributes directly but modestly ( $\beta = 0.104$ ).
- c. **Knowledge-action gap:** Knowledge does not directly predict compliance ( $p = 0.301$ ), indicating that knowledge alone may not be sufficient to trigger payment behavior without awareness, supportive service conditions, or enforcement pressure.

### Total effects and mediated pathways (re-explained)

Total effects combine direct and indirect effects and are useful to interpret mediation because they show the “overall influence” of a determinant on compliance, including the pathway through awareness. Here, awareness acts as a meaningful mediator, especially for service quality and knowledge.

**Table 3. Total effects on Tax Compliance (direct vs indirect via awareness)**

Determinant → Tax Compliance	Direct effect	Indirect effect (via awareness)	Total effect	Main interpretation
Tax Knowledge	-0.026	0.053	0.027	Knowledge matters mainly by building awareness, not by directly changing payment behavior.
Service Quality	0.104	0.224	0.329	Service quality improves compliance mostly through raising awareness (behavioral channel).
Tax Sanctions	0.612	0.137	0.749	Sanctions have the strongest overall effect, dominated by direct deterrence.

## DISCUSSION

### **Tax knowledge → awareness: information as a cognitive trigger**

The positive relationship between tax knowledge and tax awareness indicates that informational understanding helps taxpayers recognize obligations, procedures, and consequences, which can foster a more informed and accepting stance toward taxation. In TPB terms, knowledge can strengthen behavioral beliefs that shape attitudes and can also reduce uncertainty, indirectly improving perceived behavioral control. (Ajzen, 1991). However, the relatively smaller coefficient compared with service quality suggests that knowledge may be necessary but not sufficient; taxpayers can know what to do yet remain indifferent or resistant if service experience and enforcement context do not support compliance. (Kirchler, 2007).

### **Why knowledge does not directly drive compliance**

The non-significant direct path from tax knowledge to compliance implies a classic “knowledge–action gap” in public policy: knowing rules does not guarantee behavior when motivational and contextual barriers persist. This is consistent with TPB, where behavior depends on intention formed by attitude, norms, and perceived control; knowledge can exist without a favorable attitude (e.g., taxes seen as unfair), supportive norms, or a sense that compliance is feasible and worthwhile. (Ajzen, 1991). In slippery slope terms, knowledge may not overcome low trust or low perceived authority power; taxpayers may still strategically delay payment if they do not anticipate consequences or do not trust that taxes translate into public value. (Kirchler et al., 2008; Prinz et al., 2014).

### **Service quality → awareness and compliance: trust-building and friction reduction**

Service quality is the strongest predictor of awareness in the model ( $\beta = 0.507$ ), showing that interactions with tax services can meaningfully reshape taxpayer cognition and normative acceptance. Under SERVQUAL, reliable and responsive service improves clarity and reduces the subjective “cost” of compliance, while assurance and empathy increase perceived competence and benevolence of the authority, supporting trust formation. (Parasuraman et al., 1988). The fact that service quality also has a significant direct effect on compliance ( $\beta = 0.104$ ) suggests that improving service processes can reduce immediate barriers to paying, such as confusion, time cost, and perceived complexity.

Importantly, the indirect effect of service quality via awareness (0.224) exceeds its direct effect (0.104), meaning that service quality functions primarily as a behavioral enabler through awareness rather than only as an operational convenience. This aligns with the slippery slope framework: high-quality service can enhance trust and perceived legitimacy, shifting compliance from enforced to more voluntary patterns. (Kirchler et al., 2008; Prinz et al., 2014).

### **Sanctions → awareness and compliance: power of authority and deterrence dominance**

Tax sanctions have the largest direct effect on compliance ( $\beta = 0.612$ ) and the largest total effect (0.749), indicating deterrence is highly salient in the studied context. This aligns with economic deterrence theory, which predicts that higher expected penalties

reduce non-compliance by increasing the expected cost of evasion. (Allingham & Sandmo, 1972). The significant effect of sanctions on awareness ( $\beta = 0.309$ ) suggests that sanctions also act as a normative signal, reminding taxpayers that tax payment is a legal obligation with consequences.

Nevertheless, deterrence is not purely mechanical; enforcement that is perceived as arbitrary or unfair can undermine trust and crowd out intrinsic motivation, potentially weakening voluntary compliance in the long run. (Tyler, 2006; Kirchler et al., 2008). Therefore, policy implementation should treat sanctions as part of a broader system that includes transparent procedures, clear communication, and service support so that authority power strengthens compliance without damaging legitimacy. (Prinz et al., 2014).

### **Awareness → compliance: internalization as a stable pathway**

Tax awareness strongly predicts compliance ( $\beta = 0.443$ ), indicating that internalized recognition and acceptance of tax obligations is a central pathway to payment behavior. This supports TPB logic: when awareness reflects positive attitudes and stronger norms about taxpaying, intention becomes stronger and behavior more consistent. (Ajzen, 1991). In the slippery slope framework, awareness can be seen as a behavioral consequence of trust: when taxpayers view authorities as legitimate and service as fair, they are more likely to comply voluntarily, which is more stable than fear-driven compliance alone. (Kirchler et al., 2008).

### **Integrated interpretation: what the pattern implies for Banyuwangi**

The empirical pattern suggests an integrated compliance strategy: sanctions are the strongest immediate lever, but service quality is the strongest lever for strengthening awareness, and awareness is a major driver of compliance. This combination mirrors the “power + trust” proposition from the slippery slope framework, where enforcement (power) and service/legitimacy (trust) jointly produce higher compliance than either approach alone. (Kirchler et al., 2008; Prinz et al., 2014).

Practically, improving PBB-P2 compliance in Banyuwangi should prioritize: (1) structured service-quality improvements based on SERVQUAL dimensions (reliability and responsiveness as core), (2) consistent sanction implementation accompanied by transparent communication, and (3) embedding knowledge dissemination into service interactions to convert knowledge into awareness and then into compliance. This is consistent with the thesis context that recurring arrears require strategies that address root behavioral and administrative mechanisms rather than routine collection alone

## **CONCLUSION**

This study confirms that tax knowledge, service quality, and tax sanctions significantly strengthen tax awareness, while service quality, tax sanctions, and tax awareness significantly improve PBB-P2 compliance in Banyuwangi Regency. Tax knowledge does not directly affect compliance, indicating a knowledge-action gap: taxpayers may understand rules and procedures but still delay or avoid payment when motivation, perceived convenience, or enforcement expectations are not sufficiently strong. Accordingly, knowledge-based programs should be embedded into service encounters and awareness-building initiatives, while simultaneously simplifying administrative processes so that taxpayers perceive compliance as both important and feasible.

From a policy standpoint, two complementary tracks are recommended. First, strengthen service quality (reliability, responsiveness, assurance, empathy, and supporting facilities) to reduce transaction costs and build trust, which in turn raises awareness and compliance. Second, implement tax sanctions consistently and transparently to enhance deterrence without undermining legitimacy, ensuring that enforcement is paired with clear communication and accessible assistance to taxpayers. Together, these measures provide a balanced compliance strategy that addresses both voluntary and enforced dimensions of compliance behavior.

### **LIMITATION**

This manuscript is developed from the research model and statistical outputs available in the provided thesis document; therefore, it focuses on tax knowledge, service quality, and tax sanctions with tax awareness as an intervening variable, within the Banyuwangi context. The use of self-report survey data may introduce common method bias and social desirability effects, and the cross-sectional design limits strong causal inference over time. In addition, regional characteristics (administrative capacity, socio-economic conditions, service infrastructure) may restrict generalizability beyond Banyuwangi.

Future research should extend the model by incorporating institutional and technology-related determinants (e.g., digital payment usability, system reliability, complaint-handling effectiveness, transparency of tax utilization, and trust in local government). Researchers may also test moderating variables such as taxpayer type, income level, urban–rural setting, or perceived fairness to identify segments that respond differently to service and sanctions. Finally, comparative multi-region studies and longitudinal designs are recommended to strengthen external validity and to capture dynamic changes in awareness and compliance following policy reforms.

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