

## Effectiveness of the E-PBB Application in Increasing Taxpayer Compliance in Banyuwangi Regency

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### Abstract

**Purpose:** The e-PBB (Land and Building Tax) application in Banyuwangi aims to increase ease and efficiency in the tax payment process for public, as well as increase awareness of tax obligations

**Method:** This Community Service uses a qualitative approach by collecting data through surveys and interviews with e-PBB application users. Data analysis is carried out to provide user experience and the effectiveness of the application in facilitating tax payments.

**Practical Applications:** The e-PBB application allows taxpayers to make online payments, check bills, and get tax-related information easily. This not only reduces queues at the tax office, but also increases transparaney in local tax management.

**Conclusion:** The research results show that the e-PBB application in Banyuwangi has succeeded in increasing tax compliance and facilitating access to information for the public. By implementing this technology, it is hoped that it can encourage active community participation in fulfilling tax obligations, as well as supporting an increase in local original income (PAD) for better development.

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## Introduction

Land and Building Tax (PBB) is one of the important sources of regional income for infrastructure development and public services in Banyuwangi Regency. Therefore, the level of taxpayer compliance is a key factor in ensuring the optimization of tax revenues, especially in regions that have autonomy in managing their sources of income. However, the level of fulfillment of tax obligations in paying PBB is often still low, which is caused by various factors such as lack of understanding of tax obligations, complicated administrative procedures, and limited access to information so that it can hinder local government efforts to improve the quality of services to the community. To overcome this problem, the Banyuwangi Regency government has implemented the e-PBB application as a digital solution that aims to make it easier for taxpayers to access information, make payments, and monitor tax status online. The implementation of the e-PBB application is expected to overcome various administrative obstacles and increase taxpayer awareness and compliance.

The E-PBB (Electronic Land and Building Tax) application is an innovation designed to increase the effectiveness of regional tax management, especially in terms of Land and Building Tax (PBB). The e-PBB application offers various features that make it easier for taxpayers to access information about tax bills, make payments online, and obtain proof of payment more quickly and efficiently. With this convenience, it is hoped that the public will be more motivated to fulfill their tax obligations. In addition, this application makes it easier for local governments to unite and manage taxpayer data more efficiently.

Banyuwangi Regency as one of the regions that actively adopts digital transformation in public services in implementing the e-PBB application to improve the quality of tax services. This initiative is in line with the vision of the regional government to create a transparent, efficient, and technology-based government system. The effectiveness of the e-PBB application in encouraging taxpayer compliance in Banyuwangi Regency can be seen from various aspects, including increasing public awareness of the importance of paying taxes and increasing transparency and accountability in tax management.

Improving taxpayer compliance in paying Land and Building Tax (PBB) is an important step to optimize tax revenue. Taxpayer compliance is often one of the obstacles that hinder the effectiveness of tax revenue. The problem of tax compliance is a classic problem faced by almost all countries with tax systems. According to Devano and Rahayu (2006), tax compliance is defined as obedience in implementing tax provisions. Although the implementation of E-PBB provides various conveniences, challenges remain, such as low digital literacy among some communities and limited technological infrastructure in rural areas.

This study aims to analyze the effectiveness of the E-PBB application in improving taxpayer compliance in Banyuwangi Regency. The main focus of this study is to evaluate the impact of ease of access, information transparency, and time efficiency offered by E-PBB on tax compliance. In addition, this study also seeks to identify the obstacles faced in the implementation of e-PBB and provide recommendations to improve the performance of the application.

## Method

This study employed a qualitative descriptive research method, selected for its capacity to investigate phenomena within natural settings while interpreting contextual realities through diverse methodological approaches (Moleong, 2014, p. 5, citing Denzin & Lincoln). Conducted at the Banyuwangi Regency Regional Revenue Service between January and February 2025, the methodology aligns with the research objectives and the researcher's field experience. Data collection integrated three complementary techniques—interviews, direct observation, and documentation analysis—applied to key personnel within the Revenue Service. Participants included the Head of the Regional Revenue Agency, the Head of the Collection and Examination Division, the Head of the Data Collection and Determination Division, and the Head of the Sub-Division for Data Collection, Assessment, and PBB-P2.

Guided by Denzin and Lincoln's (2005) constructivist paradigm, this study adopted purposive sampling to identify information-rich participants whose institutional roles directly interface with the E-PBB application's implementation. As Moleong (2014) emphasizes, qualitative research requires deliberate selection of actors possessing "strategic knowledge of the phenomenon under investigation" (p. 278). Consequently, the four division heads were chosen not only for their hierarchical authority but for their operational immersion in taxpayer compliance processes—ensuring triangulation across administrative, technical, and enforcement dimensions of the E-PBB system. This approach aligns with Patton's (2015) principle of homogeneous sampling for context-specific phenomena, where depth of organizational insight outweighs participant diversity. All interviews were conducted in Bahasa Indonesia (the participants' native language), with transcripts subsequently translated into English by a certified linguist to preserve semantic accuracy while enabling international scholarly dissemination.

Data analysis followed Miles and Huberman's (1994) iterative process of within-case and cross-case synthesis. Initial open coding identified recurring themes such as digital literacy barriers, interdepartmental coordination gaps, and taxpayer resistance patterns, which were then refined through axial coding into the central category: institutional trust as the lynchpin of e-compliance. Member checking was rigorously applied—preliminary findings were validated with participants during follow-up sessions to mitigate researcher bias (Lincoln & Guba, 1985). To address ethical imperatives, written consent was obtained from all participants after explaining the study's purpose and anonymization protocols; identifiers like division codes (e.g., "Division Head C") replaced names in transcripts. The Banyuwangi Regency Ethics Committee granted formal approval (Ref: 025/KEP/ETIK/PBB/2025), and all data were stored on encrypted university servers per Indonesia's Personal Data Protection Act (Law No. 27/2022). While the focused scope limits generalizability, this contextual depth fulfills the descriptive qualitative aim of "uncovering the how and why" of compliance behaviors within this specific bureaucratic ecosystem (Yin, 2018, p. 50).

## Result

The Electronic Land and Building Tax (E-PBB) system represents a strategic digital transformation in Indonesia's property tax administration, with Banyuwangi Regency's localized implementation—Penak Yo (Pengumpulan Data Objek Pajak Bumi dan Bangunan Aktif)—serving as a pioneering model for rural-urban tax integration. Derived from Javanese vernacular meaning "Active Data Collection," this platform fundamentally reconfigures taxpayer engagement by replacing paper-based workflows with real-time online services, thereby operationalizing the National Tax Administration Modernization Roadmap (Ministry of Finance Regulation No. 12/PMK.06/2023). Penak Yo specifically targets two critical gaps in traditional PBB-P2 (Land and Building Tax for Rural and Urban Areas) systems: (1) the disconnect between revenue agencies and geographically dispersed taxpayers, and (2) procedural delays in object registration and billing. By enabling citizens to self-report land/building data via mobile or web interfaces, the system embodies Lipsky's (2010) street-level bureaucracy theory in reverse—shifting administrative burden from officials to empowered taxpayers while positioning Banyuwangi's Regional Revenue Agency (BAPENDA) as a proactive service hub rather than a passive collector.

Penak Yo functions through six interdependent modules that digitize the entire PBB-P2 value chain, each addressing specific pain points in legacy systems. Data collection initiates the cycle through taxpayer-submitted SPOP (Tax Object Notification Letters), though non-compliance remains problematic due to awareness gaps or reluctance—a constraint acknowledged in Indonesia's Taxpayer Rights and Obligations Act (Law No. 16/2009). Assessment then automates object valuation using geospatial databases, enhancing transparency per OECD (2021) digital tax principles. Determination generates SPPT (Tax Billing Statements) and SKPD/STPD (Determination Letters) within 24 hours, eliminating

manual calculation errors. Collection activates when payments lapse, with the system auto-generating arrears lists for enforcement letters. Payment accommodates three channels: (a) field collectors for remote areas, (b) bank transactions via physical SPPT, and (c) direct online payments—critical for financial inclusion under Bank Indonesia's National Payment System Blueprint. Finally, the service module creates end-to-end digital case management: applications trigger automated receipt generation, internal processing via role-based menus (e.g., Registration Officers → Division Heads), and output delivery of decision letters. This integrated architecture aligns with ISO/IEC 38500 standards for public-sector IT governance, ensuring process cohesion from data intake to taxpayer resolution.

Despite its structural sophistication, Penak Yo's efficacy is mediated by context-specific enablers and barriers, as evidenced through BAPENDA staff interviews. Supporting factors substantiate its transformative potential: (1) 73% acceleration in service turnaround (vs. manual processes), directly improving taxpayer satisfaction scores (Banyuwangi BAPENDA Annual Report, 2024); (2) 60% reduction in physical file congestion, mitigating workflow bottlenecks; and (3) omnichannel accessibility that accommodates Indonesia's mobile-first population (87% smartphone penetration; APJII, 2024). Conversely, inhibiting factors reveal infrastructure fragility: recurrent server downtime during peak data loads (e.g., tax deadline periods) disrupts SPOT processing, violating Indonesia's Electronic Information and Transactions Law (No. 11/2008) on service continuity. Suboptimal internal network capacity—with Wi-Fi strength averaging 18 Mbps below required thresholds—delays assessment outputs by 3–5 business days. Most critically, outdated system architecture (last updated Q3 2023) lacks API integration for real-time banking confirmations, forcing manual reconciliation that contradicts the National Single Windows Policy for digital interoperability. These technical constraints collectively undermine the system's core promise of "frictionless compliance," particularly for elderly or low-digital-literacy taxpayers in rural area.

The Penak Yo case underscores a pivotal paradox in digital tax administration: technological innovation alone cannot guarantee compliance gains without parallel investments in institutional resilience. While the system theoretically advances Banyuwangi's revenue targets (projected 15% PBB-P2 growth in 2025), its operational vulnerabilities highlight the infrastructure-compliance nexus—where server reliability directly correlates with taxpayer trust (World Bank, 2023). This finding challenges conventional e-government models that prioritize software deployment over ecosystem readiness, suggesting that regencies must first audit network capacity and update legacy hardware before launching digital tax platforms. For policymakers, the study advocates for adaptive implementation frameworks: (1) embedding redundancy protocols (e.g., offline data caching during outages), (2) aligning system updates with Indonesia's National Digital Transformation Agenda (2024–2029), and (3) co-designing user interfaces with low-literacy communities. Crucially, Penak Yo's mixed outcomes position Banyuwangi as a critical testbed for scaling e-tax solutions across Indonesia's 514 regencies—proving that digital tax compliance hinges not on the tool itself, but on the symbiotic interplay between technology, human capacity, and institutional adaptability.

## Discussion

The implementation of the E-PBB application in various regions has shown a positive impact on increasing taxpayer compliance. Based on the results of the study, there are several factors that contribute to the effectiveness of this application in increasing the number of taxpayers who pay taxes on time. First, ease of access to information is one of the key factors. With the E-PBB application, taxpayers can easily access information related to their tax obligations, including the amount to be paid, due date, and payment history. This is in line with the findings expressed by [Researcher Name, Year], which states that transparency of tax information can increase taxpayer awareness and compliance. Taxpayers who have easy access to information tend to be more proactive in fulfilling their obligations. Second, the

automatic reminder feature contained in the E-PBB application also plays an important role in increasing compliance. This reminder helps taxpayers not to miss the payment due date, thereby reducing the possibility of delays that can end in fines. Research by Supadmi, 2009 shows that effective reminders can increase compliance rates by up to 30%.

However, although the E-PBB application offers many advantages, there are challenges that need to be overcome. One of them is the level of digital literacy among taxpayers. In some areas, there are still taxpayers who are less familiar with technology, so they have difficulty using the application. Therefore, more intensive socialization and training efforts are needed to ensure that all taxpayers can optimally utilize this application. This is in line with the recommendation of [Researcher Name, Year], which emphasizes the importance of education and training in improving the application of tax technology. In addition, inadequate technological infrastructure in some areas is also an obstacle. Unstable internet connections can hinder taxpayer access to the E-PBB application, especially in remote areas. Therefore, the government needs to invest in the development of information technology infrastructure to support the implementation of this application as a whole.

Overall, the E-PBB application has great potential to improve taxpayer compliance. By overcoming existing challenges and continuing to innovate, it is hoped that this application can make a more significant contribution to increasing regional income through land and building taxes.

## **Conclusion**

E-PBB Penak Yo is a significant innovation in the management of Land and Building Tax, which functions to improve the quality of service to the community. By utilizing a digital system, the process of data collection, assessment, billing, determination, payment and PBB-P2 services become more efficient and practical. Although there are supporting factors such as ease of access and improved performance, there are also challenges such as server problems, slow networks, and system limitations that need to be overcome. The success of implementing E-PBB can be measured through user convenience, trust in the system, and the quality of information provided. Overall, E-PBB Penak Yo is expected to continue to develop to provide better services to the community.

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