Analysis of Internal and External Factors (SWOT) in Digital Rural and Urban Land and Building Tax (PBB-P2) Services in Palu City: A Study at the Regional Revenue Agency

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ABSTRACT
Digitalizing the Rural and Urban Land and Building Tax (PBB-P2) is expected to make payment easier, services more transparent, and taxpayers more compliant, yet many local governments struggle to turn these promises into practice. This study examines the internal and external factors that shape digital PBB-P2 services at the Regional Revenue Agency (Bapenda) of Palu City and proposes strategies for improving them. Using a descriptive qualitative design, we applied a SWOT analysis supported by a TOWS matrix. Data came from in-depth interviews, observation, and documents, and were analyzed through data condensation, display, and conclusion drawing. The main strengths are supportive regulation, a range of cashless payment channels, and committed leadership. The main weaknesses are unreliable tax object data, limited digital skills among staff, and weakly integrated systems. Opportunities arise from the national Electronic-Based Government System (SPBE) policy, regional digitalization programs, and the spread of digital finance, while threats include uneven digital literacy, disaster damage to tax objects, and cybersecurity risks. We recommend four priorities: verifying and updating tax object data, building staff capacity, integrating systems, and offering inclusive, well-protected services for taxpayers. The study adds to public administration and local taxation research on digital transformation in disaster-prone regions.
Keywords: Digital Tax Service; Local Tax; Palu City; Pbb-P2; Swot Analysis

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INTRODUCTION

Local taxes are a core source of Own-Source Revenue (Pendapatan Asli Daerah, PAD) and a foundation of fiscal independence for local governments under decentralization (Lewis, 2023). Within this group, the Rural and Urban Land and Building Tax (PBB-P2) is especially important. Its object cannot be moved or hidden, its base is relatively stable, and it reaches most households directly. Since its administration was handed from the central government to districts and cities under Law Number 28 of 2009 on Local Taxes and Levies, local governments have been responsible for the whole process, from registering and valuing properties to assessing, collecting, and serving taxpayers (Twinomujuni et al., 2023). Law Number 1 of 2022 on Financial Relations between the Central Government and Regional Governments later revised parts of this framework.

Meanwhile, digital transformation is changing what citizens expect from public services (Hanafi & Abdullah, 2025.). Presidential Regulation Number 95 of 2018 on the Electronic-Based Government System (SPBE) requires government bodies, including local governments, to deliver services that are integrated, efficient, and accountable. In taxation, information technology can widen the tax base, reduce the cost of complying, and limit the discretion of officials (Raudla et al., 2015). These gains are not automatic, however. Digital services succeed only when the organization is ready, its data are sound, its staff are capable, and users are willing to adopt them (Assegaf, 2022; Horn & Draude, 2025).

Palu City offers a particularly instructive setting. The earthquake, tsunami, and liquefaction of September 2018 destroyed homes and changed the physical condition of many parcels and buildings, so tax object records now need careful updating. At the same time, the Regional Revenue Agency (Bapenda) of Palu City must protect revenue while offering services that residents can reach through digital channels. Digital PBB-P2 services therefore sit between two possibilities: faster, easier service on one side, and unequal access and poor data quality on the other.

Research on tax digitalization has largely focused on what drives taxpayer compliance (Anto et al., 2021) or on how users accept new technology (Marangunić & Granić, 2015). Far less attention has gone to how ready a local tax administration is when internal and external conditions are considered together, especially in disaster-prone regions outside Java. Choosing a sound strategy, though, calls for a systematic view of strengths, weaknesses, opportunities, and threats (Helms & Nixon, 2010; Rangkuti, 2015).

This article contributes by applying a SWOT analysis, extended with a TOWS matrix, to digital PBB-P2 services in a local tax agency in a post-disaster city. The result is a set of strategies tailored to Palu City that other regions with similar conditions may also draw on. The study asks two questions: which internal and external factors shape digital PBB-P2 services at Bapenda Palu City, and what strategies follow from them? Its purpose is to analyze these factors and propose options for improving the service.

METHODS

We used a descriptive qualitative approach to understand digital PBB-P2 services as experienced by those who deliver and use by Moleong, 2017 (Creswell & Creswell, 2018). The study took place at the Regional Revenue Agency of Palu City, Central Sulawesi Province, and data were collected during the three months from May through July 2026.

Informants were chosen purposively. They included leaders and staff responsible for PBB-P2 at Bapenda, together with taxpayers who use the service, for a total of [number of informants] participants. Primary data came from semi-structured in-depth interviews and observation of service processes. Secondary data came from regulations, revenue realization reports, and the agency's official publications.

Analysis followed the interactive model of Miles, Huberman, and Saldaña (2014): data condensation, data display, and conclusion drawing. The condensed data were sorted into internal factors (strengths and weaknesses) and external factors (opportunities and threats) using the SWOT framework (Gürel & Tat, 2017; Rangkuti, 2015). These were then combined in a TOWS matrix to develop SO, WO, ST, and WT strategies. To strengthen trustworthiness, we triangulated sources and techniques and asked informants to check our interpretations (member checking).

RESULTS AND DISCUSSION

Overview of digital PBB-P2 services

PBB-P2 services at Bapenda Palu City cover registering and updating tax objects, issuing the Tax Due Notification Letter (SPPT), receiving payments, and handling inquiries and objections. Digitalization is most visible in cashless payment channels, online access to billing information, and computerized data management.

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[Add five-year PBB-P2 revenue realization data and the names of the digital applications or channels used by Bapenda]. The sections below set out the internal and external factors identified.

Internal factors: strengths

Three strengths stand out. First, regulation and leadership are aligned with digital service. The SPBE policy and regional digitalization agenda give innovation a clear legal footing, and Bapenda's leaders treat easy payment and transparency as priorities. Second, taxpayers can pay through several cashless channels, including banks and QRIS-based e-wallets, which shortens queues and saves them the cost of traveling and handling cash. Third, tax data are already managed on computers, which makes assessment, revenue monitoring, and payment reconciliation more straightforward.

Internal factors: weaknesses

The most serious weakness is the reliability of tax object data. Physical changes caused by the 2018 disaster, ownership transfers that were never recorded, and mismatches in land and building areas mean that some bills do not reflect what is on the ground. This leads to objections and erodes taxpayers' trust. Digital skills are also thin, and few staff can manage information systems with confidence. The registration, assessment, and payment systems are not yet fully connected, and information and complaint services are handled separately rather than together. Because outreach on digital services has been limited, many taxpayers still prefer to come to the office in person.

External factors: opportunities

Four opportunities emerged. The SPBE policy gives the agency both legitimacy and a framework for integrating services. Regional digitalization programs and the wider use of digital finance, including QRIS, make cashless payment easier to expand. Partnerships with the National Land Agency, banks, village governments, and universities could improve data updating and help taxpayers directly. Finally, the fiscal policy direction set by Law Number 1 of 2022 encourages regions to raise PAD, which supports stronger PBB-P2 administration.

External factors: threats

The threats are equally clear. Digital literacy and access are uneven, particularly among older taxpayers and residents of outlying areas with weak connectivity. Palu remains exposed to disasters that could damage tax objects, infrastructure, and data at any time. Cybersecurity risks are growing, and Law Number 27 of 2022 on personal data protection raises the bar for information security. Lastly, perceptions of unfairness, arrears, and disputes over data can undermine compliance even where payment channels are available.

Table 1. Summary of the SWOT matrix for digital PBB-P2 services

Factor	Key indicators
Strengths (S)	Regulatory support and leadership commitment; diverse cashless payment channels; computerized tax data.
Weaknesses (W)	Reliability of tax object data; staff digital competence; integration of systems and complaint services; limited outreach.
Opportunities (O)	SPBE policy; regional digitalization and digital finance; cross-agency collaboration; fiscal policy direction.
Threats (T)	Digital literacy and access gaps; disaster vulnerability; cybersecurity and data protection risks; data disputes and arrears.

Strategic options (TOWS matrix)

Combining these factors produced four groups of strategies. The SO strategy uses regulatory support and cashless channels to expand integrated services in line with SPBE and regional digitalization. The WO strategy relies on partnerships and training to update tax object data and raise staff digital skills. The ST strategy builds on existing systems and leadership commitment to create inclusive services and firm data security standards. The WT strategy focuses on data contingency planning, information security governance, and simpler objection procedures.

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Table 2. Strategic options based on the TOWS matrix

Strategy	Formulation
SO	Expand integrated app- and QRIS-based services aligned with SPBE and regional digitalization.
WO	Update tax object data together with the land agency, banks, and village offices, and train staff in digital skills.
ST	Set up assistance desks for taxpayers with low digital literacy and adopt clear data security standards.
WT	Prepare data backup and disaster recovery plans, strengthen information security governance, and simplify objection procedures.

The findings suggest that digitalizing PBB-P2 in Palu City is as much a social and organizational task as a technical one. Having payment channels online is not enough when the underlying data and organizational capacity are not ready. This resembles the "design–reality gap" described in the e-government literature, where technology projects falter because their design does not fit the actual state of data, people, and institutions (Heeks, 2006). In Palu, that gap is clearest in the reliability of tax object data after the disaster.

The results also support the view that technology lowers compliance costs and widens the tax base only when basic administration, such as registration and valuation, works well (Bahl & Bird, 2008; Bird & Zolt, 2008). On the user side, the literacy and access barriers show that perceived usefulness and ease of use, the core ideas of technology acceptance models, need real assistance to take hold (Davis, 1989; Venkatesh et al., 2003). For this reason, the strategies proposed here treat data updating and inclusive service as preconditions for adding digital channels, not as optional extras.

In practice, Bapenda Palu City should approach digitalization as a broader effort to improve how data and services are governed. The study has limits: it covers one agency and uses a qualitative design without weighting the factors, so its conclusions should be generalized with care.

CONCLUSION

Digital PBB-P2 services at Bapenda Palu City rest on supportive regulation, committed leadership, and cashless payment channels, but they are held back by unreliable tax object data, limited digital skills, and systems that are not yet well integrated. Opportunities lie in the SPBE policy, regional digitalization, and cross-agency partnerships, while the main threats are uneven digital literacy, exposure to disasters, and cybersecurity risks. The recommended strategies are to update tax object data, build staff capacity, integrate systems, and provide services that are inclusive and secure. Future studies could weigh the factors using IFAS and EFAS matrices or QSPM and examine taxpayer perceptions quantitatively.

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REFERENCES

Alm, J. (2019). What motivates tax compliance? Journal of Economic Surveys, 33(2), 353–388.

Anto, L. O., Hamid, W., & Bulan, N. L. (2021). Taxpayer awareness, tac knowledge, tac sanctions, public service account ability and taxpayer compliance. Accounting, 7(1), 49–58. Scopus. https://doi.org/10.5267/j.ac.2020.10.015

Assegaf, N. A. (2022). Digital Transformation Of The Public Administration Sector For Improving Public Services Through An E-Government Approach.

Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008

Hanafi, I., & Abdullah, F. 2025.). Harmonization of Hard and Soft Power Approaches in Anti-Terrorism Policy: Lessons from Poso Regency.

Horn, V., & Draude, C. (2025). The Ladder of Data Citizen Participation: A Sociotechnical Lens for Designing Democratic Digital Services in the Data Economy. Interacting with Computers, 37(4), 253–265. Scopus. https://doi.org/10.1093/iwc/iwae038

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Lewis, B. D. (2023). Indonesia's New Fiscal Decentralisation Law: A Critical Assessment. Bulletin of Indonesian Economic Studies, 59(1), 1–28. https://doi.org/10.1080/00074918.2023.2180838

Marangunić, N., & Granić, A. (2015). Technology acceptance model: A literature review from 1986 to 2013. Universal Access in the Information Society, 14(1), 81–95. Scopus. https://doi.org/10.1007/s10209-014-0348-1

Raudla, R., Douglas, J. W., Randma-Liiv, T., & Savi, R. (2015). The Impact of Fiscal Crisis on Decision-Making Processes in European Governments: Dynamics of a Centralization Cascade. Public Administration Review, 75(6), 842–852. Scopus. https://doi.org/10.1111/puar.12381

Twinomujuni, R., Buwule, H. M., Ssonko, D. K., & Rukanyangira, N. (2023). Decentralisation and Education Service Delivery in Selected Local Governments in Uganda. 8(2).

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478. https://doi.org/10.2307/30036540

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Bahl, R. W., & Bird, R. M. (2008). Subnational taxes in developing countries: The way forward. Public Budgeting & Finance, 28(4), 1–25.

Bird, R. M., & Zolt, E. M. (2008). Technology and taxation in developing countries: From hand to mouse. National Tax Journal, 61(4), 791–821.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publications.

Gürel, E., & Tat, M. (2017). SWOT analysis: A theoretical review. Journal of International Social Research, 10(51), 994–1006.

Heeks, R. (2006). Implementing and managing eGovernment: An international text. SAGE Publications.

Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis – where are we now? Journal of Strategy and Management, 3(3), 215–251.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). SAGE Publications.

Moleong, L. J. (2017). Metodologi penelitian kualitatif [Qualitative research methodology] (Rev. ed.). PT Remaja Rosdakarya.

Rangkuti, F. (2015). Analisis SWOT: Teknik membedah kasus bisnis [SWOT analysis: Techniques for dissecting business cases]. PT Gramedia Pustaka Utama.

Republic of Indonesia. (2009). Law Number 28 of 2009 on local taxes and levies.

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