

Fiscal Policy Decentralization Innovation in Groundwater Tax Collection: A Study of Policy Implementation in Tebing Tinggi City

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Abstract: *This study aims to evaluate the implementation of the groundwater tax collection policy in Tebing Tinggi City within the context of fiscal decentralization and to identify innovations needed to improve its effectiveness. Despite having a legal basis through Regional Regulation No. 1 of 2024, field practice shows that groundwater tax collection still faces various technical and institutional obstacles. The research method used is descriptive qualitative, with data collected through in-depth interviews, direct observation, and review of official documents. The analytical framework refers to George C. Edward III's policy implementation model, which includes four main components: information delivery, resource availability, implementer attitudes, and organizational structure. The research findings indicate that these four elements have not been implemented effectively. Policy information has not been conveyed comprehensively and tends to be one-way; policy implementers work with limited capacity and multiple role burdens; supporting training is not yet available to strengthen implementer commitment; and the existing organizational structure does not adequately support technology-based service innovation. Based on these conditions, a policy reform strategy is needed that includes strengthening public communication, a more structured division of implementing functions, the establishment of a fiscal education unit, and the development of a spatial information system (GIS). This initiative is expected to encourage increased taxpayer compliance and strengthen regional fiscal governance in a sustainable manner.*

Keywords: Policy Implementation; Fiscal Decentralization; Public Innovation

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Introduction

The demands for democracy and the turmoil of reform following the fall of the New Order regime in 1998 necessitated an increased role for regions and the empowerment of increasingly diverse communities. The government responded by enacting Law Number 22 of 1999 concerning Regional Government and Law Number 25 of 1999 concerning Fiscal Balance between the Central and Regional Governments (Huda, 2016). The enactment of these two laws marked the beginning of a new era of regional autonomy through the transfer of broader authority to regions accompanied by the transfer of financing, infrastructure, and human resources (Christia & Ispiyarso, 2019). The transfer of financing sources and financial management authority to support the implementation of regional development within the framework of decentralization regulated in the 1945 Constitution became a "big bang" in the implementation of fiscal decentralization in Indonesia (Amin, 2013).

Fiscal decentralization is an effort to redistribute central government authority to regional governments, thus enabling them to manage revenue and expenditure independently. In the Indonesian context, this policy aims to accelerate development and equitable welfare by providing space for regions to manage their fiscal resources autonomously (Ningsih et al., 2023). Fiscal decentralization ideally encourages accountability and efficiency in public services, including in the collection of regional taxes, which are the main source of Regional Original Income (PAD). (Asap, 2001).

Fiscal decentralization is a consequence of the implementation of regional autonomy in Indonesia. Like

regional autonomy, fiscal decentralization essentially aims to increase regional potential, specifically from a fiscal aspect. Each region has the right and obligation to regulate and implement its own government affairs under its authority, adjusting to the financial capacity of the region concerned (Sasana, 2006). Problems that often arise in the implementation of fiscal decentralization are not only related to technical issues, but in a fiscal decentralization policy design, it is a system of financial linkages between the central and regional governments (Hastuti, 2018).

In general, the general objective is to balance fiscal capacity between the central and regional governments. However, another strategic objective is to balance fiscal capacity between regions (horizontal fiscal balance). While fiscal capacity across regions does not necessarily have to be the same, fiscal decentralization at least reduces fiscal disparities and indirectly encourages further regional economic development (Kurniawan, 2012). Ideally, fiscal decentralization can improve the efficiency, effectiveness, transparency, and accountability of government financial management (Hutagalung, 2016).

A high level of independence indicates that regional governments have generally managed local revenue transparently. This allows for greater accountability in financial management, which can lead to a favorable opinion from the Supreme Audit Agency (BPK) (Herwastoeti, 2010). Decentralization, which simply means delegating authority, is not sufficient; the responses provided by the central government to regional governments should improve public services. For theoretical reasons, much is expected from decentralization, including

improved government performance, growth in regional economic development, and increased welfare (Sidik, 2002).

One concrete form of fiscal decentralization is the authority of regional governments to collect and manage groundwater taxes. This tax is not only fiscal in nature but also has an ecological function and controls the increasing exploitation of groundwater resources due to industrial activities and domestic needs (Abiyyi, 2024). Uncontrolled groundwater management can cause environmental damage such as land subsidence, seawater intrusion, and water quality degradation (Darwis, 2018). Therefore, groundwater taxes can also function as an economic instrument for internalizing environmental costs in regional fiscal policy. In practice, groundwater taxes serve as a strategic indicator of regional fiscal capacity and the extent to which local governments are able to implement sustainable natural resource management (Iqbal, 2020).

However, in various regions, including Tebing Tinggi City, this policy faces challenges in its implementation. The main problems that often arise are low levels of taxpayer compliance, limited apparatus resources, and weak policy communication to the public. This aligns with the findings of Cheema and Rondinelli (1983), who stated that policy implementation in a decentralized system tends to fail when it is not accompanied by the readiness of structures, resources, and effective communication strategies at the local level. The Tebing Tinggi City Government issued Regional Regulation No. 1 of 2024 concerning Regional Taxes and Regional Levies as the legal basis for managing groundwater taxes. This policy is expected to increase taxpayer compliance while strengthening the contribution of groundwater taxes to local

revenue (PAD). However, in its implementation, various challenges have emerged, ranging from poor taxpayer understanding to technical limitations of implementers to a suboptimal bureaucratic structure.

Based on these realities, this study aims to analyze how policy innovation is implemented in the implementation of groundwater taxes as part of regional fiscal decentralization. The primary focus is on policy communication, resource capacity, implementer disposition, and bureaucratic structure, using Edward III's implementation theory framework. This research is crucial for providing empirical insights and policy input for improving regional fiscal governance to be more responsive and adaptive to the local context.

Method

This research uses a qualitative approach with a descriptive method. According to Mukhtar (2013:10), descriptive qualitative research is a method used by researchers to seek knowledge or theory for research purposes at a specific point in time. This study uses a descriptive qualitative research design and type because it provides a deeper understanding of how fiscal decentralization innovations in groundwater tax collection in Tebing Tinggi City. This study uses a descriptive research type because it aims to explain and describe the overall data, which is then converted into written form. The research in this study is structured systematically to ensure that each stage is carried out logically and continuously. The study begins with problem identification, which is carried out through initial observations of low groundwater tax compliance and an analysis of Regional Regulation Number 1 of 2024. This step is followed by a

literature review and theory of Edward III policy implementation, which serves as a conceptual basis for formulating the focus and direction of the research.

Once the focus is established, the researcher develops research objectives and questions, which direct the field data collection process. Informants were selected purposively, namely individuals deemed relevant and having direct knowledge of the groundwater tax implementation policy, such as BPKPD officers, active taxpayers, and technical support parties. The data collection process was then carried out through in-depth interviews, participant observation, and documentation of policy regulations and financial reports. The data obtained were then analyzed using an interactive qualitative approach with the stages of data reduction, data presentation, and drawing conclusions based on the Miles and Huberman model. The final stage of this flow study is the interpretation of the results, which connects empirical findings with theory and develops recommendations for policy innovation directions that can improve the effectiveness of groundwater tax implementation in Tebing Tinggi City.

Results And Discussion

Implementation Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in the Collection of Groundwater Tax in Tebing Tinggi City

This study aims to analyze implementation of groundwater tax policy in Tebing Tinggi City using the implementation policy framework theory of George C. Edward III. The framework consists of four main variables influencing successful implementation factors, namely communication, power resources, implementers disposition and

bureaucracy structures (Edward III, 1980). This four elements form interconnected systems and determining to what extent the public policy can be executed in effective way.

Communication

In this study, the communication examined including the delivery or distribution of information to the public regarding the clarity of applicable regulations regarding the collection of Groundwater Tax. Each implementer must understand their role in carrying out their duties.

a. Transmission

The form of delivery here is through direct socialization to inform Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies, especially for Groundwater Taxpayers in Tebing Tinggi City. Based on the results of interviews with informants, it was explained that the dissemination of information about Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in the Collection of Groundwater Tax in Tebing Tinggi City is routinely carried out 3 to 4 times a year. This is done simultaneously with data collection, billing of principal taxes and tax arrears. Information on the Latest Regional Regulations is slipped in during field activities. Therefore, the socialization mechanism is a meeting between all officers or employees of the Tebing Tinggi City Regional Financial and Revenue Management Agency with taxpayers, but the socialization is carried out by tax officers who are conducting data collection, checking and collecting Groundwater Tax.

b. Clarity

A well-structured and easy-to-understand information can help implementers carry out their duties

effectively and in accordance with established policy directives. Clear information helps ensure that every step taken is aligned with objective policies, so that the implementation process can run more smoothly and efficiently. Based on interviews with several informants, it can be concluded that the clarity of Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in Groundwater Tax Collection in Tebing Tinggi City remains unclear. However, two informants were aware of the tax penalty that would be imposed if they were in arrears, which is 2%.

c. Consistency

Communication with policy implementers must be consistent and clear, or there must be no changes to prevent misunderstandings among policy implementers. Interviews with several informants revealed that the implementation of Regional Regulation No. 1 of 2024 concerning Regional Taxes and Regional Levies in Groundwater Tax Collection in Tebing Tinggi City has been consistent. There have been no regulatory changes or sudden shifts in implementation on the ground.

Resource

The quality of human resources is crucial to the success of a policy, as each stage of implementation requires the appropriate skills and abilities for the task at hand. Furthermore, it is crucial to assess the understanding of human resources, their positions and authorities, and the supporting facilities for implementing Regional Regulation No. 1 of 2024 concerning Regional Taxes and Regional Levies in Groundwater Tax Collection in Tebing Tinggi City.

a. Staff

The primary resource for policy implementation is staff or human

resources (HR). Failure is often caused by insufficient staff numbers or competency. Additional staffing is insufficient, as appropriate skills and abilities are also required to effectively implement policies. Interviews with several informants concluded that the number and competency of staff at the Tebing Tinggi City Regional Revenue and Financial Management Agency are inadequate. Having only one staff member slows down the monthly Groundwater Tax collection process, potentially leading to tax arrears.

b. Information

In implementation policy, information has two forms: (i) information about implementation policy, where the implementor needs to understand actions that must be taken, and (ii) information about implementer compliance with government regulation. The goal is so that the implementer can ensure all parties comply with the law. Based on the results of the interview, it can be concluded that the implementer of the Management Agency Tebing Tinggi City Regional Finance and Revenue understands the main task points and functions as well as the content regulations that become the foundation and guidelines in operating implementation policy in groundwater tax collection.

c. Authority

Authority must be formal to ensure orders can be carried out and provide legitimacy to the implementer in operating the policy. With legitimacy, the implementer not only has the right to act but also gains recognition from related parties. On the other hand, without clear and formal authority, the implementer's power or actions can lose legitimacy, potentially giving rise to doubt, rejection, or even failure in policy implementation. From the interview results, it can be concluded that the policy implementer has

the authority to act because of its official ties to the government and assistance from other agencies such as the prosecutor's office in resolving the problem of tax arrears that has not been resolved between taxpayers and the policy implementer of the Tebing Tinggi City Regional Financial and Revenue Management Agency.

d. Facilities

Facilities play a crucial role in supporting policy implementation, as they provide the means to effectively implement the policy. The availability of facilities provides operational support for implementers. Without adequate facilities, policy implementation can be hampered and it can be difficult to achieve the desired results. Interviews revealed that facilities such as groundwater meters are available, but the number is insufficient for all taxpayers due to budget constraints. Consequently, taxpayers without these tools are assigned an equal distribution based on their business type, which creates potential for unfairness and transparency.

Disposition

The attitude and understanding of policy implementers are crucial factors in the success of public policy implementation. Implementers must comprehensively understand the policy's objectives to implement it effectively. Furthermore, they must possess sufficient skills to implement the policy. With a strong understanding and skills, implementers can avoid errors or deviations in policy implementation. This will ensure the policy is implemented in accordance with its stated objectives.

a. Appointment of Bureaucrats

The selection process for personnel is crucial and must focus on individuals who not only possess the necessary skills

but also demonstrate a strong dedication to the policy's success and a commitment to optimally serving the public interest. Based on interviews, it can be concluded that the appointment of bureaucrats to implement the policy is successful because there is a clear decision regarding the positions held by policy implementers for a specific period. The selection process is conducted through internal meetings and prior assessment of their abilities.

b. Implementer Incentives

These incentives are designed to ensure that implementers perceive that implementing the policy effectively not only benefits the public but also supports their personal interests or organizational goals. This approach is expected to motivate implementers to implement the policy optimally and responsibly. Based on the interview results, it can be concluded that incentives are provided every quarter to motivate policy implementers and provide appreciation for their dedication in carrying out their duties, especially in achieving the groundwater tax realization target that has been set for that year.

Bureaucratic Structure

Bureaucratic structure relates to the institutions involved in policy implementation. Bureaucracy has two main characteristics: Standard Operating Procedures (SOPs) and Fragmentation.

a. Standard Operating Procedures (SOPs)

SOPs are used to address common conditions in the public and private sectors, optimize time, standardize the actions of officials within the organization, and increase flexibility and uniformity in implementing regulations. In implementing Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in Tebing Tinggi City, a clear SOP has been established and

used. This SOP is used to assist tax officials in collecting mandatory taxes in Tebing Tinggi City.

b. Fragmentation

To ensure the effective collection of Groundwater Tax in Tebing Tinggi City, existing work units must be divided according to their respective duties and responsibilities. This division is carried out in accordance with the organizational structure, which ensures that all staff carry out their duties and functions. The organizational structure tasked with implementing policies has a significant influence on policy implementation. Based on the data obtained by the researchers, the organizational structure for collecting Groundwater Tax in Tebing Tinggi City is in accordance with the Acting Mayor's decree, which is simple and straightforward.

According to Rogers (2003), policy innovation refers not only to the adoption of new technology but also includes changes in systems, procedures, and institutional approaches that can increase policy effectiveness and legitimacy.

Meanwhile, Osborne and Brown (2005) emphasize that public sector innovation must be adaptive to the local context, inclusive in involving actors, and integrated into existing governance processes. Referring to the results of the analysis of the implementation of the groundwater tax policy in Tebing Tinggi City, it was found that the policy has not been optimally implemented due to persistent obstacles in communication, resources, implementer disposition, and bureaucratic structure. Policy communication is not yet two-way and tends to be purely administrative; implementer resources are limited and burdened with dual functions; implementers have not been involved as policy facilitators; and the bureaucratic structure does not support transparent and adaptive tax services. Therefore, the direction of the required policy innovation is directed at strengthening institutions and transforming fiscal governance based on participation and technology. This innovation includes the following aspects:

Table 1. Groundwater Tax Innovation Policy Direction Based on Edward III Implementation Indicators

Indicator (Edward III)	Main Problems	Recommended Innovation Directions
Communication	Information was only conveyed verbally and unilaterally during the vote count; there was no formal outreach.	<ol style="list-style-type: none"> 1. Development of digital channels for tax information (web, social media) 2. Preparation of visual education modules for taxpayers. 3. Regular citizen forums & FGDs with business actors.
Resources	Officers have a dual function as data collectors, gatherers, and information providers; limited human resources and work equipment.	<ol style="list-style-type: none"> 1. Recruitment/specific assignments for educational functions. 2. Training tax officials in policy communication. 3. Utilization of digital systems

Indicator (Edward III)	Main Problems	Recommended Innovation Directions
Disposition of the Executor	Officers are only focused on collecting data; they don't feel responsible for conveying the substance of the policy.	<ol style="list-style-type: none"> 1. Developing a role as a policy facilitator. 2. Incentives based on improving taxpayer compliance. 3. Performance evaluation using communication indicators.
Bureaucratic Structure	There is no educational unit; communication and technical functions are mixed; there is no digital monitoring system.	<ol style="list-style-type: none"> 1. Fiscal education unit. 2. Implementation of a Geographic Information System-based monitoring dashboard. 3. Online services and taxpayer complaint channels.

Source: Processed research data, 2025

The table above summarizes the direction of groundwater tax policy innovation based on Edward III's four key implementation variables. Each indicator represents interrelated structural and operational challenges that directly impact the effectiveness of policy implementation at the regional level. Therefore, the innovations offered are not only technical and administrative in nature but also address institutional dimensions, digitalization, and strengthening human resource capacity. This innovative strategy is expected to encourage more responsive, participatory, and sustainable groundwater tax governance, while simultaneously strengthening the fiscal legitimacy of regional governments within a decentralized framework.

Optimization Groundwater Tax Compliance in Tebing Tinggi City

Groundwater taxpayer compliance refers to the level of awareness and

compliance of groundwater owners or users in fulfilling their tax obligations related to groundwater utilization. Groundwater tax is a type of tax imposed on the use of groundwater for specific purposes. Based on Rahayu's theory (2010), there are five main factors influencing taxpayer compliance: taxpayer awareness, understanding of tax regulations, perceptions of the tax system, sanctions and law enforcement, and tax service personnel.

1. Taxpayer Awareness

The level of groundwater taxpayer compliance in Tebing Tinggi City remains relatively low. This is indicated by the tendency for taxpayers to only make payments after receiving a warning or a direct visit from a tax officer. This phenomenon reflects a pattern of forced compliance, where compliance is not based on legal awareness or understanding of regulations, but rather on administrative pressure. This finding

aligns with Rahayu's (2010) theory, which states that low voluntary compliance is caused by a lack of understanding of tax obligations, weak outreach, and suboptimal service from the tax authorities. In this context, the role of public policy innovation, particularly in education, digitalization, and incentives, is crucial in encouraging the transition from forced to voluntary compliance.

2. Understanding Tax Regulation

Understanding of tax regulations, specifically Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in Groundwater Tax Collection in Tebing Tinggi City, remains suboptimal due to misunderstandings in the information related to the new regulation. Tax officials disseminate information about the content and intent of the regulations to the public, including information on taxable objects, rates, sanctions, and other matters. However, other informants are aware of the tax penalty imposed for delinquent payments, which is 2%.

3. Perception of the Tax System

The level of compliance among groundwater taxpayers in Tebing Tinggi City remains relatively low. This is indicated by the tendency for taxpayers to only make offline payments after receiving a warning or a direct visit from a tax official. This phenomenon reflects a pattern of forced compliance, where compliance is not based on legal awareness or understanding of regulations, but rather on administrative pressure.

4. Sanctions and Law Enforcement

The administrative penalty for delinquent taxpayers is set at 2% per month. If taxes are still not paid in the following month, the amount of tax owed will be increased by the tax month, and the SPT will be subject to a 2% penalty. This

provision is clearly stated in Regional Regulation Number 5 of 2011 concerning Regional Taxes, a legacy regulation that remains in effect and coexists with Regional Regulation Law Number 1 of 2024 concerning Regional Taxes and Regional Levies. Taxpayers will still face sanctions and legal enforcement if they fail to pay their taxes.

5. Tax Service Officials

Groundwater tax service officers in Tebing Tinggi City are considered friendly and accommodating. However, their service remains conventional and inflexible. Service officers have been found to be late in arriving for collection, discouraging taxpayers. This presents a challenge for some taxpayers, especially small business owners, who have limited free time outside of normal working hours.

Inhibiting Factors Implementation Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in the Collection of Groundwater Taxes in Tebing Tinggi City

Implementation failures are inseparable from influencing factors. The factors hindering the implementation of Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in Tebing Tinggi City regarding Groundwater Tax Collection in Tebing Tinggi City are based on two indicators: communication and resources. Interview results indicate that the implementation of Groundwater Tax collection faces various obstacles, both from the tax officers and taxpayers. Tax officers acknowledged that outreach through brochures was not yet effective but continued to be conducted for time and budget efficiency. On the other hand, taxpayers complained about the lack of transparency in tax calculations, the minimal number of taxpayers, slow service

resulting in late payments, and a lack of taxpayer awareness regarding reporting closed businesses. Furthermore, the relatively high tax interest provisions also burden taxpayers, especially those whose businesses experience operational constraints, sometimes opening and closing. Some taxpayers hope for a fairer and more transparent solution from the government in addressing their tax arrears and fines. The Study of the Implementation of Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Retributions in Groundwater Tax Collection in Tebing Tinggi City stated that the Communication and Resources indicators are still not optimal, and the Disposition and Bureaucratic Structure indicators are optimal. This is inseparable from inhibiting factors ranging from inappropriate socialization techniques, lack of personnel and facilities, taxpayer awareness in efforts to stop reporting which results in tax arrears and the amount of fines that are quite burdensome if arrears until the following month. The determination of administrative sanctions for taxes owed is set at 2% per month. If the tax is still unpaid in the following month, the amount of tax owed will be added to the tax month and the SPT is subject to a 2% penalty. This provision is clearly stated in Regional Regulation Number 5 of 2011 concerning Regional Taxes as an old regulation that is still in effect and coexists with Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Retributions. A new aspect of Regional Regulation Number 1 of 2024 concerning Regional Taxes and Levies is Article 93, which stipulates Regional Tax Facilitation, which provides 0.6% interest on tax arrears in cases of force majeure, such as natural disasters, fires, riots, or disease outbreaks,

for 24 months or the equivalent of two years. There are specific regulations governing the settlement mechanism for taxpayers with arrears outside of the force majeure situation, namely through an appeal. Taxpayers can file an appeal as stated in Regional Regulation Number 5 of 2011 concerning Regional Taxes. In this regional regulation, taxpayers are given the right to appeal against tax provisions. However, filing an appeal risk increasing the amount of the fine if the application is rejected. This consequence is what makes taxpayers afraid to file an appeal. Therefore, further regulations are needed specifically for tax arrears so that the tax settlement mechanism for tax arrears that are not in a force majeure condition can run more clearly, fairly, and consistently to ensure compliance with applicable provisions. The Tebing Tinggi City Regional Revenue and Finance Management Agency has implemented Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies as the primary law, while maintaining alignment with the existing laws and regulations. This assistance aims to refine the implementation of the new regulation and address various challenges faced by tax arrears. However, in reality, tax arrears persist and even increase annually. A fair resolution for tax arrears is expected, not due to force majeure and without the need for appeals as the sole resolution option. Furthermore, a comprehensive evaluation of existing laws and regulations is necessary to ensure that implemented policies are more effective, transparent, and targeted in increasing Tebing Tinggi City's Regional Original Income.

Conclusion

The implementation of Regional Regulation Number 1 of 2024 concerning

Regional Taxes and Regional Levies in the collection of Groundwater Tax in Tebing Tinggi City, based on George Edward III's theory, shows varying results across the four main indicators. Communication has not been optimal because there are still unpaid taxes that must receive socialization regarding regional regulations and a lack of clear understanding of the contents of the regional regulations. Resources are still not good in terms of the number of employees, the quality of performance is disrupted due to delays in tax collection, and water meter facilities are not evenly distributed to 11 taxpayers. Disposition is running well because of a clear system of appointing bureaucrats and regular incentives. The bureaucratic structure has functioned well in supporting the implementation of this policy. Compliance of Groundwater Taxpayers in Tebing Tinggi City is not optimal due to a lack of knowledge and awareness of tax obligations, understanding of tax regulations, perceptions of the system, sanctions and law enforcement, and service apparatus. Factors Inhibiting the Implementation of Regional Regulation Number 1 of 2024 concerning Regional Taxes and Regional Levies in Groundwater Tax Collection in Tebing Tinggi City include uneven dissemination of regional regulations to all taxpayers, inadequate staff and facilities, minimal transparency in tax calculations, low awareness among some taxpayers due to weak business reporting, and relatively high tax fines for businesses that do not operate consistently and are in arrears for a long period. They hope for a fairer and more transparent solution in resolving taxes and fines.

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