Journal of Contemporary Governance and Public Policy, 5 (2) October 2024, 193-216
ISSN: 2722-3981 (Print), ISSN: 2722-3973 (Online)
Available Online at https://journal.ppishk.org/index.php/jcgpp

Strengthening Collaborative Governance in the Department of Transportation: Implementation and Enforcement Levies

Hermansyah[1]*, Siti Zubaidah[2], Jumroh[3], Zahra Ahmadi[4]

[1] Department of Public Administration, STIA Bala Putra Dewa, Indonesia

[2] Department of Public Administration, STIA Bala Putra Dewa, Indonesia

[3] Department of Public Administration, STIA Bala Putra Dewa, Indonesia

[4] Department of Psychology, University of Tehran, Kish International Campus, Iran

*Corresponding Author Email: hermansyah@kampusbalaputradewa.ac.id

Received: 1 September 2024; Revised: 2 October 2024; Accepted: 4 October 2024

Abstract

This article explores the strengthening of collaborative governance within Indonesia's Department of Transportation, focusing on the implementation and enforcement of levies. It highlights the integration of diverse stakeholders, including government bodies, private sector entities, and civil society, to create a more effective levy management system. However, a lack of collaboration between the Palembang city government and the local community has hindered the effectiveness of levies. Key strategies for improvement include promoting transparency, shared decision-making, and the use of innovative technologies. The study underscores the importance of trust and accountability among stakeholders to enhance compliance and enforcement. In Palembang, the capital of South Sumatra Province, transportation and traffic management challenges necessitate the effective implementation of levies. Employing a qualitative approach through in-depth interviews, observations, and documentation, the research reveals that collaborative efforts between local governments, the private sector, and the community are essential, despite challenges such as limited resources and community resistance. The findings suggest that while collaborative governance can improve the effectiveness of levy enforcement, it requires commitment and active participation from all parties. Recommendations include enhancing human resource capacity, strengthening regulatory frameworks, and raising public awareness of the importance of levies for regional revenue. This study also aligns with the Sustainable Development Goals (SDGs), particularly in improving infrastructure, fostering sustainable cities (SDG 11), and promoting effective partnerships (SDG 17).

Keywords: *Collaborative Governance; Levies; Sustainable Transportation*

Copyright © 2024 by Authors, Published by Pusat Penelitian Ilmu Sosial dan Humaniora Kontemporer, Indonesia. This is an open access article under the CC BY-SA License (https://creativecommons.org/licenses/by-sa/4.0).

How to Cite: Hermansyah, H., Zubaidah, S., Jumroh, J., & Ahmadi, Z. (2024). Strengthening Collaborative Governance in the Department of Transportation: Implementation and Enforcement Levies. *Journal of Contemporary Governance and Public Policy, 5*(2), 193-216. https://doi.org/10.46507/jcgpp.v5i2.640

Permalink/DOI: https://doi.org/10.46507/jcgpp.v5i2.640

Introduction

The global digital revolution has fundamentally transformed how economies operate, with profound implications for governance structures, particularly in sectors such as communication, which lie at the core of this transformation. The rapid expansion of digital platforms and online services has created new opportunities for economic growth and development. However, it has also introduced significant challenges for governments in regulating these activities, particularly in the realm of levy implementation and enforcement (Kesavaraj et al., 2022; Sparks, 2023). This transformation has necessitated a shift from traditional, hierarchical governance models to more dynamic, collaborative approaches that can effectively manage the complexities of the digital economy (Jawad et al., 2023; Lagouvardou et al., 2022; Mensah et al., 2022).

Collaborative governance has emerged as a crucial approach in public policy, especially in the transportation sector. According to Ansell and Gash (2008), collaborative governance involves a process where the government works together with non-governmental actors such as businesses, civil society organisations, and local stakeholders to create and implement policies. This approach is particularly relevant in transportation due to the sector's complex challenges, including increasing congestion, infrastructure needs, and the fair and effective management of levies and tariffs.

In the transportation sector, developed nations like Singapore and the United Kingdom have successfully adopted collaborative governance models for levy enforcement and road pricing management (Klijn & Koppenjan, 2015; Tan & Taeihagh, 2020). For instance, Singapore's Electronic Road Pricing (ERP) system, developed through collaboration between the public and private sectors and utilising advanced technology, has effectively reduced congestion and optimised revenue collection (Kumar, 2024; Lee et al., 2019). Similarly, London's Congestion Charge represents another success story, where local government, private contractors, and the public collaborate in the management of fees and the reinvestment of revenues into public transport infrastructure (Anastasiadou et al., 2021; Dai et al., 2023; Hysa, 2021; Nazneen et al., 2021; Pereira et al., 2019).

However, despite these successes in developed countries, developing nations face significant challenges. In these regions, collaborative governance in the enforcement of transportation levies is often hindered by institutional weaknesses, limited technological infrastructure, and a lack of public trust in the transparency of such systems (Barandiaran, 2021; Sun et al., 2022; Wisnumurti et al., 2020). This underscores the gap between theory and practical implementation, particularly in countries with less established governance frameworks.

While the theoretical foundations of collaborative governance have been well-developed, there is a noticeable gap in research focused on its practical application in specific sectors such as transportation (Bergqvist, 2008; Cain et al., 2021; Iversen, 2021; Katz et al., 2012). Most studies examine general governance models but do not delve deeply into sector-specific challenges, particularly in terms of levy enforcement (Amoah et al., 2023; Fouquet & O'Garra, 2022; Mensah et al., 2022). Additionally, much of the

literature on transportation levies tends to emphasise financial efficiency and revenue collection, with less attention given to aspects of collaboration, transparency, and enforcement accountability.

Moreover, the geographical focus of much of the collaborative governance literature remains centred on major cities in developed nations, leaving developing countries underrepresented. Specific challenges, such as corruption, limited budgets, and weak institutional capacity, further complicate the successful implementation of performance-based levy enforcement systems in developing regions (Emerson et al., 2012). Hence, more research is required to explore how collaborative governance models can be optimised in these contexts, particularly in the enforcement and implementation of transportation levies.

Internationally, the successful implementation of collaborative governance in transportation levies can be observed in several major cities. In Singapore, the Electronic Road Pricing (ERP) system has successfully reduced traffic congestion and optimised levy collection through a collaborative approach involving both the public and private sectors. This system utilises advanced technology to monitor traffic and impose charges on vehicles entering congested areas, ensuring efficient enforcement and transparency (Goh, 2002).

Similarly, London's Congestion Charge is a notable example of how collaborative governance can succeed in levy enforcement. This system involves cooperation between the city government, private contractors, and the public to manage congestion and ensure the reinvestment of levy revenues into public transport infrastructure. The success of London's system lies not only in reducing central city traffic but also in its transparency and reinvestment strategy (Leape, 2008).

While these cases provide valuable lessons, applying these models to developing countries requires consideration of significant contextual differences. In developing nations, institutional weaknesses, corruption, and limited technological capacity often hinder successful collaboration in levy enforcement (Cohen, 2024; Dogan et al., 2022; Prakoso et al., 2023). Therefore, international models must be adapted to fit local contexts. This study will explore how lessons from these international cases can be adapted to strengthen collaborative governance in the Department of Transportation, particularly in the context of transportation levy enforcement in developing countries (Aleluia & Ferrão, 2016; Foong et al., 2022; Nur et al., 2024).

In the context of Indonesia, the challenges associated with governing the digital communication sector are particularly pronounced (Ambrose et al., 2024; Roos et al., 2021; Zampone et al., 2024). Indonesia is the fourth most populous country in the world, with a vast and diverse geographical landscape comprising over 17,000 islands. This diversity, combined with a decentralised political system, presents unique challenges for policy implementation and enforcement. The communication sector, which is central to the digital economy, has grown rapidly, with significant increases in internet penetration and mobile phone usage across the country. According to the World Bank (2022), Indonesia's digital economy grew by 49% between 2020 and 2022, driven by the widespread adoption of digital services and e-commerce platforms. However, this rapid

growth has outpaced the development of regulatory frameworks needed to manage and harness these activities effectively.

Indonesia's levy system, which includes taxes and fees imposed on various digital and communication services, is a crucial tool for the government to generate revenue and regulate the sector. However, the current system is plagued by inefficiencies. In 2023, the Ministry of Finance of Indonesia reported that the country loses approximately IDR 200 trillion (around USD 13.5 billion) annually due to ineffective tax and levy collection mechanisms. These losses are partly attributed to the complex and fragmented governance system, where multiple agencies with overlapping responsibilities lead to inconsistencies and gaps in enforcement (Brunner et al., 2021; Romagny et al., 2023).

Collaborative governance plays a pivotal role in the effective implementation and enforcement of levy policies in Indonesia, particularly within the transport sector. This approach brings together diverse stakeholders, including government agencies, private sector representatives, and civil society, to address the complexities inherent in levy management. The transport sector in Indonesia faces numerous challenges, such as inconsistent enforcement of levies, transparency issues, and limited community involvement. By fostering collaboration among these stakeholders, a more robust framework for decision-making and policy execution can be established.

Research suggests that collaborative governance enhances accountability and transparency, as stakeholders jointly monitor and evaluate levy enforcement (Ansell & Gash, 2008). This collective approach not only encourages trust among parties but also facilitates the integration of varied perspectives and expertise, which is essential for addressing the unique challenges within the transport sector. For example, the involvement of community members can help identify local issues and needs, ensuring that levy policies are more responsive and equitable.

Furthermore, collaborative governance can streamline communication channels, enabling faster responses to emerging challenges. As demonstrated in successful case studies from around the world, such as the implementation of integrated transport systems in cities like Amsterdam and Copenhagen, collaborative frameworks lead to more effective urban planning and sustainable development outcomes (Lifschitz & Sieczkowska, 2018).

Moreover, Indonesia's decentralised governance structure adds another layer of complexity to levy implementation. The decentralisation policy, which grants significant autonomy to regional governments, often leads to variations in how levies are implemented and enforced across different regions (Mukhlis & Perdana, 2022). This lack of uniformity not only creates confusion among businesses and service providers but also results in significant revenue losses for the central government (Maulana et al., 2022; Rozikin, Wijaya, et al., 2023).

The private sector, which plays a crucial role in Indonesia's communication sector, also faces challenges related to levy compliance. Many businesses, particularly small and medium-sized enterprises (SMEs), find it difficult to navigate the complex regulatory environment. Additionally, the rapid pace of technological innovation in the digital economy means that new business models often emerge faster than regulations can be

developed, leading to gaps in the levy system. For instance, the rise of digital platforms and online services has created new revenue streams that are not always adequately captured by existing levy regulations (Rozikin, Sulistyo, et al., 2023).

Given these challenges, there is an urgent need for a more integrated and collaborative approach to governance that can enhance the efficiency and effectiveness of levy implementation and enforcement. Collaborative governance, which involves the participation of multiple stakeholders, including government agencies, private sector entities, and civil society organisations, offers a potential solution. By bringing together diverse actors with different perspectives and expertise, collaborative governance can help create more coherent and adaptable regulatory frameworks that are better suited to the rapidly evolving digital economy (Afandi et al., 2023).

The novelty of this research lies in its focus on the intersection of collaborative governance and levy enforcement within the communication sector, an area that has not been extensively studied in the context of Indonesia (Prakoso et al., 2023). While collaborative governance has been widely discussed in other sectors, its application to the challenges of levy enforcement in a rapidly digitalising economy like Indonesia remains underexplored. This study aims to fill this gap by examining how collaborative governance can be used to enhance the efficiency and effectiveness of levy implementation in Indonesia's communication sector.

In addition, this research contributes to the broader discourse on public administration and governance in the digital age. As digital economies continue to expand globally, the lessons learned from Indonesia's experience can offer valuable insights for other countries facing similar challenges. By exploring the potential of collaborative governance in the context of levy enforcement, this study provides practical recommendations for policymakers and practitioners, not only in Indonesia but also in other emerging economies looking to strengthen their governance frameworks in the face of rapid digital transformation.

The city of Palembang, as the capital of South Sumatra Province, faces increasingly complex challenges in transportation and traffic management (Meijer & Bolívar, 2016). One of the key aspects of this management is the implementation and enforcement of levies (Meads et al., 2017), which is primarily the responsibility of the Palembang City Transportation Office. However, in practice, the traditional top-down approach (Gugu & Dal Molin, 2016), which is centralised in the government, often encounters various obstacles (Keyim, 2018). Many of the problems are related to the capacity of service systems to adapt and utilise knowledge (Ii et al., 2018).

Some of the challenges faced in the implementation and enforcement of regional levies include the public's frequent rejection of levy policies, which are often seen as an additional burden. A lack of socialisation about the benefits of levies for the improvement of public services can also lead to this resistance. Weak supervision and inadequate enforcement make it difficult to implement levy policies effectively (Li et al., 2022). This can be attributed to a lack of supervisory officers, insufficient supporting technology, and unclear sanctions for violators. Additionally, limited human resources and infrastructure pose further obstacles to the effective implementation of levy policies (Sandover, 2020).

For example, a shortage of experts, inadequate facilities, and insufficient budgets to support policy operations all contribute to the problem. Furthermore, the public may not fully understand the importance of levies in supporting public services (Widianingsih et al., 2021). A lack of education on how levies are used for the development and improvement of public services can result in low community participation and compliance.

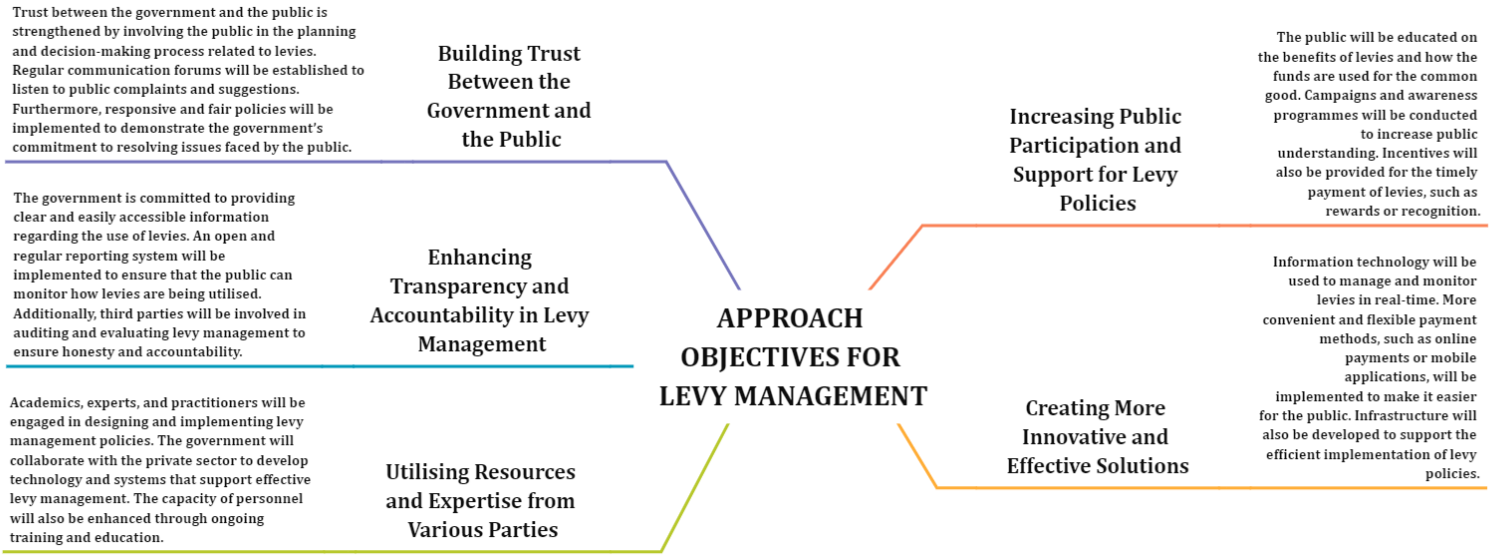


Figure 1. Approach Objectives for Levy Management
Source: Processed by Authors (2024)

The implementation of levy policies often requires cooperation between various government agencies. Poor coordination can lead to ineffective policy execution, for example, due to a lack of data synchronisation, disagreements over procedures, and slow responses in resolving issues as they arise (M. Wang & Peng, 2023).

In supporting measurable, transparent, and accountable public services, the implementation of administrative processes and Standard Operating Procedures (SOPs) is crucial (Situmeang, 2024). Administration, as a function of bureaucratic management, promotes diligence and precision in work (Cabral & Krane, 2018), enabling the transportation agency to fulfil its duties and responsibilities efficiently (Ran & Qi, 2018). SOPs help ensure the quality and accountability of public services in a consistent and efficient manner (Hafer, 2018).

Collaborative governance involves cooperation between various stakeholders, including governments, the private sector, academia, and civil society (Ansell & Gash, 2008). This approach aims to enhance levy management, as illustrated in Figure 1.

In the context of the City of Palembang, the implementation of Collaborative Governance by the Transportation Department in terms of levies is a strategic step to overcome existing challenges (Quayle et al., 2019). It represents a shift away from traditional models of government towards a more participatory and partnership-

oriented approach (Clarke, 2017). This initiative is also aligned with the global trend towards smarter and more sustainable urban governance (Meijer & Bolívar, 2016). By utilising information and communication technology, the Palembang City Transportation Department has the potential to increase efficiency in levy management while improving the quality of services to the community (Steels, 2015; van der Heijden, 2015).

However, the implementation of Collaborative Governance is not without challenges. A change in mindset is required (Cheng et al., 2015), along with institutional capacity building (Kim & Siddiki, 2018) and the long-term commitment of all parties involved (Getha-Taylor et al., 2019). The success of this approach will largely depend on the ability of the Palembang City Transportation Department to build and maintain productive relationships with various stakeholders (Berends et al., 2016). Additionally, continuous efforts must be made to overcome barriers to coordination between agencies and to integrate various perspectives in order to create efficient solutions (Crosby & Bryson, 2010).

A levy is a charge imposed by the government on the public in exchange for specific services provided by the government (Amoah et al., 2023). Levies are a source of local revenue used to finance regional government operations and development (Siregar et al., 2020), such as the Public Service Levy, which is provided by local governments for public benefit and can be enjoyed by the community (Massam, 2002). Examples include parking levies, health service levies, and levies on the use of regional assets (Osborne et al., 2013). Business Service Levies are also provided by local governments, following commercial principles, as they could also be provided by the private sector (Klievink et al., 2016). Examples include levies on recreational and sports venues, wholesale markets, shops, and the use of regional assets (Abbiasov & Sedov, 2023). Finally, Certain Licensing Levies are imposed by local governments when granting permits to individuals or entities for development (Papcunová et al., 2020), regulations (Whitelaw et al., 2001), control (Ambarwati et al., 2023), and the supervision of activities, space utilisation, and natural resources (Venables, 2016). Examples include levies on building permits, permits for selling alcoholic beverages, and nuisance permits (Rosa-Jiménez et al., 2017).

The purpose of levies includes several key aspects in government management (Schaefer, 1991) and community services. First, levies aim to increase local revenue (Suprihati et al., 2018). By collecting funds from individuals who utilise certain services or facilities (Benjamin et al., 2004), local governments can finance operational activities (J. Wang et al., 2021) and regional development (Gennaioli et al., 2013), reducing dependence on central government funding (Xu et al., 2016) and promoting regional financial independence (Agustyawati et al., 2023). Second, levies aim to improve the quality of public services (Ingraham, 2005). The funds collected are used for the maintenance, repair, and enhancement of various public services and facilities such as transportation, health, education, and infrastructure (Sohail et al., 2005), allowing the public to enjoy better, more adequate services. Third, levies serve to regulate and control community activities (Barwick et al., 2024). Through certain licensing levies, the government ensures that community activities comply with applicable regulations, protect the public interest, and are well organised (Hamilton, 1972). This also includes

the control of resource use, space utilisation, and business activities (Holling, 2004). Fourth, levies help achieve social justice (Bradley, 2003). By charging fees for public services to those who directly benefit from them, levies ensure that the costs are fairly distributed. This means that people who use or benefit more from public services contribute more to their financing (Lapuente & Van de Walle, 2020).

The implementation of collaborative governance in levy management within the transportation sector is directly aligned with several Sustainable Development Goals (SDGs). This research supports the achievement of SDG 11 (Sustainable Cities and Communities), which seeks to make cities more inclusive, safe, resilient, and sustainable. Effective levy enforcement contributes to improving transport infrastructure, which is crucial for enhancing urban mobility and the efficiency of city systems. Furthermore, the study is linked to SDG 16 (Peace, Justice, and Strong Institutions), as it highlights the importance of transparency, accountability, and the involvement of all stakeholders in decision-making processes. Collaborative efforts between the government, private sector, and the community in the management of levies aim to create more inclusive and participatory governance.

Additionally, the research contributes to SDG 17 (Partnerships for the Goals), where strong cooperation between different actors is essential for achieving sustainable outcomes. By leveraging innovative technologies and strengthening human resource capacity, this study offers solutions to challenges in levy enforcement and provides recommendations that can support regional revenue generation, thereby indirectly fostering sustainable economic development. Raising public awareness of the significance of levies is also central to this research, enhancing the role of communities in supporting the sustainability and growth of urban areas.

The purpose of this study is to assess the strengths and weaknesses of collaborative governance in the Department of Transportation, specifically regarding the implementation and enforcement of levies. The main objectives are to assess the current state of collaboration between governmental and non-governmental actors in transportation levy enforcement, examining the roles, relationships, and effectiveness of these collaborative efforts in ensuring fair and transparent levy implementation. Additionally, the study seeks to identify the challenges and obstacles that hinder effective collaboration and enforcement in the transportation sector, with a focus on uncovering institutional, technological, and governance-related barriers that impede smooth cooperation and efficient levy enforcement.

Research Methods

This research employs a qualitative approach, with data collection techniques including in-depth interviews, observations, and documentation studies. Qualitative research aims to understand the phenomenon experienced by the research subjects as a whole, described through words and language (Nassaji, 2020), within the specific context in which it occurs, and utilises various scientific methods (Guariso et al., 2023). A qualitative research method with a case study design provides a comprehensive

overview of the collaboration between the parties involved, as well as the challenges and solutions encountered.

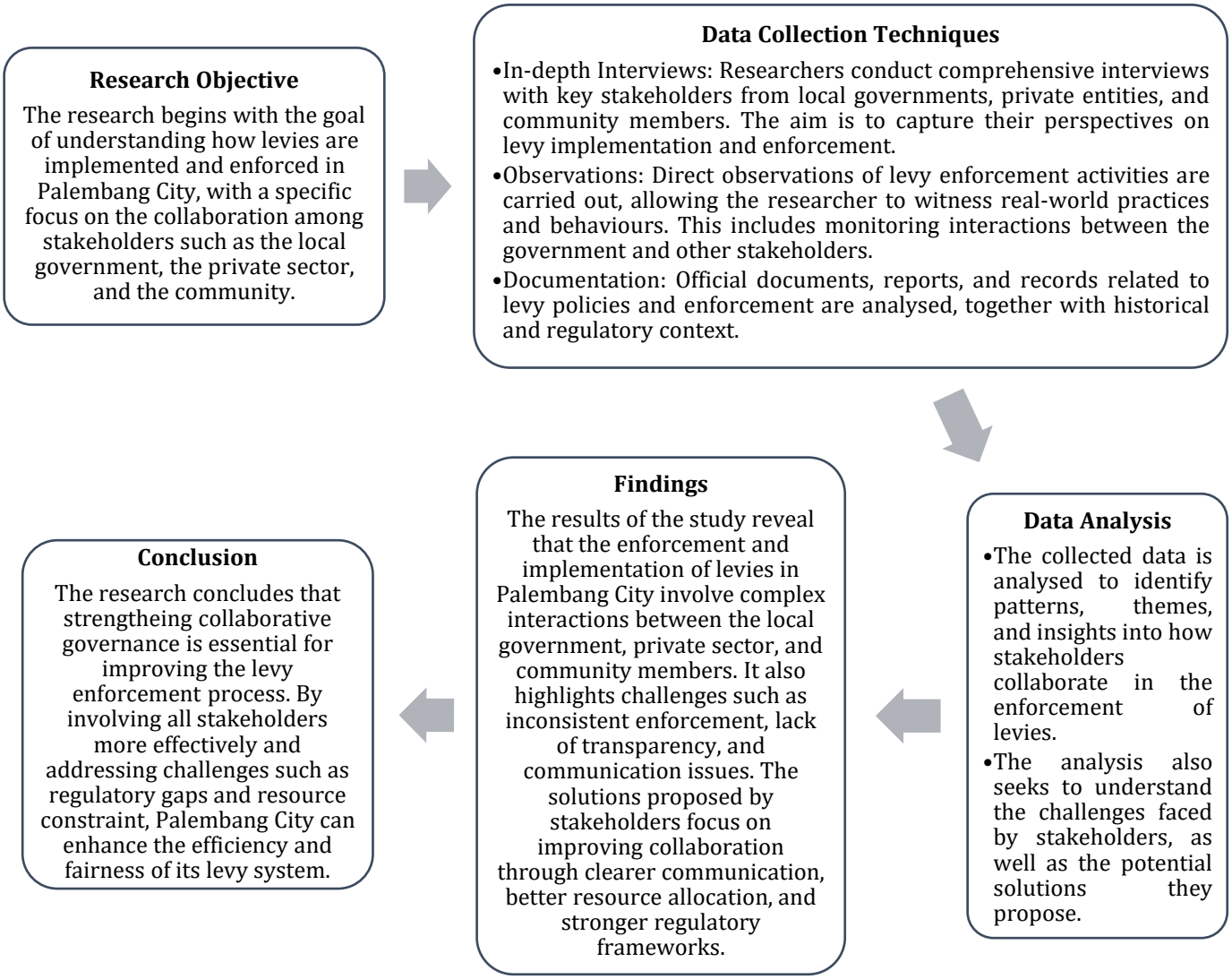


Figure 2. Research Process
Source: Processed by Authors (2024)

The findings indicate that the implementation and enforcement of levies in Palembang City involve multiple stakeholders, including local governments, the private sector, and the community. The stages of the research process are illustrated in Figure 2.

Based on the stages outlined in Figure 2, this research seeks to understand how levies are implemented and enforced in Palembang City, with a focus on the collaboration between the local government, private sector, and the community. Data collection involved in-depth interviews, observations of levy enforcement, and the analysis of official documents to provide a comprehensive understanding. The analysis highlighted challenges such as inconsistent enforcement, transparency issues, and communication barriers, while also exploring potential solutions, including clearer communication, improved resource allocation, and stronger regulations. In conclusion, strengthening

collaborative governance is crucial for enhancing levy enforcement, ensuring more efficient and equitable processes in Palembang City.

Results and Discussion

The implementation and enforcement of levies by the Palembang City Department of Transportation highlights the critical role of collaborative governance in public administration. Collaborative governance, as defined by Ansell and Gash (2008), involves multiple stakeholders in the decision-making process, which can significantly improve public service delivery. Through stakeholder engagement, the establishment of clear frameworks, and the continuous adaptation of strategies, the Department has effectively optimised the levy system while maintaining essential transportation services. However, to sustain the success of this system, ongoing efforts are required to address challenges such as ensuring compliance, adapting to new challenges, and ensuring that the system meets the evolving needs of all stakeholders (Emerson et al., 2012).

Collaborative governance at the Palembang City Transportation Office demonstrates how effective cooperation between government, the private sector, and community organisations can enhance the efficiency of public policies like levy enforcement. Research by Huxham and Vangen (2016) shows that collaborative approaches foster a sense of ownership among stakeholders, leading to more sustainable outcomes. The Department's ability to work with related agencies, the private sector, and the community illustrates how collaboration improves regional revenue collection. However, challenges remain, particularly in areas such as inter-agency coordination, transparency, and accountability. Future efforts should focus on addressing these issues to further strengthen the implementation of levy policies. The key problems, challenges, and solutions are summarised in Table 1.

Based on Table 1, several key areas of concern and proposed solutions are highlighted, along with future agendas for improvement. The issue of inter-agency coordination is addressed by establishing a central coordinating body to streamline communication and efforts across agencies. The next step involves exploring digital platforms that enable real-time coordination between agencies, ensuring more effective collaboration.

In terms of transparency and accountability, the solution lies in implementing open data policies to make the levy enforcement process more transparent to the public. Moving forward, the development of a blockchain-based system is suggested to track levy transactions, which would enhance accountability and provide a secure, transparent framework for monitoring these processes.

For stakeholder engagement, regular consultations and feedback mechanisms are considered vital for building trust among all parties involved in levy enforcement. The next agenda should focus on establishing long-term partnerships and collaborative agreements with stakeholders to create a more sustainable and engaged approach to levy management.

Table 1. Issues, Solutions, and Future Agenda for Collaborative Governance in Levy Enforcement
Source: Processed by Authors (2024)

Issues	Solutions	Future Agenda
Inter-agency coordination	Establish a central coordinating body to streamline communication and efforts	Explore digital platforms for real-time inter-agency coordination
Transparency and accountability	Implement open data policies to make levy enforcement processes more transparent	Develop a blockchain-based system to track levy transactions for better accountability
Stakeholder engagement	Regular stakeholder consultations and feedback mechanisms to build trust	Establish long-term partnerships and collaborative agreements with stakeholders.
Regulatory gaps in levy enforcement	Revise and update levy regulations to close loopholes and ensure compliance	Review and adjust regulations periodically to meet evolving challenges
Resource allocation for levy systems	Allocate sufficient resources for training and technology to improve enforcement	Invest in capacity-building and technology advancements for better enforcement practices

Regulatory gaps in levy enforcement have been identified as a significant challenge, and the proposed solution is to revise and update levy regulations to close existing loopholes and ensure compliance. A periodic review and adjustment of these regulations will be necessary to adapt to evolving challenges in the levy system and maintain effective enforcement.

Lastly, in addressing resource allocation for levy systems, the recommendation is to allocate sufficient resources for training and technology to improve levy enforcement. The next step involves investing in capacity building and technological advancements, which will enable more efficient and effective enforcement practices in the long term.

Each of these areas points towards a more coordinated, transparent, and accountable levy system that engages stakeholders, addresses regulatory gaps, and ensures proper resource allocation to enhance overall effectiveness.

Initial Implementation at the Department of Transportation

The implementation of collaborative governance in the Department of Transportation in Palembang City began with a concerted effort to align various stakeholders, including government agencies, private sector entities, and community representatives. This initial phase focused on establishing a framework for cooperation, setting clear objectives, and defining the roles of each party involved.

The Department of Transportation of Palembang City conducted a series of meetings and consultations to engage relevant stakeholders. These included local government bodies, transportation companies, and civil society organisations. The primary aim was to ensure that all parties shared a common understanding of the goals and procedures related to levy implementation.

A governance framework was developed, outlining the responsibilities of each stakeholder. This framework emphasised transparency, accountability, and mutual benefits, all of which are crucial for effective collaboration. The Palembang City Department of Transportation also established a task force to oversee the implementation process.

Effective communication channels were established to ensure that all stakeholders remained informed and engaged throughout the implementation process. Regular updates and feedback sessions were integral to maintaining a collaborative atmosphere.

In this modern era, collaborative governance at the Palembang City Department of Transportation demonstrates how cooperation between the government, the private sector, and the community can produce a more effective and responsive system in the management of the transportation sector, including the implementation and enforcement of levies. Collaborative governance is an approach that involves various stakeholders working together to formulate policies, implement them, and enforce regulations.

The Department of Transportation of Palembang City initiated the process by educating the public about the importance of levy through various information campaigns, ensuring a clear understanding of the benefits and procedures for paying the levy. They collaborated with tech companies to create digital solutions, such as payment apps and monitoring systems, which simplify the levy process and enhance transparency.

The Department of Transportation prepared and implemented regulations regarding tariffs, payment procedures, and sanctions for violations, to ensure compliance and order in the management of levies. To ensure the policy runs effectively, regular monitoring and evaluation were conducted, with necessary improvements made to optimise the system. The funds obtained from levies are used to improve and develop transportation infrastructure, thereby directly enhancing the quality of public services for the community.

Implementation and Enforcement of Levy in Palembang City

Once the framework was in place, the Department of Transportation proceeded with the actual implementation and enforcement of the levy. This phase focused on operationalising the levy collection process and ensuring compliance from all relevant parties.

The Department introduced standardised procedures for levy collection, including the establishment of payment points, staff training, and the integration of technology to facilitate efficient transactions. The use of digital payment systems was particularly emphasised to reduce errors and improve transparency.

To ensure compliance, the Department of Transportation implemented strict enforcement mechanisms. These included regular inspections, penalties for non-

compliance, and public awareness campaigns to educate stakeholders about the importance of the levy. The Department also worked closely with local law enforcement to support these efforts.

Table 2. Stakeholder Framework
Source: Processed by Authors (2024)

Stakeholder	Role	Interest	Influence	Collaboration Strategy	Evaluation and Monitoring
Local government	Policy formulation, regulatory support, administrative and legal backing	Successful policy implementation, increased revenue, improved public services	Very High	Regular stakeholder meetings, transparent reporting systems	Key Performance Indicators (KPIs), regular reviews
Private sector	Payment of levies, feedback provision, public dialogue participation	Efficient operational costs, transparency in payment, fair policies	High	Early involvement in policy development, communication platforms	Compliance rates, satisfaction surveys
Community and local organisations	Monitoring, feedback provision, public policy participation	Improved access to transportation services, accountability	Medium	Public education programmes, community working groups	Community satisfaction, public feedback
Law enforcement agencies	Law enforcement, support for policy implementation and maintaining public order	Maintaining order, ensuring law enforcement, supporting policy enforcement	High	Collaboration with local government, training and capacity building for officers	Legal compliance rates, enforcement effectiveness
Mass media	Dissemination of information, public education, transparency oversight	Accurate information dissemination, public awareness	Medium	Media involvement in all policy phases, public education on levy policies	Media coverage, public awareness levels

During this phase, the Department faced challenges such as resistance from some stakeholders, technical difficulties with payment systems, and initial gaps in enforcement. These issues were addressed through ongoing stakeholder engagement, system upgrades, and adjustments to enforcement strategies as needed.

Effective enforcement of levies relies heavily on consistency in the application of sanctions, transparency in the law enforcement process, and active community participation in complying with the rules. Sanctions for violators are designed to deter unwanted actions through legal threats and enforcement. Challenges remain in ensuring consistent enforcement, particularly with regards to oversight and action against minor violations. The government must ensure that all violators receive appropriate sanctions, without discrimination. Transparency in the law enforcement process must also be enhanced to build public trust.

In the context of the Palembang City Transportation Office, the implementation of the levy is a strategic approach aimed at increasing regional revenue while ensuring the sustainability of transportation services and public infrastructure. One of the key factors contributing to the effectiveness of this strategy is the alignment of all involved parties towards a common vision and mission, focused on enhancing transportation services and optimising levy revenue. Collaboration is central to this approach, involving various stakeholders, including local governments, communities, business actors, and non-governmental organisations, all working together to create a transparent and accountable levy system.

Another important aspect is the development and implementation of clear regulations governing levies. This includes establishing well-defined levy rates, payment procedures, and penalties for violations, which are crucial for maintaining order and fairness within the system. Furthermore, providing clear and open information regarding the levy process and the utilisation of collected funds is essential for building public trust. Ensuring that an effective monitoring mechanism is in place adds another layer of accountability, helping to ensure that the levy system operates efficiently and transparently, benefiting both the public and the transportation infrastructure in Palembang City.

Based on this, Table 2 presents the stakeholder framework for collaborative governance in the implementation and enforcement of levies at the Palembang City Transportation Office.

The stakeholder framework for the implementation and enforcement of levies at the Palembang City Department of Transportation involves five key groups: the local government, the private sector, community and local organisations, law enforcement agencies, and the mass media.

The local government leads the policy-making process, ensuring regulatory support and administrative oversight, and collaborates with other stakeholders through regular meetings and transparent reporting. The private sector, as a primary payer of levies, participates in policy development, providing crucial feedback to ensure fairness and feasibility. Community organisations play a watchdog role, monitoring policy implementation and educating the public, while law enforcement agencies ensure

compliance and maintain public order through collaboration and targeted training. Finally, the mass media disseminates information and promotes transparency, keeping the public informed and holding the government accountable.

This framework fosters effective collaboration by clearly defining the roles and interests of each stakeholder, with regular evaluation and monitoring to ensure that the levy system is fair, efficient, and responsive to the needs of all involved.

Evaluation of Levy Implementation and Enforcement

The evaluation phase was crucial for assessing the effectiveness of levy implementation and enforcement, as well as identifying areas for improvement. The Department of Transportation established key performance indicators (KPIs) to measure the success of levy implementation. These metrics included the rate of levy collection, compliance rates, and stakeholder satisfaction. Data were collected through surveys, financial reports, and feedback from stakeholders.

The evaluation revealed that levy implementation was generally successful in increasing revenue for the Palembang City Department of Transportation. Compliance rates improved significantly after the initial enforcement challenges were addressed. However, the evaluation also highlighted the need for continuous stakeholder engagement and periodic updates to the levy framework to adapt to changing circumstances.

While the implementation and enforcement of levies in Palembang City have progressed well, there are still several aspects that require improvement to achieve greater effectiveness. Collaborative governance, which involves multiple parties, is key to creating a transparent, fair, and effective system. This concept refers to close cooperation between the government, the community, and the private sector in decision-making, policy design, and the implementation of public programmes. In the context of levies, this collaboration is essential to ensure fairness in the collection and use of funds, as well as to enhance transparency and accountability in the process.

Most respondents felt that the sanctions applied were fair, though there were suggestions to increase transparency in law enforcement. Community participation in providing input is still considered less than optimal, despite the Transportation Department's efforts to involve the public. The level of participation in the process of creating levy policies needs to be increased to gain more diverse input. Collaboration between the Department of Transportation, the private sector, and community organisations is considered strong, but there remains potential for further development. Increasing community participation in policymaking can provide valuable input, strengthen systems, and address various existing challenges. Regular evaluations of the effectiveness of levy enforcement are necessary to assess compliance levels and identify areas for improvement. This collaboration is expected to further enhance the effectiveness of levy implementation and enforcement.

The enforcement of levies is considered reasonably effective, with sanctions for violators serving to deter unwanted actions through legal threats and enforcement. However, challenges remain in maintaining consistency in enforcement, particularly in

terms of supervision and handling minor violations. Most respondents found the sanctions applied to be fair, though there were suggestions to increase transparency in the law enforcement process. Community participation in providing input is still considered less than optimal, despite the Transportation Department's efforts to involve the public. The level of participation in the formulation of levy policies needs to be increased to gather more diverse inputs. While collaboration between the Transportation Department, the private sector, and community organisations is regarded as positive, there remains potential for further development.

Based on the evaluation, several recommendations were made to strengthen the implementation and enforcement process. These include enhancing digital infrastructure for levy collection, increasing public awareness efforts, and fostering deeper collaboration with stakeholders to ensure sustained compliance and support.

The findings of this research reveal that the implementation and enforcement of levies in Palembang City involve complex interactions between the local government, the private sector, and the community. One of the main challenges identified is the inconsistency in levy enforcement, alongside issues of transparency and communication among stakeholders. However, proposed solutions from stakeholders include clearer communication, better resource allocation, and stronger regulatory frameworks. This suggests that improved collaboration between various parties is essential for enhancing the effectiveness of the levy system.

From the perspective of the Sustainable Development Goals (SDGs), these findings are closely related to SDG 11 (Sustainable Cities and Communities). Effective levy enforcement supports the development of improved urban infrastructure, playing a crucial role in creating more inclusive, safe, resilient, and sustainable urban environments. An enhanced levy system also contributes to better urban planning and long-term sustainability.

Furthermore, the challenges of transparency and accountability identified in this research align with SDG 16 (Peace, Justice, and Strong Institutions). Improving governance structures, such as strengthening regulatory frameworks and establishing clearer communication channels, is essential for fostering more transparent, accountable, and inclusive institutions. This is critical for building public trust in the government's enforcement of levy policies.

This research also supports SDG 17 (Partnerships for the Goals), as collaboration between the government, the private sector, and the community is crucial for creating a fairer and more transparent levy system. Strengthening trust and cooperation among stakeholders is a key factor in achieving better governance.

Thus, the results of this study demonstrate that strengthening collaborative governance and addressing obstacles such as regulatory gaps and limited resources can significantly improve the efficiency and fairness of the levy system in Palembang City. The research also underscores the importance of collaboration between all parties in building a more transparent and effective levy management system, ultimately supporting the achievement of the SDGs.

Conclusion

The implementation and enforcement of levies by the Palembang City Department of Transportation highlight the effectiveness of collaborative governance in achieving public administration goals. By involving various stakeholders, creating clear frameworks, and adapting strategies, the Department successfully optimised the levy system. However, continuous efforts are needed to maintain compliance and address emerging challenges to ensure the system serves all stakeholders effectively.

Collaboration between the government, the private sector, and the community at the Palembang City Department of Transportation demonstrates how stakeholder involvement enhances the efficiency and effectiveness of levy enforcement. While the collaborative approach has optimised regional revenue collection, ongoing issues such as inter-agency coordination, transparency, and accountability still require attention to further improve the levy system.

Based on the conclusions drawn from this research, recommendations for future studies focus on several key areas aimed at improving the levy system. Firstly, enhancing inter-agency coordination emerges as a vital step towards strengthening the system's implementation. Future research could examine more efficient collaboration models between various governmental entities to improve coordination and streamline enforcement mechanisms. Secondly, leveraging technology to increase transparency stands as another promising area for further exploration. Research could investigate the potential role of digital tools and platforms in improving transparency and accountability in levy enforcement, offering valuable insights into how the system can be modernised. Lastly, ensuring long-term sustainability is another critical focus. Future studies should explore how the levy system can be made adaptable to future challenges, such as population growth and technological advancements, ensuring that the system remains effective and relevant in the years to come.

Acknowledgement

We would like to extend our deepest appreciation to STIA Bala Putra Dewa, Indonesia, for providing invaluable academic support throughout the research and writing of this article. Furthermore, we are grateful to the Department of Transportation in Palembang City for their collaboration and assistance in offering key insights into the implementation and enforcement of levies, which significantly enhanced the discussion on collaborative governance.

References

Abbiasov, T., & Sedov, D. (2023). Do local businesses benefit from sports facilities? The case of major league sports stadiums and arenas. *Regional Science and Urban Economics*, *98*, 1–59. https://doi.org/10.1016/j.regsciurbeco.2022.103853

Afandi, M. N., Tri Anomsari, E., Novira, A., & Sudartini, S. (2023). Collaborative governance in a mandated setting: shifting collaboration in stunting interventions at local level.

Development Studies Research, *10*(1).

Agustyawati, D., Hastuti, Suriadi, Katjina, H., & Rais, M. (2023). Effect of Terminal Levy Contribution on Local Original Revenue. *International Journal of Management Progress*, *5*(2), 113–121. https://doi.org/10.35326/ijmp.v5i2.4415

Aleluia, J., & Ferrão, P. (2016). Characterization of urban waste management practices in developing Asian countries: A new analytical framework based on waste characteristics and urban dimension. *Waste Management*, *58*, 415–429. https://doi.org/10.1016/j.wasman.2016.05.008

Ambarwati, S. D., Sudarsono, S., & Hadiyantina, S. (2023). Policies to Control and Evaluate Regional Regulations on Taxes and Levies in Indonesia: Re-centralisation? *Jurnal Media Hukum*, *30*(1), 29–47. https://doi.org/10.18196/jmh.v30i1.14172

Ambrose, G., Kim, J., & Siddiki, S. (2024). Evaluating conflict in collaborative environmental governance: A study of environmental justice councils. *Review of Policy Research*. https://doi.org/10.1111/ropr.12614

Amoah, A., Kwablah, E., Amoah, B., & Adjei-Mantey, K. (2023). Willingness to pay for electronic transaction levy: empirical evidence from Ghana. *African Journal of Economic and Management Studies*, *14*(4), 663–679.

Anastasiadou, K., Gavanas, N., Pitsiava-latinopoulou, M., & Bekiaris, E. (2021). Infrastructure planning for autonomous electric vehicles, integrating safety and sustainability aspects: A multi-criteria analysis approach. *Energies*, *14*(17). https://doi.org/10.3390/en14175269

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, *18*(4), 543–571.

Barandiaran, X. (2021). Collaborative Governance for Public Social Innovation: The case of Gipuzkoa Basque Country. *European Public and Social Innovation Review*, *6*(2), 78–96. https://doi.org/10.31637/EPSIR.21-2.6

Barwick, P. J., Li, S., Waxman, A., Wu, J., & Xia, T. (2024). Efficiency and Equity Impacts of Urban Transportation Policies with Equilibrium Sorting. *American Economic Review*, *114*(10), 3161–3205. https://doi.org/10.1257/aer.20220212

Benjamin, L., Rubin, J. S., & Zielenbach, S. (2004). Community development financial institutions: Current issues and future prospects. *Journal of Urban Affairs*, *26*(2), 177–195. https://doi.org/10.1111/j.0735-2166.2004.00196.x

Berends, L., Ritter, A., & Chalmers, J. (2016). Collaborative Governance in the Reform of Western Australia's Alcohol and Other Drug Sector. *Australian Journal of Public Administration*, *75*(2), 137–148. https://doi.org/10.1111/1467-8500.12154

Bergqvist, R. (2008). Realizing Logistics Opportunities in a Public–Private Collaborative Setting: The Story of Skaraborg. *Transport Reviews*, *28*(2), 219–237. https://doi.org/10.1080/01441640701581496

Bradley, G. V. (2003). Retribution: The central aim of punishment. *Harvard Journal of Law and Public Policy*, *27*(1), 19–31.

Brunner, E. J., Robbins, M. D., & Simonsen, B. (2021). Property Tax Information and Support for School Bond Referenda: Experimental Evidence. *Public Administration Review*, *81*(3), 488–499. https://doi.org/10.1111/puar.13201

Cabral, S., & Krane, D. (2018). Civic festivals and collaborative governance. *International Review of Administrative Sciences*, *84*(1), 185–205.

Cain, B. E., Gerber, E. R., & Hui, I. (2021). Public Perceptions of Collaborative Governance in Transportation Policy. *Political Research Quarterly*, *74*(4), 899–912.

Cheng, A. S., Gerlak, A. K., Dale, L., & Mattor, K. (2015). Examining the adaptability of collaborative governance associated with publicly managed ecosystems over time: Insights from the front range roundtable, Colorado, USA. *Ecology and Society*, *20*(1). https://doi.org/10.5751/ES-07187-200135

Clarke, S. E. (2017). Local Place-Based Collaborative Governance: Comparing State-Centric and Society-Centered Models. *Urban Affairs Review*, *53*(3), 578–602. https://doi.org/10.1177/1078087416637126

Cohen, E. (2024). The Waste Landfill Policy in Israel: Economic and Political Perspectives. *Sustainability (Switzerland)* , *16*(7). https://doi.org/10.3390/su16072791

Crosby, B. C., & Bryson, J. M. (2010). Integrative leadership and the creation and maintenance of cross-sector collaborations. *The Leadership Quarterly*, *21*(2), 211–230. https://doi.org/10.1016/j.leaqua.2010.01.003

Dai, J., Alvarado, R., Ali, S., Ahmed, Z., & Meo, M. S. (2023). Transport infrastructure, economic growth, and transport CO2 emissions nexus: Does green energy consumption in the transport sector matter? *Environmental Science and Pollution Research*, *30*(14), 40094–40106. https://doi.org/10.1007/s11356-022-25100-3

Dogan, E., Chishti, M. Z., Karimi Alavijeh, N., & Tzeremes, P. (2022). The roles of technology and Kyoto Protocol in energy transition towards COP26 targets: Evidence from the novel GMM-PVAR approach for G-7 countries. *Technological Forecasting and Social Change*, *181*, 121756. https://doi.org/10.1016/j.techfore.2022.121756

Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory*, *22*(1), 1–29. https://doi.org/10.1093/jopart/mur011

Foong, S. Y., Chan, Y. H., Loy, A. C. M., How, B. S., Tamothran, A. M., Yip, A. J. K., Liew, R. K., Peng, W., Alstrup, A. K., Lam, S. S., & Sonne, C. (2022). The nexus between biofuels and pesticides in agroforestry: Pathways toward United Nations sustainable development goals. *Environmental Research*, *214*, 113751.

Fouquet, R., & O'Garra, T. (2022). In pursuit of progressive and effective climate policies: Comparing an air travel carbon tax and a frequent flyer levy. *Energy Policy*, *171*. https://doi.org/10.1016/j.enpol.2022.113278

Gennaioli, N., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2013). Human Capital and Regional Development. *The Quarterly Journal of Economics*, *128*(1), 105–164. https://doi.org/10.1093/qje/qjs050

Getha-Taylor, H., Grayer, M. J., Kempf, R. J., & O'Leary, R. (2019). Collaborating in the Absence of Trust? What Collaborative Governance Theory and Practice Can Learn From the Literatures of Conflict Resolution, Psychology, and Law. *American Review of Public Administration*, *49*(1), 51–64.

Goh, M. (2002). Congestion management and electronic road pricing in Singapore. *Journal of Transport Geography*, *10*(1), 29–38.

Guariso, D., Castañeda, G., & Guerrero, O. A. (2023). Budgeting for SDGs: Quantitative methods to assess the potential impacts of public expenditure. *Development Engineering*, *8*, 100113. https://doi.org/10.1016/j.deveng.2023.100113

Gugu, S., & Dal Molin, M. (2016). Collaborative Local Cultural Governance: What Works? The Case of Cultural Districts in Italy. *Administration & Society*, *48*(2), 237–262. https://doi.org/10.1177/0095399715581037

Hafer, J. A. (2018). Understanding the Emergence and Persistence of Mandated Collaboration: A Policy Feedback Perspective of the United States's Model to Address Homelessness. *American Review of Public Administration*, *48*(7), 777–788. https://doi.org/10.1177/0275074017729877

Hamilton, R. W. (1972). Procedures for the Adoption of Rules of General Applicability: The Need for Procedural Innovation in Administrative Rulemaking. *California Law Review*, *60*(5), 1276. https://doi.org/10.2307/3479550

Holling, C. S. (2004). From Complex Regions to Complex Worlds. *Ecology and Society*, *9*(1), art11. https://doi.org/10.5751/ES-00612-090111

Huxham, C., & Vangen, S. (2013). Managing to collaborate: The theory and practice of collaborative advantage. *Managing to Collaborate: The Theory and Practice of Collaborative Advantage*, *19*(5), 1–271. https://doi.org/10.4324/9780203010167

Hysa, A. (2021). Introducing Transversal Connectivity Index (TCI) as a method to evaluate the effectiveness of the blue-green infrastructure at metropolitan scale. *Ecological Indicators*, *124*. https://doi.org/10.1016/j.ecolind.2021.107432

Ii, S. S., Fitzgerald, L., Morys-Carter, M. M., Davie, N. L., & Barker, R. (2018). Knowledge translation in tri-sectoral collaborations: An exploration of perceptions of academia, industry and healthcare collaborations in innovation adoption. *Health Policy*, *122*(2), 175–183. https://doi.org/10.1016/j.healthpol.2017.11.010

Ingraham, P. W. (2005). Performance: Promises to keep and miles to go. *Public Administration Review*, *65*(4), 390–395. https://doi.org/10.1111/j.1540-6210.2005.00466.x

Iversen, V. (2021). Social Mobility in Developing Countries. In *Social Mobility in Developing Countries* (pp. 75–96). Oxford University Press.

Jawad, A., Savona, N., Penney, T., & White, M. (2023). Industry responses to the UK government's public consultation on the proposed soft drinks industry levy: Qualitative documentary analysis using the framework method and a systems perspective. *Food Policy*, *118*. https://doi.org/10.1016/j.foodpol.2023.102498

Katz, R., Mookherji, S., Kaminski, M., Haté, V., & Fischer, J. E. (2012). Urban governance of disease. *Administrative Sciences*, *2*(2), 135–147.

Kesavaraj, S. V., Mukund Jakhiya, C., & Nisha Bhandari, C. (2022). A Study on Upcoming Central Bank Digital Currency: Opportunities, Obstacles, and Potential FinTech Solutions using Cryptography in the Indian Scenario. *2022 13th International Conference on Computing Communication and Networking Technologies (ICCCNT)*, 1–10. https://doi.org/10.1109/ICCCNT54827.2022.9984539

Keyim, P. (2018). Tourism Collaborative Governance and Rural Community Development in Finland: The Case of Vuonislahti. *Journal of Travel Research*, *57*(4), 483–494. https://doi.org/10.1177/0047287517701858

Kim, J., & Siddiki, S. (2018). Linking diversity of collaborative policymaking venues with procedural justice perceptions: A study of U.S. marine aquaculture partnerships. *American Review of Public Administration*, *48*(2), 159–174. https://doi.org/10.1177/0275074016669442

Klievink, B., Bharosa, N., & Tan, Y. H. (2016). The collaborative realization of public values and business goals: Governance and infrastructure of public-private information platforms. *Government Information Quarterly*, *33*(1), 67–79.

Klijn, E. H., & Koppenjan, J. (2015). Governance Networks in the Public Sector. In *Governance Networks in the Public Sector*. Routledge.

Kumar, R. (2024). Hugh Compston, Policy Networks and Policy Change: Putting Policy Network Theory to the Test. *Journal of Development Policy and Practice*, *9*(2), 171–175. https://doi.org/10.1177/24551333221123400

Lagouvardou, S., Psaraftis, H. N., & Zis, T. (2022). Impacts of a bunker levy on decarbonizing shipping: A tanker case study. *Transportation Research Part D: Transport and Environment*, *106*, 103257.

Lapuente, V., & Van de Walle, S. (2020). The effects of new public management on the quality of public services. *Governance*, *33*(3), 461–475.

Leape, J. (2008). The London congestion charge. *Futuribles: Analyse et Prospective*, *20*(337), 157–176. https://doi.org/10.1051/futur:200833749

Lee, O. L., Tay, R. I., Too, S. T., & Gorod, A. (2019). A Smart City transportation System of Systems Governance Framework: A Case Study of Singapore. *2019 14th Annual Conference System of Systems Engineering (SoSE)*, 37–42.

Li, S., Xia, Y., Xiao, R., & Jiang, H. (2022). Residents' Behavioral Intention of Environmental Governance and Its Influencing Factors: Based on a Multidimensional Willingness Measure Perspective. *International Journal of Environmental Research and Public Health*, *19*(22). https://doi.org/10.3390/ijerph192214734

Lifschitz, C., & Sieczkowska, A. (2018). New insights into the fecal microbiota of children living in a slum: association with small bowel bacterial overgrowth. *Jornal de Pediatria*, *94*(5), 455–457. https://doi.org/10.1016/j.jped.2017.12.002

Massam, B. H. (2002). Quality of life: Public planning and private living. *Progress in Planning*, *58*(3), 141–227. https://doi.org/10.1016/S0305-9006(02)00023-5

Maulana, R. Y., Decman, M., & Durnik, M. (2022). Fostering Collaborative Digital Transformation in Indonesian Local Government. In P. A., B. M.K., B. R., S. A., O. G., & V. D. (Eds.), *35 th Bled eConference Digital Restructuring and Human (Re)action* (pp. 733–758). University of Maribor Press.

Meads, G., Russell, G., & Lees, A. (2017). Community governance in primary health care: towards an international Ideal Type. *The International Journal of Health Planning and Management*, *32*(4), 554–574. https://doi.org/10.1002/hpm.2360

Meijer, A., & Bolívar, M. P. R. (2016). Governing the smart city: a review of the literature on smart urban governance. *International Review of Administrative Sciences*, *82*(2), 392–408. https://doi.org/10.1177/0020852314564308

Mensah, I. K., Mwakapesa, D. S., Mensah, P. A., & Mensah, J. K. (2022). The Impact of Government Electronic Transaction Levy on the Continuous Adoption of Mobile

Money Transactions in Ghana. *Proceedings of the 4th Africa-Asia Dialogue Network (AADN) International Conference on Advances in Business Management and Electronic Commerce Research*, 17–23. https://doi.org/10.1145/3572996.3573001

Mukhlis, M., & Perdana, R. (2022). A Critical Analysis of the Challenges of Collaborative Governance in Climate Change Adaptation Policies in Bandar Lampung City, Indonesia. *Sustainability*, *14*(7), 4077. https://doi.org/10.3390/su14074077

Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, *24*(4), 427–431. https://doi.org/10.1177/1362168820941288

Nazneen, S., Hong, X., Ud Din, N., & Jamil, B. (2021). Infrastructure-driven development and sustainable development goals: Subjective analysis of residents' perception. *Journal of Environmental Management*, *294*.

Nur, A. C., Nur, A. I., Akib, H., & Koliopoulus, T. (2024). The Importance of Government Collaboration Strategies for Developing Tourism Villages in Indonesia. *Revista de Gestão Social e Ambiental*, *18*(4), e05386. https://doi.org/10.24857/rgsa.v18n4-096

Osborne, S. P., Radnor, Z., & Nasi, G. (2013). A New Theory for Public Service Management? Toward a (Public) Service-Dominant Approach. *American Review of Public Administration*, *43*(2), 135–158.

Papcunová, V., Hudáková, J., Štubňová, M., & Urbaníková, M. (2020). Revenues of Municipalities as a Tool of Local Self-Government Development (Comparative Study). *Administrative Sciences*, *10*(4), 101.

Pereira, R. H. M., Banister, D., Schwanen, T., & Wessel, N. (2019). Distributional effects of transport policies on inequalities in access to opportunities in Rio de Janeiro. *Journal of Transport and Land Use*, *12*(1), 741–764.

Prakoso, M. R., Berawi, M. A., & Gunawan. (2023). Evaluation of Logistics System Performance-Based on Indonesian Government Policy. In K. S.A., G. B.S., S. M., & S. A. (Eds.), *Lecture Notes in Civil Engineering* (Vol. 225, pp. 791–797). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-981-16-9348-9_70

Quayle, A., Grosvold, J., & Chapple, L. (2019). New modes of managing grand challenges: Cross-sector collaboration and the refugee crisis of the Asia Pacific. *Australian Journal of Management*, *44*(4), 665–686.

Ran, B., & Qi, H. (2018). Contingencies of Power Sharing in Collaborative Governance. *American Review of Public Administration*, *48*(8), 836–851.

Romagny, B., Aderghal, M., Auclair, L., Ilbert, H., & Lemeilleur, S. (2023). From rural to urban areas: new trends and challenges for the commons in Morocco. *Journal of North African Studies*, *28*(1), 57–74.

Roos, G., Kubina, N. Y., & Farafonova, Y. Y. (2021). Opportunities For Sustainable Economic Development Of The Coastal Territories Of The Baltic Sea Region In The Context Of Digital Transformation. *Baltic Region*, *13*(2), 7–26.

Rosa-Jiménez, C., Nebot, N., García Moreno, A., & Ballesteros, M. J. M. (2017). Near Zero Consumption Building as an Urban Acupuncture for a Vertical Slum. A Case Study in the City of Malaga, Spain. *IOP Conference Series: Materials Science and Engineering*, *245*(5), 052028. https://doi.org/10.1088/1757-899X/245/5/052028

Rozikin, M., Sulistyo, A. B., Saleh, C., Hermawan, & Riyadi, B. S. (2023). The Collaborative Governance in Digital Infrastructure Development in Indonesia: A Public Policy Perspective. *International Journal of Membrane Science and Technology*, *10*(3), 449–459. https://doi.org/10.15379/ijmst.v10i3.1553

Rozikin, M., Wijaya, A. F., & Riyadi, B. S. (2023). Sustainable Development: Disaster Risk Reduction of Forest and Land Fire in Indonesia. *International Journal of Membrane Science and Technology*, *10*(3), 329–339.

Sandover, R. (2020). Participatory food cities: Scholar activism and the co-production of food knowledge. *Sustainability (Switzerland)*, *12*(9).

Schaefer, M. B. (1991). Some aspects of the dynamics of populations important to the management of the commercial Marine fisheries. *Bulletin of Mathematical Biology*, *53*(1–2), 253–279. https://doi.org/10.1007/BF02464432

Siregar, R. T., Sinaga, R. S., Nasution, I. R., Nasution, C., Panjaitan, F., & Modifa, I. (2020). Regional Development Environment: Implementation, Realization & Contribution of Revenue in Pematangsiantar. *IOP Conference Series: Earth and Environmental Science*, *469*(1), 012052.

Situmeang, M. (2024). The Influence of Administration and Standard Operating Procedures on Public Services at the South Tapanuli Regency Transportation Service. *Focus Ilmu Administrasi*, *3*(1), 39–51.

Sohail, M., Cavill, S., & Cotton, A. P. (2005). Sustainable Operation and Maintenance of Urban Infrastructure: Myth or Reality? *Journal of Urban Planning and Development*, *131*(1), 39–49. https://doi.org/10.1061/(ASCE)0733-9488(2005)131:1(39)

Sparks, L. (2023). Marketing Responses to the Taxation of Soft Drinks Comment on "Understanding Marketing Responses to a Tax on Sugary Drinks: A Qualitative Interview Study in the United Kingdom, 2019." *International Journal of Health Policy and Management*, *12*(1), 7612. https://doi.org/10.34172/ijhpm.2023.7612

Steels, S. (2015). Key characteristics of age-friendly cities and communities: A review. *Cities*, *47*, 45–52. https://doi.org/10.1016/j.cities.2015.02.004

Sun, M., Gao, X., Li, J., & Jing, X. (2022). Research on Evolutionary Game of Water Environment Governance Behavior from the Perspective of Public Participation. *International Journal of Environmental Research and Public Health*, *19*(22). https://doi.org/10.3390/ijerph192214732

Suprihati, Kristiyanti, & Hajir. (2018). Improving Regional Original Income With Tax Receipt, Regional Retribution And Regional Wealth Management Results In Solo Raya. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *2*(3), 11–26.

Tan, S., & Taeihagh, A. (2020). Smart City Governance in Developing Countries: A Systematic Literature Review. *Sustainability*, *12*(3), 899.

van der Heijden, J. (2015). Interacting State and Non-State Actors in Hybrid Settings of Public Service Delivery. *Administration and Society*, *47*(2), 99–121.

Venables, A. J. (2016). Using natural resources for development: Why has it proven so difficult? *Journal of Economic Perspectives*, *30*(1), 161–184.

Wang, J., Zhao, L., & Huchzermeier, A. (2021). Operations-Finance Interface in Risk

Management: Research Evolution and Opportunities. *Production and Operations Management*, *30*(2), 355–389. https://doi.org/10.1111/poms.13269

Wang, M., & Peng, X. (2023). How to Develop Sustainably after Poverty Alleviation in Poverty-Stricken Areas under Paired Assistance: A Quantitative Assessment Framework Based on System Dynamics Model. *Sustainability (Switzerland)*, *15*(6), 4764. https://doi.org/10.3390/su15064764

Whitelaw, S., Baxendale, A., Bryce, C., MacHardy, L., Young, I., & Witney, E. (2001). "Settings" based health promotion: A review. *Health Promotion International*, *16*(4), 339–353. https://doi.org/10.1093/heapro/16.4.339

Widianingsih, I., Paskarina, C., Riswanda, R., & Putera, P. B. (2021). Evolutionary Study of Watershed Governance Research: A Bibliometric Analysis. *Science & Technology Libraries*, *40*(4), 416–434. https://doi.org/10.1080/0194262X.2021.1926401

Wisnumurti, A. . G. O., Candranegara, I. M. W., Suryawan, D. K., & Wijaya, I. G. N. (2020). Collaborative Governance: Synergity Among the Local Government, Higher Education, and Community in Empowerment of Communities and Management of Potential Tourism Village. *Proceedings of the 2nd Annual International Conference on Business and Public Administration (AICoBPA 2019)*, *154*(AICoBPA 2019), 112–115. https://doi.org/10.2991/aebmr.k.201116.024

Xu, Z., Wu, Z., Li, Z., Jee, K., Rhee, J., Xiao, X., Xu, F., Wang, H., & Jiang, G. (2016). High fidelity data reduction for big data security dependency analyses. *Proceedings of the ACM Conference on Computer and Communications Security*, *24-28-Octo*, 504–516. https://doi.org/10.1145/2976749.2978378

Zampone, G., Nicolò, G., Sannino, G., & De Iorio, S. (2024). Gender diversity and SDG disclosure: the mediating role of the sustainability committee. *Journal of Applied Accounting Research*, *25*(1), 171–193. https://doi.org/10.1108/JAAR-06-2022-0151