



## Public Services Amid Infrastructure Inequities: A Case Study of Indonesia's Outer Islands

Nurman<sup>1\*</sup>, Setyo Utomo<sup>2</sup>, Irwan Gesmi<sup>2</sup>, Zaheruddin Othman<sup>3</sup>, Zainal<sup>2</sup>

<sup>1</sup> Department of Public Administration, Universitas Islam Riau, Pekanbaru 28284, Indonesia

<sup>2</sup> Department of Government Sciences, Universitas Islam Riau, Pekanbaru 28284, Indonesia

<sup>3</sup> School of Government, Universiti Utara Malaysia, Kedah 06010, Malaysia

Corresponding Author Email: [nurman07@soc.uir.ac.id](mailto:nurman07@soc.uir.ac.id)

Copyright: ©2025 The authors. This article is published by IETA and is licensed under the CC BY 4.0 license (<http://creativecommons.org/licenses/by/4.0/>).

<https://doi.org/10.18280/ijstdp.200536>

### ABSTRACT

**Received:** 13 April 2025

**Revised:** 25 May 2025

**Accepted:** 29 May 2025

**Available online:** 31 May 2025

#### **Keywords:**

*public services, infrastructural disparity, regional development, Meranti Islands, policy evaluation*

Infrastructure disparities present significant challenges to public service delivery in remote regions, especially on Indonesia's outermost islands. This study explores the impact of infrastructure inadequacies on public service accessibility in Meranti Islands District, focusing on key issues such as limited transportation, inadequate digital connectivity, and constrained local budgets. A qualitative approach was employed, combining policy analysis and case study methods to assess the correlation between infrastructure development and service accessibility. The findings reveal that infrastructure deficiencies severely hinder the efficiency and reach of essential services, particularly in education, healthcare, and public administration. Poor transportation networks impede the timely delivery of healthcare and educational services to remote areas, while inadequate digital infrastructure restricts the implementation of technology-driven administrative programs. The study recommends strategic policy interventions, including localized infrastructure improvements, optimized resource utilization, and digital transformation tailored to the region's unique needs. It emphasizes the need for an integrated approach that aligns infrastructure development with the enhancement of public services to promote social equity and regional development. By bridging the infrastructure-service gap, policymakers can improve service quality, reduce socioeconomic disparities, and foster sustainable growth in Indonesia's outer islands. This research contributes to the broader discourse on equitable public service delivery in marginalized regions.

## 1. INTRODUCTION

Public services are vital for regional development, especially in remote areas like Meranti Islands Regency. Efficient, high-quality services improve the quality of life and drive local economic growth by providing essential infrastructure, education, and healthcare [1]. In these regions, equitable access to services is key to regional success and can reduce inequality, boosting individual welfare [2, 3].

Local governments face significant challenges in providing public services due to geographical and financial constraints. In Meranti Islands Regency, limited transportation and poor digital connectivity hinder access to essential services, highlighting the need for policies that address these barriers and promote social equity in development [4, 5].

Infrastructure deficiencies hinder the quality and accessibility of public services, particularly in sectors like education and healthcare [1]. The resulting inequality in access exacerbates the socioeconomic divide and reduces service effectiveness [6]. Therefore, a strategic infrastructure development policy tailored to local needs is essential for ensuring inclusive public services [2].

This situation becomes increasingly intricate because of constrained regional funds, challenging topography, and the restricted capabilities of local administrations. In insular areas like the Meranti Islands, inadequate transportation access hinders the prompt delivery of health and education services to isolated people [4]. Restricted digital connectivity impedes the execution of technology-driven public administration services that are intended to enhance efficiency and accessibility [7]. A comprehensive strategic strategy is necessary to overcome this gap by integrating infrastructure development plans with public service programs tailored to local needs and community goals [8].

Comprehending the correlation between infrastructure and public services is a crucial step in developing successful and sustainable policy. Robust infrastructure not only enhances the accessibility of public services but also promotes equal development across all regions [9]. Policies that disregard this connection often fail to address local needs comprehensively [10]. By comprehending this relationship, policymakers can discern infrastructure development objectives that enhance public service quality, so fostering equity and social justice [11].

The infrastructure deficit in Meranti Islands Regency hampers public services, particularly in education, healthcare, and governance. Addressing this requires strategic infrastructure development, resource optimization, and technology integration to improve service efficiency [1]. This approach aims to overcome infrastructure limitations and create an inclusive, sustainable service system for regional development [6].

An exhaustive examination of infrastructural deficiencies and their effects on public service provision in the Meranti Islands is crucial for developing policy solutions tailored to local requirements. This research aims to significantly enhance the development of inclusive, effective, and sustainable public services in Indonesia's remote island regions, including the Meranti Islands.

#### **Research questions:**

- 1) How do infrastructure inequities affect the access to and quality of public services in Indonesia's outer islands?
- 2) What impact do infrastructure inequities have on the social and economic welfare of communities in Indonesia's outer islands?

## **2. LITERATURE REVIEW**

Public service theory offers a robust framework for comprehending the dynamics between public administration and the community, highlighting the imperative of addressing citizens' needs through accountable, transparent, and participatory governance. At the core of this paradigm is the notion of co-creation, wherein public administration actively collaborates with citizens to improve service delivery. This concept is further enhanced by the evolving public service logic, which contextualizes public service delivery within a service-dominant framework, emphasizing the significance of collaboration between public officials and citizens [12-14]. This transition to co-creation acknowledges that efficient public service delivery is fundamentally a collaborative endeavor, necessitating active involvement from both the government and its citizenry (Figure 1). It emphasizes the increasing importance of participatory governance models, in which citizens are not only passive recipients but active participants in the design, implementation, and assessment of public services [15, 16].

An essential element of public service theory is the significance of infrastructure in the effective provision of public services. Infrastructure, encompassing transportation, healthcare, education, and communication, is essential for the delivery of public services. The absence of sufficient infrastructure can significantly hinder the provision of important services. Infrastructure constitutes the foundation for economic expansion, social advancement, and the efficacy of public services, guaranteeing that resources, services, and opportunities are available to all citizens [17, 18]. Studies demonstrate that robust transportation infrastructure, including roads and bridges, markedly improves the mobility of individuals and commodities, thus promoting enhanced access to healthcare, education, and other essential public services [19, 20]. These infrastructures facilitate accessibility and establish the essential physical and economic conditions

for delivering quality services to the community [21]. Consequently, infrastructure development is not solely a technical matter but an essential element of efficient public service provision.

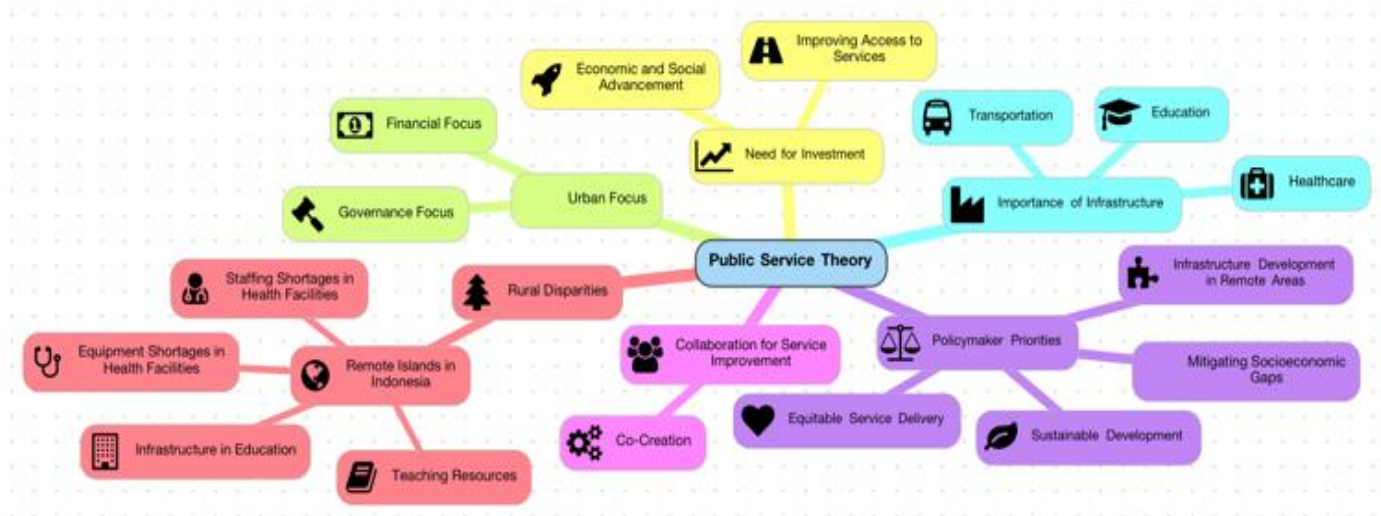
In rural and underserved areas, infrastructure development is often insufficient, leading to disparities in public service quality and accessibility compared to urban areas. Limited financial resources, remoteness, and lack of government focus hinder the growth of essential infrastructure, resulting in poor transportation, healthcare, and education. In the Meranti Islands Regency, inadequate public transportation further restricts access to services like healthcare and education, exacerbating socio-economic disparities and hindering economic opportunities [22, 23].

Inadequate healthcare infrastructure in Indonesia's remote islands has worsened health disparities, with insufficient staffing, medical equipment, and services leading to poor health outcomes and higher mortality rates. Limited access to qualified medical professionals and the need for long travel distances further delay treatment [23, 24]. Similarly, the education sector faces challenges such as inadequate facilities, lack of qualified teachers, and insufficient funding, limiting academic success and perpetuating poverty [25]. These deficiencies hinder socio-economic development in remote regions.

The Meranti Islands Regency faces significant challenges in public service delivery due to its geographical isolation and inadequate infrastructure. This isolation increases the cost and complexity of providing essential services such as healthcare, education, and transportation [26, 27]. Fiscal constraints and a political focus on urban areas further exacerbate these challenges, leading to resource misallocation and unequal infrastructure development, which disproportionately affects rural communities [28]. This urban-centric governance model deepens regional disparities, leaving remote areas like the Meranti Islands underserved.

A cohesive infrastructure development strategy is crucial, especially for Indonesia's outermost islands. Investment in transportation infrastructure, such as roads and bridges, has been shown to boost rural economic prospects by improving access to markets, services, and job opportunities. This, in turn, enhances the local economy and alleviates poverty. Similarly, investments in health infrastructure, including clinics and telemedicine, improve health outcomes by increasing access to care and reducing the need for long-distance travel to urban centers. Moreover, enhancing educational infrastructure in remote islands is vital for improving educational outcomes and future economic opportunities, as areas with better access to education generally see higher literacy rates and better employment prospects.

The lack of digital infrastructure in remote islands exacerbates the service gap between urban and rural areas, limiting access to education, healthcare, and government services. Enhancing digital connectivity, such as broadband access, can improve quality of life by enabling services like telemedicine and e-learning, which in turn boost health and educational outcomes. A comprehensive infrastructure strategy must integrate both physical and digital components, ensuring rural populations can fully participate in the digital economy and access essential services.



**Figure 1.** Conceptual framework

Infrastructure development is key to addressing inequalities in Indonesia's remote islands. Investments in transportation, healthcare, education, and digital infrastructure improve access to essential services and drive economic and social progress. Policymakers must prioritize these areas to reduce socio-economic gaps, promote sustainable development, and ensure equitable service delivery, enabling all individuals, regardless of location, to access opportunities for prosperity.

The review highlights significant challenges in public service delivery in Indonesia's remote islands, especially the Meranti Islands Regency. Infrastructure deficiencies in transportation, healthcare, education, and digital connectivity hinder access to essential services and exacerbate socio-economic disparities. Geographic isolation and fiscal constraints increase the cost and complexity of service delivery, with urban areas often prioritized. These issues contribute to poor health outcomes and limited educational opportunities, perpetuating cycles of poverty. Investing in infrastructure—particularly in transportation, healthcare, education, and digital connectivity—can improve access to services, boost economic opportunities, and reduce poverty, especially through telemedicine and e-learning.

This study aims to fill gaps in the literature on public service delivery in remote regions like the Meranti Islands. While the need for infrastructure development is recognized, there is a lack of context-specific policies for such areas. The study will explore tailored infrastructure strategies for the region. Additionally, while co-creation in public services is well-discussed, its application in remote Indonesian islands is limited, and this research will investigate how local communities can collaborate with public administration to improve services. The role of digital infrastructure in enhancing access to services like healthcare and education in remote islands is also underexplored, and the study will assess its impact. Finally, the long-term socio-economic effects of infrastructure investment in these regions remain understudied, and this research will explore how such investments can drive sustainable development and reduce inequalities.

### 3. RESEARCH METHODS

In this study, a qualitative approach using a case study method is employed to explore the relationship between

infrastructure development and public services in the Meranti Islands Regency. The qualitative design is ideal for comprehensively understanding the phenomenon, particularly the effects of infrastructure policies on service provision in remote regions.

**Interview and FGD Guidelines:** the interviews and Focus Group Discussions (FGD) aim to capture insights on specific domains related to infrastructure development and its impact on public services. The key themes explored include: a) Infrastructure Needs: Transportation, healthcare facilities, educational infrastructure, and digital connectivity; b) Challenges in Service Delivery: Barriers to access, logistical issues, and service gaps; c) Policy and Planning: The role of government policies, planning processes, and resource allocation in infrastructure development; d) Community Perspectives: How infrastructure development affects residents' access to services like education, healthcare, and employment.

**In-depth interviews** were conducted with 20 purposively selected informants from various stakeholders, including officials from the Regional Planning Agency (BAPPEDA), Regional Revenue Agency (BAPENDA), Public Works Office (PU), and One-Stop Integrated Service Office (PTSP). Community leaders, with deep knowledge of infrastructure issues, also served as principal informants. Selection criteria were based on informants' expertise, involvement in policy-making, and access to crucial data related to infrastructure and public services in the region.

**Triangulation Approach:** this study utilized data triangulation to cross-verify findings from multiple sources, ensuring the credibility and robustness of the research. The triangulation involved comparing insights from interviews, field observations, and the FGD to mitigate bias and gain a well-rounded understanding. Moreover, methodological triangulation was applied through the combination of interviews, field observations, and FGDs to ensure a comprehensive approach to data collection and analysis.

**Inductive Data Analysis:** the data analysis was carried out inductively, beginning with coding and categorizing the data, followed by the identification of major themes. This process was performed manually, although the potential use of qualitative analysis software (Map-This) could be employed for organizing and visualizing data. Codes were developed from recurring patterns in the responses, and thematic analysis

was used to construct an in-depth narrative. A thematic map or coding tree could be helpful in visually illustrating the relationships between identified themes and categories.

Ensuring Validity and Reliability to maintain the reliability and validity of the findings, several steps were taken. The member check method was used, where informants were provided with preliminary findings to validate the accuracy of the interpretations. Furthermore, peer debriefing was conducted to enhance the trustworthiness of the analysis and interpretations. Regular meetings with research team members ensured consistency in the coding process and reduced subjectivity in data interpretation.

Field Observation: the researcher conducted one month of field observations in various locations within the Meranti Islands Regency. This allowed direct examination of infrastructure conditions and the challenges faced by the local population in accessing services such as healthcare, education, and governmental administration. Observations helped corroborate the interview and FGD findings, contributing to a more holistic understanding of the infrastructure landscape in the region. Timeline and Context: this research spanned three months (October-December 2024), providing ample time to gather rich data and insights that contribute to a more nuanced understanding of the relationship between infrastructure development and public service improvement in remote areas.

4. RESULTS AND DISCUSSION

4.1 Meranti Islands: 3T region and inadequate infrastructure

The Meranti Islands Regency, situated in Riau Province, Indonesia, is classified as underdeveloped, remote, and outermost (3T). The physical features, comprising numerous islands divided by sea, present considerable problems for the

establishment of sufficient infrastructure. The infrastructure in this region, encompassing transportation, public facilities, and communication networks, remains comparatively inadequate, directly affecting the community's access to essential services such as healthcare, education, and public administration [29].

A primary difficulty confronting the inhabitants of the Meranti Islands is the inadequate transportation infrastructure linking the small islands to the governmental center and other essential services. Insufficient roads and restricted transportation options lead to prolonged trip durations and elevated expenses for the population to reach public service facilities. This directly affects the quality of service provided, as the community frequently encounters challenges in accessing prompt health services, particularly during crises [30]. Moreover, educational institutions are impeded, as numerous schools are challenging to access, particularly for youngsters residing in isolated regions.

Inadequate infrastructure in the Meranti Islands hinders local economic growth by restricting access to markets and distribution networks. This affects sectors like fisheries, agriculture, and tourism, which depend on inter-island and regional connectivity. Despite the region’s economic potential, unresolved infrastructure issues have led to underutilization of these opportunities.

As a 3T region, Meranti Islands Regency faces challenges in securing sufficient budget for infrastructure development. Limited resources and inefficient planning exacerbate disparities with urban areas, hindering equitable development and community welfare (Figure 2). Equitable, high-quality infrastructure development in Meranti Islands is crucial for reducing socio-economic inequality, improving public service access, and spurring economic growth. Prioritizing essential infrastructure—such as roads, bridges, transportation, healthcare, and education—is vital for the region's development.

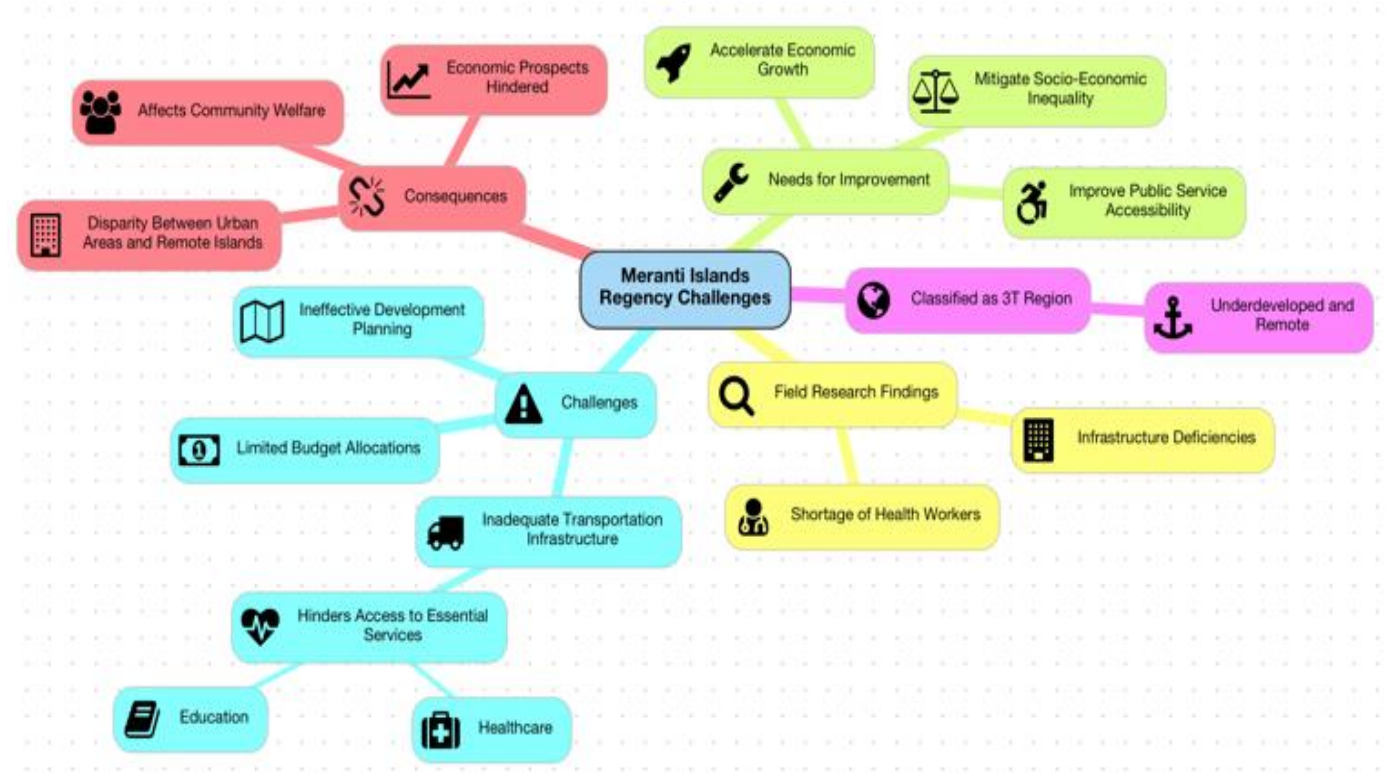


Figure 2. 3T research results: Lagging, leading & outermost



## 4.2 Impact on public services

The infrastructural deficiencies in Meranti Islands Regency substantially impact the quality and accessibility of public services, particularly in the domains of education, healthcare, and governmental administration. Inadequate infrastructure, encompassing transportation, communication networks, and essential facilities, significantly hinders the community's access to quality and timely services, hence impacting their overall quality of life [31].

The education sector suffers from limited accessibility caused by inadequate infrastructure, hindering many students in distant locations from obtaining sufficient educational facilities. Insufficient transportation networks necessitate that students traverse extensive distances to access educational institutions, particularly on remote tiny islands. This not only impedes student attendance at school but also detracts from the quality of learning, as numerous pupils are fatigued or hindered by adverse weather and unfavorable environmental conditions [32]. Moreover, inadequate school infrastructure, including deteriorated classrooms, insufficient supporting facilities like libraries and laboratories, and restricted access to educational technology, exacerbates the quality of education available to children in these regions. This circumstance may exacerbate the educational disparity between distant and metropolitan regions, ultimately affecting human resource development in these places.

In the healthcare sector, inadequate transportation infrastructure and medical facilities significantly impede the community's access to essential medical treatments, particularly in emergencies. Hospitals and community health centers located distant from residential areas frequently lack basic amenities, including skilled medical workers, sufficient medical equipment, and essential medications [33]. Furthermore, difficulties in securing transportation impede individuals in need of urgent care or transfer to bigger medical facilities. This leads to an increased mortality rate due to delays in medical treatment and the inadequate quality of healthcare services accessible to the community. Infrastructure limitations hinder the rapid dissemination of

health information, as residents in rural areas face difficulties in obtaining essential information related to health and disease prevention.

In government administration, inadequate technical infrastructure and communication networks significantly hinder successful public services. Administrative procedures, like the application for population documentation, company licenses, or other public services, frequently experience delays due to restricted access to government facilities at both the sub-district and village levels. In many instances, residents are required to traverse considerable distances to access government offices, leading to delays in service processing and heightened expenses for the community [19]. Furthermore, an administrative system dependent on manual processes, lacking sufficient information technology support, undermines efficiency in public services and facilitates opportunities for corruption or abuse of authority in the handling of critical documents (Figure 3).

Overall, the limited infrastructure in Meranti Islands Regency has a significant impact on the quality and accessibility of public services in various sectors. Inadequate infrastructure creates obstacles that exacerbate social and economic inequalities between people in remote areas and those living in areas with better infrastructure access. Therefore, equitable infrastructure development and improvement in this area is essential to ensure that every citizen, regardless of where they live, can access decent, quality, and timely public services. Infrastructure development must be a priority in efforts to reduce inequality and improve the welfare of the people in Meranti Islands Regency.

Another finding that the researchers also discovered was that when the researchers conducted field research at the Meranti Islands Regency Integrated Licensing Service Office, they found that the office was unfit for purpose, even a small office, and that two other offices had to be combined in it, making the room very unfit for purpose, and this certainly has a big impact on investors who come there. When they see the unfit condition of the office, it is unlikely that investors will be interested in investing heavily in Meranti Islands Regency because even the government does not have a proper office.

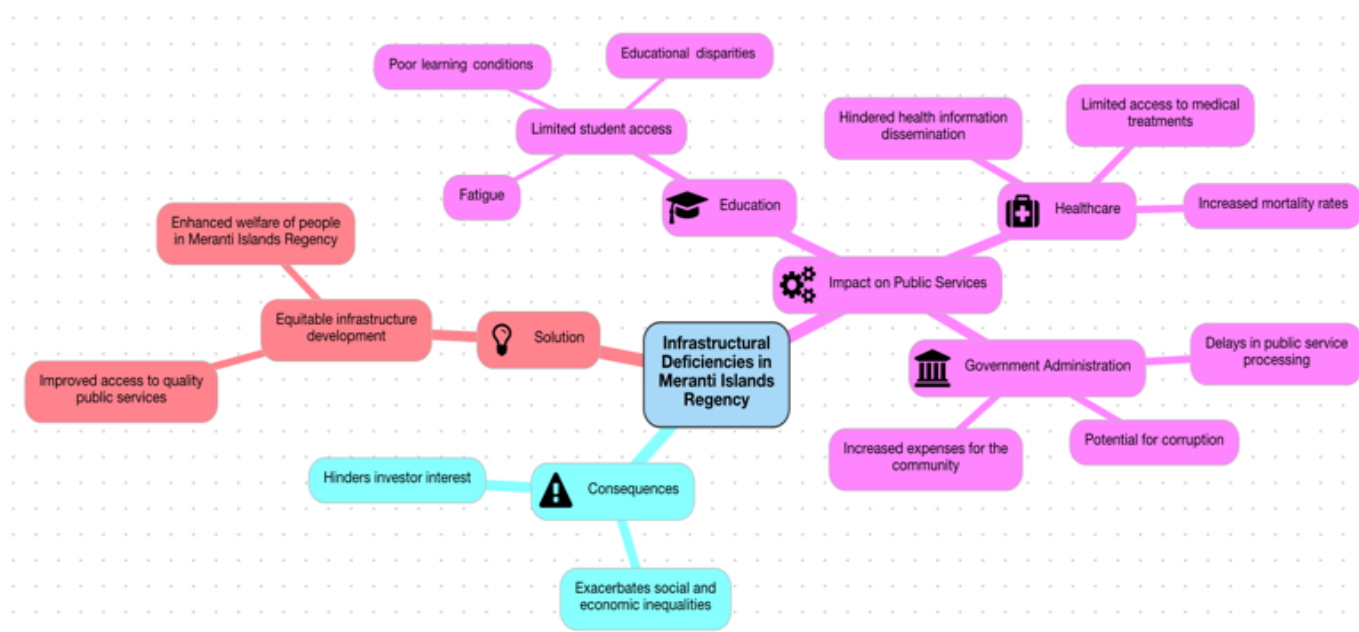


Figure 3. Research result the impact on public service

### 4.3 Local government strategy

The Meranti Islands Regency Government has undertaken numerous initiatives to address the infrastructure limitations in the region, aiming to enhance public service quality and diminish social disparities between distant and metropolitan locations. The primary measures implemented include the creation and enhancement of fundamental infrastructure, encompassing transportation networks, improved healthcare facilities, and educational services. Furthermore, the incorporation of technology and community-oriented projects constitutes a component of the government's effort to enhance the efficiency and efficacy of public services [34, 35].

To enhance transportation infrastructure, the administration has concentrated on constructing roads and bridges that link the islands in Meranti Islands Regency. The enhancement of transportation infrastructure is anticipated to expedite community movement and improve access to diverse public services, including healthcare and educational institutions. The government is enhancing maritime transportation infrastructure to link outlying islands with the central administration by offering more efficient and safer vessels. Nonetheless, intricate topographical constraints persist as a significant impediment that necessitates focus and permanent solutions [36, 37].

The Meranti Islands Regency government is enhancing health service accessibility by constructing community health facilities and hospitals in strategic locations, alongside offering training to medical staff in rural areas. Initiatives like deploying mobile physicians and offering telemedicine services are being implemented to access those residing in remote locations. This project aims to diminish the health care disparity between urban and rural regions and guarantee that all citizens have equitable access to sufficient health care [38, 39].

The government is endeavoring to mitigate gaps in the education sector by enhancing school infrastructure,

encompassing both physical facilities and technological resources. One of the executed programs is the implementation of an e-learning system and the utilization of information technology to facilitate distant learning, particularly in remote locations. This technology enables students in remote places to access educational materials and engage in learning activities remotely, despite constraints imposed by the current physical infrastructure. An integrated school development initiative that combines educational, health, and administrative facilities has been begun to enhance the overall efficacy of public services in rural regions [40, 41].

The Meranti Islands Regency government depends on community-based efforts to enhance public services, alongside the development of physical and technological infrastructure. Community empowerment initiatives have been implemented through training and counseling on local infrastructure management, alongside capacity building in information technology, to foster active engagement in regional development (Figure 4). These projects aim to enhance public knowledge on the significance of robust infrastructure and effective public services, while also motivating community engagement in the upkeep of current public facilities. Engaging the community directly is anticipated to enhance the efficacy and sustainability of infrastructure and public service development.

The Meranti Islands Regency government's initiatives to address infrastructural limitations and enhance public services have yielded favorable outcomes, despite ongoing substantial hurdles. Enhanced infrastructure development, technological utilization, and community empowerment are anticipated to expedite the enhancement of public service quality and diminish the disparity between remote regions and other areas. The longevity and efficacy of these initiatives are largely contingent upon the collaboration of the government, community, and business sector in addressing infrastructural challenges in Meranti Islands Regency.

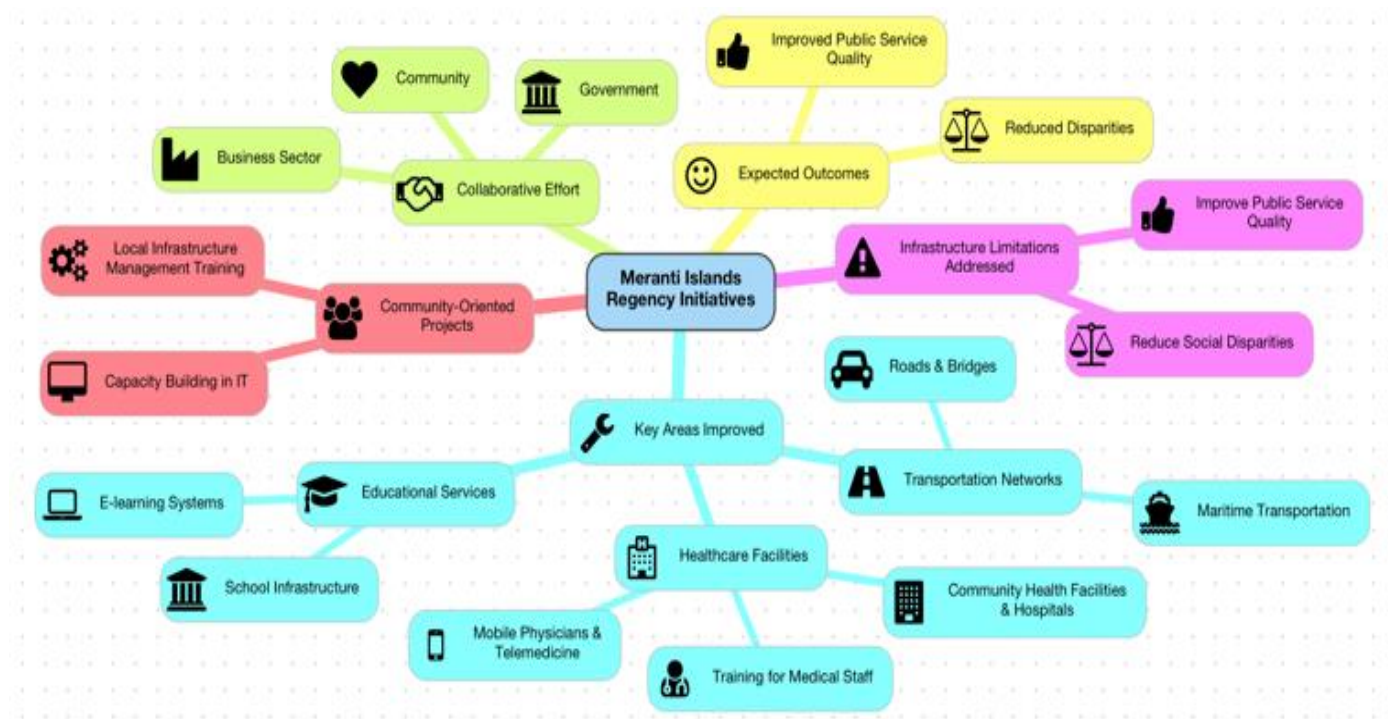


Figure 4. Research result local government strategy

#### 4.4 Theoretical discussion

This study's findings indicate that infrastructure deficiencies in Meranti Islands Regency substantially impact the quality and accessibility of public services, aligning with fundamental principles of public service theory. Public service philosophy underscores three fundamental principles: efficiency, accessibility, and equity. These three concepts serve as the criteria for assessing the efficacy of government services delivered to the population. Within the Meranti Islands Regency, these three concepts encounter significant obstacles due to inadequate infrastructure conditions [42].

The study's results indicate that infrastructure limitations impede the delivery of prompt and efficient services. In the health and education sectors, transportation delays and access challenges hinder service delivery, hence diminishing operational efficiency. This aligns with public service theory, which posits that efficiency is the primary metric for evaluating service quality, as infrastructural obstacles can result in the squander of time and resources [43].

The study's findings indicate that individuals in remote regions of the Meranti Islands face challenges in accessing basic services due to inadequate transportation and communication infrastructure. Public service philosophy emphasizes the significance of fair access for all societal

segments, irrespective of geographic location or socioeconomic position. In the Meranti Islands, restricted access to healthcare, education, and administrative services results in disparities in meeting individuals' fundamental needs, constituting a breach of the principle of accessibility in public service theory [44].

Justice, the third principle in public service philosophy, is undermined by the inequitable allocation of infrastructure in this region. Inhabitants of small islands encounter greater challenges in accessing sufficient education and healthcare services compared to those residing in urban centers. Equity in public services necessitates an impartial allocation of services to all citizens, without exception. The disparity in infrastructure distribution within Meranti Islands Regency results in inequitable services for the community (Figure 5).

This study affirms that infrastructure enhancements in Meranti Islands Regency are crucial for increasing efficiency, accessibility, and equity in public services. Government initiatives to mitigate infrastructure limitations must prioritize equitable and high-quality development, incorporating community engagement in both the planning and execution phases. Consequently, it is anticipated that all individuals, irrespective of their geographical location, will have access to satisfactory and high-quality public services.

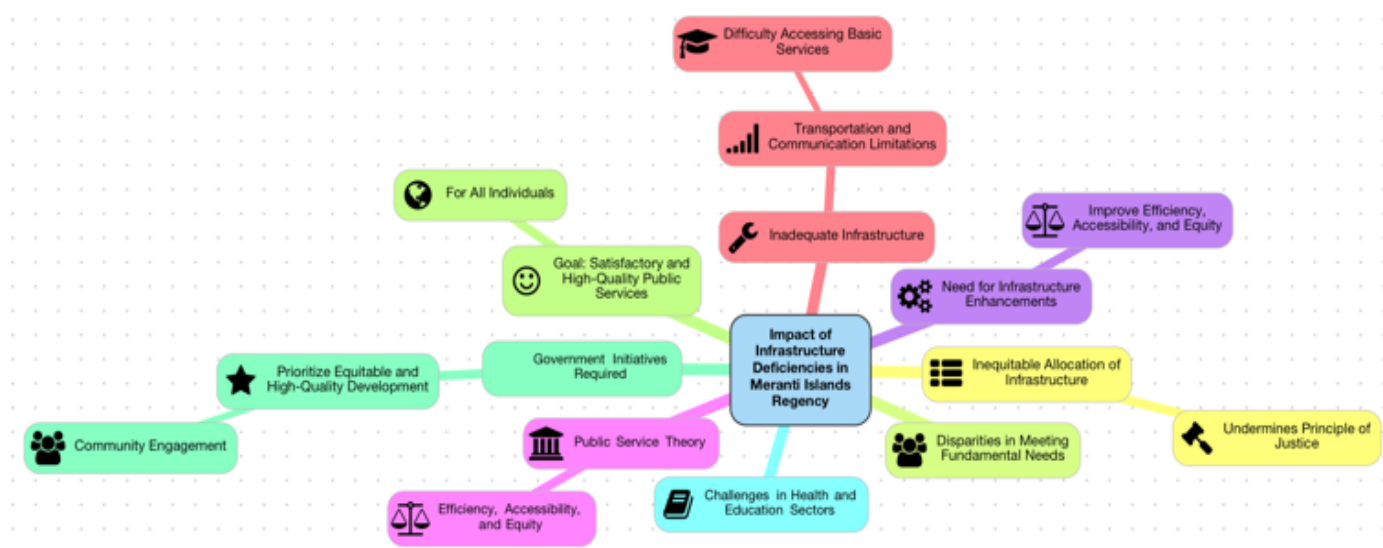


Figure 5. Research result theoretical discussion

#### 4.5 Implications for policies and strategies that can be adopted

The research findings and their alignment with public service theory indicate numerous significant implications for the development policies and strategies that the Meranti Islands Regency government should implement. An urgent strategy is the integrated development of fundamental infrastructure, emphasizing efficiency, accessibility, and equity. The government must guarantee that infrastructure development in Indonesia's outermost and distant islands prioritizes not only economic centers or accessible regions but also addresses the needs of residents in difficult-to-reach locations [45] (Figure 6).

A development policy utilizing an area-based approach must be implemented to guarantee that Indonesia's outermost and most distant regions receive prioritized attention in budget

and resource allocation. Enhancing transportation efficiency, upgrading health and education facilities, and establishing digital infrastructure to link remote communities with information centers and public services are crucial for improving accessibility. The expansion of digital technologies, including e-health and e-learning, is essential to facilitate access to services for the residents of the Meranti Islands, unimpeded by inadequate physical infrastructure [46, 47].

Furthermore, initiatives for community empowerment must be enhanced to guarantee active community involvement in the management and upkeep of local infrastructure. This aligns with the notion of equity in public service philosophy, which underscores the necessity of community involvement in the decision-making process concerning infrastructure development that impacts their lives. By implementing community training and capacity-building programs, the government may raise awareness of the significance of



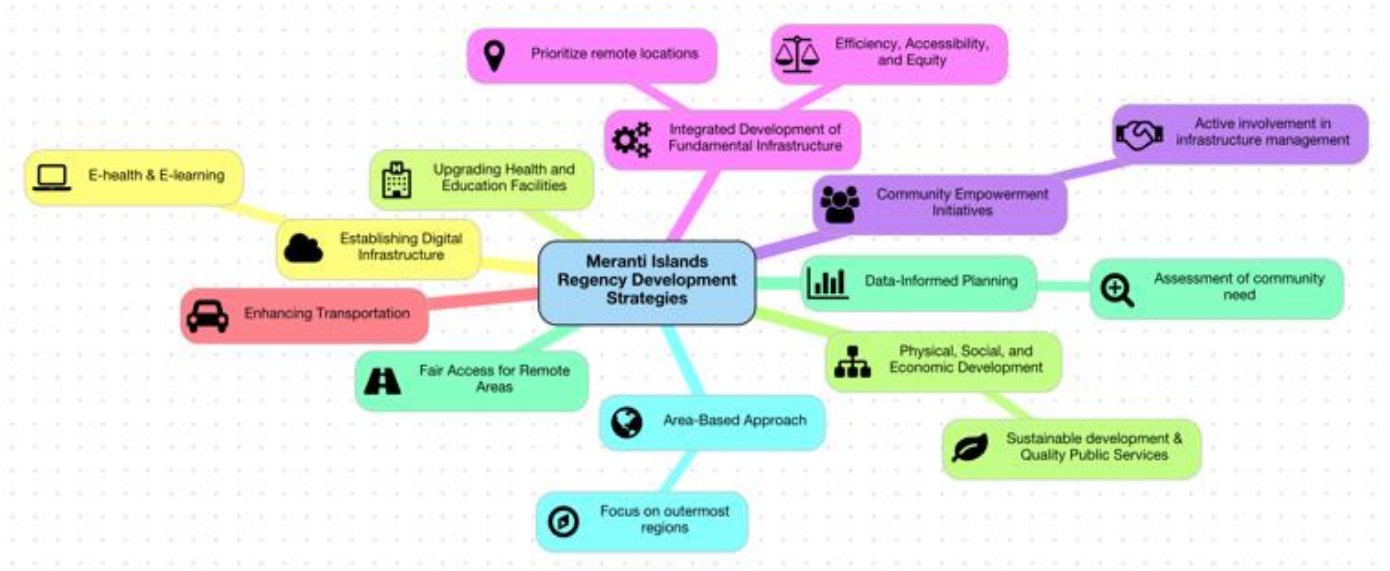
excellent infrastructure and motivate the community to actively participate in the maintenance and oversight of public services [48, 49].

Data-informed planning and assessment of community need must be fundamental to development policy. The government must do a thorough assessment of infrastructure needs in each region of Meranti Islands Regency to ensure that every policy enacted maximizes advantages for the community. A systematic and evidence-driven strategy for planning will empower the government to address infrastructure concerns more effectively and efficiently.

The implemented policies and plans must adopt a

comprehensive strategy that considers both physical development and the social and economic needs of the community. This would improve the efficiency, equity, and fairness of public services while fostering sustainable development in Meranti Islands Regency. By integrating the principles of public services into development projects, the government may ensure that all citizens, especially those in remote areas, have fair access to high-quality public services.

Here’s the table mapping the infrastructure deficiencies in the Meranti Islands Regency to the three core principles of public service theory: efficiency, accessibility, and equity (Table 1).



**Figure 6.** Research result implications for policies and strategies that can be adopted

**Table 1.** Mapping the infrastructure deficiencies in the meranti islands regency

Infrastructure Deficiency	Efficiency	Accessibility	Equity
Limited transportation	Increases travel time and costs, impeding service processes.	Hinders access to healthcare, education, and administrative services.	Creates inequality in access between remote areas and urban centers.
Inadequate healthcare facilities	Delays timely medical services and increases costs.	Challenges in accessing medical facilities in remote areas.	Limits healthcare services for residents of small islands.
Inadequate education facilities	Reduces efficiency in teaching and learning processes.	Hinders student access to schools, especially in remote areas.	Creates educational disparities between remote and urban areas.
Limited communication infrastructure	Impairs the efficiency of information dissemination and coordination.	Residents in remote areas struggle to obtain crucial information.	Exacerbates information gaps between wealthy and poor regions.
Inadequate administrative offices	Slows down administrative processes and reduces efficiency.	Impedes residents from accessing essential administrative services.	Increases difficulty for residents to obtain administrative services.

### 5. CONCLUSIONS

This study's primary findings indicate that the infrastructure deficit in Meranti Islands Regency is substantial, directly affecting the quality and accessibility of public services. Inadequate infrastructure development, particularly regarding transportation, healthcare, education, and information technology, has posed significant challenges for the community, especially for residents of distant areas. This restricted access hinders the community's ability to acquire essential services, including quality education, sufficient healthcare, and effective governmental administration. The unequal distribution of this infrastructure intensifies social and economic imbalances, resulting in unequal access to public

services that ought to be a fundamental entitlement for all citizens. The inadequate infrastructure in Meranti Islands Regency not only harms the residents but also obstructs regional development comprehensively.

Recommendations for Future Research: to enhance the findings, subsequent research may employ a quantitative methodology, such as surveys or statistical analysis, to assess the direct and quantifiable effects of infrastructure constraints on the quality of public services. A quantitative methodology will facilitate hypothesis testing with a more extensive and representative sample, yielding more robust findings concerning the correlation between infrastructure and the efficacy of public services in analogous regions.

Furthermore, an investigation into human resources (HR)



within the public service sector of Meranti Islands Regency is necessary to assess the capacity and competency of state machinery in addressing public service difficulties. Constraints in human resources can impact service quality, making the assessment of training requirements and capacity enhancement for local government personnel crucial for future service efficiency improvement. Additional research that incorporates infrastructure, human resources, and budget management will yield more thorough insights for developing sustainable policies tailored to local needs.

## ACKNOWLEDGMENT

The author expresses gratitude to the Director of the Research and Community Service Directorate of Riau Islamic University for funding this research in 2024.

## REFERENCES

- [1] Haemmerli, M., Powell-Jackson, T., Goodman, C., Thabrany, H., Wiseman, V. (2021). Poor quality for the poor? A study of inequalities in service readiness and provider knowledge in Indonesian primary health care facilities. *International Journal for Equity in Health*, 20(1): 1-12. <https://doi.org/10.1186/s12939-021-01577-1>
- [2] Phiri, J., Ataguba, J.E. (2014). Inequalities in public health care delivery in Zambia. *International Journal for Equity in Health*, 13: 1-9. <https://doi.org/10.1186/1475-9276-13-24>
- [3] Bahall, M. (2018). Health equity and access to health care in Trinidad and Tobago. *World Journal of Public Health*, 3(3): 83-92. <https://doi.org/10.11648/j.wjph.20180303.13>
- [4] Macharia, P.M., Ouma, P.O., Gogo, E.G., Snow, R.W., Noor, A.M. (2017). Spatial accessibility to basic public health services in South Sudan. *Geospatial Health*, 12(1): 510. <https://doi.org/10.4081/gh.2017.510>
- [5] Jin, C., Cheng, J., Lu, Y., Huang, Z., Cao, F. (2015). Spatial inequity in access to healthcare facilities at a county level in a developing country: A case study of Deqing County, Zhejiang, China. *International Journal for Equity in Health*, 14: 1-21. <https://doi.org/10.1186/s12939-015-0195-6>
- [6] Eriksson, K. (2012). Self-service society: Participative politics and new forms of governance. *Public Administration*, 90(3): 685-698. <https://doi.org/10.1111/j.1467-9299.2011.01996.x>
- [7] Lowther-Payne, H.J., Ushakova, A., Beckwith, A., Liberty, C., Edge, R., Lobban, F. (2023). Understanding inequalities in access to adult mental health services in the UK: A systematic mapping review. *BMC Health Services Research*, 23(1): 1042. <https://doi.org/10.1186/s12913-023-10030-8>
- [8] Queiroz, V.C., Carvalho, R.C.D., Heller, L. (2020). New approaches to monitor inequalities in access to water and sanitation: The SDGs in Latin America and the Caribbean. *Water*, 12(4): 931. <https://doi.org/10.3390/w12040931>
- [9] He, W.J., Lai, Y.S., Karmacharya, B.M., Dai, B.F., Hao, Y.T., Xu, D.R. (2018). Geographical heterogeneity and inequality of access to improved drinking water supply and sanitation in Nepal. *International Journal for Equity in Health*, 17: 1-14. <https://doi.org/10.1186/s12939-018-0754-8>
- [10] Siqueira-Gay, J., Giannotti, M., Sester, M. (2019). Learning about spatial inequalities: Capturing the heterogeneity in the urban environment. *Journal of Cleaner Production*, 237: 117732. <https://doi.org/10.1016/j.jclepro.2019.117732>
- [11] Bairros, F.S.D., Meneghel, S.N., Dias-da-Costa, J.S., Bassani, D.G., Menezes, A.M.B., Gigante, D.P., Olinto, M.T.A. (2011). Racial inequalities in access to women's health care in southern Brazil. *Cadernos de Saúde Pública*, 27: 2364-2372. <https://doi.org/10.1590/s0102-311x2011001200008>
- [12] Sønderkov, M., Rønning, R. (2021). Public service logic: An appropriate recipe for improving serviceness in the public sector? *Administrative Sciences*, 11(3): 64. <https://doi.org/10.3390/admsci11030064>
- [13] Osborne, S.P., Powell, M., Cui, T., Strokosch, K. (2021). New development: 'Appreciate-engage-facilitate'-the role of public managers in value creation in public service ecosystems. *Public Money & Management*, 41(8): 668-671. <https://doi.org/10.1080/09540962.2021.1916189>
- [14] Osborne, S.P., Powell, M., Cui, T., Strokosch, K. (2022). Value creation in the public service ecosystem: An integrative framework. *Public Administration Review*, 82(4): 634-645. <https://doi.org/10.1111/puar.13474>
- [15] Mohd, S., Azhar, N.A.Z.M., Shakil, N.S.M., Senadjki, A., Iran, M.D.G. (2018). Pockets of poverty in the northern states of Malaysia. In *Malaysian Journal of Society and Space. Geografia*, 14(4): 238-249. <https://doi.org/10.17576/geo-2018-1404-19>
- [16] Osborne, S.P., Strokosch, K., Radnor, Z. (2018). Co-Production and the Co-Creation of Value in Public Services. <https://doi.org/10.4324/9781315204956-3>
- [17] Dick-Sagoe, C., Asare-Nuamah, P., Dick-Sagoe, A.D. (2021). Public choice and decentralised healthcare service delivery in Lesotho: Assessing improvement and efficiency in service delivery. *Cogent Social Sciences*, 7(1): 1969737. <https://doi.org/10.1080/23311886.2021.1969737>
- [18] Maulida, L., Rarasati, A.D. (2019). Community involvement analysis for sustainable rural infrastructure development. In *MATEC Web of Conferences. EDP Sciences*, 276: 02003. <https://doi.org/10.1051/mateconf/201927602003>
- [19] Hodgkinson, I.R., Hannibal, C., Keating, B.W., Chester Buxton, R., Bateman, N. (2017). Toward a public service management: past, present, and future directions. *Journal of Service Management*, 28(5): 998-1023. <https://doi.org/10.1108/JOSM-01-2017-0020>
- [20] Gustafsson, A., Högstöm, C., Radnor, Z., Friman, M., Heinonen, K., Jaakkola, E., Mele, C. (2016). Developing service research-paving the way to transdisciplinary research. *Journal of Service Management*, 27(1): 9-20. <https://doi.org/10.1108/JOSM-03-2015-0098>
- [21] Ertas, N. (2016). Millennials and volunteering: Sector differences and implications for public service motivation theory. *Public Administration Quarterly*, 40(3): 517-558. <https://doi.org/10.1177/073491491604000305>
- [22] Gan, L., Ren, H., Xiang, W., Wu, K., Cai, W. (2021). Nonlinear influence of public services on urban housing

- prices: A case study of China. *Land*, 10(10): 1007. <https://doi.org/10.3390/land10101007>
- [23] Liu, R., Du, M., Shen, J., Wang, X., Jiang, Y. (2021). Research on geriatric care for equalizing the topological layout of health care infrastructure networks. *Journal of Healthcare Engineering*, 2021(1): 8306479. <https://doi.org/10.1155/2021/8306479>
- [24] Navot, D., Reingewertz, Y., Cohen, N. (2016). Speed or greed? High wages and corruption among public servants. *Administration & Society*, 48(5): 580-601. <https://doi.org/10.1177/0095399715623313>
- [25] Mastracci, S.H. (2022). Dirty work and emotional labor in public service: Why government employers should adopt an ethic of care. *Review of Public Personnel Administration*, 42(3): 537-552. <https://doi.org/10.1177/0734371X21997548>
- [26] Osborne, S.P., Nasi, G., Powell, M. (2021). Beyond co-production: Value creation and public services. *Public Administration*, 99(4): 641-657. <https://doi.org/10.1111/padm.12718>
- [27] Kim, Y.J., Kim, E.S. (2016). Exploring the interrelationship between public service motivation and corruption theories. In *Evidence-based HRM: A Global Forum for Empirical Scholarship*. Emerald Group Publishing Limited, 4(2): 181-186. <https://doi.org/10.1108/EBHRM-12-2015-0047>
- [28] Liu, S., Luo, W., Li, X., Li, Y. (2023). Research on policy implementation of government purchasing environmental public services. In *2023 3rd International Conference on Public Management and Intelligent Society (PMIS 2023)*. Atlantis Press, pp. 786-794. [https://doi.org/10.2991/978-94-6463-200-2\\_81](https://doi.org/10.2991/978-94-6463-200-2_81)
- [29] Adi, S., Mawarni, D., Fauzia, D.R. (2023). Interest of public health science students of state university of Malang to work in remote areas, borders, and islands. *The Indonesian Journal of Public Health*, 8(2): 31-38. <http://doi.org/10.17977/um044v8i22023p31-38>
- [30] Fadilaha, M., Tarofderb, A.K., Ferdousb, S.M., Syakuraha, R.A. (2019). Investigating crucial factors affecting pharmacy students' intention to work in rural area: A quantitative approach. *Management Science Letters*, 9: 2157-2168. <https://doi.org/10.5267/j.msl.2019.6.016>
- [31] Abuelhaija, Y., Mustafa, A., Al-Bataineh, H.A., Alzaq, M., Mustafa, A., Bawa'neh, F., Alomari, M., Alkhader, A. (2023). A systematic review on the healthcare system in Jordan: Strengths, weaknesses, and opportunities for improvement. *World Journal of Advanced Research and Reviews*, 18(3): 1393-1396. <https://doi.org/10.30574/wjarr.2023.18.3.1254>
- [32] Maganti, R.K., Rajaravichandran, A., Patel, V.K., Suraparaju, S., Zahid, Z., Maganti, R.K., Patel, V. (2024). A retrospective study to evaluate discrepancies in urban versus rural mortality due to brain cancer in the United States. *Cureus*, 16(5). <https://doi.org/10.7759/cureus.60636>
- [33] Baljepally, V.S., Wilson, D.C., Wilson, D. (2021). Gender-based disparities in rural versus urban patients undergoing cardiac procedures. *Cureus*, 13(7): e16672. <https://doi.org/10.7759/cureus.16672>
- [34] Resch, K., Schritteser, I. (2023). Using the Service-Learning approach to bridge the gap between theory and practice in teacher education. *International Journal of Inclusive Education*, 27(10): 1118-1132. <https://doi.org/10.1080/13603116.2021.1882053>
- [35] Zhang, W., Wang, Y., Yang, L., Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13(3): 55. <https://doi.org/10.3390/jrfm13030055>
- [36] Wu, D., Seibold, S., Ellwood, M.F., Chu, C. (2022). Differential effects of vegetation and climate on termite diversity and damage. *Journal of Applied Ecology*, 59(12): 2922-2935. <https://doi.org/10.1111/1365-2664.14282>
- [37] Kayaarslan, B., Güzeloglu, G.B.T., Onat, Y.A., Sonsel, O.B. (2022). Emergency remote teaching during the COVID-19 pandemic: The case of music teachers in Turkey and England. *International Journal of Education and Literacy Studies*, 10(2): 57-64. <https://doi.org/10.7575/aiac.ijels.v.10n.2p.57>
- [38] Malik, V.S., Singal, K., Singh, M., Gupta, V., Singh, M. (2022). The perceived need for evidence-based COVID-19 management and tele-education in the north-east region of India: A cross-sectional survey. *Journal of Community Health*, 47(6): 943-948. <https://doi.org/10.1007/s10900-022-01076-6>
- [39] Dost, S., Hossain, A., Shehab, M., Abdelwahed, A., Al-Nusair, L. (2020). Perceptions of medical students towards online teaching during the COVID-19 pandemic: A national cross-sectional survey of 2721 UK medical students. *BMJ Open*, 10(11): e042378. <https://doi.org/10.1136/bmjopen-2020-042378>
- [40] Carlo, D.P., Azhar, A., Sivabalan, T. (2024). Underlying school dropouts issues in Sarawak. *International Journal of Business & Society*, 25(1). <https://doi.org/10.33736/ijbs.6923.2024>
- [41] Sutomo, M., Siregar, E.S. (2022). Teacher professional development in Indonesia's remote areas with driven educational philanthropic institutions. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 6(3): 500-509. <https://doi.org/10.23887/jppp.v6i3.55742>
- [42] Lanin, D., Hermanto, N. (2019). The effect of service quality toward public satisfaction and public trust on local government in Indonesia. *International Journal of Social Economics*, 46(3): 377-392. <https://doi.org/10.1108/IJSE-04-2017-0151>
- [43] Mutiarin, D., Sudiro, R., Misran, M. (2021). Design of e-public service in realizing agile government based on information technology: Case study in Indonesia. In *Iapa Proceedings Conference*, pp. 17-32. <https://doi.org/10.30589/proceedings.2021.512>
- [44] Ravšelj, D., Umek, L., Todorovski, L., Aristovnik, A. (2022). A review of digital era governance research in the first two decades: A bibliometric study. *Future Internet*, 14(5): 126. <https://doi.org/10.3390/fi14050126>
- [45] Gulnaz, K., Olga, P., Tatiana, B., Nikita, P., Konstantin, L. (2023). International and Russian experience in applying evidential policy instruments in the sphere of public administration: Issues of continuity in sectoral balance. *Russian Law Journal*, 11(10S): 582-595. <https://doi.org/10.52783/rj.v11i10s.1759>
- [46] Bosworth, G., Annibal, I., Carroll, T., Price, L., Sellick, J., Shepherd, J. (2016). Empowering local action through neo-Endogenous development; The case of leader in England. *Sociologia Ruralis*, 56(3): 427-449. <https://doi.org/10.1111/soru.12089>
- [47] Tashobya, C.K., da Silveira, V.C., Ssengooba, F.,

- Nabyonga-Orem, J., Macq, J., Criel, B. (2014). Health systems performance assessment in low-income countries: Learning from international experiences. *Globalization and Health*, 10: 1-19. <https://doi.org/10.1186/1744-8603-10-5>
- [48] Jeannet, A., Ademmer, E., Ruhs, M., Stöhr, T. (2019). What asylum and refugee policies do Europeans want? Evidence from a cross-national conjoint experiment. In SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3489268>
- [49] Kreps, S.E., Kriner, D.L. (2020). Model uncertainty, political contestation, and public trust in science: Evidence from the COVID-19 pandemic. *Science Advances*, 6(43): eabd4563. <https://doi.org/10.1126/sciadv.abd4563>