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ANALYSIS OF THE INFLUENCE OF ROAD HANDLING BASED ON TECHNICAL AND POLICY FACTORS ON PROVINCIAL ROADS IN SIDOARJO

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ABSTRACT

Provincial roads in East Java, especially in the Sidoarjo area, play a strategic role in supporting economic and transportation systems. However, their varying conditions—from mild to severe damage—alongside increasing traffic volumes and limited budgets, present major challenges in ensuring infrastructure quality. This study aims to analyze the influence of technical and policy factors on road handling prioritization in East Java, focusing on the Sidoarjo region. Using a quantitative approach, the study involved distributing structured questionnaires to policy stakeholders and analyzing both primary and secondary data through a weighted criteria matrix. The technical factors assessed include road width, traffic volume (LHR), degree of saturation, and road damage. Policy factors include alignment with the Regional Development Presidential Regulation, Regional Spatial Planning (RTRW), and budgeting cost. Results show that budgeting is the most influential policy factor (37%), followed by Presidential Regulation (33%) and RTRW (30%). These findings suggest that fiscal capability significantly drives road maintenance decisions. The study proposes a data-driven framework to support more efficient, transparent, and sustainable road management practices, which may be used by policymakers in infrastructure planning across other regions.

INTRODUCTION

Transportation roads have a very important role in the development of a region. Good roads not only improve connectivity and accessibility, but also support economic growth, improve people's quality of life, and strengthen national integration. Therefore, road development and maintenance must be a top priority in national development.

East Java Provincial Roads are the backbone of connectivity between regions and the center of economic growth in East Java. To support the smooth connectivity, East Java Province carries out provincial road maintenance through the Regional Apparatus Organization (OPD) which has the duty and authority to manage and maintain provincial roads, namely the East Java Provincial Highway Public Works Office. The agency has the duty and authority to maintain 1,671.57 km of provincial roads in accordance with the Decree of the Governor of East Java no. 188/210/KPTS/013/2023 concerning the Determination of the Status of Road Sections as Provincial Roads. The Public Works Department of Highways manages and carries out road maintenance through the Technical Implementation Unit which is divided into 11 regions where each UPT covers its respective areas, one of which is UPT Surabaya.

The Road and Bridge Management Unit is a technical implementing element of the Service that carries out operational technical tasks in the field, led by the Head of the Unit who is located below and responsible to the Head of the Service (PU, 2019). The Road and Bridge Management Unit itself has the task of carrying out some of the duties of the Service in handling, managing roads and bridges, administration, and community services. UPT Surabaya serves provincial roads in the Surabaya City area, Sidoarjo Regency, Lamongan Regency, and Gresik Regency. The total length of roads covered by UPT Surabaya is 147.39 Km. areas that often experience congestion

The government through the agencies appointed as road operators needs funds to maintain the stability of the road itself. The process of budgeting funds for the implementation of the road goes through

the process of proposing, discussing and determining the budget. Priority determination through policy is the decision-making process regarding which proposed section to be handled. This process involves evaluating alternatives, considering resource limitations, and selecting options that are considered most effective and efficient to achieve policy objectives. Due to the length of the process, prioritization takes a long time.

The current situation on provincial roads in the Sidoarjo area, the condition of the roads varies, ranging from light to severe damage, is a serious obstacle to the smooth running of transportation and economic activities. The traffic jam due to the congestion of vehicles passing through the road is also an obstacle to providing driving comfort for road users. Limited maintenance budgets and increasing traffic burdens further exacerbate this problem. Therefore, determining the priority of road handling is a crucial step to ensure the effectiveness of the use of the budget and optimize the benefits for the community.

Provincial roads in Sidoarjo play a critical role in supporting regional transportation and economic activity. However, inconsistent road conditions—from minor wear to severe damage—combined with limited maintenance budgets and escalating traffic loads, have created substantial challenges in ensuring efficient road infrastructure. The absence of a structured, data-driven prioritization model that incorporates both technical and policy factors has led to delays and inefficiencies in road maintenance decision-making processes, hindering overall regional development.

Effective road infrastructure is vital for regional connectivity, economic mobility, and public welfare. In East Java, especially Sidoarjo, deteriorating provincial roads pose obstacles to traffic flow, safety, and logistics, with increasing congestion and maintenance demands. Given the strategic importance of these roads in supporting major growth areas—such as Gerbangkertosusila and tourism zones—establishing objective and systematic road handling priorities has become an urgent necessity.

Moreover, the lack of a decision-making framework that integrates policy alignment (such as regional development policies and spatial planning) with on-the-ground technical assessments (e.g., road damage, traffic density) leads to inefficient budgeting and maintenance practices. A structured prioritization method not only helps optimize resource allocation but also supports the formulation of long-term, sustainable road development strategies aligned with government planning instruments.

Multiple studies have employed Multi-Criteria Decision Analysis (MCDA) to determine road maintenance priorities. Alijoyo et al. (2009) and Setiawan (2019) introduced frameworks integrating risk-based weighting and regional development alignment to rank road segments. Their work emphasizes the need for harmonizing budget availability with infrastructure demands, offering a theoretical basis for strategic prioritization.

Aziz and Dewanto (2022) applied the AHP (Analytical Hierarchy Process) method in Kediri Regency to rank road handling programs based on expert judgment. Similarly, Baihaqi (2022) highlighted how local stakeholder input can enhance priority-setting processes. These studies demonstrate that combining technical measurements with policy relevance is essential, but few offer scalable applications for broader provincial contexts.

Ardhiarini (2016) focused on identifying road maintenance needs aligned with the national strategic plan. While this study introduced valuable planning benchmarks, it lacked specific mechanisms for operationalizing them at the regional level. Collectively, past research validates the importance of integrated decision tools, but often stops short of balancing real-time technical road conditions with overarching government policies.

Despite prior applications of MCDA and AHP in road prioritization, few studies provide a holistic, empirically grounded model that combines both policy-driven priorities and real-time technical metrics within a provincial context like Sidoarjo. There remains a gap in translating high-level strategic plans into actionable, localized road maintenance priorities based on a quantitative weighting of both policy and technical criteria.

This study introduces an integrated prioritization framework that combines policy influence (such as Presidential Development Regulations, Spatial Planning, and Budgeting Policies) with technical road data (road width, condition, traffic volume, saturation level). By quantifying and weighting these factors through stakeholder input and comparative matrix analysis, the study provides a data-driven, region-specific tool for prioritizing provincial road handling—novel within the East Java context.

This study aims to analyze the weight of the influence of various factors in road handling, especially those that include technical factors and policy factors, in order to understand the contribution of each factor to the success of road handling. Through this approach, the research is expected to provide strategic guidance for decision-making in determining road management priorities more effectively and efficiently based on relevant technical and policy considerations. The results of the research are expected to be recommendations for local governments, especially the East Java Provincial Public Works Office, in formulating road management policies on provincial roads, especially in 3 regions, namely Surabaya

Regency, Surabaya City, and Batu City. In addition, the expected benefits of this research are to help the accessibility of the community as road users so that they can move smoothly.

METHOD

This study uses a quantitative approach with a method of analyzing the weight of the influence of each criterion from technical factors and policy factors. The subjects of the study were stakeholders in road handling at the East Java Provincial Public Works Office, including echelon officials, regional stakeholders, and employees of the Surabaya Road and Bridge Management UPT. The location of the research is on a provincial road in Sidoarjo, with an implementation time of two months, including observation surveys, data collection, and data analysis.

The research data consists of primary data and secondary data. Primary data was obtained through the distribution of questionnaires to stakeholders to determine the level of importance and weight of criteria on a scale of 1–6, where the total weight of all criteria must reach 100. Secondary data includes information on road sections based on the Governor's Decree on the Determination of Provincial Road Status in 2023, Average Daily Traffic (LHR) data in 2023, road condition data from the UPT Surabaya Region in 2024, and development priority policies from the East Java Public Works and Highways Office Strategic Plan 2019–2024.

Data analysis techniques are carried out systematically. The first step is to establish principles, criteria, and indices for the analysis, including traffic density, traffic volume, road conditions, cost needs, and development priority policies. Furthermore, primary data from the questionnaire were processed to obtain the importance of each criterion through a *pairwise comparison matrix* and consistency testing. The average weight of each criterion was calculated to obtain an overall score, which was then analyzed along with secondary data to determine alternative road management priorities.

The results of the analysis produced data-based road handling priorities and measurable criteria, so that this research is expected to make a strategic contribution to decision-making related to road infrastructure management in East Java Province, especially the Sidoarjo area.

RESULTS AND DISCUSSION

Development Priority Policy Data

This priority policy data is in accordance with the strategic plan of the Highway Public Works Office 2019 – 2024 Amendment II. In the strategic plan, it is stated that the East Java Provincial Public Works Highway Office divides the priorities for handling road sections according to the designation of strategic areas, namely:

Based on the Strategic Plan Study of Ministries / Institutions related to development (Presidential Decree Number 80 of 2019)

a. Provincial roads that support access to the Gerbangkertosusila Priority Area and its surroundings:
   - Bts. Regency Sidoarjo - Bts. Mojosari City (Link. 157)
   - Bts. Gresik Regency – Mlirip (Link. 161)
   - Bts. Regency Sidoarjo – Mojokerto (Link. 162)
   - Mojokerto – Deck (Link. 163)
   - Jln. Wahab Hasbullah (Link. 168.11K)
   - Jln. Hasyim Ashari (Link. 168.12K)
   - Bts. Jombang City – Pulorejo (Link. 169)
b. Provincial roads that support access to the Madura and Islands Region as a Support for the Gerbangkertosusila Area and its surroundings:
   - Bts. Kota Sampang – Ketapang (Link. 228)
   - Bts. Sampang City – Omben (Link. 229)
   - Drink - Bts. Pamekasan Regency (Link. 230)
   - Bts. Sampang Regency - Bts. Pamekasan City (Link. 232)
c. Provincial roads that support access to the Ijen Ring Area as a Support for the Bromo - Tengger - Semeru Area and its surroundings:
   - Bts. Pasuruan City – Kejayan (Link. 195)
   - Kejayan – Tosari (Link. 196)
   - Copyright © 2019 Copyright © 2019 Copyright © 2019 Copyright © 2019 Copyright © 2019
   - Copyright © 2019 Copyright © 2019 Copyright © 2019 Copyright © 2019 Copyright © 2019 Copyright 

d. Provincial roads that support access to the Selingkar Wilis Priority Area and its surroundings:
   - Arjosari - Purwantoro (Bts. Prov. Central Java) (Link. 137)
   - Wareng – Kemukus (Link. 138)
e. Provincial roads that support access to the South Cross Road and its surroundings:
   - Bts. Malang City – Turen (Link. 189)

Based on the Regional Spatial Plan Study

a. Intercity Freeway/Toll Road Development Plan:
   - Kertosono – Kediri (+ 40.50 km) (Presidential Decree No. 80/2019)
   - Manyar – Tuban (+65.00 km)
   - Demak – Tuban (+174.00 km)
   - Mojokerto – Gempol (+38.71 km) (Presidential Decree No. 80/2019)
   - Malang – Kepanjen (+ 24.00 km) (Presidential Decree No. 80/2019)
   - Singosari – Batu (+00.00 km)
   - Suramadu - Tanjung Bulupandan (+ 15.30 km) (Presidential Decree No. 80/2019)
   - Sukorejo - Batu (+ 40.00 km)
   - Batu - Kediri (+ 70.00 km)
   - Kediri - Tulungagung (+ 20.35 km) (Presidential Decree No. 80/2019)
   - Probolinggo - Lumajang (+ 32.00 km) (Presidential Decree No. 80/2019)
   - Juanda - Gempol (+ 46.00 km)
   - Ngawi - Bojonegoro - Tuban - Lamongan - Gresik (+ 186.80 km) (Presidential Decree No. 80/2019)
   - Krian - Pucukan (+ 00.00 km)
   - Mojokerto - Lamongan (+00.00 km)
   - Situbondo - Bondowoso - Jember (+ 65.00 km)
   - Lumajang - Jember (+56.32 km)
   - Jember - Banyuwangi (+105.82 km)
   - Lumajang - Kepanjen (+ 00,00 km)
   - Kepanjen – Tulungagung (+ 00.00 km)
   - Tulungagung - Trenggalek (+ 00,00 km)
   - Trenggalek – Pacitan (+00.00 km)
   - Pacitan - Yogyakarta (+ 00.00 km)
   - Pasuruan - Sukorejo (+00.00 km)
b. Inner City Freeway/Toll Road in accordance with Presidential Regulation No. 80/2019:
   - Waru (Aloha) - Wonokromo - Tanjung Perak (+ 18.20 km)
   - Juanda Airport - Tanjung Perak (+ 23.00 km)
c. Primary Collector Road Network 2 (JKP-2) in East Java Province
   - Nganjuk - Bojonegoro - Ponco - Jatirogo - Bts. Central Java
   - Tuban – Bojonegoro - Nganjuk
   - Poncho - Pakah
   - Kandangan - Pulorejo - Jombang - Ploso - Babat
   - Gedek - Lamongan
   - Mojokerto - Mlirip - Legundi - Driyorejo - Joyoboyo
   - Turen - Malang - Batu - Kandangan - Pare - Kediri
   - Batu - Pacet - Mojosari - Krian By Pass
   - Sidoarjo - Krian
   - Karanglo - Pendem
   - Pare - Pulorejo
   - Pandaan – Tretes
   - Copyright © 2019 Copyright © 2019 Copyright © 2019
   - The Importance of Teaching - Teaching
   - Kejayan - Tosari
   - Walk - Kencong - Pity - Balung - Ambulu - Mangli
   - Poor Shepherd - Poor Shepherd
   - Jember - Bondowoso - Situbondo

-
- Blitar - Srengat - Kediri - Nganjuk
- Arjosari - Nawangan
- Pacitan - Arjosari – Dengok
- Wareng - Mukus
- Maospati - Magetan - Cemorosewu
- Ponorogo - Biting
- Ngantru – Srengat

d. Primary Collector Road Network 3 (JKP-3) in East Java Province
- Along - Garden
- Mojokerto - Gedek - Bts. Kab. Jombang/Bts. Kab. Mojokerto - Ploso
- Grobogan - Bts.Kab.Jember/Bts.Kab.Lumajang - Pondokdalem
- Balong - Rambipuji
- Maesan - Kalisat - Sempolan
- The Devil Wears Prada - Goodbye
- The Battle of the Bulge - O'Neill
- Five Years of Silence - A Five-Year-Old Story
- Benculuk - Glagah Agung - Grajagan
- The Great Barrier Reef - Dunkin' Donuts
- Sampang - Ketapang
- Sampang - Drink – Pamekasan
- Pamekasan - Sotabar
- The Walking Dead - The Beach Boys

e. Provincial strategic road network:
- Dengok – Pacitan (supporting the border areas of Golekpawon / Ponorogo, Trenggalek, Pacitan, Wonogiri, Pawonsari / Pacitan, Wonogiri, Wonosari and Karismapawirogo / Karanganyar, Wonogiri, Sragen, Magetan, Pacitan, Ngawi, Ponorogo)
- Ponorogo - Biting (Bts. Prov. Central Java) (supporting the border areas of Golekpawon / Ponorogo, Trenggalek, Pacitan, Wonogiri and Karismapawirogo / Karanganyar, Wonogiri, Sragen, Magetan, Pacitan, Ngawi, Ponorogo)
- Maospati – Magetan (supporting the border areas of Karismapawirogo / Karanganyar, Wonogiri, Sragen, Magetan, Pacitan, Ngawi, Ponorogo)
- Bojonegoro - Nganjuk - Guyangan - Simpang Empat Candi – Kediri (supporting the Selingkarwilis area, the golden triangle / Lamongan, Tuban, Bojonegoro, natural gas / Exxon and Kediri Airport)
- Pakah – Ponco (supporting the border areas of Ratubangnegoro / Blora, Tuban, Rembang, Bojonegoro, Golden Triangle / Lamongan, Tuban, Bojonegoro and natural gas)
- Tripe – Jombang (supporting the golden triangle area / Lamongan, Tuban, Bojonegoro)
- Joyoboyo - Driyorejo - Legundi - Mlirip - Mojokerto - Gedek - Ploso (supporting the Gerbangkertasusila area)
- Krian By Pass - Krian – Mojosari (supports Gerbangkertasusila area)
- Sidoarjo – Krian (supporting the Gerbangkertasusila area)
- Karanglo – Batu (supporting the BTS area, Malangraya)
- Turen - Malang - Batu - Bts. Kediri Regency (supports the BTS area, Malangraya)
- Pandaan – Tretes (supporting the geothermal area of Mount Welirang, Mount Arjuno)
- Pasuruan - Kejayan – Tosari (supporting the BTS area)
- Kejayan – Purwosari (supporting the BTS area)
- Purwodadi – Nongkojajar (supporting the BTS area)
- Lumajang – Kencong – Kasian – Balung – Rambipuji (supporting tourism/beach areas and puger cement factory plans)
- Jember - Arjasa - Maesan - Bondowoso - Situbondo (supporting the Mount Ijen area)
- Kulon Tile - Wonorekso – Rogojampi (supports the Mount Ijen area and the air port)
- Jajag - Simpang Lima Peran – Pasanggaran (supporting the Mount Ijen area)

From the data of the Strategic Plan, several provincial sections in the Sidoarjo area are included in the handling priority, both as listed sections and as supporting sections. Here's a recap for each section

Table 1. Data on Provincial Roads in Sidoarjo

Yes	Field Name	Link	Segment Length
			Miles
1	Krian By Pass (Simpang Empat) – Krian (Simpang Lima)	68	1,3
2	Copyright © 2019 Mojokerto District. All Rights Reserved.	69	7,59
3	Stuttgart	070.11K	3,42
4	Bts. Sidoarjo City - Krian	70	14,90
5	Along - Garden	71	1,44
6	Mlirip – Bts. Mojokerto Regency	72	0,64
		Total	29,32

Source: Processed Researcher, 2024

LHR

LHR data for the Sidoarjo provincial section was obtained from the latest data belonging to the East Java Provincial Public Works and Highways Office which is the result of a traffic survey in 2023, with the following details per section:

Table 2. LHR 2023 Total Data

No	Field Name	Link	Total LHR (kend/day)
1	Krian By Pass (Simpang Empat) – Krian (Simpang Lima)	068	135.553
2	Copyright © 2019 Mojokerto District. All Rights Reserved.	069	147.804
3	Stuttgart	070.11K	179.788
4	Bts. Sidoarjo City - Krian	070	166.050
5	Along - Garden	071	93.779
6	Mlirip – Bts. Mojokerto Regency	072	70.724

Source: Processed Researcher, 2024

Table 3. LHR Conversion Results (smp/day)

				Link					
	Golongan		Coeficin	068	069	070.11K	070	071	072
Type of vehicle (junior high school/day)	1	SM	0,5	32.272	32.510	35.721	38.900	21.540	12.543
	2	MP	1	5.592	6.614	21.870	8.776	6.194	4.953
	3	MP	1	1.702	3.075	1.007	1.979	994	467
	4	MP	1	563	369	1.910	172	468	1.589
	5a	KS	1,3	33	34	61	69	65	35
	5b	BB	1,5	15	178	151	147	280	200
	6a	KS	1,3	1.378	3.998	1.354	2.206	337	3.490
	6b	KS	1,3	340	284	1.278	180	280	1.263
	7a	TB	2,5	191	4.654	1.017	659	186	1.211
	7b	TB	2,5	58	102	92	46	94	1.256
	7c	TB	2,5	18	476	132	104	33	242
	Total			42.162	52.295	64.592	53.238	30.472	27.249

Source: Processed Researcher, 2024

Degree of Saturation (DS)

To calculate the degree of saturation (DS) in 2024, we will use a comparison between the average daily traffic volume (LHR) and the road capacity. In other words, we will divide the total number of vehicles

passing in an hour in 2024 by the maximum number of vehicles that can pass in a day on those roads without causing severe congestion.

Table 4. Results of Saturation Degree (DS) Calculation

No	Field Name	Link	Capacity (C)	LHR	DS
			junior high school/hour	junior high school/hour	
1	Krian By Pass (Simpang Empat) – Krian (Simpang Lima)	68	2032	1756	0,86
2	Copyright © 2019 Mojokerto District. All Rights Reserved.	69	3013	2178	0,72
3	Stuttgart	070.11K	3129	2691	0,86
4	Bts. Sidoarjo City - Krian	70	2662	2218	0,83
5	Along - Garden	71	3010	1269	0,42
6	Mlirip – Bts. Mojokerto Regency	72	2335	1135	0,49

Source: Processed Researcher, 2024

Road Conditions

The road condition data used is road condition data based on the results of the survey of UPT PJJ Surabaya. The following road condition data is listed in the table.

Table 5. Road Condition Data in 2024

No	Streets	Damage Condition (km)			
		Good	Keep	Minor Damage	Severely Damaged
1	Krian By Pass (Simpang Empat) – Krian (Simpang Lima)	1,13	0,20	0,00	0,00
2	Copyright © 2019 Mojokerto District. All Rights Reserved.	3,50	3,99	0,00	0,10
3	Stuttgart	2,22	1,10	0,00	0,00
4	Bts. Sidoarjo City - Krian	11,70	3,20	0,00	0,00
5	Along - Garden	1,04	0,40	0,00	0,00
6	Mlirip – Bts. Mojokerto Regency	0,34	0,30	0,00	0,00

Source: Processed Researcher, 2024

Budgeting Cost Standard Data

In budgeting planning, the East Java Provincial Government uses cost standards to budget an activity. In Governor's Regulation no. 18 of 2024 concerning Expenditure Standard Analysts and Technical Standards, the costs for road handling are as follows:

Table 6. Recap of pricing standards for budgeting

Handling Type	**Handling Type**	**Unit**	**Cost (Rp)**
Routine Maintenance of Good Condition Roads	Holding treatment	km	164.672.144
Routine Maintenance of Medium Condition Roads	Holding treatment	km	351.850.128
Periodic maintenance of 6 m wide road	Maintenance of pavement, road shoulders, and foundation layers	Km	3.892.340.256
Periodic maintenance of 6 – 7 m wide roads	Maintenance of pavement, road shoulders, and foundation layers	Km	3.892.340.256
Periodic maintenance of 7 – 9 m wide roads	Maintenance of pavement, road shoulders, and foundation layers	Miles	5.359.676.896
Periodic maintenance of 9 - 11 m wide roads	Maintenance of pavement, road shoulders, and foundation layers	Miles	6.337.901.360
Road Reconstruction / Widening	2 meter road widening with 6 meter road width overlay	Miles	6.639.708.992
Road Reconstruction / Widening	2 meter road widening with 7 meter road width overlay	Miles	7.138.299.952
Road Reconstruction / Widening	3 meter road widening with 7 meter road width overlay	Miles	8.064.524.720
Road Reconstruction / Widening	2-meter road widening with 9-meter road width overlay	Miles	8.135.481.984
Road Reconstruction / Widening	2-meter road widening with 11-meter road width overlay	Miles	10.985.113.552

Source: Processed Researcher, 2024

In this study, for handling good conditions, the Good Condition Road Routine Maintenance budget will be used, for handling moderate conditions, the Medium Condition Road Routine Maintenance budget will be used, for handling lightly damaged conditions, the periodic road maintenance budget will be used by adjusting the width of the road, for handling heavy damaged conditions, the Road Reconstruction / Widening budget will be used by adjusting the width of the handling road.

The budgeting calculation is carried out by multiplying the length of the section according to the road condition by the budget value according to the road condition. Then, from each condition in one segment is accumulated. The following is an example of the calculation of the budgeting costs needed.

- Budget needs for good road handling:
  Anggaran = Panjang kondisi baik X Satuan biaya anggaran pemeliharaan kondisi baik

Selection of Road Handling Priorities based on policy factors.

The selection of road handling priorities based on this policy factor was obtained data through a questionnaire given to policy holders at the East Java Provincial Public Works Office of Highways as many as 5 respondents, namely the Head of the Service, the Secretary of the Service, and 3 Heads of Fields.

The questionnaire asked the level of importance of three policy factors to the priority of road handling. This factor is in accordance with the Strategic Plan of the Highway Public Works Office, these factors are the factors influencing Development Presidential Regulation Number 80 of 2019 concerning the Acceleration of Economic Development, Regional Spatial Plan Factors (RTRW), and Budgeting Cost Factors. The results of the questionnaire can be seen in the following table.

Table 7. Results of the Policy Factor Importance Level Questionnaire

Policy Factors	Question	Response results					Total weight		
		1	2	3	4	5	sum	average of each criterion	%
Presidential Regulation on Development	How important is the policy of the Regional Development Presidential Regulation in determining the priorities of road handling over the past 2 years?		1		1	3	21	20,33	**0,33**
	Has the Presidential Regulation on Regional Development had a significant impact on the change in road handling priorities?		1		1	3	21		
	How effective is the policy of the Regional Development Presidential Regulation in directing budget allocation for road handling?		1		3	1	19		
RTRW	How important is the Regional Spatial Plan (RTRW) in determining the priorities for road handling over the past 2 years?			1	4		19	18,66	**0,30**
	Has the RTRW policy become the main reference in the planning and implementation of road handling?		1	1	2	1	18		

	How much influence does the RTRW have in determining the priority scale of the road sections to be handled?		1		3	1	19		
Budgeting	How important is budgeting cost considerations in determining road handling priorities over the past 2 years?			1		4	23	23	**0,37**
							total	**66**	**1**

Source: Processed Researcher, 2024

From the results of the questionnaire, in determining the priority of handling provincial roads in the last 2 years, the most important policy influence factors are **Budgeting (37%), Presidential Development Regulation (33%), and RTRW (30%).**

The majority that affects the priority of handling roads is budgeting. Based on the author's experience in the last 2 years, some road handling is not optimal because the budget received is not in accordance with the target needs. This results in several road sections that will be handled that should be handled periodically and reconstructed, must be handled with handling *holding treatment* that are handled in a *spot – spot* damage only, so not all sections get thorough handling.

In general, the budget obtained by the agency is determined through verification and evaluation by the Regional Government Budget Team (TAPD) and discussed by the DPRD for mutual approval. Other factors such as regional interests, the governor's vision and mission, regional fiscal conditions, and also budget policies from the central government are also indirect factors that affect the budget received.

CONCLUSION

This study examined two primary categories of criteria—Technical Factors (including road width, Average Daily Traffic/ LHR, degree of saturation, and road damage conditions) and Policy Factors (such as Presidential Regulation on Regional Development, Regional Spatial Planning/RTRW, and Budgeting Costs) relevant to road maintenance prioritization in 2024. Based on questionnaires distributed to five policy-level stakeholders at the East Java Provincial Public Works Office, the analysis revealed that the most influential policy factor in determining road maintenance priorities over the past two years was Budgeting (37%), followed by Presidential Development Regulations (33%) and the Regional Spatial Plan (30%). These results suggest that fiscal considerations play the most critical role in shaping decision-making processes related to road management. For future researchers, it is recommended to expand the scope of respondents to include regional planners, local government representatives, and civil society to enrich the policy perspective. Additionally, integrating real-time monitoring systems and Geographic Information System (GIS) data could enhance the dynamic prioritization of road maintenance and support more responsive infrastructure planning.

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