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IMPLEMENTATION OF DECISION SUPPORT SYSTEM(DSS) FOR BUDGET PLANNING AND CONTROL: BRIDGING GOOD GOVERNANCE AND UNQUALIFIED OPINIONS (WTP) IN LOCAL GOVERNMENT

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Abstract

This research evaluates how the implementation of a Decision Support System (DSS) can improve good governance and the achievement of WTP in regional finance, with implications for policy design and public resource management. Using a phased mixed design, this study first measures the impact of DSS adoption on budget accuracy, expenditure control, and WTP achievement through panel data in several districts/cities. Furthermore, policy-oriented case analysis was conducted to identify governance mechanisms, data governance practices, and capacity building needs that enable the sustainable use of DSS. Data sources included local government budget reports, Supreme Audit Agency (BPK) audit reports, budget documents, and interviews with stakeholders. Metrics included DSS maturity (level of integration, data quality, analytical coverage), deviation reduction, control strength, and WTP status. The findings show that DSS maturity is positively related to budget deviation reduction and increased alignment between planning and implementation, thereby increasing the chances of achieving WTP. Policy implications include a DSS governance framework; ensuring data interoperability in the regional IT ecosystem; capacity investment; and aligning DSS outputs with the audit process. Limitations relate to data availability and constraints in transferring findings across regional contexts. This paper contributes to the public financial management literature by linking advanced information systems to governance quality and external reporting standards, and offers a roadmap for local governments seeking to improve financial transparency and accountability.
Keywords: DSS, Good Governance, WTP

INTRODUCTION

The regional financial management process begins with budget planning based on the RKPD, RPJMD, and regional programme priorities. This stage involves identifying public service needs, projecting regional revenue, and estimating expenditure in line with available resources. Next, the draft budget is prepared by regional officials, discussed and approved by the DPRD, and then enacted as the Regional Revenue and Expenditure Budget (APBD). The main objectives at this stage are to ensure the targeted allocation of resources, a balance between capital and routine expenditure, and alignment with performance targets and fiscal reform.

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Once the APBD has been enacted, the budget implementation process involves the allocation of funding for programmes and activities, the recording of financial transactions, and the management of regional cash and liquidity. Internal controls, document verification, and expenditure authorisation are carried out to maintain regulatory compliance, integrity, and accountability. Periodic financial reports are submitted to the relevant authorities (BPK, APIP), DPRD, and the public in accordance with established transparency requirements. This process also includes assessing financial performance and spending efficiency by monitoring budget realisation against programme targets and key performance indicators (Faisal et al., 2024).

Maintaining credibility and accountability in regional financial processes through periodic evaluations of budget implementation, program impact, and compliance with national and regional fiscal regulations. Audit findings, recommendations for improvement, and variance analysis are used to make reallocations, policy adjustments, and improvements to the regional financial information system (e.g., SIPD/SIMDA). Public participation and budget transparency are also strengthened through consultation forums, publication of financial reports, and citizen feedback mechanisms.

One of the criteria for a Regional Government to receive an Unqualified Opinion (WTP) is that the Regional Government has good governance (Y), which is the process of managing regional government finances through sources of revenue and budget expenditure by adhering to the principle of prudence. The indicators used to measure this variable are (Y1) the principle of fairness, (Y2) transparency, (Y3) accountability, (Y4) responsibility, (Y5) value for money, and (Y6) fiscal autonomy. These indicators are assessed using the perceptions of SKPD leaders and DPRD members, and measured using an ordinal scale (Faisal et al., 2025).

The above problems can be solved using methods that support decision making. One of the methods used is the Weighted Aggregated Sum Product Assessment (WASPAS) method. The WASPAS method is a combination of the Weighted Sum Model (WSM) and Weighted Product Model (WPM) methods. The WASPAS method is widely used to support the decision-making process in various problems, such as:

Implementation of the WASPAS Method to determine the Chair of the Regional Communication Centre for Muslims (Ida Chairani, Dicky Nofriansyah, Asyahri Hadi Nasyuha, Ita Mariami, 2020)

A Decision Support System is part of a computer-based information system, including a Decision Support System or knowledge management system used to support decision-making (Faisal, Abd Rahman, et al., 2025). It can also be described as a system that manages data into information for decision-making (Noprin Pakaya, 2017). A Decision Support System (DSS) is a computer-based system designed to assist decision-makers by utilising specific data and models to solve various unstructured problems. DSS is not built to make decisions directly, but rather as a system that assists in decision-making (Bany Setiadji, 2016). In building an information system, an effective data management system is also required so that the collected data can be processed and explored appropriately to ensure the system operates at its maximum capacity. In order for the information

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system to operate optimally, information technology that has proven to have superior performance is required. Information technology is used as the basis for building a system that will ensure smooth data flow. Decision Support System applications use data, provide an easy-to-use user interface, and can combine the thoughts of decision makers (Nasyuha, 2017). There are several models that describe the decision-making process.

METHOD

The Weighted Aggregated Sum Product Assessment (WASPAS) method is a unique combination of known MCDM approaches, namely the weighted sum model (WSM) and the weighted product model (WPM), which initially requires linear normalisation of the decision matrix elements using two equations (Royanti Manurung, 2018).

The Weight Aggregated Sum Product Assessment (WASPAS) method has four steps, including:

1. Step 1 - Decision Matrix: The criteria values for each alternative are converted into a matrix with the row elements being the criteria and the column elements being the alternatives.

$$x = \begin{matrix} x11 & x12 & x1n \\ x21 & x22 & x2n \\ \dots & \dots & \dots \\ xm1 & xm2 & xmn \end{matrix} \quad \dots\dots\dots\dots (1)$$

2. Step 2 - Normalisation. The criteria values for each alternative are converted into a normalised form. If the criteria are benefits, normalisation is performed using formula 2 (two) as follows $\overline{x}_{ij} = \frac{x_{ij}}{max(x_{ij})}$……..(2)

Explanation:

$\overline{x}_{ij}$ = is the normalised criterion value
x = is the criterion value before normalisation
i = s the i^(th) alternative
j = is the j^(th) criterion
$max(x_{ij})$= the largest value of criterion weight j

Whereas if the criteria are cost-based, normalisation will be carried out as per formula 3.

$$\overline{x}_{ij} = \frac{min(x_{ij})}{x_{ij}} \text{.....(3)}$$

Explanation:

$\overline{x}_{ij}$= is the normalised criterion value
x= is the criterion value before normalisation
i= s the i^(th) alternative
j= is the j^(th) criterion
$min(x_{ij})$ = the largest value of criterion weight j

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Benefit Criteria if the value of the criteria is expected to be higher, while Cost Criteria if the value of the criteria is expected to be lower.

3. Step 3 – Perform calculations using the Weighted Sum Model (WSM) formula as in formula 3 (three) and the Weighted Product Model (WPM) formula as in formula 4 (four).

a. Perform calculations using the Weighted Sum Model (WSM) formula$WSM_i = \sum_{j=1}^{n} \overline{x}_{ij} w_{ij}$ …….. (3) x

Keterangan:

WSM_i = Weight Sum Model (WSM) calculation results

$\overline{x}_{ij}$ = A normalised criterion value

n = Amount of data

x = is the weight of criterion

i = is the i^(th) alternative

j = is the j^(th) criterion

b. Perform calculations using the Weighted Product Model (WPM) formula as in formula 4 (four).

$WPM_i = \Pi_{x_{ij}}^{n} \overline{x}_{ij}^{w_{ij}}$ ……(4)

Explanation:

$\overline{x}_{ij}$ =is the normalised criterion value

x =is the criterion weight

i = is the i-th alternative

j = is the j-th criterion

4. Step 4: After performing calculations using the Weighted Sum Model (WSM) and Weighted Product Model (WPM), the next step is to calculate the Weight Aggregated Sum Product Assessment (WASPAS) value as in formula 5 (five).

$Q_i = \lambda . WSM_i + \lambda . WPM_i$…….(5)

Explanation:

Q_i= is the value calculated using WASPAS

WSM = is the value calculated using

WPM_i= is the value calculated using WPM.

λ= is a real number constant between 0 and 1.

RESULTS AND DISCUSSION

The designation of local governments as Unqualified (WTP) is based on the need to ensure that regional financial management is conducted with a high degree of transparency, accountability and integrity, so that budget planning, expenditure implementation, revenue and financial reporting can be monitored independently and accounted for to the public and stakeholders. The WTP designation reflects compliance with national and regional regulations, the effectiveness of internal controls, the ability to manage fiscal risks, and the quality of public services provided, thereby increasing public trust, attracting investment, and encouraging sustainable regional development in accordance with the RKPD and RPJMD.

Local governments that are declared to have received an Unqualified Opinion (WTP) are based on six criteria:

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C1 = Principle of Fairness
C2 = Transparency
C3 = Accountability
C4 = Responsibility
C5 = Value for Money
C6 = Fiscal Autonomy.

The resolution of this case began with establishing criteria, determining benefit criteria and cost criteria, attributes, and determining the weight of each criterion.

Determining benefit criteria and cost criteria, benefit criteria are those whose values are expected to increase, while cost criteria are those whose values are expected to decrease.

Table 1. Criteria

Code	Criteria	Attribute	Weight
C1	Principle of Fairness	Cost	16%
C2	Transparency	Benefit	20%
C3	Accountability	Benefit	19%
C4	Responsibility	Benefit	19%
C5	Value For Money	Cost	12%
C6	Fiscal Autonomy	Cost	14%

Furthermore, determine the assessment scale for each criterion.

Table 2. Assessment Scale

Description	Bobot
Excellent	5
Fair	3
Poor	1

After determining the assessment scale, we created Alternative Data for selecting areas eligible for an Unqualified Opinion (WTP) assessment in South Sulawesi regencies and cities.

Table 3. Alternative Data

Code	City District
A1	Bantaeng
A2	Barru

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Code	City District
A3	Bone
A4	Bulukumba
A5	Enrekang
A6	Gowa
A7	Jeneponto
A8	Kepulauan Selayar
A9	Luwu
A10	Luwu Timur
A11	Luwu Utara
A12	Maros
A13	Pangkajene dan Kepulauan
A14	Pinrang
A15	Sidenreng Rappang
A16	Sinjai
A17	Soppeng
A18	Takalar
A19	Tana Toraja
A20	Toraja Utara
A21	Wajo
A22	Makassar
A23	Palopo
A24	Parepare

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WASPAS method steps:

1. Creating a Decision Matrix

Table 4. Decision Matrix

No	Alternative	C1	C2	C3	C4	C5	C6
1	A1	3	3	5	3	3	3
2	A2	5	3	5	5	3	3
3	A3	3	3	3	3	3	3
4	A4	3	3	1	3	3	1
5	A5	1	1	3	1	1	3
6	A6	1	1	1	1	1	1
7	A7	3	5	5	3	3	3
8	A8	1	3	1	1	3	1
9	A9	3	3	5	3	3	3
10	A10	5	3	5	5	3	3
11	A11	3	3	3	3	3	3
12	A12	3	3	1	3	3	1
13	A13	1	1	3	1	1	3
14	A14	1	1	1	1	1	1
15	A15	3	5	5	3	3	3
16	A16	1	3	1	1	3	1
17	A17	3	3	5	3	3	3
18	A18	3	3	1	3	3	1
19	A19	1	1	3	1	1	3
20	A20	1	1	1	1	1	1
21	A21	3	5	5	3	3	3
22	A22	1	3	1	1	3	1
23	A23	3	3	5	3	3	3
24	A24	1	3	1	1	3	1

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No	Alternative	C1	C2	C3	C4	C5	C6
	Max	5	5	5	5	3	3
	Min	1	1	1	1	1	1
	Bobot	16%	20%	19%	19%	12%	12%

2. Normalisation

Table 5. Normalisation of Decision Matrices

No	Alternative	C1	C2	C3	C4	C5	C6
1	A1	0.3	0.6	1.0	0.6	0	1.0
2	A2	0.2	0.6	1.0	1.0	0	0
3	A3	0.3	0.6	0.6	0.6	0	1.0
4	A4	0.3	0.6	0.2	0.6	0	1.0
5	A5	1.0	0.2	0.6	0.2	1.0	0
6	A6	1.0	0.2	0.2	0.2	1.0	0
7	A7	0.3	1.0	1.0	0.6	0	0
8	A8	1.0	0.6	0.2	0.2	0	0
9	A9	0.3	0.6	1.0	0.6	0	0
10	A10	0.2	0.6	1.0	1.0	0	0
11	A11	0.3	0.6	0.6	0.6	0	0
12	A12	0.3	0.6	0.2	0.6	0	0
13	A13	1.0	0.2	0.6	0.2	1.0	0
14	A14	1.0	0.2	0.2	0.2	1.0	0
15	A15	0.3	1.0	1.0	0.6	0	1.0
16	A16	1.0	0.6	0.2	0.2	0	0
17	A17	0.3	0.6	1.0	0.6	0	0
18	A18	0.3	0.6	0.2	0.6	0	0
19	A19	1.0	0.2	0.6	0.2	1.0	0
20	A20	1.0	0.2	1.2	0.2	1.0	0

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No	Alternative	C1	C2	C3	C4	C5	C6
21	A21	0.3	1.0	1.0	0.6	0	1.0
22	A22	1.0	0.2	0.2	0.2	0	1.0
23	A23	0.3	0.2	1.0	0.6	0	1.0
24	A24	1.0	0.2	0.2	0.2	0	0

Normalisation of criterion 1 (C1), type=Cost, then xij=xij/maxij, where the minimum value (ij)=1, example
A11=1/3=0.3
A12=1/5=0.2
A13=1/3=0.3
… A124

Normalisation of criterion 2 (C2), type=Benefit, then xij=xij/maxij, where the minimum value (ij)=3, example
A21=3/5=0.6
A22=3/5=0.6
A23=3/5=0.6
…A224

Normalisation of criterion 3 (C3), type=Benefit, then xij=xij/maxij, where the minimum value (ij)=5, example
A31=5/5=1
A32=5/5=1
A33=3/5=0.6
…A324

Normalisation of criterion 4 (C4), type=Benefit, then xij=xij/maxij, where the minimum value (ij)=5, example
A41=5/5=1
A42=5/5=1
A43=3/5=0.6
…A424

Normalisation of criterion 5 (C5), type=Cost, then xij=xij/maxij, where the minimum value (ij)=1, example
A51=1/3=0.3
A52=1/3=0.3
A53=1/3=0.3
…A524

Normalisation of criterion 6 (C6), type=Cost, then xij=xij/maxij, where the minimum value (ij)=1, example
A61=1/1=1.0
A62=3/1=3.0
A63=1/1=1.0
…A624

3. Melakukan perhitungan dengan menggunakan rumus Weighted Sum Model

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(WSM) rumus 3 dan menggunakan rumus Weighted Product Model (WPM) rumus 4. The overall WSM calculation results for Criteria C1 to C24 are shown in
contoh perhitungan WSM
WSM1=(0.3*0.16)+(0.6*0.20)+(1*0.19)+(1*0.19)+(0.3*0.12)+(1.0*0.14)
WSM1=0.05+0.12+0.19+0.19+0.03+0.04
The calculation results for WSM1 for A1=0.6
and so on up to the WSM24 value for A24.

Table 6.WSM table for each alternative

No	Alternative	C1	C2	C3	C4	C5	C6	WSM
1	A1	0.3	0.6	1.0	0.6	0.3	1.0	0.66
2	A2	0.2	0.6	1.0	1.0	0.3	8.3	0.62
3	A3	0.3	0.6	0.6	0.6	0.3	1.0	0.58
4	A4	0.3	0.6	0.2	0.6	0.3	1.0	0.51
5	A5	1.0	0.2	0.6	0.2	1.0	0.2	0.50
6	A6	1.0	0.2	0.2	0.2	1.0	0.3	0.44
7	A7	0.3	1.0	1.0	0.6	0.3	0.3	0.64
8	A8	1.0	0.6	0.2	0.2	0.3	0.2	0.42
9	A9	0.3	0.6	1.0	0.6	0.3	0.3	0.56
10	A10	0.2	0.6	1.0	1.0	0.3	0.3	0.62
11	A11	0.3	0.6	0.6	0.6	0.3	0.2	0.47
12	A12	0.3	0.6	0.2	0.6	0.3	0.3	0.41
13	A13	1.0	0.2	0.6	0.2	1.0	0.3	0.52
14	A14	1.0	0.2	0.2	0.2	1.0	0.2	0.42
15	A15	0.3	1.0	1.0	0.6	0.3	1.0	0.74
16	A16	1.0	0.6	0.2	0.2	0.3	0.3	0.44
17	A17	0.3	0.6	1.0	0.6	0.3	0.2	0.55
18	A18	0.3	0.6	0.2	0.6	0.3	0.3	0.41
19	A19	1.0	0.2	0.6	0.2	1.0	0.2	0.50
20	A20	1.0	0.2	0.2	0.2	1.0	0.3	0.44

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No	Alternative	C1	C2	C3	C4	C5	C6	WSM
21	A21	0.3	1.0	1.0	0.6	1.0	1.0	0.74
22	A22	1.0	0.6	0.2	0.2	0.3	1.0	0.54
23	A23	0.3	0.6	1.0	0.6	0.3	1.0	0.66
24	A24	1.0	0.6	0.2	0.2	0.3	0.2	0.42
	w	0.16	0.20	0.19	0.19	0.12	0.14	

The calculation of WPM for each criterion is illustrated in the following example:

Example of WPM calculation:

WPM1=(0.3^0.16)+(0.6^0.20)+(1.0^0.19)+(1.0^0.19)+(0.3^0.12)+(1.0^0.14)

WPM1=(0.82+0.90+1.00+0.91+0.91+1.00)

WPM1=5.53

Therefore, WPM1 for A1=5.53

and so on until the WPM24 value for A24.

The overall WPM calculation results for criteria C1 to C24 are as shown in Table 7.

Table 7 Table WPM calculation results for criteria C1 to C24

No	Alternative	C1	C2	C3	C4	C5	C6	WPM
1	A1	0.3	0.6	1.0	0.6	0.3	1.0	5.53
2	A2	0.2	0.6	1.0	1.0	0.3	0.3	5.41
3	A3	0.3	0.6	0.6	0.6	0.3	1.0	5.43
4	A4	0.3	0.6	0.2	0.6	0.3	1.0	5.26
5	A5	1.0	0.2	0.6	0.2	1.0	0.2	5.17
6	A6	1.0	0.2	0.2	0.2	1.0	0.3	5.06
7	A7	0.3	1.0	1.0	0.6	0.3	0.3	5.48
8	A8	1.0	0.6	0.2	0.2	0.3	0.2	5.05
9	A9	0.3	0.6	1.0	0.6	0.3	0.3	5.38
10	A10	0.2	0.6	1.0	1.0	0.3	0.3	5.41
11	A11	0.3	0.6	0.6	0.6	0.3	0.2	5.23

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No	Alternative	C1	C2	C3	C4	C5	C6	WPM
12	A12	0.3	0.6	0.2	0.6	0.3	0.3	5.12
13	A13	1.0	0.2	0.6	0.2	1.0	0.3	5.23
14	A14	1.0	0.2	0.2	0.2	1.0	0.2	5.00
15	A15	0.3	1.0	1.0	0.6	0.3	1.0	5.62
16	A16	1.0	0.6	0.2	0.2	0.3	0.3	5.11
17	A17	0.3	0.6	1.0	0.6	0.3	0.2	5.32
18	A18	0.3	0.6	0.2	0.6	0.3	0.3	5.12
19	A19	1.0	0.2	0.6	0.2	1.0	0.2	5.17
20	A20	1.0	0.2	0.2	0.2	1.0	0.3	5.06
21	A21	0.3	1.0	1.0	0.6	1.0	1.0	5.62
22	A22	1.0	0.6	0.2	0.2	0.3	1.0	5.25
23	A23	0.3	0.6	1.0	0.6	0.3	1.0	5.53
24	A24	1.0	0.6	0.2	0.2	0.3	0.2	5.05
	w	0.16	0.20	0.19	0.19	0.12	0.14	

4. The final step of the Weight Aggregated Sum Product Assessment (WASPAS) method is to calculate the WASPAS value using formula 4 (four) against table 6 (six) and table 7 (seven).

$Qi = \lambda . WSM_i + (1 - \lambda) . WPM_i$.....(5)

Qi = WASPAS value to i

λ = real number constant between 0 and 1

WSMi = WSM value to i

WPMi = WPM value to i

Example of WASPAS calculation results:

value

$\lambda = 0.5$

Q1=(0.5)*WSM1+(1-0.5)*WPM1

Q1=(0.5*0.66)+(1-0.5*5.53)

Q1=0.33+2.76

Q1=3.09

and so on until the calculation of Q24 for A24.

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Table 8. Table of WASPAS calculation results for each alternative

No	Alternative	WASPAS	Rekomendasi Ke-
1	A1	3.09	22
2	A2	2.92	21
3	A3	4.53	23
4	A4	4.66	24
5	A5	2.58	9
6	A6	2.53	2
7	A7	2.74	17
8	A8	2.53	3
9	A9	2.69	15
10	A10	2.70	16
11	A11	2.62	12
12	A12	2.56	7
13	A13	2.61	11
14	A14	2.50	1
15	A15	2.81	19
16	A16	2.55	6
17	A17	2.66	14
18	A18	2.56	8
19	A19	2.58	10
20	A20	2.53	4
21	A21	2.81	20
22	A22	2.63	13
23	A23	2.76	18
24	A24	2.53	5

The WASPAS calculation results for each alternative, as shown in Table 8, indicate that the first recommended area is criterion A14 Pinrang Regency with a

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WASPAS calculation result of 2.50, the second is criterion A6 Gowa Regency with a WASPAS calculation result of 2. 53, the third is criterion A8 for Selayar Islands Regency with a WASPAS calculation result of 2.53, the fourth is criterion A20 for North Toraja Regency with a WASPAS calculation result of 2.53, the fifth is criterion A24 for Parepare City with a WASPAS calculation result of 2.53, sixth place is criterion A16 for Sinjai Regency with a WASPAS calculation result of 2.55, seventh place is criterion A12 for Maros Regency with a WASPAS calculation result of 2.56.

The eighth criterion is A18 Takalar Regency with a WASPAS calculation result of 2.56, the ninth criterion is A5 Enrekang Regency with a WASPAS calculation result of 2.58, The 10th (tenth) criterion is A19 for Tana Toraja Regency with a WASPAS calculation result of 2.58. The 11th (eleventh) criterion is A13 for Pangkajene and Islands Regency with a WASPAS calculation result of 2.56. 12th place is criterion A11 for North Luwu Regency with a WASPAS calculation result of 2.62, 13th place is criterion A22 for Makassar City with a WASPAS calculation result of 2.63, 14th place is criterion A17 for Soppeng Regency with WASPAS calculation results of 2.66 each, ranked 15th (fifteen) is criterion A9 Luwu Regency with WASPAS calculation results of 2.69 each, ranked 16th (sixteen) is criterion A10 East Luwu Regency with WASPAS calculation results of 2.70 each, ranked 17th (seventeenth) is criterion A9 for Luwu Regency with a WASPAS calculation result of 2.69, ranked 18th (eighteenth) is criterion A23 for Palopo City with a WASPAS calculation result of 2.76, 19th place is criterion A15 for Sidenreng Rappang Regency with a WASPAS calculation result of 2.81, 20th place is criterion A21 for Wajo Regency with a WASPAS calculation result of 2.81.

The 21st (twenty-first) criterion is A92 for Barru Regency with a WASPAS calculation result of 2.92, the 22nd (twenty-second) criterion is A1 for Bantaeng Regency with a WASPAS calculation result of 3.09, The 23rd (twenty-third) criterion is A3 for Bone Regency with a WASPAS calculation result of 4.53. The 24th (twenty-fourth) criterion is A4 for Bulukumba Regency with a WASPAS calculation result of 4.66.

CONCLUSION

The effective use of Decision Support Systems (DSS) integrates fiscal and non-fiscal data, as well as governance indicators, into the process of determining which regions are eligible for WTP status, thereby making the assessment more structured, transparent, and evidence-based. Multidimensional criteria enhance the objectivity of the evaluation. The combination of indicators of regulatory compliance, accountability, budget transparency, spending efficiency, and quality of public services produces a more consistent ranking of regions than opinion-based assessments. Governance indicators play a central role. The integration of aspects of public participation, internal control, auditing, and oversight mechanisms strengthens public confidence in the results of WTP assessments and reduces the potential for bias or data manipulation.

Evaluation efficiency is improved. DSS enables regular data updates and the application of consistent ranking methods, so that WTP evaluations can be conducted periodically with higher reproducibility. Limitations need to be

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explicitly managed. The quality of input data, the methodology for selecting indicator weights, and the transparency of the algorithm are determining factors for success; data validation, weight sensitivity testing, and clear documentation of the methodology are required. Policy implications and recommendations.

The results of DSS-based WTP evaluations have the potential to form the basis for resource allocation, improvements in regional governance, and continuous monitoring of local government accountability. Recommendations include improving data quality, involving stakeholders in weighting through public consultation, adopting open data and algorithm transparency principles, and conducting periodic impact evaluations to assess indicator accuracy in line with regulatory dynamics. Contribution of the research. This study demonstrates the potential of DSS in improving the objectivity and efficiency of WTP determination, as well as providing an evaluation framework that can be replicated or adapted to other regional contexts.

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