Institut Riset dan Publikasi Indonesia (IRPI)
IJATIS: Indonesian Journal of Applied Technology and Innovation Science
Journal Homepage: https://journal.irpi.or.id/index.php/ijatis
Vol. 2 Iss. 2 August 2025, pp: 70-79
ISSN(P): 3032-7466 | ISSN(E): 3032-7474

Comparison of MAUT and EDAS Methods for News Media Selection on YouTube Platform Using ROC Weighting

Rizki Aulia Putra[1*], Dandi Eko Prasetyo[2], Ahmad Kurniawan[4], Kahlil Gibran[5]

[1,2,3]Department of Information Systems, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
[4]Department of Sharia and Law, Faculty of Islamic Sharia, Al-Azhar University, Egypt
[5]Department of Computer Systems, Faculty of Engineering and Computer Science, Universitas Komputer Indonesia, Indonesia

E-Mail: [1]12050313356@students.uin-suska.ac.id, [2]12050310477@students.uin-suska.ac.id, [3]amekurniawan1@gmail.com, [4]kahlil.10220003@mahasiswa.uniko.ac.id

Received Dec 15th 2024; Revised Jul 30th 2025; Accepted Aug 20th 2025; Available Online Aug 30th 2025
Corresponding Author: Rizki Aulia Putra

Abstract

News media is one of the sources considered for obtaining information. In order to avoid issues or news that are not good, especially those smelling of politics in Indonesia, it is necessary to choose which media can be used as a reference, especially on YouTube as an alternative place to watch and get news. This problem can be solved with the help of a decision support system, which can select an alternative news media source using the MAUT and EDAS methods. The alternatives tested for calculation are obtained based on how often the media is trending on YouTube. In future calculations, based on criteria determined from the results of expert interviews, namely transparency, credibility, news sources and subscribers will be tested to get the best news media with the help of ROC weighting. With the criteria that have been determined and the calculation of the MAUT and EDAS methods, getting the best news media ranking results from both methods is CNN Indonesia with a final value of preference 1. These results will be an illustration for the people of Indonesia in sorting out the news on each news media on YouTube.

Keyword: EDAS, Indonesia, MAUT, News Media, ROC

1. INTRODUCTION

YouTube is a popular yet under-researched social media site. It reaches 95% of the Internet population and provides material in 80 different languages [1]. More than 2 billion unique users use the site each month, and more than one billion hours of video are watched each day [2]. In addition to being a significant platform for information sharing, YouTube is also a major source of misinformation, including disinformation about news and misleading content [3]. While the mechanism of YouTube's algorithm is unknown due to its proprietary nature, it reportedly uses deep neural networks to learn from video views, click-through rates, average time spent watching videos, and engagement (e.g., liking or disliking videos, commenting) to customize video recommendations [4][5]. This situation creates both opportunities and challenges for audiences, especially when selecting reliable news sources from the wide variety available on the platform.

One of them gets news information from the media, most individuals get information about local and global events from the news media, which is a freely available source of data [6]. News media not only presents useful information about local and world events and priorities, but also highlights prejudices and subjective opinions through word choice and mood, which greatly helps in shaping people's attitudes [7]. There are so many news media on the YouTube platform, but sometimes the information conveyed from the news media displays information that is less open and accurate [5], it is impossible to calculate or even estimate how much of the information online is false [8]. This will make it difficult for the audience to choose news media, because the news media that is watched does not necessarily provide reliable information.

The process of determining the best news media is one of the most important decisions in the scope of news communication [9]. A decision that is made will affect the development and welfare of the entire community. However, in the selection of news media, it often happens that news media provide or display

news, topics, or others by not being open and inaccurate, so there are many factors that need to be considered such as transparency, credibility, news sources, and others [10]. To address these challenges, a Decision Support System (DSS) is needed as a structured approach to evaluate multiple factors objectively. The DSS is a multicriteria method that helps in the decision-making process because, based on existing information, it searches for the best solution [11]. Multi-criteria DSS is the most widely applied methodology in group evaluation problems in various disciplines, and its use in media selection could enhance both accuracy and transparency in the decision-making process.

The decision makers are therefore faced with the task of evaluating and comparing various conflicting options using multiple criteria in an MCDM problem [13]. The main focus of all Multi-Criteria Decision Making (MCDM) techniques is to make the group decision-making process simpler. In this study we use MAUT is a method that has an evaluation design with weights and values relevant to alternatives [14] and EDAS a method that has the shortest distance from the positive ideal and has the longest distance from the negative ideal [15] and with Receiver Operating Characteristic (ROC) weighting used to generate a weight needed on certain criteria [16].

Multi Attribute Utility Theory (MAUT) is a method in decision making. MAUT is a method where to find the weighted sum of the same values on each utility on each attribute [17]. This method can also process data from all attributes with different utilities. MAUT is a final evaluation scheme, v(x) of an object x is defined as the weight summed with a value relevant to its dimension value, the usual term for it is the utility value [18][19]. The Evaluation based on Distance from Average Solution (EDAS) method, first introduced by Mehdi Keshavarz-Ghorabaee in 2015, analyzes and solves problems by measuring both the positive ideal distance and the negative ideal distance, then averaging the results to produce an accurate final outcome [15]. The strength of EDAS lies in its efficiency and reduced mathematical complexity compared to other classification methods. In EDAS, the scoring of alternatives depends on the distance of each alternative from the standard solution for each criterion [12][20]. By combining the unique strengths of MAUT and EDAS, this study aims to achieve more reliable and efficient decision-making outcomes.

Some previous research that can be used as a reference or reference in writing this article that discusses the MAUT and EDAS methods, and with ROC weighting, such as in research conducted by Ramadiani and friends [19]The research results show that the MAUT method outperforms the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method, with an accuracy of 94.667% in selecting the bidikmisi scholarship. Research conducted by Naomi Labora Saragi and friends [16] On the application of the EDAS method and ROC weighting of formula milk recommendations for infants allergic to cow's milk, the best formula for infants allergic to cow's milk is A2 Enfa mil A + Gentle Care, with a value of -0.047 as the best alternative. Other research conducted by Ahmad Rifqi and Rima Tamara Aldisa [21] In the comparison of the MAUT method and the TOPSIS method using ROC weighting, the ranking result using the MAUT method is A4 with a value of 0.950, while the ranking result using the TOPSIS method is also A4 with a value of 0.917.

2. MATERIAL AND METHOD

In this study, data were collected from a journalist expert to select news media that have been selected. The results of the interviews that have been conducted will be processed by the DSS method, namely MAUT and EDAS with the help of ROC for weighting the best criteria that have been determined. The research methodology is illustrated in Figure 1.

2.1. Decision Support System (DSS)

DSS is a system that can help solve a problem that produces data so that the resulting data is used to determine a decision [15]. DSS is a way of organizing information that is intended to be used in making decisions [22].

2.2. Multi-Attribute Utility Theory (MAUT)

The MAUT method is one of the methods used in DSS to assist decision makers in dealing with complex situations by considering several relevant criteria or attributes [21]. MAUT is used to change from several interests to a numeric value on a scale of 0-1 with 0 representing the worst choice and 1 the best[23][24]. The MAUT method is an approach or structure that describes the final assessment of an entity x by presenting the accumulated weight with a certain amount of value. Keeney and Raiffa proposed the MAUT method in 1976 based construction of individual utility functions with respect to each criterion [25].

1. Preparing the Decision Matrix (X_{ij}) [22]

$$X_{ij} = \begin{bmatrix} r_{11} & \cdots & r_{1j} & \cdots & r_{1n} \\ r_{i1} & \cdots & r_{ij} & \cdots & r_{in} \\ r_{m1} & \cdots & r_{mj} & \cdots & r_{mn} \end{bmatrix} \quad (1)$$

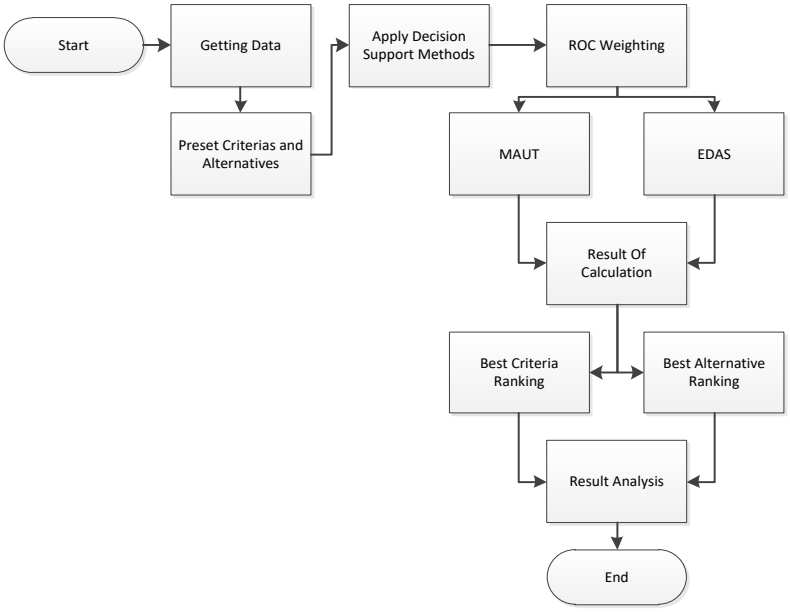

Figure 1. Research Methodology

2. Calculating Normalization (r^*_{ij})

$$r_{ij}^* = \frac{r_{ij} - \min(r_{ij})}{\max(r_{ij}) - \min(r_{ij})} \text{ (benefit)} \quad (2)$$

$$r_{ij}^* = 1 + \left(\frac{\min(r_{ij}) - r_{ij}}{\max(r_{ij}) - \min(r_{ij})}\right) \text{ (cost)} \quad (3)$$

3. Calculating Utility (u_{ij})

$$u_{ij} = \frac{e^{\left(r_{ij}^*\right)^2} - 1}{1.71} \quad (4)$$

4. Calculating Final Utility (u_i)

$$u_i = \sum_{j=1}^{n} u_{ij} \times w_{ij} \quad (5)$$

2.3. Evaluation based on Distance from Average Solution (EDAS)

The Evaluation EDAS method is a method that was originally discovered by an expert named Mehdi Keshavarz-Ghorabaee and first published in 2015 [15]. Where the function of this method is to analyze and try to solve a problem by utilizing a calculation function by scanning the positive ideal distance and negative ideal distance and then averaged and the results ultimately produce the right and accurate final result [26].

1. Make provisions for average scores for all criteria

$$AV_j = \frac{\sum_{i=m}^{n} r_{ij}}{n} \quad (6)$$

2. Finding the average value of positive and negative distances according to the type of criteria. If the criteria type is benefit, the formula used is as follows:

$$PDA_{ij} = \frac{\max(0, (r_{ij} - AV_j))}{AV_j} \quad (7)$$

$$NDA_{ij} = \frac{\max\left(0, (AV_j - r_{ij})\right)}{AV_j} \quad (8)$$

If the criteria type is cost, the formula used is the opposite of the benefit formula.

3. Calculation of positive and negative distances for all alternatives

$$SP_i = \sum_{j=1}^{m} PDA_{ij} \,.\, wj \tag{9}$$

$$SN_i = \sum_{j=1}^{m} NDA_{ij} \,.\, wj \tag{10}$$

4. Normalization of SP and SN values for all alternatives [12]

$$NSP_i = \frac{SP_i}{max_i(SP_i)} \tag{11}$$

$$NSN_i = 1 - \frac{SP_i}{max_i(SN_i)} \tag{12}$$

5. Calculating scores on all alternatives

$$AS_i = \frac{1}{2}(NSP_i + NSN_i) \tag{13}$$

2.4. Rank Order Centroid (ROC)

Determination of weight The ROC (Rank Order Centroid) method is a method that focuses on the priority of criteria to be the main one. The ROC method is based on the level of importance or priority of the criteria, the ROC technique gives weight to each criterion according to the rank evaluated according to its priority.

$$IF\ C1 > C2 > C3 > \cdots > Cn\ THEN\ W1 > W2 > W3 > \cdots > Wn \tag{14}$$

Then to determine the weight value (W), the following formula can be used [25]:

$$W_k = \frac{1}{k}\sum_{i=1}^{k}\left(\frac{1}{k}\right) \tag{15}$$

3. RESULTS AND DISCUSSION

3.1. Criteria

In the assessment of performing calculations when applying methods, criteria are needed to be made as a reference. Good criteria must cover the most significant or critical aspects in the context of the problem at hand and in accordance with the objectives to be achieved. Based on the results of an interview with a journalist expert, the criteria used in this study can be seen in Table 1.

Table 1. Criterias

Code	Criteria	Type
C1	Transparency	Benefit
C2	Credibility	Benefit
C3	News Sources	Benefit
C4	Subscriber	Benefit

Description:

1. Transparency: A criterion used to evaluate the extent to which news media are open and honest in their actions, policies and the information they convey.
2. Credibility: A criterion that refers to the extent to which an information source or entity can be trusted to provide true, accurate and reliable information.
3. News Sources: A criterion that media that prioritize primary news sources or direct interviews with sources can be more reliable than those that rely solely on news from secondary sources or third-party interpretations.
4. Subscriber: Criteria based on how many subscribers follow the media.

3.2. Alternative

Decision-making in selecting the best news media is recommended, aiming to help users or the public choose the most suitable news media. In this study, news media will be considered and selected based on how often the media appear trending in the context of news on the YouTube platform, with a minimum of 100k verified subscriptions. The alternatives are presented in Table 2.

Table 2. Alternatives

Alternative	News Media
A1	Tribunnews
A2	Kompas.com
A3	CNBC Indonesia
A4	CNN Indonesia
A5	Detikcom

3.3. ROC Weighting

The ROC method is applied in this study to assess the weight of each criterion met. Based on Table 1, the criteria do not have weights, so calculations are required for each criterion to produce weight values. The use of the ROC method facilitates the calculation of values based on the equation below for each criterion that has been previously obtained.

$$W1 = \frac{1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4}}{4} = 0{,}52$$

$$W2 = \frac{0 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4}}{4} = 0{,}27$$

$$W3 = \frac{0 + 0 + \frac{1}{3} + \frac{1}{4}}{4} = 0{,}14$$

$$W4 = \frac{0 + 0 + 0 + \frac{1}{4}}{4} = 0{,}06$$

Based on the calculations and equations carried out, it produces priority weights according to predetermined criteria, as shown in Table 3.

Table 3. Alternatives Weight

Code	Criteria	Weight	Type
C1	Transparency	0,52	Benefit
C2	Credibility	0,27	Benefit
C3	News Sources	0,14	Benefit
C4	Subscriber	0,06	Benefit

Referring to the data obtained in the research, the assessment of conformity between the criteria and the alternative data is presented in Table 4.

Table 4. Data on Alternatives News Media on the YouTube Platform

Alternative	C1	C2	C3	C4
A1	Open	Trusted	Interview	11,1 Million
A2	Highly Open	Highly Trustworthy	Interview	3,19 Million
A3	Lack of Openness	Less Trustworthy	Interview	2,43 Million
A4	Highly Open	Highly Trustworthy	Interview	10,6 Million
A5	Open	Trusted	Second Source	2,1 Million

The data obtained is still in the form of information, so it is given a weight to facilitate the calculation using the method employed. Below are Tables 5 to 8, which contain data regarding the weighting of criteria from C1 to C4.

Table 5. Transparency Criteria

Description	Weight Value
Highly Open	3
Open	2
Lack of Openness	1

Table 6. Credibility Criteria

Description	Weight Value
Highly Trustworthy	3
Trusted	2
Less Trustworthy	1

Table 7. News Source Criteria

Description	Weight Value
Interview	3
Second Source	2
Third Party	1

Table 8. Subscriber Criteria

Description	Weight Value
above 5m	4
Around 4m - 5m	3
Around 1m – 3m	2
Under 1m	1

From the entire weight value table, a table containing the weight numbers for each alternative for suitability assessment data can be generated, which is shown in Table 9.

Table 9. Rating the suitability of alternatives on each criterion

Alternatif	C1	C2	C3	C4
A1	2	2	3	4
A2	3	3	3	3
A3	1	1	3	2
A4	3	3	3	4
A5	2	2	2	2

3.4. MAUT Method

1. Decision Matrix (X_{ij})

$$X_{ij} = \begin{bmatrix} 2 & 2 & 3 & 4 \\ 3 & 3 & 3 & 3 \\ 1 & 1 & 3 & 2 \\ 3 & 3 & 3 & 4 \\ 2 & 2 & 2 & 2 \end{bmatrix}$$

The maximum and minimum values from the decision matrix are presented in Table 10.

Table 10. Max and Min Value

Nilai	C1	C2	C3	C4
Max	3	3	3	4
Min	1	1	2	2

2. Normalization (r^*_{ij})

$$r_{ij} = \begin{bmatrix} 0{,}5 & 0{,}5 & 1 & 1 \\ 1 & 1 & 1 & 0{,}5 \\ 0 & 0 & 1 & 0 \\ 1 & 1 & 1 & 1 \\ 0{,}5 & 0{,}5 & 0 & 0 \end{bmatrix}$$

3. Utilities (u_{ij})

$$u_{ij} = \begin{bmatrix} 1{,}666 & 0{,}166 & 1{,}005 & 1{,}005 \\ 1{,}005 & 1{,}005 & 1{,}005 & 0{,}166 \\ 0 & 0 & 1{,}005 & 0 \\ 1{,}005 & 1{,}005 & 1{,}005 & 1{,}005 \\ 0{,}166 & 0{,}166 & 0 & 0 \end{bmatrix}$$

4. Final Utility (u_i)

$$u_1 = (1{,}666 \times 0{,}52) + (0{,}166 \times 0{,}27) + (1{,}005 \times 0{,}14) + (1{,}005 \times 0{,}06) = 0{,}340$$
$$u_2 = (1{,}005 \times 0{,}52) + (1{,}005 \times 0{,}27) + (1{,}005 \times 0{,}14) + (0{,}166 \times 0{,}06) = 0{,}952$$
$$u_3 = (0 \times 0{,}52) + (0 \times 0{,}27) + (1{,}005 \times 0{,}14) + (0 \times 0{,}06) = 0{,}146$$

$u_4 = (1{,}005 \times 0{,}52) + (1{,}005 \times 0{,}27) + (1{,}005 \times 0{,}14) + (1{,}005 \times 0{,}06) = 1$
$u_5 = (0{,}166 \times 0{,}52) + (0{,}166 \times 0{,}27) + (0 \times 0{,}14) + (0 \times 0{,}06) = 0{,}131$

3.5. EDAS Method

1. Decision Matrix (X)

$$X_{ij} = \begin{bmatrix} 2 & 2 & 3 & 4 \\ 3 & 3 & 3 & 3 \\ 1 & 1 & 3 & 2 \\ 3 & 3 & 3 & 4 \\ 2 & 2 & 2 & 2 \end{bmatrix}$$

2. Average value for all criteria

$$AV_1 = \frac{2+3+1+3+2}{5} = 2{,}2$$
$$AV_2 = \frac{2+3+1+3+2}{5} = 2{,}2$$
$$AV_3 = \frac{3+3+3+3+2}{5} = 2{,}8$$
$$AV_4 = \frac{4+3+2+4+2}{5} = 3$$
$$AV = [2{,}2\ ;\ 2{,}2\ ;\ 2{,}8\ ;\ 3]$$

3. Average value of positive and negative distances
   a. Positive

$$PDA_{11} = \frac{\max(0, (2-2{,}2))}{2{,}2} = 0$$
$$PDA_{21} = \frac{\max(0, (3-2{,}2))}{2{,}2} = 0{,}363$$
$$PDA_{31} = \frac{\max(0, (1-2{,}2))}{2{,}2} = 0$$
$$PDA_{41} = \frac{\max(0, (3-2{,}2))}{2{,}2} = 0{,}363$$
$$PDA_{51} = \frac{\max(0, (2-2{,}2))}{2{,}2} = 0$$

$$\begin{bmatrix} 0 & 0 & 0{,}071 & 0{,}333 \\ 0{,}363 & 0{,}363 & 0{,}071 & 0 \\ 0 & 0 & 0{,}071 & 0 \\ 0{,}363 & 0{,}363 & 0{,}071 & 0{,}333 \\ 0 & 0 & 0 & 0 \end{bmatrix}$$

   b. Negative

$$NDA_{11} = \frac{\max(0, (2{,}2-2))}{2{,}2} = 0{,}090$$
$$NDA_{21} = \frac{\max(0, (2{,}2-3))}{2{,}2} = 0$$
$$NDA_{31} = \frac{\max(0, (2{,}2-1))}{2{,}2} = 0{,}545$$
$$NDA_{41} = \frac{\max(0, (2{,}2-3))}{2{,}2} = 0$$
$$NDA_{51} = \frac{\max(0, (2{,}2-2))}{2{,}2} = 0{,}090$$

$$\begin{bmatrix} 0{,}090 & 0{,}090 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0{,}545 & 0{,}545 & 0 & 0{,}333 \\ 0 & 0 & 0 & 0 \\ 0{,}090 & 0{,}090 & 0{,}285 & 0{,}333 \end{bmatrix}$$

4. Positive and negative distances for all alternatives
   a. Positive

$$SP_1 = (0 \times 0{,}52) + (0 \times 0{,}27) + (0{,}071 \times 0{,}14) + (0{,}333 \times 0{,}06) = 0{,}031$$
$$SP_2 = (0{,}363 \times 0{,}52) + (0{,}363 \times 0{,}27) + (0{,}071 \times 0{,}14) + (0 \times 0{,}06) = 0{,}298$$
$$SP_3 = (0 \times 0{,}52) + (0 \times 0{,}27) + (0{,}071 \times 0{,}14) + (0 \times 0{,}06) = 0{,}010$$
$$SP_4 = (0{,}363 \times 0{,}52) + (0{,}363 \times 0{,}27) + (0{,}071 \times 0{,}14) + (0{,}333 \times 0{,}06) = 0{,}319$$
$$SP_5 = (0 \times 0{,}52) + (0 \times 0{,}27) + (0 \times 0{,}14) + (0 \times 0{,}06) = 0$$

   b. Negative

$$SN_1 = (0{,}090 \times 0{,}52) + (0{,}090 \times 0{,}27) + (0 \times 0{,}14) + (0 \times 0{,}06) = 0{,}071$$
$$SN_2 = (0 \times 0{,}52) + (0 \times 0{,}27) + (0 \times 0{,}14) + (0 \times 0{,}06) = 0$$
$$SN_3 = (0{,}545 \times 0{,}52) + (0{,}545 \times 0{,}27) + (0 \times 0{,}14) + (0{,}333 \times 0{,}06) = 0{,}452$$
$$SN_4 = (0 \times 0{,}52) + (0 \times 0{,}27) + (0 \times 0{,}14) + (0 \times 0{,}06) = 0$$
$$SN_5 = (0{,}090 \times 0{,}52) + (0{,}090 \times 0{,}27) + (0{,}285 \times 0{,}14) + (0{,}333 \times 0{,}06) = 0{,}134$$

5. Normalization of SP and SN values for all alternatives
   a. Positive

$$NSP_1 = \frac{0{,}031}{0{,}319} = 0{,}097$$
$$NSP_2 = \frac{0{,}298}{0{,}319} = 0{,}934$$
$$NSP_3 = \frac{0{,}010}{0{,}319} = 0{,}032$$
$$NSP_4 = \frac{0{,}319}{0{,}319} = 1$$
$$NSP_5 = \frac{0}{0{,}319} = 0$$

   b. Negative

$$NSN_1 = 1 - \frac{0{,}071}{0{,}452} = 0{,}841$$
$$NSN_2 = 1 - \frac{0}{0{,}452} = 1$$
$$NSN_3 = 1 - \frac{0{,}452}{0{,}452} = 0$$
$$NSN_4 = 1 - \frac{0}{0{,}452} = 1$$
$$NSN_5 = 1 - \frac{0{,}134}{0{,}452} = 0{,}702$$

6. Scores on all alternatives

$$AS_1 = \frac{1}{2}(0{,}097 + 0{,}841) = 0{,}469$$
$$AS_2 = \frac{1}{2}(0{,}934 + 1) = 0{,}967$$
$$AS_3 = \frac{1}{2}(0{,}032 + 0) = 0{,}016$$
$$AS_4 = \frac{1}{2}(1 + 1) = 1$$

$$AS_5 = \frac{1}{2}(0 + 0{,}702) = 0{,}351$$

3.6. Comparison of MAUT and EDAS Method Results

Based on the calculation results of the two previous methods, the alternative rankings for the best news media on the YouTube platform are obtained, as shown in Table 11.

Table 11. Final Alternative Ranking Results

MAUT Method			EDAS Method		
News Media	Preference Value	Rank	News Media	Preference Value	Rank
CNN Indonesia (A4)	1	1	CNN Indonesia (A4)	1	1
Kompas.com (A2)	0,952	2	Kompas.com (A2)	0,967	2
Tribunnews (A1)	0,340	3	Tribunnews (A1)	0,469	3
CNBC Indonesia (A3)	0,146	4	Detikcom (A5)	0,351	4
Detikcom (A5)	0,131	5	CNBC Indonesia (A3)	0,016	5

CNN Indonesia's news media receives a perfect score of 1, indicating that it will be a priority when the public wants to see or watch news. The public can also use Kompas.com as an alternative, as it has a value close to 1. The two lowest media in this study, based on the calculation results, are Detikcom and CNBC Indonesia, which have values far from 1, making it difficult to make the media acceptable.

4. CONCLUSION

Based on the analysis using the MAUT and EDAS methods combined with ROC weighting, the selection of the most suitable news media on the YouTube platform was successfully carried out through four predetermined criteria and five alternatives. Both methods consistently identified CNN Indonesia (A4) as the top-ranked alternative, each producing a maximum final score of 1. This consistency demonstrates the reliability and robustness of both approaches in multi-criteria decision-making for evaluating news media. The results of this research provide practical value for audiences and policymakers in identifying credible and transparent news sources, particularly in the context of combating misinformation and disinformation on digital platforms. Furthermore, the integration of MAUT, EDAS, and ROC weighting can be adapted for other domains where multi-criteria selection is required, such as e-commerce vendor evaluation, educational program selection, or service provider ranking. For methodological improvement, future studies should involve a larger panel of experts to minimize bias in scoring alternatives, expand the number of news media evaluated to capture a wider spectrum of perspectives, and test the model using real-time audience feedback or engagement metrics. By doing so, the decision support framework will become more comprehensive, accurate, and adaptable to evolving trends in media consumption.

REFERENCES

[1] YouTube, “Pedoman Komunitas,” Police, YouTube, 2023.
[2] T. Spangler, “YouTube Now Has 2 Billion Monthly Users, Who Watch 250 Million Hours on TV Screens Daily,” *Variety*, 2019.
[3] A. Shoufan and F. Mohamed, “YouTube and Education: A Scoping Review,” *IEEE Access*, vol. 10, no. October, pp. 125576–125599, 2022, doi: 10.1109/ACCESS.2022.3225419.
[4] P. Covington, J. Adams, and E. Sargin, “Deep Neural Networks for YouTube Recommendations,” in *Proceedings of the 10th ACM Conference on Recommender Systems*, 2016, pp. 191–198.
[5] D. Abul-Fottouh, M. Y. Song, and A. Gruzd, “Examining algorithmic biases in YouTube’s recommendations of vaccine videos,” *Int. J. Med. Inform.*, vol. 140, no. April, p. 104175, 2020, doi: 10.1016/j.ijmedinf.2020.104175.
[6] E. Boudemagh and I. Moise, “News media coverage of refugees in 2016: a GDELT case study,” in *Proceedings of the International AAAI Conference on Web and Social Media*, 2017, vol. 11, no. 1, pp. 743–750.
[7] K. Buckingham, J. Brandt, W. Anderson, A. Luiz Fernando do, and R. Singh, “The untapped potential of mining news media events for understanding environmental change,” *Curr. Opin. Environ. Sustain.*, vol. 45, pp. 92–99, 2020, doi: 10.1016/j.cosust.2020.08.015.
[8] S. A. Khan, M. H. Alkawaz, and H. M. Zangana, “The Use and Abuse of Social Media for Spreading Fake News,” *2019 IEEE Int. Conf. Autom. Control Intell. Syst. I2CACIS 2019 - Proc.*, no. June, pp. 145–148, 2019, doi: 10.1109/I2CACIS.2019.8825029.
[9] A. Matheven and B. V. D. Kumar, “Fake News Detection Using Deep Learning and Natural Language Processing,” in *2022 9th International Conference on Soft Computing & Machine Intelligence (ISCMI)*, 2022, pp. 11–14. doi: 10.1109/ISCMI56532.2022.10068440.
[10] M. M. Talha, H. U. Khan, S. Iqbal, M. Alghobiri, T. Iqbal, and M. Fayyaz, “Deep learning in news

recommender systems: A comprehensive survey, challenges and future trends," *Neurocomputing*, vol. 562, p. 126881, 2023, doi: https://doi.org/10.1016/j.neucom.2023.126881.
[11] G. Rediske, J. C. M. Siluk, L. Michels, P. D. Rigo, C. B. Rosa, and G. Cugler, "Multi-criteria decision-making model for assessment of large photovoltaic farms in Brazil," *Energy*, vol. 197, p. 117167, 2020, doi: 10.1016/j.energy.2020.117167.
[12] D. Asante, Z. He, N. O. Adjei, and B. Asante, "Exploring the barriers to renewable energy adoption utilising MULTIMOORA- EDAS method," *Energy Policy*, vol. 142, no. 2006, p. 111479, 2020, doi: 10.1016/j.enpol.2020.111479.
[13] S. Mete, "Assessing occupational risks in pipeline construction using FMEA-based AHP-MOORA integrated approach under Pythagorean fuzzy environment," *Hum. Ecol. Risk Assess. An Int. J.*, vol. 25, no. 7, pp. 1645–1660, Oct. 2019, doi: 10.1080/10807039.2018.1546115.
[14] D. Maharani and A. Nata, "Perbandingan Metode Mfep Dan Maut Dalam Seleksi Calon Peserta Olimpiade Sains Nasional (Osn)," *JURTEKSI (Jurnal Teknol. dan Sist. Informasi)*, vol. 6, no. 3, pp. 247–252, 2020, doi: 10.33330/jurteksi.v6i3.793.
[15] A. Karim, S. Esabella, M. Hidayatullah, and T. Andriani, "Sistem Pendukung Keputusan Aplikasi Bantu Pembelajaran Matematika Menggunakan Metode EDAS," *Build. Informatics, Technol. Sci.*, vol. 4, no. 3, 2022, doi: 10.47065/bits.v4i3.2494.
[16] N. L. Saragi, R. A. A. Saragih, A. N. Halawa, and E. Bu'ulolo, "Penerapan Metode EDAS Dan Pembobotan ROC Rekomendasi Susu Formula Untuk Bayi Alergi Susu Sapi," *KOMIK (Konferensi Nas. Teknol. Inf. dan Komputer)*, vol. 6, no. 1, pp. 791–800, 2022, doi: 10.30865/komik.v6i1.5768.
[17] R. N. Sari and R. S. Hayati, "Penerapan Metode Multi Attribute Utility Theory (MAUT) Dalam Pemilihan Rumah Kost," *J-SAKTI (Jurnal Sains Komput. dan Inform.*, vol. 3, no. 2, p. 243, 2019, doi: 10.30645/j-sakti.v3i2.144.
[18] M. I. Nasution, A. Fadlil, and S. Sunardi, "Perbandingan Metode Smart dan Maut untuk Pemilihan Karyawan pada Merapi Online Corporation," *J. Teknol. Inf. dan Ilmu Komput.*, vol. 8, no. 6, p. 1205, 2021, doi: 10.25126/jtiik.2021863583.
[19] Ramadiani, H. R. Hatta, N. Novita, and Azainil, "Comparison of two methods between TOPSIS and MAUT in determining BIDIKMISI scholarship," *Proc. 3rd Int. Conf. Informatics Comput. ICIC 2018*, no. 432, pp. 1–6, 2018, doi: 10.1109/IAC.2018.8780455.
[20] M. Keshavarz Ghorabaee, E. K. Zavadskas, L. Olfat, and Z. Turskis, "Multi-Criteria Inventory Classification Using a New Method of Evaluation Based on Distance from Average Solution (EDAS)," *Informatica*, vol. 26, no. 3, pp. 435–451, Jan. 2015, doi: 10.15388/Informatica.2015.57.
[21] A. Rifqi, R. T. Aldisa, F. Teknologi, K. Dan, and U. Nasional, "Analisa Perbandingan Metode MAUT dan Metode TOPSIS Dengan Menggunakan Pembobotan ROC Dalam Sistem Pendukung Keputusan Pemilihan Calon Kepala Desa," vol. 4, no. 4, pp. 1413–1422, 2023, doi: 10.47065/josh.v4i4.3829.
[22] A. G. Simorangkir, F. Saidah, and M. Mesran, "Penerapan Metode Maut, Copras Dan Edas Dalam Pemilihan Media Pembelajaran Online Di Masa Pandemic Covid-19," *J. Teknol. Inf. Mura*, vol. 14, no. 1, pp. 46–56, 2022, doi: 10.32767/jti.v14i1.1580.
[23] M. Mihuandayani, R. Arundaa, and V. Tamuntuan, "Decision Support System for Employee Recruitment of A Company Using Multi Attribute Utility Theory," *2020 2nd Int. Conf. Cybern. Intell. Syst. ICORIS 2020*, 2020, doi: 10.1109/ICORIS50180.2020.9320817.
[24] H. Gunawan and H. Ramadhan, "Increased Accuracy of Selection High Performing Employees Using Multi Attribute Utility Theory (MAUT)," *2018 6th Int. Conf. Cyber IT Serv. Manag. CITSM 2018*, no. CITSM, pp. 1–4, 2019, doi: 10.1109/CITSM.2018.8674060.
[25] G. T. Mareti and A. T. Ayunda, "Komparasi Metode Maut dan Moora dalam Pemilihan Sunscreen untuk Kulit Menggunakan Pembobotan ROC," *Build. Informatics, Technol. Sci.*, vol. 5, no. 2, 2023, doi: 10.47065/bits.v5i2.4313.
[26] S. K. Zega, A. S. Harahap, H. H. Sihite, and I. Saputra, "Sistem Pendukung Keputusan Aplikasi Nobar Online Terbaik Dengan Menerapkan Metode EDAS Dengan Pembobotan ROC," *KOMIK (Konferensi Nas. Teknol. Inf. dan Komputer)*, vol. 6, no. November, pp. 809–818, 2022, doi: 10.30865/komik.v6i1.5774.