OPTIMIZING LOCATION SELECTION FOR RK BARBER USING SAW AND TOPSIS METHODS

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ABSTRACT

RK BARBER, a barbershop in Bandung City, was forced to close at the end of 2023 due to location-related issues and relocation plans. This research aims to determine the best new location to ensure long-term success. The selection process uses the SAW method to create a normalized decision matrix, followed by the TOPSIS method to determine preference values for each alternative. This research is classified as applied research with a quantitative approach. It employs a descriptive method with cross-sectional data collection. Data is obtained through interviews, observations, and literature studies and then analyzed using SAW and TOPSIS. The TOPSIS method ranks alternatives based on their closeness to the positive ideal solution and distance from the negative ideal solution. The results indicate that location A4 ranks first with the highest preference value (0.878), followed by A5 (0.763), A3 (0.530), A2 (0.447), A6 and A7 (0.383), and A1 (0.379). These rankings help determine the most suitable location for RK BARBER's relocation, ensuring optimal conditions for long-term business growth and sustainability.

Keywords: Location selection; Simple Additive Weighting; TOPSIS; Optimal Solution

ABSTRAK

RK BARBER merupakan sebuah barbershop yang terletak di wilayah Kota Bandung. Pada akhir tahun 2023, RK BARBER terpaksa harus ditutup karena terdapat beberapa permasalahan terkait lokasi dan berencana untuk melakukan perpindahan lokasi. Penelitian ini bertujuan untuk memilih lokasi terbaik untuk RK BARBER. Lokasi yang tepat diperlukan karena bersifat jangka panjang dan menunjang keberhasilan usaha. Proses pemilihan lokasi pada penelitian ini menggunakan metode SAW untuk membantu dalam membuat matriks keputusan ternormalisasi dan dilanjutkan dengan metode TOPSIS untuk mendapatkan nilai preferensi setiap alternatif lokasi. Penelitian ini tergolong ke dalam applied research dengan pendekatan kuantitatif. Penelitian ini menggunakan metode deskriptif dengan pengambilan data secara cross sectional. Penelitian ini menggunakan teknik pengumpulan data berupa wawancara, observasi, dan studi pustaka yang dianalisis menggunakan metode SAW dan dilanjutkan dengan metode TOPSIS. Alternatif terbaik menempati urutan pertama dengan nilai preferensi tertinggi yang menunjukkan kedekatan tertinggi dengan solusi ideal positif dan jarak terjauh dari solusi ideal negatif. Hasil penelitian menunjukkan lokasi A4 menempati urutan pertama dengan nilai 0.878, lokasi A5 (0.763), lokasi A3 (0.530), lokasi A2 (0.447), lokasi A6 dan A7 (0.383), dan lokasi A1 (0.379). Pengurutan ini membantu menentukan lokasi paling sesuai untuk relokasi RK BARBER, memastikan kondisi terbaik untuk pertumbuhan dan keberlanjutan bisnis jangka panjang.

Kata kunci: *Pemilihan lokasi, Simple Additive Weighting, TOPSIS, Optimal Solution*

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1. INTRODUCTION

A service business is a type of business that offers a form of service to its consumers (Faradilla, 2021). Currently, the service business continues to grow in Indonesia and is targeted to continue to grow because the need for services cannot be replaced by robots, unlike the goods business. The Minister of Finance of the Republic of Indonesia said that in several countries currently, including Indonesia, the service industry continues to experience significant growth in the current digital era; this is also one of the causes of the decline in the manufacturing industry in various countries, including Indonesia (Saputra, 2023). Various types of service businesses can become business opportunities, one of which is the barbershop business. The barbershop business currently continues to grow considering that people's lifestyles are currently very developed, especially regarding personal care. Where more and more men are realizing the importance of taking care of their appearance, including regularly visiting salons or barbershops.

To support the success of a business, one of which is the barbershop business, you need a location that truly suits your business needs. Location plays a vital role in determining the level of success of a business (Franchise, 2020). Apart from that, a strategic business location will be very profitable for entrepreneurs because it can have a positive impact on customers, because it is easy to reach from anywhere (Rosiana & Cahyani, 2024). Apart from that, location is also a long-term investment, whether buying or renting a location. If you make a single mistake when choosing a location, moving locations will take a lot of time and money. Location is also an aspect that consumers consider when making purchasing decisions. Therefore, the right location is needed to support the success of the barbershop business.

RK BARBER is one of the barbershops in the Bandung City area, and it was founded at the end of November 2021. RK BARBER rents space in a coffee shop called The Kamasan. RK BARBER has had to close because of several problems at the location. The main problem faced by RK BARBER is the inadequate parking space for customers. Almost all the parking spaces provided are for two-wheeled vehicles, so customers who bring four-wheeled vehicles must park them on the shoulder of the road. Apart from that, because the RK BARBER location is in a coffee shop, the existing parking space has to be divided, making it even more difficult for RK BARBER customers to park their vehicles.

Apart from problems regarding parking spaces, there are also problems regarding the visibility of the location. It is challenging to find the location of RK BARBER because its location cannot be directly seen from the side of the road. This is because RK BARBER is very far from the coffee shop - The Kamasan. Apart from that, other shops sell and put up banners, which makes it difficult for customers to find RK BARBER. Apart from that, some problems are caused by the poor relationship between the owner of RK BARBER and the owner of the rental place. This means that the rental owner wants an increase in the rental price not accompanied by additional facilities or other advantages.

There was also one problem at the old RK BARBER location related to capacity. According to Heizer, Render, & Munson (2020), capacity refers to the maximum amount of output that a system can produce in a specific time. Capacity is an essential element that has a significant role not only in manufacturing businesses but also in service businesses. RK BARBER's old location could not accommodate many cutting chairs. The lack of seats at this location creates quite a long queue, so customers must wait quite a long time to get their turn. Thus, the best option for maintaining the RK BARBER business is to move to a new, more suitable location.

Several approaches can be used as tools to assist in selecting a location. One of them is the SAW method. The Simple Additive Weighting (SAW) method is a calculation approach that can be used as a decision support system by calculating the weighted sum of the assessment criteria for each alternative for each attribute (Resti, 2017). This method is an approach that is quite often used as a support system in selecting locations because of its ease in determining shape or weighting values.

However, the SAW method is weak in selecting the best alternative location because it does not consider the distance between the positive ideal solution and the distance of the negative ideal solution. The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method produces ideal positive data and ideal negative data from each distance found in the data (Warmansyah, 2020). Therefore, collaboration with the TOPSIS method is needed to overcome the shortcomings of the SAW method. By combining these two methods, research can focus on relevant criteria for RK BARBER business locations to find the best alternative location. With the new location, it is hoped that RK BARBER can resume operations and provide better facilities and experience for customers.

2. METHOD AND DATA

This research is classified as descriptive research. According to Sekaran & Bougie (2016), descriptive research is a type of conclusive research with the main aim of describing something, usually related to explaining market characteristics or functions. This research uses structured interviews to collect data. A structured interview is a type of interview in which a standardized set of questions is asked in the same order to each respondent, ensuring uniformity in data collection (Babbie, 2020). Based on structured interviews conducted with three stakeholders, score data was obtained for all alternative locations based on each criterion. This research aims to describe the characteristics of the ideal location for RK BARBER based on existing criteria

Data collection techniques were also carried out through interviews, observation, and literature study. Interviews are data collection techniques carried out face to face and direct questions and answer between the researcher and the informant or data source (Dwijaya & Setiawansyah, 2020). Interviews were conducted with the owner to obtain information regarding problems at the old RK BARBER location and the weight of each criterion required for the new location. Apart from that. According to Widoyoko (2014). Observation is the systematic observation and recording of elements that appear in a symptom on the research object. Observations are carried out to analyze each alternative location to understand the alternative location. A literature study is a theoretical study of several scientific references by checking and re-reading the literature (Isnaeni, Badrujaman, & Sutisna, 2020). A literature study was carried out to understand the theory and concepts of the two methods used in this research and determine relevant criteria for selecting a location.

According to Sugiyono (2019), the operational definition of a variable is anything in any form that is determined by the researcher to be studied so that information is obtained about it and then conclusions are drawn. The operationalization of variables in this research is based on location selection criteria according to Putri, Utomo, & Mar'ati (2021), namely access, visibility, parking, traffic density and level of competition.

Table 1. Variable Operationalization

No.	Variable	Definition	Code	indicator
1	Access	The access variable concerns how easily the location can be reached by consumers (Putri, Utomo, & Mar'ati, 2021).	C1	Access to the location is easy to reach using two-wheeled vehicles.
				Access to the location is easy to reach using a four-wheeled vehicle.
2	Visibility	The visibility variable relates to how easily a location can be seen at a normal viewing distance (Putri, Utomo, & Mar'ati, 2021).	C2	The location can be seen easily.
3	Parking	The parking space variable is related to the size of the parking area for each alternative location and the number of vehicles, both four-wheeled and two-wheeled that can be accommodated in the parking area. (Putri, Utomo, & Mar'ati, 2021).	C3	The parking area can accommodate two-wheeled vehicles safely.
				The parking area can accommodate four-wheeled vehicles safely.
				The parking area is sufficient to accommodate two-wheeled vehicles.
				The parking area is sufficient to accommodate four-wheeled vehicles.
4	Traffic Density	The traffic density variable relates to the significant number of people or vehicles in an area or road passing through that location (Putri, Utomo, & Mar'ati, 2021).	C4	Pedestrians heavily traverse the location.
				The location is heavily traversed by two-wheeled and four-wheeled vehicles.
5	Level of Competition	The competition level variable relates to competition between similar businesses in the area (Putri, Utomo, & Mar'ati, 2021).	C5	No similar services are operating in the area.

Source: Author's processing result

The importance weight of each variable uses a percentage value of 0-100%, where the sum of the importance weights of all variables must be 100%. Apart from that, there is also a measurement scale needed to calculate the final score value which is a Likert scale. According to Sanusi (2017), The Likert scale is a scale based on the summation of respondents' attitudes in responding to statements related to indicators of a concept or variable being measured. The indicators used in this research are measured using a score of 1-5 to describe the order based on certain preference values for each criterion for all alternatives.

Table 2. Variable Measurement

Score	Information
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Source: Author's processing result

The validity test used in this research is face validity, which is classified as content validity. According to Nazir (2014), Face validity is the expert's assessment of a measuring instrument. The purpose of face validity is to ensure that the indicators used in this research can describe location selection. Face validity in this research was carried out by the author with someone who understands location selection, namely one of the lecturers at Parahyangan Catholic University.

Based on Pertiwi, Nurahman, & Aziz (2022), several steps need to be taken to choose the best alternative in making decisions using the SAW method, namely:

1. Alternatives (Ai) and criteria (Ci) are determined as the basis for the decision-making process
2. Each criterion is determined by a weight (W) value based on existing alternatives
3. Assess the suitability of each alternative with each existing criterion
4. Develop a normalized decision matrix based on calculations from the normalized performance matrix (R)

$$R_{ij} = \begin{cases} \frac{X_{ij}}{Max_i\, X_{ij}} & \text{If j is a benefit attribute.} \\ \frac{Min_i\, X_{ij}}{X_{ij}} & \text{If j is a cost attribute} \end{cases} \qquad \text{.....(3.1)}$$

Notation:

R_{ij} = value obtained by calculating the normalized decision matrix (R).

X_{ij} = value used to measure the selection of the ith alternative based on the jth criterion

$Max\, x_{ij}$ = the highest value recorded for each predetermined criterion

$Min\, x_{ij}$ = the lowest value recorded for each predetermined criterion

5. Determine the outcome value of preference

$$V_i = \sum_{j=1}^{n} W_j\, R_{ij} \qquad \text{.....(3.2)}$$

Notation:

V_i = rating value for all alternatives

W_j = weight for each criterion

R_{ij} = normalized performance assessment value

The preference value for each alternative is the result of calculations carried out using the SAW method. The higher the preference value obtained, the greater the

possibility that the alternative will be chosen as the best alternative among several predetermined alternatives.

Based on Pertiwi, Nurahman, & Aziz (2022), several steps need to be taken in determining the best alternative for making decisions using the TOPSIS method, namely:

1. Determine relevant alternatives, properties, and criteria
2. Determine the weight (level of importance) for each criterion
3. Create a suitability rating
4. Develop a normalized decision matrix

$$R_{ij} = \frac{X_{ij}}{\sqrt{\sum_{i=1}^{m} X_{ij}^2}} \qquad \text{.....(3.3)}$$

Notation:

R_{ij} = value obtained through normalized decision matrix calculations (R)

X_{ij} = value used to carry out measurements in determining the i alternative and j criteria

m = The values obtained for the selected or planned alternative are used.

5. Determine weighted normalized decision matrices

$$Y_{ij} = W_i R_{ij} \qquad \text{.....(3.4)}$$

Notation:

Y_{ij} = value obtained from the results of normalized weight rating calculations

W_i = value of the weight of the I criterion

6. Determine negative and positive ideal solution matrices

$$Y_j^+ = \begin{cases} \frac{Max_i Y_{ij}}{i} & \text{If j is a benefit attribute.} \\ \frac{Min_i Y_{ij}}{i} & \text{If j is a cost attribute} \end{cases} \qquad \text{.....(3.5)}$$

$$Y_j^- = \begin{cases} \frac{Min_i Y_{ij}}{i} & \text{If j is a benefit attribute.} \\ \frac{Max_i Y_{ij}}{i} & \text{If j is a cost attribute} \end{cases} \qquad \text{.....(3.6)}$$

Before determining Y_j^+ and Y_j^-, it is first necessary to determine the maximum and minimum values of Y_{ij} Which have been calculated previously. Determination of maximum and minimum values must be adjusted to the nature of the attribute or criteria used.

7. Determine the distance between the values of each alternative using negative and positive ideal solution matrix

To get the distance value between the alternative (A_i) And the negative ideal solution, it is first necessary to calculate the value based on the negative and positive ideal solution matrices; here is the formula:

$$D_j^- = \sqrt{\sum_{j=1}^{n} (Y_i^- - Y_{ij})^2} \qquad \text{.....(3.7)}$$

To get the distance value between the alternative (A_i) and the positive ideal solution, it is first necessary to calculate the value based on the negative and positive ideal solution matrices; here is the formula:

$$\mathrm{D_j^+} = \sqrt{\sum_{\mathrm{j=1}}^{\mathrm{n}} (\mathrm{Y_i^+ - Y_{ij}})^2} \qquad \text{.....(3.8)}$$

Based on these two formulas, the $D_j^+$and D_j^-Values are obtained by calculating the negative and positive ideal solution matrices. This value is then added to the D_j^+formula and the D_j^-Into a bracket, which will be raised to the power and then squared.

8. Determine the preference value for all alternatives

$$V = \frac{D_i^-}{D_i^- + D_i^+} \qquad \text{.....(3.9)}$$

Notation:

V = Preference value for each existing alternative location

The alternative with the highest preference value resulting from the calculation will be selected as the best choice for the final decision

The combination of the SAW and TOPSIS methods is depicted in a flowchart that explains the SAW method steps, which end with obtaining a normalized decision matrix, and the TOPSIS method steps, which end with obtaining preference values for each location alternative.

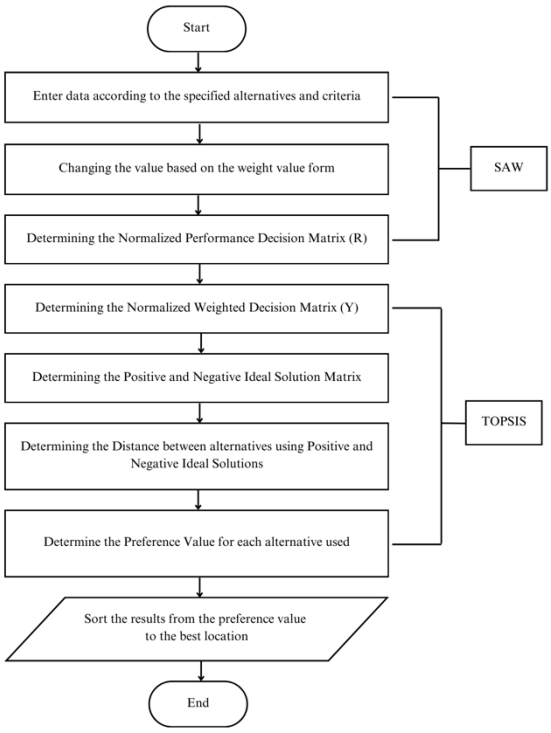

Figure 1. Flowchart of Combination of SAW and TOPSIS Methods

3. DISCUSSION

There are seven alternative locations and five criteria used in this research. The seven alternative locations were selected based on their suitability to the owner's preferences.

Table 3. Alternatives and Criteria Used

No.	Alternative	Criteria
1	Bahureksa Street No.26 = A1	Access = C1
2	Bahureksa Street No.1 = A2	Visibility = C2
3	Belitung Street No.3c = A3	Parking= C3
4	LLRE Martadinata Street No.118 = A4	Traffic Density = C4
5	Sunda Street No.65 = A5	Competition Level = C5
6	Veteran Street No.34a = A6	
7	Veteran Street No.40b = A7	

Source: Author's processing result

Data was collected by interviewing three respondents to obtain scores for each alternative for each criterion. Each criterion consists of several indicators; the score for each criterion is obtained by averaging the scores of all indicators for that criterion. The assessment was given by three stakeholder subjects, one owner and two investors. The score for each alternative for each criterion is obtained by averaging the assessments given by the three subjects. The highest score on each criterion indicates that the alternative location is superior.

Table 4. Alternative Score Data for Each Criterion

	Criteria				
Alternative	**C1**	**C2**	**C3**	**C4**	**C5**
A1	3.333	2.000	2.917	2.667	4.667
A2	3.333	4.000	2.250	3.167	4.667
A3	3.667	1.333	4.750	2.833	2.333
A4	4.667	4.333	4.333	3.833	4.333
A5	3.667	4.333	4.083	3.167	4.667
A6	4.500	2.667	3.167	3.333	1.667
A7	4.500	2.667	3.167	3.333	1.667

Source: Author's processing result

The final calculation result carried out using the SAW method is to create a normalized performance matrix. The normalized performance matrix (R) is created based on the nature of each criterion which is divided into two, namely costs and benefits. The divisor value for cost criteria is the lowest score for that criterion, while the divisor value for benefit criteria is the highest score for that criterion. In this research, each criterion used is of benefit, so the divisor value used is the highest score of each alternative for each criterion. The normalization process is carried out by dividing the score of each alternative for certain criteria by the divisor value.

Table 5. Normalized Performance Matrix Results (R)

Weight (Percent)	**20%**	**20%**	**35%**	**10%**	**15%**
Weight (Decimal)	**0,20**	**0,20**	**0,35**	**0,10**	**0,15**
			Criteria		
Alternative	**C1**	**C2**	**C3**	**C4**	**C5**
A1	0.714	0.462	0.614	0.696	1
A2	0.714	0.923	0.474	0.826	1
A3	0.786	0.308	1	0.739	0.500
A4	1	1	0.912	1	0.928
A5	0.786	1	0.860	0.826	1
A6	0.964	0.616	0.667	0.870	0.357
A7	0.964	0.616	0.667	0.870	0.357

Source: Author's processing result

After obtaining the normalized performance matrix, the calculation continues using the TOPSIS method. The first step in calculating the TOPSIS method is carried out by creating a normalized weighted decision matrix (Y). The matrix is obtained by multiplying the weight of each criterion by the score of each alternative for that criterion.

Table 6. Normalized Weighted Decision Matrix (Y)

Weight (Percent)	**20%**	**20%**	**35%**	**10%**	**15%**
Weight (Decimal)	**0,20**	**0,20**	**0,35**	**0,10**	**0,15**
			Criteria		
Alternative	**C1**	**C2**	**C3**	**C4**	**C5**
A1	0.143	0.092	0.215	0.070	0.150
A2	0.143	0.185	0.166	0.083	0.150
A3	0.157	0.062	0.350	0.074	0.075
A4	0.200	0.200	0.319	0.100	0.139
A5	0.157	0.200	0.301	0.083	0.150
A6	0.193	0.123	0.233	0.087	0.054
A7	0.193	0.123	0.233	0.087	0.054

Source: Author's processing result

The second step in TOPSIS calculations is to create a matrix of positive ideal solutions and negative ideal solutions. This matrix is obtained by determining the highest score and lowest score based on the score of each alternative for each criterion in the normalized weighted decision matrix (Y).

Table 7. Positive Ideal Solution Matrix and Negative Ideal Solution Matrix

Criteria	**Nature of Criteria**	**Y+**	**Y-**
C1	Benefit	Max {0.143; 0.143; 0.157; 0.157; 0.200; 0.157; 0.193; 0.193; 0.193} = 0.200	Min {0.143; 0.143; 0.157; 0.200; 0.157; 0.193; 0.193} = 0.143
C2	Benefit	Max {0.092; 0.185; 0.062; 0.062; 0.200; 0.200; 0.123; 0.123; 0.123} = 0.200	Min {0.092; 0.185; 0.062; 0.200; 0.200; 0.123; 0.123} = 0.062
C3	Benefit	Max {0.215; 0.166; 0.350; 0.350; 0.319; 0.301; 0.233; 0.233; 0.233} = 0.350	Min {0.215; 0.166; 0.350; 0.319; 0.301; 0.233; 0.233} = 0.166
C4	Benefit	Max {0.070; 0.083; 0.074; 0.074; 0.100; 0.083; 0.087; 0.087; 0.087} = 0.100	Min {0.070; 0.083; 0.074; 0.100; 0.083; 0.087; 0.087} = 0.070
C5	Benefit	Max {0.150; 0.150; 0.075; 0.075; 0.139; 0.150; 0.054; 0.054; 0.054} = 0.150	Min {0.150; 0.150; 0.075; 0.139; 0.150; 0.054; 0.054} = 0.054

Source: Author's processing result

After that, continue by grouping positive ideal solution values and negative ideal solution values.

Table 8. Data from Positive and Negative Ideal Solution Matrix Calculation Results

	C1	**C2**	**C3**	**C4**	**C5**
A+	0.200	0.200	0.350	0.100	0.150
A-	0.143	0.062	0.166	0.070	0.054

Source: Author's processing result

The next step in calculating the TOPSIS method is to calculate the distance between alternatives (D). There are two distance results between alternatives, namely, using a positive ideal solution (D+) and using a negative ideal solution (D-). The D+ value is obtained through calculation steps, which begin by finding the difference between the A+ value for each criterion

and the value of each criterion at the alternative location. After getting five differences, square the differences. After that, add up all the squared results of the differences. The final step is to root the sum to get the value D+.

Table 9. Distance Results Between Alternatives Using Positive Ideal Solutions

D1+	0.184
D2+	0.194
D3+	0.165
D4+	0.033
D5+	0.067
D6+	0.170
D7+	0.170

Source: Author's processing result

The D- value is obtained through calculation steps, which begin with calculating the difference between the value of each criterion in the alternative location and the A- value for each criterion. After getting five differences, square the differences. After that, add up all the squared results of the differences.

Table 10. Distance Results Between Alternatives Using a Negative Ideal Solution

D1-	0.112
D2-	0.157
D3-	0.186
D4-	0.232
D5-	0.216
D6-	0.105
D7-	0.105

Source: Author's processing result

The next step in calculations using TOPSIS is to obtain the preference value for each alternative (V). This value is obtained through calculations using the TOPSIS method formula, namely dividing the D- value by adding the D- and D+ values.

Table 11. Preference Value Result Data

Alternative	Value	Preference
A1	V1	0.377
A2	V2	0.447
A3	V3	0.530
A4	V4	0.876
A5	V5	0.763
A6	V6	0.381
A7	V7	0.381

Source: Author's processing result

After getting the preference value for each location alternative, sorting is needed to determine the order of the location alternatives from highest to lowest.

Table 12. Preference Value Order Data from Largest to Smallest

Alternative	Ranking	Preference Value
A4 = LLRE Martadinata Street No.118	1	0.876
A5 = Sunda Street No.65	2	0.763
A3 = Belitung Street No.3c	3	0.530
A2 = Bahureksa Street No.1	4	0.447
A6 = Veteran Street No.34a	5	0.381
A7 = Veteran Street No.40b	5	0.381
A1 = Bahureksa Street No.26	7	0.377

Source: Author's processing result

Location A4 (LLRE Martadinata Street No. 118) ranks first with a preference value of 0.876. Followed by location A5 (Sunda Street No.65) with a preference value of 0.763. Next, in third place is location A3 (Belitung Street No.3c), with a preference value of 0.530. Location A2 (Bahureksa Street No.1) is in fourth place with a preference value of 0.447. Location A6 (Veteran Street No.34a) and location A7 (Veteran Street No.40b) are both in fifth place with a preference value of 0.381. Meanwhile, location A1 (Bahureksa Street No.26) is in last place with a preference value of 0.377.

The A4 location has the highest preference value compared to other alternatives, with the advantage of excellent access because it is easy to reach and there are rarely any traffic jams, high visibility because the location is wide without many obstructive objects, and good traffic density because it is passed by vehicles and pedestrians. However, there is a shortage of parking areas which, although adequate for two- and four-wheeled vehicles, must be shared with other shops. Of the four buildings at the location, three are occupied by shops that have many customers, including a famous cake shop, which causes limited parking for four-wheeled vehicles. Meanwhile, the A5 location is ranked second with the main advantage being a better parking area because it does not need to be shared with other shops. However, access to this location is quite difficult because it is next to a one-way road, which is known to be busy and is a main road with train tracks, which can be an obstacle for customers. According to researchers, although it is not a top priority, the A3 location can be considered if the focus is on parking space criteria. This location has the highest score for parking, provides a large area for two- and four-wheeled vehicles, and offers better security because it is inside a shophouse with supervision from officers.

4. CONCLUSION

Based on the results of the normalized decision matrix, for aspect C1, which is the access criterion, the location with the highest value is location A4 with a value of 1, and the locations with the lowest value are locations A1 and A2 with a value of 0.714 each. For aspect C2, which is a visibility criterion, locations A4 and A5 get the largest value, namely 1, and the location with the smallest value is location A3, with a value of 0.308. For the C3 aspect, which is a parking space criterion, location A3 gets the highest score, namely 1, and the location that gets the lowest score is location A2, with a score of 0.474. For aspect C4, which is a traffic density criterion, the location that gets the highest score is location A4 with a value of 1 and location A1 gets the lowest value, namely 0.696. For the C5 aspect, which is a competition-level criterion, locations A1, A2 and A5 got the highest score of 1, and the locations that got the lowest score were locations A6 and A7, with a score of 0.357.

RK BARBER owners and investors can choose the A4 location (LLRE Martadinata Street No. 118) as the best alternative based on the highest preference value but are advised to pay attention to the sharing of parking spaces with other shops through communication with the shop owner and the assistance of the parking attendant who manages parking without additional costs or choose the A5 location (Sunda Street No. 65) with low competition but access that is prone to traffic jams, which can be overcome by analyzing traffic patterns and adjusting operating hours to target morning customers and arranging employee rest hours at busy times.

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