Jatilima : Jurnal Multimedia Dan Teknologi Informasi
Volume 07, Number 03, 2025, doi.org/10.54209/jatilima.v7i03.1677
E.SSN : 2721-1800 (Online)
https://journal.cattleyadf.org/index.php/jatilima/index

Penerapan Metode Preference Selection Index (PSI) Untuk Sistem Pendukung Keputusan Dalam Penilaian Calon Supervisor Departemen Kitchen Di Hotel Grand Antares

Yosefa Fras Hutahaean[1], Sinar Sinurat[2], Ridwan Syahputra[3]
[1,2,3]Universities Budi Darma, Jl. SM. Raja, No. 338, Siti Rejo I, Medan Kota, SUMUT 20219, Indonesia.

Article Info

Keywords:
Preference Selection Index (PSI), Decision Support System (DSS), Multi-Criteria Decision Making (MCDM), Supervisor Candidate Evaluation, Kitchen Department

ABSTRACT

In the Supervisor Candidate Assessment at the Grand Antares Hotel, the criteria used to determine Supervisor Candidates at the Grand Antares Hotel are made based on criteria. Based on the results of the research that has been conducted, the Preference Selection Index Method is applied in the assessment of supervisor candidates who will be appointed as supervisors, then 4 criteria are determined: Education, Skills, Work Experience. GPA Data analysis is carried out so that criteria can be determined from existing alternatives and weighted using the Preference Selection Index (PSI) Method.

Corresponding Author:
Yosefa Fras Hutahaean
Universities Budi Darma
Jl. SM. Raja, No. 338, Siti Rejo I, Medan Kota, SUMUT 20219, Indonesia.
Hutahaeanyosefa41@gmail.com

INTRODUCTION

A supervisor is an individual directly under management, authorized and responsible for monitoring and managing company staff in carrying out their duties. The role of a supervisor is quite important for a company[1]. A hotel is a type of accommodation that provides lodging, food and beverage services with available facilities, and other services to the public, managed commercially[2]. One such hotel in Medan is the Grand Antares Hotel. The Grand Antares Hotel is a four-star hotel, designated "The Best Four-Star Hotel in Medan." Opening on February 10, 2008, the Grand Antares Hotel has a capacity of 143 rooms. In a restaurant or hotel environment, "kitchen" refers to the area where chefs and other kitchen staff work to prepare food for guests. In a general context, a "kitchen" is a place where cooking equipment, cutlery, and food ingredients are stored and used to prepare meals.[3]

METHODS

A Decision Support System (DSS) is generally defined as a system capable of providing both problem-solving and communication capabilities for semi-structured problems[6]. A Decision Support System (DSS) is designed to support all stages of decision-making, from identifying the problem, determining relevant data, selecting the approach used in the decision-making process, to evaluating alternative choices[7],[8]. According to Kusrini, a Decision Support System (DSS) is an information system that provides information, modeling, and data manipulation[9]. Research conducted by Devin Anandra in 2022, entitled "Implementation of the Preference Selection Index Method in Selecting Recipients of Basic

Food Assistance," concluded that the PSI method is capable of generating weighting criteria to find the best alternative value. The calculation above shows that alternative A2, namely Riana, is the selected alternative because it received the highest score for basic food assistance recipients. This can facilitate users in finding alternatives for receiving basic food assistance[10].

Research conducted by Nursobah in 2021 entitled "Application of the Preference Selection Index (PSI) Method in Selecting Private Universities with IT Study Programs in East Kalimantan Province" concluded that the existence of a Decision Support System in selecting private universities with IT study programs in East Kalimantan will help high school graduates who want to continue their education because it is felt to increase effectiveness and efficiency in decision-making. The model used for a decision is the Preference Selection Index (PSI) because this model is the best alternative of several alternatives and uses more than one criterion [11]. PSI (Preference Selection Index) In the PSI method, results are obtained with minimal and simple calculations, as they are based on statistical concepts without the need for attribute weights. The steps of the PSI procedure can be stated as follows [12], [13]: a. Define the problem, b. Formulate the decision matrix, c. Normalization of the decision matrix

RESULTS AND DISCUSSION

Application Of Alternative Data

Based on the research conducted, it is necessary to establish criteria data for prospective supervisors. The following is alternative data that will be tested in the supervisor candidate assessment.

Tabel 1. Alternative Data For Criteria

Alternative	Name	Education	Skills	Work Experience	GPA
A1	Willyam Sitorus	S1	Leadership	0 Year	3.25
A2	Dycal Siahaan	D3	Leadership	1 Year	3.90
A3	Masrin Tobing	S1	Manajemen Tim	>2 Year	3.85
A4	Charles Hutajulu	S1	Priority Management	0 Year	3.15
A5	Ridwan Sirait	S1	Leadership	1 Year	3.06
A6	Suci Pardede	D3	Manajemen Tim	>2 Year	3.40
A7	Ranty Siburian	S1	Priority Management	0 Year	3.00
A8	Ribka Aruan	S1	Leadership	1 Year	2.95
A9	Wantri Sinaga	S1	Manajemen Tim	>2 Year	3.01
A10	Richard Sihombing	D3	Priority Management	0 Year	2.90

Application Of Criteria

The PSI method requires criteria to be used as the basis for calculations and considerations. The criteria used for calculations and considerations are as follows:

Tabel 2. Selection Criteria

Criteria	Information
C1	Education

C2	Skills
C3	Work Experience
C4	GPA

Tabel 3. Weight Of Education

Fuzzynumbers	Mark
D3	80
S1	90

Tabel 4. Skill Criteria

Skills	*Fuzzy* numbers	Mark
Leadership	Exellent	95
Manajemen Tim	Good	90
Priority Management	Enough	95

Tabel 5. Work Experience Criteria

Work Experience	*Fuzzy* numbers	Mark
0 Year	Exellent	70
1 Year	Good	85
>2 Year	Enough	95

Tabel 6. Suitability Rating Of Each Alternative For Each Criterion

Alternative	C1	C2	C3	C4
A1	90	95	70	3.25
A2	80	95	85	3.90
A3	90	90	70	3.85
A4	90	95	85	3.15
A5	90	95	95	3.06
A6	80	90	70	3.40
A7	90	95	85	3.00
A8	90	95	95	2.95
A9	90	90	70	3.01
A10	80	95	85	2.90

Implementation of the PSI Method

To solve the above problem using the PSI method, the steps described in the methodology section will be followed. The results of manual testing in this study yielded final scores, as outlined in Table 8 below.

Tabel 7. Scores for Each Alternative

Alternative	Name	Mark
A1	Willyam Sitorus	0.7755
A2	Dycal Siahaan	0.9763
A3	Masrin Tobing	0.9522
A4	Charles Hutajulu	0.6420
A5	Ridwan Sirait	0.5242
A6	Suci Pardede	0.8725
A7	Ranty Siburian	0.5862
A8	Ribka Aruan	0.6222
A9	Wantri Sinaga	0.3265
A10	Richard Sihombing	0.4352

Tabel 8. Alternative ranked by highest score

Alternative	Name	Mark	Rankink
A2	Dycal Siahaan	0.9763	1
A3	Masrin Tobing	0.9522	2
A6	Suci Pardede	0.8725	3
A1	Willyam Sitorus	0.7755	4
A4	Charles Hutajulu	0.6420	5
A8	Ribka Aruan	0.6222	6
A7	Ranty Siburian	0.5862	7
A5	Ridwan Sirait	0.5242	8
A9	Richard Sihombing	0.4352	9
A10	Wantri Sinaga	0.3265	10

The research results showed that alternative **A2** was the best and highest alternative with a value of **0.9763**.

CONCLUSION

From the research conducted, the highest value is the best final result according to the PSI method where A2 (Dycal Siahaan) is ranked 1st with a result of 0.9763. The PSI method provides effective decisions compared to the SAW, WP or MOORA methods and is very helpful for the author in determining a decision in selecting a Supervisor. In selecting a Supervisor, other methods can also be used as material to solve a problem.

REFERENCE

S. N. Abdullah, I. Fitri, dan R. T. Aldisa, "Sistem Penunjang Keputusan Pemilihan Model Stainless steel untuk Kitchen Set dengan Metode AHP," *J. JTIK (Jurnal Teknol. Inf. dan Komunikasi)*, vol. 6, no. 2, hal. 313–318, 2022, doi: 10.35870/jtik.v6i2.414.

A. A. T. Susilo, "Penerapan Metode CPI Pada Pemilihan Hotel Dikota Lubuklinggau," *J. RESTI (Rekayasa Sist. Dan Teknol. Informasi)*, vol. 1, no. 3, hal. 2580–0760, 2017.

J. Hutagalung, A. Fitri Boy, H. Jaya, dan I. Zulkarnain, "Pemberian Beasiswa Kepada Mahasiswa dengan Metode Preference Selection Index (PSI)," *J. Sains Komput. Inform. (J-SAKTI*, vol. 6, no. 2, hal. 648–660, 2022.

R. Panggabean dan N. A. Hasibuan, "Penerapan Preference Selection Index (PSI) Dalam Sistem Pendukung Keputusan Pengangkatan Supervisor Housekeeping," *Resolusi Rekayasa Tek. Inform. dan Inf.*, vol. 1, no. 2, hal. 85–93, 2020, doi:

10.30865/resolusi.v1i2.70.
I. Dwi Pangestu dan Fahrullah, “Penerapan Metode Preference Selection Index untuk Sistem Pendukung Keputusan Pemilihan Supervisor di PT Arkananta,” *J. Teknosains Kodepena J*, vol. 02, no. 01, hal. 37–49, 2021.
S. R. Nasution, S. Aripin, dan M. Sianturi, “Sistem Pendukung Keputusan Prioritas Lokasi Per4an Jalan Dengan Metode Preference Selection Index (PSI) (Studi Kasus : Dinas Bina Marga),” *Pelita Inform. Inf. dan Inform.*, vol. 10, no. 1, hal. 38–45, 2021.
R. J. Putri, U. M. Buana, Y. M. Putra, dan U. M. Buana, “SISTEM INFORMASI MANAJEMEN Pemanfaatan Teknologi Informasi Sistem Pengambilan Keputusan Pada PT . Astarindo Daya Sakti Dosen : Yananto Mihadi Putra , SE , M . Si,” no. December, hal. 1–11, 2019.
M. Angeline dan F. Astuti, “Sistem Pendukung Keputusan Pemilihan Karyawan Ter4 Menggunakan Metode Profile Matching,” *J. Ilm. SMART*, vol. II, no. 2, hal. 45–51, 2018.
A. Giawa, P. S. Ramadhan, dan A. Calam, “Penentuan Lokasi Cabang Baru Swalayan Menggunakan Preference Selection Index (PSI),” *J. Sist. Inf. Triguna Dharma (JURSI TGD)*, vol. 1, no. 2, hal. 98, 2022, doi: 10.53513/jursi.v1i2.5104. 10.53513/jursi.v1i2.5104.
D. Anandra, L. Latipah, dan A. Ambarwati, “Implementasi Metode Preference Selection Index Pada Pemilihan Penerima Bantuan SEMBAKO,” *JOINTECS (Journal Inf. Technol. Comput. Sci.*, vol. 7, no. 1, hal. 9, 2022, doi: 10.31328/jointecs.v7i1.2660.
N. Nursobah, “Penerapan Metode Preference Selection Index (PSI) Dalam Pemilihan Perguruan Tinggi Swasta Program Studi IT di Provinsi Kalimantan Timur,” *J. Media Inform. Budidarma*, vol. 5, no. 3, hal. 1045, 2021, doi: 10.30865/mib.v5i3.3081.
S. N. Abdullah, I. Fitri, dan R. T. Aldisa, “Sistem Penunjang Keputusan Pemilihan Model Stainless steel untuk Kitchen Set dengan Metode AHP,” *J. JTIK (Jurnal Teknol. Inf. dan Komunikasi)*, vol. 6, no. 2, hal. 313–318, 2022, doi: 10.35870/jtik.v6i2.414.
A. A. T. Susilo, “Penerapan Metode CPI Pada Pemilihan Hotel Dikota Lubuklinggau,” *J. RESTI (Rekayasa Sist. Dan Teknol. Informasi)*, vol. 1, no. 3, hal. 2580–0760, 2017.