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File name: kor_methods_to_determine_non-cash_food_assistance_recipi...
File size: 575.38K
Page count: 13
Word count: 6,993
Character count: 33,736
Submission date: 16-Jul-2024 07:26AM (UTC+0700)
Submission ID: 2417493276

IAES International Journal of Artificial Intelligence (IJ-AI)
Vol. 13, No. 2, June 2024, pp. 1430-1442
ISSN: 2252-8938, DOI: 10.11591/ijai.v13i2.ppt1430-1442

1430

Comparison of WASPAS and VIKOR methods to determine non-cash food assistance recipients

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Article Info

Article history:
Received Jul 25, 2023
Revised Oct 19, 2023
Accepted Dec 2, 2023

Keywords:
Decision support system
Non-cash food assistance
Vishkriterijumsko
kooperativno rangiranje
Weighted aggregated sum
product assessment

ABSTRACT

Non-cash food assistance or *bantuan pangan non-tunai* (BPNT) is a government program of the Republic of Indonesia by distributes food assistance in non-cash to beneficiary families. The process of distributing BPNT still needs to be done with the data and criteria set, because the existing BPNT distribution is considered not right on target. We need a method that can help provide an objective decision. One method that can be used in making decisions is the weighted aggregated sum product assessment (WASPAS) and Vishkriterijumsko Kooperativno Rangiranje (VIKOR) methods. The results of the calculations from the two methods will then be chosen which is the best, by conducting sensitivity tests and accuracy tests. This study uses 100 sample data and 16 criteria. The sensitivity test results are 9.78003997% for the WASPAS method and 0.0759142% for the VIKOR method, while the results of the accuracy test show that both methods have the same level of accuracy, which is 80%. Based on the comparison of the sensitivity test and accuracy test of the two methods, the WASPAS method is considered more accurate in determining the recipients of the BPNT program because the WASPAS method has a higher sensitivity test value than the VIKOR method.

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1. INTRODUCTION

The Central Bureau of Statistics of the Republic of Indonesia defines poverty as the inability of individuals or groups to fulfill basic food and non-food needs to survive more properly, either from the poverty line or the poverty line. The problem of poverty is still one of the problems faced by Indonesia which is multidimensional and complex, even now there is a slowdown in the reduction of poverty and the government is still trying to suppress the poverty rate [1]. In line with the slowing down of the poverty rate, the results of the release of the poverty rate by the Indonesian Central Bureau of Statistics showed that there was an increase of 0.37 percent point in the period March 2019 to September 2020, then increased again to 0.56 percent in March 2021 with a total poverty rate of 9.78 percent, and if calculated with the population in Indonesia, the poor in Indonesia has increased to 291 million people with a total of 26.42 million people in the period March 2020 to March 2021. Along with the increasing number of poor people, according to the people's welfare statistics records released by the Central Bureau of Statistics Republic of Indonesia in 2018, shows that the distribution of social assistance for the poor/rice prosperous (*raskin/trasta*) with a figure of 34.74% which already includes urban communities and rural areas. The *raskin/trasta* social assistance was then transferred to

Journal homepage: <http://ijai.iaescore.com>