Application of Fuzzy TOPSIS for Decision Making in Selection for Poverty Among UiTM Perlis Students Due to Covid-19 Pandemic

Nurulain Nabilah Muhamad Fauzuki[1], Sharifah Fhahriyah Syed Abas[2]
[1]*nurulain.nabilah00@gmail.com*
[2]*sfhahriyah@uitm.edu.my*

ABSTRACT

Universiti Teknologi MARA (UiTM) has offered several aids to assist the students. To obtain these aids, students must apply for the application by completing the required documents. Consequently, students must submit all relevant documentation which include their family income, occupations and the number of dependents, which will be inspected, graded and selected by the committee to determine the qualification for assistance. Hence, it will be a long process to select the rightful applicants, which involves a significant length of time as it consisted of hundreds of applicants. This study aims to select and rank the best alternative which is UiTM Perlis students with fairness, fast and accurate manner. In this study, the Fuzzy Technique for Others Preference by Similarity to Ideal Solution (TOPSIS) method was used to solve the problem. The model was run using Microsoft Excel. The selection of UiTM Perlis students were based on a set of criteria that had been predetermined: family income, occupations and number of dependents in the family. The findings show that from 35 samples of UiTM Perlis students, student (S35) is in the highest-ranking with a 1.0000 relative closeness. Meanwhile, student (S30) is in the lowest ranking with a 0.6478 relative closeness. It is also shown that all 35 students are qualified to receive aid due to the allocation provided is sufficient for 35 students. Therefore, using this method, the mistakes during the selection process can be reduced compared to manual selection thus making it easier to channel aid faster. As a result, it has been demonstrated that this method can produce results quickly.

Keywords: Fuzzy Technique for Others Preference by Similarity to Ideal Solution (TOPSIS), Select, Rank, Alternative