

ABSTRAK

Sudarsana, Eka I Putu (2021), “Perbandingan Metode SAW, TOPSIS, dan SAW – TOPSIS Dalam Sistem Pendukung Keputusan Kelayakan Pemberian Kredit Studi Kasus: Koperasi Tani Karya Sejahtera”.

Tesis ini sudah disetujui dan diperiksa oleh Pembimbing I: Dr. I Gede Aris Gunadi., S.Si., M.Kom. dan Pembimbing II: Dr. Komang Setemen, S.Si., M.T.

Kata kunci : Sistem Pendukung Keputusan, *Simple Additive Weighting* (SAW), *Technique for Order by Similarity to Ideal Solution* (TOPSIS), *Mean Average Precision* (MAP).

Penelitian ini bertujuan untuk membandingkan tiga metode Sistem Pendukung Keputusan dalam melakukan penilaian/merekomendasikan pemberian kredit usaha di Koperasi Tani Karya Sejahtera. Ketiga metode tersebut, yaitu: *Simple Additive Weighting* (SAW), *Technique for Order by Similarity to Ideal Solution* (TOPSIS), serta kombinasi dari metode SAW dan TOPSIS karena metode SAW merupakan metode yang pembobotannya bagus, sedangkan metode TOPSIS memiliki perankingan yang akurat. Penelitian ini menggunakan lima kriteria yaitu: Jaminan, Penghasilan, Formulir Pengajuan pinjaman (FPP), Surat Ijin Pendirian Usaha (SIUP), Pajak Bumi Bangunan (PBB). Selain membandingkan metode, dilakukan pula pengujian metode. Hal ini bertujuan untuk mencari metode yang paling sesuai/relevan dalam melakukan penilaian. Pengujian metode menggunakan teknik MAP yang menguji akurasi terhadap perankingan debitur. Perbandingan antara metode SAW, TOPSIS, dan SAW-TOPSIS diuji menggunakan teknik MAP yang menunjukkan berdasarkan hasil pengujian masing-masing metode, metode SAW – TOPSIS menjadi metode dengan akurasi terbaik ketika menggunakan 10 data ranking teratas dengan nilai sebesar 83,7%. Metode TOPSIS menjadi metode dengan akurasi terbaik ke dua ketika menggunakan 10 data ranking teratas dengan nilai pengujian MAP sebesar 66%. Metode SAW menjadi metode dengan akurasi terbaik ketiga ketika menggunakan 10 data ranking teratas, dalam pengujian menggunakan teknik MAP dengan nilai sebesar 54,3%. Penelitian selanjutnya diharapkan mampu menyempurnakan metode kombinasi SAW-TOPSIS karena dalam penelitian ini metode tersebut menunjukkan akurasi tertinggi.

ABSTRACT

Sudarsana, Eka I Putu (2021), Comparison of SAW, TOPSIS, and SAW – TOPSIS Methods in a Decision Support System for Credit Eligibility Case Study: Koperasi Tani Karya Sejahtera

This thesis has been approved and reviewed by Advisor I: Dr. I Gede Aris Gunadi, S.Si., M.Kom. and Advisor II: Dr. Komang Seteman, S.Si., M.T.

Keywords: Decision Support System, Simple Additive Weighting (SAW), Technique for Order by Similarity to Ideal Solution (TOPSIS), Mean Average Precision (MAP).

This study aims to compare the three methods of Decision Support Systems in assessing/recommending the provision of business credit at the Tani Karya Sejahtera Cooperative. The three methods are: Simple Additive Weighting (SAW), Technique for Order by Similarity to Ideal Solution (TOPSIS), and a combination of the SAW and TOPSIS methods because the SAW method is a good weighting method, while the TOPSIS method has an accurate ranking. This study uses five criteria, namely: guarantee, income, loan application form (FPP), business establishment permit (SIUP), and land building tax (PBB). In addition to comparing methods, method testing was also carried out. It aims to find the most appropriate/relevant method for conducting the assessment. The test method uses the MAP technique, which tests the accuracy of the debtor ranking. The comparison between the SAW, TOPSIS, and SAW-TOPSIS methods was tested using the MAP technique, which showed that, based on the test results of each method, the SAW - TOPSIS method became the method with the best accuracy when using the top 10 data rankings with a value of 83.7%. The TOPSIS method is the method with the second best accuracy when using the top 10 ranking data, with a MAP test value of 66%. The SAW method is the method with the third best accuracy when using the top 10 ranking data, in testing using the MAP technique, with a value of 54.3%. Future research is expected to be able to improve the SAW-TOPSIS combination method because in this study, the method shows the highest accuracy.