

ABSTRACT

Title : *Decision Support System for Selecting The Best Fabric Supplier at Kalilu Fashion Studio of Convection using The Moora Method (Multy Objective Optimization by Ration Analysis) using PHP & MySQL Programming Languages;*

Name : ABDAN SYUKURO

No. Bp : 20101152610438

Study Program : *Information Systems*

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Advisor : 1. Dr. Firna Yenila, S.Kom, M.Kom
2. Rofil M. Nur, S.Kom, M.Kom

The rapid development of information technology has encouraged various business sectors, including the garment industry, to utilize technology-based systems to support operations and decision-making. Kalilu Fashion Studio, as one of the garment businesses, requires a more objective, faster, and efficient method to determine the best fabric supplier. The manual process that has been used so far tends to be subjective, time-consuming, and poorly documented. This study uses the Multi-Objective Optimization by Ratio Analysis (MOORA) method to evaluate and rank suppliers based on five primary criteria: product price, product quality, delivery accuracy, supply capacity, and after-sales service. Data was obtained through interviews, field observations, and literature reviews. The system was designed as a web-based application using the PHP programming language and a MySQL database. The system design utilized the Unified Modeling Language (UML), including Use Case Diagrams, Class Diagrams, Activity Diagrams, and Sequence Diagrams. The developed system is capable of automatically processing supplier data, calculating values based on criterion weights, and generating the best supplier rankings. Testing using the black box testing method showed that all features functioned as designed, from data input, the MOORA calculation process, to the printing of supplier selection results reports. The implementation of a MOORA-based decision support system at Kalilu Fashion Studio can help make the fabric supplier selection process more objective, efficient, and accurate. This system also improves transparency and consistency in assessment, as well as supporting production quality and accuracy.

Keywords: *Decision Support System, MOORA, PHP, MySQL.*

ABSTRAK

Judul : Sistem Pendukung Keputusan untuk Pemilihan Supplier Kain Terbaik pada Konveksi Kalilu Fashion Studio dengan Metode Moora (Multy Objective Optimization by Ration Analysis) Menggunakan Bahasa Pemograman PHP & MySQL

Nama : ABDAN SYUKURO

No. Bp : 20101152610438

Program Studi : Sistem Informasi

Jenjang Pendidikan : Strata-1 (S1)

Pembimbing : 1. Dr. Firna Yenila, S.Kom, M.Kom
2. Rofil M. Nur, S.Kom, M.Kom

Perkembangan teknologi informasi yang pesat telah mendorong berbagai sektor usaha, termasuk industri konveksi, untuk memanfaatkan sistem berbasis teknologi dalam mendukung operasional dan pengambilan keputusan. Kalilu Fashion Studio, sebagai salah satu usaha konveksi, membutuhkan metode yang lebih objektif, cepat, dan efisien dalam menentukan supplier kain terbaik. Proses manual yang selama ini digunakan cenderung subjektif, memakan waktu, dan kurang terdokumentasi dengan baik. Penelitian ini menggunakan metode *Multi-Objective Optimization by Ratio Analysis* (MOORA) untuk mengevaluasi dan menentukan peringkat supplier berdasarkan lima kriteria utama, yaitu harga produk, kualitas produk, ketepatan pengiriman, kemampuan supply, dan layanan purna jual. Data diperoleh melalui wawancara, observasi lapangan, dan studi pustaka. Sistem dirancang berbasis web menggunakan bahasa pemrograman PHP dan database MySQL. Perancangan sistem menggunakan *Unified Modeling Language* (UML) yang mencakup *Use Case Diagram*, *Class Diagram*, *Activity Diagram*, dan *Sequence Diagram*. Sistem yang dikembangkan mampu mengolah data supplier secara otomatis, menghitung nilai berdasarkan bobot kriteria, serta menghasilkan peringkat supplier terbaik. Pengujian menggunakan metode *black box testing* menunjukkan seluruh fitur berfungsi sesuai perancangan, mulai dari input data, proses perhitungan MOORA, hingga pencetakan laporan hasil seleksi supplier. Implementasi sistem pendukung keputusan berbasis metode MOORA di Kalilu Fashion Studio dapat membantu proses pemilihan supplier kain menjadi lebih objektif, efisien, dan akurat. Sistem ini juga meningkatkan transparansi, konsistensi penilaian, serta mendukung kualitas dan ketepatan produksi.

Kata Kunci: Sistem Pendukung Keputusan, MOORA, PHP, MySQL.