

ABSTRACT

Supplier selection is a crucial element in enhancing the operational performance of SMEs, particularly in the textile industry. UMKM XYZ, a company engaged in fabric production, faces challenges in identifying suppliers that can meet key criteria such as product quality, cost efficiency, flexibility, and responsiveness to market demand. Given the importance of suppliers in maintaining production stability and competitiveness, a comprehensive and accurate supplier evaluation process becomes a strategic step toward business sustainability.

This study aims to analyze and determine the best fabric supplier for UMKM XYZ using the Analytical Hierarchy Process (AHP) method. AHP is employed to establish priority weights based on relevant criteria and sub-criteria, enabling a more structured and objective evaluation. Through this weighting system, each supplier is assigned a priority score that reflects their compatibility with the needs of UMKM XYZ, based on both qualitative and quantitative considerations.

The analysis results indicate that Supplier Nirwana Tekstil ranks highest with a priority score of 0.433882, followed by Toko Kain Pasar Baru at 0.259807. Meanwhile, Tiga Saudara Tekstil, Jayatekstil, and Kharisma received lower priority scores. Product quality and cost emerged as the two most influential factors in the supplier selection process, with quality (0.305031) being the dominant criterion, followed by cost (0.200456). A notable finding of this study is the significance of punctuality or adherence to product specifications. The sub-criterion "adherence" received the highest weight in the accuracy category, indicating that supplier consistency in maintaining agreed quality standards has a direct impact on product outcomes and business reputation. These findings offer a strategic reference for SMEs in selecting supplier partners and highlight opportunities for further research that integrates external factors and non-technical relationship aspects in decision-making.

Keyword :Supplier Selection, AHP, Quality, Cost, Punctuality