

# DETERMINATION OF PRIORITY CRITERIA AND SUPPLIER RANKING USING AHP-TOPSIS AT PT. SUTINDO RAYA MULIA

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## Abstract

PT. Sutindo Raya Mulia or SRM is a stockist company that purchases, stores, and resells it to consumers. PT. Sutindo Raya Mulia is headquartered in Surabaya and has branch offices in Jakarta, Semarang, Balikpapan, and Samarinda. One of the products offered by SRM is a stainless steel plate. Plate products have 3 series (S200, S300, and S400) and have different suppliers consisting of both local and international. Some of the weaknesses of the purchasing process can be caused by the selection of suppliers that are not fixed when purchasing products from suppliers. This is because the company does not have priority criteria in selecting suppliers. Priority criteria are determined using the Analytical Hierarchy Process method. Supplier assessment is determined using the Technique for Order Preference by Similarity to Ideal Solution method.

The results of the AHP method obtained the weight and order of these criteria, price (0.261), availability (0.206), quality (0.200), position (0.106), quantity (0.102), MOQ (0.060), delivery (0.038), payment method (0.027). The results of the TOPSIS method obtained the value and sequence of suppliers, S200 (AB-21.0%; AC-27.3%; AD-20.2%; AE-17.5%; AF-14.1%), S300 (BC-28.3%; BD-9.5%; BE-23.8%; BF-17.2%; BG-21.1%), S400 (CD-23.5%; CE-23.2%; CF-25.5%; CG-27.8%). Proposed improvements are made by establishing a simple supplier assessment system that can be carried out periodically to monitor supplier performance. This simple system can be updated regularly and generates supplier values automatically which can be used as a consideration for prioritizing suppliers in improving company performance.

**Kata kunci:** Priority criteria, supplier assessment, *Analytical Hierarchy Process*, *Technique for Order Preference by Similarity to Ideal Solution*