

ABSTRACT

PT XYZ is a freight forwarding company engaged in export and import activities and located in Bandung. In its operations, the company faces an increase in the number of export shipment delays, most of which are caused by operational risks that have not been optimally addressed. To date, the company does not have a structured risk control system to prevent this problem from recurring in the future. This study aims to analyze and design risk mitigation strategies using the Failure Mode and Effect Analysis (FMEA) method and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). The results of the FMEA analysis identified three dominant risks that are priorities for mitigation: inconsistencies in HS Codes on PEB documents, errors in the description of goods and quantities on documents, and damage to goods during the stuffing process. The TOPSIS method was applied to evaluate various mitigation alternatives and determine the most appropriate solution based on several criteria. The mitigation proposals generated using the TOPSIS method include a risk monitoring dashboard, a goods verification form, and an export document checklist. The results of this study are expected to reduce the potential for delays and improve operational risk control at PT XYZ on an ongoing basis.

Keywords – Risk Analysis, FMEA, TOPSIS