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AN INTEGRATIVE ANALYSIS OF AVIATION RISK MANAGEMENT PERFORMANCE PROFILE TO LEVERAGE DATA-DRIVEN SAFETY MANAGEMENT FOR BUSINESS COMPETITIVE ADVANTAGE

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Abstract

The downturn in the oil and gas industry is also adversely affecting the air charter services market. Despite of most air operators following with the low-cost strategy, the industry still put a high value on the performance of Safety Management System (SMS). However, the misleading information from invalid safety data analysis may cause a poor managerial decision, discredit the SMS process and lower the company business competitive advantage. The study is aimed to find a method of safety data analysis which can provide a reliable basis for communicating the risk management results to stakeholders. An integrative approach is developed to transform large amounts of safety data collected from the SMS activities into useful information that supports effective decision making. ARMS Methodology of Event Risk Classification and Flight Safety Foundation BARS bow tie schematic diagram are combined to create the Risk Management Performance Profile model. Case study was performed using the Travira Air SMS implementation data in the period of 1 January 2019 until 20 April 2020. Quantitative risk indexes as the result can be used as a reference for understanding how the accidents occurs and monitor the effectiveness of preventive barriers or recovery measures. The model can be implemented by Safety Managers who interested in correctly identify the safety hotspots and find solution based on informed data and sufficient analysis.

Keywords: Data-Driven, Risk Assessment, Safety Management System, Competitive Advantage, Aviation.
