

Supply Chain Risk Analysis using SCOR and FMEA Models at PT Servistama Pro Indonesia

By Muhammad Shalahuddin Arribath Fatana

Abstract

PT Servistama Pro Indonesia is a distributor of XCMG heavy equipment spare parts that relies heavily on a smooth supply chain. Disruptions in the planning, procurement, distribution, and return processes may lead to supply delays, product mismatches, and reduced service quality. This study aims to identify supply chain risks within the company's processes and determine risk priorities that require immediate mitigation. The study employs a descriptive quantitative approach using the SCOR model and FMEA through mapping the core processes of plan, source, deliver, and return. Data were collected through interviews and observations using a total sampling technique involving one warehouse manager and four warehouse operational staff at PT Servistama Pro Indonesia. The results identified 24 risk events caused by 29 risk agents. The FMEA assessment based on severity, occurrence, and detection indicates the priority risks as follows: suppliers' delays in fulfilling requests (RPN 343), environmental risks such as flooding and difficult terrain along distribution routes (RPN 252), delays in shipment updates/tracking from the forwarding company (RPN 252), and rejected items potentially being mixed with usable items (RPN 216). The proposed improvements focus on strengthening performance control for suppliers and logistics providers, improving inventory management and goods-handling procedures, and developing a more structured supply chain risk management system to enhance supply reliability and the company's service quality.

.Keywords: *supply chain, supply chain risk, SCOR, FMEA, Risk Priority Number (RPN).*

Analisis Risiko Rantai Pasok menggunakan Model SCOR Dan FMEA pada PT Servistama Pro Indonesia

Oleh Muhammad Shalahuddin Arribath Fatana

Abstrak

PT Servistama Pro Indonesia merupakan perusahaan distribusi suku cadang alat berat merek XCMG yang sangat bergantung pada kelancaran rantai pasok. Gangguan pada proses perencanaan, pengadaan, distribusi, dan retur berpotensi menyebabkan keterlambatan pasokan, ketidaksesuaian barang, serta penurunan kualitas layanan. Penelitian ini bertujuan untuk mengidentifikasi risiko dalam proses rantai pasok perusahaan dan menentukan prioritas risiko yang perlu segera dimitigasi. Penelitian menggunakan pendekatan deskriptif kuantitatif dengan pendekatan model SCOR dan FMEA melalui pemetaan proses inti *plan, source, deliver, dan return*. Data diperoleh melalui wawancara dan observasi menggunakan teknik *total sampling* terhadap 1 *manager warehouse* dan 4 staf operasional gudang PT Servistama Pro Indonesia. Hasil penelitian mengidentifikasi 24 *risk event* yang disebabkan oleh 29 *risk agent*. Penilaian FMEA berdasarkan *severity, occurrence, dan detection* menunjukkan risiko prioritas, yaitu pemasok terlambat memenuhi permintaan (RPN 343), risiko lingkungan seperti banjir dan medan berat pada rute distribusi (RPN 252), keterlambatan *update/tracking* pengiriman dari pihak ekspedisi (RPN 252), serta barang *reject* yang berpotensi tercampur dengan barang layak pakai (RPN 216). Usulan perbaikan difokuskan pada penguatan pengendalian kinerja pemasok dan ekspedisi, perbaikan pengelolaan persediaan dan prosedur penanganan barang, serta pengembangan manajemen risiko rantai pasok yang lebih terstruktur guna meningkatkan keandalan pasokan dan kualitas layanan perusahaan.

Kata kunci: rantai pasok, risiko rantai pasok, SCOR, FMEA, *Risk Priority Number* (RPN).