

**KOMBINASI MODEL *HOR* DAN *MARKOV* PADA  
PENGELOLAAN RISIKO RANTAI PASOK SELAMA  
PANDEMI COVID-19**  
**STUDI KASUS: PRODUK FAST MOVING CONSUMER GOOD  
DI KABUPATEN BANGKALAN**

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**ABSTRAK**

Produk *Fast Moving Consumer Goods* (FMCG) merupakan produk kebutuhan sehari-hari dengan perputaran penjualan yang relatif cepat dan dijual dengan harga yang terjangkau. Produk FMCG akan terus berkembang pesat dalam rangka mendukung pertumbuhan dan pembangunan manusia. Parameter dari pertumbuhan manusia adalah nilai Indeks Pembangunan Manusia (IPM). Nilai IPM Kabupaten Bangkalan selama jangka waktu 6 tahun mengalami kenaikan 5,6 %. Peningkatan kasus penyebaran COVID-19 di Kabupaten Bangkalan berdampaknya pada ketidakpastian risiko rantai pasok produk FMCG. Penelitian ini menggunakan pendekatan Model *House of Risk* (*HOR*) yang dikombinasikan dengan Model *Markov*. Data diperoleh dari hasil penyebaran kuesioner, wawancara, *brainstorming* dan studi literatur. Berdasarkan hasil penelitian, diperoleh identifikasi dari hasil *House of Risk* fase 1 berupa 12 *Risk event*, 12 *Risk agent* dengan 5 *Risk agent* prioritas yang mengacu pada diagram pareto. Kemudian dari hasil *House of Risk* Fase 2 diperoleh 7 aksi mitigasi antara lain melakukan konsolidasi dengan pemegang kebijakan untuk menemukan solusi diikuti rerouting untuk menemukan rute alternatif, mengevaluasi kinerja gudang retail serta optimalisasi aspek *inventory management*, melakukan peramalan kembali dengan mengidentifikasi pola pembelian dan minat masyarakat selama Pandemi COVID-19, merancang resiliensi pola rantai pasokan diikuti kolaborasi dengan pihak pendukung seperti 3PL atau *freight forwarder*, menawarkan Promosi menarik dengan menyesuaikan trend, melakukan evaluasi internal terkait penyesuaian strategi bisnis dengan kebijakan pemerintah selama pandemi COVID-19, mengevaluasi kinerja rantai pasokan produk pada masing-masing *retailer* disertai optimalisasi *cash to cash cycle time* dan *order fulfillment cycle time*. Pemodelan *Markov* memprediksi bahwa kemungkinan *brand switching* antar produk FMCG masih akan terjadi dengan probabilitas mencapai 70%

**Kata Kunci:** Produk FMCG, COVID-19, *House of Risk*, Model *Markov*, *Brand Switching*

**COMBINATION OF HOR AND MARKOV MODELS IN SUPPLY  
CHAIN RISK MANAGEMENT DURING THE COVID-19  
PANDEMIC CASE STUDY: FAST MOVING CONSUMER  
GOODS PRODUCTS IN KAB. BANGKALAN**

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**ABSTRACT**

*Fast Moving Consumer Goods (FMCG) products are daily used products with relatively fast sales turnover and sold at affordable prices. FMCG products will grow rapidly in order to support human growth and development. The parameter of human growth is the value of the Human Development Index (HDI). The HDI value of Bangkalan for a period of 6 years has increased by 5.6%. The increase in cases of the spread of COVID-19 in Bangkalan has an impact on the uncertainty of supply chain risk for FMCG products. This study uses the House of Risk (HOR) Model approach combined with the Markov Model. Data were obtained from the results of distributing questionnaires, interviews, brainstorming and literature studies. Based on the results of the study, the identification of the results of the House of Risk phase 1 there are 12 Risk events, 12 Risk agents with 5 priority Risk agents referring to the Pareto diagram. Then from the results of the House of Risk Phase 2 obtained 7 mitigation actions, including consolidating with policy holders to find solutions followed by rerouting to find alternative routes, evaluating retail warehouse performance and optimizing inventory management aspects, re-forecasting by identifying purchasing patterns and public interest during The COVID-19 pandemic, designing the resilience of supply chain patterns followed by collaboration with supporting parties such as 3PL or freight forwarders, offering attractive promotions by adjusting trends, conducting internal evaluations related for adjusting business strategies with government policies during the COVID-19 pandemic, evaluating product supply chain performance during the COVID-19 pandemic. each retailer with cash to cash cycle time optimization and order fulfillment cycle time. Markov modeling predicts that the possibility of brand switching between FMCG products will still occur with a probability of reaching 70%*

**Keywords:** FMCG Products, COVID-19, House of Risk, Markov Model, Brand Switching