

Identifying Key Drivers of Food Waste in Restaurant Operations: A Case-Based Study

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Abstract. Food waste has become a global issue, particularly in the food service sector, where daily operations generate significant losses. Despite its economic and cultural importance, the restaurant industry in Indonesia, particularly seafood restaurants, receives minimal research. This study aims to identify the key operational drivers of food waste in Indonesian restaurants. More specifically, it seeks to (1) explore food management practices across procurement, storage, preparation, and service; (2) collect staff perceptions of daily challenges in waste management; and (3) analyze how technical, organizational, and cultural factors interact to generate avoidable waste. A qualitative case study methodology is employed, integrating direct observations with structured interviews conducted with restaurant staff. Analytical tools such as Fuzzy Cognitive Mapping (FCM) and Failure Mode and Effects Analysis (FMEA) inspired the structuring of relationships between identified drivers. Early findings so far highlight issues such as poor portion control, limited staff training, absence of formal waste monitoring procedures, and the cultural habit of generosity in service. These factors often act in parallel, amplifying waste quantities. The study provides one of the first operational-level analyses of food waste in Indonesian restaurants, integrating both technical and cultural perspectives. The results are expected to provide realistic recommendations for SMEs in the food sector and contribute to achieving the UN Sustainable Development Goal 12.3, which is about food waste reduction.

Keywords: Food waste, Restaurant, Indonesia, SMEs, Sustainability, SDG 12.3