Identification of Key Factors Influencing the Online Assessment of Restaurants by Customers - Analysis of Sets of Determinants of Food Service Quality*

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Abstract

This study investigates the key determinants shaping online customer ratings of restaurants in Sopot, Poland— a tourist destination marked by seasonal fluctuations and diverse clientele. Despite extensive literature on service quality in gastronomy, there is a noticeable gap concerning the holistic thematic analysis of user-generated reviews using unsupervised machine learning models. To address this, the study employs Latent Dirichlet Allocation (LDA) to analyse 947 English-language Google Maps reviews from 2024. The LDA model identified four dominant themes: (1) food quality and service, (2) overall guest experience and intention to return, (3) mixed feedback with emphasis on waiting times, and (4) location and atmospheric value of the establishment. The findings confirm that food quality and professional service are the most critical factors positively influencing customer satisfaction and loyalty. Conversely, long waiting times contribute to negative sentiments, even within generally positive reviews. The atmosphere and location were also influential, especially in leisure-oriented dining. This study offers actionable insights for restaurant managers by highlighting priority areas for improvement and strategic focus. The findings also demonstrate the value of thematic modelling in extracting actionable knowledge from large sets of unstructured online data.

Keywords: online reviews, food service quality, theme analysis, restaurants, customer ratings