

The Quality of Hotel Services in Sopot in the Light of Online Reviews – An Analysis of Key Strengths and Weaknesses*

Aleksandra KOŹLAK and Jacek WINIARSKI

University of Gdansk, Faculty of Economics; Poland

Correspondence should be addressed to: Aleksandra KOŹLAK, aleksandra.kozlak@ug.edu.pl

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Abstract

The increasing influence of online reviews on consumer choices in the hospitality sector has made sentiment analysis a valuable tool for assessing service quality. Although many studies have addressed service quality in tourism, few have focused on the systematic use of Natural Language Processing (NLP) methods to analyse customer opinions about hotels in specific destinations. This study addresses this gap by applying sentiment analysis to evaluate Polish-language online reviews of four prominent hotels in Sopot, a major seaside resort in Poland. The aim was to identify the most frequently mentioned strengths and weaknesses of hotel services. The analysis was conducted using the VADER (Valence Aware Dictionary and sEntiment Reasoner) algorithm integrated with Python-based NLP techniques. A total of 947 reviews were collected from Google Maps and processed for sentiment classification and keyword extraction using TF-IDF. The findings reveal that customers most frequently praise service quality, hotel location, and breakfast offerings. In contrast, negative feedback often concerns reception desk operations, room conditions, and spa or pool facilities. Despite some inconsistencies in service quality, overall sentiment was more positive than negative. The study confirms that sentiment analysis can effectively identify areas for improvement and support data-driven decision-making in hotel service management. The results offer practical implications for hospitality managers aiming to optimise service quality and increase competitiveness in tourist destinations.

Keywords: hotel service quality, sentiment analysis, NLP, VADER, online reviews, hospitality, customer satisfaction