Travellers Segmentation and Choice Prediction through Online Reviews: The Case of Wellington's Hotels in New Zealand

Ali Ahani [a,b], Mehrbakhsh Nilashi [c,*], Othman Ibrahim [d]

[a] Department of Business Strategy and Innovation, Griffith Business School, Griffith University, Brisbane, Australia
[b] Department of Marketing, Griffith Business School, Griffith University, Gold Coast, Australia
[c] School of Computing, Faculty of Engineering, Universiti Teknologi Malaysia (UTM), Skudai Johor 81310, Malaysia
[d] Azman Hashim International Business School, Universiti Teknologi Malaysia (UTM), Skudai Johor 81310, Malaysia

* Corresponding author email address: nilashidotnet@hotmail.com

Abstract

Customer choice and segmentation through online reviews can help hotels to improve their marketing strategy development. Nevertheless, old-style approaches are unproductive in analysing online data generated by customers because of size, dissimilar proportions and structures of online review data. Therefore, this research aims to develop a method for 5-star hotels segmentation and travellers' choice forecast through online reviews analysis using machine learning methods. Assessment of method was directed through the gathering of data from travellers' ratings of Wellington's 5-star hotels on different features in TripAdvisor. Results confirm that the projected hybrid machine learning approaches can be applied as a progressive recommender mediator for 5-star hotel segmentation by applying 'big data' obtained from online social media settings.

Keywords: Market Segmentation, Online Reviews, MCDM, TOPSIS, Choice Prediction, Wellington's 5-star hotels, New Zealand

1. Introduction

Hotel managers are constantly trying to make tourists happy, but, tourists are dissimilar as classically they display varied preferences depending on the aim of travel, style of travel, and previous understandings (Berezina, Bilgihan, Cobanoglu, & Okumus, 2016). Customer satisfaction is a valuable degree that can help hoteliers to evaluate hotel performance by diverse groups of travellers (Neirotti, Raguseo, & Paolucci, 2016). Thus, hotel managers are increasingly aiming to identify methods to recognize the relationship between travelers' preferences and their satisfaction degrees to advance their marketing strategy. Hotel managers want to understand customer preferences and needs in attaining well marketplace (De Pelsmacker, Van Tilburg, & Holthof, 2018). However, the development of social media practice, questions the traditional technique of customer relationship management and customer behavior analysis (Ahani, Nilashi, Yadegaridehkordi et al., 2019; Ahani, Rahim, & Nilashi, 2017b).

For Instance, TripAdvisor as a popular social media platforms delivers opportunities for following travelers to assessing their behavior and thus can be efficiently applied in market segmentation analysis (Ahani, Nilashi, Ibrahim, Sanzogni, & Weaven, 2019). Undeniably, tourist

researchers and the tourist businesses are in need of data-driven market segmentation examination not only for knowledge expansion but also to understand marketplace (Ernst & Dolnicar, 2018). Therefore, online reviews are a significant source of valued data and information about tourists, their preferences, and experiences that disclose the customers' feelings of service satisfaction (Gao, Li, Liu, & Fang, 2018). Furthermore, the online rating study is a type of Multi-Criteria Decision Making (MCDM) matter as they deliver preferences of clients based on their diverse perspectives on the hotels valuation (Ahani, Nilashi, Yadegaridehkordi et al., 2019). Tourists' expectancy of hotel services usually differs based on hotel star rating, which effects their overall satisfaction (Tefera and Govender, 2016). Although quality of services and satisfaction are substantial in the hotel and hospitality business, they are more vital in 5-star hotel since tourist supposed to receive luxury service and higher quality form this type of hotels (Lu, Berchoux, Marek, & Chen, 2015; Mohsin & Lockyer, 2010). Nevertheless, inadequate attention has been paid to the advance of novel approaches for market segmentation based on online reviews of 5-star hotels. Furthermore, online reviews and ratings have been produced a big volume of data over the last decades. It has been predictable that the quantity of data will continue to