# Universiti Teknologi MARA

# Select The Most Preferable Budget Hotel in Kuala Perlis By Using Fuzzy COPRAS-F Method

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Report submitted in fulfillment of the requirement for Bachelor of Science (Hons.) Management Mathematics Faculty of Computer and Mathematical Sciences

### STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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Abstract. Budget hotel is one of the best hotels for people to stay while travelling. Budget hotel is a low-cost hotel that provides basic facilities for guests. However, there are several criteria (factors) that need to be considered when selecting a budget hotel. The aim of this study is to identify and rank important criteria (factors) for the selection of budget hotels and to determine the best among selected budget hotels in Kuala Perlis. The study used a Multi-Criteria Decision Making (MCDM) approach for the methodological perspective. The study adopted the Fuzzy Complex Proportional Assessment (COPRAS-F) method for ranking of five criteria (factors) namely, price, location, cleanliness, service and facilities provided by the budget hotel. The alternative to the best budget hotel is then determined on the basis of criteria (factors). The result shows that the most important criteria (factors) are cleanliness with the crisp value of 0.79 while the Noor Boutique Hotel is the best budget hotel selected in Kuala Perlis. For the result of criteria based on each budget hotel, Budget Motel Kuala Perlis have two criteria that be the most important criteria namely, price and location with the crisp value of 8.33. Then for Noor Boutique Hotel, the most important criteria is price with the crisp value of 7.78. Based on the result, it is shown that the Fuzzy COPRAS-F method helps to identify and rank important criteria (factors) and to identify the best alternatives among selected budget hotels in Kuala Perlis.

**Keywords:** Fuzzy Complex Proportional Assessment (COPRAS-F), Multi-CriteriDecision Making, budget hotel, cleanliness.

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