

**AN EVALUATION OF FOOD E-SERVICE DELIVERY
APPLICATION: FUZZY ANALYTIC HIERARCHY PROCESS
(FAHP) APPROACH**

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ABSTRACT

Food delivery is one of the businesses reporting growth rates after the COVID-19 pandemic. Due to social isolation and extensive lockdowns worldwide, individuals who once dined out now choose online food delivery. In order to stay up with the ever-changing market dynamics, the service provider must be aware of various measurements and aspects related to sustainable growth. Therefore, this study aims to determine customers' satisfaction criteria in evaluating food e-service delivery applications, to calculate the weight for criteria that contributed to customers' satisfaction and ranking the food e-service delivery application according to the most preferred by the customers. This study will use multi-criteria decision-making (MCDM)-based framework which is the Fuzzy Analytic Hierarchy Process (FAHP). The FAHP is used to produce weights for criteria by applying fuzzy set theory to the linguistic evaluation statements of experts and ranking the food e-service delivery application according to the customer's preference. The findings indicate that FoodPanda is the most preferred food delivery application, followed by GrabFood and McDelivery. The most crucial main criterion is economic, with delivery cost as the priority sub-criteria. The second most important criterion is technology, the third is service quality, and the last is social and environmental.

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