Fakulti Sains Komputer Dan Matematik

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UTILIZING THE FUZZY ANALYTICAL HIERARCHY
PROCESS (FAHP) APPROACH TO IDENTIFY THE BEST
ONLINE FOOD DELIVERY SERVICES

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ABSTRACT

This study uses the Fuzzy Analytical Hierarchy Process (FAHP) approach to rank the most reliable online food delivery services among students at UiTM Kelantan Branch Kota Bharu Campus and the ability to apply Fuzzy Triangular Number (TFN) in Multi Criteria Decision Making (MCDM). The decision will be made based on several factors, involving service, cost, time, and quality. According to Idris (2020), due to its potential and aptitude, FAHP in is the best way to improve the consistency and accuracy of decision makers' judgement. The fuzzy set theory is utilized to transform the linguistic evaluation statements of experts into criteria weights that are produced by the FAHP. Three experts who are UiTM Kelantan Branch students from the Kota Bharu Campus took part in the survey. The online food delivery (OFD) services, including Foodpanda, GrabFood, and Odamakan, are then ranked using the chosen criteria. Following Foodpanda and OdaMakan in the final rankings, GrabFood is currently the OFD service with the best performance at the UiTM Kelantan Branch, Kota Bharu Campus. This study also includes discussions, findings, and suggestions for further investigation.

1 INTRODUCTION

1.1 Research Backgroud

1.1 (a) Online Food Delivery (OFD) Services

A website or mobile application that allows customers to order food from a local food services company or restaurant that organizes food online is known as an online food delivery (OFD) services. Consumers will make an order for food, which will be delivered from the restaurant to their location by either restaurant workers or a food delivery service. This service is analogous to shopping on the internet.

Lately, it gained popularity as an online-to-offline mobile service that provides two-way benefits for catering businesses and customers by delivering an effective online order and offline delivery services. Since the growth of the internet and electronic commerce, information and communication technology have become integral aspects of people's daily lives. OFD services have also become more prompt and quick to keep increasing among consumers. Customers may order from a wide range of restaurants and doorstep delivery alternatives with a single tap of their mobile phone on OFD platforms. It has gained widespread acceptance due to its numerous advantages, such as lower prices, better deals, and more. In these circumstances, the OFD sector has risen as a significant route for reaching customers and offering them higher-quality services (Alalwan, 2020).

At the same time, the battle between the OFD providers has become more competitive (Tech, 2020). Therefore, this study aims to identify the best online food delivery services by measuring service factors as well as technical factors for selecting food delivery service providers in UiTM Kelantan Branch, Kota Bharu Campus by using Fuzzy Analytical Hierarchy Process (FAHP). The alternatives that have been chosen are Foodpanda, GrabFood and OdaMakan meanwhile service, cost, time and quality are the criteria for the alternative to present the result of the best online food delivery.

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