

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**AN APPLICATION OF ANALYTICAL
HIERARCHY PROCESS (AHP) IN E-WALLET
SELECTION**

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

A digital wallet also known as "e-Wallet" refers to an electronic device or online service that enables an individual to transact electronically. This may include purchasing products online with a laptop or using a smartphone to buy something from a store. The digital revolution continues to transform most of our everyday lives. Each e-wallet has different features and uniqueness. However, a proper research for the e-wallet selection has not been done yet. The criteria of the most preferable e-wallet are not being properly identified by using a mathematical method. This research was conducted to identify which e-wallet is preferable by the consumers, and which factors affect their choice. Thus, this research used an Analytical Hierarchy Process (AHP) to recommend the solution to achieve our objectives. The hierarchical structure of this problem is constructed. The criteria that included in this research were uses, money transfer, money withdrawal, rewards, security and user-friendly. Next, the pairwise comparison matrix is calculated to find the weightage of each criterion. The most preferable criteria and alternatives for e-wallet can be defined based on the highest weightage value. By evaluating the results from AHP method, Touch 'n Go had become the preferable e-wallet with weightage of 0.2798. Among all the criteria, Security became the most important criteria in selecting of e-wallet. This research had selected the most preferable e-wallet by using AHP method, thus other researchers are encouraged to use another approach in Multi-Criteria Decision Making (MCDM) such as fuzzy Analytical Hierarchy Process (AHP), Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS), and Data Development Analysis (DEA).