

B04 Analytic Hierarchy Process to determine target food retailers at urban poor locations in Kuala Lumpur, Malaysia: Preliminary findings from the South East Asia Obesogenic Food Environment (SEAOFE) Study

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Analytic Hierarchy Process (AHP) has long been a useful tool for decision-makers and researchers to facilitate the making of multiple-criteria decisions. The AHP was employed to determine the criteria for selection, and thus aid in the identification of target food retailers for the SEAOFE study in Malaysia. Six experts from various related-fields were recruited and trained on the application of AHP. The experts were from *Dewan Bandaraya Kuala Lumpur*, Ministry of Health, Malaysia Retailers Association, Federation of Malaysian Consumers Associations, academia, and food retail industry. The experts filled out and completed all questionnaires requiring pair-wise comparisons of the different criteria. Pair-wise comparison matrices were created and all experts need to give ratings for each criterion based on a scale of relative importance. The three criteria were size of food retailer as first criterion, format of food retailer as second criterion, and company share as final criterion. Mathematical computations to calculate sum of criteria weight was employed to determine the criteria that were important for this study. Three highest sums of criteria weight of each criterion were taken into consideration in our results. Our findings indicate that micro, medium, and large-sized retailers should be prioritised for criterion 1. For criterion 2, modern retailer format with three specific types of retail, namely hypermarket, supermarket, and convenience store, were prioritised. As for the last criterion, Euromonitor data was used to select food retailers by considering the top 10 companies based on market share. In conclusion, the type of retailers were aptly selected for the SEAOFE study in Malaysia using this AHP technique, whereby complex decisions can be made more efficiently with a combination of mathematics and psychology.