

Fakulti Sains Komputer Dan Matematik

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RISK ELEMENT ANALYSIS AND PRIORITISATION OF
HALAL FOOD SUPPLY CHAIN USING TRADITIONAL
AHP AND FUZZY AHP

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In the Name of Allah, The most Gracious, The most Merciful. Assalamualaikum w.b.t

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ABSTRACT

Halal food supplies are now exposed to various risks in the process before it is received by the end consumers following the news of fake halal meat scandal that has caused consumer distrust recently. Therefore, the purpose of this project is to prioritise the associated risk and its elements in halal food supply chain so the identified risks can be mitigate by using qualitative research approaches which are analytic hierarchy process (AHP or traditional AHP) and Fuzzy analytic hierarchy process (Fuzzy AHP) methods. Findings from this project highlighted that the main criteria with the highest ranking is raw material risk meanwhile the highest weight priority for sub-criteria is "low reliability on halal certificates—fraudulent halal cert" when applied both methods. Outsourcing practices risk that was discovered by both methodologies then to be in ranked second under the category of risk which "loss of control towards outsourced company issue" being the highest relative weight for this outsourcing risk and the whole global ranking. The suggestions to mitigate the prioritised risks in supply chain within halal food industry are also discussed. In terms of practical implications, the findings of this project can be utilised as baseline data for efforts to control and enhance policy related to risk mitigation of halal food supply chain in Malaysia.