

FORMATIVE EVALUATION OF ANALYTIC HIERARCHY PROCESS AS A RISK PRIORITISATION TOOL FOR RISK MANAGEMENT

(Penilaian Formatif Terhadap Proses Hierarki Analisis sebagai alat Pengutamaan Risiko untuk Pengurusan Risiko)

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ABSTRACT

The aim of this study is to discover strengths and limitations of Analytic Hierarchy Process (AHP) as a risk prioritisation tool for risk management. The study developed a risk management problem and used AHP to organise and structure risks and sub-risks of the problem. It used formative evaluation method with open-ended questionnaires to obtain feedbacks from risk managers on AHP. The study documented the following strengths of AHP: it is easy to use and understand, improves understanding of a problem and improve risk assessment. AHP improves risk assessment in the following ways: it provides a systematic risk assessment process, a clear and transparent risk assessment, facilitates debate and discussion of the risk ranking, and assists risk managers to make explicit trade-off between the risks and sub-risks. AHP is useful for problems with intangible elements, scarce data or requiring subjective judgements. AHP limitations are: too many pairwise comparisons decreasing risk managers concentration and the repetitiveness of the pairwise comparisons resulting in decision fatigue. The consequence, risk managers did not answer all questions or just answer the questions randomly.

Keywords: analytic hierarchy process; risk prioritisation; formative evaluation

ABSTRAK

Tujuan kajian ini adalah untuk mengetahui kekuatan dan batasan Proses Hierarki Analisis (PHA) sebagai alat pengutamaan risiko untuk pengurusan risiko. Kajian ini membangunkan satu masalah pengurusan risiko dan menggunakan PHA untuk mengatur dan menstruktur risiko dan sub-risiko masalah tersebut. Ia menggunakan kaedah penilaian formatif dengan soal selidik terbuka untuk mendapatkan maklum balas daripada pengurus risiko terhadap PHA. Kajian ini mendapati kelebihan PHA adalah seperti berikut: mudah untuk digunakan dan difahami, meningkatkan pemahaman masalah dan memperbaiki penilaian risiko. PHA memperbaiki penilaian risiko seperti berikut: penilaian risiko sistematik, penilaian risiko yang jelas dan telus, memudahkan perdebatan dan perbincangan mengenai tahap kepentingan risiko, dan membantu pengurus risiko untuk membuat penilaian jelas dan seimbang terhadap risiko dan sub-risiko. PHA berguna untuk masalah yang mempunyai unsur tak ketara, data berkurangan atau memerlukan pertimbangan subjektif. Batasan PHA adalah perbandingan yang terlalu banyak mengurangkan tumpuan pengurus risiko dan perbandingan yang berulang-ulang menyebabkan keletihan pembuatan keputusan. Akibatnya, pengurus risiko tidak menjawab semua soalan atau hanya menjawab soalan secara rawak.

Kata kunci: proses hierarki analisis; pengutamaan risiko; penilaian formatif

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