

Harker, P. T.

Alternative modes of questioning in the analytic hierarchy process. (English) Zbl 0626.90001
Math. Modelling 9, 353-360 (1987).

The standard mode of questioning in the Analytic Hierarchy Process (AHP) requires the decision maker to complete a sequence of positive reciprocal matrices by answering $n(n-1)/2$ questions for each matrix, each entry being an approximation to the ratio of the weights of the n items being compared. This paper presents two extensions of the eigenvector approach of the AHP which allows the decision maker to say "I don't know" or "I'm not sure" to some of the questions being asked, and to approximate nonlinear functions of the ratios of the weights. In this way, the questioning process can be substantially shortened and better representations of the responses to certain stimuli may be derived.

MSC:

[91B06](#) Decision theory

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