



Annotated Summary of:

Money, Arthur, David Tromp, and Trevor Wegner (1988), "The Quantification of Decision Support Benefits within the Context of Value Analysis." *MIS Quarterly* 12(2): 223–36.

Chapter 7: Conjoint Analysis

Multivariate Data Analysis, Sixth edition

"The world's leading authority on applied multivariate data analysis based on number of citations, as reported by Google Scholar"

The authors use conjoint analysis as a more rigorous approach to evaluate decision support systems (DSS). By identifying and measuring the intangible benefits of these systems, the authors establish a means of evaluating the effectiveness of information technology in adding value to the decision-making process. Using a literature review and the Delphi method, the authors generate a number of benefits. They then use cluster analysis to confirm these as three separate product benefits (operational, managerial–organizational, and personal). The benefit groupings (used as the factors in the conjoint analysis) contain a total of 12 levels. A sample of 15 DSS workshop attendees is used to obtain the utility scores (raising concerns as to the adequacy of sample size). After determining which benefits are important for end-users, the next step is to apply these results toward judging whether a proposed system adds value.

The authors apply a fractional factorial design, reducing the 48 possible combinations to 12 benefit combinations. The respondents are instructed to rank the combinations of benefits from most important to least important. The results indicate that personally derived benefits, particularly the improvement of decision-making capabilities, are more important than either operational, managerial or organizational benefits. To evaluate the potential of the DSS, the authors perform a t test to compare the differences of the value benefits to a null benefits set (i.e., provides no benefits, which acts as a threshold level). The results, from this example, indicate support for the proposed DSS project. Additionally, the authors demonstrate that self-stated importance ratings offer comparable results. By allowing for the quantification of end-user perceptions of intangible benefits, conjoint analysis has provided a value-based framework for DSS evaluation.
