

On the Rank-Based Selection Strategy for the Group Interview Problem*

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ABSTRACT

For the so-called group interview problem in which several groups of choice alternatives are presented sequentially to the decision maker, the optimal selection strategy is derived that minimizes the expected rank of the selected choice or purchased product. For the case in which the sequence of groups can be rearranged by the decision maker, a simple heuristic procedure is proposed for obtaining a near-optimal sequence of groups, and the performance of the heuristic procedure in a Monte Carlo simulation is assessed. According to the heuristic procedure, the consumer is advised to visit smaller stores first and then move to larger stores later to increase the likelihood of finding a better product. Finally, the optimal selection strategy and the heuristic procedure are compared with those proposed by Chun, Moskowitz, and Plante (1993) and the problem of locating a new store in an area where there are several competing stores is discussed. The optimal selection strategy and the heuristic procedure can be applied to many sequential decision problems such as the consumer search and purchase process.

Subject Areas: Heuristic Procedure, Nonparametric Procedure, Optimal Stopping Rule, and Sequential Decision Process.

INTRODUCTION

For many decisions in everyday life such as buying an electronic appliance at a shopping mall or finding a motel along an interstate highway, several alternatives are evaluated sequentially and, following an evaluation of an alternative, the decision maker (DM) may either select the alternative under consideration or reject it and consider the next available one. The model corresponding to such sequential decision situations is known under various assumptions as the job search problem (Lippman & McCall, 1976), the marriage problem (Lindley, 1961), or the house-selling problem

*In exploring sequential selection and ordering strategies for the group interview problem over the past few years, I have benefited from the advice, encouragement, and assistance of Professors Herbert Moskowitz and Robert Plante at Krannert Graduate School of Management, Purdue University. The author also would like to thank two anonymous reviewers and an associate editor for their helpful comments and suggestions.