

## عنوان مقاله:

Optimal Stopping Policy for Multivariate Sequences; a Generalized Best Choice Problem

## محل انتشار:

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## خلاصه مقاله:

In the classical versions of Best Choice Problem , the sequence of offers is a random sample from a single known distribution. We present an extension of this problem in which the sequential offers are random variables but from multiple independent distributions. Each distribution function represents a class of investment or offers. Offers appear without any specified order. The objective is to accept the best offer. After observing each offer, the decision maker has to accept or reject it. The rejected offers cannot be recalled again. In this paper, we consider both cases of known and unknown parameters of the distribution function of the class of next offer. Two optimality criteria are considered, maximizing the expected value of the accepted offer or the probability of obtaining the best offer. We develop stochastic dynamic programming models for several possible problems, depending on the assumptions. A monotone case optimal policy for both criteria is proved. We also show that the optimal policy of a mixed sequence is similar to the one in which offers are from a single density.

## کلمات کلیدی:

Best choice problem; Asset allocation; Optimal stopping rule; Stochastic dynamic programming; Bayesian decision theory; Mixed model

## لینک ثابت مقاله در پایگاه سیویلیکا:

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