"Invariance Relations for m-Switch Utility Functions with Multiple Attributes"

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Abstract:
We introduce a variety of new independence conditions for multiattribute utility functions. The conditions, and the corresponding functional forms, are based on the idea of limiting the number of switches that a decision maker may make between two alternatives as some parameter of the problem varies. We present the general solutions of the corresponding functional equations, on open subsets of the n-dimensional real space, and show how they lead to simple, easily assessable functional forms that nevertheless permit preference dependencies among the attributes of a decision problem.