

TESTS FOR THE MARGINAL PROBABILITIES IN THE TWO- WAY CONTINGENCY TABLE UNDER RESTRICTED ALTERNATIVES

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Abstract. Testing hypotheses on the marginal probabilities of a two-way contingency table is discussed. Three statistics are considered for testing the hypothesis of specified probabilities in the margins against alternatives with certain kind of order restriction. The properties of these statistics are discussed and their asymptotic behaviors are compared in depth. An application which motivated the consideration of the original testing problem is illustrated with a practical data.

Key words and phrases: Asymptotic power, categorical data, restricted alternative, most stringent somewhere most powerful test.