

Dickinson

A Complement to Cross-tabulation Chi-square Hypothesis Testing

**DECISION SCIENCES INSTITUTE**

Two Observations Between “Truth” and Meh:  
A Complement to Cross-tabulation Chi-square Hypothesis Testing

John R. Dickinson  
University of Windsor  
Email: [MExperiences@bell.net](mailto:MExperiences@bell.net)

**ABSTRACT**

Cross-tabulation and its accompanying chi-square statistical hypothesis test is among the most commonly applied types of analysis. Though not without subtle aspects, the basic analysis is straightforward. As with statistical hypothesis testing generally, a p-value is calculated and on that basis the null hypothesis of independence is either rejected or not rejected. The present research demonstrates that the test may be very sensitive to measurement error. Accordingly, an additional perspective is developed with the suggestion that additional descriptive statistics complement the basic test.

KEYWORDS: Cross-tabulation, chi-square, measurement error, statistical significance

Full paper and references available upon request.