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**Ranil Weerackoon\*** (raniljw@yahoo.com) and **Dmitry Suvorov**. *Measures of Predictor Variable Importance in Logistic Regression: A Comparative Study*.

Researchers have often sought to assess the relative importance of predictor variables in a multiple linear regression model. A number of indices of relative importance in multiple linear regression have been proposed in literature, including the squared zero-order correlation, the squared standardized regression coefficient, the product measure (Pratt's index), the squared standardized regression coefficient of  $y$  regressed on the least squares orthogonal of the  $j$ th predictor, and Johnson's relative weight measure. In this study, we extend these indices to the case of a logistic regression model, when the dependent variable takes a binary form. A Monte Carlo Study is conducted to compare the performance of these indices numerically. Recommendations are made as to which of the relative importance indices are effective for ranking the predictors. (Received September 07, 2014)