Political Science 5001/6001
Example: Presenting the results from a logistic regression analysis in a formal paper

Table 1 shows the results from a multivariate logistic regression analysis as they should be presented in table in a formal paper. The presentation of a logistic regression analysis looks very similar to the presentation of results from an OLS multiple regression. In this table, the left-hand column lists the independent variables and the other columns show the values of (in order): the partial logistic regression coefficients (b), the standard errors of the partial slope coefficients (se), the z-ratio, the significance level, and the odds ratio (or exponentiated slope coefficient). In presenting the results from a logistic regression, there is some debate over whether or not to report the odds ratio. Some researchers report it, while others do not. If you find the odds ratio value helpful and wish to discuss it in your interpretation, then you should include it with the results in your table.

In addition to these values, it is important to report measures of goodness of fit for the model as a whole. When using an OLS multiple regression model, the R-squared value, F-test, and SEE are commonly reported. With the logistic regression analysis, there is less agreement on which measures of goodness of fit to report (look at journal articles in political science that use logistic regression and you will see a variety of statistics reported). In keeping with what would be presented in an OLS regression, this table shows the model chi-square value (roughly analogous to the F-test) and the pseudo R-squared value (roughly analogous to R-squared) as measures of goodness of fit. In logistic regression there is no goodness of fit statistic equivalent to the standard error of the estimate. Also, note that with logistic regression there is nothing equivalent to a standardized regression coefficient. For the sake of clarity and completeness, it is helpful to include an explanation of how the dependent variable is coded in the analysis.

Table 1, Logistic Regression Analysis of Voter Turnout in 2004

| Independent variable | b | se | z ratio | Prob. | Odds |
|---|---|---|---|---|---|
| Age | .023 | .005 | 4.60 | .000 | 1.023 |
| Education | .260 | .040 | 6.50 | .000 | 1.298 |
| Household Income | .063 | .015 | 4.20 | .000 | 1.065 |
| Black | .109 | .241 | 0.45 | .650 | 1.115 |
| Hispanic | - .241 | .315 | 0.76 | .443 | .786 |
| Constant | - 4.034 | .619 | 6.52 | .000 | |

| | |
|---|---|
| Model $\chi^2$ = | 117.106 p. < .05 |
| Pseudo $R^2$ = | .18 |
| n = | 945 |

Note: The dependent variable in this analysis is voter turnout coded so that 0 = did not vote in 2004 and 1 = voted in 2004.

Source: Data from 2004 National Election Study.