Exercises

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Regression Tables

1. Open the Hosmer & Lemeshow low birth weight data (`webuse lbw`).
2. Estimate a `logit` model for whether low birth weight depends on whether the mother smoked during pregnancy.
3. Estimate a second model in which you add control variables (age, weight, race, premature labor history, and hypertension of mother).
4. Create a regression table of the two models containing logit coefficients and t-values; add the pseudo R^2, the BIC and the Log Likelihood; use better labels for the models in the header; change the display formats of the numbers to whatever you think might be appropriate (using options `b()` and `t()`).
5. Label the coefficients using the labels defined in the data or using some custom labels; use a better label for the Log Likelihood; get rid of the boldface label at the top of the table (which is an "equation label").

Regression Tables

6. Improve the labeling of the race variable by including a subheading (see `estout`'s `refcat()` option).
7. Export the table to Word. Export a second time placing coefficients and t-values into the same cell. Export a third time placing coefficients and t-values in separate cells side by side. Export a third fourth time including a title for the table (in boldface).
8. Change the table such that coefficients significant at the 10% level are also marked.
9. Change the table to include 95% confidence intervals instead of t-values and remove the significance stars.
10. Create a table that displays odds ratios instead of logit coefficients.
11. Create a table for the second model that displays logit coefficients as well as odds ratios.

Regression Tables

12. Compute average marginal effects for the two models (`margins`). Create a table that displays odds ratios and t-statistics as well as marginal effects for both models (using `estadd` and the `cells()` option). Create a second table that only displays marginal effects (including the standard errors of the marginal effects; by directly tabulating the results returned by `margins`).

Other tables using estpost

1. Create a table of summary statistics (mean and standard deviation) of the variables in the dataset (using `estpost summarize` or `estpost tabstat`) and export it to Word.
2. Create a table in which the summary statistics are divided by mother's smoking status (using the `by()` option of `estpost tabstat`; in `esttab` use option `unstack` to place the groups side by side) and export it to Word.
3. Create a table containing results from t-test by mother's smoking status and export it to Word.
4. Create a correlation table of the variables in the above logit model and export it to Word.
5. Create a twoway table of race by smoking status and export it to Word. Include row percentages in the table.

Graphs (coefplot and grstyle)

1. Take the logit models from above and display their coefficients and confidence intervals in a plot. Think about rescaling some of the coefficients such that the confidence spikes are informative.
2. Create a second plot that has two panels: the first panel displays the coefficients as above, the second panel displays average marginal effects.
3. Change the confidence intervals to capped spikes. Do some work on the labeling; for example, add a subheading for race, change the subgraph headings and labels in the legend.
4. Add p-values to the graph.
5. Create a graph that displays significant and non-significant effects in different styles.
6. Create a bar chart of smoking status by race.

Graphs (coefplot and grstyle)

7. Take one of the graphs from above and play around with different `grstyle` settings. For example, try to adapt the graph's appearance to the standards that are typically used in your discipline.