

POL 213: Research Methods III

Problem Set 3

Please access the data set `aidaa.dta` from the class website. The response variable is called `aidblak` and is a seven-point scale measuring preferences for governmental spending on programs for African-Americans. The highest category, "7", denotes the response, "greatly increase," while the lowest score, "1", denotes the category "greatly decrease." The variable `south` is an indicator variable scored "1" if the respondent resides in a southern state and "0" if not. The variable `liberal` is an indicator variable scored "1" if the respondent claims to have a liberal ideology (0 if not). The variable `conserve` is coded "1" if the respondent claims to have a conservative ideology (0 if not). The variable `tolerance` is composite index measuring political tolerance. Higher scores indicate the respondent is more politically tolerant/acceptant; lower scores indicate the respondent is less politically tolerant/acceptant.

Please answer/address the following questions.

1. Estimate a multinomial logit model using these data. Present the results from the model in publication-quality tables. It's up to you to choose the relevant information to present. Include the computer code used to generate these models. For this model, estimate it using BOTH R *and* Stata. For the table, you do not need to report both sets of logit estimates. (10 points)
2. For the model, fully interpret every coefficient using the best substantive political science language you can think of (i.e. imagine you were writing up results for a journal article). Included in this interpretation should be a tabular presentation of some quantities of interest (probabilities, marginal effects, odds ratios, and so forth). (20 points)
3. Using R, reestimate the model in question 1 using the adjacent category parameterization. Present the results in tabular form and discuss the major differences and similarities between this model and the multinomial logit model. (10 points)
4. Now estimate a reduced-rank multinomial logit model, presenting the results in tabular form. Interpret every coefficient including the ϕ parameters. Also, discuss the principal differences between this model and that given in question 1. (20 points)
5. From your rr-mnl model, test whether or not some of the scale categories are

indistinguishable from one another. Present a formal test of this and discuss the implications of your test for the model. (15 points)