The goal of this problem is to fit a “good” model of U.S. presidential approval over the 1978-2005 time period using the related economic aggregates. You need to think about or test for the dynamics of each of the economic aggregates, the approval series itself, etc. (Note specifically, you may need to construct and include variables for the changes in U.S. presidential administrations. Be careful about this: remember, U.S. presidents are elected in November, but do not take office until the subsequent January 20th (at least in the present sample).

The Stata data file, USApproval19782005.dta has a dataset of three monthly time series from January 1978-June 2005: • Presidential Approval (approval) • Michigan Index of Consumer Sentiment (mics) • U.S. unemployment rate (unrate)

Use these data to do the following:

(a) Specify, estimation, fit, and justify your “best” ARMAX(p,q) model for how the covariates in the data file explain presidential approval over the sample period.

(b) Present your alternative models, which work to and justify your final model. This should be done using a table of results / estimates as would be presented in a leading political science or economics journal. This would / should be a table that compares models, their uncertainty, and overall fit to the data in a sensible way (consult your favorite empirical journal for examples). You also need to “write-up” or explain the table to the reader.

*Hint: You can read the datafile into R with the foreign package’s read.dta function. You can do this analysis in R, Stata, RATS, etc. If using R, you should use the dynlm package or look closely at the arima() syntax. There are some special issues with handling lagged values that are not dealt with in the standard linear regression functions in R with either of these – e.g., lining up the transformed time series.*