Solow Replication

The assignment requires a report in “term paper” format using “Turabian”(Chicago) conventions. You can find the details on the web. The paper must have i) a title page, ii) the report of the replication exercise, and iii) a bibliography. The bibliography should consist of the Solow article, the program you use for the estimation and the printed book or the web site from which you obtain Turabian conventions. The appendix should include the econometrics software runs from which you extract the answers. The paper itself, not counting the appendices, should be three or four pages. It needs page numbers and your name on every page.

The paper to replicate is Robert M. Solow, “ Technical Change and the Aggregate Production Function” The review of Economics and Statistics, Vol. 39, No.3. (Aug., 1957), pp. 312-320. You are to re-estimate the equations he reports.

* *q = α + β/k* (4a)
* *q = α + β log k* (4b)
* *q = α – β /k*  (4c)
* log *q = α + β* log *k* (4d)
* log *q = α – β /k* (4e)

If you look at Chart 4 you will notice that Solow explains *q/A* by *k*.

***One.*** You should compare what he reports with what you get by using his data – which excludes the war years – and least squares. That’s “replication” narrowly defined. Then using all the data in the table-that includes the war years – redo equations (4a) - (4e) using both OLS and 20%trimmed least squares. Make a table that is easy for me to read that has Solow’s report and the three cases you considered.

***Two.*** How does your program’s selection of observations to drop compare with Solow’s drop decision? Solow’s drop decision is the same for all five specifications. Your runs?

***Three.*** Another aspect of the paper to notice is that Solow does not report standard errors for the regression coefficients. One could argue that since he dropped the war years, the standard errors are not well defined. The final task for the paper is to provide bootstrap standard errors for the (4a) specification – that is the linear one – both for OLS on all the observations and the 20% trim regression

***Due Thursday March 17.*** Make sure to check your data since there will no redo of this assignment. Things will go really wrong if you are working with different data than that which Solow reports.