A Quick Guide to TSP

TSP is a statistical package that was developed by and for economists. It contains a number of econometric subroutines, including a rudimentary programming language for manipulating your data. It is particularly useful for time-series econometrics and maximum-likelihood estimation, including limited dependent variable estimators. It also has some specific estimation routines for panel data and for systems of equations, and it can run Monte Carlo simulations. TSP users are mainly found in economics departments around the world.

There is a TSP manual in the PAC datalab office. For anything advanced, and to get a full idea of the range of procedures available, you will need to go to the appropriate manual.

Relationship to EViews

TSP has very similar syntax to EViews. They are based on the same original program, TSP (which stands for time series processor), which was written by Robert Hall (now an economist at Stanford) when he was a graduate student at MIT in the 1960s. His wife Bronwyn Hall (now an economist at UC Berkeley) continued to develop the program and began marketing it for commercial use. Then, due to the divorce of the founders, the asset of TSP was split into two versions, and subsequently the two versions have diverged in terms of interface and types of subroutines included. EViews is more graphics and time-series oriented and is easier for beginners to use, but TSP has some more advanced econometric routines, particularly of the maximum likelihood and panel data types.

Getting started

At Wesleyan, TSP is available on the UNIX system CONDOR. All students have an account on CONDOR. To find out how to get onto CONDOR and manage your files, see the UNIX essentials tipsheet.

To run a TSP program noninteractively, you must create a file using a text editor or word processor (saving in text format) and name it <**filename**>.**tsp**. This tells the TSP program that it is a TSP program.

Then type:

tsp <**filename**> <**xxx**>

where xxx refers to the size of the workspace you estimate the program will need to run. If you omit the number, TSP will default onto a smallish size and will inform you if you need to set a larger workspace.

Running the program creates a log file, called <**filename**>.**out**. This contains a duplication of your program, along with any error messages that occurred during execution, and (assuming all went well) the output of any statistical subroutines you requested in the program.

If you want to print your log file, you can download it to your local machine or workspace and send it to the local printer (see the UNIX essentials tipsheet section on uploading and downloading files if you are unsure how to do this).

You can also run TSP interactively, but IMHO this is not a good idea because you will not proceed in as orderly a fashion and will have trouble remembering what you have done. To do this you would just type **tsp** and you will get a prompt from tsp to enter in the first command.

Reading data into a tsp program

In TSP, you can enter data in interactive mode or in your program file, but more likely you will want to read in a datafile. Datafiles should be named <**datafilename**>**.dat**. They can contain numbers and characters, where variables are separated by spaces. Each line is an observation, with the variable values in columns. You can create datafiles as output from another program, such as Excel or SAS, or create it yourself using a text editor or word processor (saving as a text file).

Sample program

In order to see this in action, you can run a small sample program that reads in a datafile and runs a couple of statistical functions on the data.

you can retrieve the sample program to see how this works by typing:

cp /html/jjacobsen/public_html/samples/sample.tsp sample.tsp

This will copy a TSP program (sample.tsp) out of my directory into yours.

Now run it by typing:

tsp sample

the output will now be in sample.out. You can view it by typing:

more sample.out

and to advance a page at a time hit the space bar.

For intermediate topics, such as how to read files with other formats, how to create output files from TSP, and how to create permanent datafiles (TSP databanks), consult the TSP User's Guide.