Guide to Computer Code for

Heterogeneity of Ambiguity Preferences

RESTAT_a_00392-Stahl

Since there are many files and Fortran programs used, this guide is intended to associate specific files with claims in the paper. Therefore, this guide follows the order of the paper. Unfortunately, my Fortran code does not contain many comments that explain what it is doing.

1) Data

The raw data is in two files. The first, 2011ALL.xls, is user friendly and lists the responses of all 101 subjects for the 12 questions. The file, ra2011.data, is the file that all the computer codes read; it should be in the same directory as the code.

2) The 2-parameter aggregate model, as well as the entropy calculation is carried out by Fortran program: ra-aggc4.f; the output is ra-aggc4.out.

3) Figure 3. The individual estimation of the two-parameter model is carried out by rkamb7.f; the output is rkamb7.out, and Excel (rkamb7.xls) was used to generate the scatter plot.

In the two paragraphs following Fig 3, two tests are reported on allowing β and γ to differ over some of the questions. These tests are carried out by rkamb72b.f and rkamb73.f.

4) Figure 4 was generated by Fortran program bayesgrd5.f and Excel program bayesgrd5.xls.

5) The Max Error rates for the Level-0 hypothesis (Figure 5) were computed by id5_l0.f, and the plot produced by Excel bayescat5.xls.

6) The Max Error rates for H2 and H3 (page 15) were produced by id5_beta.f and id5_ed.f respectively, and plots produced by Excel bayescat5.xls. Note that all three programs read a data file, pat4096.data, which contains the 4096 potential response patterns to the twelve questions. Therefore, this file needs to be in the same directory as these programs.

7) Figure 6 was produced by Excel bayescat5.xls, sheets Categories and Chart5.

8) Table 2. The shares of each region (column 2) are generated by Excel bayescat5.xls. In sheet L0Max, the array defined by BB57:CZ107 contains the probability of each grid point in the Level-0 region given by Figure 4 (sheet bayesgrd5), and summed in cell DA108. Similarly, sheet EUMax performs this calculation for the EUM region (BB112:DA163); and B1Max performs this calculation for the Residual region (BB169:DA221). The AA region is one minus these other three regions. Sheet AAMax performs this calculation directly to serve as a check.

The standard errors are computed by rsbay51.f and rsbay51.xls. The data file, cat10.data, is required for the Fortran code. It is a text file with the data from the Categories sheet of bayescat5.xls.

9) Table 3 is generated by bayesgrd5i.f and bayesgrd5i.xls.

10) Figure 7 is generated by 2011ALL.xls.

11) Table 4 is generated by ramix2d.f with output ramix2d.out.

12) Table 5. The uni-modal model (next to last column) is generated by rauni50.f (which gives the ML estimates), and the bootstrapped standard errors are generated by btu0.f.

The two-mode model (last column) is generated by ramix751.f, and the bootstrapped standard errors are generated by bt751.f.

13) The bootstapped LLR test of the uni-mode and two mode models (page 20) is generated by btu751.f.

14) Table 6 was generated by ramix751cat.xls, which is essentially a copy of bayescat5.xls, but with the probability grid from the two-mode model output (ramix751.out).

15) The figure in Appendix B is generated by bayesgrd5s.f and bayesgrds.xls.