Instructions to Use the Transportation Modeling Package

Halton Sequences Code

Halton Sequences Code

- This is the R code for generating Halton sequences for use in simulation estimation of discrete choice models.

- It is based on the Gauss code developed by Dr. Chandra R. Bhat at the University of Texas – Austin.

- The technical paper and the Gauss code are available at

http://www.ce.utexas.edu/prof/bhat/halton.html

Files to Download

File Name	Description
Halton_Gen.r	R code generating standard or scramble Halton sequences
Xbrat.csv	Input data (permutation matrices for scramble Halton sequences) to "Halton_Gen.r"
Xiden.csv	Input data (permutation matrices for standard Halton sequences) to "Halton_Gen.r"

Running Halton Sequences Using the R Script

• **Step 1:** Open the R-code "Halton_Gen.r".

• **Step 2:** Update the path of working directory to the one in which this code resides.

• **Step 3:** Change the settings of Halton sequences such as "sbrat", "output_file", "draws", and "dim" (see the next slide for detailed information).

• **Step 4:** Select all and run (Ctrl+A and Ctrl+R).

Running Halton Sequences Using the R Script

Variable Name	Description
setwd	Change working directory to the one in which this code resides
sbrat	"True" if Bratten-Weller Scrambled sequence is desired; "False" if standard sequence desired
output_file	File name for the output of Halton sequences (Note: output file will be saved in the working directory)
draws	Number of draws (= number of replications × number of cases)
dim	Number of dimensions (it should be equal to or less than 16)

Halton Sequences: Results – "testhaltonout.csv"

• The output file of the Halton sequences is provided as a separate attachment.