SAMPLE

Selection of Random Samples

Selection of a Proportion *p*

For each case, a random uniform number in the range 0 to 1 is generated. If it is less than *p*, the case is included in the sample.

Selection of a Sample of n_1 Cases out of a Total of *n*

(a) $p = \dfrac{n_1}{n}$

$n = n - 1$

Select a case if its uniform (0,1) number is less than *p*. If selected, $n_1 = n_1 - 1$, and return to (a).

Selection of Cases in Nonparametric Procedures

The sampling procedure is as follows:

Each time a case is encountered after the limit imposed by the size of the workspace has been reached, the program decides whether to include it in the sample or not at random. The probability that the new cases will enter the sample is equal to the number of cases that can be held in the workspace divided by the number of cases so far encountered.

If the program decides to accept a case, it then picks at random one of the cases previously stored in the workspace and drops it from the analysis, replacing it with the new case. Each case has the same probability of being in the sample.

If case weighting is used, the nonparametric procedures can use a case more than once. For example, if the weight of a case is 2.3, the program will use that case twice, and may choose at random, with a probability of 0.3, to use it a third time. If sampling is in effect, each of these two or three cases is a candidate for sampling.