Table 1: Input for Monte Carlo simulation of the Heckman selection model

TITLE: Selection modeling: Muthén-Jöreskog (1983), p. 146 with data generated similar to Model 1, p. 158 y missing if u=0

MONTECARLO: NAMES = y u x;
NOBSERVATIONS = 4000;
NREPS = 500;
CATEGORICAL = u; ! u = 1 if y observed
GENERATE = u(1 p);
MISSING = y;

MODEL POPULATION:
x@1;
y ON x*1;
[y*0];
y*1;
f BY y*-1 u@1; ! gives residual corr = -0.5
f@1;
u ON x*-1;

ANALYSIS: ESTIMATOR = MLR;
LINK = PROBIT;
PROCESSORS = 8;
MCONVERGENCE = 0.00001;
INTEGRATION = 30;

MODEL:
y ON x*1;
[y*0];
y*1 (v);
f BY y*-1 (lam)
u@1; ! gives -0.5 res. correlation
f@1;
u ON x*-1 (slope);
[u$1] (thresh);

MODEL MISSING:
! binary y = 1 denotes missing on continuous y
! logit regression for y with [y] denoting intercept
[y@15]; ! probability one of missing on y if u = 0
y ON u@-30; ! probability zero of missing on y if u=1

MODEL CONSTRAINT:
NEW (rescorr*-.5 probint*0 probslp*-0.707107);
rescorr = lam/(SQRT(lam*lam+v)*SQRT(1+1));
probint = -thresh/SQRT(1+1);
probslp = slope/SQRT(1+1);

OUTPUT: TECH9;

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