Supplemental File 2

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* Supplemental File 2 – GBTM Example Do-File (Stata)
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** download traj package for Stata (Jones & Nagin, 2013)
net from http://www.andrew.cmu.edu/user/bjones/traj
net install traj, force
help traj

** Square Root Transform Outcome (Step 2)
*Alcohol
gen alcsq1 = sqrt(alcohol1)
gen alcsq2 = sqrt(alcohol2)
gen alcsq3 = sqrt(alcohol3)
gen alcsq4 = sqrt(alcohol4)
gen alcsq5 = sqrt(alcohol5)
gen alcsq6 = sqrt(alcohol6)
gen alcsq7 = sqrt(alcohol7)
gen alcsq8 = sqrt(alcohol8)
gen alcsq9 = sqrt(alcohol9)
gen alcsq10 = sqrt(alcohol10)
gen alcsq11 = sqrt(alcohol11)
gen alcsq12 = sqrt(alcohol12)
gen alcsq13 = sqrt(alcohol13)
gen alcsq14 = sqrt(alcohol14)
* Marijuana
gen mjsq1 = sqrt(marijuana1)
gen mjsq2 = sqrt(marijuana2)
gen mjsq3 = sqrt(marijuana3)
gen mjsq4 = sqrt(marijuana4)
gen mjsq5 = sqrt(marijuana5)
gen mjsq6 = sqrt(marijuana6)
gen mjsq7 = sqrt(marijuana7)
gen mjsq8 = sqrt(marijuana8)
gen mjsq9 = sqrt(marijuana9)
gen mjsq10 = sqrt(marijuana10)
gen mjsq11 = sqrt(marijuana11)
gen mjsq12 = sqrt(marijuana12)
gen mjsq13 = sqrt(marijuana13)
gen mjsq14 = sqrt(marijuana14)

**** Censored Normal Models **** (Step 3)
** Alcohol - 4 Trajectories
* All cubic
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 3) min(0) max(6)
        * Plotting
        trajplot, ci
* Mixed
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 2) min(0) max(6)
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* Mixed
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 2 2) min(0) max(6)

** Alcohol - 5 Trajectories
* All cubic
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 3 3) min(0) max(6)
* Mixed
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 3 2) min(0) max(6)
* Mixed
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 2 2) min(0) max(6)

** Marijuana - 4 Trajectories
* All cubic
traj, model(cnorm) var(mjsq*) indep(t_*) order(3 3 3 3) min(0) max(6)
* All quadratic
traj, model(cnorm) var(mjsq*) indep(t_*) order(2 2 2 2) min(0) max(6)
* Mixed
traj, model(cnorm) var(mjsq*) indep(t_*) order(1 2 2 2) min(0) max(6)

** Marijuana - 5 Trajectories
* All cubic
traj, model(cnorm) var(mjsq*) indep(t_*) order(3 3 3 3 3) min(0) max(6)
* All quadratic
traj, model(cnorm) var(mjsq*) indep(t_*) order(2 2 2 2 2) min(0) max(6)
* Mixed
traj, model(cnorm) var(mjsq*) indep(t_*) order(1 2 2 2 2) min(0) max(6)

*** ZIP Models *** (Step 3)
** Alcohol - 4 Trajectories
* All cubic
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 3) iorder(1 1 1 1)
* Mixed
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 2) iorder(1 1 1 1)
* Mixed
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 2 2) iorder(1 1 1 1)

** Alcohol - 5 Trajectories
* All cubic
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 3 3) iorder(1 1 1 1 1)
* Mixed
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 3 2) iorder(1 1 1 1 1)
* Mixed
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 2 2) iorder(1 1 1 1 1)

** Marijuana - 4 Trajectories
* All cubic
traj, model(zip) var(marijuana*) indep(t_*) order(3 3 3 3) iorder (1 1 1 1)
* Mixed
traj, model(zip) var(marijuana*) indep(t_*) order(1 2 3 2) iorder (1 1 1 1)
* Mixed

traj, model(zip) var(marijuana*) indep(t_*) order(1 2 2 2) iorder (1 1 1 1)

** Marijuana - 5 Trajectories
* All quadratic
traj, model(zip) var(marijuana*) indep(t_*) order(1 2 3 3 3) iorder (1 1 1 1 1)
* Mixed
traj, model(zip) var(marijuana*) indep(t_*) order(1 2 2 2 3) iorder (1 1 1 1 1)
* Mixed
traj, model(zip) var(marijuana*) indep(t_*) order(1 2 2 2 2) iorder (1 1 1 1 1)

*** Addition of Covariates to "Best" Models (Step 4) ***
** Alcohol
* Censored Normal
traj, model(cnorm) var(alcsq*) indep(t_*) order(3 3 3 3 3) min(0) max(6) risk(black hispanic other)

** ZIP
traj, model(zip) var(alcohol*) indep(t_*) order(3 3 3 3 2) iorder(1 1 1 1 1) risk(black hispanic other)

** Marijuana
* Censored Normal
traj, model(cnorm) var(mjsq*) indep(t_*) order(1 2 3 2 2) min(0) max(6) risk(black hispanic other)

** ZIP
traj, model(zip) var(marijuana*) indep(t_*) order(1 2 2 2 2) iorder(1 1 1 1 1) risk(black hispanic other)