**Maximum Likelihood Results (Penalty = 0)**

parameters

Estimate s.d. t-stat

gamma 0.3904 0.0000 0.0000

alpha 0.0000 0.1495 0.0001

rhop 0.4153 0.0000 0.0000

rhog 0.1270 0.0000 0.0000

rhoa 0.9797 0.0057 170.7609

rhoe 0.0000 0.0739 0.0006

standard deviation of shocks

Estimate s.d. t-stat

epsilon\_a 0.0868 0.0000 0.0000

epsilon\_e 0.0017 0.0001 20.5705

epsilon\_z 0.0095 0.0000 0.0000

epsilon\_r 0.0014 0.0000 0.0000

cov\_matrix =

0.0060 0.0000 0.0002 0.0000

0.0000 0.0000 -0.0000 0.0000

0.0002 -0.0000 0.0001 -0.0000

0.0000 0.0000 -0.0000 0.0000

corrcoef\_matrix =

1.0000 0.1495 0.3604 0.1333

0.1495 1.0000 -0.5562 0.0012

0.3604 -0.5562 1.0000 -0.2034

0.1333 0.0012 -0.2034 1.0000

DegreeContemporaneousCC =

0.7862

**Maximum Likelihood Results (Penalty = 1000)**

parameters

Estimate s.d. t-stat

gamma 0.7811 0.0019 402.6088

alpha 0.0009 0.0007 1.2660

rhop 0.5097 0.0027 191.6564

rhog 0.1099 0.0003 422.7945

rhoa 0.9776 0.0010 1008.9304

rhoe 0.0006 0.0007 0.7676

standard deviation of shocks

Estimate s.d. t-stat

epsilon\_a 0.0489 0.0005 103.5965

epsilon\_e 0.0026 0.0001 21.1999

epsilon\_z 0.0396 0.0007 54.5107

epsilon\_r 0.0017 0.0001 21.6094

cov\_matrix =

0.0021 0.0000 0.0003 0.0000

0.0000 0.0000 0.0000 -0.0000

0.0003 0.0000 0.0009 -0.0000

0.0000 -0.0000 -0.0000 0.0000

corrcoef\_matrix =

1.0000 0.3041 0.2182 0.1027

0.3041 1.0000 0.1186 -0.3139

0.2182 0.1186 1.0000 -0.1300

0.1027 -0.3139 -0.1300 1.0000

DegreeContemporaneousCC =

0.5163

**Maximum Likelihood Results (Penalty = 5000)**

parameters

Estimate s.d. t-stat

gamma 0.5354 0.0012 432.6489

alpha 0.0003 0.0003 0.8067

rhop 0.4873 0.0006 867.1318

rhog 0.0072 0.0001 76.3854

rhoa 0.6299 0.0004 1666.0356

rhoe 0.0001 0.0003 0.3001

standard deviation of shocks

Estimate s.d. t-stat

epsilon\_a 0.0392 0.0003 122.1865

epsilon\_e 0.0025 0.0000 196.2702

epsilon\_z 0.0027 0.0000 194.1904

epsilon\_r 0.0029 0.0000 88.5886

cov\_matrix =

1.0e-03 \*

0.7347 -0.0033 0.0179 -0.0041

-0.0033 0.0092 -0.0008 -0.0014

0.0179 -0.0008 0.0045 -0.0002

-0.0041 -0.0014 -0.0002 0.0023

corrcoef\_matrix =

1.0000 -0.0399 0.3105 -0.1007

-0.0399 1.0000 -0.1239 -0.3019

0.3105 -0.1239 1.0000 -0.0526

-0.1007 -0.3019 -0.0526 1.0000

DegreeContemporaneousCC =

0.3499