\*\*\*\*\* Numerical Optimization Converged \*\*\*\*\*

Final log Likelihood: -2062.6713

Number of estimated parameters: 50

Number of Observations: 1302

Number of Equations: 4

Optimizer: fminsearch

Number of Equations in System: 4

Distribution Assumption -> Normal

Standard error calculation -> 1

\*\*\*\*\* Final Parameters for Equation #1 \*\*\*\*\*

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = 0.00 (0.00,0.71)

State 2, Intercept = -0.00 (0.01,0.80)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.07 (0.03,0.04)

State 2, Lag 1 = 0.05 (0.07,0.43)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.01 (0.01,0.02)

State 2, Lag 1 = 0.05 (0.02,0.01)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.02 (0.01,0.00)

State 2, Lag 1 = -0.04 (0.02,0.12)

Dependent Variable #4 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.01 (0.01,0.10)

State 2, Lag 1 = 0.01 (0.03,0.72)

\*\*\*\*\* Final Parameters for Equation #2 \*\*\*\*\*

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = -0.05 (0.02,0.01)

State 2, Intercept = 0.05 (0.05,0.31)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.08 (0.19,0.66)

State 2, Lag 1 = -0.04 ( Inf,1.00)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.02 (0.04,0.56)

State 2, Lag 1 = 0.01 (0.01,0.37)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.11 (0.04,0.01)

State 2, Lag 1 = 0.09 (0.08,0.28)

Dependent Variable #4 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.10 (0.05,0.03)

State 2, Lag 1 = -0.09 (0.11,0.44)

\*\*\*\*\* Final Parameters for Equation #3 \*\*\*\*\*

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = -0.02 (0.02,0.19)

State 2, Intercept = -0.01 (0.06,0.89)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.15 (0.16,0.35)

State 2, Lag 1 = 0.14 (0.22,0.54)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.23 (0.04,0.00)

State 2, Lag 1 = 0.46 (0.07,0.00)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.12 (0.04,0.00)

State 2, Lag 1 = -0.08 (0.09,0.35)

Dependent Variable #4 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.05 (0.05,0.24)

State 2, Lag 1 = -0.02 (0.12,0.85)

\*\*\*\*\* Final Parameters for Equation #4 \*\*\*\*\*

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = -0.02 (0.01,0.20)

State 2, Intercept = 0.01 (0.04,0.82)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.01 ( Inf,1.00)

State 2, Lag 1 = -0.00 ( Inf,1.00)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.19 (0.03,0.00)

State 2, Lag 1 = 0.26 (0.05,0.00)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.05 (0.04,0.13)

State 2, Lag 1 = -0.06 (0.06,0.38)

Dependent Variable #4 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.02 (0.04,0.59)

State 2, Lag 1 = -0.05 (0.09,0.60)

---> Transition Probabilities Matrix (p-value) <---

0.88 (0.00) 0.36 (0.00)

0.12 ( NaN) 0.64 ( NaN)

---> Expected Duration of Regimes <---

Expected duration of Regime #1: 8.28 time periods

Expected duration of Regime #2: 2.79 time periods

---> Covariance Matrix <---

State 1

0.00610 (0.00041,0.00) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.23079 (0.01411,0.00) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.19628 (0.01396,0.00) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.14180 (0.00883,0.00)

State 2

0.06843 (0.00676,0.00) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.71065 (0.06484,0.00) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.72087 (0.06518,0.00) 0.00000 ( NaN, NaN)

0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.00000 ( NaN, NaN) 0.42825 (0.03775,0.00)

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