Column: India\_8

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3609  
Model: ARIMA(0, 1, 0) Log Likelihood -10159.831  
Date: Tue, 14 May 2024 AIC 20321.661  
Time: 23:29:28 BIC 20327.852  
Sample: 0 HQIC 20323.867  
 - 3609   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 16.3459 0.077 213.522 0.000 16.196 16.496  
===================================================================================  
Ljung-Box (L1) (Q): 50.39 Jarque-Bera (JB): 354461.20  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.34 Skew: 0.47  
Prob(H) (two-sided): 0.00 Kurtosis: 51.55  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3609  
Model: ARIMA(3, 1, 0) Log Likelihood -10095.461  
Date: Tue, 14 May 2024 AIC 20198.921  
Time: 23:29:28 BIC 20223.685  
Sample: 0 HQIC 20207.746  
 - 3609   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0958 0.007 14.605 0.000 0.083 0.109  
ar.L2 0.1367 0.008 16.156 0.000 0.120 0.153  
ar.L3 0.0400 0.010 4.009 0.000 0.020 0.060  
sigma2 15.7724 0.081 195.776 0.000 15.614 15.930  
===================================================================================  
Ljung-Box (L1) (Q): 0.03 Jarque-Bera (JB): 318870.72  
Prob(Q): 0.85 Prob(JB): 0.00  
Heteroskedasticity (H): 0.31 Skew: -0.03  
Prob(H) (two-sided): 0.00 Kurtosis: 49.06  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_36

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3503  
Model: ARIMA(0, 1, 0) Log Likelihood -11624.264  
Date: Tue, 14 May 2024 AIC 23250.528  
Time: 23:29:28 BIC 23256.689  
Sample: 0 HQIC 23252.727  
 - 3503   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 44.7358 0.112 399.653 0.000 44.516 44.955  
===================================================================================  
Ljung-Box (L1) (Q): 7.85 Jarque-Bera (JB): 4776521.88  
Prob(Q): 0.01 Prob(JB): 0.00  
Heteroskedasticity (H): 0.43 Skew: 6.82  
Prob(H) (two-sided): 0.00 Kurtosis: 183.41  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3503  
Model: ARIMA(3, 1, 0) Log Likelihood -11614.240  
Date: Tue, 14 May 2024 AIC 23236.480  
Time: 23:29:28 BIC 23261.124  
Sample: 0 HQIC 23245.275  
 - 3503   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0435 0.007 5.898 0.000 0.029 0.058  
ar.L2 0.0507 0.006 7.812 0.000 0.038 0.063  
ar.L3 0.0279 0.006 4.456 0.000 0.016 0.040  
sigma2 44.4969 0.111 400.806 0.000 44.279 44.715  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 4882344.34  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 0.41 Skew: 6.77  
Prob(H) (two-sided): 0.00 Kurtosis: 185.42  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_40

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(0, 1, 0) Log Likelihood -10036.791  
Date: Tue, 14 May 2024 AIC 20075.582  
Time: 23:29:28 BIC 20081.788  
Sample: 0 HQIC 20077.792  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 14.0446 0.071 196.440 0.000 13.905 14.185  
===================================================================================  
Ljung-Box (L1) (Q): 19.82 Jarque-Bera (JB): 246355.31  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.35 Skew: 0.67  
Prob(H) (two-sided): 0.00 Kurtosis: 43.15  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(5,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(5, 1, 0) Log Likelihood -9950.366  
Date: Tue, 14 May 2024 AIC 19912.732  
Time: 23:29:28 BIC 19949.968  
Sample: 0 HQIC 19925.990  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0463 0.009 5.013 0.000 0.028 0.064  
ar.L2 0.1819 0.008 23.311 0.000 0.167 0.197  
ar.L3 0.0562 0.009 6.551 0.000 0.039 0.073  
ar.L4 0.0140 0.009 1.526 0.127 -0.004 0.032  
ar.L5 0.0284 0.008 3.359 0.001 0.012 0.045  
sigma2 13.3965 0.079 169.872 0.000 13.242 13.551  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 203617.80  
Prob(Q): 0.93 Prob(JB): 0.00  
Heteroskedasticity (H): 0.32 Skew: 0.08  
Prob(H) (two-sided): 0.00 Kurtosis: 39.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_67

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(0, 1, 0) Log Likelihood -10424.737  
Date: Tue, 14 May 2024 AIC 20851.474  
Time: 23:29:28 BIC 20857.680  
Sample: 0 HQIC 20853.683  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 17.3580 0.071 242.830 0.000 17.218 17.498  
===================================================================================  
Ljung-Box (L1) (Q): 20.23 Jarque-Bera (JB): 601516.37  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.52 Skew: 2.92  
Prob(H) (two-sided): 0.00 Kurtosis: 65.51  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(4,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(4, 1, 0) Log Likelihood -10332.266  
Date: Tue, 14 May 2024 AIC 20674.533  
Time: 23:29:28 BIC 20705.563  
Sample: 0 HQIC 20685.582  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0588 0.009 6.780 0.000 0.042 0.076  
ar.L2 0.1875 0.007 26.865 0.000 0.174 0.201  
ar.L3 -0.0015 0.005 -0.283 0.777 -0.012 0.009  
ar.L4 0.0653 0.005 13.439 0.000 0.056 0.075  
sigma2 16.5023 0.088 187.182 0.000 16.330 16.675  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 424194.64  
Prob(Q): 0.93 Prob(JB): 0.00  
Heteroskedasticity (H): 0.51 Skew: 2.24  
Prob(H) (two-sided): 0.00 Kurtosis: 55.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_69

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3592  
Model: ARIMA(0, 1, 0) Log Likelihood -10335.390  
Date: Tue, 14 May 2024 AIC 20672.779  
Time: 23:29:28 BIC 20678.966  
Sample: 0 HQIC 20674.984  
 - 3592   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 18.5119 0.075 246.494 0.000 18.365 18.659  
===================================================================================  
Ljung-Box (L1) (Q): 11.68 Jarque-Bera (JB): 652421.26  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.60 Skew: 2.94  
Prob(H) (two-sided): 0.00 Kurtosis: 68.77  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(4,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3592  
Model: ARIMA(4, 1, 0) Log Likelihood -10239.239  
Date: Tue, 14 May 2024 AIC 20488.479  
Time: 23:29:28 BIC 20519.410  
Sample: 0 HQIC 20499.503  
 - 3592   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0500 0.009 5.812 0.000 0.033 0.067  
ar.L2 0.1900 0.007 29.036 0.000 0.177 0.203  
ar.L3 -0.0202 0.005 -4.205 0.000 -0.030 -0.011  
ar.L4 0.0815 0.006 13.244 0.000 0.069 0.094  
sigma2 17.5464 0.106 166.084 0.000 17.339 17.753  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 429658.05  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 0.58 Skew: 2.32  
Prob(H) (two-sided): 0.00 Kurtosis: 56.39  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_124

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3501  
Model: ARIMA(0, 1, 0) Log Likelihood -6214.070  
Date: Tue, 14 May 2024 AIC 12430.139  
Time: 23:29:28 BIC 12436.300  
Sample: 0 HQIC 12432.338  
 - 3501   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 2.0401 0.013 152.557 0.000 2.014 2.066  
===================================================================================  
Ljung-Box (L1) (Q): 14.16 Jarque-Bera (JB): 88332.92  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.36 Skew: 0.24  
Prob(H) (two-sided): 0.00 Kurtosis: 27.61  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3501  
Model: ARIMA(3, 1, 0) Log Likelihood -6206.244  
Date: Tue, 14 May 2024 AIC 12420.488  
Time: 23:29:28 BIC 12445.130  
Sample: 0 HQIC 12429.282  
 - 3501   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0637 0.006 10.074 0.000 0.051 0.076  
ar.L2 -0.0004 0.007 -0.057 0.954 -0.014 0.014  
ar.L3 -0.0203 0.006 -3.239 0.001 -0.033 -0.008  
sigma2 2.0310 0.014 145.802 0.000 2.004 2.058  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 96424.04  
Prob(Q): 0.94 Prob(JB): 0.00  
Heteroskedasticity (H): 0.37 Skew: 0.11  
Prob(H) (two-sided): 0.00 Kurtosis: 28.71  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_136

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(0, 1, 0) Log Likelihood -9439.415  
Date: Tue, 14 May 2024 AIC 18880.829  
Time: 23:29:28 BIC 18887.035  
Sample: 0 HQIC 18883.039  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 10.1355 0.046 218.675 0.000 10.045 10.226  
===================================================================================  
Ljung-Box (L1) (Q): 67.79 Jarque-Bera (JB): 385064.61  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.28 Skew: 0.19  
Prob(H) (two-sided): 0.00 Kurtosis: 53.23  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(3, 1, 0) Log Likelihood -9403.072  
Date: Tue, 14 May 2024 AIC 18814.144  
Time: 23:29:28 BIC 18838.969  
Sample: 0 HQIC 18822.983  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.1405 0.004 -33.793 0.000 -0.149 -0.132  
ar.L2 -0.0327 0.010 -3.403 0.001 -0.051 -0.014  
ar.L3 -0.0167 0.010 -1.682 0.093 -0.036 0.003  
sigma2 9.9364 0.054 184.199 0.000 9.831 10.042  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 282889.70  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 0.28 Skew: 0.89  
Prob(H) (two-sided): 0.00 Kurtosis: 46.02  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_153

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(0, 1, 0) Log Likelihood -9793.966  
Date: Tue, 14 May 2024 AIC 19589.933  
Time: 23:29:28 BIC 19596.139  
Sample: 0 HQIC 19592.143  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 12.3008 0.054 226.602 0.000 12.194 12.407  
===================================================================================  
Ljung-Box (L1) (Q): 17.28 Jarque-Bera (JB): 451730.13  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.58 Skew: 2.63  
Prob(H) (two-sided): 0.00 Kurtosis: 57.15  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(6,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3664  
Model: ARIMA(6, 1, 0) Log Likelihood -9668.436  
Date: Tue, 14 May 2024 AIC 19350.872  
Time: 23:29:28 BIC 19394.315  
Sample: 0 HQIC 19366.340  
 - 3664   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0332 0.007 4.627 0.000 0.019 0.047  
ar.L2 0.1983 0.008 23.552 0.000 0.182 0.215  
ar.L3 0.0643 0.009 6.923 0.000 0.046 0.082  
ar.L4 0.0567 0.010 5.892 0.000 0.038 0.076  
ar.L5 -0.0043 0.006 -0.669 0.504 -0.017 0.008  
ar.L6 0.0617 0.007 9.046 0.000 0.048 0.075  
sigma2 11.4851 0.067 171.299 0.000 11.354 11.617  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 375090.28  
Prob(Q): 0.94 Prob(JB): 0.00  
Heteroskedasticity (H): 0.57 Skew: 2.38  
Prob(H) (two-sided): 0.00 Kurtosis: 52.34  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_160

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3501  
Model: ARIMA(0, 1, 0) Log Likelihood -10707.480  
Date: Tue, 14 May 2024 AIC 21416.960  
Time: 23:29:28 BIC 21423.121  
Sample: 0 HQIC 21419.159  
 - 3501   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 26.5943 0.061 436.064 0.000 26.475 26.714  
===================================================================================  
Ljung-Box (L1) (Q): 7.90 Jarque-Bera (JB): 6791546.63  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.85 Skew: 6.81  
Prob(H) (two-sided): 0.01 Kurtosis: 218.37  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3501  
Model: ARIMA(3, 1, 0) Log Likelihood -10703.476  
Date: Tue, 14 May 2024 AIC 21414.952  
Time: 23:29:28 BIC 21439.594  
Sample: 0 HQIC 21423.746  
 - 3501   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0475 0.008 5.595 0.000 0.031 0.064  
ar.L2 0.0007 0.013 0.058 0.953 -0.024 0.026  
ar.L3 -0.0055 0.010 -0.574 0.566 -0.024 0.013  
sigma2 26.5417 0.061 434.747 0.000 26.422 26.661  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 6883947.41  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 0.86 Skew: 6.82  
Prob(H) (two-sided): 0.01 Kurtosis: 219.84  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_172

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3349  
Model: ARIMA(0, 1, 0) Log Likelihood -9230.060  
Date: Tue, 14 May 2024 AIC 18462.120  
Time: 23:29:28 BIC 18468.237  
Sample: 0 HQIC 18464.308  
 - 3349   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 14.5258 0.079 182.771 0.000 14.370 14.682  
===================================================================================  
Ljung-Box (L1) (Q): 97.80 Jarque-Bera (JB): 200655.36  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.40 Skew: 0.11  
Prob(H) (two-sided): 0.00 Kurtosis: 40.93  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(4,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3349  
Model: ARIMA(4, 1, 0) Log Likelihood -9124.384  
Date: Tue, 14 May 2024 AIC 18258.767  
Time: 23:29:28 BIC 18289.348  
Sample: 0 HQIC 18269.706  
 - 3349   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1402 0.010 14.681 0.000 0.122 0.159  
ar.L2 0.1452 0.010 14.357 0.000 0.125 0.165  
ar.L3 0.0011 0.011 0.099 0.921 -0.021 0.023  
ar.L4 0.0847 0.009 8.936 0.000 0.066 0.103  
sigma2 13.6364 0.084 163.069 0.000 13.473 13.800  
===================================================================================  
Ljung-Box (L1) (Q): 0.04 Jarque-Bera (JB): 186230.12  
Prob(Q): 0.84 Prob(JB): 0.00  
Heteroskedasticity (H): 0.36 Skew: -0.43  
Prob(H) (two-sided): 0.00 Kurtosis: 39.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_199

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2422  
Model: ARIMA(0, 1, 0) Log Likelihood -8229.179  
Date: Tue, 14 May 2024 AIC 16460.357  
Time: 23:29:28 BIC 16466.149  
Sample: 0 HQIC 16462.463  
 - 2422   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 52.4730 0.250 209.824 0.000 51.983 52.963  
===================================================================================  
Ljung-Box (L1) (Q): 8.64 Jarque-Bera (JB): 507914.37  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 1.47 Skew: 2.58  
Prob(H) (two-sided): 0.00 Kurtosis: 73.77  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(6,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2422  
Model: ARIMA(6, 1, 0) Log Likelihood -8210.586  
Date: Tue, 14 May 2024 AIC 16435.171  
Time: 23:29:28 BIC 16475.715  
Sample: 0 HQIC 16449.914  
 - 2422   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0551 0.010 -5.763 0.000 -0.074 -0.036  
ar.L2 0.0697 0.013 5.223 0.000 0.044 0.096  
ar.L3 0.0527 0.009 5.799 0.000 0.035 0.070  
ar.L4 -0.0668 0.008 -8.818 0.000 -0.082 -0.052  
ar.L5 0.0086 0.013 0.648 0.517 -0.017 0.035  
ar.L6 0.0032 0.013 0.243 0.808 -0.023 0.029  
sigma2 51.6654 0.280 184.228 0.000 51.116 52.215  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 501369.53  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 1.48 Skew: 2.71  
Prob(H) (two-sided): 0.00 Kurtosis: 73.29  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_206

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3074  
Model: ARIMA(0, 1, 0) Log Likelihood -12418.049  
Date: Tue, 14 May 2024 AIC 24838.098  
Time: 23:29:28 BIC 24844.128  
Sample: 0 HQIC 24840.264  
 - 3074   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 189.4570 1.631 116.147 0.000 186.260 192.654  
===================================================================================  
Ljung-Box (L1) (Q): 16.98 Jarque-Bera (JB): 31003.93  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.23 Skew: -0.01  
Prob(H) (two-sided): 0.00 Kurtosis: 18.56  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3074  
Model: ARIMA(3, 1, 0) Log Likelihood -12409.482  
Date: Tue, 14 May 2024 AIC 24826.964  
Time: 23:29:29 BIC 24851.086  
Sample: 0 HQIC 24835.630  
 - 3074   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0746 0.009 8.177 0.000 0.057 0.093  
ar.L2 -0.0042 0.007 -0.567 0.571 -0.019 0.010  
ar.L3 -0.0040 0.008 -0.529 0.597 -0.019 0.011  
sigma2 188.4026 1.619 116.350 0.000 185.229 191.576  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 31757.17  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.23 Skew: -0.06  
Prob(H) (two-sided): 0.00 Kurtosis: 18.75  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: India\_220

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3503  
Model: ARIMA(0, 1, 0) Log Likelihood -10669.279  
Date: Tue, 14 May 2024 AIC 21340.558  
Time: 23:29:29 BIC 21346.719  
Sample: 0 HQIC 21342.756  
 - 3503   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 25.9296 0.196 132.602 0.000 25.546 26.313  
===================================================================================  
Ljung-Box (L1) (Q): 13.56 Jarque-Bera (JB): 47727.70  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.24 Skew: -0.01  
Prob(H) (two-sided): 0.00 Kurtosis: 21.09  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(3,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 3503  
Model: ARIMA(3, 1, 0) Log Likelihood -10661.654  
Date: Tue, 14 May 2024 AIC 21331.308  
Time: 23:29:29 BIC 21355.952  
Sample: 0 HQIC 21340.103  
 - 3503   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0610 0.008 7.810 0.000 0.046 0.076  
ar.L2 0.0146 0.007 2.214 0.027 0.002 0.028  
ar.L3 0.0152 0.007 2.214 0.027 0.002 0.029  
sigma2 25.8178 0.195 132.240 0.000 25.435 26.200  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 48606.43  
Prob(Q): 0.97 Prob(JB): 0.00  
Heteroskedasticity (H): 0.24 Skew: -0.11  
Prob(H) (two-sided): 0.00 Kurtosis: 21.25  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).