Column: China\_4\_2010-01-01 - 2012-05-31

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 628  
Model: ARIMA(0, 1, 0) Log Likelihood -3074.786  
Date: Sun, 19 May 2024 AIC 6151.572  
Time: 22:28:47 BIC 6156.013  
Sample: 0 HQIC 6153.297  
 - 628   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 1064.2815 31.522 33.763 0.000 1002.500 1126.063  
===================================================================================  
Ljung-Box (L1) (Q): 0.50 Jarque-Bera (JB): 772.67  
Prob(Q): 0.48 Prob(JB): 0.00  
Heteroskedasticity (H): 2.44 Skew: -0.52  
Prob(H) (two-sided): 0.00 Kurtosis: 8.34  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 628  
Model: ARIMA(3, 1, 0) Log Likelihood -3072.952  
Date: Sun, 19 May 2024 AIC 6153.903  
Time: 22:28:47 BIC 6171.667  
Sample: 0 HQIC 6160.804  
 - 628   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0281 0.030 0.948 0.343 -0.030 0.086  
ar.L2 -0.0581 0.026 -2.212 0.027 -0.110 -0.007  
ar.L3 -0.0388 0.026 -1.491 0.136 -0.090 0.012  
sigma2 1058.0465 31.873 33.196 0.000 995.577 1120.516  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 777.13  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 2.39 Skew: -0.50  
Prob(H) (two-sided): 0.00 Kurtosis: 8.36  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_4\_2012-05-31 - 2014-11-19

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 643  
Model: ARIMA(0, 1, 0) Log Likelihood -2848.862  
Date: Sun, 19 May 2024 AIC 5699.724  
Time: 22:28:47 BIC 5704.189  
Sample: 0 HQIC 5701.457  
 - 643   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 418.6726 10.722 39.047 0.000 397.657 439.688  
===================================================================================  
Ljung-Box (L1) (Q): 0.07 Jarque-Bera (JB): 1519.06  
Prob(Q): 0.79 Prob(JB): 0.00  
Heteroskedasticity (H): 0.19 Skew: -0.15  
Prob(H) (two-sided): 0.00 Kurtosis: 10.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 643  
Model: ARIMA(3, 1, 0) Log Likelihood -2847.932  
Date: Sun, 19 May 2024 AIC 5703.864  
Time: 22:28:47 BIC 5721.723  
Sample: 0 HQIC 5710.795  
 - 643   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0062 0.032 -0.197 0.844 -0.068 0.056  
ar.L2 0.0460 0.034 1.340 0.180 -0.021 0.113  
ar.L3 0.0279 0.031 0.902 0.367 -0.033 0.089  
sigma2 417.4550 11.823 35.310 0.000 394.283 440.627  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1422.17  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.19 Skew: -0.15  
Prob(H) (two-sided): 0.00 Kurtosis: 10.29  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_4\_2014-11-19 - 2023-06-07

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2229  
Model: ARIMA(0, 1, 0) Log Likelihood -8727.620  
Date: Sun, 19 May 2024 AIC 17457.241  
Time: 22:28:47 BIC 17462.950  
Sample: 0 HQIC 17459.326  
 - 2229   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 147.9118 0.870 170.028 0.000 146.207 149.617  
===================================================================================  
Ljung-Box (L1) (Q): 65.90 Jarque-Bera (JB): 234319.66  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.39 Skew: 2.60  
Prob(H) (two-sided): 0.00 Kurtosis: 52.97  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2229  
Model: ARIMA(3, 1, 0) Log Likelihood -8665.454  
Date: Sun, 19 May 2024 AIC 17338.907  
Time: 22:28:47 BIC 17361.743  
Sample: 0 HQIC 17347.246  
 - 2229   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1370 0.006 23.772 0.000 0.126 0.148  
ar.L2 0.1212 0.005 23.282 0.000 0.111 0.131  
ar.L3 0.0874 0.006 15.489 0.000 0.076 0.098  
sigma2 139.7693 1.020 137.088 0.000 137.771 141.768  
===================================================================================  
Ljung-Box (L1) (Q): 0.02 Jarque-Bera (JB): 161378.83  
Prob(Q): 0.90 Prob(JB): 0.00  
Heteroskedasticity (H): 0.36 Skew: 1.66  
Prob(H) (two-sided): 0.00 Kurtosis: 44.56  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_33\_2010-01-01 - 2013-12-09

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1025  
Model: ARIMA(0, 1, 0) Log Likelihood -2937.039  
Date: Sun, 19 May 2024 AIC 5876.078  
Time: 22:28:47 BIC 5881.010  
Sample: 0 HQIC 5877.951  
 - 1025   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 18.1474 0.329 55.206 0.000 17.503 18.792  
===================================================================================  
Ljung-Box (L1) (Q): 10.84 Jarque-Bera (JB): 4189.23  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.80 Skew: 0.13  
Prob(H) (two-sided): 0.04 Kurtosis: 12.91  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1025  
Model: ARIMA(4, 1, 0) Log Likelihood -2919.994  
Date: Sun, 19 May 2024 AIC 5849.988  
Time: 22:28:47 BIC 5874.645  
Sample: 0 HQIC 5859.349  
 - 1025   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0949 0.022 4.413 0.000 0.053 0.137  
ar.L2 0.1426 0.023 6.090 0.000 0.097 0.189  
ar.L3 -0.0440 0.019 -2.353 0.019 -0.081 -0.007  
ar.L4 0.0223 0.023 0.950 0.342 -0.024 0.068  
sigma2 17.5523 0.350 50.167 0.000 16.867 18.238  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 3816.09  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.70 Skew: 0.13  
Prob(H) (two-sided): 0.00 Kurtosis: 12.45  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_33\_2013-12-09 - 2016-01-19

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 550  
Model: ARIMA(0, 1, 0) Log Likelihood -1381.192  
Date: Sun, 19 May 2024 AIC 2764.384  
Time: 22:28:47 BIC 2768.692  
Sample: 0 HQIC 2766.068  
 - 550   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 8.9691 0.189 47.527 0.000 8.599 9.339  
===================================================================================  
Ljung-Box (L1) (Q): 23.57 Jarque-Bera (JB): 4832.57  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.38 Skew: 1.12  
Prob(H) (two-sided): 0.00 Kurtosis: 17.36  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 550  
Model: ARIMA(4, 1, 0) Log Likelihood -1361.028  
Date: Sun, 19 May 2024 AIC 2732.056  
Time: 22:28:47 BIC 2753.596  
Sample: 0 HQIC 2740.474  
 - 550   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.1838 0.021 -8.779 0.000 -0.225 -0.143  
ar.L2 0.1210 0.020 6.126 0.000 0.082 0.160  
ar.L3 -0.0321 0.025 -1.275 0.202 -0.082 0.017  
ar.L4 -0.1354 0.020 -6.841 0.000 -0.174 -0.097  
sigma2 8.3317 0.211 39.537 0.000 7.919 8.745  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 3112.35  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 0.46 Skew: 1.31  
Prob(H) (two-sided): 0.00 Kurtosis: 14.37  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_33\_2016-01-19 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2086  
Model: ARIMA(0, 1, 0) Log Likelihood -4595.364  
Date: Sun, 19 May 2024 AIC 9192.729  
Time: 22:28:47 BIC 9198.371  
Sample: 0 HQIC 9194.796  
 - 2086   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 4.8073 0.050 97.094 0.000 4.710 4.904  
===================================================================================  
Ljung-Box (L1) (Q): 8.01 Jarque-Bera (JB): 23531.18  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 1.55 Skew: 1.48  
Prob(H) (two-sided): 0.00 Kurtosis: 19.19  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2086  
Model: ARIMA(4, 1, 0) Log Likelihood -4587.439  
Date: Sun, 19 May 2024 AIC 9184.877  
Time: 22:28:47 BIC 9213.090  
Sample: 0 HQIC 9195.214  
 - 2086   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0598 0.011 5.619 0.000 0.039 0.081  
ar.L2 0.0329 0.012 2.810 0.005 0.010 0.056  
ar.L3 0.0025 0.015 0.169 0.866 -0.027 0.032  
ar.L4 0.0496 0.016 3.158 0.002 0.019 0.080  
sigma2 4.7709 0.053 89.620 0.000 4.667 4.875  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 22165.84  
Prob(Q): 0.92 Prob(JB): 0.00  
Heteroskedasticity (H): 1.53 Skew: 1.38  
Prob(H) (two-sided): 0.00 Kurtosis: 18.73  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_103\_2014-11-21 - 2015-10-14

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 232  
Model: ARIMA(0, 1, 0) Log Likelihood -509.698  
Date: Sun, 19 May 2024 AIC 1021.395  
Time: 22:28:47 BIC 1024.837  
Sample: 0 HQIC 1022.783  
 - 232   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 4.8312 0.281 17.200 0.000 4.281 5.382  
===================================================================================  
Ljung-Box (L1) (Q): 2.23 Jarque-Bera (JB): 93.93  
Prob(Q): 0.14 Prob(JB): 0.00  
Heteroskedasticity (H): 1.91 Skew: 0.28  
Prob(H) (two-sided): 0.01 Kurtosis: 6.08  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 232  
Model: ARIMA(2, 1, 0) Log Likelihood -508.405  
Date: Sun, 19 May 2024 AIC 1022.810  
Time: 22:28:47 BIC 1033.137  
Sample: 0 HQIC 1026.975  
 - 232   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1067 0.051 2.107 0.035 0.007 0.206  
ar.L2 -0.0122 0.058 -0.212 0.832 -0.125 0.101  
sigma2 4.7771 0.292 16.355 0.000 4.205 5.350  
===================================================================================  
Ljung-Box (L1) (Q): 0.02 Jarque-Bera (JB): 88.58  
Prob(Q): 0.90 Prob(JB): 0.00  
Heteroskedasticity (H): 1.91 Skew: 0.20  
Prob(H) (two-sided): 0.00 Kurtosis: 6.01  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_103\_2015-10-14 - 2023-04-17

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1957  
Model: ARIMA(0, 1, 0) Log Likelihood -5294.349  
Date: Sun, 19 May 2024 AIC 10590.698  
Time: 22:28:47 BIC 10596.276  
Sample: 0 HQIC 10592.748  
 - 1957   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 13.1387 0.057 229.361 0.000 13.026 13.251  
===================================================================================  
Ljung-Box (L1) (Q): 0.07 Jarque-Bera (JB): 908537.02  
Prob(Q): 0.80 Prob(JB): 0.00  
Heteroskedasticity (H): 2.44 Skew: -1.60  
Prob(H) (two-sided): 0.00 Kurtosis: 108.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1957  
Model: ARIMA(2, 1, 0) Log Likelihood -5294.260  
Date: Sun, 19 May 2024 AIC 10594.520  
Time: 22:28:47 BIC 10611.256  
Sample: 0 HQIC 10600.672  
 - 1957   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0056 0.018 -0.316 0.752 -0.041 0.029  
ar.L2 0.0077 0.029 0.268 0.789 -0.048 0.064  
sigma2 13.1366 0.058 227.498 0.000 13.023 13.250  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 908118.52  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 2.43 Skew: -1.60  
Prob(H) (two-sided): 0.00 Kurtosis: 108.51  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_165\_2010-01-01 - 2013-06-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 901  
Model: ARIMA(0, 1, 0) Log Likelihood -2406.839  
Date: Sun, 19 May 2024 AIC 4815.678  
Time: 22:28:47 BIC 4820.481  
Sample: 0 HQIC 4817.513  
 - 901   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 12.3130 0.274 44.993 0.000 11.777 12.849  
===================================================================================  
Ljung-Box (L1) (Q): 2.21 Jarque-Bera (JB): 1836.62  
Prob(Q): 0.14 Prob(JB): 0.00  
Heteroskedasticity (H): 0.74 Skew: 0.12  
Prob(H) (two-sided): 0.01 Kurtosis: 9.99  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 901  
Model: ARIMA(5, 1, 0) Log Likelihood -2390.657  
Date: Sun, 19 May 2024 AIC 4793.314  
Time: 22:28:47 BIC 4822.129  
Sample: 0 HQIC 4804.322  
 - 901   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0543 0.023 2.343 0.019 0.009 0.100  
ar.L2 0.1167 0.024 4.821 0.000 0.069 0.164  
ar.L3 -0.1399 0.020 -7.137 0.000 -0.178 -0.101  
ar.L4 -0.0330 0.020 -1.617 0.106 -0.073 0.007  
ar.L5 -0.0141 0.022 -0.632 0.528 -0.058 0.030  
sigma2 11.8757 0.297 40.047 0.000 11.295 12.457  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1419.24  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 0.71 Skew: 0.15  
Prob(H) (two-sided): 0.00 Kurtosis: 9.14  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_165\_2013-06-18 - 2020-03-05

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1751  
Model: ARIMA(0, 1, 0) Log Likelihood -4053.548  
Date: Sun, 19 May 2024 AIC 8109.096  
Time: 22:28:47 BIC 8114.564  
Sample: 0 HQIC 8111.117  
 - 1751   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 6.0179 0.075 79.937 0.000 5.870 6.165  
===================================================================================  
Ljung-Box (L1) (Q): 0.13 Jarque-Bera (JB): 12119.50  
Prob(Q): 0.72 Prob(JB): 0.00  
Heteroskedasticity (H): 0.33 Skew: 1.22  
Prob(H) (two-sided): 0.00 Kurtosis: 15.66  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1751  
Model: ARIMA(5, 1, 0) Log Likelihood -4051.127  
Date: Sun, 19 May 2024 AIC 8114.254  
Time: 22:28:47 BIC 8147.058  
Sample: 0 HQIC 8126.380  
 - 1751   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0079 0.014 0.558 0.577 -0.020 0.036  
ar.L2 0.0044 0.011 0.400 0.689 -0.017 0.026  
ar.L3 0.0134 0.018 0.755 0.450 -0.021 0.048  
ar.L4 -0.0501 0.013 -3.877 0.000 -0.075 -0.025  
ar.L5 -0.0162 0.017 -0.926 0.355 -0.050 0.018  
sigma2 6.0013 0.085 70.552 0.000 5.835 6.168  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 11536.25  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.34 Skew: 1.27  
Prob(H) (two-sided): 0.00 Kurtosis: 15.32  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_165\_2020-03-05 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1009  
Model: ARIMA(0, 1, 0) Log Likelihood -2422.262  
Date: Sun, 19 May 2024 AIC 4846.523  
Time: 22:28:47 BIC 4851.439  
Sample: 0 HQIC 4848.391  
 - 1009   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 7.1577 0.128 55.764 0.000 6.906 7.409  
===================================================================================  
Ljung-Box (L1) (Q): 2.05 Jarque-Bera (JB): 4505.71  
Prob(Q): 0.15 Prob(JB): 0.00  
Heteroskedasticity (H): 1.85 Skew: 0.38  
Prob(H) (two-sided): 0.00 Kurtosis: 13.33  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1009  
Model: ARIMA(5, 1, 0) Log Likelihood -2414.808  
Date: Sun, 19 May 2024 AIC 4841.617  
Time: 22:28:47 BIC 4871.111  
Sample: 0 HQIC 4852.822  
 - 1009   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0460 0.014 3.235 0.001 0.018 0.074  
ar.L2 -0.0201 0.023 -0.888 0.375 -0.064 0.024  
ar.L3 -0.0416 0.020 -2.075 0.038 -0.081 -0.002  
ar.L4 0.0738 0.019 3.960 0.000 0.037 0.110  
ar.L5 0.0717 0.018 3.954 0.000 0.036 0.107  
sigma2 7.0522 0.129 54.832 0.000 6.800 7.304  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 4918.37  
Prob(Q): 0.94 Prob(JB): 0.00  
Heteroskedasticity (H): 1.87 Skew: 0.35  
Prob(H) (two-sided): 0.00 Kurtosis: 13.80  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_169\_2010-01-01 - 2014-09-23

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1231  
Model: ARIMA(0, 1, 0) Log Likelihood -3370.534  
Date: Sun, 19 May 2024 AIC 6743.068  
Time: 22:28:47 BIC 6748.182  
Sample: 0 HQIC 6744.992  
 - 1231   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 14.0506 0.228 61.623 0.000 13.604 14.497  
===================================================================================  
Ljung-Box (L1) (Q): 0.06 Jarque-Bera (JB): 5524.09  
Prob(Q): 0.81 Prob(JB): 0.00  
Heteroskedasticity (H): 1.12 Skew: 0.42  
Prob(H) (two-sided): 0.24 Kurtosis: 13.35  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1231  
Model: ARIMA(4, 1, 0) Log Likelihood -3366.668  
Date: Sun, 19 May 2024 AIC 6743.336  
Time: 22:28:47 BIC 6768.910  
Sample: 0 HQIC 6752.958  
 - 1231   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0093 0.020 0.473 0.636 -0.029 0.048  
ar.L2 0.0011 0.018 0.066 0.948 -0.033 0.035  
ar.L3 -0.0729 0.015 -4.882 0.000 -0.102 -0.044  
ar.L4 0.0317 0.015 2.121 0.034 0.002 0.061  
sigma2 13.9623 0.226 61.841 0.000 13.520 14.405  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 5673.07  
Prob(Q): 0.97 Prob(JB): 0.00  
Heteroskedasticity (H): 1.15 Skew: 0.44  
Prob(H) (two-sided): 0.17 Kurtosis: 13.48  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_169\_2014-09-23 - 2021-04-08

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1706  
Model: ARIMA(0, 1, 0) Log Likelihood -4062.384  
Date: Sun, 19 May 2024 AIC 8126.767  
Time: 22:28:47 BIC 8132.209  
Sample: 0 HQIC 8128.781  
 - 1706   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 6.8715 0.091 75.206 0.000 6.692 7.051  
===================================================================================  
Ljung-Box (L1) (Q): 19.13 Jarque-Bera (JB): 9284.37  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.68 Skew: 0.85  
Prob(H) (two-sided): 0.00 Kurtosis: 14.30  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1706  
Model: ARIMA(4, 1, 0) Log Likelihood -4033.176  
Date: Sun, 19 May 2024 AIC 8076.351  
Time: 22:28:47 BIC 8103.558  
Sample: 0 HQIC 8086.421  
 - 1706   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.1129 0.011 -9.903 0.000 -0.135 -0.091  
ar.L2 -0.1400 0.016 -8.921 0.000 -0.171 -0.109  
ar.L3 0.0395 0.013 3.058 0.002 0.014 0.065  
ar.L4 -0.0340 0.015 -2.273 0.023 -0.063 -0.005  
sigma2 6.6399 0.097 68.564 0.000 6.450 6.830  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 8734.71  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.68 Skew: 1.03  
Prob(H) (two-sided): 0.00 Kurtosis: 13.89  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_169\_2021-04-08 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 724  
Model: ARIMA(0, 1, 0) Log Likelihood -1666.247  
Date: Sun, 19 May 2024 AIC 3334.495  
Time: 22:28:47 BIC 3339.078  
Sample: 0 HQIC 3336.264  
 - 724   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 5.8790 0.044 132.859 0.000 5.792 5.966  
===================================================================================  
Ljung-Box (L1) (Q): 36.03 Jarque-Bera (JB): 275860.57  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 3.18 Skew: 0.52  
Prob(H) (two-sided): 0.00 Kurtosis: 98.69  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 724  
Model: ARIMA(4, 1, 0) Log Likelihood -1643.819  
Date: Sun, 19 May 2024 AIC 3297.638  
Time: 22:28:47 BIC 3320.555  
Sample: 0 HQIC 3306.483  
 - 724   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.2399 0.007 -32.537 0.000 -0.254 -0.225  
ar.L2 -0.0711 0.025 -2.882 0.004 -0.119 -0.023  
ar.L3 0.0343 0.035 0.971 0.332 -0.035 0.103  
ar.L4 0.0689 0.039 1.765 0.078 -0.008 0.145  
sigma2 5.5246 0.054 102.844 0.000 5.419 5.630  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 160647.66  
Prob(Q): 0.91 Prob(JB): 0.00  
Heteroskedasticity (H): 3.26 Skew: 2.63  
Prob(H) (two-sided): 0.00 Kurtosis: 75.84  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_203\_2010-01-01 - 2012-05-31

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 628  
Model: ARIMA(0, 1, 0) Log Likelihood -2236.317  
Date: Sun, 19 May 2024 AIC 4474.634  
Time: 22:28:47 BIC 4479.075  
Sample: 0 HQIC 4476.359  
 - 628   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 73.3723 1.748 41.970 0.000 69.946 76.799  
===================================================================================  
Ljung-Box (L1) (Q): 0.63 Jarque-Bera (JB): 2359.98  
Prob(Q): 0.43 Prob(JB): 0.00  
Heteroskedasticity (H): 1.79 Skew: -0.90  
Prob(H) (two-sided): 0.00 Kurtosis: 12.33  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 628  
Model: ARIMA(2, 1, 0) Log Likelihood -2234.882  
Date: Sun, 19 May 2024 AIC 4475.763  
Time: 22:28:47 BIC 4489.086  
Sample: 0 HQIC 4480.939  
 - 628   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0340 0.025 1.337 0.181 -0.016 0.084  
ar.L2 -0.0596 0.025 -2.401 0.016 -0.108 -0.011  
sigma2 72.9897 1.969 37.071 0.000 69.131 76.849  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 2320.53  
Prob(Q): 0.92 Prob(JB): 0.00  
Heteroskedasticity (H): 1.77 Skew: -0.90  
Prob(H) (two-sided): 0.00 Kurtosis: 12.25  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_203\_2012-05-31 - 2014-09-23

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 602  
Model: ARIMA(0, 1, 0) Log Likelihood -1839.459  
Date: Sun, 19 May 2024 AIC 3680.918  
Time: 22:28:47 BIC 3685.317  
Sample: 0 HQIC 3682.630  
 - 602   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 26.6676 0.698 38.211 0.000 25.300 28.035  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1507.76  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 0.09 Skew: -0.17  
Prob(H) (two-sided): 0.00 Kurtosis: 10.75  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 602  
Model: ARIMA(2, 1, 0) Log Likelihood -1838.647  
Date: Sun, 19 May 2024 AIC 3683.295  
Time: 22:28:47 BIC 3696.491  
Sample: 0 HQIC 3688.431  
 - 602   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0036 0.032 0.111 0.912 -0.060 0.067  
ar.L2 0.0519 0.035 1.486 0.137 -0.017 0.120  
sigma2 26.5954 0.774 34.344 0.000 25.078 28.113  
===================================================================================  
Ljung-Box (L1) (Q): 0.02 Jarque-Bera (JB): 1402.15  
Prob(Q): 0.89 Prob(JB): 0.00  
Heteroskedasticity (H): 0.09 Skew: -0.17  
Prob(H) (two-sided): 0.00 Kurtosis: 10.48  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_203\_2014-09-23 - 2020-04-10

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1447  
Model: ARIMA(0, 1, 0) Log Likelihood -4059.889  
Date: Sun, 19 May 2024 AIC 8121.779  
Time: 22:28:47 BIC 8127.055  
Sample: 0 HQIC 8123.748  
 - 1447   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 16.0781 0.095 169.284 0.000 15.892 16.264  
===================================================================================  
Ljung-Box (L1) (Q): 43.19 Jarque-Bera (JB): 359815.50  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 3.34 Skew: 0.63  
Prob(H) (two-sided): 0.00 Kurtosis: 80.27  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1447  
Model: ARIMA(2, 1, 0) Log Likelihood -4032.525  
Date: Sun, 19 May 2024 AIC 8071.049  
Time: 22:28:47 BIC 8086.879  
Sample: 0 HQIC 8076.957  
 - 1447   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1884 0.008 23.618 0.000 0.173 0.204  
ar.L2 -0.0955 0.016 -5.901 0.000 -0.127 -0.064  
sigma2 15.4804 0.126 123.074 0.000 15.234 15.727  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 262465.19  
Prob(Q): 0.91 Prob(JB): 0.00  
Heteroskedasticity (H): 3.29 Skew: 0.08  
Prob(H) (two-sided): 0.00 Kurtosis: 69.00  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_203\_2020-04-10 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 983  
Model: ARIMA(0, 1, 0) Log Likelihood -2776.024  
Date: Sun, 19 May 2024 AIC 5554.049  
Time: 22:28:47 BIC 5558.939  
Sample: 0 HQIC 5555.909  
 - 983   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 16.7088 0.122 136.499 0.000 16.469 16.949  
===================================================================================  
Ljung-Box (L1) (Q): 42.33 Jarque-Bera (JB): 225776.29  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.31 Skew: 2.56  
Prob(H) (two-sided): 0.00 Kurtosis: 77.11  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 983  
Model: ARIMA(2, 1, 0) Log Likelihood -2753.452  
Date: Sun, 19 May 2024 AIC 5512.904  
Time: 22:28:47 BIC 5527.573  
Sample: 0 HQIC 5518.484  
 - 983   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.2165 0.009 -23.657 0.000 -0.234 -0.199  
ar.L2 -0.0472 0.026 -1.846 0.065 -0.097 0.003  
sigma2 15.9573 0.127 125.544 0.000 15.708 16.206  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 195709.67  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 0.37 Skew: 3.37  
Prob(H) (two-sided): 0.00 Kurtosis: 71.83  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_209\_2010-01-01 - 2012-04-04

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 587  
Model: ARIMA(0, 1, 0) Log Likelihood -1673.599  
Date: Sun, 19 May 2024 AIC 3349.199  
Time: 22:28:47 BIC 3353.572  
Sample: 0 HQIC 3350.903  
 - 587   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 17.7088 0.384 46.074 0.000 16.956 18.462  
===================================================================================  
Ljung-Box (L1) (Q): 0.44 Jarque-Bera (JB): 3831.49  
Prob(Q): 0.51 Prob(JB): 0.00  
Heteroskedasticity (H): 3.11 Skew: 0.66  
Prob(H) (two-sided): 0.00 Kurtosis: 15.46  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 587  
Model: ARIMA(4, 1, 0) Log Likelihood -1667.909  
Date: Sun, 19 May 2024 AIC 3345.818  
Time: 22:28:47 BIC 3367.684  
Sample: 0 HQIC 3354.339  
 - 587   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0242 0.029 0.834 0.404 -0.033 0.081  
ar.L2 0.0823 0.026 3.207 0.001 0.032 0.133  
ar.L3 -0.0580 0.018 -3.151 0.002 -0.094 -0.022  
ar.L4 -0.0976 0.026 -3.744 0.000 -0.149 -0.046  
sigma2 17.3664 0.412 42.140 0.000 16.559 18.174  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 3578.83  
Prob(Q): 0.93 Prob(JB): 0.00  
Heteroskedasticity (H): 3.06 Skew: 0.72  
Prob(H) (two-sided): 0.00 Kurtosis: 15.02  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_209\_2012-04-04 - 2021-10-08

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2481  
Model: ARIMA(0, 1, 0) Log Likelihood -5473.170  
Date: Sun, 19 May 2024 AIC 10948.341  
Time: 22:28:47 BIC 10954.157  
Sample: 0 HQIC 10950.453  
 - 2481   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 4.8354 0.048 100.524 0.000 4.741 4.930  
===================================================================================  
Ljung-Box (L1) (Q): 5.30 Jarque-Bera (JB): 21822.26  
Prob(Q): 0.02 Prob(JB): 0.00  
Heteroskedasticity (H): 0.33 Skew: 1.14  
Prob(H) (two-sided): 0.00 Kurtosis: 17.35  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2481  
Model: ARIMA(4, 1, 0) Log Likelihood -5464.692  
Date: Sun, 19 May 2024 AIC 10939.385  
Time: 22:28:47 BIC 10968.465  
Sample: 0 HQIC 10949.946  
 - 2481   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0437 0.010 4.451 0.000 0.024 0.063  
ar.L2 0.0634 0.008 7.480 0.000 0.047 0.080  
ar.L3 -0.0070 0.012 -0.601 0.548 -0.030 0.016  
ar.L4 -0.0296 0.009 -3.126 0.002 -0.048 -0.011  
sigma2 4.8024 0.054 88.776 0.000 4.696 4.908  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 18847.13  
Prob(Q): 0.96 Prob(JB): 0.00  
Heteroskedasticity (H): 0.33 Skew: 1.02  
Prob(H) (two-sided): 0.00 Kurtosis: 16.35  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_209\_2021-10-08 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 593  
Model: ARIMA(0, 1, 0) Log Likelihood -1420.342  
Date: Sun, 19 May 2024 AIC 2842.685  
Time: 22:28:47 BIC 2847.068  
Sample: 0 HQIC 2844.392  
 - 593   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 7.1034 0.068 103.827 0.000 6.969 7.237  
===================================================================================  
Ljung-Box (L1) (Q): 0.02 Jarque-Bera (JB): 125037.13  
Prob(Q): 0.88 Prob(JB): 0.00  
Heteroskedasticity (H): 1.16 Skew: -2.70  
Prob(H) (two-sided): 0.31 Kurtosis: 73.99  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 593  
Model: ARIMA(4, 1, 0) Log Likelihood -1420.247  
Date: Sun, 19 May 2024 AIC 2850.494  
Time: 22:28:47 BIC 2872.411  
Sample: 0 HQIC 2859.031  
 - 593   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0063 0.122 0.052 0.959 -0.232 0.245  
ar.L2 0.0110 0.139 0.079 0.937 -0.261 0.282  
ar.L3 0.0111 0.151 0.074 0.941 -0.284 0.306  
ar.L4 0.0057 0.042 0.136 0.891 -0.076 0.088  
sigma2 7.1011 0.087 81.215 0.000 6.930 7.272  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 124622.19  
Prob(Q): 0.98 Prob(JB): 0.00  
Heteroskedasticity (H): 1.15 Skew: -2.69  
Prob(H) (two-sided): 0.31 Kurtosis: 73.88  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_213\_2010-01-01 - 2014-01-16

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1053  
Model: ARIMA(0, 1, 0) Log Likelihood -2626.845  
Date: Sun, 19 May 2024 AIC 5255.689  
Time: 22:28:47 BIC 5260.648  
Sample: 0 HQIC 5257.569  
 - 1053   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 8.6376 0.119 72.507 0.000 8.404 8.871  
===================================================================================  
Ljung-Box (L1) (Q): 0.03 Jarque-Bera (JB): 14187.58  
Prob(Q): 0.86 Prob(JB): 0.00  
Heteroskedasticity (H): 0.73 Skew: 0.20  
Prob(H) (two-sided): 0.00 Kurtosis: 20.99  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1053  
Model: ARIMA(2, 1, 0) Log Likelihood -2626.370  
Date: Sun, 19 May 2024 AIC 5258.739  
Time: 22:28:47 BIC 5273.614  
Sample: 0 HQIC 5264.379  
 - 1053   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0053 0.022 0.247 0.805 -0.037 0.048  
ar.L2 0.0295 0.023 1.275 0.202 -0.016 0.075  
sigma2 8.6297 0.127 67.808 0.000 8.380 8.879  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 14762.85  
Prob(Q): 0.93 Prob(JB): 0.00  
Heteroskedasticity (H): 0.73 Skew: 0.16  
Prob(H) (two-sided): 0.00 Kurtosis: 21.35  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_213\_2014-01-16 - 2020-03-05

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1599  
Model: ARIMA(0, 1, 0) Log Likelihood -4088.678  
Date: Sun, 19 May 2024 AIC 8179.356  
Time: 22:28:47 BIC 8184.733  
Sample: 0 HQIC 8181.353  
 - 1599   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 9.7705 0.041 240.934 0.000 9.691 9.850  
===================================================================================  
Ljung-Box (L1) (Q): 8.32 Jarque-Bera (JB): 1376736.18  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 1.73 Skew: -6.84  
Prob(H) (two-sided): 0.00 Kurtosis: 146.14  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1599  
Model: ARIMA(2, 1, 0) Log Likelihood -4084.425  
Date: Sun, 19 May 2024 AIC 8174.850  
Time: 22:28:47 BIC 8190.979  
Sample: 0 HQIC 8180.839  
 - 1599   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0713 0.020 3.584 0.000 0.032 0.110  
ar.L2 0.0106 0.024 0.439 0.661 -0.037 0.058  
sigma2 9.7188 0.047 206.475 0.000 9.626 9.811  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1396734.58  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 1.74 Skew: -6.86  
Prob(H) (two-sided): 0.00 Kurtosis: 147.18  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_213\_2020-03-05 - 2023-04-17

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 811  
Model: ARIMA(0, 1, 0) Log Likelihood -2116.686  
Date: Sun, 19 May 2024 AIC 4235.372  
Time: 22:28:47 BIC 4240.069  
Sample: 0 HQIC 4237.175  
 - 811   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 10.8972 0.103 106.067 0.000 10.696 11.099  
===================================================================================  
Ljung-Box (L1) (Q): 15.18 Jarque-Bera (JB): 97682.15  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.36 Skew: 2.90  
Prob(H) (two-sided): 0.00 Kurtosis: 56.48  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 811  
Model: ARIMA(2, 1, 0) Log Likelihood -2099.744  
Date: Sun, 19 May 2024 AIC 4205.488  
Time: 22:28:47 BIC 4219.579  
Sample: 0 HQIC 4210.898  
 - 811   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.1670 0.012 -14.419 0.000 -0.190 -0.144  
ar.L2 -0.1578 0.011 -14.583 0.000 -0.179 -0.137  
sigma2 10.4498 0.114 91.462 0.000 10.226 10.674  
===================================================================================  
Ljung-Box (L1) (Q): 0.20 Jarque-Bera (JB): 83544.91  
Prob(Q): 0.65 Prob(JB): 0.00  
Heteroskedasticity (H): 0.34 Skew: 3.48  
Prob(H) (two-sided): 0.00 Kurtosis: 52.26  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_228\_2010-01-01 - 2018-03-01

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2128  
Model: ARIMA(0, 1, 0) Log Likelihood -6969.653  
Date: Sun, 19 May 2024 AIC 13941.306  
Time: 22:28:47 BIC 13946.968  
Sample: 0 HQIC 13943.379  
 - 2128   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 41.0851 0.524 78.402 0.000 40.058 42.112  
===================================================================================  
Ljung-Box (L1) (Q): 11.24 Jarque-Bera (JB): 8100.25  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.13 Skew: -0.06  
Prob(H) (two-sided): 0.00 Kurtosis: 12.56  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 2128  
Model: ARIMA(3, 1, 0) Log Likelihood -6961.012  
Date: Sun, 19 May 2024 AIC 13930.024  
Time: 22:28:47 BIC 13952.674  
Sample: 0 HQIC 13938.314  
 - 2128   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0731 0.011 6.425 0.000 0.051 0.095  
ar.L2 -0.0146 0.011 -1.319 0.187 -0.036 0.007  
ar.L3 -0.0499 0.012 -4.128 0.000 -0.074 -0.026  
sigma2 40.7473 0.541 75.297 0.000 39.687 41.808  
===================================================================================  
Ljung-Box (L1) (Q): 0.03 Jarque-Bera (JB): 8585.41  
Prob(Q): 0.87 Prob(JB): 0.00  
Heteroskedasticity (H): 0.13 Skew: -0.08  
Prob(H) (two-sided): 0.00 Kurtosis: 12.84  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_228\_2018-03-01 - 2020-03-05

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 524  
Model: ARIMA(0, 1, 0) Log Likelihood -1322.027  
Date: Sun, 19 May 2024 AIC 2646.054  
Time: 22:28:47 BIC 2650.313  
Sample: 0 HQIC 2647.722  
 - 524   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 9.1859 0.255 35.980 0.000 8.686 9.686  
===================================================================================  
Ljung-Box (L1) (Q): 13.93 Jarque-Bera (JB): 1606.69  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.92 Skew: 1.70  
Prob(H) (two-sided): 0.56 Kurtosis: 10.89  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 524  
Model: ARIMA(3, 1, 0) Log Likelihood -1313.113  
Date: Sun, 19 May 2024 AIC 2634.226  
Time: 22:28:47 BIC 2651.264  
Sample: 0 HQIC 2640.898  
 - 524   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1489 0.043 3.461 0.001 0.065 0.233  
ar.L2 0.0782 0.038 2.055 0.040 0.004 0.153  
ar.L3 0.0198 0.047 0.420 0.675 -0.073 0.112  
sigma2 8.8774 0.249 35.669 0.000 8.390 9.365  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1674.94  
Prob(Q): 1.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.87 Skew: 1.61  
Prob(H) (two-sided): 0.35 Kurtosis: 11.16  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_228\_2020-03-05 - 2023-06-05

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 846  
Model: ARIMA(0, 1, 0) Log Likelihood -2615.813  
Date: Sun, 19 May 2024 AIC 5233.626  
Time: 22:28:47 BIC 5238.365  
Sample: 0 HQIC 5235.442  
 - 846   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 28.5997 0.284 100.764 0.000 28.043 29.156  
===================================================================================  
Ljung-Box (L1) (Q): 0.27 Jarque-Bera (JB): 76579.72  
Prob(Q): 0.60 Prob(JB): 0.00  
Heteroskedasticity (H): 0.20 Skew: 3.26  
Prob(H) (two-sided): 0.00 Kurtosis: 49.18  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 846  
Model: ARIMA(3, 1, 0) Log Likelihood -2597.591  
Date: Sun, 19 May 2024 AIC 5203.181  
Time: 22:28:47 BIC 5222.138  
Sample: 0 HQIC 5210.445  
 - 846   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0312 0.010 -3.157 0.002 -0.051 -0.012  
ar.L2 0.0622 0.014 4.512 0.000 0.035 0.089  
ar.L3 0.2252 0.011 20.653 0.000 0.204 0.247  
sigma2 27.3867 0.366 74.745 0.000 26.669 28.105  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 53287.36  
Prob(Q): 0.91 Prob(JB): 0.00  
Heteroskedasticity (H): 0.20 Skew: 2.68  
Prob(H) (two-sided): 0.00 Kurtosis: 41.53  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_250\_2010-01-01 - 2012-09-24

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 710  
Model: ARIMA(0, 1, 0) Log Likelihood -2132.280  
Date: Sun, 19 May 2024 AIC 4266.561  
Time: 22:28:47 BIC 4271.125  
Sample: 0 HQIC 4268.324  
 - 710   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 23.9751 0.581 41.269 0.000 22.836 25.114  
===================================================================================  
Ljung-Box (L1) (Q): 0.03 Jarque-Bera (JB): 1710.31  
Prob(Q): 0.87 Prob(JB): 0.00  
Heteroskedasticity (H): 1.69 Skew: -0.01  
Prob(H) (two-sided): 0.00 Kurtosis: 10.61  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 710  
Model: ARIMA(2, 1, 0) Log Likelihood -2129.012  
Date: Sun, 19 May 2024 AIC 4264.025  
Time: 22:28:47 BIC 4277.716  
Sample: 0 HQIC 4269.314  
 - 710   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0054 0.039 0.138 0.890 -0.071 0.082  
ar.L2 0.0973 0.028 3.415 0.001 0.041 0.153  
sigma2 23.7545 0.611 38.897 0.000 22.558 24.951  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 1590.90  
Prob(Q): 0.97 Prob(JB): 0.00  
Heteroskedasticity (H): 1.67 Skew: -0.09  
Prob(H) (two-sided): 0.00 Kurtosis: 10.34  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_250\_2012-09-24 - 2020-03-23

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1954  
Model: ARIMA(0, 1, 0) Log Likelihood -4270.388  
Date: Sun, 19 May 2024 AIC 8542.775  
Time: 22:28:47 BIC 8548.352  
Sample: 0 HQIC 8544.825  
 - 1954   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 4.6426 0.052 88.545 0.000 4.540 4.745  
===================================================================================  
Ljung-Box (L1) (Q): 19.30 Jarque-Bera (JB): 16752.28  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.39 Skew: 1.33  
Prob(H) (two-sided): 0.00 Kurtosis: 17.10  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1954  
Model: ARIMA(2, 1, 0) Log Likelihood -4260.577  
Date: Sun, 19 May 2024 AIC 8527.153  
Time: 22:28:47 BIC 8543.885  
Sample: 0 HQIC 8533.304  
 - 1954   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.0987 0.011 9.120 0.000 0.077 0.120  
ar.L2 0.0096 0.011 0.862 0.389 -0.012 0.031  
sigma2 4.5960 0.055 83.962 0.000 4.489 4.703  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 15040.28  
Prob(Q): 1.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.39 Skew: 1.27  
Prob(H) (two-sided): 0.00 Kurtosis: 16.36  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_250\_2020-03-23 - 2024-01-18

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 997  
Model: ARIMA(0, 1, 0) Log Likelihood -2187.335  
Date: Sun, 19 May 2024 AIC 4376.671  
Time: 22:28:47 BIC 4381.574  
Sample: 0 HQIC 4378.535  
 - 997   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 4.7320 0.065 72.584 0.000 4.604 4.860  
===================================================================================  
Ljung-Box (L1) (Q): 7.66 Jarque-Bera (JB): 15294.44  
Prob(Q): 0.01 Prob(JB): 0.00  
Heteroskedasticity (H): 2.84 Skew: 0.54  
Prob(H) (two-sided): 0.00 Kurtosis: 22.17  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 997  
Model: ARIMA(2, 1, 0) Log Likelihood -2176.338  
Date: Sun, 19 May 2024 AIC 4358.675  
Time: 22:28:47 BIC 4373.386  
Sample: 0 HQIC 4364.268  
 - 997   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0776 0.011 -6.798 0.000 -0.100 -0.055  
ar.L2 0.1196 0.017 7.209 0.000 0.087 0.152  
sigma2 4.6286 0.068 67.661 0.000 4.494 4.763  
===================================================================================  
Ljung-Box (L1) (Q): 0.03 Jarque-Bera (JB): 12991.91  
Prob(Q): 0.86 Prob(JB): 0.00  
Heteroskedasticity (H): 2.80 Skew: 0.45  
Prob(H) (two-sided): 0.00 Kurtosis: 20.67  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_265\_2013-04-02 - 2015-05-15

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 552  
Model: ARIMA(0, 1, 0) Log Likelihood -2147.649  
Date: Sun, 19 May 2024 AIC 4297.298  
Time: 22:28:47 BIC 4301.610  
Sample: 0 HQIC 4298.983  
 - 552   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 142.2527 3.123 45.557 0.000 136.133 148.373  
===================================================================================  
Ljung-Box (L1) (Q): 0.20 Jarque-Bera (JB): 4260.77  
Prob(Q): 0.66 Prob(JB): 0.00  
Heteroskedasticity (H): 0.68 Skew: 1.40  
Prob(H) (two-sided): 0.01 Kurtosis: 16.33  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 552  
Model: ARIMA(6, 1, 0) Log Likelihood -2140.629  
Date: Sun, 19 May 2024 AIC 4295.257  
Time: 22:28:47 BIC 4325.439  
Sample: 0 HQIC 4307.051  
 - 552   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 -0.0213 0.037 -0.574 0.566 -0.094 0.051  
ar.L2 0.0690 0.029 2.352 0.019 0.012 0.126  
ar.L3 0.0192 0.026 0.747 0.455 -0.031 0.070  
ar.L4 -0.1395 0.032 -4.372 0.000 -0.202 -0.077  
ar.L5 -0.0467 0.031 -1.515 0.130 -0.107 0.014  
ar.L6 0.0126 0.033 0.384 0.701 -0.052 0.077  
sigma2 138.6471 3.623 38.273 0.000 131.547 145.747  
===================================================================================  
Ljung-Box (L1) (Q): 0.01 Jarque-Bera (JB): 3859.26  
Prob(Q): 0.94 Prob(JB): 0.00  
Heteroskedasticity (H): 0.69 Skew: 1.44  
Prob(H) (two-sided): 0.01 Kurtosis: 15.64  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_265\_2015-05-15 - 2016-12-05

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 405  
Model: ARIMA(0, 1, 0) Log Likelihood -1534.907  
Date: Sun, 19 May 2024 AIC 3071.813  
Time: 22:28:47 BIC 3075.815  
Sample: 0 HQIC 3073.397  
 - 405   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 116.8285 4.234 27.596 0.000 108.531 125.126  
===================================================================================  
Ljung-Box (L1) (Q): 13.85 Jarque-Bera (JB): 549.21  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 0.83 Skew: 0.67  
Prob(H) (two-sided): 0.28 Kurtosis: 8.55  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 405  
Model: ARIMA(6, 1, 0) Log Likelihood -1517.216  
Date: Sun, 19 May 2024 AIC 3048.432  
Time: 22:28:47 BIC 3076.442  
Sample: 0 HQIC 3059.520  
 - 405   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.2379 0.040 5.919 0.000 0.159 0.317  
ar.L2 -0.1642 0.038 -4.293 0.000 -0.239 -0.089  
ar.L3 0.1609 0.033 4.938 0.000 0.097 0.225  
ar.L4 -0.1099 0.039 -2.801 0.005 -0.187 -0.033  
ar.L5 -0.0434 0.044 -0.980 0.327 -0.130 0.043  
ar.L6 0.0119 0.045 0.263 0.793 -0.077 0.101  
sigma2 106.9765 4.021 26.604 0.000 99.095 114.858  
===================================================================================  
Ljung-Box (L1) (Q): 0.00 Jarque-Bera (JB): 531.84  
Prob(Q): 0.99 Prob(JB): 0.00  
Heteroskedasticity (H): 0.71 Skew: 0.73  
Prob(H) (two-sided): 0.05 Kurtosis: 8.43  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

Column: China\_265\_2016-12-05 - 2023-06-07

# ARIMA(0,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1696  
Model: ARIMA(0, 1, 0) Log Likelihood -6142.678  
Date: Sun, 19 May 2024 AIC 12287.355  
Time: 22:28:47 BIC 12292.791  
Sample: 0 HQIC 12289.368  
 - 1696   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
sigma2 82.2803 0.474 173.433 0.000 81.350 83.210  
===================================================================================  
Ljung-Box (L1) (Q): 46.50 Jarque-Bera (JB): 340301.19  
Prob(Q): 0.00 Prob(JB): 0.00  
Heteroskedasticity (H): 1.11 Skew: 3.39  
Prob(H) (two-sided): 0.22 Kurtosis: 72.08  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).

# ARIMA(1,1,0) Summary:

SARIMAX Results   
==============================================================================  
Dep. Variable: y No. Observations: 1696  
Model: ARIMA(6, 1, 0) Log Likelihood -6053.184  
Date: Sun, 19 May 2024 AIC 12120.368  
Time: 22:28:47 BIC 12158.416  
Sample: 0 HQIC 12134.456  
 - 1696   
Covariance Type: opg   
==============================================================================  
 coef std err z P>|z| [0.025 0.975]  
------------------------------------------------------------------------------  
ar.L1 0.1164 0.007 15.955 0.000 0.102 0.131  
ar.L2 0.2222 0.008 28.308 0.000 0.207 0.238  
ar.L3 0.0895 0.007 13.645 0.000 0.077 0.102  
ar.L4 -0.0209 0.005 -3.822 0.000 -0.032 -0.010  
ar.L5 0.0555 0.009 5.904 0.000 0.037 0.074  
ar.L6 -0.1040 0.009 -11.853 0.000 -0.121 -0.087  
sigma2 74.0228 0.591 125.175 0.000 72.864 75.182  
===================================================================================  
Ljung-Box (L1) (Q): 0.47 Jarque-Bera (JB): 223916.48  
Prob(Q): 0.49 Prob(JB): 0.00  
Heteroskedasticity (H): 1.05 Skew: 1.95  
Prob(H) (two-sided): 0.57 Kurtosis: 59.17  
===================================================================================  
  
Warnings:  
[1] Covariance matrix calculated using the outer product of gradients (complex-step).