Non-Linear Interrupted Time Series Analysis for 2024_French Senate elect

OLS Regression Results

Dep. Variable: index R-squared: 0.639 Model: OLS Adj. R-squared: 0.634 Method: Least Squares F-statistic: 125.5 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.19e-76 17:32:17 Log-Likelihood: Time: 880.80 361 AIC: No. Observations: -1750. Df Residuals: 355 BIC: -1726.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.9516 0.005 1489.378 0.000 6.942 6.961 time -0.0010 0.000 -8.568 0.000 -0.001 -0.001

time_squared 1.134e-06 3.24e-07 3.504 0.001 4.98e-07 1.77e-06

intervention 0.0146 0.006 2.459 0.014 0.003 0.026

time_after_intervention 4.037e-05 0.000 0.219 0.827 -0.000 0.000

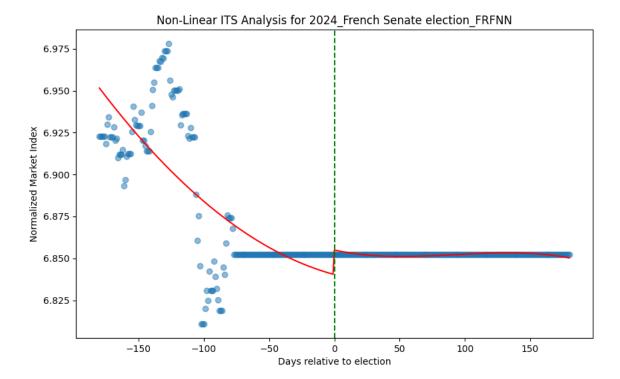
time_3 1.134e-06 3.24e-07 3.504 0.001 4.98e-07 1.77e-06

Omnibus: 39.446 Durbin-Watson: 0.070 Prob(Omnibus): 0.000 Jarque-Bera (JB): 186.694

 Skew:
 0.268 Prob(JB):
 2.88e-41

 Kurtosis:
 6.482 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.731 Model: OLS Adj. R-squared: 0.728 Method: Least Squares F-statistic: 193.3 Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.47e-99 17:32:17 Log-Likelihood: 704.51 Time: 361 AIC: No. Observations: -1397. Df Residuals: 355 BIC: -1374.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.4716 0.008 850.842 0.000 6.457 6.487 time -0.0022 0.000 -11.380 0.000 -0.003 -0.002

time_squared 5.268e-06 5.27e-07 9.990 0.000 4.23e-06 6.31e-06

intervention 0.0165 0.010 1.700 0.090 -0.003 0.036

 $time_after_intervention \\ -0.0017 \\ 0.000 \\ -5.796 \\ 0.000 \\ -0.002 \\ -0.001$

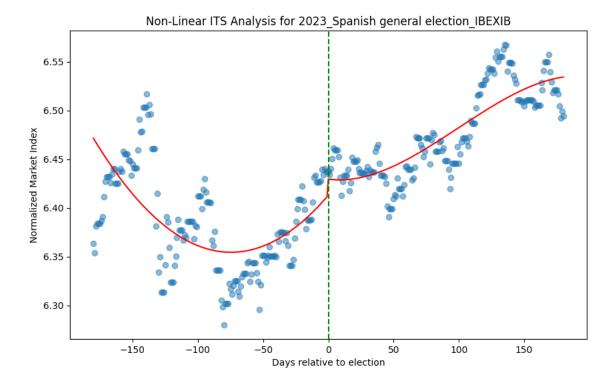
time_3 5.268e-06 5.27e-07 9.990 0.000 4.23e-06 6.31e-06

Omnibus: 15.034 Durbin-Watson: 0.147 Prob(Omnibus): 0.001 Jarque-Bera (JB): 25.002

 Skew:
 0.268
 Prob(JB):
 3.72e-06

 Kurtosis:
 4.173
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Dutch general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.930 Model: OLS Adj. R-squared: 0.929 Method: Least Squares F-statistic: 939.1 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.40e-202 17:32:17 Log-Likelihood: Time: 881.84 361 AIC: No. Observations: -1752. Df Residuals: 355 BIC: -1728.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3286 0.005 1359.822 0.000 6.319 6.338 time 0.0009 0.000 7.758 0.000 0.001 0.001

time_squared -2.83e-06 3.23e-07 -8.771 0.000 -3.47e-06 -2.2e-06

intervention 0.0747 0.006 12.586 0.000 0.063 0.086 time_after_intervention 0.0022 0.000 11.770 0.000 0.002 0.003

time_after_intervention_squared 1.603e-08 1.66e-09 9.680 0.000 1.28e-08 1.93e-08 time_after_intervention_3 2.181e-08 1.65e-09 13.188 0.000 1.86e-08 2.51e-08

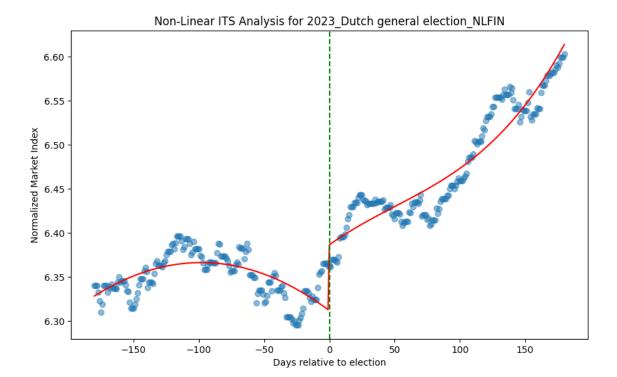
time_3 -2.83e-06 3.23e-07 -8.771 0.000 -3.46e-06 -2.2e-06

Omnibus: 8.416 Durbin-Watson: 0.132 Prob(Omnibus): 0.015 Jarque-Bera (JB): 6.636

 Skew:
 0.234 Prob(JB):
 0.0362

 Kurtosis:
 2.529 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Polish parliamentar

OLS Regression Results

Dep. Variable: index R-squared: 0.969 Model: OLS Adj. R-squared: 0.969 Method: Least Squares F-statistic: 2237. Thu, 11 Jul 2024 Prob (F-statistic): Date: 7.00e-266 17:32:17 Log-Likelihood: Time: 683.42 361 AIC: No. Observations: -1355. Df Residuals: 355 BIC: -1332.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.7888 0.008 1089.916 0.000 8.773 8.805 time 0.0041 0.000 19.769 0.000 0.004 0.004

-9.087e-06 5.59e-07 -16.252 0.000 -1.02e-05 -7.99e-06

intervention 0.1857 0.010 18.073 0.000 0.166 0.206 time after intervention 0.0057 0.000 17.975 0.000 0.005 0.00

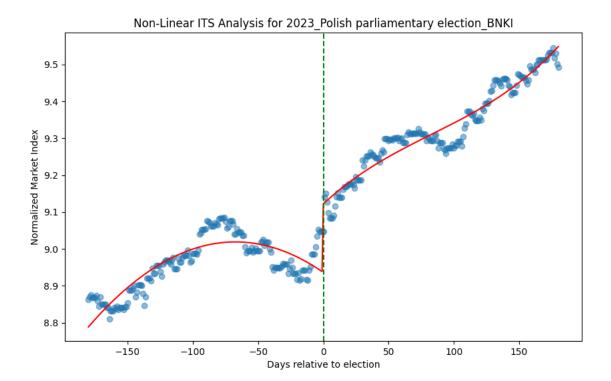
time_after_intervention 0.0057 0.000 17.975 0.000 0.005 0.006

time_3 -9.087e-06 5.59e-07 -16.252 0.000 -1.02e-05 -7.99e-06

Omnibus: 5.349 Durbin-Watson: 0.218 Prob(Omnibus): 0.069 Jarque-Bera (JB): 5.341

Skew: 0.268 Prob(JB): 0.0692 Kurtosis: 2.740 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Greek legislative ele

OLS Regression Results

Dep. Variable: index R-squared: 0.884 Model: OLS Adj. R-squared: 0.882 Method: Least Squares F-statistic: 539.8 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:18 Log-Likelihood: Date: 1.88e-163 Time: 522.87 361 AIC: No. Observations: -1034. Df Residuals: 355 BIC: -1010.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3802 0.013 507.180 0.000 6.356 6.405 time 0.0049 0.000 15.142 0.000 0.004 0.006

time_squared -8.725e-06 8.72e-07 -10.003 0.000 -1.04e-05 -7.01e-06

intervention 0.2025 0.016 12.627 0.000 0.171 0.234

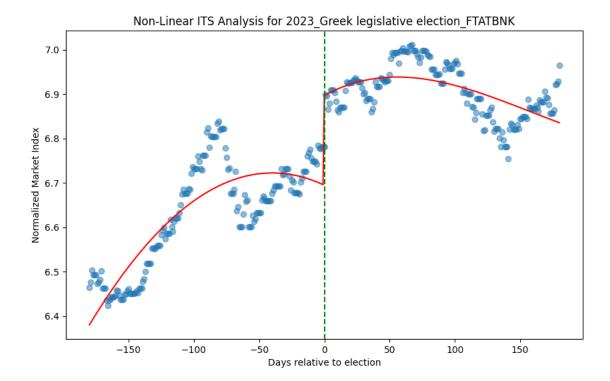
 $time_after_intervention \qquad 0.0030 \quad 0.000 \quad 6.023 \quad 0.000 \quad 0.002 \quad 0.004$

time_after_intervention_squared 1.557e-08 4.48e-09 3.478 0.001 6.77e-09 2.44e-08 time_after_intervention_3 2.14e-08 4.47e-09 4.787 0.000 1.26e-08 3.02e-08 time_3 -8.725e-06 8.72e-07 -10.003 0.000 -1.04e-05 -7.01e-06

Omnibus: 7.639 Durbin-Watson: 0.136 Prob(Omnibus): 0.022 Jarque-Bera (JB): 6.294

Skew: 0.236 Prob(JB): 0.0430 Kurtosis: 2.558 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Finnish parliamenta

OLS Regression Results

Dep. Variable: index R-squared: 0.552 Model: OLS Adj. R-squared: 0.546 Method: Least Squares F-statistic: 87.46 Thu, 11 Jul 2024 Prob (F-statistic): Date: 9.63e-60 17:32:18 Log-Likelihood: Time: 722.44 361 AIC: No. Observations: -1433. Df Residuals: 355 BIC: -1410.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.9123 0.007 1093.223 0.000 7.898 7.927 time 0.0030 0.000 16.069 0.000 0.003 0.003

time_squared -6.887e-06 5.02e-07 -13.722 0.000 -7.87e-06 -5.9e-06

intervention 0.0427 0.009 4.633 0.000 0.025 0.061

 $time_after_intervention \qquad \quad 0.0025 \quad \ 0.000 \quad \ 8.772 \quad \ 0.000 \quad \ 0.002 \quad \ 0.003$

time_after_intervention_squared 2.115e-08 2.58e-09 8.211 0.000 1.61e-08 2.62e-08 time_after_intervention_3 2.837e-08 2.57e-09 11.032 0.000 2.33e-08 3.34e-08

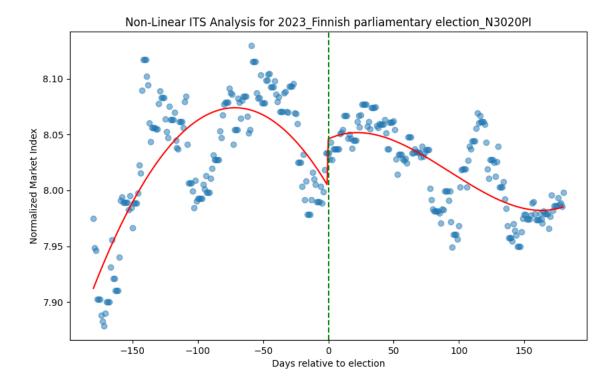
time_3 -6.886e-06 5.02e-07 -13.722 0.000 -7.87e-06 -5.9e-06

Omnibus: 4.443 Durbin-Watson: 0.189 Prob(Omnibus): 0.108 Jarque-Bera (JB): 4.776

 Skew:
 0.151 Prob(JB):
 0.0918

 Kurtosis:
 3.476 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Italian local election

OLS Regression Results

Dep. Variable: index R-squared: 0.848 Model: OLS Adj. R-squared: 0.846 Method: Least Squares F-statistic: 395.9 Thu, 11 Jul 2024 Prob (F-statistic): Date: 9.08e-143 17:32:18 Log-Likelihood: Time: 682.82 361 AIC: No. Observations: -1354. Df Residuals: 355 BIC: -1330.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 9.3394 0.008 1156.276 0.000 9.324 9.355 time 0.0033 0.000 15.985 0.000 0.003 0.004

time_squared -5.184e-06 5.6e-07 -9.256 0.000 -6.29e-06 -4.08e-06

intervention -0.0210 0.010 -2.041 0.042 -0.041 -0.001

time_after_intervention 0.0019 0.000 6.073 0.000 0.001 0.003 time_after_intervention_squared 1.105e-08 2.87e-09 3.846 0.000 5.4e-09 1.67e-08

time_after_intervention_squared 1.105e-08 2.87e-09 3.846 0.000 5.4e-09 1.67e-08 time_after_intervention_3 1.958e-08 2.87e-09 6.822 0.000 1.39e-08 2.52e-08

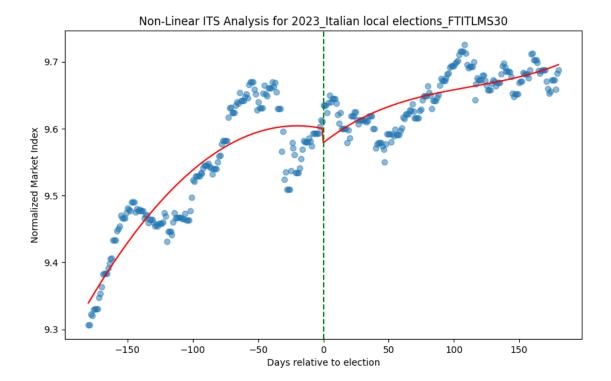
time_3 -5.184e-06 5.6e-07 -9.256 0.000 -6.29e-06 -4.08e-06

Omnibus: 6.676 Durbin-Watson: 0.104 Prob(Omnibus): 0.036 Jarque-Bera (JB): 4.040

 Skew:
 -0.012
 Prob(JB):
 0.133

 Kurtosis:
 2.482
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Spanish local electi

OLS Regression Results

Dep. Variable: index R-squared: 0.804 Model: OLS Adj. R-squared: 0.801 Method: Least Squares F-statistic: 291.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.08e-123 17:32:18 Log-Likelihood: 730.38 Time: 361 AIC: No. Observations: -1449. Df Residuals: 355 BIC: -1425.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.1856 0.007 873.666 0.000 6.172 6.200 time 0.0047 0.000 25.962 0.000 0.004 0.005

time_squared -1.177e-05 4.91e-07 -23.972 0.000 -1.27e-05 -1.08e-05

intervention 0.0580 0.009 6.424 0.000 0.040 0.076

time_after_intervention 0.0064 0.000 22.748 0.000 0.006 0.007 time_after_intervention_squared 3.812e-08 2.52e-09 15.131 0.000 3.32e-08 4.3

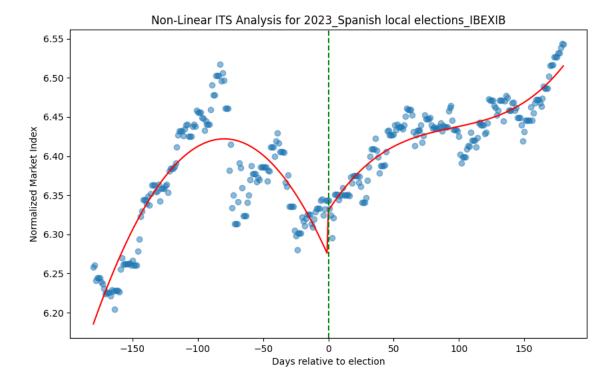
time_after_intervention_squared 3.812e-08 2.52e-09 15.131 0.000 3.32e-08 4.31e-08 time_after_intervention_3 4.377e-08 2.52e-09 17.396 0.000 3.88e-08 4.87e-08

time_3 -1.177e-05 4.91e-07 -23.972 0.000 -1.27e-05 -1.08e-05

Omnibus: 13.885 Durbin-Watson: 0.182 Prob(Omnibus): 0.001 Jarque-Bera (JB): 21.660

Skew: -0.268 Prob(JB): 1.98e-05 Kurtosis: 4.073 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2023_Spanish regional ele

OLS Regression Results

Dep. Variable: index R-squared: 0.804 Model: OLS Adj. R-squared: 0.801 Method: Least Squares F-statistic: 291.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.08e-123 17:32:19 Log-Likelihood: 730.38 Time: 361 AIC: No. Observations: -1449. Df Residuals: 355 BIC: -1425.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.1856 0.007 873.666 0.000 6.172 6.200 time 0.0047 0.000 25.962 0.000 0.004 0.005

time_squared -1.177e-05 4.91e-07 -23.972 0.000 -1.27e-05 -1.08e-05

intervention 0.0580 0.009 6.424 0.000 0.040 0.076

time_after_intervention 0.0064 0.000 22.748 0.000 0.006 0.007

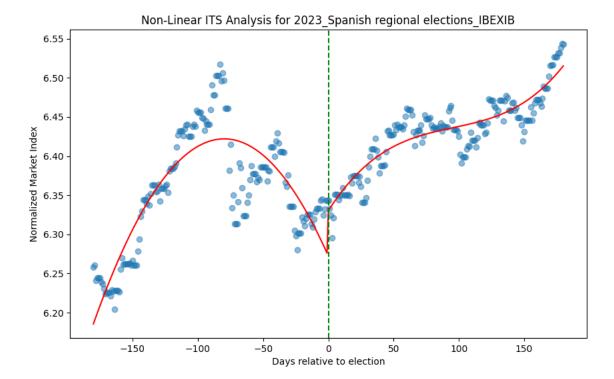
time_after_intervention_squared 3.812e-08 2.52e-09 15.131 0.000 3.32e-08 4.31e-08 time after intervention 3 4.377e-08 2.52e-09 17.396 0.000 3.88e-08 4.87e-08

time_3 -1.177e-05 4.91e-07 -23.972 0.000 -1.27e-05 -1.08e-05

Omnibus: 13.885 Durbin-Watson: 0.182 Prob(Omnibus): 0.001 Jarque-Bera (JB): 21.660

Skew: -0.268 Prob(JB): 1.98e-05 Kurtosis: 4.073 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2022_United States election

OLS Regression Results

Dep. Variable: index R-squared: 0.359 Model: OLS Adj. R-squared: 0.350 Method: Least Squares F-statistic: 39.79 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.96e-32 17:32:19 Log-Likelihood: Time: 659.94 361 AIC: No. Observations: -1308. Df Residuals: 355 BIC: -1285.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 9.0780 0.009 1054.894 0.000 9.061 9.095 time 0.0001 0.000 0.470 0.639 -0.000 0.001

time_squared -1.628e-06 5.97e-07 -2.729 0.007 -2.8e-06 -4.55e-07

intervention 0.0815 0.011 7.432 0.000 0.060 0.103 time_after_intervention 0.0018 0.000 5.408 0.000 0.001 0.001

time_after_intervention 0.0018 0.000 5.408 0.000 0.001 0.003 time_after_intervention_squared -1.142e-08 3.06e-09 -3.728 0.000 -1.74e-08 -5.39e-09

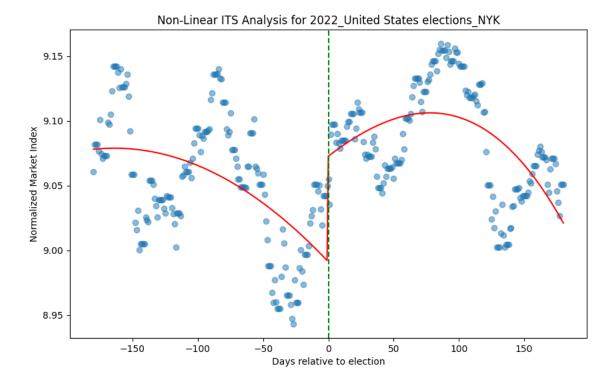
time_after_intervention_3 -3.122e-09 3.06e-09 -1.021 0.308 -9.14e-09 2.89e-09

time_3 -1.628e-06 5.97e-07 -2.729 0.007 -2.8e-06 -4.55e-07

Omnibus: 37.916 Durbin-Watson: 0.100 Prob(Omnibus): 0.000 Jarque-Bera (JB): 14.104

Skew: -0.229 Prob(JB): 0.000866 Kurtosis: 2.146 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2022_French presidential

OLS Regression Results

Dep. Variable: index R-squared: 0.799 Model: OLS Adj. R-squared: 0.796 Method: Least Squares F-statistic: 282.0 Thu, 11 Jul 2024 Prob (F-statistic): Date: 2.99e-121 17:32:19 Log-Likelihood: 601.46 Time: 361 AIC: No. Observations: -1191. Df Residuals: 355 BIC: -1168.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.7769 0.010 669.724 0.000 6.757 6.797 time 0.0019 0.000 7.496 0.000 0.001 0.002

time_squared -6.854e-06 7.02e-07 -9.769 0.000 -8.23e-06 -5.47e-06

intervention 0.0224 0.013 1.735 0.084 -0.003 0.048

time_after_intervention 0.0027 0.000 6.855 0.000 0.002 0.004

time_after_intervention_squared 3.27e-08 3.6e-09 9.082 0.000 2.56e-08 3.98e-08 time_after_intervention_3 3.889e-08 3.6e-09 10.815 0.000 3.18e-08 4.6e-08

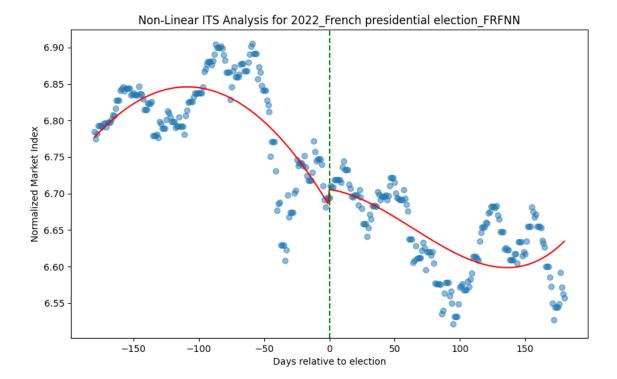
time_3 -6.854e-06 7.02e-07 -9.769 0.000 -8.23e-06 -5.47e-06

Omnibus: 19.690 Durbin-Watson: 0.090 Prob(Omnibus): 0.000 Jarque-Bera (JB): 21.341

 Skew:
 -0.576
 Prob(JB):
 2.32e-05

 Kurtosis:
 3.302
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2022_French legislative e

OLS Regression Results

Dep. Variable: index R-squared: 0.775 Model: OLS Adj. R-squared: 0.772 Method: Least Squares F-statistic: 244.5 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.28e-112 17:32:19 Log-Likelihood: 597.94 Time: 361 AIC: No. Observations: -1184. Df Residuals: 355 BIC: -1161.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.8774 0.010 673.076 0.000 6.857 6.898 time -0.0013 0.000 -5.087 0.000 -0.002 -0.001

time_squared 2.834e-07 7.08e-07 0.400 0.689 -1.11e-06 1.68e-06

intervention -0.0459 0.013 -3.525 0.000 -0.072 -0.020

time_after_intervention 0.0009 0.000 2.130 0.034 6.59e-05 0.002

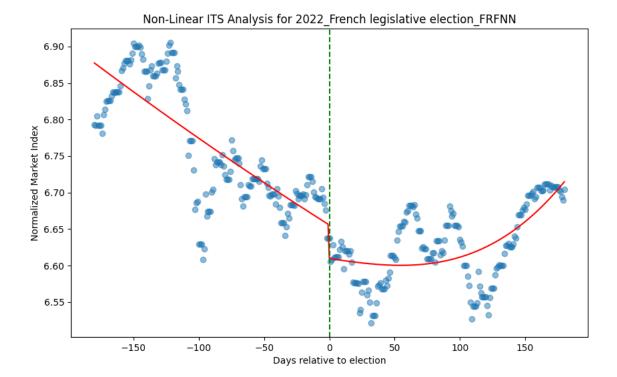
time_3 2.834e-07 7.08e-07 0.400 0.689 -1.11e-06 1.68e-06

Omnibus: 15.797 Durbin-Watson: 0.089 Prob(Omnibus): 0.000 Jarque-Bera (JB): 16.658

 Skew:
 -0.493
 Prob(JB):
 0.000241

 Kurtosis:
 3.370
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2022_Swedish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.898 Model: OLS Adj. R-squared: 0.897 Method: Least Squares F-statistic: 628.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 7.28e-174 17:32:20 Log-Likelihood: 764.45 Time: 361 AIC: No. Observations: -1517. Df Residuals: 355 BIC: -1494.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.8985 0.006 1226.002 0.000 7.886 7.911 time 8.124e-05 0.000 0.491 0.624 -0.000 0.000

time_squared -9.229e-07 4.47e-07 -2.066 0.040 -1.8e-06 -4.43e-08

intervention 0.0218 0.008 2.656 0.008 0.006 0.038 time_after_intervention 0.0023 0.000 9.068 0.000 0.002 0.003

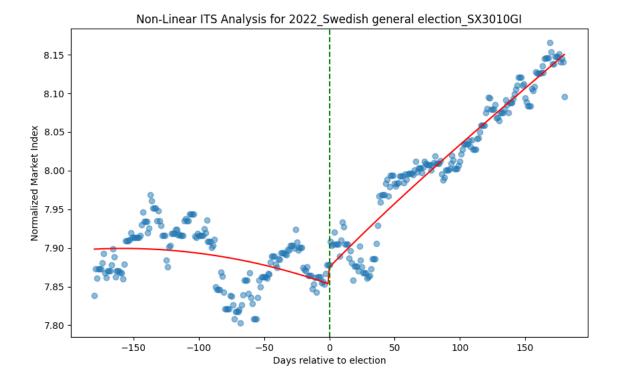
time_after_intervention_squared -1.528e-09 2.29e-09 -0.666 0.506 -6.04e-09 2.98e-09 time after intervention 3 5.686e-09 2.29e-09 2.484 0.013 1.18e-09 1.02e-08

time_3 -9.228e-07 4.47e-07 -2.066 0.040 -1.8e-06 -4.43e-08

Omnibus: 17.034 Durbin-Watson: 0.161 Prob(Omnibus): 0.000 Jarque-Bera (JB): 18.674

Skew: -0.554 Prob(JB): 8.81e-05 Kurtosis: 2.890 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2022_Italian general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.895 Model: OLS Adj. R-squared: 0.893 Method: Least Squares F-statistic: 602.3 Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.95e-171 17:32:20 Log-Likelihood: 652.50 Time: 361 AIC: No. Observations: -1293. Df Residuals: 355 BIC: -1270.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 9.4676 0.009 1077.738 0.000 9.450 9.485 time -0.0025 0.000 -11.223 0.000 -0.003 -0.002

time_squared 4.461e-06 6.09e-07 7.323 0.000 3.26e-06 5.66e-06

intervention -0.0282 0.011 -2.520 0.012 -0.050 -0.006 time_after_intervention 0.0018 0.000 5.216 0.000 0.001 0.002

time_after_intervention_squared -3.952e-08 3.13e-09 -12.642 0.000 -4.57e-08 -3.34e-08 time_after_intervention_3 -3.087e-08 3.12e-09 -9.889 0.000 -3.7e-08 -2.47e-08

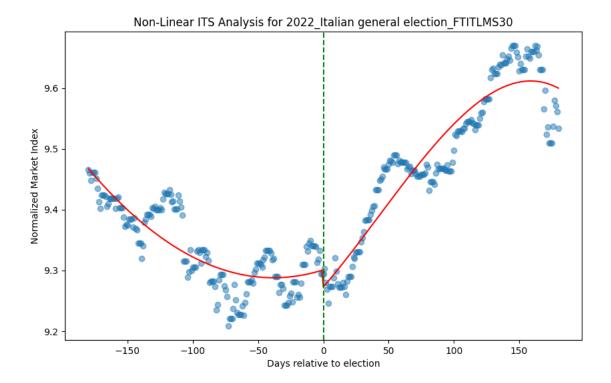
time_3 4.461e-06 6.09e-07 7.323 0.000 3.26e-06 5.66e-06

Omnibus: 14.438 Durbin-Watson: 0.134 Prob(Omnibus): 0.001 Jarque-Bera (JB): 6.726

 Skew:
 0.034
 Prob(JB):
 0.0346

 Kurtosis:
 2.335
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2021_German federal elec

OLS Regression Results

Dep. Variable: index R-squared: 0.761 Model: OLS Adj. R-squared: 0.758 Method: Least Squares F-statistic: 226.7 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.88e-108 17:32:20 Log-Likelihood: Time: 858.91 361 AIC: No. Observations: -1706. Df Residuals: 355 BIC: -1682.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.8523 0.005 1583.368 0.000 7.843 7.862 time 0.0014 0.000 11.053 0.000 0.001 0.002

time_squared -2.317e-06 3.44e-07 -6.739 0.000 -2.99e-06 -1.64e-06

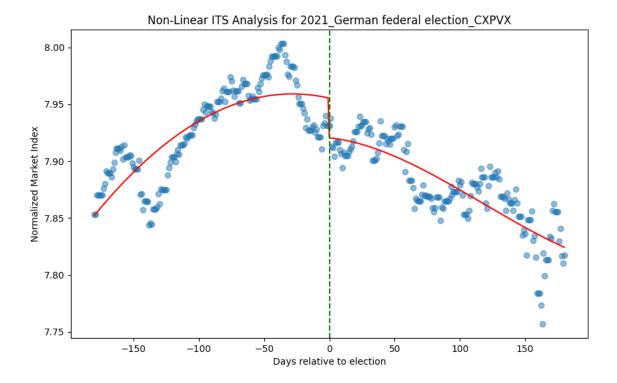
time_3 -2.317e-06 3.44e-07 -6.739 0.000 -2.99e-06 -1.64e-06

Omnibus: 15.233 Durbin-Watson: 0.168 Prob(Omnibus): 0.000 Jarque-Bera (JB): 16.495

 Skew:
 -0.519
 Prob(JB):
 0.000262

 Kurtosis:
 2.868
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2021_Canadian federal ele

OLS Regression Results

Dep. Variable: index R-squared: 0.740 Model: OLS Adj. R-squared: 0.736 Method: Least Squares F-statistic: 201.8 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:20 Log-Likelihood: Date: 2.01e-101 Time: 1369.3 361 AIC: No. Observations: -2727. Df Residuals: 355 BIC: -2703.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 9.0271 0.001 7484.727 0.000 9.025 9.029 time -3.7e-05 3.1e-05 -1.195 0.233 -9.79e-05 2.39e-05 time_squared 1.033e-07 8.36e-08 1.236 0.217 -6.11e-08 2.68e-07

intervention -0.0063 0.002 -4.123 0.000 -0.009 -0.003

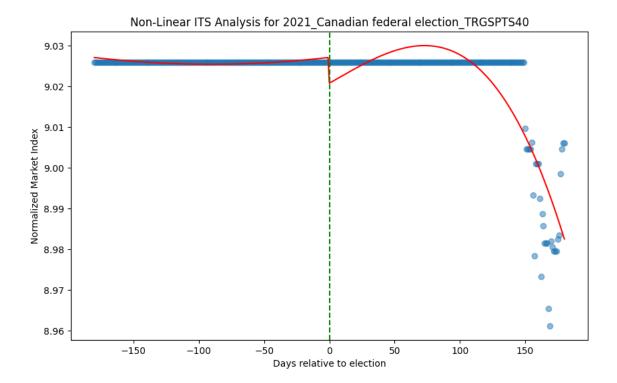
time_after_intervention 0.0001 4.77e-05 3.042 0.003 5.13e-05 0.000

time_3 1.034e-07 8.36e-08 1.236 0.217 -6.11e-08 2.68e-07

Omnibus: 88.924 Durbin-Watson: 0.274 Prob(Omnibus): 0.000 Jarque-Bera (JB): 1492.553

Skew: -0.496 Prob(JB): 0.00 Kurtosis: 12.912 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2021_Norwegian parliame

OLS Regression Results

Dep. Variable: index R-squared: 0.900 Model: OLS Adj. R-squared: 0.899 Method: Least Squares F-statistic: 638.4 Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.62e-175 17:32:21 Log-Likelihood: Time: 860.37 361 AIC: No. Observations: -1709. Df Residuals: 355 BIC: -1685.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.8224 0.005 1583.732 0.000 7.813 7.832 time 0.0004 0.000 2.849 0.005 0.000 0.001

time_squared -2.634e-07 3.42e-07 -0.769 0.442 -9.37e-07 4.1e-07

intervention 0.0091 0.006 1.447 0.149 -0.003 0.021 time_after_intervention 0.0016 0.000 8.203 0.000 0.001 0.001

time_after_intervention 0.0016 0.000 8.203 0.000 0.001 0.002 time_after_intervention_squared -2.501e-08 1.76e-09 -14.229 0.000 -2.85e-08 -2.10

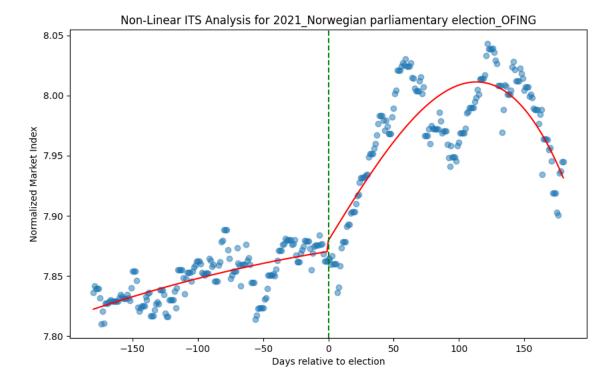
time_3 -2.633e-07 3.42e-07 -0.769 0.442 -9.37e-07 4.1e-07

Omnibus: 5.236 Durbin-Watson: 0.156 Prob(Omnibus): 0.073 Jarque-Bera (JB): 5.064

 Skew:
 -0.240
 Prob(JB):
 0.0795

 Kurtosis:
 3.326
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2021_Dutch general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.951 Model: OLS Adj. R-squared: 0.950 Method: Least Squares F-statistic: 1371. Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.30e-229 17:32:21 Log-Likelihood: 740.25 Time: 361 AIC: No. Observations: -1468. Df Residuals: 355 BIC: -1445.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 5.9541 0.007 864.259 0.000 5.941 5.968 time 0.0016 0.000 8.973 0.000 0.001 0.002

time_squared 3.941e-07 4.78e-07 0.825 0.410 -5.45e-07 1.33e-06

intervention 0.0558 0.009 6.353 0.000 0.039 0.073

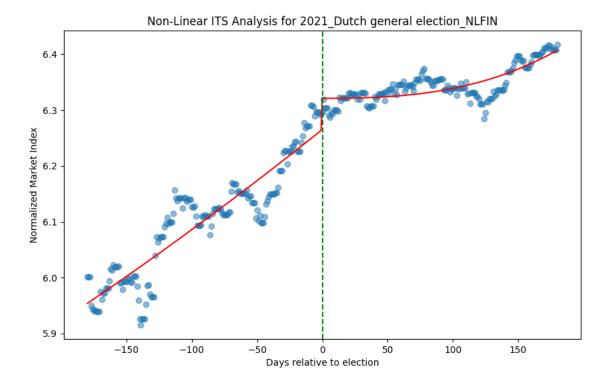
time_after_intervention -0.0019 0.000 -6.896 0.000 -0.002 -0.001

time_3 3.941e-07 4.78e-07 0.825 0.410 -5.45e-07 1.33e-06

Omnibus: 24.157 Durbin-Watson: 0.139 Prob(Omnibus): 0.000 Jarque-Bera (JB): 34.041

Skew: -0.498 Prob(JB): 4.06e-08 Kurtosis: 4.127 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2020_United States president

OLS Regression Results

Dep. Variable: index R-squared: 0.958 Model: OLS Adj. R-squared: 0.957 Method: Least Squares F-statistic: 1616. Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.06e-241 17:32:21 Log-Likelihood: 795.04 Time: 361 AIC: No. Observations: -1578. Df Residuals: 355 BIC: -1555.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.7439 0.006 1477.236 0.000 8.732 8.756 time 0.0020 0.000 13.121 0.000 0.002 0.002

time_squared -4.12e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

intervention 0.0823 0.008 10.912 0.000 0.067 0.097

time_after_intervention 0.0031 0.000 13.388 0.000 0.003 0.004

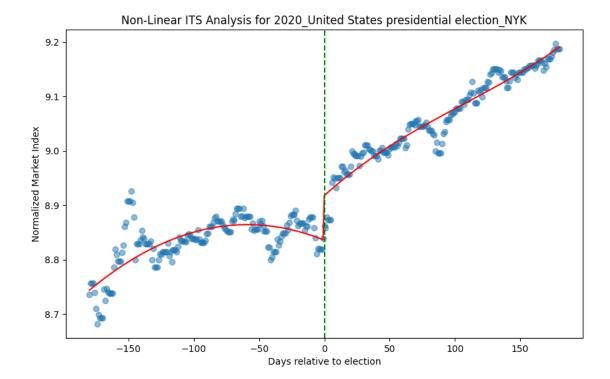
time_3 -4.119e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

Omnibus: 60.255 Durbin-Watson: 0.229 Prob(Omnibus): 0.000 Jarque-Bera (JB): 262.789

 Skew:
 0.621 Prob(JB):
 8.63e-58

 Kurtosis:
 6.991 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2020_United States Senat

OLS Regression Results

Dep. Variable: index R-squared: 0.958 Model: OLS Adj. R-squared: 0.957 Method: Least Squares F-statistic: 1616. Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.06e-241 17:32:21 Log-Likelihood: 795.04 Time: 361 AIC: No. Observations: -1578. Df Residuals: 355 BIC: -1555.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.7439 0.006 1477.236 0.000 8.732 8.756 time 0.0020 0.000 13.121 0.000 0.002 0.002

time_squared -4.12e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

intervention 0.0823 0.008 10.912 0.000 0.067 0.097

 $time_after_intervention \qquad 0.0031 \quad 0.000 \quad 13.388 \quad 0.000 \quad 0.003 \quad 0.004$

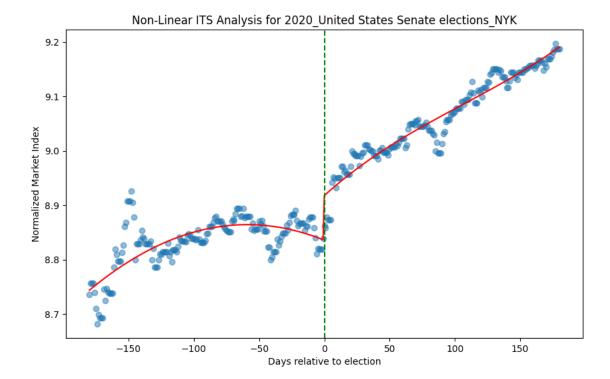
time_3 -4.119e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

Omnibus: 60.255 Durbin-Watson: 0.229 Prob(Omnibus): 0.000 Jarque-Bera (JB): 262.789

 Skew:
 0.621 Prob(JB):
 8.63e-58

 Kurtosis:
 6.991 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2020_United States House

OLS Regression Results

Dep. Variable: index R-squared: 0.958 Model: OLS Adj. R-squared: 0.957 Method: Least Squares F-statistic: 1616. Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.06e-241 17:32:22 Log-Likelihood: 795.04 Time: 361 AIC: No. Observations: -1578. Df Residuals: 355 BIC: -1555.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.7439 0.006 1477.236 0.000 8.732 8.756 time 0.0020 0.000 13.121 0.000 0.002 0.002

time_squared -4.12e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

intervention 0.0823 0.008 10.912 0.000 0.067 0.097

time_after_intervention 0.0031 0.000 13.388 0.000 0.003 0.004

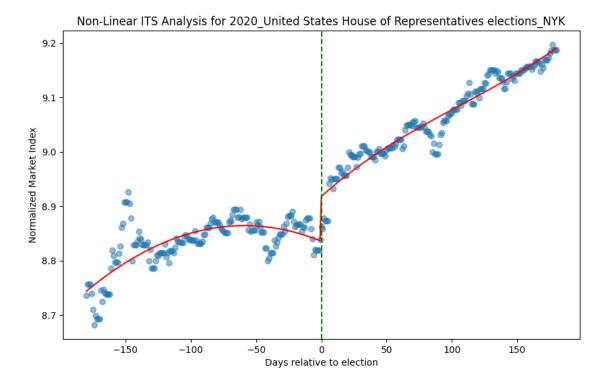
time_3 -4.119e-06 4.1e-07 -10.037 0.000 -4.93e-06 -3.31e-06

Omnibus: 60.255 Durbin-Watson: 0.229 Prob(Omnibus): 0.000 Jarque-Bera (JB): 262.789

 Skew:
 0.621 Prob(JB):
 8.63e-58

 Kurtosis:
 6.991 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.810 Model: OLS Adj. R-squared: 0.808 Method: Least Squares F-statistic: 303.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 9.94e-126 17:32:22 Log-Likelihood: Time: 692.11 361 AIC: No. Observations: -1372. Df Residuals: 355 BIC: -1349.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3686 0.008 809.028 0.000 6.353 6.384 time -0.0011 0.000 -5.477 0.000 -0.002 -0.001

time_squared 3.095e-06 5.46e-07 5.670 0.000 2.02e-06 4.17e-06

intervention 0.0034 0.010 0.337 0.736 -0.016 0.023

time_after_intervention -0.0041 0.000 -13.028 0.000 -0.005 -0.003

time_after_intervention_squared 1.162e-08 2.8e-09 4.149 0.000 6.11e-09 1.71e-08 time_after_intervention_3 1.744e-08 2.8e-09 6.234 0.000 1.19e-08 2.29e-08

time_3 3.095e-06 5.46e-07 5.670 0.000 2.02e-06 4.17e-06

Omnibus: 1.718 Durbin-Watson: 0.130 Prob(Omnibus): 0.424 Jarque-Bera (JB): 1.556

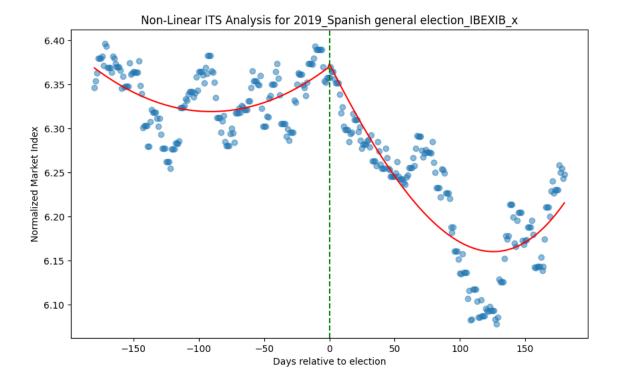
 Skew:
 -0.043
 Prob(JB):
 0.459

 Kurtosis:
 2.690
 Cond. No.
 1.18e+18

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

[2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.849 Model: OLS Adj. R-squared: 0.846 Method: Least Squares F-statistic: 398.0 Thu, 11 Jul 2024 Prob (F-statistic): Date: 4.14e-143 17:32:22 Log-Likelihood: Time: 392.25 361 AIC: -772.5 No. Observations: -749.2 Df Residuals: 355 BIC:

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3223 0.018 349.995 0.000 6.287 6.358 time -0.0026 0.000 -5.645 0.000 -0.004 -0.002

time_squared 5.686e-06 1.25e-06 4.540 0.000 3.22e-06 8.15e-06

intervention 0.0485 0.023 2.105 0.036 0.003 0.094

 $time_after_intervention \\ -0.0025 \\ 0.001 \\ -3.541 \\ 0.000 \\ -0.004 \\ -0.001$

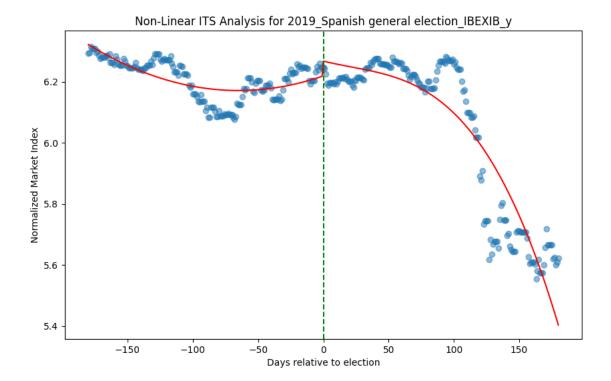
time_after_intervention_squared -9.238e-08 6.43e-09 -14.372 0.000 -1.05e-07 -7.97e-08 time after intervention 3 -8.66e-08 6.42e-09 -13.491 0.000 -9.92e-08 -7.4e-08

time_3 5.686e-06 1.25e-06 4.540 0.000 3.22e-06 8.15e-06

Omnibus: 41.520 Durbin-Watson: 0.073 Prob(Omnibus): 0.000 Jarque-Bera (JB): 96.229

Skew: -0.586 Prob(JB): 1.27e-21 Kurtosis: 5.242 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Portuguese legislat

OLS Regression Results

Dep. Variable: index R-squared: 0.906 Model: OLS Adj. R-squared: 0.904 Method: Least Squares F-statistic: 682.8 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.20e-179 17:32:22 Log-Likelihood: 456.78 Time: 361 AIC: No. Observations: -901.6 Df Residuals: 355 BIC: -878.2

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 4.2201 0.015 279.337 0.000 4.190 4.250 time 0.0027 0.000 6.836 0.000 0.002 0.003

time_squared -1.219e-05 1.05e-06 -11.638 0.000 -1.43e-05 -1.01e-05

intervention 0.0309 0.019 1.607 0.109 -0.007 0.069

 $time_after_intervention \qquad 0.0110 \quad 0.001 \quad 18.433 \quad 0.000 \quad 0.010 \quad 0.012$

time_after_intervention_squared -6.217e-08 5.38e-09 -11.565 0.000 -7.27e-08 -5.16e-08 time after intervention 3 -5.832e-08 5.37e-09 -10.862 0.000 -6.89e-08 -4.78e-08

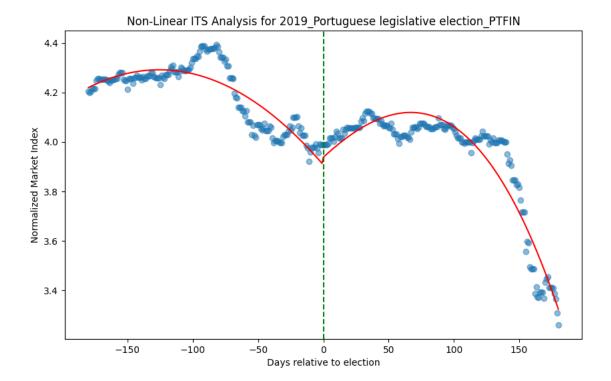
time_3 -1.219e-05 1.05e-06 -11.638 0.000 -1.43e-05 -1.01e-05

Omnibus: 2.981 Durbin-Watson: 0.085 Prob(Omnibus): 0.225 Jarque-Bera (JB): 2.951

 Skew:
 0.221
 Prob(JB):
 0.229

 Kurtosis:
 2.962
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Greek legislative ele

OLS Regression Results

Dep. Variable: index R-squared: 0.919 Model: OLS Adj. R-squared: 0.918 Method: Least Squares F-statistic: 801.8 Thu, 11 Jul 2024 Prob (F-statistic): Date: 6.10e-191 17:32:23 Log-Likelihood: 447.44 Time: 361 AIC: No. Observations: -882.9 Df Residuals: 355 BIC: -859.5

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 5.9462 0.016 383.543 0.000 5.916 5.977 time 0.0050 0.000 12.644 0.000 0.004 0.006

time_squared -2.27e-06 1.07e-06 -2.112 0.035 -4.38e-06 -1.56e-07

intervention -0.1382 0.020 -6.993 0.000 -0.177 -0.099

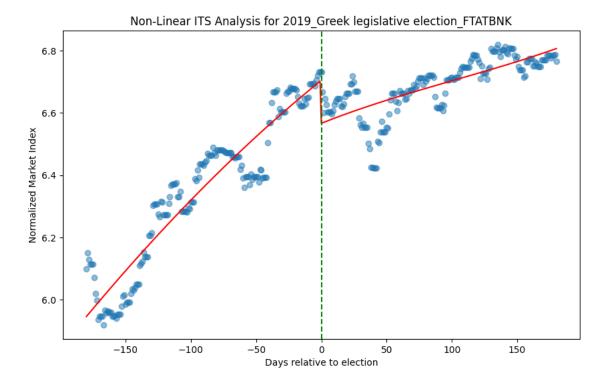
 $time_after_intervention \qquad -0.0017 \quad 0.001 \quad -2.820 \quad 0.005 \quad -0.003 \quad -0.001$

time_3 -2.27e-06 1.07e-06 -2.112 0.035 -4.38e-06 -1.56e-07

Omnibus: 11.451 Durbin-Watson: 0.120 Prob(Omnibus): 0.003 Jarque-Bera (JB): 11.685

Skew: -0.433 Prob(JB): 0.00290 Kurtosis: 3.167 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Belgian federal elec

OLS Regression Results

Dep. Variable: index R-squared: 0.710 Model: OLS Adj. R-squared: 0.706 Method: Least Squares F-statistic: 173.5 Thu, 11 Jul 2024 Prob (F-statistic): Date: 4.99e-93 17:32:23 Log-Likelihood: Time: 773.84 361 AIC: No. Observations: -1536. Df Residuals: 355 BIC: -1512.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.6366 0.006 1057.292 0.000 6.624 6.649 time 0.0011 0.000 6.742 0.000 0.001 0.001

time_squared -8.866e-07 4.35e-07 -2.037 0.042 -1.74e-06 -3.07e-08

intervention -0.0340 0.008 -4.252 0.000 -0.050 -0.018 time after intervention -0.0008 0.000 -3.139 0.002 -0.001 -0.00

time_after_intervention -0.0008 0.000 -3.139 0.002 -0.001 -0.000

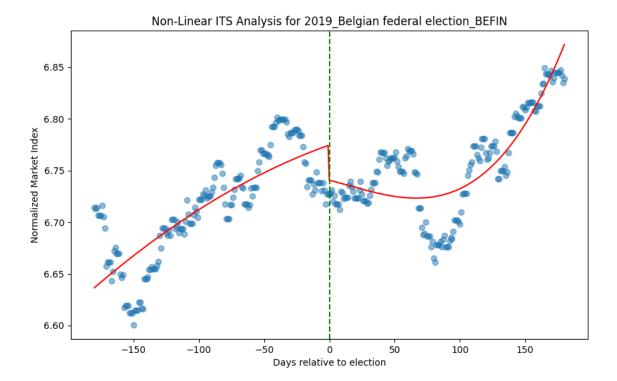
time_after_intervention_squared 1.826e-08 2.23e-09 8.174 0.000 1.39e-08 2.26e-08 time_after_intervention_3 2.432e-08 2.23e-09 10.902 0.000 1.99e-08 2.87e-08

time_3 -8.866e-07 4.35e-07 -2.037 0.042 -1.74e-06 -3.06e-08

Omnibus: 1.984 Durbin-Watson: 0.087 Prob(Omnibus): 0.371 Jarque-Bera (JB): 1.692

Skew: 0.008 Prob(JB): 0.429 Kurtosis: 2.665 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Danish general elec

OLS Regression Results

Dep. Variable: index R-squared: 0.878 Model: OLS Adj. R-squared: 0.877 Method: Least Squares F-statistic: 513.3 Thu, 11 Jul 2024 Prob (F-statistic): Date: 4.94e-160 17:32:23 Log-Likelihood: 957.70 Time: 361 AIC: No. Observations: -1903. Df Residuals: 355 BIC: -1880.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.7808 0.004 1797.720 0.000 6.773 6.788 time 0.0019 9.68e-05 19.974 0.000 0.002 0.002

time_squared -3.584e-06 2.62e-07 -13.703 0.000 -4.1e-06 -3.07e-06

intervention 0.0100 0.005 2.086 0.038 0.001 0.019

time_after_intervention 0.0012 0.000 7.838 0.000 0.001 0.001

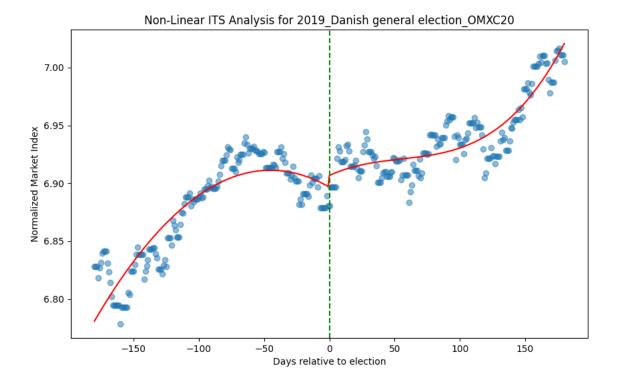
time_after_intervention_squared 1.853e-08 1.34e-09 13.807 0.000 1.59e-08 2.12e-08 time_after_intervention_3 2.472e-08 1.34e-09 18.445 0.000 2.21e-08 2.74e-08

time_3 -3.584e-06 2.62e-07 -13.703 0.000 -4.1e-06 -3.07e-06

Omnibus: 2.156 Durbin-Watson: 0.192 Prob(Omnibus): 0.340 Jarque-Bera (JB): 2.203

Skew: 0.185 Prob(JB): 0.332 Kurtosis: 2.901 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Finnish parliamenta

OLS Regression Results

Dep. Variable: index R-squared: 0.776 Model: OLS Adj. R-squared: 0.773 Method: Least Squares F-statistic: 246.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.18e-113 17:32:23 Log-Likelihood: 859.76 Time: 361 AIC: No. Observations: -1708. Df Residuals: 355 BIC: -1684.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.5815 0.005 1532.373 0.000 7.572 7.591 time -0.0011 0.000 -8.482 0.000 -0.001 -0.001

time_squared 4.007e-06 3.43e-07 11.680 0.000 3.33e-06 4.68e-06

intervention -0.0067 0.006 -1.058 0.291 -0.019 0.006 time_after_intervention -0.0023 0.000 -11.618 0.000 -0.003 -0.002

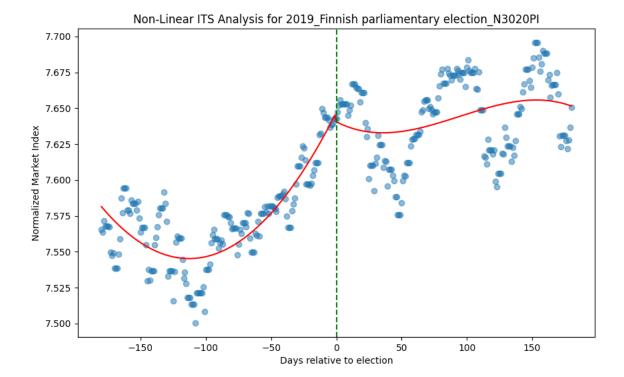
time_after_intervention_3 -1.068e-08 1.76e-09 -6.076 0.000 -1.41e-08 -7.23e-09

time_3 4.007e-06 3.43e-07 11.680 0.000 3.33e-06 4.68e-06

Omnibus: 22.110 Durbin-Watson: 0.154 Prob(Omnibus): 0.000 Jarque-Bera (JB): 13.850

Skew: -0.340 Prob(JB): 0.000983 Kurtosis: 2.323 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2019_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.810 Model: OLS Adj. R-squared: 0.808 Method: Least Squares F-statistic: 303.2 Thu, 11 Jul 2024 Prob (F-statistic): Date: 9.94e-126 17:32:24 Log-Likelihood: Time: 692.11 361 AIC: No. Observations: -1372. Df Residuals: 355 BIC: -1349.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3686 0.008 809.028 0.000 6.353 6.384 time -0.0011 0.000 -5.477 0.000 -0.002 -0.001

time_squared 3.095e-06 5.46e-07 5.670 0.000 2.02e-06 4.17e-06

intervention 0.0034 0.010 0.337 0.736 -0.016 0.023

time_after_intervention -0.0041 0.000 -13.028 0.000 -0.005 -0.003

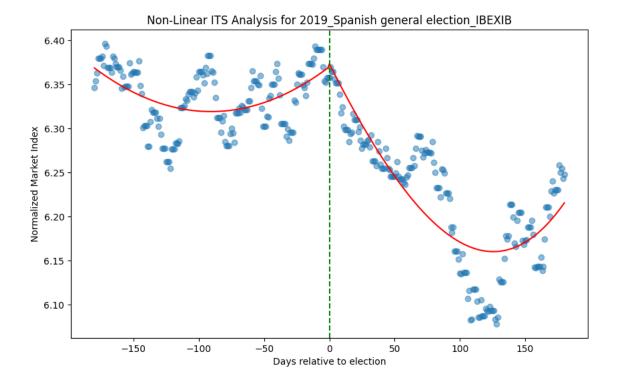
time_after_intervention_squared 1.162e-08 2.8e-09 4.149 0.000 6.11e-09 1.71e-08 time_after_intervention_3 1.744e-08 2.8e-09 6.234 0.000 1.19e-08 2.29e-08 time_3 3.095e-06 5.46e-07 5.670 0.000 2.02e-06 4.17e-06

3.0936-00 3.406-07 3.070 0.000 2.026-00 4.176-00

Omnibus: 1.718 Durbin-Watson: 0.130 Prob(Omnibus): 0.424 Jarque-Bera (JB): 1.556

Skew: -0.043 Prob(JB): 0.459
Kurtosis: 2.690 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2018_Swedish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.764 Model: OLS Adj. R-squared: 0.760 Method: Least Squares F-statistic: 229.5 Thu, 11 Jul 2024 Prob (F-statistic): Date: 7.12e-109 17:32:24 Log-Likelihood: Time: 869.27 361 AIC: No. Observations: -1727. Df Residuals: 355 BIC: -1703.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.7214 0.005 1602.289 0.000 7.712 7.731 time -0.0018 0.000 -14.488 0.000 -0.002 -0.002

time_squared 6.592e-06 3.34e-07 19.729 0.000 5.94e-06 7.25e-06

intervention -0.0262 0.006 -4.260 0.000 -0.038 -0.014

 $time_after_intervention \\ -0.0054 \\ 0.000 \\ -28.143 \\ 0.000 \\ -0.006 \\ -0.005$

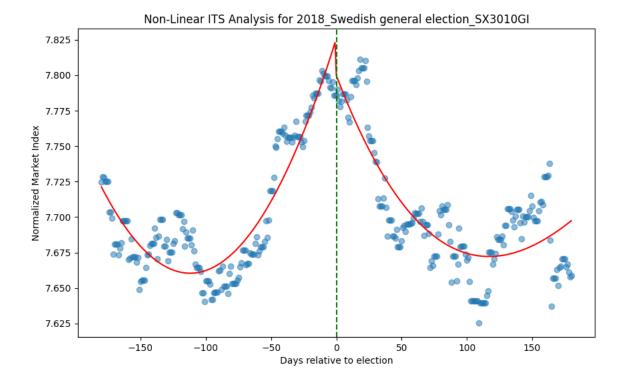
time_3 6.592e-06 3.34e-07 19.729 0.000 5.94e-06 7.25e-06

Omnibus: 18.738 Durbin-Watson: 0.177 Prob(Omnibus): 0.000 Jarque-Bera (JB): 10.247

 Skew:
 0.234
 Prob(JB):
 0.00595

 Kurtosis:
 2.321
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2018_Italian general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.731 Model: OLS Adj. R-squared: 0.727 Method: Least Squares F-statistic: 193.0 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:24 Log-Likelihood: Date: 6.48e-99 680.39 Time: 361 AIC: No. Observations: -1349. Df Residuals: 355 BIC: -1325.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 9.5697 0.008 1176.865 0.000 9.554 9.586 time -0.0007 0.000 -3.116 0.002 -0.001 -0.000

time_squared 2.401e-06 5.64e-07 4.259 0.000 1.29e-06 3.51e-06

intervention 0.0147 0.010 1.422 0.156 -0.006 0.035

time_after_intervention -0.0025 0.000 -7.883 0.000 -0.003 -0.002

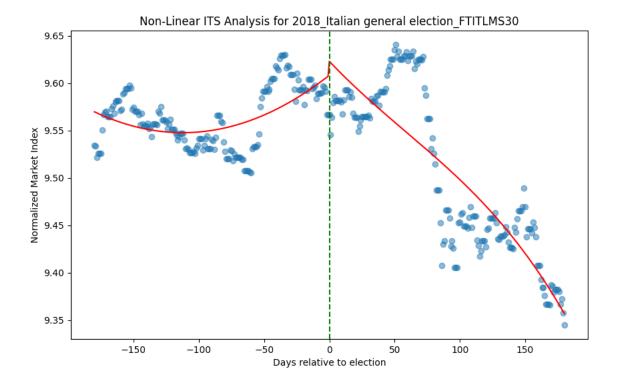
time_3 2.401e-06 5.64e-07 4.259 0.000 1.29e-06 3.51e-06

Omnibus: 6.220 Durbin-Watson: 0.077
Prob(Omnibus): 0.045 Jarque-Bera (JB): 6.033

 Skew:
 0.279
 Prob(JB):
 0.0490

 Kurtosis:
 3.301
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2017_German federal elec

OLS Regression Results

Dep. Variable: index R-squared: 0.920 Model: OLS Adj. R-squared: 0.919 Method: Least Squares F-statistic: 820.9 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.31e-192 17:32:24 Log-Likelihood: 954.38 Time: 361 AIC: No. Observations: -1897. Df Residuals: 355 BIC: -1873.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.3691 0.004 1935.792 0.000 7.362 7.377 time 0.0017 9.77e-05 17.176 0.000 0.001 0.002

time_squared -2.957e-06 2.64e-07 -11.201 0.000 -3.48e-06 -2.44e-06

intervention 0.0111 0.005 2.298 0.022 0.002 0.021

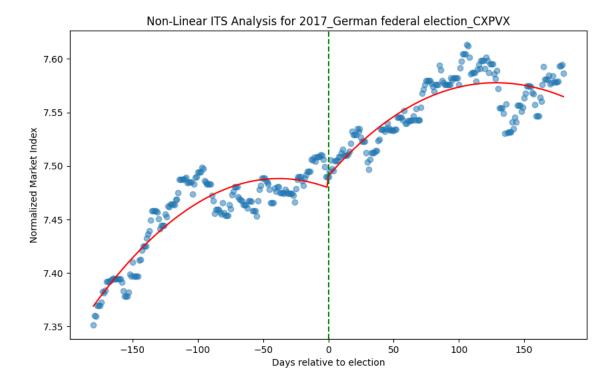
time_after_intervention 0.0018 0.000 12.265 0.000 0.002 0.002

time_3 -2.957e-06 2.64e-07 -11.201 0.000 -3.48e-06 -2.44e-06

Omnibus: 6.789 Durbin-Watson: 0.134 Prob(Omnibus): 0.034 Jarque-Bera (JB): 5.188

Skew: -0.183 Prob(JB): 0.0747 Kurtosis: 2.541 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2017 French presidential

OLS Regression Results

Dep. Variable: index R-squared: 0.920 Model: OLS Adj. R-squared: 0.919 Method: Least Squares F-statistic: 819.8 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.63e-192 17:32:25 Log-Likelihood: Time: 888.57 361 AIC: No. Observations: -1765. Df Residuals: 355 BIC: -1742.

Df Model: 5 Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

0.005 1455.348 0.000 6.6480 6.639 6.657 const 0.0020 0.000 16.744 0.000 0.002 0.002 time

time_squared -3.649e-06 3.17e-07 -11.519 0.000 -4.27e-06 -3.03e-06

0.088

0.0767 0.006 13.179 0.000 0.065 intervention

time_after_intervention 0.0015 0.000 8.095 0.000 0.001 0.002 time_after_intervention_squared 1.024e-08 1.63e-09 6.299

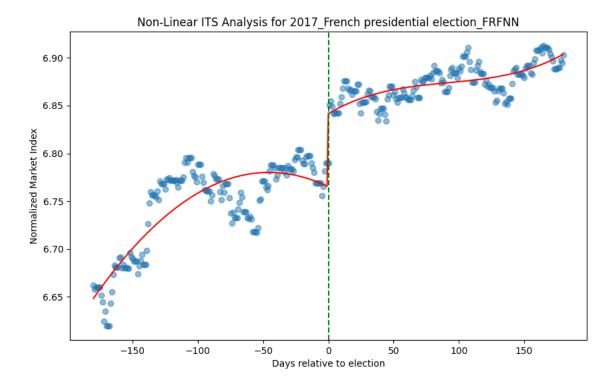
0.000 7.04e-09 1.34e-08 time after intervention 3 1.631e-08 1.62e-09 10.049 0.000 1.31e-08 1.95e-08

-3.649e-06 3.17e-07 -11.519 0.000 -4.27e-06 -3.03e-06 time_3

Omnibus: 14.084 Durbin-Watson: 0.187 Prob(Omnibus): 0.001 Jarque-Bera (JB): 14.731

0.000633 Skew: -0.452 Prob(JB): Kurtosis: 3.402 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2017_French legislative e

OLS Regression Results

Dep. Variable: index R-squared: 0.890 Model: OLS Adj. R-squared: 0.888 Method: Least Squares F-statistic: 572.0 Thu, 11 Jul 2024 Prob (F-statistic): Date: 2.08e-167 17:32:25 Log-Likelihood: Time: 935.09 361 AIC: No. Observations: -1858. Df Residuals: 355 BIC: -1835.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.7788 0.004 1688.054 0.000 6.771 6.787 time -0.0008 0.000 -7.370 0.000 -0.001 -0.001

time_squared 3.822e-06 2.78e-07 13.727 0.000 3.27e-06 4.37e-06

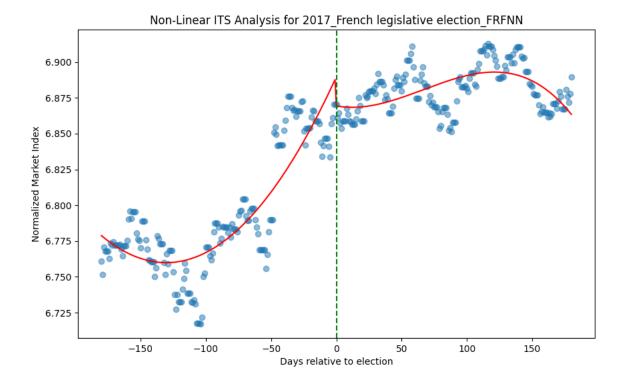
intervention -0.0203 0.005 -3.970 0.000 -0.030 -0.010 time_after_intervention -0.0022 0.000 -13.623 0.000 -0.002 -0.002

time_3 3.822e-06 2.78e-07 13.727 0.000 3.27e-06 4.37e-06

Omnibus: 2.380 Durbin-Watson: 0.167 Prob(Omnibus): 0.304 Jarque-Bera (JB): 2.155

Skew: -0.181 Prob(JB): 0.340 Kurtosis: 3.108 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2017_United Kingdom gen

OLS Regression Results

Dep. Variable: index R-squared: 0.946 Model: OLS Adj. R-squared: 0.945 Method: Least Squares F-statistic: 1233. Thu, 11 Jul 2024 Prob (F-statistic): Date: 7.54e-222 17:32:25 Log-Likelihood: Time: 1021.5 361 AIC: -2031. No. Observations: Df Residuals: 355 BIC: -2008.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.3479 0.003 2641.006 0.000 8.342 8.354 time 0.0006 8.11e-05 7.677 0.000 0.000 0.001

time_squared 8.162e-07 2.19e-07 3.724 0.000 3.85e-07 1.25e-06

intervention -0.0053 0.004 -1.311 0.191 -0.013 0.003

time_after_intervention -0.0012 0.000 -9.288 0.000 -0.001 -0.001

time_after_intervention_squared -7.566e-09 1.12e-09 -6.727 0.000 -9.78e-09 -5.35e-09 time_after_intervention_3 5.841e-11 1.12e-09 0.052 0.959 -2.15e-09 2.27e-09

time_3 8.162e-07 2.19e-07 3.724 0.000 3.85e-07 1.25e-06

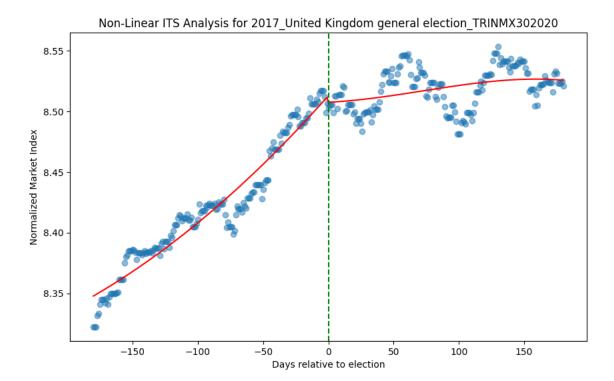
 Omnibus:
 9.257
 Durbin-Watson:
 0.143

 Prob(Omnibus):
 0.010
 Jarque-Bera (JB):
 9.547

 Skew:
 -0.381
 Prob(JB):
 0.00845

Kurtosis: -0.381 Prob(JB): 0.00845 -0.381 Prob(JB): 0.00845 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2017_Dutch general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.923 Model: OLS Adj. R-squared: 0.922 Method: Least Squares F-statistic: 854.7 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.77e-195 17:32:26 Log-Likelihood: Time: 975.49 361 AIC: No. Observations: -1939. Df Residuals: 355 BIC: -1916.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.3520 0.004 1769.086 0.000 6.345 6.359 time 0.0017 9.22e-05 18.441 0.000 0.002 0.002

time_squared -2.315e-06 2.49e-07 -9.299 0.000 -2.8e-06 -1.83e-06

intervention -0.0105 0.005 -2.304 0.022 -0.020 -0.002 time_after_intervention 0.0011 0.000 7.730 0.000 0.001 0.001

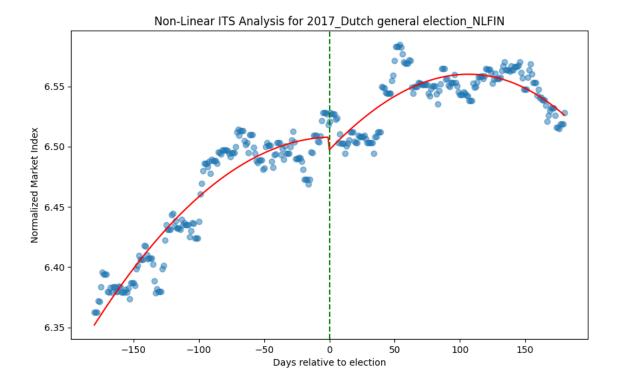
time_after_intervention_squared -5.009e-09 1.28e-09 -3.921 0.000 -7.52e-09 -2.5e-09

time_after_intervention_3 7.917e-10 1.28e-09 0.620 0.535 -1.72e-09 3.3e-09 time_3 -2.315e-06 2.49e-07 -9.299 0.000 -2.8e-06 -1.83e-06

Omnibus: 0.281 Durbin-Watson: 0.153 Prob(Omnibus): 0.869 Jarque-Bera (JB): 0.213

Skew: -0.059 Prob(JB): 0.899 Kurtosis: 3.018 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2016_United States president

OLS Regression Results

Dep. Variable: index R-squared: 0.950 Model: OLS Adj. R-squared: 0.950 Method: Least Squares F-statistic: 1359. Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.53e-229 17:32:26 Log-Likelihood: 955.44 Time: 361 AIC: No. Observations: -1899. Df Residuals: 355 BIC: -1876.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.6927 0.004 2290.183 0.000 8.685 8.700 time 0.0004 9.74e-05 4.402 0.000 0.000 0.001

time_squared -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

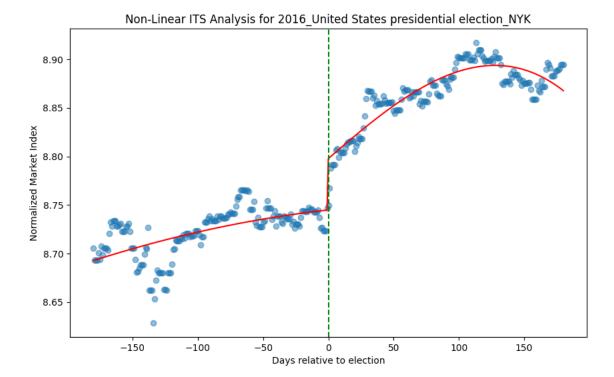
intervention 0.0528 0.005 10.922 0.000 0.043 0.062 time_after_intervention 0.0010 0.000 6.839 0.000 0.001 0.001

time_3 -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

Omnibus: 41.916 Durbin-Watson: 0.215 Prob(Omnibus): 0.000 Jarque-Bera (JB): 79.580

Skew: -0.661 Prob(JB): 5.24e-18 Kurtosis: 4.883 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2016_United States Senat

OLS Regression Results

Dep. Variable: index R-squared: 0.950 Model: OLS Adj. R-squared: 0.950 Method: Least Squares F-statistic: 1359. Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.53e-229 17:32:26 Log-Likelihood: 955.44 Time: 361 AIC: No. Observations: -1899. Df Residuals: 355 BIC: -1876.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.6927 0.004 2290.183 0.000 8.685 8.700 time 0.0004 9.74e-05 4.402 0.000 0.000 0.001

time_squared -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

intervention 0.0528 0.005 10.922 0.000 0.043 0.062 time_after_intervention 0.0010 0.000 6.839 0.000 0.001 0.001

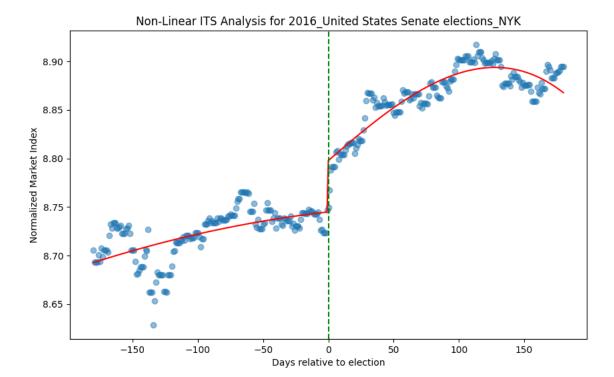
time_after_intervention_3 -6.048e-09 1.35e-09 -4.484 0.000 -8.7e-09 -3.4e-09

time_3 -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

Omnibus: 41.916 Durbin-Watson: 0.215 Prob(Omnibus): 0.000 Jarque-Bera (JB): 79.580

Skew: -0.661 Prob(JB): 5.24e-18 Kurtosis: 4.883 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2016_United States House

OLS Regression Results

Dep. Variable: index R-squared: 0.950 Model: OLS Adj. R-squared: 0.950 Method: Least Squares F-statistic: 1359. Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.53e-229 17:32:26 Log-Likelihood: 955.44 Time: 361 AIC: No. Observations: -1899. Df Residuals: 355 BIC: -1876.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.6927 0.004 2290.183 0.000 8.685 8.700 time 0.0004 9.74e-05 4.402 0.000 0.000 0.001

time_squared -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

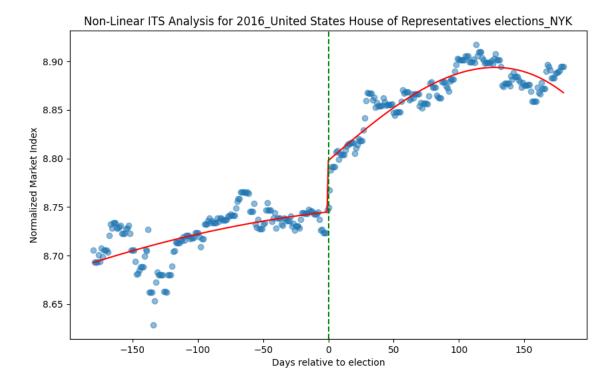
intervention 0.0528 0.005 10.922 0.000 0.043 0.062 time_after_intervention 0.0010 0.000 6.839 0.000 0.001 0.001

time_after_intervention_3 -6.048e-09 1.35e-09 -4.484 0.000 -8.7e-09 -3.4e-09 time_3 -3.86e-07 2.63e-07 -1.467 0.143 -9.04e-07 1.32e-07

Omnibus: 41.916 Durbin-Watson: 0.215 Prob(Omnibus): 0.000 Jarque-Bera (JB): 79.580

Skew: -0.661 Prob(JB): 5.24e-18 Kurtosis: 4.883 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2016_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.576 Model: OLS Adj. R-squared: 0.571 Method: Least Squares F-statistic: 96.65 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:26 Log-Likelihood: Date: 4.64e-64 Time: 546.13 361 AIC: No. Observations: -1080. Df Residuals: 355 BIC: -1057.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.4403 0.012 546.023 0.000 6.417 6.464 time -0.0001 0.000 -0.369 0.712 -0.001 0.000

time_squared -8.106e-07 8.18e-07 -0.991 0.322 -2.42e-06 7.98e-07

intervention -0.1206 0.015 -8.021 0.000 -0.150 -0.091 time_after_intervention 0.0018 0.000 3.781 0.000 0.001 0.003

time_after_intervention_squared 8.494e-09 4.2e-09 2.024 0.044 2.4e-10 1.67e-08 time after intervention_3 1.437e-08 4.19e-09 3.429 0.001 6.13e-09 2.26e-08

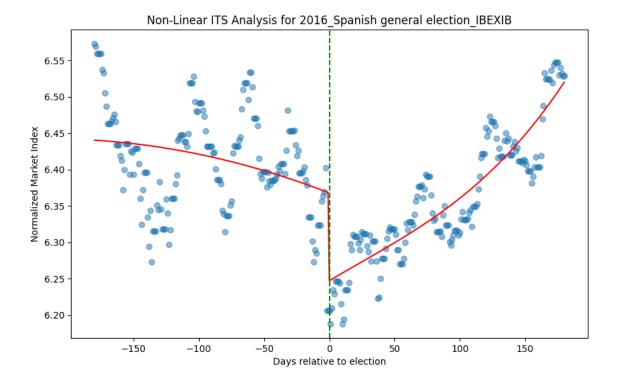
time_3 -8.106e-07 8.18e-07 -0.991 0.322 -2.42e-06 7.98e-07

Omnibus: 2.791 Durbin-Watson: 0.179 Prob(Omnibus): 0.248 Jarque-Bera (JB): 2.601

 Skew:
 -0.139
 Prob(JB):
 0.272

 Kurtosis:
 3.310
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2016_United Kingdom Brown

OLS Regression Results

Dep. Variable: index R-squared: 0.628 Model: OLS Adj. R-squared: 0.623 Method: Least Squares F-statistic: 119.8 Thu, 11 Jul 2024 Prob (F-statistic): Date: 5.86e-74 17:32:27 Log-Likelihood: 701.67 Time: 361 AIC: No. Observations: -1391. Df Residuals: 355 BIC: -1368.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.2522 0.008 1076.434 0.000 8.237 8.267 time 3.672e-05 0.000 0.187 0.852 -0.000 0.000

time_squared 3.324e-07 5.32e-07 0.625 0.532 -7.13e-07 1.38e-06

intervention -0.0569 0.010 -5.824 0.000 -0.076 -0.038

 $time_after_intervention \qquad \quad 0.0015 \quad 0.000 \quad \quad 5.022 \quad \quad 0.000 \quad \quad 0.001 \quad \quad 0.002$

time_after_intervention_squared -2.584e-08 2.73e-09 -9.473 0.000 -3.12e-08 -2.05e-08 time after intervention 3 -1.83e-08 2.72e-09 -6.719 0.000 -2.37e-08 -1.29e-08

time_3 3.324e-07 5.32e-07 0.625 0.532 -7.13e-07 1.38e-06

 Omnibus:
 29.271 Durbin-Watson:
 0.174

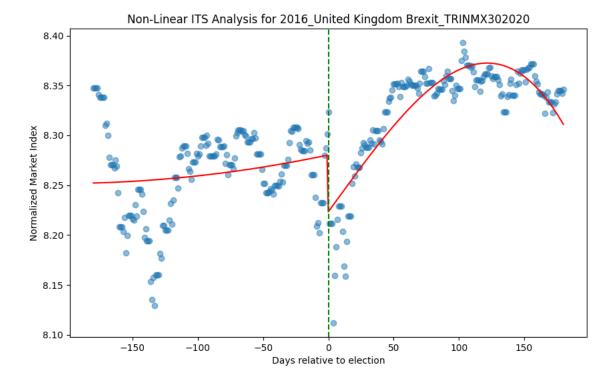
 Prob(Omnibus):
 0.000 Jarque-Bera (JB):
 54.191

 Skew:
 -0.483 Prob(JB):
 1.71e-12

Kurtosis: -0.483 Prob(JB): 1.71e-12

Kurtosis: 4.634 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2015_Portuguese legislat

OLS Regression Results

Dep. Variable: index R-squared: 0.929 Model: OLS Adj. R-squared: 0.928 Method: Least Squares F-statistic: 927.9 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:27 Log-Likelihood: Date: 2.45e-201 Time: 541.93 361 AIC: No. Observations: -1072. Df Residuals: 355 BIC: -1049.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 4.8221 0.012 404.098 0.000 4.799 4.846 time 0.0002 0.000 0.707 0.480 -0.000 0.001

time_squared -9.188e-06 8.27e-07 -11.105 0.000 -1.08e-05 -7.56e-06

intervention 0.2390 0.015 15.712 0.000 0.209 0.269 time_after_intervention 0.0048 0.000 10.133 0.000 0.004 0.006

time_after_intervention_squared 6.281e-08 4.25e-09 14.793 0.000 5.45e-08 7.12e-08 time after intervention 3 6.722e-08 4.24e-09 15.851 0.000 5.89e-08 7.56e-08

time_3 -9.188e-06 8.27e-07 -11.105 0.000 -1.08e-05 -7.56e-06

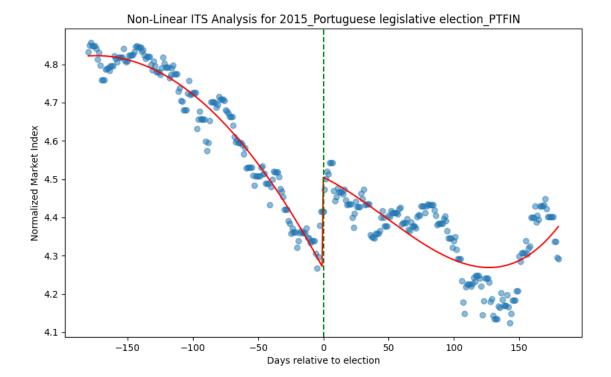
Omnibus: 0.943 Durbin-Watson: 0.228 Prob(Omnibus): 0.624 Jarque-Bera (JB): 0.782

Skew: -0.108 Prob(JB): 0.677 Kurtosis: 3.074 Cond. No. 1.18e+18

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

[2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2015_Spanish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.860 Model: OLS Adj. R-squared: 0.858 Method: Least Squares F-statistic: 435.3 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:27 Log-Likelihood: Date: 5.36e-149 574.06 Time: 361 AIC: No. Observations: -1136. Df Residuals: 355 BIC: -1113.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.6773 0.011 611.651 0.000 6.656 6.699 time -3.823e-05 0.000 -0.136 0.892 -0.001 0.001

time_squared -3.651e-07 7.57e-07 -0.482 0.630 -1.85e-06 1.12e-06

intervention -0.1603 0.014 -11.519 0.000 -0.188 -0.133 time_after_intervention -0.0006 0.000 -1.295 0.196 -0.001 0.000

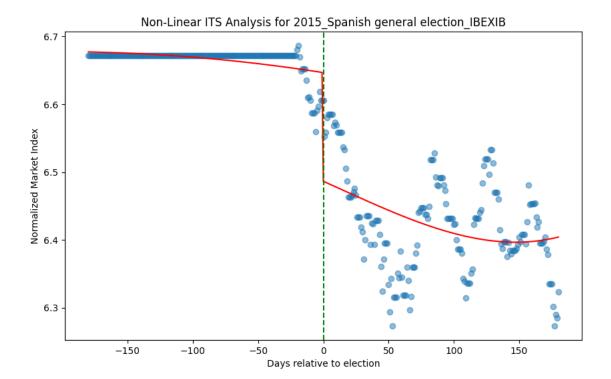
time_after_intervention_squared 5.201e-09 3.88e-09 1.339 0.181 -2.44e-09 1.28e-08 time_after_intervention_3 1.13e-08 3.88e-09 2.912 0.004 3.67e-09 1.89e-08

time_3 -3.651e-07 7.57e-07 -0.482 0.630 -1.85e-06 1.12e-06

Omnibus: 14.356 Durbin-Watson: 0.138 Prob(Omnibus): 0.001 Jarque-Bera (JB): 26.348

Skew: -0.210 Prob(JB): 1.90e-06 Kurtosis: 4.255 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2015_United Kingdom gen

OLS Regression Results

Dep. Variable: index R-squared: 0.895 Model: OLS Adj. R-squared: 0.893 Method: Least Squares F-statistic: 604.3 Thu, 11 Jul 2024 Prob (F-statistic): Date: 3.49e-171 17:32:27 Log-Likelihood: Time: 886.47 361 AIC: No. Observations: -1761. Df Residuals: 355 BIC: -1738.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 8.1365 0.005 1770.834 0.000 8.127 8.146 time 0.0016 0.000 13.169 0.000 0.001 0.002

time_squared -5.667e-07 3.19e-07 -1.779 0.076 -1.19e-06 5.99e-08

intervention 0.0061 0.006 1.050 0.294 -0.005 0.018

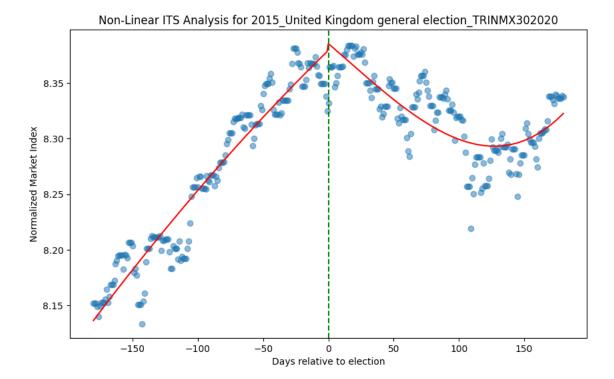
 $time_after_intervention \qquad -0.0022 \qquad 0.000 \quad -11.900 \qquad 0.000 \quad -0.003 \quad -0.002$

time_3 -5.667e-07 3.19e-07 -1.779 0.076 -1.19e-06 5.99e-08

Omnibus: 17.427 Durbin-Watson: 0.228 Prob(Omnibus): 0.000 Jarque-Bera (JB): 18.777

Skew: -0.555 Prob(JB): 8.37e-05 Kurtosis: 3.126 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2014_Swedish general ele

OLS Regression Results

Dep. Variable: index R-squared: 0.870 Model: OLS Adj. R-squared: 0.868 Method: Least Squares F-statistic: 473.5 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.34e-154 17:32:28 Log-Likelihood: 874.00 Time: 361 AIC: No. Observations: -1736. Df Residuals: 355 BIC: -1713.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 7.4363 0.005 1563.493 0.000 7.427 7.446 time 0.0011 0.000 9.397 0.000 0.001 0.001

time_squared -2.909e-06 3.3e-07 -8.822 0.000 -3.56e-06 -2.26e-06

intervention 0.0261 0.006 4.309 0.000 0.014 0.038

time_after_intervention 0.0015 0.000 7.917 0.000 0.001 0.002 time_after_intervention_squared 2.352e-08 1.69e-09 13.895 0.000 2.02e-08 2.68e-08

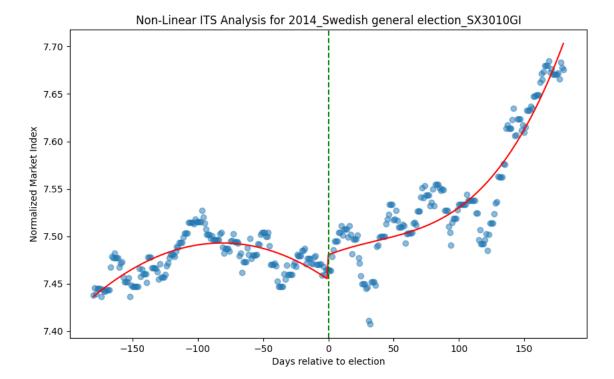
time_after_intervention_squared 2.352e-08 1.69e-09 13.895 0.000 2.02e-08 2.68e-08 time_after_intervention_3 3.031e-08 1.69e-09 17.931 0.000 2.7e-08 3.36e-08

time_3 -2.909e-06 3.3e-07 -8.822 0.000 -3.56e-06 -2.26e-06

Omnibus: 49.757 Durbin-Watson: 0.185 Prob(Omnibus): 0.000 Jarque-Bera (JB): 73.236

Skew: -0.887 Prob(JB): 1.25e-16 Kurtosis: 4.312 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2014_Belgian federal elec

OLS Regression Results

Dep. Variable: index R-squared: 0.556 Model: OLS Adj. R-squared: 0.550 Method: Least Squares F-statistic: 88.98 Thu, 11 Jul 2024 Prob (F-statistic): Date: 1.78e-60 17:32:28 Log-Likelihood: 852.03 Time: 361 AIC: No. Observations: -1692. Df Residuals: 355 BIC: -1669.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.2761 0.005 1241.658 0.000 6.266 6.286 time 0.0016 0.000 12.466 0.000 0.001 0.002

time_squared -3.326e-06 3.5e-07 -9.490 0.000 -4.02e-06 -2.64e-06

intervention 0.0199 0.006 3.091 0.002 0.007 0.033

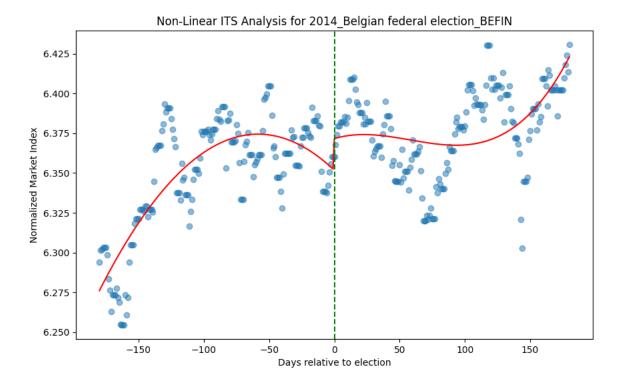
 $time_after_intervention \qquad 0.0010 \quad 0.000 \quad 5.107 \quad 0.000 \quad 0.001 \quad 0.001$

time_3 -3.326e-06 3.5e-07 -9.490 0.000 -4.02e-06 -2.64e-06

Omnibus: 1.847 Durbin-Watson: 0.181 Prob(Omnibus): 0.397 Jarque-Bera (JB): 1.675

Skew: -0.163 Prob(JB): 0.433 Kurtosis: 3.067 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2013_German federal elec

OLS Regression Results

Dep. Variable: index R-squared: 0.897 Model: OLS Adj. R-squared: 0.896 Method: Least Squares F-statistic: 619.7 Thu, 11 Jul 2024 Prob (F-statistic): Date: 6.49e-173 17:32:28 Log-Likelihood: 947.90 Time: 361 AIC: No. Observations: -1884. Df Residuals: 355 BIC: -1860.

Df Model: 5
Covariance Type: nonrobust

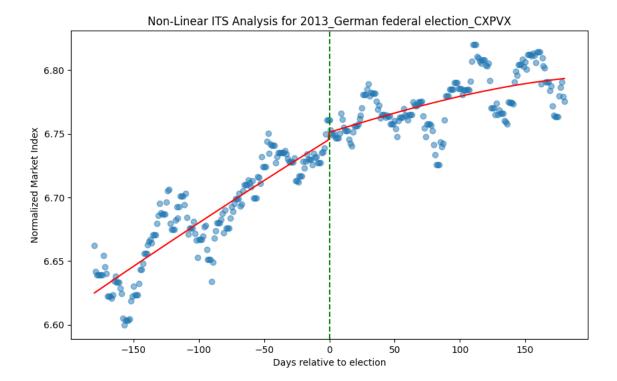
coef std err t P>|t| [0.025 0.975]

6.6251 0.004 1709.371 0.000 6.617 6.633 const 0.0007 9.95e-05 7.050 0.000 0.001 0.001 time time_squared -9e-08 2.69e-07 -0.335 0.738 -6.19e-07 4.39e-07 0.015 0.0056 0.005 1.128 0.260 -0.004 intervention time_after_intervention -0.0003 0.000 -2.103 0.036 -0.001 -2.09e-05 time_after_intervention_squared -3.763e-09 1.38e-09 -2.729 0.007 -6.48e-09 -1.05e-09

Omnibus: 3.828 Durbin-Watson: 0.171 Prob(Omnibus): 0.147 Jarque-Bera (JB): 3.681

Skew: -0.246 Prob(JB): 0.159 Kurtosis: 3.049 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2013_Italian general elect

OLS Regression Results

Dep. Variable: index R-squared: 0.546 Model: OLS Adj. R-squared: 0.540 Method: Least Squares F-statistic: 85.45 Thu, 11 Jul 2024 Prob (F-statistic):
17:32:28 Log-Likelihood: Date: 9.11e-59 Time: 553.28 361 AIC: No. Observations: -1095. -1071. Df Residuals: 355 BIC:

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

 const
 9.2061
 0.012
 796.126
 0.000
 9.183
 9.229

 time
 -8.312e-05
 0.000
 -0.280
 0.780
 -0.001
 0.001

time_squared 3.628e-06 8.02e-07 4.525 0.000 2.05e-06 5.2e-06 intervention -0.1578 0.015 -10.705 0.000 -0.187 -0.129

time_after_intervention -0.0026 0.000 -5.630 0.000 -0.003 -0.002

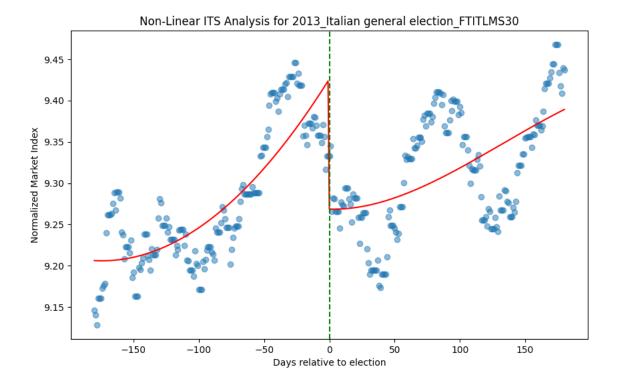
time_3 3.628e-06 8.02e-07 4.525 0.000 2.05e-06 5.2e-06

Omnibus: 36.174 Durbin-Watson: 0.120 Prob(Omnibus): 0.000 Jarque-Bera (JB): 11.251

 Skew:
 0.034
 Prob(JB):
 0.00360

 Kurtosis:
 2.138
 Cond. No.
 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.



Non-Linear Interrupted Time Series Analysis for 2013_Norwegian parliame

OLS Regression Results

Dep. Variable: index R-squared: 0.907 Model: OLS Adj. R-squared: 0.905 Method: Least Squares F-statistic: 690.6 Thu, 11 Jul 2024 Prob (F-statistic): 17:32:28 Log-Likelihood: Date: 1.91e-180 811.37 Time: 361 AIC: No. Observations: -1611. Df Residuals: 355 BIC: -1587.

Df Model: 5
Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]

const 6.6792 0.006 1180.629 0.000 6.668 6.690 time 0.0007 0.000 4.896 0.000 0.000 0.001

time_squared -2.505e-07 3.92e-07 -0.639 0.524 -1.02e-06 5.21e-07

intervention -0.0457 0.007 -6.341 0.000 -0.060 -0.032 time_after_intervention 0.0013 0.000 5.961 0.000 0.001 0.002

time_after_intervention_squared -1.634e-08 2.01e-09 -8.117 0.000 -2.03e-08 -1.24e-08 time_after_intervention_3 -1.024e-08 2.01e-09 -5.094 0.000 -1.42e-08 -6.29e-09

time_3 -2.505e-07 3.92e-07 -0.638 0.524 -1.02e-06 5.21e-07

Omnibus: 14.840 Durbin-Watson: 0.120 Prob(Omnibus): 0.001 Jarque-Bera (JB): 11.711

Skew: -0.348 Prob(JB): 0.00286 Kurtosis: 2.457 Cond. No. 1.18e+18

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.28e-21. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.

