# Model Metrics

Contents

[Model Metrics 1](#_Toc51512352)

[1. Ordinary Least Squares (OLS) Regression results from 1983-2020 with no lag 1](#_Toc51512353)

[2. OLS results from 1983-2020 for lags 1 – 20 5](#_Toc51512354)

[3. OLS Regression Results from 1983-2020 for lag 5 90](#_Toc51512355)

[4. OLS Regression Results from 1983-2020 for lag 5 95](#_Toc51512356)

## Ordinary Least Squares (OLS) Regression results from 1983-2020 with no lag

1. OLS Regression Results For No Lag 1982 - 2020

==============================================================================

Dep. Variable: Food R-squared: 0.019

Model: OLS Adj. R-squared: 0.016

Method: Least Squares F-statistic: 6.948

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00876

Time: 13:02:09 Log-Likelihood: -824.62

No. Observations: 360 AIC: 1653.

Df Residuals: 358 BIC: 1661.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5329 0.127 35.818 0.000 4.284 4.782

Ethanol 0.8062 0.306 2.636 0.009 0.205 1.408

==============================================================================

Omnibus: 51.682 Durbin-Watson: 0.061

Prob(Omnibus): 0.000 Jarque-Bera (JB): 76.876

Skew: 0.914 Prob(JB): 2.03e-17

Kurtosis: 4.337 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

OLS Regression Results

==============================================================================

Dep. Variable: Meats R-squared: 0.065

Model: OLS Adj. R-squared: 0.062

Method: Least Squares F-statistic: 24.82

Date: Sun, 20 Sep 2020 Prob (F-statistic): 9.80e-07

Time: 13:02:09 Log-Likelihood: -1144.5

No. Observations: 360 AIC: 2293.

Df Residuals: 358 BIC: 2301.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2818 0.308 13.912 0.000 3.677 4.887

Ethanol 3.7059 0.744 4.982 0.000 2.243 5.169

==============================================================================

Omnibus: 3.521 Durbin-Watson: 0.088

Prob(Omnibus): 0.172 Jarque-Bera (JB): 3.507

Skew: 0.241 Prob(JB): 0.173

Kurtosis: 2.955 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

OLS Regression Results

==============================================================================

Dep. Variable: Fruits\_veg R-squared: 0.064

Model: OLS Adj. R-squared: 0.061

Method: Least Squares F-statistic: 24.39

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.21e-06

Time: 13:02:09 Log-Likelihood: -1185.2

No. Observations: 360 AIC: 2374.

Df Residuals: 358 BIC: 2382.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.1409 0.345 17.820 0.000 5.463 6.819

Ethanol 4.1128 0.833 4.938 0.000 2.475 5.751

==============================================================================

Omnibus: 7.729 Durbin-Watson: 0.444

Prob(Omnibus): 0.021 Jarque-Bera (JB): 12.020

Skew: -0.085 Prob(JB): 0.00245

Kurtosis: 3.879 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

OLS Regression Results

===============================================================================

Dep. Variable: Rice\_pasta\_cornmeal R-squared: 0.000

Model: OLS Adj. R-squared: -0.002

Method: Least Squares F-statistic: 0.1690

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.681

Time: 13:02:09 Log-Likelihood: -1281.2

No. Observations: 360 AIC: 2566.

Df Residuals: 358 BIC: 2574.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6095 0.450 10.247 0.000 3.725 5.494

Ethanol 0.4470 1.087 0.411 0.681 -1.691 2.585

==============================================================================

Omnibus: 254.555 Durbin-Watson: 0.073

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2572.717

Skew: 2.978 Prob(JB): 0.00

Kurtosis: 14.664 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

OLS Regression Results

==============================================================================

Dep. Variable: Dairy R-squared: 0.057

Model: OLS Adj. R-squared: 0.055

Method: Least Squares F-statistic: 21.76

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.38e-06

Time: 13:02:09 Log-Likelihood: -1202.4

No. Observations: 360 AIC: 2409.

Df Residuals: 358 BIC: 2417.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8530 0.361 10.660 0.000 3.142 4.564

Ethanol 4.0745 0.874 4.664 0.000 2.357 5.792

==============================================================================

Omnibus: 26.587 Durbin-Watson: 0.102

Prob(Omnibus): 0.000 Jarque-Bera (JB): 61.125

Skew: 0.362 Prob(JB): 5.33e-14

Kurtosis: 4.884 Cond. No. 2.42

==============================================================================

## OLS results from 1983-2020 for lags 1 – 20

ags1

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.040

Model: OLS Adj. R-squared: 0.038

Method: Least Squares F-statistic: 15.00

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.000128

Time: 13:02:10 Log-Likelihood: -820.14

No. Observations: 360 AIC: 1644.

Df Residuals: 358 BIC: 1652.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5300 0.125 36.245 0.000 4.284 4.776

x1 1.1700 0.302 3.873 0.000 0.576 1.764

==============================================================================

Omnibus: 49.326 Durbin-Watson: 0.066

Prob(Omnibus): 0.000 Jarque-Bera (JB): 70.617

Skew: 0.900 Prob(JB): 4.63e-16

Kurtosis: 4.211 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags2

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.064

Model: OLS Adj. R-squared: 0.061

Method: Least Squares F-statistic: 24.38

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.21e-06

Time: 13:02:10 Log-Likelihood: -815.42

No. Observations: 360 AIC: 1635.

Df Residuals: 358 BIC: 1643.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5258 0.123 36.688 0.000 4.283 4.768

x1 1.4722 0.298 4.938 0.000 0.886 2.059

==============================================================================

Omnibus: 48.739 Durbin-Watson: 0.073

Prob(Omnibus): 0.000 Jarque-Bera (JB): 68.163

Skew: 0.908 Prob(JB): 1.58e-15

Kurtosis: 4.117 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags3

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.087

Model: OLS Adj. R-squared: 0.085

Method: Least Squares F-statistic: 34.30

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.07e-08

Time: 13:02:10 Log-Likelihood: -810.60

No. Observations: 360 AIC: 1625.

Df Residuals: 358 BIC: 1633.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5227 0.122 37.158 0.000 4.283 4.762

x1 1.7228 0.294 5.856 0.000 1.144 2.301

==============================================================================

Omnibus: 51.525 Durbin-Watson: 0.079

Prob(Omnibus): 0.000 Jarque-Bera (JB): 72.777

Skew: 0.949 Prob(JB): 1.57e-16

Kurtosis: 4.117 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags4

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.107

Model: OLS Adj. R-squared: 0.104

Method: Least Squares F-statistic: 42.82

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.08e-10

Time: 13:02:10 Log-Likelihood: -806.49

No. Observations: 360 AIC: 1617.

Df Residuals: 358 BIC: 1625.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5208 0.120 37.569 0.000 4.284 4.757

x1 1.9031 0.291 6.544 0.000 1.331 2.475

==============================================================================

Omnibus: 57.450 Durbin-Watson: 0.084

Prob(Omnibus): 0.000 Jarque-Bera (JB): 84.861

Skew: 1.016 Prob(JB): 3.74e-19

Kurtosis: 4.236 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags5

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.119

Model: OLS Adj. R-squared: 0.117

Method: Least Squares F-statistic: 48.57

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.54e-11

Time: 13:02:10 Log-Likelihood: -803.21

No. Observations: 360 AIC: 1610.

Df Residuals: 358 BIC: 1618.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5235 0.119 37.935 0.000 4.289 4.758

x1 2.0086 0.288 6.970 0.000 1.442 2.575

==============================================================================

Omnibus: 66.230 Durbin-Watson: 0.084

Prob(Omnibus): 0.000 Jarque-Bera (JB): 106.432

Skew: 1.098 Prob(JB): 7.74e-24

Kurtosis: 4.509 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags6

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.120

Model: OLS Adj. R-squared: 0.118

Method: Least Squares F-statistic: 48.94

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.30e-11

Time: 13:02:10 Log-Likelihood: -802.18

No. Observations: 360 AIC: 1608.

Df Residuals: 358 BIC: 1616.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5295 0.119 38.094 0.000 4.296 4.763

x1 2.0104 0.287 6.996 0.000 1.445 2.576

==============================================================================

Omnibus: 75.021 Durbin-Watson: 0.089

Prob(Omnibus): 0.000 Jarque-Bera (JB): 131.348

Skew: 1.178 Prob(JB): 3.01e-29

Kurtosis: 4.791 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags7

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.113

Model: OLS Adj. R-squared: 0.110

Method: Least Squares F-statistic: 45.49

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.18e-11

Time: 13:02:10 Log-Likelihood: -803.15

No. Observations: 360 AIC: 1610.

Df Residuals: 358 BIC: 1618.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5353 0.119 38.040 0.000 4.301 4.770

x1 1.9434 0.288 6.744 0.000 1.377 2.510

==============================================================================

Omnibus: 82.277 Durbin-Watson: 0.097

Prob(Omnibus): 0.000 Jarque-Bera (JB): 152.758

Skew: 1.252 Prob(JB): 6.75e-34

Kurtosis: 4.979 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags8

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.106

Model: OLS Adj. R-squared: 0.104

Method: Least Squares F-statistic: 42.63

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.27e-10

Time: 13:02:10 Log-Likelihood: -803.86

No. Observations: 360 AIC: 1612.

Df Residuals: 358 BIC: 1620.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5409 0.119 38.011 0.000 4.306 4.776

x1 1.8850 0.289 6.529 0.000 1.317 2.453

==============================================================================

Omnibus: 86.897 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 166.178

Skew: 1.304 Prob(JB): 8.22e-37

Kurtosis: 5.068 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags9

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.093

Model: OLS Adj. R-squared: 0.090

Method: Least Squares F-statistic: 36.53

Date: Sun, 20 Sep 2020 Prob (F-statistic): 3.78e-09

Time: 13:02:10 Log-Likelihood: -806.26

No. Observations: 360 AIC: 1617.

Df Residuals: 358 BIC: 1624.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5465 0.120 37.806 0.000 4.310 4.783

x1 1.7566 0.291 6.044 0.000 1.185 2.328

==============================================================================

Omnibus: 88.469 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 173.762

Skew: 1.310 Prob(JB): 1.85e-38

Kurtosis: 5.172 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags10

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.076

Model: OLS Adj. R-squared: 0.074

Method: Least Squares F-statistic: 29.54

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.02e-07

Time: 13:02:10 Log-Likelihood: -809.23

No. Observations: 360 AIC: 1622.

Df Residuals: 358 BIC: 1630.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5520 0.121 37.540 0.000 4.314 4.790

x1 1.5927 0.293 5.435 0.000 1.016 2.169

==============================================================================

Omnibus: 88.588 Durbin-Watson: 0.083

Prob(Omnibus): 0.000 Jarque-Bera (JB): 181.911

Skew: 1.284 Prob(JB): 3.15e-40

Kurtosis: 5.351 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags11

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.061

Model: OLS Adj. R-squared: 0.058

Method: Least Squares F-statistic: 23.23

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.13e-06

Time: 13:02:10 Log-Likelihood: -812.23

No. Observations: 360 AIC: 1628.

Df Residuals: 358 BIC: 1636.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5555 0.122 37.257 0.000 4.315 4.796

x1 1.4242 0.296 4.819 0.000 0.843 2.005

==============================================================================

Omnibus: 85.390 Durbin-Watson: 0.075

Prob(Omnibus): 0.000 Jarque-Bera (JB): 179.095

Skew: 1.226 Prob(JB): 1.29e-39

Kurtosis: 5.435 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags12

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.045

Model: OLS Adj. R-squared: 0.043

Method: Least Squares F-statistic: 16.98

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.69e-05

Time: 13:02:10 Log-Likelihood: -815.52

No. Observations: 360 AIC: 1635.

Df Residuals: 358 BIC: 1643.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5564 0.123 36.926 0.000 4.314 4.799

x1 1.2290 0.298 4.121 0.000 0.642 1.815

==============================================================================

Omnibus: 80.293 Durbin-Watson: 0.073

Prob(Omnibus): 0.000 Jarque-Bera (JB): 169.281

Skew: 1.151 Prob(JB): 1.74e-37

Kurtosis: 5.447 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags13

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.033

Model: OLS Adj. R-squared: 0.030

Method: Least Squares F-statistic: 12.23

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.000531

Time: 13:02:10 Log-Likelihood: -817.96

No. Observations: 360 AIC: 1640.

Df Residuals: 358 BIC: 1648.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5571 0.124 36.682 0.000 4.313 4.801

x1 1.0498 0.300 3.496 0.001 0.459 1.640

==============================================================================

Omnibus: 77.155 Durbin-Watson: 0.068

Prob(Omnibus): 0.000 Jarque-Bera (JB): 163.512

Skew: 1.104 Prob(JB): 3.12e-36

Kurtosis: 5.454 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags14

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.023

Model: OLS Adj. R-squared: 0.020

Method: Least Squares F-statistic: 8.383

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00402

Time: 13:02:10 Log-Likelihood: -819.83

No. Observations: 360 AIC: 1644.

Df Residuals: 358 BIC: 1651.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5613 0.125 36.525 0.000 4.316 4.807

x1 0.8739 0.302 2.895 0.004 0.280 1.467

==============================================================================

Omnibus: 72.927 Durbin-Watson: 0.068

Prob(Omnibus): 0.000 Jarque-Bera (JB): 149.807

Skew: 1.060 Prob(JB): 2.95e-33

Kurtosis: 5.344 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags15

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.017

Model: OLS Adj. R-squared: 0.014

Method: Least Squares F-statistic: 6.146

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0136

Time: 13:02:10 Log-Likelihood: -820.83

No. Observations: 360 AIC: 1646.

Df Residuals: 358 BIC: 1653.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5668 0.125 36.468 0.000 4.321 4.813

x1 0.7503 0.303 2.479 0.014 0.155 1.346

==============================================================================

Omnibus: 68.589 Durbin-Watson: 0.064

Prob(Omnibus): 0.000 Jarque-Bera (JB): 134.981

Skew: 1.019 Prob(JB): 4.89e-30

Kurtosis: 5.201 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags16

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.013

Model: OLS Adj. R-squared: 0.010

Method: Least Squares F-statistic: 4.651

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0317

Time: 13:02:10 Log-Likelihood: -821.49

No. Observations: 360 AIC: 1647.

Df Residuals: 358 BIC: 1655.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5768 0.125 36.482 0.000 4.330 4.824

x1 0.6539 0.303 2.157 0.032 0.058 1.250

==============================================================================

Omnibus: 63.944 Durbin-Watson: 0.062

Prob(Omnibus): 0.000 Jarque-Bera (JB): 119.587

Skew: 0.977 Prob(JB): 1.08e-26

Kurtosis: 5.039 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags17

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.009

Model: OLS Adj. R-squared: 0.006

Method: Least Squares F-statistic: 3.148

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0769

Time: 13:02:10 Log-Likelihood: -822.19

No. Observations: 360 AIC: 1648.

Df Residuals: 358 BIC: 1656.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5853 0.126 36.479 0.000 4.338 4.833

x1 0.5390 0.304 1.774 0.077 -0.058 1.136

==============================================================================

Omnibus: 59.364 Durbin-Watson: 0.061

Prob(Omnibus): 0.000 Jarque-Bera (JB): 104.286

Skew: 0.941 Prob(JB): 2.26e-23

Kurtosis: 4.848 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags18

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.005

Model: OLS Adj. R-squared: 0.003

Method: Least Squares F-statistic: 1.904

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.169

Time: 13:02:10 Log-Likelihood: -822.93

No. Observations: 360 AIC: 1650.

Df Residuals: 358 BIC: 1658.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5942 0.126 36.474 0.000 4.347 4.842

x1 0.4200 0.304 1.380 0.169 -0.179 1.019

==============================================================================

Omnibus: 55.642 Durbin-Watson: 0.061

Prob(Omnibus): 0.000 Jarque-Bera (JB): 92.030

Skew: 0.915 Prob(JB): 1.04e-20

Kurtosis: 4.668 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags19

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.004

Model: OLS Adj. R-squared: 0.001

Method: Least Squares F-statistic: 1.294

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.256

Time: 13:02:10 Log-Likelihood: -823.51

No. Observations: 360 AIC: 1651.

Df Residuals: 358 BIC: 1659.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6017 0.126 36.474 0.000 4.354 4.850

x1 0.3468 0.305 1.137 0.256 -0.253 0.946

==============================================================================

Omnibus: 52.819 Durbin-Watson: 0.059

Prob(Omnibus): 0.000 Jarque-Bera (JB): 83.641

Skew: 0.895 Prob(JB): 6.88e-19

Kurtosis: 4.539 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags1

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.089

Model: OLS Adj. R-squared: 0.087

Method: Least Squares F-statistic: 35.07

Date: Sun, 20 Sep 2020 Prob (F-statistic): 7.47e-09

Time: 13:02:10 Log-Likelihood: -1139.8

No. Observations: 360 AIC: 2284.

Df Residuals: 358 BIC: 2291.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2609 0.304 14.027 0.000 3.664 4.858

x1 4.3474 0.734 5.922 0.000 2.904 5.791

==============================================================================

Omnibus: 3.281 Durbin-Watson: 0.092

Prob(Omnibus): 0.194 Jarque-Bera (JB): 3.356

Skew: 0.226 Prob(JB): 0.187

Kurtosis: 2.863 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags2

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.114

Model: OLS Adj. R-squared: 0.111

Method: Least Squares F-statistic: 45.84

Date: Sun, 20 Sep 2020 Prob (F-statistic): 5.26e-11

Time: 13:02:10 Log-Likelihood: -1135.1

No. Observations: 360 AIC: 2274.

Df Residuals: 358 BIC: 2282.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2390 0.300 14.138 0.000 3.649 4.829

x1 4.9062 0.725 6.771 0.000 3.481 6.331

==============================================================================

Omnibus: 4.801 Durbin-Watson: 0.099

Prob(Omnibus): 0.091 Jarque-Bera (JB): 4.873

Skew: 0.281 Prob(JB): 0.0875

Kurtosis: 2.907 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags3

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.134

Model: OLS Adj. R-squared: 0.132

Method: Least Squares F-statistic: 55.57

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.85e-13

Time: 13:02:10 Log-Likelihood: -1131.0

No. Observations: 360 AIC: 2266.

Df Residuals: 358 BIC: 2274.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2212 0.296 14.241 0.000 3.638 4.804

x1 5.3403 0.716 7.455 0.000 3.931 6.749

==============================================================================

Omnibus: 8.700 Durbin-Watson: 0.108

Prob(Omnibus): 0.013 Jarque-Bera (JB): 8.861

Skew: 0.384 Prob(JB): 0.0119

Kurtosis: 3.018 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags4

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.152

Model: OLS Adj. R-squared: 0.150

Method: Least Squares F-statistic: 64.35

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.50e-14

Time: 13:02:10 Log-Likelihood: -1127.2

No. Observations: 360 AIC: 2258.

Df Residuals: 358 BIC: 2266.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2136 0.293 14.366 0.000 3.637 4.790

x1 5.6866 0.709 8.022 0.000 4.292 7.081

==============================================================================

Omnibus: 12.739 Durbin-Watson: 0.103

Prob(Omnibus): 0.002 Jarque-Bera (JB): 13.266

Skew: 0.468 Prob(JB): 0.00132

Kurtosis: 3.091 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags5

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.158

Model: OLS Adj. R-squared: 0.155

Method: Least Squares F-statistic: 67.09

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.64e-15

Time: 13:02:10 Log-Likelihood: -1125.5

No. Observations: 360 AIC: 2255.

Df Residuals: 358 BIC: 2263.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2242 0.292 14.472 0.000 3.650 4.798

x1 5.7782 0.705 8.191 0.000 4.391 7.166

==============================================================================

Omnibus: 15.544 Durbin-Watson: 0.104

Prob(Omnibus): 0.000 Jarque-Bera (JB): 16.484

Skew: 0.520 Prob(JB): 0.000263

Kurtosis: 3.134 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags6

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.149

Model: OLS Adj. R-squared: 0.147

Method: Least Squares F-statistic: 62.85

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.86e-14

Time: 13:02:10 Log-Likelihood: -1126.3

No. Observations: 360 AIC: 2257.

Df Residuals: 358 BIC: 2264.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2470 0.293 14.516 0.000 3.672 4.822

x1 5.6058 0.707 7.928 0.000 4.215 6.996

==============================================================================

Omnibus: 16.684 Durbin-Watson: 0.107

Prob(Omnibus): 0.000 Jarque-Bera (JB): 17.834

Skew: 0.540 Prob(JB): 0.000134

Kurtosis: 3.147 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags7

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.132

Model: OLS Adj. R-squared: 0.130

Method: Least Squares F-statistic: 54.45

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.12e-12

Time: 13:02:10 Log-Likelihood: -1128.9

No. Observations: 360 AIC: 2262.

Df Residuals: 358 BIC: 2269.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2760 0.295 14.512 0.000 3.697 4.855

x1 5.2544 0.712 7.379 0.000 3.854 6.655

==============================================================================

Omnibus: 18.483 Durbin-Watson: 0.103

Prob(Omnibus): 0.000 Jarque-Bera (JB): 19.994

Skew: 0.571 Prob(JB): 4.55e-05

Kurtosis: 3.173 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags8

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.109

Model: OLS Adj. R-squared: 0.107

Method: Least Squares F-statistic: 43.83

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.31e-10

Time: 13:02:10 Log-Likelihood: -1132.1

No. Observations: 360 AIC: 2268.

Df Residuals: 358 BIC: 2276.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.3172 0.297 14.523 0.000 3.733 4.902

x1 4.7566 0.718 6.621 0.000 3.344 6.170

==============================================================================

Omnibus: 19.545 Durbin-Watson: 0.102

Prob(Omnibus): 0.000 Jarque-Bera (JB): 21.293

Skew: 0.588 Prob(JB): 2.38e-05

Kurtosis: 3.189 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags9

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.087

Model: OLS Adj. R-squared: 0.084

Method: Least Squares F-statistic: 34.00

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.23e-08

Time: 13:02:10 Log-Likelihood: -1135.1

No. Observations: 360 AIC: 2274.

Df Residuals: 358 BIC: 2282.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.3572 0.300 14.532 0.000 3.767 4.947

x1 4.2256 0.725 5.831 0.000 2.801 5.651

==============================================================================

Omnibus: 20.424 Durbin-Watson: 0.094

Prob(Omnibus): 0.000 Jarque-Bera (JB): 22.346

Skew: 0.600 Prob(JB): 1.40e-05

Kurtosis: 3.225 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags10

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.066

Model: OLS Adj. R-squared: 0.063

Method: Least Squares F-statistic: 25.26

Date: Sun, 20 Sep 2020 Prob (F-statistic): 7.94e-07

Time: 13:02:10 Log-Likelihood: -1137.8

No. Observations: 360 AIC: 2280.

Df Residuals: 358 BIC: 2287.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.3985 0.302 14.564 0.000 3.805 4.992

x1 3.6683 0.730 5.026 0.000 2.233 5.104

==============================================================================

Omnibus: 20.925 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 22.894

Skew: 0.598 Prob(JB): 1.07e-05

Kurtosis: 3.309 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags11

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.044

Model: OLS Adj. R-squared: 0.042

Method: Least Squares F-statistic: 16.67

Date: Sun, 20 Sep 2020 Prob (F-statistic): 5.49e-05

Time: 13:02:10 Log-Likelihood: -1140.6

No. Observations: 360 AIC: 2285.

Df Residuals: 358 BIC: 2293.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.4413 0.304 14.590 0.000 3.843 5.040

x1 3.0037 0.736 4.083 0.000 1.557 4.451

==============================================================================

Omnibus: 21.323 Durbin-Watson: 0.074

Prob(Omnibus): 0.000 Jarque-Bera (JB): 23.482

Skew: 0.584 Prob(JB): 7.96e-06

Kurtosis: 3.446 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags12

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.022

Model: OLS Adj. R-squared: 0.019

Method: Least Squares F-statistic: 8.020

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00489

Time: 13:02:10 Log-Likelihood: -1144.2

No. Observations: 360 AIC: 2292.

Df Residuals: 358 BIC: 2300.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.4840 0.307 14.584 0.000 3.879 5.089

x1 2.1044 0.743 2.832 0.005 0.643 3.566

==============================================================================

Omnibus: 21.016 Durbin-Watson: 0.073

Prob(Omnibus): 0.000 Jarque-Bera (JB): 23.392

Skew: 0.562 Prob(JB): 8.33e-06

Kurtosis: 3.544 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags13

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.006

Model: OLS Adj. R-squared: 0.004

Method: Least Squares F-statistic: 2.313

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.129

Time: 13:02:10 Log-Likelihood: -1146.8

No. Observations: 360 AIC: 2298.

Df Residuals: 358 BIC: 2305.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5320 0.310 14.635 0.000 3.923 5.141

x1 1.1381 0.748 1.521 0.129 -0.334 2.610

==============================================================================

Omnibus: 20.009 Durbin-Watson: 0.070

Prob(Omnibus): 0.000 Jarque-Bera (JB): 22.147

Skew: 0.544 Prob(JB): 1.55e-05

Kurtosis: 3.541 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags14

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.000

Model: OLS Adj. R-squared: -0.003

Method: Least Squares F-statistic: 0.05888

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.808

Time: 13:02:10 Log-Likelihood: -1148.2

No. Observations: 360 AIC: 2300.

Df Residuals: 358 BIC: 2308.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5913 0.311 14.769 0.000 3.980 5.203

x1 0.1823 0.751 0.243 0.808 -1.295 1.660

==============================================================================

Omnibus: 18.923 Durbin-Watson: 0.069

Prob(Omnibus): 0.000 Jarque-Bera (JB): 20.626

Skew: 0.534 Prob(JB): 3.32e-05

Kurtosis: 3.485 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags15

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.002

Model: OLS Adj. R-squared: -0.000

Method: Least Squares F-statistic: 0.8860

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.347

Time: 13:02:10 Log-Likelihood: -1150.3

No. Observations: 360 AIC: 2305.

Df Residuals: 358 BIC: 2312.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6702 0.313 14.932 0.000 4.055 5.285

x1 -0.7115 0.756 -0.941 0.347 -2.198 0.775

==============================================================================

Omnibus: 19.432 Durbin-Watson: 0.073

Prob(Omnibus): 0.000 Jarque-Bera (JB): 21.153

Skew: 0.549 Prob(JB): 2.55e-05

Kurtosis: 3.451 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags16

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.013

Model: OLS Adj. R-squared: 0.010

Method: Least Squares F-statistic: 4.596

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0327

Time: 13:02:10 Log-Likelihood: -1152.1

No. Observations: 360 AIC: 2308.

Df Residuals: 358 BIC: 2316.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.7568 0.314 15.135 0.000 4.139 5.375

x1 -1.6284 0.760 -2.144 0.033 -3.122 -0.135

==============================================================================

Omnibus: 20.936 Durbin-Watson: 0.074

Prob(Omnibus): 0.000 Jarque-Bera (JB): 23.029

Skew: 0.575 Prob(JB): 9.98e-06

Kurtosis: 3.461 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags17

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.029

Model: OLS Adj. R-squared: 0.026

Method: Least Squares F-statistic: 10.72

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00116

Time: 13:02:10 Log-Likelihood: -1152.7

No. Observations: 360 AIC: 2309.

Df Residuals: 358 BIC: 2317.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.8406 0.315 15.376 0.000 4.222 5.460

x1 -2.4913 0.761 -3.274 0.001 -3.988 -0.995

==============================================================================

Omnibus: 20.190 Durbin-Watson: 0.074

Prob(Omnibus): 0.000 Jarque-Bera (JB): 22.023

Skew: 0.569 Prob(JB): 1.65e-05

Kurtosis: 3.419 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags18

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.045

Model: OLS Adj. R-squared: 0.043

Method: Least Squares F-statistic: 17.03

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.57e-05

Time: 13:02:10 Log-Likelihood: -1153.3

No. Observations: 360 AIC: 2311.

Df Residuals: 358 BIC: 2318.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.9164 0.315 15.592 0.000 4.296 5.536

x1 -3.1452 0.762 -4.127 0.000 -4.644 -1.647

==============================================================================

Omnibus: 16.646 Durbin-Watson: 0.076

Prob(Omnibus): 0.000 Jarque-Bera (JB): 17.628

Skew: 0.519 Prob(JB): 0.000149

Kurtosis: 3.311 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags19

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.057

Model: OLS Adj. R-squared: 0.054

Method: Least Squares F-statistic: 21.53

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.88e-06

Time: 13:02:10 Log-Likelihood: -1158.0

No. Observations: 360 AIC: 2320.

Df Residuals: 358 BIC: 2328.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.9977 0.319 15.645 0.000 4.369 5.626

x1 -3.5827 0.772 -4.640 0.000 -5.101 -2.064

==============================================================================

Omnibus: 20.230 Durbin-Watson: 0.083

Prob(Omnibus): 0.000 Jarque-Bera (JB): 22.430

Skew: 0.547 Prob(JB): 1.35e-05

Kurtosis: 3.545 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags1

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.072

Model: OLS Adj. R-squared: 0.070

Method: Least Squares F-statistic: 27.95

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.17e-07

Time: 13:02:10 Log-Likelihood: -1181.8

No. Observations: 360 AIC: 2368.

Df Residuals: 358 BIC: 2375.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.1921 0.341 18.140 0.000 5.521 6.863

x1 4.3616 0.825 5.287 0.000 2.739 5.984

==============================================================================

Omnibus: 5.346 Durbin-Watson: 0.457

Prob(Omnibus): 0.069 Jarque-Bera (JB): 7.398

Skew: -0.023 Prob(JB): 0.0247

Kurtosis: 3.701 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags2

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.071

Model: OLS Adj. R-squared: 0.068

Method: Least Squares F-statistic: 27.18

Date: Sun, 20 Sep 2020 Prob (F-statistic): 3.14e-07

Time: 13:02:10 Log-Likelihood: -1181.8

No. Observations: 360 AIC: 2368.

Df Residuals: 358 BIC: 2375.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2333 0.341 18.262 0.000 5.562 6.905

x1 4.3006 0.825 5.213 0.000 2.678 5.923

==============================================================================

Omnibus: 5.541 Durbin-Watson: 0.483

Prob(Omnibus): 0.063 Jarque-Bera (JB): 7.819

Skew: -0.001 Prob(JB): 0.0201

Kurtosis: 3.722 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags3

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.083

Model: OLS Adj. R-squared: 0.080

Method: Least Squares F-statistic: 32.42

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.59e-08

Time: 13:02:10 Log-Likelihood: -1179.0

No. Observations: 360 AIC: 2362.

Df Residuals: 358 BIC: 2370.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2407 0.339 18.429 0.000 5.575 6.907

x1 4.6602 0.818 5.694 0.000 3.051 6.270

==============================================================================

Omnibus: 6.842 Durbin-Watson: 0.479

Prob(Omnibus): 0.033 Jarque-Bera (JB): 10.517

Skew: 0.029 Prob(JB): 0.00520

Kurtosis: 3.835 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags4

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.095

Model: OLS Adj. R-squared: 0.092

Method: Least Squares F-statistic: 37.45

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.47e-09

Time: 13:02:10 Log-Likelihood: -1176.2

No. Observations: 360 AIC: 2356.

Df Residuals: 358 BIC: 2364.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2503 0.336 18.598 0.000 5.589 6.911

x1 4.9703 0.812 6.119 0.000 3.373 6.568

==============================================================================

Omnibus: 7.721 Durbin-Watson: 0.467

Prob(Omnibus): 0.021 Jarque-Bera (JB): 12.559

Skew: 0.029 Prob(JB): 0.00187

Kurtosis: 3.913 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags5

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.085

Model: OLS Adj. R-squared: 0.083

Method: Least Squares F-statistic: 33.42

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.62e-08

Time: 13:02:10 Log-Likelihood: -1177.3

No. Observations: 360 AIC: 2359.

Df Residuals: 358 BIC: 2366.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2714 0.337 18.605 0.000 5.608 6.934

x1 4.7093 0.815 5.781 0.000 3.107 6.312

==============================================================================

Omnibus: 8.423 Durbin-Watson: 0.452

Prob(Omnibus): 0.015 Jarque-Bera (JB): 14.354

Skew: -0.018 Prob(JB): 0.000764

Kurtosis: 3.978 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags6

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.050

Model: OLS Adj. R-squared: 0.047

Method: Least Squares F-statistic: 18.83

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.86e-05

Time: 13:02:10 Log-Likelihood: -1183.7

No. Observations: 360 AIC: 2371.

Df Residuals: 358 BIC: 2379.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3184 0.343 18.416 0.000 5.644 6.993

x1 3.5978 0.829 4.339 0.000 1.967 5.228

==============================================================================

Omnibus: 10.757 Durbin-Watson: 0.457

Prob(Omnibus): 0.005 Jarque-Bera (JB): 19.693

Skew: -0.099 Prob(JB): 5.29e-05

Kurtosis: 4.129 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags7

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.022

Model: OLS Adj. R-squared: 0.019

Method: Least Squares F-statistic: 7.922

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00515

Time: 13:02:10 Log-Likelihood: -1188.9

No. Observations: 360 AIC: 2382.

Df Residuals: 358 BIC: 2390.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3667 0.348 18.287 0.000 5.682 7.051

x1 2.3683 0.841 2.815 0.005 0.714 4.023

==============================================================================

Omnibus: 12.776 Durbin-Watson: 0.451

Prob(Omnibus): 0.002 Jarque-Bera (JB): 24.533

Skew: -0.142 Prob(JB): 4.71e-06

Kurtosis: 4.247 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags8

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.011

Model: OLS Adj. R-squared: 0.008

Method: Least Squares F-statistic: 3.981

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0468

Time: 13:02:10 Log-Likelihood: -1190.9

No. Observations: 360 AIC: 2386.

Df Residuals: 358 BIC: 2394.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3932 0.350 18.263 0.000 5.705 7.082

x1 1.6881 0.846 1.995 0.047 0.024 3.352

==============================================================================

Omnibus: 14.292 Durbin-Watson: 0.435

Prob(Omnibus): 0.001 Jarque-Bera (JB): 28.513

Skew: -0.166 Prob(JB): 6.43e-07

Kurtosis: 4.338 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags9

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.004

Model: OLS Adj. R-squared: 0.002

Method: Least Squares F-statistic: 1.560

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.212

Time: 13:02:10 Log-Likelihood: -1192.1

No. Observations: 360 AIC: 2388.

Df Residuals: 358 BIC: 2396.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.4140 0.351 18.261 0.000 5.723 7.105

x1 1.0603 0.849 1.249 0.212 -0.609 2.730

==============================================================================

Omnibus: 15.680 Durbin-Watson: 0.430

Prob(Omnibus): 0.000 Jarque-Bera (JB): 32.232

Skew: -0.188 Prob(JB): 1.00e-07

Kurtosis: 4.417 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags10

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.001

Model: OLS Adj. R-squared: -0.002

Method: Least Squares F-statistic: 0.3602

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.549

Time: 13:02:10 Log-Likelihood: -1192.7

No. Observations: 360 AIC: 2389.

Df Residuals: 358 BIC: 2397.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.4279 0.352 18.271 0.000 5.736 7.120

x1 0.5103 0.850 0.600 0.549 -1.162 2.182

==============================================================================

Omnibus: 16.789 Durbin-Watson: 0.428

Prob(Omnibus): 0.000 Jarque-Bera (JB): 35.385

Skew: -0.204 Prob(JB): 2.07e-08

Kurtosis: 4.481 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags11

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.000

Model: OLS Adj. R-squared: -0.003

Method: Least Squares F-statistic: 0.01632

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.898

Time: 13:02:10 Log-Likelihood: -1193.4

No. Observations: 360 AIC: 2391.

Df Residuals: 358 BIC: 2399.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.4220 0.352 18.220 0.000 5.729 7.115

x1 0.1088 0.852 0.128 0.898 -1.566 1.784

==============================================================================

Omnibus: 16.332 Durbin-Watson: 0.425

Prob(Omnibus): 0.000 Jarque-Bera (JB): 34.083

Skew: -0.197 Prob(JB): 3.97e-08

Kurtosis: 4.455 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags12

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.000

Model: OLS Adj. R-squared: -0.003

Method: Least Squares F-statistic: 0.06194

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.804

Time: 13:02:10 Log-Likelihood: -1193.8

No. Observations: 360 AIC: 2392.

Df Residuals: 358 BIC: 2399.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3925 0.353 18.117 0.000 5.699 7.086

x1 -0.2122 0.853 -0.249 0.804 -1.889 1.465

==============================================================================

Omnibus: 15.017 Durbin-Watson: 0.424

Prob(Omnibus): 0.001 Jarque-Bera (JB): 30.563

Skew: -0.176 Prob(JB): 2.31e-07

Kurtosis: 4.383 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags13

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.003

Model: OLS Adj. R-squared: -0.000

Method: Least Squares F-statistic: 0.9701

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.325

Time: 13:02:10 Log-Likelihood: -1193.2

No. Observations: 360 AIC: 2390.

Df Residuals: 358 BIC: 2398.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3636 0.352 18.061 0.000 5.671 7.056

x1 -0.8387 0.852 -0.985 0.325 -2.513 0.836

==============================================================================

Omnibus: 13.055 Durbin-Watson: 0.425

Prob(Omnibus): 0.001 Jarque-Bera (JB): 25.012

Skew: -0.153 Prob(JB): 3.71e-06

Kurtosis: 4.255 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags14

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.007

Model: OLS Adj. R-squared: 0.005

Method: Least Squares F-statistic: 2.630

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.106

Time: 13:02:10 Log-Likelihood: -1192.3

No. Observations: 360 AIC: 2389.

Df Residuals: 358 BIC: 2396.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3467 0.351 18.061 0.000 5.656 7.038

x1 -1.3772 0.849 -1.622 0.106 -3.047 0.293

==============================================================================

Omnibus: 12.072 Durbin-Watson: 0.423

Prob(Omnibus): 0.002 Jarque-Bera (JB): 21.778

Skew: -0.157 Prob(JB): 1.87e-05

Kurtosis: 4.163 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags15

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.009

Model: OLS Adj. R-squared: 0.007

Method: Least Squares F-statistic: 3.384

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0667

Time: 13:02:10 Log-Likelihood: -1191.9

No. Observations: 360 AIC: 2388.

Df Residuals: 358 BIC: 2396.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3513 0.351 18.093 0.000 5.661 7.042

x1 -1.5606 0.848 -1.839 0.067 -3.229 0.108

==============================================================================

Omnibus: 12.806 Durbin-Watson: 0.425

Prob(Omnibus): 0.002 Jarque-Bera (JB): 23.662

Skew: -0.166 Prob(JB): 7.28e-06

Kurtosis: 4.211 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags16

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.007

Model: OLS Adj. R-squared: 0.004

Method: Least Squares F-statistic: 2.525

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.113

Time: 13:02:10 Log-Likelihood: -1192.4

No. Observations: 360 AIC: 2389.

Df Residuals: 358 BIC: 2397.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3615 0.352 18.098 0.000 5.670 7.053

x1 -1.3500 0.850 -1.589 0.113 -3.021 0.321

==============================================================================

Omnibus: 13.661 Durbin-Watson: 0.424

Prob(Omnibus): 0.001 Jarque-Bera (JB): 26.691

Skew: -0.160 Prob(JB): 1.60e-06

Kurtosis: 4.295 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags17

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.002

Model: OLS Adj. R-squared: -0.001

Method: Least Squares F-statistic: 0.7480

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.388

Time: 13:02:10 Log-Likelihood: -1193.3

No. Observations: 360 AIC: 2391.

Df Residuals: 358 BIC: 2398.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3530 0.352 18.027 0.000 5.660 7.046

x1 -0.7366 0.852 -0.865 0.388 -2.412 0.938

==============================================================================

Omnibus: 14.303 Durbin-Watson: 0.424

Prob(Omnibus): 0.001 Jarque-Bera (JB): 28.997

Skew: -0.157 Prob(JB): 5.05e-07

Kurtosis: 4.354 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags18

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.000

Model: OLS Adj. R-squared: -0.003

Method: Least Squares F-statistic: 0.004767

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.945

Time: 13:02:10 Log-Likelihood: -1193.7

No. Observations: 360 AIC: 2391.

Df Residuals: 358 BIC: 2399.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.3316 0.353 17.947 0.000 5.638 7.025

x1 0.0589 0.853 0.069 0.945 -1.618 1.736

==============================================================================

Omnibus: 15.390 Durbin-Watson: 0.424

Prob(Omnibus): 0.000 Jarque-Bera (JB): 32.162

Skew: -0.171 Prob(JB): 1.04e-07

Kurtosis: 4.424 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags19

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.004

Model: OLS Adj. R-squared: 0.001

Method: Least Squares F-statistic: 1.271

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.260

Time: 13:02:10 Log-Likelihood: -1193.3

No. Observations: 360 AIC: 2391.

Df Residuals: 358 BIC: 2398.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2862 0.352 17.836 0.000 5.593 6.979

x1 0.9604 0.852 1.128 0.260 -0.715 2.636

==============================================================================

Omnibus: 16.417 Durbin-Watson: 0.422

Prob(Omnibus): 0.000 Jarque-Bera (JB): 34.767

Skew: -0.192 Prob(JB): 2.82e-08

Kurtosis: 4.473 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags1

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.008

Model: OLS Adj. R-squared: 0.005

Method: Least Squares F-statistic: 2.976

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0854

Time: 13:02:10 Log-Likelihood: -1279.6

No. Observations: 360 AIC: 2563.

Df Residuals: 358 BIC: 2571.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5822 0.448 10.232 0.000 3.701 5.463

x1 1.8673 1.082 1.725 0.085 -0.261 3.996

==============================================================================

Omnibus: 252.345 Durbin-Watson: 0.075

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2464.327

Skew: 2.958 Prob(JB): 0.00

Kurtosis: 14.370 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags2

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.024

Model: OLS Adj. R-squared: 0.021

Method: Least Squares F-statistic: 8.769

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00327

Time: 13:02:10 Log-Likelihood: -1276.4

No. Observations: 360 AIC: 2557.

Df Residuals: 358 BIC: 2565.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5611 0.444 10.274 0.000 3.688 5.434

x1 3.1773 1.073 2.961 0.003 1.067 5.287

==============================================================================

Omnibus: 250.435 Durbin-Watson: 0.077

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2370.901

Skew: 2.942 Prob(JB): 0.00

Kurtosis: 14.110 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags3

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.042

Model: OLS Adj. R-squared: 0.040

Method: Least Squares F-statistic: 15.83

Date: Sun, 20 Sep 2020 Prob (F-statistic): 8.37e-05

Time: 13:02:10 Log-Likelihood: -1273.1

No. Observations: 360 AIC: 2550.

Df Residuals: 358 BIC: 2558.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5355 0.440 10.312 0.000 3.670 5.400

x1 4.2297 1.063 3.979 0.000 2.139 6.320

==============================================================================

Omnibus: 251.924 Durbin-Watson: 0.082

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2415.484

Skew: 2.961 Prob(JB): 0.00

Kurtosis: 14.223 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags4

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.060

Model: OLS Adj. R-squared: 0.057

Method: Least Squares F-statistic: 22.82

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.60e-06

Time: 13:02:10 Log-Likelihood: -1269.4

No. Observations: 360 AIC: 2543.

Df Residuals: 358 BIC: 2551.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5271 0.435 10.398 0.000 3.671 5.383

x1 5.0269 1.052 4.777 0.000 2.957 7.096

==============================================================================

Omnibus: 257.425 Durbin-Watson: 0.087

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2593.735

Skew: 3.028 Prob(JB): 0.00

Kurtosis: 14.672 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags5

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.073

Model: OLS Adj. R-squared: 0.071

Method: Least Squares F-statistic: 28.31

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.82e-07

Time: 13:02:10 Log-Likelihood: -1266.6

No. Observations: 360 AIC: 2537.

Df Residuals: 358 BIC: 2545.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5246 0.432 10.474 0.000 3.675 5.374

x1 5.5555 1.044 5.321 0.000 3.502 7.609

==============================================================================

Omnibus: 263.972 Durbin-Watson: 0.087

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2823.991

Skew: 3.109 Prob(JB): 0.00

Kurtosis: 15.231 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags6

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.076

Model: OLS Adj. R-squared: 0.074

Method: Least Squares F-statistic: 29.49

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.04e-07

Time: 13:02:10 Log-Likelihood: -1266.0

No. Observations: 360 AIC: 2536.

Df Residuals: 358 BIC: 2544.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5248 0.431 10.492 0.000 3.677 5.373

x1 5.6600 1.042 5.431 0.000 3.610 7.710

==============================================================================

Omnibus: 270.517 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3054.259

Skew: 3.195 Prob(JB): 0.00

Kurtosis: 15.759 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags7

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.066

Model: OLS Adj. R-squared: 0.063

Method: Least Squares F-statistic: 25.20

Date: Sun, 20 Sep 2020 Prob (F-statistic): 8.17e-07

Time: 13:02:10 Log-Likelihood: -1267.8

No. Observations: 360 AIC: 2540.

Df Residuals: 358 BIC: 2547.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5412 0.433 10.478 0.000 3.689 5.394

x1 5.2580 1.047 5.020 0.000 3.198 7.318

==============================================================================

Omnibus: 275.803 Durbin-Watson: 0.092

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3231.043

Skew: 3.268 Prob(JB): 0.00

Kurtosis: 16.141 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags8

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.052

Model: OLS Adj. R-squared: 0.050

Method: Least Squares F-statistic: 19.77

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.16e-05

Time: 13:02:10 Log-Likelihood: -1270.2

No. Observations: 360 AIC: 2544.

Df Residuals: 358 BIC: 2552.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5586 0.436 10.447 0.000 3.700 5.417

x1 4.6896 1.055 4.447 0.000 2.616 6.764

==============================================================================

Omnibus: 277.797 Durbin-Watson: 0.093

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3300.065

Skew: 3.296 Prob(JB): 0.00

Kurtosis: 16.287 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags9

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.042

Model: OLS Adj. R-squared: 0.039

Method: Least Squares F-statistic: 15.51

Date: Sun, 20 Sep 2020 Prob (F-statistic): 9.85e-05

Time: 13:02:10 Log-Likelihood: -1272.1

No. Observations: 360 AIC: 2548.

Df Residuals: 358 BIC: 2556.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5990 0.439 10.484 0.000 3.736 5.462

x1 4.1756 1.060 3.939 0.000 2.091 6.261

==============================================================================

Omnibus: 278.265 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3325.524

Skew: 3.301 Prob(JB): 0.00

Kurtosis: 16.346 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags10

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.027

Model: OLS Adj. R-squared: 0.024

Method: Least Squares F-statistic: 9.942

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00175

Time: 13:02:10 Log-Likelihood: -1274.7

No. Observations: 360 AIC: 2553.

Df Residuals: 358 BIC: 2561.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6273 0.442 10.474 0.000 3.758 5.496

x1 3.3666 1.068 3.153 0.002 1.267 5.466

==============================================================================

Omnibus: 275.906 Durbin-Watson: 0.085

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3263.107

Skew: 3.265 Prob(JB): 0.00

Kurtosis: 16.225 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags11

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.014

Model: OLS Adj. R-squared: 0.011

Method: Least Squares F-statistic: 4.915

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0272

Time: 13:02:10 Log-Likelihood: -1277.3

No. Observations: 360 AIC: 2559.

Df Residuals: 358 BIC: 2566.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6427 0.445 10.432 0.000 3.767 5.518

x1 2.3847 1.076 2.217 0.027 0.269 4.500

==============================================================================

Omnibus: 271.361 Durbin-Watson: 0.087

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3121.103

Skew: 3.200 Prob(JB): 0.00

Kurtosis: 15.928 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags12

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.007

Model: OLS Adj. R-squared: 0.004

Method: Least Squares F-statistic: 2.518

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.113

Time: 13:02:10 Log-Likelihood: -1278.5

No. Observations: 360 AIC: 2561.

Df Residuals: 358 BIC: 2569.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6579 0.447 10.431 0.000 3.780 5.536

x1 1.7123 1.079 1.587 0.113 -0.410 3.835

==============================================================================

Omnibus: 268.258 Durbin-Watson: 0.083

Prob(Omnibus): 0.000 Jarque-Bera (JB): 3027.824

Skew: 3.155 Prob(JB): 0.00

Kurtosis: 15.729 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags13

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.003

Model: OLS Adj. R-squared: 0.000

Method: Least Squares F-statistic: 1.087

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.298

Time: 13:02:10 Log-Likelihood: -1279.5

No. Observations: 360 AIC: 2563.

Df Residuals: 358 BIC: 2571.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6602 0.448 10.408 0.000 3.780 5.541

x1 1.1282 1.082 1.043 0.298 -1.000 3.256

==============================================================================

Omnibus: 264.235 Durbin-Watson: 0.080

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2901.570

Skew: 3.100 Prob(JB): 0.00

Kurtosis: 15.450 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags14

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.000

Model: OLS Adj. R-squared: -0.003

Method: Least Squares F-statistic: 0.1038

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.747

Time: 13:02:10 Log-Likelihood: -1280.0

No. Observations: 360 AIC: 2564.

Df Residuals: 358 BIC: 2572.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6770 0.448 10.430 0.000 3.795 5.559

x1 0.3492 1.084 0.322 0.747 -1.782 2.480

==============================================================================

Omnibus: 258.513 Durbin-Watson: 0.080

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2712.146

Skew: 3.026 Prob(JB): 0.00

Kurtosis: 15.008 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags15

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.001

Model: OLS Adj. R-squared: -0.002

Method: Least Squares F-statistic: 0.3545

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.552

Time: 13:02:10 Log-Likelihood: -1280.0

No. Observations: 360 AIC: 2564.

Df Residuals: 358 BIC: 2572.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6928 0.448 10.466 0.000 3.811 5.575

x1 -0.6453 1.084 -0.595 0.552 -2.776 1.486

==============================================================================

Omnibus: 251.369 Durbin-Watson: 0.080

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2475.707

Skew: 2.938 Prob(JB): 0.00

Kurtosis: 14.425 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags16

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.006

Model: OLS Adj. R-squared: 0.003

Method: Least Squares F-statistic: 2.032

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.155

Time: 13:02:10 Log-Likelihood: -1279.4

No. Observations: 360 AIC: 2563.

Df Residuals: 358 BIC: 2571.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.7011 0.448 10.503 0.000 3.821 5.581

x1 -1.5422 1.082 -1.426 0.155 -3.670 0.585

==============================================================================

Omnibus: 245.682 Durbin-Watson: 0.078

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2297.464

Skew: 2.869 Prob(JB): 0.00

Kurtosis: 13.965 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags17

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.009

Model: OLS Adj. R-squared: 0.006

Method: Least Squares F-statistic: 3.127

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0779

Time: 13:02:10 Log-Likelihood: -1279.2

No. Observations: 360 AIC: 2562.

Df Residuals: 358 BIC: 2570.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6947 0.447 10.495 0.000 3.815 5.574

x1 -1.9117 1.081 -1.768 0.078 -4.038 0.214

==============================================================================

Omnibus: 244.345 Durbin-Watson: 0.080

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2253.063

Skew: 2.854 Prob(JB): 0.00

Kurtosis: 13.845 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags18

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.009

Model: OLS Adj. R-squared: 0.006

Method: Least Squares F-statistic: 3.176

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0756

Time: 13:02:10 Log-Likelihood: -1279.3

No. Observations: 360 AIC: 2563.

Df Residuals: 358 BIC: 2570.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6884 0.447 10.478 0.000 3.808 5.568

x1 -1.9271 1.081 -1.782 0.076 -4.054 0.200

==============================================================================

Omnibus: 247.267 Durbin-Watson: 0.079

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2337.277

Skew: 2.890 Prob(JB): 0.00

Kurtosis: 14.064 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags19

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.006

Model: OLS Adj. R-squared: 0.003

Method: Least Squares F-statistic: 1.988

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.159

Time: 13:02:10 Log-Likelihood: -1279.9

No. Observations: 360 AIC: 2564.

Df Residuals: 358 BIC: 2572.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.6747 0.448 10.429 0.000 3.793 5.556

x1 -1.5276 1.083 -1.410 0.159 -3.658 0.603

==============================================================================

Omnibus: 252.169 Durbin-Watson: 0.081

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2488.126

Skew: 2.950 Prob(JB): 0.00

Kurtosis: 14.448 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags1

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.079

Model: OLS Adj. R-squared: 0.076

Method: Least Squares F-statistic: 30.71

Date: Sun, 20 Sep 2020 Prob (F-statistic): 5.82e-08

Time: 13:02:10 Log-Likelihood: -1198.3

No. Observations: 360 AIC: 2401.

Df Residuals: 358 BIC: 2408.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8338 0.357 10.729 0.000 3.131 4.536

x1 4.7858 0.864 5.542 0.000 3.087 6.484

==============================================================================

Omnibus: 31.024 Durbin-Watson: 0.104

Prob(Omnibus): 0.000 Jarque-Bera (JB): 65.729

Skew: 0.464 Prob(JB): 5.34e-15

Kurtosis: 4.876 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags2

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.093

Model: OLS Adj. R-squared: 0.090

Method: Least Squares F-statistic: 36.54

Date: Sun, 20 Sep 2020 Prob (F-statistic): 3.75e-09

Time: 13:02:10 Log-Likelihood: -1195.8

No. Observations: 360 AIC: 2396.

Df Residuals: 358 BIC: 2403.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8186 0.355 10.761 0.000 3.121 4.516

x1 5.1842 0.858 6.045 0.000 3.498 6.871

==============================================================================

Omnibus: 39.194 Durbin-Watson: 0.102

Prob(Omnibus): 0.000 Jarque-Bera (JB): 85.432

Skew: 0.575 Prob(JB): 2.81e-19

Kurtosis: 5.091 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags3

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.090

Model: OLS Adj. R-squared: 0.088

Method: Least Squares F-statistic: 35.52

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.04e-09

Time: 13:02:10 Log-Likelihood: -1196.2

No. Observations: 360 AIC: 2396.

Df Residuals: 358 BIC: 2404.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8208 0.355 10.754 0.000 3.122 4.519

x1 5.1178 0.859 5.960 0.000 3.429 6.806

==============================================================================

Omnibus: 43.662 Durbin-Watson: 0.107

Prob(Omnibus): 0.000 Jarque-Bera (JB): 97.646

Skew: 0.629 Prob(JB): 6.26e-22

Kurtosis: 5.219 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags4

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.077

Model: OLS Adj. R-squared: 0.074

Method: Least Squares F-statistic: 29.85

Date: Sun, 20 Sep 2020 Prob (F-statistic): 8.74e-08

Time: 13:02:10 Log-Likelihood: -1198.9

No. Observations: 360 AIC: 2402.

Df Residuals: 358 BIC: 2410.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8266 0.358 10.690 0.000 3.123 4.531

x1 4.7267 0.865 5.464 0.000 3.025 6.428

==============================================================================

Omnibus: 42.242 Durbin-Watson: 0.114

Prob(Omnibus): 0.000 Jarque-Bera (JB): 96.068

Skew: 0.604 Prob(JB): 1.38e-21

Kurtosis: 5.224 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags5

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.064

Model: OLS Adj. R-squared: 0.062

Method: Least Squares F-statistic: 24.54

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.12e-06

Time: 13:02:10 Log-Likelihood: -1201.5

No. Observations: 360 AIC: 2407.

Df Residuals: 358 BIC: 2415.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8336 0.360 10.635 0.000 3.125 4.543

x1 4.3160 0.871 4.954 0.000 2.603 6.029

==============================================================================

Omnibus: 39.201 Durbin-Watson: 0.113

Prob(Omnibus): 0.000 Jarque-Bera (JB): 97.063

Skew: 0.531 Prob(JB): 8.38e-22

Kurtosis: 5.311 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags6

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.056

Model: OLS Adj. R-squared: 0.053

Method: Least Squares F-statistic: 21.11

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.02e-06

Time: 13:02:10 Log-Likelihood: -1203.0

No. Observations: 360 AIC: 2410.

Df Residuals: 358 BIC: 2418.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8419 0.362 10.611 0.000 3.130 4.554

x1 4.0204 0.875 4.594 0.000 2.299 5.741

==============================================================================

Omnibus: 35.312 Durbin-Watson: 0.102

Prob(Omnibus): 0.000 Jarque-Bera (JB): 92.296

Skew: 0.455 Prob(JB): 9.08e-21

Kurtosis: 5.308 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags7

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.044

Model: OLS Adj. R-squared: 0.041

Method: Least Squares F-statistic: 16.37

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.38e-05

Time: 13:02:10 Log-Likelihood: -1205.3

No. Observations: 360 AIC: 2415.

Df Residuals: 358 BIC: 2422.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8554 0.364 10.583 0.000 3.139 4.572

x1 3.5626 0.880 4.046 0.000 1.831 5.294

==============================================================================

Omnibus: 32.138 Durbin-Watson: 0.095

Prob(Omnibus): 0.000 Jarque-Bera (JB): 87.794

Skew: 0.389 Prob(JB): 8.63e-20

Kurtosis: 5.291 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags8

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.027

Model: OLS Adj. R-squared: 0.024

Method: Least Squares F-statistic: 9.980

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.00172

Time: 13:02:10 Log-Likelihood: -1208.3

No. Observations: 360 AIC: 2421.

Df Residuals: 358 BIC: 2428.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8736 0.367 10.542 0.000 3.151 4.596

x1 2.8054 0.888 3.159 0.002 1.059 4.552

==============================================================================

Omnibus: 29.914 Durbin-Watson: 0.094

Prob(Omnibus): 0.000 Jarque-Bera (JB): 87.471

Skew: 0.323 Prob(JB): 1.01e-19

Kurtosis: 5.327 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags9

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.013

Model: OLS Adj. R-squared: 0.010

Method: Least Squares F-statistic: 4.566

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0333

Time: 13:02:10 Log-Likelihood: -1211.1

No. Observations: 360 AIC: 2426.

Df Residuals: 358 BIC: 2434.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8890 0.370 10.503 0.000 3.161 4.617

x1 1.9123 0.895 2.137 0.033 0.152 3.672

==============================================================================

Omnibus: 28.737 Durbin-Watson: 0.093

Prob(Omnibus): 0.000 Jarque-Bera (JB): 89.988

Skew: 0.270 Prob(JB): 2.88e-20

Kurtosis: 5.389 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags10

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.004

Model: OLS Adj. R-squared: 0.001

Method: Least Squares F-statistic: 1.497

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.222

Time: 13:02:10 Log-Likelihood: -1212.9

No. Observations: 360 AIC: 2430.

Df Residuals: 358 BIC: 2438.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9000 0.372 10.481 0.000 3.168 4.632

x1 1.1004 0.899 1.224 0.222 -0.668 2.869

==============================================================================

Omnibus: 27.790 Durbin-Watson: 0.092

Prob(Omnibus): 0.000 Jarque-Bera (JB): 88.316

Skew: 0.242 Prob(JB): 6.64e-20

Kurtosis: 5.378 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags11

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.001

Model: OLS Adj. R-squared: -0.001

Method: Least Squares F-statistic: 0.4788

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.489

Time: 13:02:10 Log-Likelihood: -1213.5

No. Observations: 360 AIC: 2431.

Df Residuals: 358 BIC: 2439.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9055 0.373 10.477 0.000 3.172 4.639

x1 0.6234 0.901 0.692 0.489 -1.148 2.395

==============================================================================

Omnibus: 26.894 Durbin-Watson: 0.089

Prob(Omnibus): 0.000 Jarque-Bera (JB): 83.815

Skew: 0.233 Prob(JB): 6.31e-19

Kurtosis: 5.317 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags12

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.001

Model: OLS Adj. R-squared: -0.002

Method: Least Squares F-statistic: 0.2548

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.614

Time: 13:02:10 Log-Likelihood: -1213.8

No. Observations: 360 AIC: 2432.

Df Residuals: 358 BIC: 2439.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9053 0.373 10.469 0.000 3.172 4.639

x1 0.4550 0.902 0.505 0.614 -1.318 2.228

==============================================================================

Omnibus: 26.376 Durbin-Watson: 0.088

Prob(Omnibus): 0.000 Jarque-Bera (JB): 81.366

Skew: 0.227 Prob(JB): 2.15e-18

Kurtosis: 5.284 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags13

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.001

Model: OLS Adj. R-squared: -0.002

Method: Least Squares F-statistic: 0.3212

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.571

Time: 13:02:10 Log-Likelihood: -1213.7

No. Observations: 360 AIC: 2431.

Df Residuals: 358 BIC: 2439.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9066 0.373 10.476 0.000 3.173 4.640

x1 0.5108 0.901 0.567 0.571 -1.262 2.283

==============================================================================

Omnibus: 26.059 Durbin-Watson: 0.089

Prob(Omnibus): 0.000 Jarque-Bera (JB): 81.317

Skew: 0.213 Prob(JB): 2.20e-18

Kurtosis: 5.289 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags14

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.002

Model: OLS Adj. R-squared: -0.001

Method: Least Squares F-statistic: 0.6003

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.439

Time: 13:02:10 Log-Likelihood: -1213.4

No. Observations: 360 AIC: 2431.

Df Residuals: 358 BIC: 2439.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9147 0.373 10.505 0.000 3.182 4.648

x1 0.6978 0.901 0.775 0.439 -1.073 2.469

==============================================================================

Omnibus: 25.387 Durbin-Watson: 0.090

Prob(Omnibus): 0.000 Jarque-Bera (JB): 80.720

Skew: 0.184 Prob(JB): 2.96e-18

Kurtosis: 5.290 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags15

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.005

Model: OLS Adj. R-squared: 0.002

Method: Least Squares F-statistic: 1.631

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.202

Time: 13:02:10 Log-Likelihood: -1212.9

No. Observations: 360 AIC: 2430.

Df Residuals: 358 BIC: 2437.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9196 0.372 10.535 0.000 3.188 4.651

x1 1.1485 0.899 1.277 0.202 -0.620 2.917

==============================================================================

Omnibus: 23.994 Durbin-Watson: 0.091

Prob(Omnibus): 0.000 Jarque-Bera (JB): 77.308

Skew: 0.132 Prob(JB): 1.63e-17

Kurtosis: 5.255 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags16

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.010

Model: OLS Adj. R-squared: 0.007

Method: Least Squares F-statistic: 3.546

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0605

Time: 13:02:10 Log-Likelihood: -1212.0

No. Observations: 360 AIC: 2428.

Df Residuals: 358 BIC: 2436.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9321 0.371 10.592 0.000 3.202 4.662

x1 1.6894 0.897 1.883 0.061 -0.075 3.454

==============================================================================

Omnibus: 22.333 Durbin-Watson: 0.090

Prob(Omnibus): 0.000 Jarque-Bera (JB): 71.141

Skew: 0.069 Prob(JB): 3.56e-16

Kurtosis: 5.173 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags17

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.014

Model: OLS Adj. R-squared: 0.011

Method: Least Squares F-statistic: 5.036

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0254

Time: 13:02:10 Log-Likelihood: -1211.4

No. Observations: 360 AIC: 2427.

Df Residuals: 358 BIC: 2435.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9461 0.371 10.649 0.000 3.217 4.675

x1 2.0097 0.896 2.244 0.025 0.248 3.771

==============================================================================

Omnibus: 20.914 Durbin-Watson: 0.090

Prob(Omnibus): 0.000 Jarque-Bera (JB): 64.070

Skew: 0.027 Prob(JB): 1.22e-14

Kurtosis: 5.066 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags18

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.014

Model: OLS Adj. R-squared: 0.012

Method: Least Squares F-statistic: 5.261

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0224

Time: 13:02:10 Log-Likelihood: -1211.5

No. Observations: 360 AIC: 2427.

Df Residuals: 358 BIC: 2435.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9679 0.371 10.706 0.000 3.239 4.697

x1 2.0545 0.896 2.294 0.022 0.293 3.816

==============================================================================

Omnibus: 19.754 Durbin-Watson: 0.092

Prob(Omnibus): 0.000 Jarque-Bera (JB): 57.833

Skew: 0.019 Prob(JB): 2.76e-13

Kurtosis: 4.963 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Lags19

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.014

Model: OLS Adj. R-squared: 0.011

Method: Least Squares F-statistic: 4.971

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.0264

Time: 13:02:10 Log-Likelihood: -1211.8

No. Observations: 360 AIC: 2428.

Df Residuals: 358 BIC: 2435.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.9931 0.371 10.763 0.000 3.263 4.723

x1 1.9992 0.897 2.230 0.026 0.236 3.763

==============================================================================

Omnibus: 19.123 Durbin-Watson: 0.095

Prob(Omnibus): 0.000 Jarque-Bera (JB): 54.253

Skew: 0.038 Prob(JB): 1.66e-12

Kurtosis: 4.900 Cond. No. 2.42

## OLS Regression Results from 1983-2020 for lag 5

Food\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.119

Model: OLS Adj. R-squared: 0.117

Method: Least Squares F-statistic: 48.57

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.54e-11

Time: 13:05:50 Log-Likelihood: -803.21

No. Observations: 360 AIC: 1610.

Df Residuals: 358 BIC: 1618.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5235 0.119 37.935 0.000 4.289 4.758

x1 2.0086 0.288 6.970 0.000 1.442 2.575

==============================================================================

Omnibus: 66.230 Durbin-Watson: 0.084

Prob(Omnibus): 0.000 Jarque-Bera (JB): 106.432

Skew: 1.098 Prob(JB): 7.74e-24

Kurtosis: 4.509 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Meats\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.158

Model: OLS Adj. R-squared: 0.155

Method: Least Squares F-statistic: 67.09

Date: Sun, 20 Sep 2020 Prob (F-statistic): 4.64e-15

Time: 13:05:50 Log-Likelihood: -1125.5

No. Observations: 360 AIC: 2255.

Df Residuals: 358 BIC: 2263.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.2242 0.292 14.472 0.000 3.650 4.798

x1 5.7782 0.705 8.191 0.000 4.391 7.166

==============================================================================

Omnibus: 15.544 Durbin-Watson: 0.104

Prob(Omnibus): 0.000 Jarque-Bera (JB): 16.484

Skew: 0.520 Prob(JB): 0.000263

Kurtosis: 3.134 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Fruits\_veg\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.085

Model: OLS Adj. R-squared: 0.083

Method: Least Squares F-statistic: 33.42

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.62e-08

Time: 13:05:50 Log-Likelihood: -1177.3

No. Observations: 360 AIC: 2359.

Df Residuals: 358 BIC: 2366.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2714 0.337 18.605 0.000 5.608 6.934

x1 4.7093 0.815 5.781 0.000 3.107 6.312

==============================================================================

Omnibus: 8.423 Durbin-Watson: 0.452

Prob(Omnibus): 0.015 Jarque-Bera (JB): 14.354

Skew: -0.018 Prob(JB): 0.000764

Kurtosis: 3.978 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Rice\_pasta\_cornmeal\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.073

Model: OLS Adj. R-squared: 0.071

Method: Least Squares F-statistic: 28.31

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.82e-07

Time: 13:05:50 Log-Likelihood: -1266.6

No. Observations: 360 AIC: 2537.

Df Residuals: 358 BIC: 2545.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.5246 0.432 10.474 0.000 3.675 5.374

x1 5.5555 1.044 5.321 0.000 3.502 7.609

==============================================================================

Omnibus: 263.972 Durbin-Watson: 0.087

Prob(Omnibus): 0.000 Jarque-Bera (JB): 2823.991

Skew: 3.109 Prob(JB): 0.00

Kurtosis: 15.231 Cond. No. 2.42

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Dairy\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.064

Model: OLS Adj. R-squared: 0.062

Method: Least Squares F-statistic: 24.54

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.12e-06

Time: 13:05:50 Log-Likelihood: -1201.5

No. Observations: 360 AIC: 2407.

Df Residuals: 358 BIC: 2415.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.8336 0.360 10.635 0.000 3.125 4.543

x1 4.3160 0.871 4.954 0.000 2.603 6.029

==============================================================================

Omnibus: 39.201 Durbin-Watson: 0.113

Prob(Omnibus): 0.000 Jarque-Bera (JB): 97.063

Skew: 0.531 Prob(JB): 8.38e-22

Kurtosis: 5.311 Cond. No. 2.42

## OLS Regression Results from 1983-2020 for lag 5

Food\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.134

Model: OLS Adj. R-squared: 0.130

Method: Least Squares F-statistic: 30.31

Date: Sun, 20 Sep 2020 Prob (F-statistic): 1.14e-07

Time: 13:09:30 Log-Likelihood: -481.53

No. Observations: 198 AIC: 967.1

Df Residuals: 196 BIC: 973.6

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 4.9166 0.197 24.946 0.000 4.528 5.305

x1 1.9486 0.354 5.506 0.000 1.251 2.647

==============================================================================

Omnibus: 12.264 Durbin-Watson: 0.083

Prob(Omnibus): 0.002 Jarque-Bera (JB): 12.769

Skew: 0.605 Prob(JB): 0.00169

Kurtosis: 3.291 Cond. No. 1.80

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Meats\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.139

Model: OLS Adj. R-squared: 0.135

Method: Least Squares F-statistic: 31.63

Date: Sun, 20 Sep 2020 Prob (F-statistic): 6.36e-08

Time: 13:09:30 Log-Likelihood: -707.06

No. Observations: 198 AIC: 1418.

Df Residuals: 196 BIC: 1425.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 6.2320 0.616 10.123 0.000 5.018 7.446

x1 6.2178 1.106 5.624 0.000 4.038 8.398

==============================================================================

Omnibus: 12.308 Durbin-Watson: 0.092

Prob(Omnibus): 0.002 Jarque-Bera (JB): 14.878

Skew: 0.465 Prob(JB): 0.000588

Kurtosis: 3.968 Cond. No. 1.80

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Fruits\_veg\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.148

Model: OLS Adj. R-squared: 0.144

Method: Least Squares F-statistic: 34.03

Date: Sun, 20 Sep 2020 Prob (F-statistic): 2.21e-08

Time: 13:09:30 Log-Likelihood: -665.02

No. Observations: 198 AIC: 1334.

Df Residuals: 196 BIC: 1341.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 5.4862 0.498 11.019 0.000 4.504 6.468

x1 5.2152 0.894 5.833 0.000 3.452 6.978

==============================================================================

Omnibus: 4.378 Durbin-Watson: 0.385

Prob(Omnibus): 0.112 Jarque-Bera (JB): 5.070

Skew: 0.145 Prob(JB): 0.0793

Kurtosis: 3.728 Cond. No. 1.80

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Rice\_pasta\_cornmeal\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.074

Model: OLS Adj. R-squared: 0.069

Method: Least Squares F-statistic: 15.55

Date: Sun, 20 Sep 2020 Prob (F-statistic): 0.000112

Time: 13:09:30 Log-Likelihood: -746.46

No. Observations: 198 AIC: 1497.

Df Residuals: 196 BIC: 1503.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 5.1679 0.751 6.879 0.000 3.686 6.649

x1 5.3194 1.349 3.943 0.000 2.659 7.980

==============================================================================

Omnibus: 117.427 Durbin-Watson: 0.095

Prob(Omnibus): 0.000 Jarque-Bera (JB): 545.440

Skew: 2.435 Prob(JB): 3.62e-119

Kurtosis: 9.511 Cond. No. 1.80

==============================================================================

///////////////////////////////////////////////////////////////////////////////////////////////

Dairy\_pred

OLS Regression Results

==============================================================================

Dep. Variable: y R-squared: 0.100

Model: OLS Adj. R-squared: 0.095

Method: Least Squares F-statistic: 21.73

Date: Sun, 20 Sep 2020 Prob (F-statistic): 5.81e-06

Time: 13:09:30 Log-Likelihood: -709.04

No. Observations: 198 AIC: 1422.

Df Residuals: 196 BIC: 1429.

Df Model: 1

Covariance Type: nonrobust

==============================================================================

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

------------------------------------------------------------------------------

const 3.2847 0.622 5.282 0.000 2.058 4.511

x1 5.2047 1.117 4.661 0.000 3.003 7.407

==============================================================================

Omnibus: 13.637 Durbin-Watson: 0.125

Prob(Omnibus): 0.001 Jarque-Bera (JB): 15.187

Skew: 0.555 Prob(JB): 0.000504

Kurtosis: 3.781 Cond. No. 1.80

==============================================================================