Questions:

Does the time series and the cross-sectional dataset have to relate? Or they can be totally different kinds of data?

Time series data

**Simple Linear Regression**

Egg vs CPI

CPI dependent variable

Egg independent variable

**Multiple Regression**

Egg vs CPI vs two other variables

CPI dependent variable

Egg, two others independent variable

Logistic regression

Ridge regression

Lasso regression

Elastic Net

Method for model diagnosis

Normality test

Heteroskedasticity test

Auto correlation test

Multicollinearity test

Stationary test

Unit Root Test

discriminatory power tests

predictive power tests