# Problem Set

Spring Semester 2023
Deadline: May 7

This problem set asks you to deal with the actual macroeconomic data (you can submit your answers by emailing your teaching assistant).

1.      Find US real GDP, and personal consumption, including its three components: non-durable goods, durable goods and services, and gross domestic investment. The sample period is from 1960 Q1 to 2022 Q4, with quarterly frequency. Draw the figures to show the shares of each component over the total GDP. Comments on the main driver of US GDP.

2.      Find US CPI and M2 growth rate. The sample period is from 1960 M1 to 2022 M12, with monthly frequency. Construct the inflation rate from CPI, and plot the M2 growth rate and inflation rate. Draw the figures and comment on your results.

3.      Find US net export (current account balance) and its relation with US savings and investment. Draw a figure to show it.

4.      Find the US unemployment rate and discuss its co-movement with the US GDP growth rate.

5.      Find Chinese real GDP, private consumption, private investment, public consumption, and public investment. The sample period is from 1992 Q1 to 2022 Q2, with quarterly frequency. Draw the figures to show the shares of each component over the total GDP. Comments on the main driver of Chinese GDP.

6.      Find the Chinese CPI and M2 growth rate. The sample period is from 1992 M1 to 2022 M6, with monthly frequency. Construct the inflation rate from CPI, and plot the M2 growth rate and inflation rate. Draw the figures and comment on your results.

7.      Try to find the Chinese housing price index and plot its growth rate against the M2 growth rate. Discuss what you find.

**Note: You can find US macroeconomic data in the dataset of Fed St Louis.**
**(https://fred.stlouisfed.org/)**
**The Chinese data can be found on the website of Fed Atlanta.**
**(https://www.atlantafed.org/cqer/research/china-macroeconomy.aspx?panel=1)**