Data Exercises on the Indian Economy

The following is a set of exercises to get students acquainted with accessing data about the Indian economy and then analyzing and presenting the data.

I have based these exercises on National Income Data available in the RBI Handbook of Statistics.

https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy

All the data is available in Excel sheets. Teachers can spend a session showing how to access this database, how it is organized, and how to download and work on the data.

The latest data sets do not contain information from earlier years. Students have to access data sets from previous years in the archive (right side of the screen) and collate data for all years. I would suggest accessing the tables from 2018 or 2019 as the data after the COVID lockdown is not comparable.

This exercise focuses on data used in the Indian economy manuscript however; teachers can extend it to access other important databases such as NSSO and IHDS too.

I am also providing some sample graphs to give an idea to students about what is expected in these data exercises.

Data on GDP: Collect GDP data from 1950 onwards; as far as possible get the data to be based on the same base year, and if possible, deflate data collected from a different base year. Calculate average GDP trends for each period and present them in a table form.

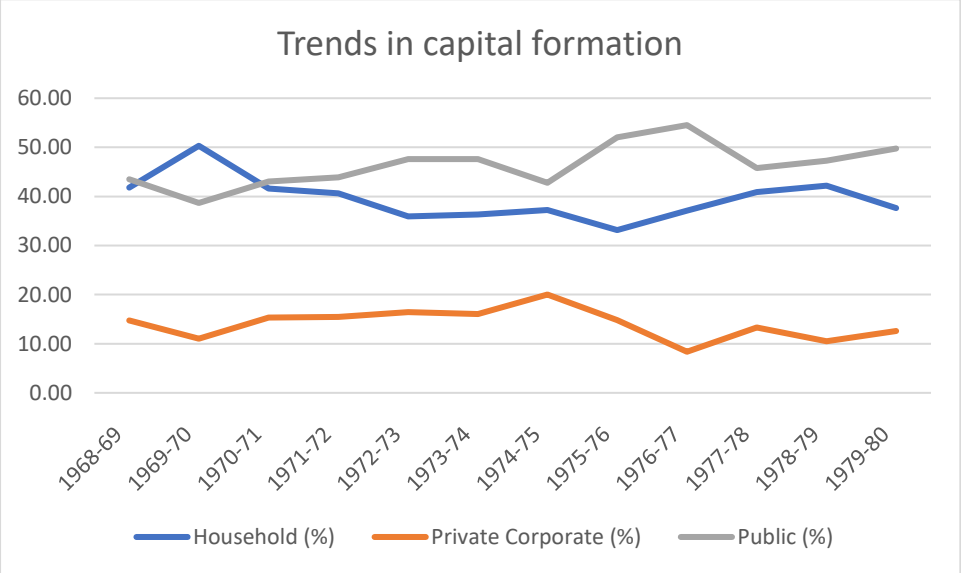
GDP and Aggregate Demand: Collect data on different components of aggregate demand from the table 'Components of Gross Domestic Product'. Collect data from 1950 onwards. Break the data into the different periods identified in the book 1950 –66, 1967 – 79, etc. Make a line graph for each component: Private Final Consumption Expenditure, Government Final Consumption Expenditure, Gross Fixed Capital Formation + Change in Stocks, Exports, Imports, and GDP. Analyse trends in the data: which component grows at the fastest pace in which period?

Period (Base Year 2004 – 05)	**Private Final Consumption Expenditure**	**Government Final Consumption Expenditure**	**Gross Fixed Capital Formation**	**Exports of Goods and Services**	**Imports of Goods and Services**	**GDP at Market Prices**
1950 – 1966	3.12	6.81	6.8	0	2.56	3.66
1967 – 1980	3.08	5.23	3.86	8.6	3.69	3.62
1980 – 2003	4.7	5.7	6.6	9.2	10	5.62
2004 – 2014	7.4	7.31	10.53	13.81	14.77	7.52

Sectoral Growth: Collect data for various sectors from the 'Components of Gross Value Added' table, collect data from 1950 onwards, and add the different sub-components to create data for three categories: primary, secondary, and tertiary sector. Break the data into different periods identified in the book. Make a table to compare the data.

Period (Base Year 2004 – 05)	Agriculture	Industry	Services (Including Construction)
1950 – 1966	1.8	6.1	4.85
1967 – 1980	2.6	4.58	4.1
1980 – 2003	3.5	5.95	6.81
2004 – 2013	3.3	7.2	9.4

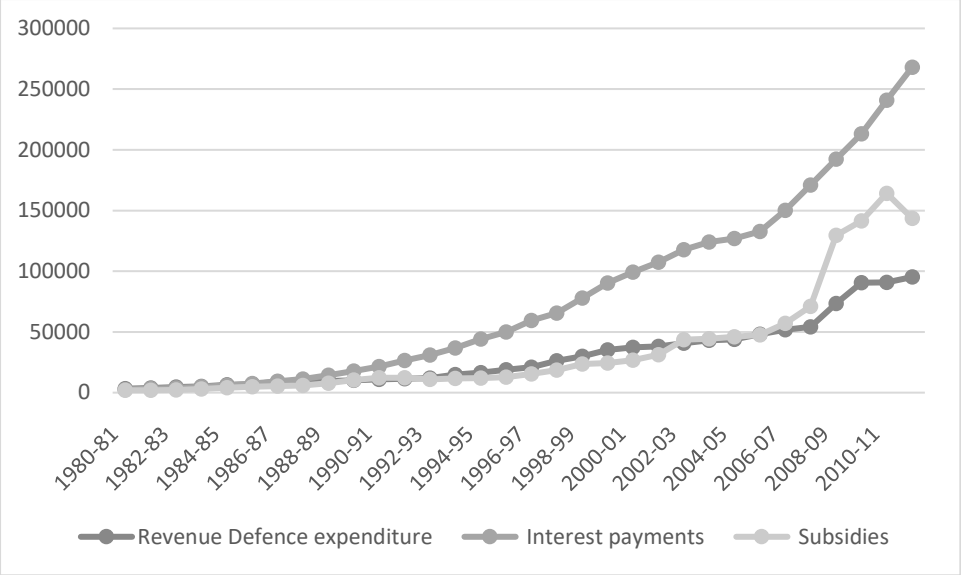
Trends in Investment: Collect data for different components of investment from the 'Institutional Sector Wise Gross Capital Formation' Table, collect data from 1950 onwards, aggregate the data into three categories, private, public, and government, and household, break the data into different periods identified in the book. Make a line graph for each component in a period and analyze the trends in the data.



Public Finance Data:

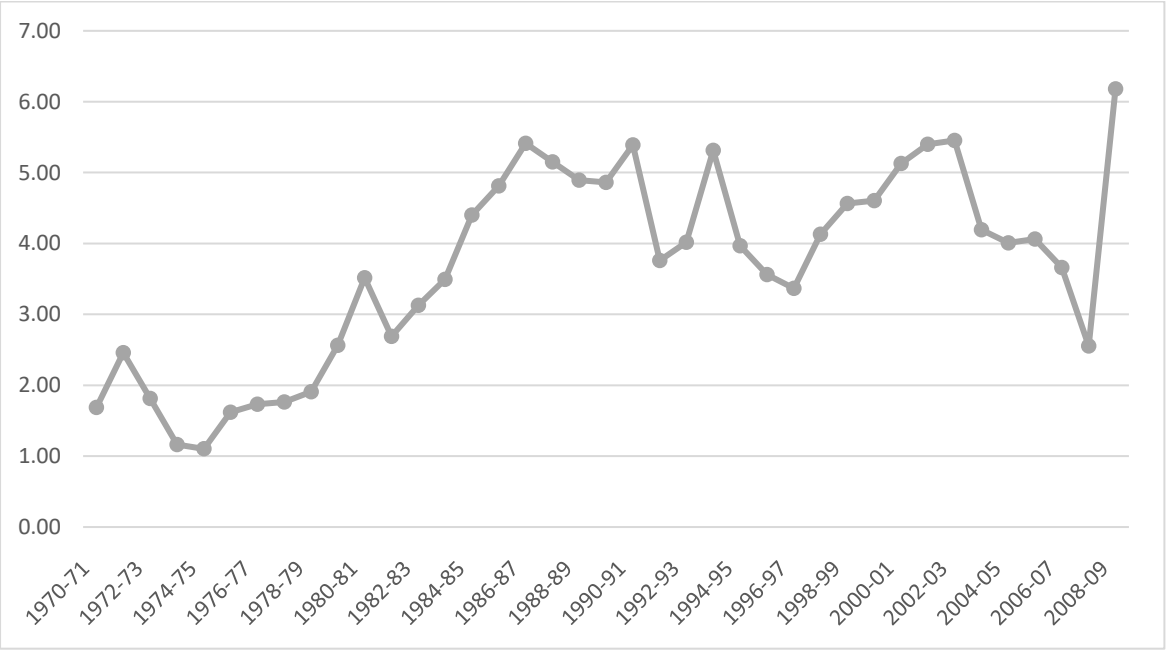
You can do a similar exercise and analyze public finance data from 1970 onwards (data from earlier periods are not available in the RBI handbook). Students can analyze the following data sets:

Major Heads of Expenditure of the Central Government: data on revenue and capital expenditure of the central government.



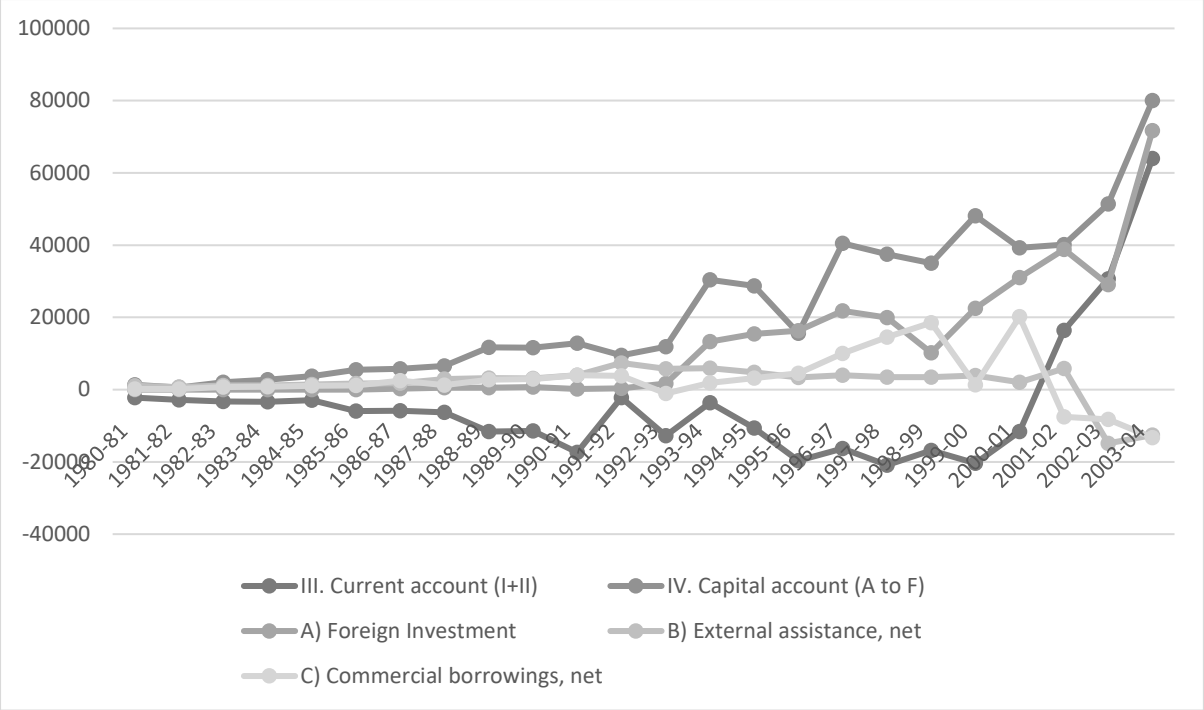
Central Government Receipts: This contains data on different components of tax and non-tax revenue for the central government. Students can draw line graphs comparing revenue trends across different years.

Select Fiscal Indicators of the Central Government (as a percentage of GDP): Students can draw a line graph of different deficit indicators in different periods and analyze them.



Balance of Payment Data

Balance of Payment Indicators: This contains data about Revenue and capital accounts of the Indian economy. Students can be asked to make a separate line graph for trends in current accounts and trends in capital accounts.



Aside from these data exercises, teachers can also provide broader questions to get students to think about how to formulate research questions based on the data availability. I present a data table to students and ask them to come up with three research questions based on the data trends and then analyze what other data they require to address this research question.