Overview of Macroeconomics

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Recall

An Overview of Macroeconomics
Measuring a Nation's Economic Activities —National Income Accounting
Theories of Consumption and Investment
Aggregate Demand and Supply
The Multiplier Model
Money, Banking and Financial Markets
Monetary Policy Tools and Implications
Relationship Between Inflation, Unemployment and Growth
Introduction to Open Economy Macroeconomics

- **Quiz (10%) + End-sem (40%)**

Textbooks:

- Samuelson Paul A, William D. Nordhaus, **Economics**, 19th Edition, [Indian Adaptation by S. Chaudhuri and A. Sen] Tata McGraw-Hill, 2010. The 18th Edition can also be used for this course.
- Samuelson Paul A, William D. Nordhaus, ***Economics**, 19th Edition.*
- Mankiw, N. Gregory, **Principles of Economics**, 3rd Indian Edition, Thompson Learning, 2007.

Measuring a Nation's Income

Recall…

- *Microeconomics* is the study of how individual households and firms make decisions and how they interact with one another in markets.

- *Macroeconomics* is the study of the economy as a whole. Its goal is to explain the economic changes that affect many households, firms, and markets at once.

Introduction

- Examines reasons for growth and decline of nations
- Important concepts:
  - **Output**: Various useful goods and services which are either consumed or used in further production.
  - **Employment/Unemployment**: Measure dependent on the number of people unemployed.
    - *A worker is unemployed if he/she is not working and is either waiting to be recalled after a layoff or has actively looked for work in the last 4 weeks*. - (US Bureau of Labour Statistics)
  - **Prices:** Money cost of a good, service, or asset. Measured in monetary units per unit of the good (e.g. Rs. 30 per apple).
- Two **central themes** underlying macroeconomics:
  - Short-run fluctuations in output, employment, prices (Business cycles)
  - Long-run trends in output and standard of living (Economic growth)

Key questions of Macroeconomics

- **Why do output and employment fall; how can unemployment be reduced?**
  - Recessions, business cycles, droughts
  - Drivers of output, high inflation and unemployment
  - Macroeconomics examines the sources and suggests solutions

- **What are the sources of inflation and how can it be controlled?**
  - Prices – yardstick to measure economic value, to conduct business
  - Rapidly increasing prices (inflation) → *yardstick* loses value → inflation reduces real incomes → economic inefficiency
  - Price stability – key objective
  - Macroeconomics examines drivers; and the use of effective monetary and fiscal policy, exchange rate mechanisms and independent central bank to control inflation

Key questions of Macroeconomics

- **How can a nation increase its rate of economic growth?**
  - Long-run prosperity or growth of the country.
  - Growth of a nation's productive potential – key determinant of growth in real wages and living standards.
  - Ingredients for growth: Role of investment, savings, budget deficits and industrial policies, investment in R&D and human capital

- **Tradeoffs between goals**
  - Tradeoff between **inflation and unemployment**: rapid increasing growth of output and drastic fall in unemployment => rising inflation

  - Tradeoff between **growth, investment and consumption**: ↑investment in capital and knowledge (possible only if current consumption of food, clothing etc. ↓) => ↑ growth rate

Objectives of macroeconomics

1. Measuring economic success:

- High level and rapid growth of national output
  - **Gross domestic product (GDP):** GDP is the measure of the market value of all final goods and services produced in a country during a year.
  - **Nominal GDP vs Real GDP:** Nominal GDP is measured in actual market prices. Real GDP is calculated in constant or invariant prices (accounts for inflation).
  - **Potential GDP**: Potential GDP represents the maximum sustainable level of output that the economy can produce. An economy operating at potential levels, will have high levels of utilization of the labour and capital stocks.

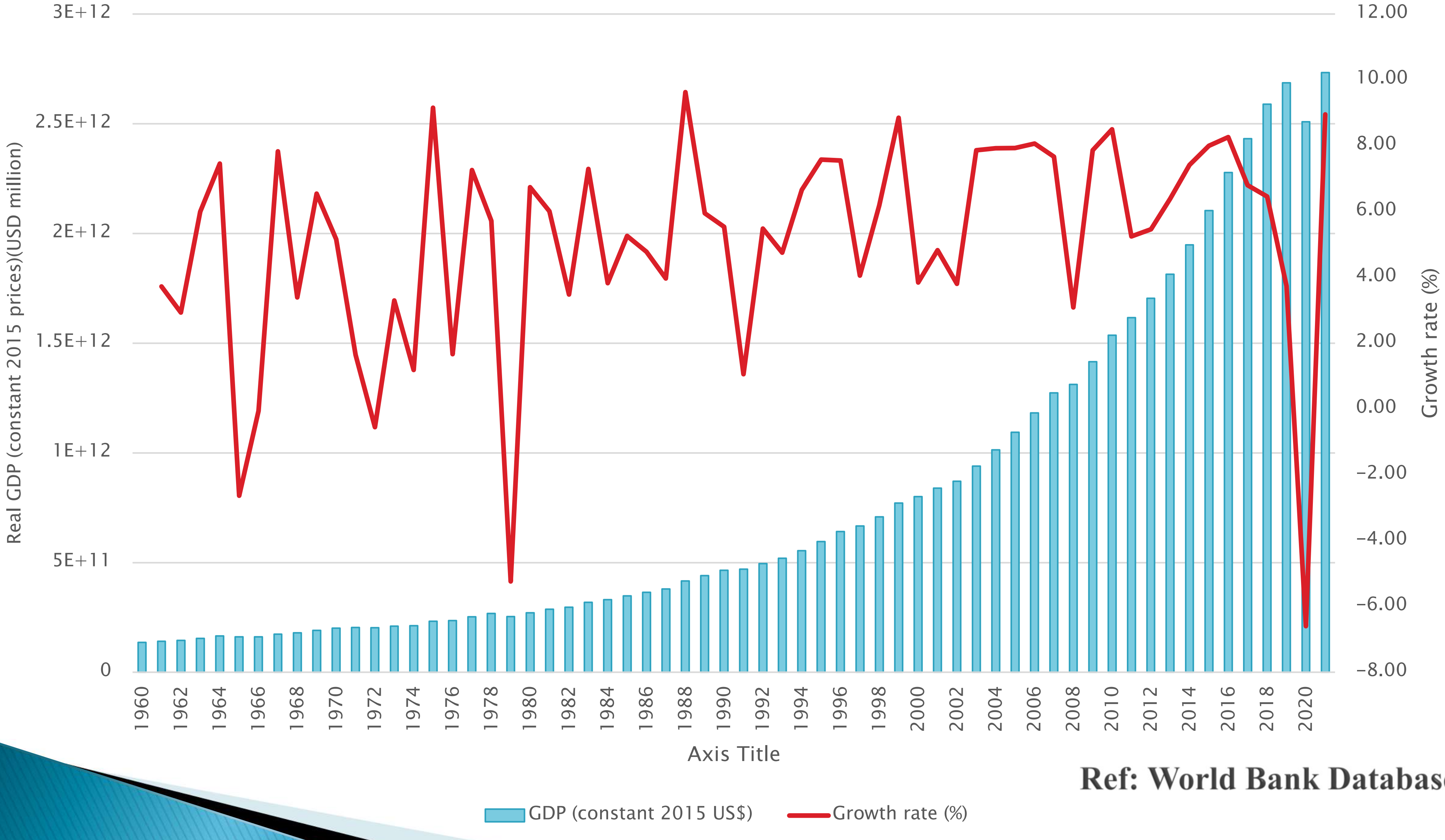
Objectives of macroeconomics…

- Potential output *determined* by the economy's productive capacity, which depends upon the inputs available (capital, labor, land, etc.) and the economy's technological efficiency.

- Economic downturns are called **recessions** when a significant decline in total output, income, and employment occur;
  - Usually last more than a few months; and are marked by widespread contractions in many sectors of the economy.

- A severe and protracted downturn is called a **depression**.

Real GDP (USD million) and Growth rate (%) for India



Ref: World Bank Database

Objectives of macroeconomics…

2. High employment, low unemployment

- **Labor force** includes all employed persons and those unemployed individuals who are seeking jobs. It excludes those without work who are not looking for jobs.

- **Unemployment rate =** percentage of the labor force that is unemployed.
- The unemployment rate reflects the state of the business cycle:
  - When output is falling, the demand for labor falls and the unemployment rate rises.

Objectives of macroeconomics…

3. Price Stability (Low and stable inflation rate)

- **Price indices**: Indicators of the average price movement over time of a fixed basket of goods and services. The basket of goods and services are compiled after considering whether the changes are to be measured in retail, wholesale or producer prices.

- **Consumer Price Index (CPI):** measures the trend in the average price of goods and services bought by consumers.

- **Wholesale Price Index (WPI):** is a measure of average wholesale price movement for the economy.

- **Other indices:** CPI-Rural, CPI-Urban, CPI-Combined, CPI-Industrial Workers, CPI-Agricultural Labour

Objectives of macroeconomics…

- **Inflation**
  - Measure of price stability
  - The inflation rate is the percentage change in the overall level of prices across years.

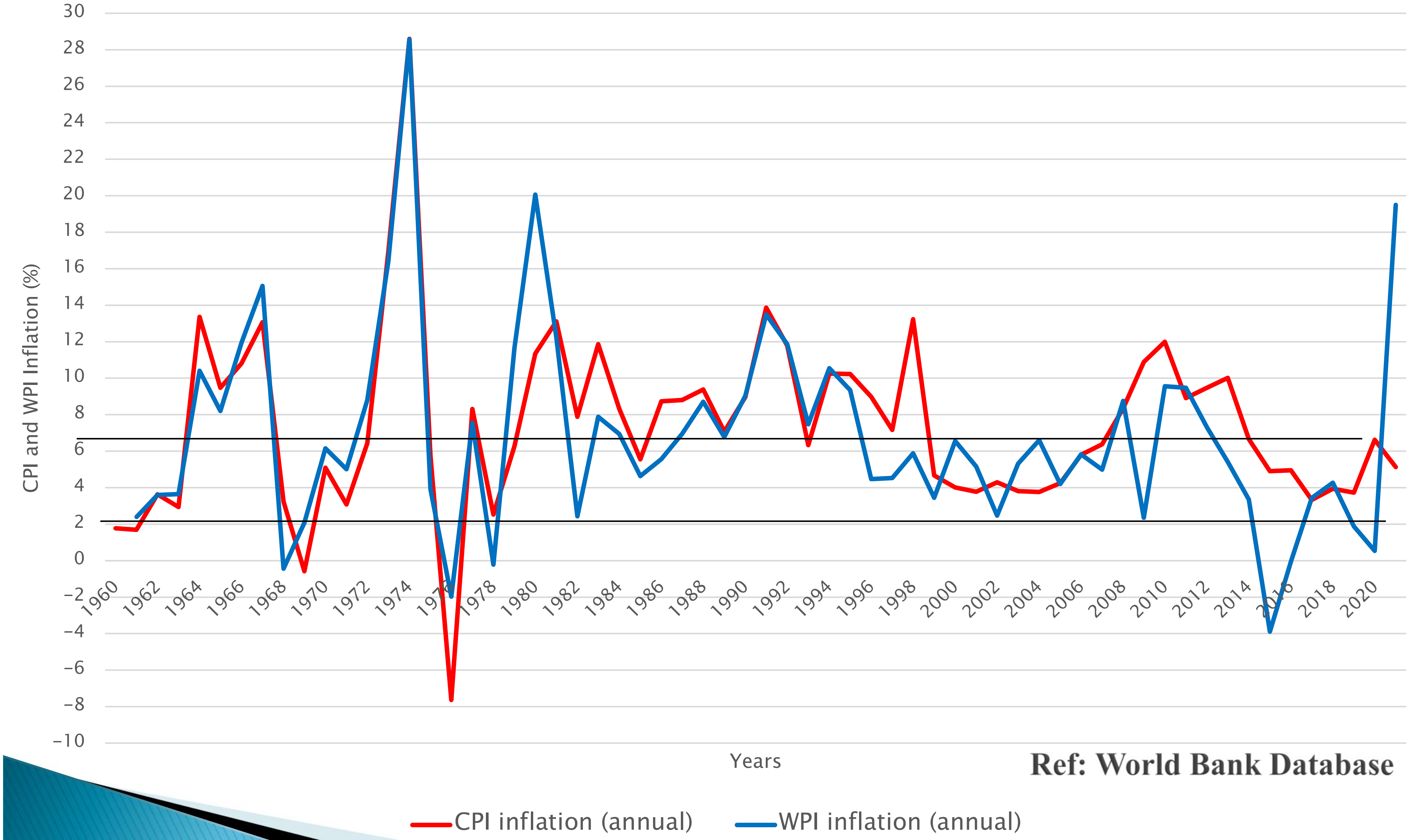
  - $\boxed{\text{Rate of inflation at } t\ (\%) = \frac{P(t)-P(t-1)}{P(t-1)} X\ 100}$

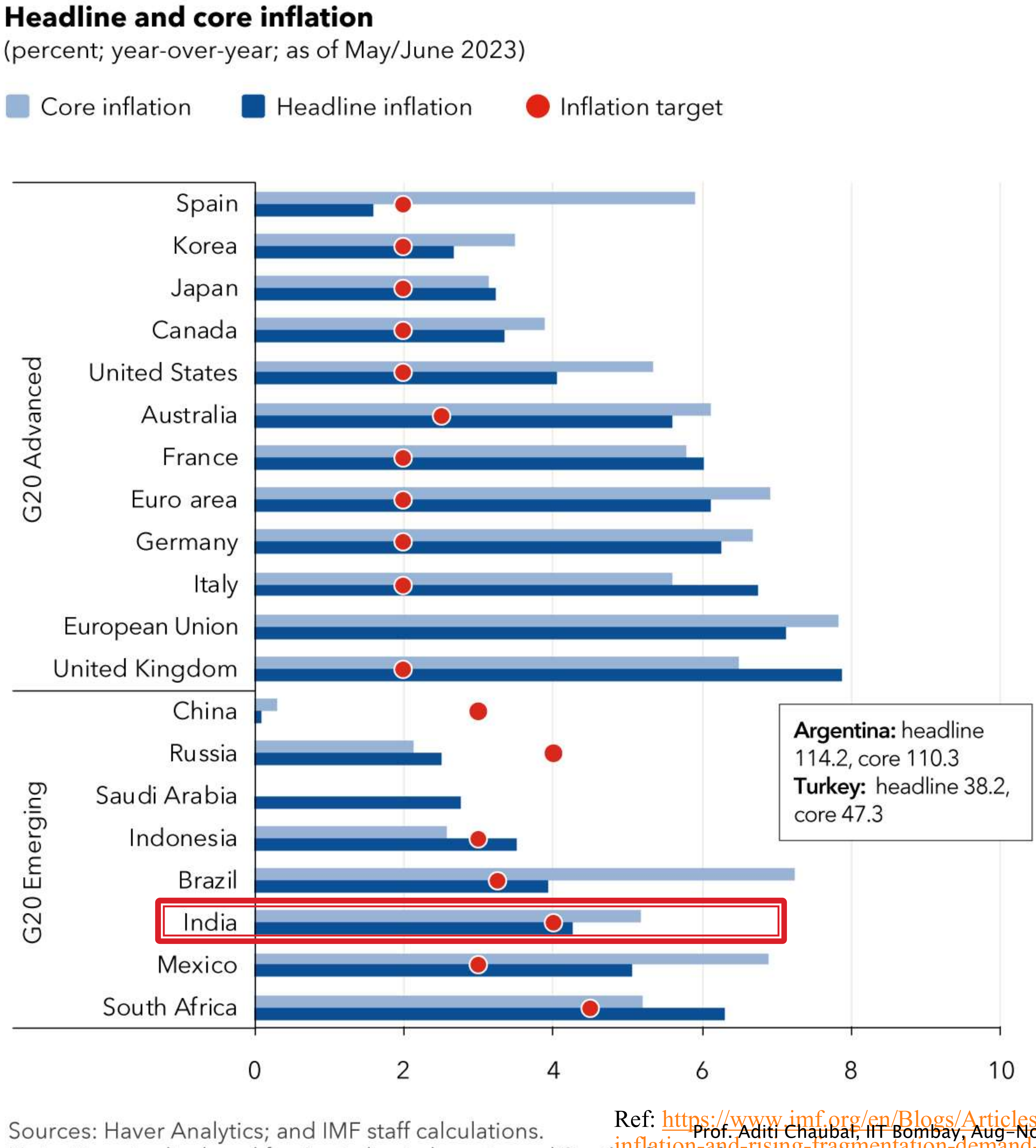
  - Deflation (opposite of inflation) occurs when prices decline (the rate of inflation is negative).

  - Disinflation occurs when the rate of inflation decreases sharply.

  - Hyperinflation is inflation at extremely high rates, e.g. 1000% or even 1 billion% per year!

CPI and WPI inflation (%) for India





Ref: https://www.imf.org/en/Blogs/Articles/2023/07/13/weak-global-economy-high-inflation-and-rising-fragmentation-demand-strong-g20-action

Objectives of macroeconomics…

- The goals of macroeconomic policy are:

  - A high and growing level of national output
  - High employment with low unemployment
  - A stable or gently rising price level

- **Importance of price stability**: A smooth functioning market system requires that prices accurately convey information about relative scarcities.
- With high inflation, taxes become highly variable, the real values of people's pensions are eroded, and people spend real resources to avoid depreciating Rupees or Yuan or….

(AD and AS curves) vs. Microeconomic market demand and supply curves

• Microeconomic demand (DD) and supply (SS) curves show the *quantities and prices of individual commodities*, with factors such as national income and prices of other commodities held as a given.	• AD and AS curves represent the *determination of total output and price level,* with factors such as money supply, fiscal stance, and capital stock held constant.

(AD and AS curves) vs. Microeconomic market demand and supply curves…

• DD and SS represent the impact of a policy measure or shock (say, increase in tax on a commodity) on *the demand and supply of that commodity or related commodities.*	• AD and AS represent the impact of a policy measure or shock (say, increase in taxes) *on national output and aggregate price levels.*

Macroeconomic equilibrium is the combination of overall price and quantity at which neither buyers nor sellers wish to change their purchases, sales or price levels.

Aggregate Demand

- **Aggregate demand (AD):** consists of the total spending in an economy by households, businesses, governments, and foreigners.
  - Represents the total output that would be willingly bought at each price level, given the monetary and fiscal policies and other factors affecting demand.

- **Formally:** Total planned or desired spending in the economy during a given period.
  - Determined by the aggregate price level, and influenced by domestic investment, net exports, government spending, consumption function and money supply.

- **AD curve:** graphs the relation between the quantity of goods and services that people are willing to buy at the aggregate price level, other things equal; with the dynamics driven by government spending, consumption function and money supply.

Aggregate Supply

- **Aggregate Supply (AS)**: quantity of output businesses would willingly produce and sell at each price level (given prices, costs and market conditions).
- **Formally**: Total value of goods and services that firms would willingly produce in a given time period.
  - Function of available inputs, technology and price level.

- **AS curve:** graphs the relation between the output which firms would willingly supply and the aggregate price level, other things equal. The curve tends to be vertical at potential output but may be relatively flat in the short run.

Tools and Instruments of Macroeconomic Policy

- ***Policy instrument****:* An economic variable under the control of government which can affect (in order to attain) the macroeconomic goals.
- **Fiscal policy**: A government's program/policy used to affect and achieve long-term economic growth through its impact on national savings and investment; it is also used to stimulate spending in deep recessions.
- **Instruments**: (i) the purchase of goods and services and expenditure on transfer payments (Government expenditure) and (ii) the amount and type of taxes (Taxation) in order to achieve the macroeconomic goals.

Tools and Instruments of Macroeconomic Policy

- Government expenditure → (i) Government purchases, (ii) Government transfer payments
- **Government purchases** = spending by the government on goods and services, infrastructure, defence and salaries
- **Transfer payments** = payments made to targeted groups such as elderly, unemployed etc.
- **Government expenditure** influences the relative size of collective spending and private consumption.
- **Taxation** subtracts from incomes, reduces private spending, and affects private saving while affecting investment and potential output.

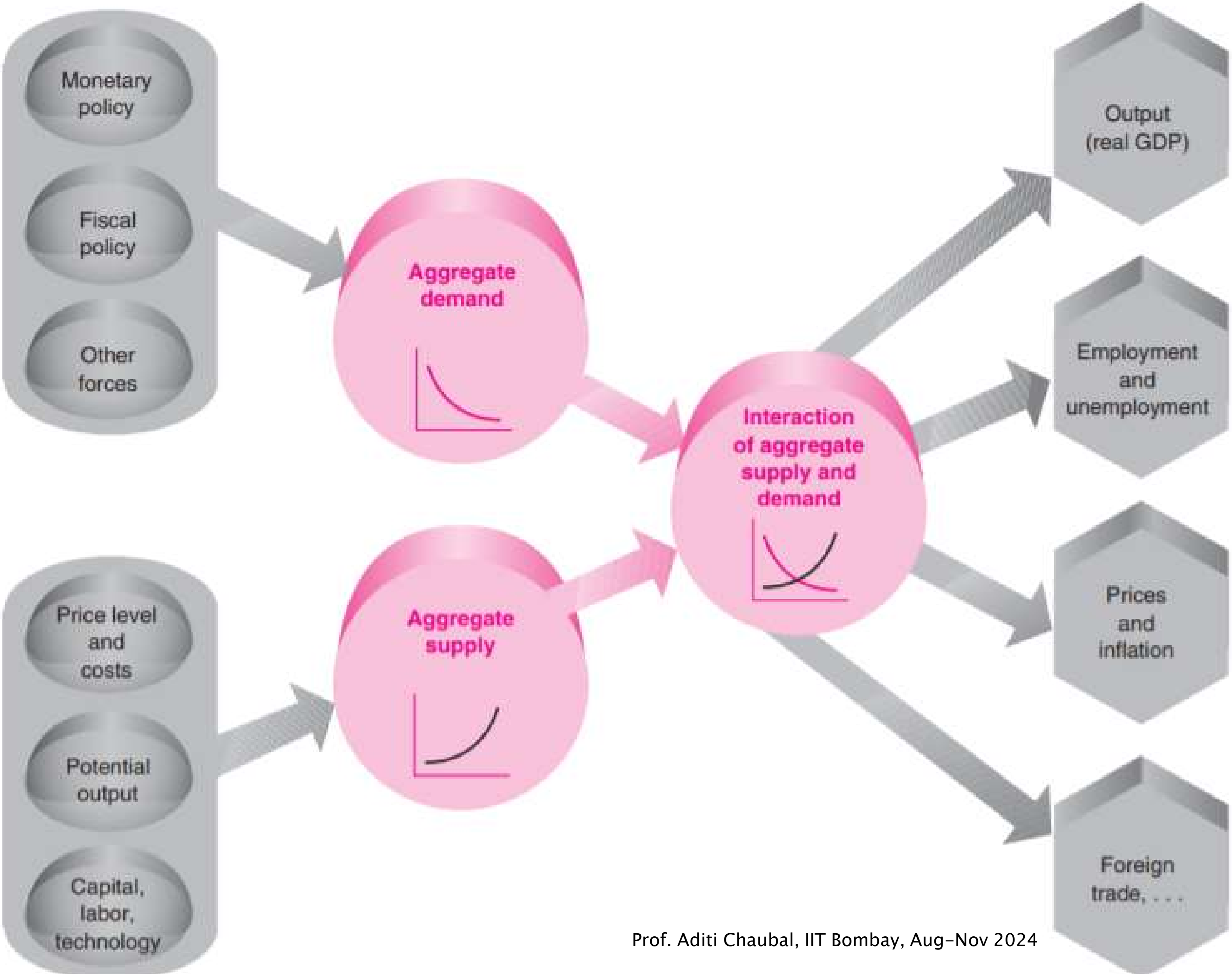
Tools and Instruments of Macroeconomic Policy

- **Monetary policy:** A policy (usually implemented by the central bank) which impacts the money supply (and thus, the credit, interest rates and output) in the economy to attain the macroeconomic goals.
- Monetary policy affects credit conditions, including asset prices such as stock and bond prices and exchange rates (exchange rates are a central part of the policy in open economies).
- Changes in interest rates, along with other financial conditions, affect spending in sectors such as business investment, housing, and foreign trade.

Tools and Instruments of Macroeconomic Policy

- Monetary policy has an important effect on both actual GDP and potential GDP.
  - **Instruments:** Money supply, open market operations, interest rates
  - Interactions between money supply, interest rates, output, inflation, external sector in the long- and short-run

Aggregate Supply and Aggregate Demand determine major macroeconomic variables (Ref: Samuelson & Nordhaus: *Economics*, 19th Ed.)



Thank you