Table of Contents

Measuring Macroeconomic Performance: Output and Prices

INDICATORS OF MACROECONOMIC PERFORMANCE

1. RISING LIVING STANDARDS

- Economic growth
- Material wellbeing
- Output divided by population = output per capita
- Trend rise in per-capita output = economic growth

Growth theory – the study of the long-run growth performance of economies

2. STABLE BUSINESS CYCLE

- Avoiding extremes of macroeconomic performance
- Low volatility in fluctuations of actual output around its trend or potential output
- The standard deviation has decreased from 1960s to 2010s
    - Since mid-1980s, Great Moderation there has been large fall in volatility

3. RELATIVELY STABLE PRICE LEVEL

- Maintaining the real value of the currency
- Low (positive) rate of inflation
- Inflation had been a concern for most developed countries over the last half century
- Deflation – meaning that the economy is slow and a problem

4. SUSTAINABLE LEVELS OF PUBLIC AND NATIONAL DEBT

Public debt – borrowing by public sector from private sector

- Influenced by government budget deficits/surpluses

National/Foreign debt – borrowing by domestic residents from foreign countries

- Influenced by an economy's current account deficits/surpluses

Current account deficits –

5. BALANCE BETWEEN CURRENT AND FUTURE CONSUMPTION

6. FULL EMPLOYMENT

- Unemployment rises quickly but recovers slowly
- Unemployment rate should be around 5.5%

MEASURING OUTPUT (GDP)

WHAT IS GDP

GDP – measure of a country's aggregate output or production

- The market value of final goods and services produced in a country during a given period

"DURING A GIVEN PERIOD"

- GDP is a flow variable – measured in a given period (normally in Quarters)
- Stock variable – instant of time

"PRODUCED IN A COUNTRY"

- Excludes imports
- Excludes goods and services produced in earlier quarters that are resold

"MARKET VALUE"

- Measure of aggregate production or output
- Use market prices to value (or weight) quantities of various goods and services
- No observed market price?
    - E.g. National defence, roads
    - Use costs of providing these goods and services as measure of their contribution to GDP
- Exclude: Unpaid housework (Household production)

"FINAL GOODS AND SERVICES"

- GDP excludes intermediate goods and serves
    - These goods are used-up in the production process
    - Don't double count of intermediate goods
- Value Added
    - The market value of a firm's production less the cost of inputs purchased from other firms

Value Added = Value of sales – cost of intermediate inputs

WAYS TO MEASURE GDP

1. Production Method (based on value added approach)
2. Expenditure Method (final sales)
3. Income Method

EXPENDITURE METHOD

Expenditure on goods and services by final users = value of their production

Consumption (C) – purchases by Households
Investments (I) – purchases by Firms
Government (G) – Government
Net Exports (NX) – net purchases by foreign sector
NX = Exports (X) – Imports (M)

GDP = Expenditure

$$Y = C + I + G + X - M$$

INCOME METHOD

GDP equals the aggregate income paid to:

- Labour (L)
- Capital (K)

GDP = Labour income + capital income

NOMINAL GDP VS REAL GDP

- Useful to have a measure of changes in physical production or volume of goods and services

Nominal – dollar value

Real – actual physical volume of production

Choice of Base Year Prices

CHAIN-WEIGHTED MEASURE OF REAL GDP

1. Take average growth rates of 2 consecutive years
2. Choose either year as the base-year

GOOD MEASURE OF ECONOMIC WELLBEING?

- Omissions from GDP that might matter for economic welfare

Hedonic pricing

MEASURING PRICES AND INFLATION

MEASURES OF THE PRICE LEVEL

GDP Deflator or Price Index → (Producers index)

Nominal GDP = price level x real GDP

Consumer Price Index (CPI)

Inflation rate $=[\frac{CPI - CPI(-1)}{CPI(-1)}]*100$

LIMITATIONS WITH CPI

Quality adjustment and new goods bias

- Quality improvements may show up as higher prices for goods and services
- New goods are often not included until CPI is re-based

Substitution bias

- Use of a fixed basket means that no allowance is made for consumers' substitution towards relatively less expensive goods

CPI tends to overstate the true rate of inflation

INFLATION AND INTEREST RATES

Nominal interest rates – percentage increase in the nominal (dollar) value of a financial asset

Real interest rate – percentage increase in the real purchasing power of a financial asset

$$\boldsymbol{r = i - \pi}$$

r = real interest rate
i = nominal interest rate
π = inflation rate