GDP: Measuring the Nation's Output

Gross Domestic Product – market value of final goods and services produced in a country during a given period

- Measure of a countries aggregate output or production
- Want a sustainable growth rate of GDP, no large fluctuations around the trend
- GDP / Population = GDP per-capita

GDP Characterisitcs:

- Given Period
 - Flow Variable measure from two given dates
- Produced
 - Excludes goods and services produced in other countries, but consumed in Australia (imports)
 - Excludes goods and services produced in an earlier period but resold in the current period (2nd hand goods)
- Market Value
 - Helps measure and aggregate goods and services that are different
 - Goods with no market price are measured using the **cost** of providing these goods and services as their contribution to GDP (national defense, roads)
 - Some are excluded from GDP (household production, unpaid housework)
- Final Goods and Services (consumed by the ultimate user)
 - GDP excludes intermediate goods and services, as they are used up in the production process

Measuring GDP:

1. Production Method

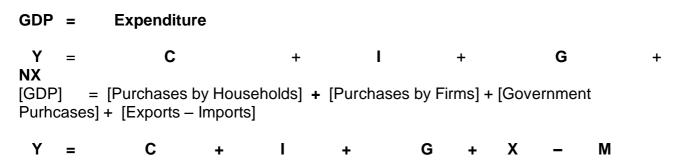
Value Added (each Firm) = Value of Sales (market value of production) - Cost of Intermediate Inputs (cost of inputs purchased)

Σ Value Added (GDP) = Final Sales

2. Expenditure Method

National Income Accounting Identity – mathematical relation that shows how GDP is equal to the expenditure on consumption, investment, government purchases and net exports

Expenditure of Goods and Services by Final Users = Value of their Production



Y+M=C+I+G+X

→ Supply of Goods and Services = Demand of Goods and Services

All final goods and services that are produced in a country in a given year will be purchased by one or more of these four groups:

- 1. Consumption spending by households on goods and services (ie. food, clothing and equipment)
- 2. Investment spending by firms on final goods and services (ie. capital goods and construction of **NEW** houses)
- DOES include inventories (goods that are produced but not sold by firms are recognised by economists as being purchased)
- Beginning Inventory Ending Inventory
- 3. Government Purchases purchases by governmets of final goods (ie. teaching in public schools, public demand)
- Does NOT include transfer payments (payments made by governments in which no current goods or services are received)
- Does NOT include Interest Paid on Government Debt
- Includes Public Demand
- 4. Net Exports exports minus imports to find the net amount of spending on domestically produced goods and services
- Represents the net demand for domestic goods by foreigners

3. Income Method

GDP = Labour Income (L) + Capital Income (K) (aggregate incomes in the production of goods and services)

Labour Income – wages, salaries and the incomes of the self-employed

Capital Income

- Payments to owners of physical capital and intangible capital
- Profits earned by business owners
- Rent paid to owners of buildings or land
- Interest received by bond holders non-financial private firms,
- Royalties received by holders of copyrights or patents

Nominal GDP vs Real GDP

Real GDP – a measure of GDP in which the quantities produced are valued at the prices in a base year rather than current year prices

Measures of real physical production

- Physical quantities of G&S produced in any year is what determine's people economic wellbieng, not the dollar values
- Excludes the effect of prices, in other words, adjusts for inflation

Nominal GDP – a measure of GDP in which the quantitites produced are valued at current-year prices (year of produciton)

- Measures the current dollar-value of production
- Using initial prices is known as a <u>Laspeyres</u> Index
- Using final prices is known as a Paasche Index

Chain-weighted Measure of Real GDP (2 Consecutive Years):

- 1. Compute the growth rates of real GDP implied by both the Laspeyres and the Paasche index
- 2. Average the two growth rates to calculate the chain-weighted growth rate, used to compute a real chain-weighted GDP
- 3. Above process is repeated on a year-by-year basis to calculate a change index over a long period of time