

# Macro Economics

## GDP

**GDP(Gross Domestic product)** The Total amount of goods and services produced within an economy in a given year [^mn] {-} There are three ways of calculating this \* Expenditure This must only include expenditure on goods and services produced within the economy (no imports, and no goods produced in a previous year) \* Income This must only use income obtained by selling goods and services (no transfer payments) \* Output

## GDP composition

To measure the GDP<sup>1</sup> it is simplest to measure the amount spent on goods and services and then subtract the part of that which is spent on goods and services produced outside the economy (imports) or before the given year (inventories). Finally goods not bought in the bought elsewhere (exports) or stored for the future are added.<sup>2</sup>

- Consumption(C): The goods and services purchased by consumers
- Investment(I): The sum of
  - no-resedential investment: Capital equipment and land bought by firms
  - resedntial investment: Housing bought by consumers
- Goverment spending(G): The amount the goverment spendings buying goods and services from firms and employing workers. (goverment tranfers are not payments for work done and are not included)
- Net exports (X-I): The total amount of exports minus imports.
- Net inventory build up

This brings us to the equation  $Z = C + I + G$

## Consumption

Consumption is a function of disposable income <sup>3</sup> ( $Y_D$ )

$$C(Y_D)$$

Unemployment —————

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<sup>1</sup>GDP and total demand(Z) are used interchangeably

<sup>2</sup>Exports and inventories are ignored in the begining part of the course

<sup>3</sup>income minus taxation

## Inflation

## Philips curve

## GDP composition 2

Go over chapter 2

Net foreign factor income.

Indirect taxes : Sin taxes , value add tax , import taxes

**Directs taxes** Direct on factor input, wages profit

GDP at market price - direct taxes +(net subsidies)<sup>4</sup>

## further adjustments

- further transaction on household income
- Insurance contributions(money is taken directly taken, south african pensions come directly from tax not from fund)
- Unemployment funds (are in south africa)
- Corporate taxes
- Profits that could have been paid by firms that are retained by firms
- transfer payments<sup>5</sup> This results in personal income
- taxes on interest This results in disposable income : The amount of income a consumer can produce

GDP is concerned with the amount of production that takes place in a country  
GNP is by national citizen

GDP + income from foreign source - production from foreign sources

Output(Value add) = Output(Income) + assume not corporate profit is retained.

Output(Value added) = output(expenditure) + No inventories

Output(expenditure = output(income) + No saving

## Important

**Nominal vs real GDP** Nominal GDP = real GDP \* current prices

- Prices measured as a percentage of the base year

Real GDP higher than nominal GDP means increase in output<sup>6</sup>

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<sup>4</sup>indirect taxes - subsidies

<sup>5</sup>Do not confuse payments to and from unemployment and pension payments

<sup>6</sup>Q: What is calculated first inflation or gdp, Why not exponential but go over

## Unemployment or inflation

**Strict unemployment** People that are actively looking for work  
**Broad unemployment**

People actively looking for work plus discouraged workers (everybody who would like to work)

Broad is greater than the strict easily provable

$U$  or  $U_t$  is the number of people unemployed  $u$  or  $u_t$  is the unemployment rate

**Participation rate** The labour force over the population size. Higher participation rates tend to have higher employment rates.

## Problems with unemployment

- GDP excludes the illegal economy and excludes the legal economy that is not reported for tax evasion.
- Good unemployment benefits may cause people to register as unemployed.
- Unemployment causes less than optimal production.

**#inflation** An increase in the change of general price levels. inflation rate is the derivative of inflation. An index may be simple or compound

CPI is used in South Africa (goods consumed by a typical or average household)

- Conducts infrequent household surveys every five or more years to get weightings
- Consumer price index
- State SA tracks some prices monthly and others quarterly
- Month by month inflation  $\frac{a - b}{a}$
- monthly annual inflation rate. Jan to Jan ... Dec to Dec
- annual = average of monthly annual

1. find the size of the labour force

**GDP deflator**  $\text{Real GDP} - \text{Nominal GDP} / \text{Real GDP}$

GDP deflator and CPI move together most of the time but CPI moves faster from international shocks.

Competition determines how much price shocks are communicated to consumers.

Hyperinflation and deflation

Inflation affects income distribution

- Fixed income earners such as pensioners lose income
- Distortions
- Bracket creep (Governments try to adjust)
- Exchange and inflation tend to move together

Is inflation ever good

- In japan moderate inflation could have worked
- High deflation can lead to uncertainty
- Why does low inflation make monetary policy useless
  - Inflation and interest rate move together.
  - Central bank cannot reduce interest rates below zero

## Chapter 3