The foreign sector

Why countries trade

- Why do individuals trade?
- What is the basis for specialisation and exchange?
- Same applies to countries
- ***Absolute advantage***
  - benefits of trade obvious
  - specialise in what you are best at

- But what if an individual or country is better at everything than another individual or country?

- ***Relative advantage:***
  - as long as opportunity costs (or relative prices) differ, there is always scope for trade
  - specialise where opportunity costs are lowest

Relative (comparative) advantage

- ***With same resources:***

South Africa	100 litres of paint or 200 units of plastic
Botswana	50 litres of paint or 150 units of plastic

  - SA has absolute advantage in both
  - Botswana has relative advantage in plastic; opportunity cost: ⅓ litre of paint per 1 unit of plastic; lower than in SA: ½ litre of paint per 1 unit of plastic

- SA has relative advantage in paint; opportunity cost of 2 units of plastic per litre of paint; lower than in Botswana: 3 units of plastic per litre of paint
- SA → paint; Botswana → plastic; then trade at (say) 2,5 units of plastic per litre of paint
- Exchange ratio must be between opportunity cost ratios

- If opportunity costs similar in both countries – no benefits from specialisation and trade

Trade policy

- Import tariffs
- Import quotas
- Subsidies
- Non-tariff barriers
- Exchange controls
- Exchange rate policy

Exchange rates

- ***Definition:*** price of a currency in terms of another currency

- Foreign exchange market (forex market)
  - demand for a currency
  - supply of a currency
  - equilibrium exchange rate

- Appreciation and depreciation

NB: Always check which currency is being analysed – important because exchange rate always involves two currencies

Exchange: exchange rate between Rand and Euro

- We examine the market for euro

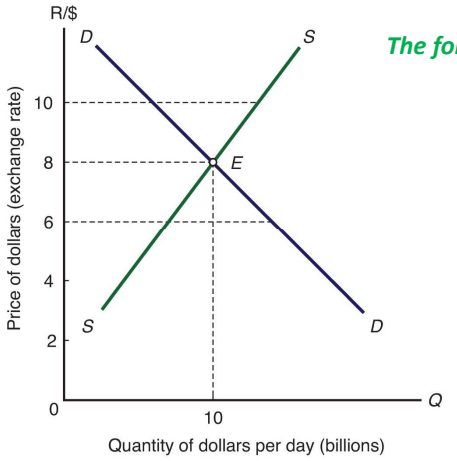
- Price thus rand per euro (what euro costs in rand) Quantity in euro

- Sources of demand for euro include:
  - SA importers who have to pay in euro
  - SA residents who purchase euro-denominated assets (eg shares in German companies or French government bonds)

- Euro zone investors who sell SA assets (eg shares on JSE) and convert proceeds into euro
- SA tourists visiting Euro zone countries who buy euro-denominated travellers' cheques, etc.
- Speculators who anticipate a decline in the value of the rand against the euro (depreciation of the rand/appreciation of the euro)

- Sources of supply of euro include the following (note that the factors are simply the inverse of those that lie behind the demand for euro):
  - SA exporters who exchange their euro earnings for rand
  - SA residents who sell euro-denominated assets
  - Euro zone investors who invest in SA assets
  - Euro zone tourists who visit SA
  - Speculators who expect the euro to weaken (depreciation of the euro/appreciation of the rand)

- ***Equilibrium exchange rate:***
  Similar to figure below, which pertains to rand/dollar exchange rate



The foreign exchange market

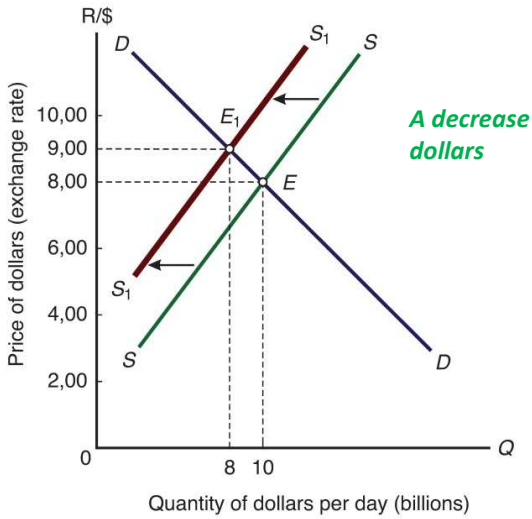
Changes in supply and demand
(Currency appreciation and depreciation)

- Causes of changes in supply of foreign currency
- Causes of changes in demand for foreign currency
- Resultant changes in exchange rate

EXAMPLE

Demand for euro increases	→	euro appreciates (rand depreciation)
Demand for euro decreases	→	euro depreciates (rand appreciates)
Supply of euro increases	→	euro depreciates (rand appreciates)
Supply of euro decreases	→	euro appreciates (rand depreciates)

- **Graphical exposition:** Similar to figure below which pertains to rand/dollar exchange rate



A decrease in the supply of dollars

Economic impact of changes in exchange rate

- ***Rand depreciates*** → export prices (in forex) decrease
  → import prices (in rand) increase
  → exports tend to increase
  → imports tend to decrease
  → current account tends to improve
  → domestic prices tend to rise
- ***Rand appreciation:*** just the opposite tends to happen

More on forex market

Role of speculation

- demand and supply change in anticipation/ expectation of change in exchange rate
- could result in that which is expected to happen now

Official intervention (managed floating)

- authorities may try to intervene in the forex market to affect the exchange rate
- to prevent or counteract depreciation, they have to possess sufficient foreign exchange reserves
- to prevent appreciation, they must be prepared to purchase foreign exchange
- principle illustrated in ***Figure: Managed floating***
- in practice, often difficult

Foreign sector in Keynesian model

- Exports (X): injection into circular flow of income and spending
- Imports (Z): leakage or withdrawal from circular flow
- Exports autonomous – not related to domestic income Y

Figure: Exports

- Imports strongly related to domestic economic activity Y

Figure

- $X = \bar{X}$ (autonomous)
- $Z = \bar{Z} + mY$, where m = marginal propensity to import

Impact of exports and imports

- ***Exports (X)***
  - raise the level of aggregate spending *A*
  - leave multiplier unchanged
  - raise the equilibrium level of income Y_0
- ***Imports (Z)***
  - act as leakage from circular flow
  - reduce the level of aggregate spending on domestic production
  - reduce the multiplier
  - reduce the equilibrium level of income

Keynesian model including the foreign sector

$Y = A$ (equilibrium condition)

$A = \bar{C} + \bar{I} + \bar{G} + \bar{X} - \bar{Z}$ (aggregate spending)

$C = \bar{C} + c(1 - t)Y$ (consumption spending)

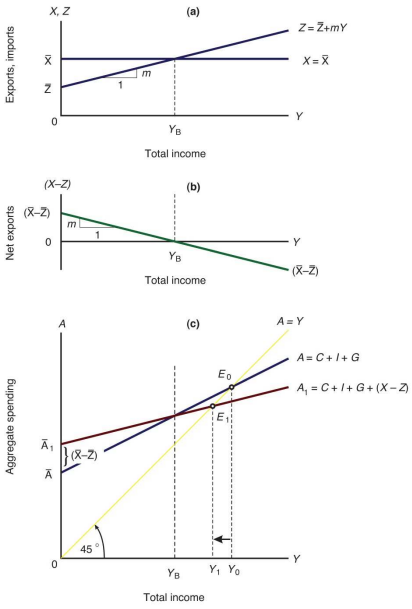
$Z = \bar{Z} + mY$ (imports/spending on imports)

$Y_0 = \alpha\bar{A}$

Where α = $1/(1 - c(1 - t) + m)$

$\bar{A} = \bar{C} + \bar{I} + \bar{G} + \bar{X} - \bar{Z}$

Graphical exposition:



Net exports, aggregate spending and equilibrium income in the open economy

Numerical example

Suppose $\bar{C}$ = 100, $\bar{I}$ = 200, $\bar{G}$ = 300, $\bar{X}$ = 150, $\bar{Z}$ = 50

c = 0,9, t = 0,33, m = 0,1

Total autonomous spending = $\bar{C} + \bar{I} + \bar{G} + \bar{X} - \bar{Z}$ = 700

Multiplier = $1/(1–c(1–t) + m)$

= $1/(1–0,9(1–0,33) + 0,1)$

= $1/(1-0,6 + 0,1)$

= $1/0,5$

= 2

Y_0 = αĀ = 2 x 700 = 1400