## Aggregate supply and demand

# Classical vs Keynesian

## Aggregate demand:

•Graphically illustrates the inverse relationship between the price level and the quantity of goods demanded throughout the economy

•$AD = C + I + G + (X-M)$

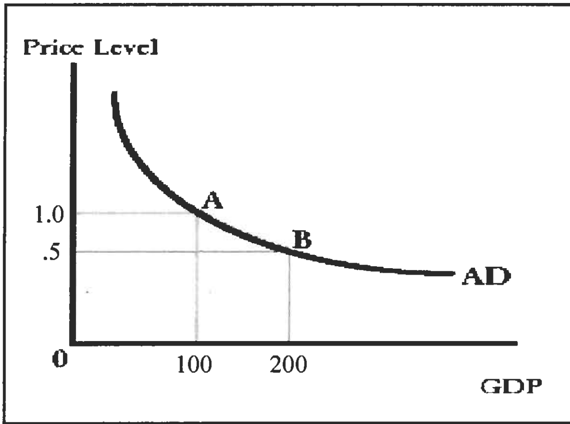
## Reasons for a downward sloping aggregate demand curve:

•Wealth effect- decreasing the price level increases the purchasing power of money

•Interest rate effect- decreasing the price level increases the real money supply which lowers interest rates and increases investments

•Intertemporal price level effect- price level falls and is expected to rise in the future

•International effect- decreasing the price level makes domestic goods cheaper relative to foreign goods




## Aggregate demand shift factors:

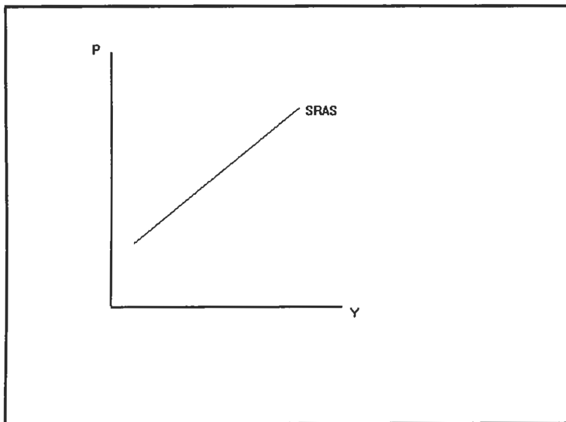
- Income- increasing income will increase consumption
- Expectations- higher expected future prices will increase current consumption
- Interest rates- lower interest rates will increase consumption and investment
- distribution of income

## Aggregate supply:

- Graphically illustrates the relationship between the price level and the quantity of goods supplied throughout the economy

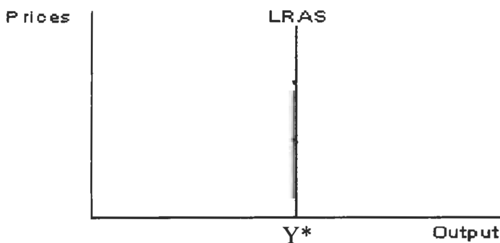
## Reasons for a upward sloping short run aggregate supply curve:

•Constant input prices- if the price level rises firms receive more money for their goods and if input price are constant firms will have higher profits




## Reasons for a vertical long run aggregate supply curve:

•In the long run input prices have time to adjust



## SRAS shift factors:

•Expectations- if suppliers expect aggregate demand to be low they will reduce supply

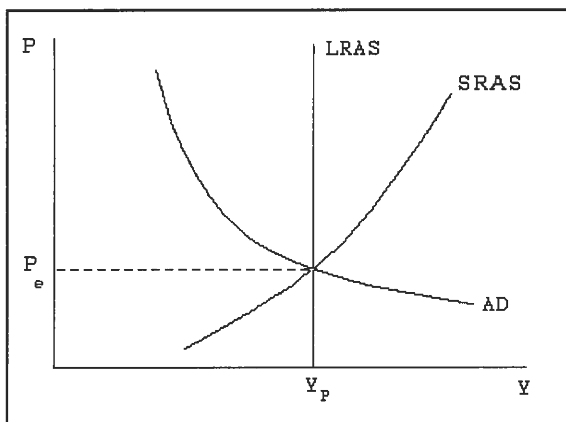
•wage price ratio- when wages are low relative to prices firms have a desire to produce a lot

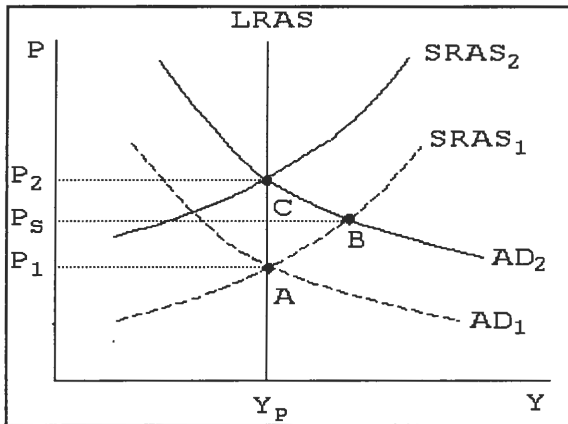
## LRAS shift factors:

•Available inputs- ↑ # of inputs ↑LRAS

•Institutional environment-↓regulation ↑LRAS

•Technology- improve technology ↑LRAS






## Keynes vs Classical

- Activist- believe the government can impact the economy
- Laissez-faire(leave the market alone) economist- believe that most government policies would make things worst

## Classical economics

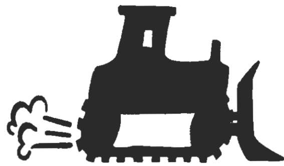
- The market is self adjusting; wages prices and interest rates are flexible
  - in the short-run there may be problems
  - focus is on the long-run
- Unemployment results when the real wage is too high
  - solution to unemployment- eliminate labor unions and government policies that hold wages too high

## Classical economics

•Equation of exchange:
•MV = PQ
•M = money supply
•V = velocity
•P = price level
•Q = real output
•PQ = nominal output

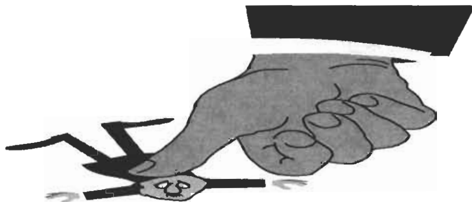
## Say's Law:

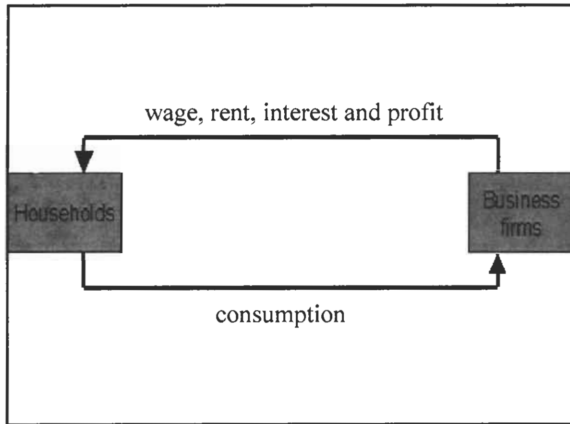
•Say's Law- supply creates its own demand
•the act of producing requires resources to be hired and paid, which in turn leads to resource owner's income being spent on other goods.



## Say's Law:

•Surpluses in specific markets are remedied because surpluses drive down prices in the long run. (Flexible wages prices and interest rates)





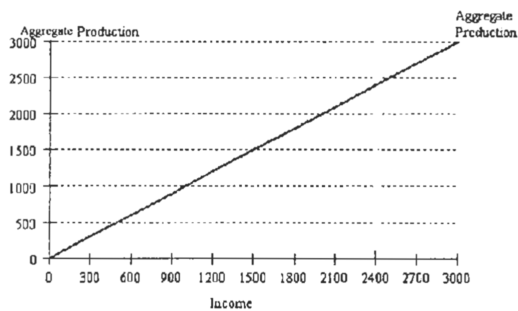

## Challenge to Say's Law:

- Critics of Say's Law point out that people seldom spend all they earn
- so savings might result in inadequate Aggregate Demand
- classical rebuttal- all saving is invested

# Aggregate expenditures

## Aggregate Production:

- Aggregate production is the total amount of production of all goods and services in every industry in an economy
- Production creates an equal amount of income
- Expenditures can be higher or lower than planned production



## Consumption Schedule

| Income | Consumption |
|---|---|
| 0 | 500 |
| 1000 | 1250 |
| 2000 | 2000 |
| 3000 | 2750 |
| 4000 | 3500 |

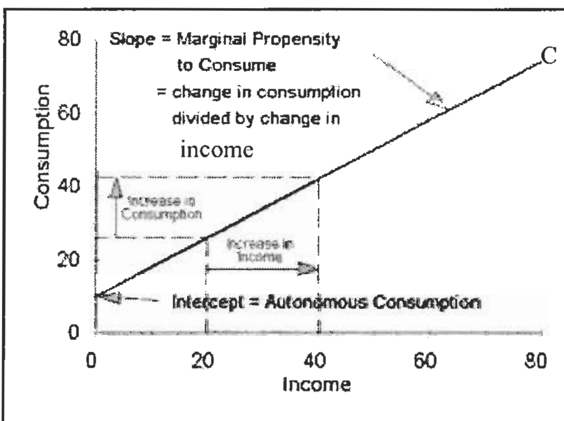
Assuming Taxes=0

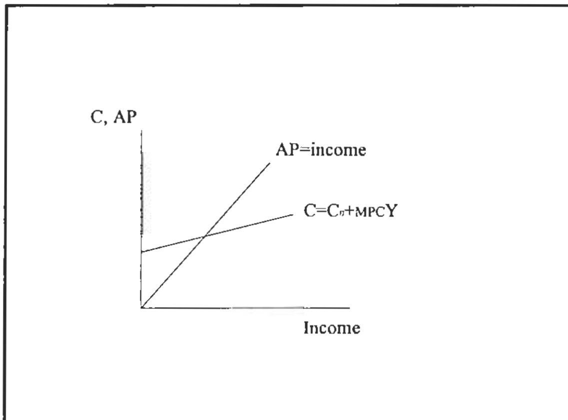
## Autonomous vs Induced

- Autonomous expenditures- expenditures that are independent of income
- Induced expenditures(consumption)- expenditures that change as income changes

$$C = c_0 + mpc(yd)$$

Autonomous (c₀) — induced (mpc(yd))






## Consumption and saving:

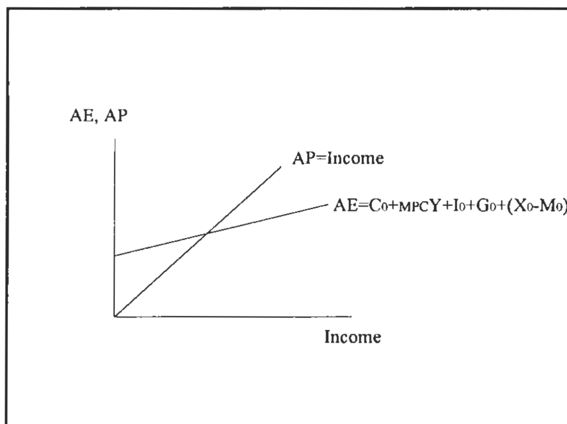
- Marginal propensity to consume- The amount of each additional dollar that is spent
- Marginal propensity to save- The amount of each additional dollar that is not spent
- mpc + mps = 1

## Aggregate expenditures:

| Income | AE |
|---|---|
| 0 | 1000 |
| 1000 | 1750 |
| 2000 | 2500 |
| 3000 | 3250 |
| 4000 | 4000 |

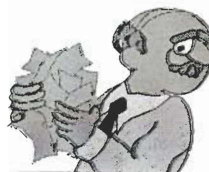
Aggregate expenditures:

- $AE=C_o+mpc\,(yd)+I_0+g_0+(x_0-m_0)$
- The keynesians assumed that every thing other than induced consumption is Autonomous




Multiplier:

- Multiplier- tells us how much income will change in response to a change in autonomous expenditures
- Multiplier = 1/(1-mpc)



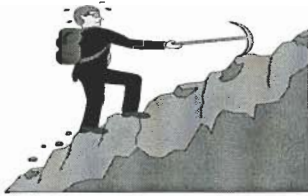
## The keynesian equation:

•Use this equation to find equilibrium income

yd = multiplier x (sum of autonomous expenditures)

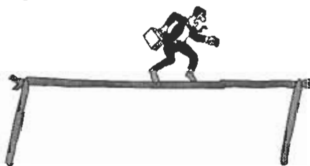
## Increase in MPC

- An increase in the MPC increases the slope of the consumption function...



## Increase in autonomous consumption

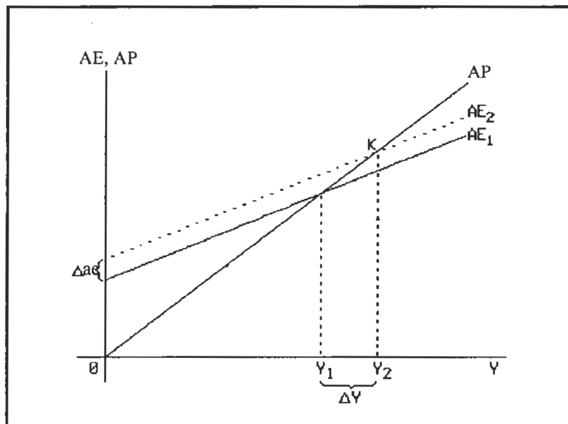
- An increase in autonomous consumption shifts the entire consumption function upward, parallel to the original.



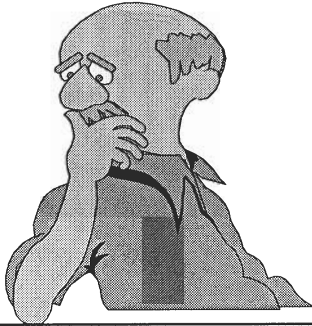
## Formula to find change in income:

Use this equation to find change in equilibrium income given a change in autonomous expenditures.

$$\triangle Yd = \text{multiplier} \times \triangle \text{sumAE}_0$$



# Fiscal policy



## Fiscal policy:

•The deliberate change in either government spending or taxes to stimulate or slow down the economy

•Expansionary fiscal policy- increasing government spending or decreasing taxes

•Contractionary fiscal policy- decreasing government spending or increasing taxes

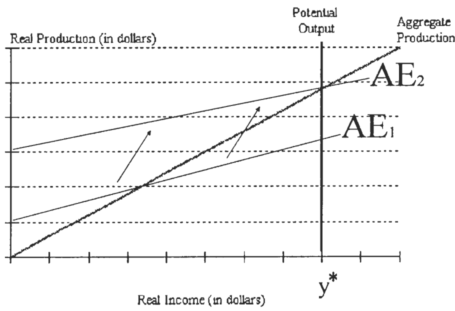
## Fine tuning:

•Recessionary gap- when equilibrium income is below potential income

•Inflationary gap- when equilibrium income is above potential

•fine tuning- an attempt to keep the economy at potential income

## The Aggregate Production Curve



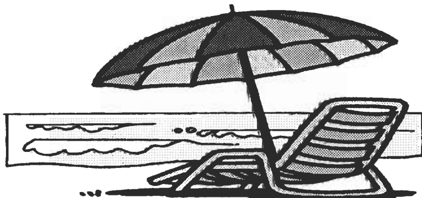

## Multipliers:

Government spending multiplier = 1/(1-mpc) or 1/mps

Tax multiplier = mpc/(1-mpc)

## Automatic stabilizer:

- Any government program or policy that will counteract the business cycle without any new government action



# Deficit:

- When government spending is greater than tax revenue
- Structural deficit- the part of a budget deficit that would exist even if the economy were at its potential(full employment) level of income
- Passive deficit- the part of the deficit that exist because the economy is operating below its potential (full employment) level of output

# Crowding out