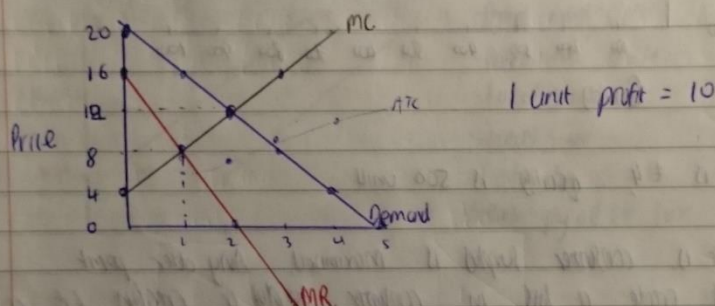


## Economics 2011

Q1

Price	Q demanded	Total revenue	Marginal revenue	Total cost	Marginal cost	TR-TC Profit
20	0	0		2	4	-2
16	1	16	16	6	8	10
12	2	24	8	14	12	10
8	3	24	0	26	16	-2
4	4	16	-8	42	20	-26
0	5	0	-16	62		-62

iii. Profit is maximum when  $MR = MC$



iv. Produce a smaller output at a higher price

- Monopoly inefficient

- Smaller output and higher price drive a wedge between marginal social benefit and marginal social cost creating a deadweight loss

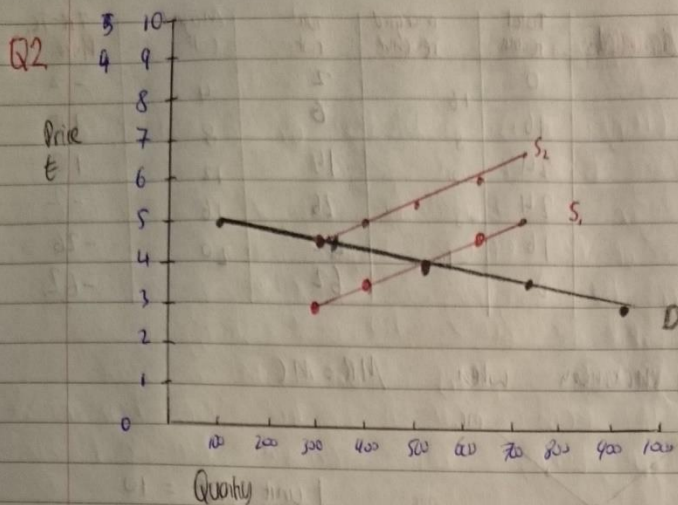
- Consumer surplus shrink

v. Consumer Surplus: the monetary gain enjoyed by consumers because they are able to purchase a product that is less than the highest price that they would be willing to pay

$$= \frac{1}{2} \times 8 \times 1 = 4 = \text{consumer surplus}$$

Producer Surplus: amount that producer benefit by selling at a market price that is higher than the least price they would be willing to sell for

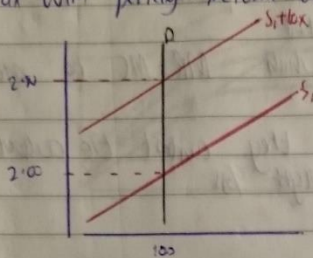
Deadweight loss: loss of economic efficiency occurs when equilibrium for a good or service is not optimal - (curve - monopoly)



- i. Price is £4, quantity is 500 units
- ii. Yes it is. consumer surplus is maximised. Any other point would create a loss in consumer surplus or (region of a deadweight loss)
- iii. When tax is put on producer price is 4.50 and quantity is 300  
Buyer pays 50p tax, producer gets 4.00
- iv. Taxes are inefficient, they create deadweight losses, mean a loss in consumer surplus and hence
- v. It is the analysis of the effect of a particular tax on the distribution of economic welfare. Tax incidence is said to 'fall' upon the group that ultimately bears the burden of the tax. Key concept is that tax burden does not depend on where the revenue collected but on the price elasticity of supply and demand curves.

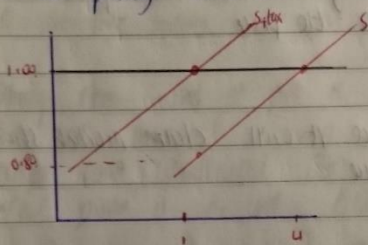
ECON 2011

Q2 Tax with perfectly elastic demand



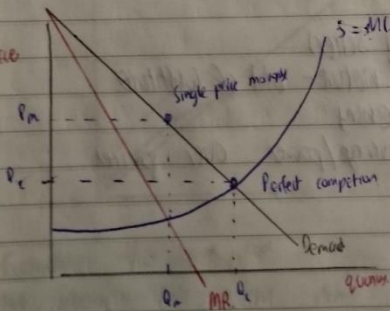
- Demand perfectly elastic
- No tax  $Q=100$   $P=2.00$
- Tax of 50 cents imposed
- Decreased supply  $\Rightarrow$  left shift
- Price rises to 2.50 but  $Q$  remains the same. Buyer pays all tax

Tax with perfectly elastic demand



- Demand perfectly elastic
- Price = 1.00  $Q=4$
- Tax of 20 cents
- Decreased supply
- $P=1.00$  but  $Q=1$
- Seller pays all the tax

Q3 price



- Competitive market produce quantity  $Q_c$  at price  $P_c$
- Single price monopoly produce quantity  $Q_m$  at price  $P_m$  where  $MR=MC$
- Monopoly produce smaller output and charged higher price
- Monopoly is inefficient because of deadweight loss created
- In monopolistic competition  $Q_c$  is produced by two firms at price  $P_c$



Monopoly → only one producer/seller for a product

- entry into this market restricted
- Produce the amount of which  $MR = MC$  to maximize profit
- They control the price as they control the output
- Inefficient → creates deadweight loss
- No competition

Oligopoly (monopolistic competition) - only a few firms make up the industry

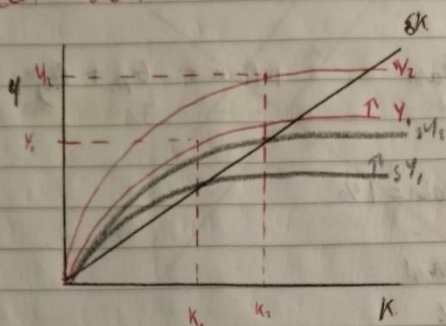
- The select group has control over the price
- High barriers to entry
- If one price is interdependent
- If one firm drops price it will claim market share
- Others must also drop price
- Efficient, competitive

Perfect Competition -

- Many buyers and many sellers
- Many products similar in nature - lot of substitutes
- few or no barriers to entry
- Companies have little leverage/power over prices
- Competitive efficient

Econ 2011

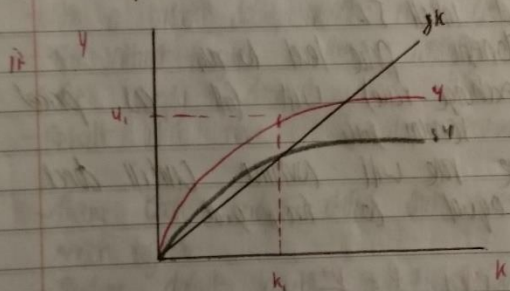
Q4 As.



Formula  $Y = A k^{\alpha} L^{1-\alpha}$

A = total factor productivity    k = capital    L = labour

- Initially China was at point  $k_1$  and GDP of  $y_1$ .
- But TFP increased having the effect of shifting the output curve upwards and the 45° line (savings curve) upwards.
- New position is  $k_2$  and GDP of  $y_2$ .



Formula  $Y = A k^{\alpha} L^{1-\alpha}$

- This situation arose from richer countries having better access to technology causing TFP to rise, this increased output and savings.
- Other countries may be growing as fast but the countries with higher GDP have higher capital or labour force as indicated by the formula.

Output is greater in these countries attributed to higher level of capital & labour.

4 br.  $G_{money} = G_{pri} + G_{real}$        $inflation = G_{pri} + G_{y}$   
 $G_p = g_m - G_y$       3%  
 $3\% - 2\%$   
 $= 1\%$        $inflation = 1\%$

ii  $inflation + real\ rate = nominal$   
 $1\% + 4\% = 5\%$

To ensure savers get 4% interest without inflation coming away at it (1% loss) they must compensate for this by adding back on 1%!

iii  $Price\ A = \frac{P_A}{\text{exch. rate}}$

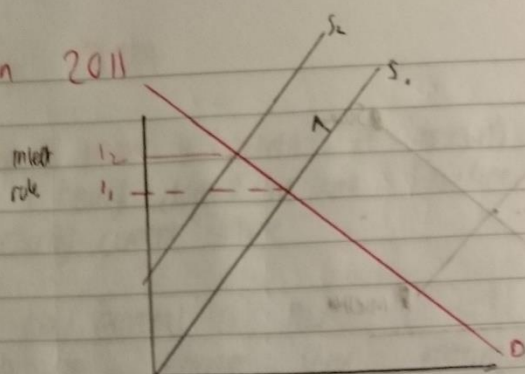
- Inflation is 1% and nominal interest 5%
- Inflation causes domestic price level to rise
- PPP predicts  $e$  (exchange rate) will fall as prices in other countries remain stable
- Separation of exchange rate will continue until domestic price level is equal to foreign price

$e$  will adjust until  $P = \frac{P^*}{e}$

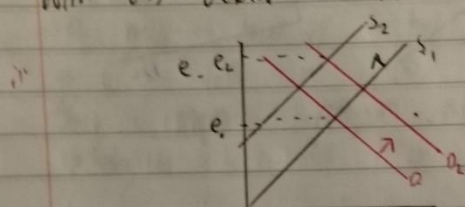


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Q 5A



- i. With a budget deficit, the supply of bonds decreases (shifts left) with this decrease the interest rate increases from  $i_1$  to  $i_2$

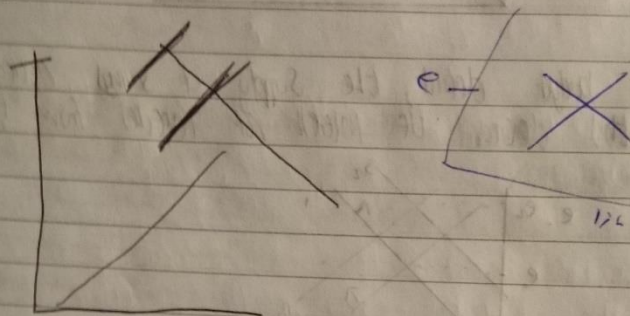
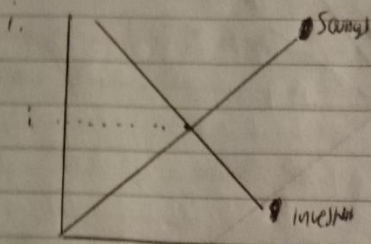


- ii.
- With a budget deficit, interest rate are high in domestic economy
  - This attract foreign investment, increasing demand on  $\text{Sfr}$ .
  - The supply decrease with this increase in demand
  - Result is new normal exchange rate of  $e_2$

iii. - Many that budget deficit and current account deficit occur together.

- Budget deficit results in fall of savings.
- (create) higher interest rate because a lower supply of savings
- Higher interest rate cause  $e$  to appreciate
- exchange rate strong  $\rightarrow$  bad for trade from foreign markets
- lead to current account deficit

50



current account is already in deficit

- Increase real rate even further
- Increase in inward inflow.
- appreciation of currency
- falls and leads to negative

What have we met in other countries



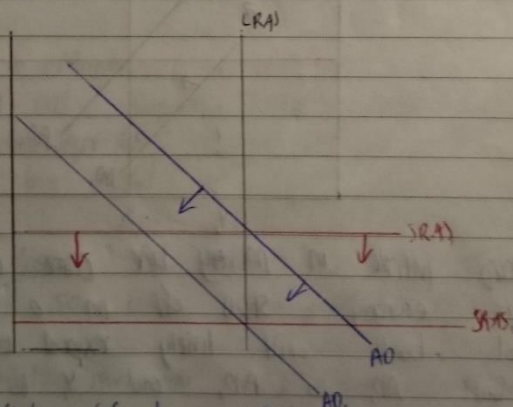
Econ 2011

Q6: Permanent income hypothesis: A person's consumption level today depends on all lifetime income - and not necessarily current income

As the economy moves toward its potential output, people are earning their maximum income. As consumption demand slowly falls as people smooth out their income

If price level is high today, people might expect it to fall in the future. For this reason, they might postpone expenditure until the future, leading to a fall in aggregate demand.

ii The economy will always return to potential ( $Y=Y_n$ ) output. When  $Y < Y_n$ , price will fall and the SRAS curve will shift downward.



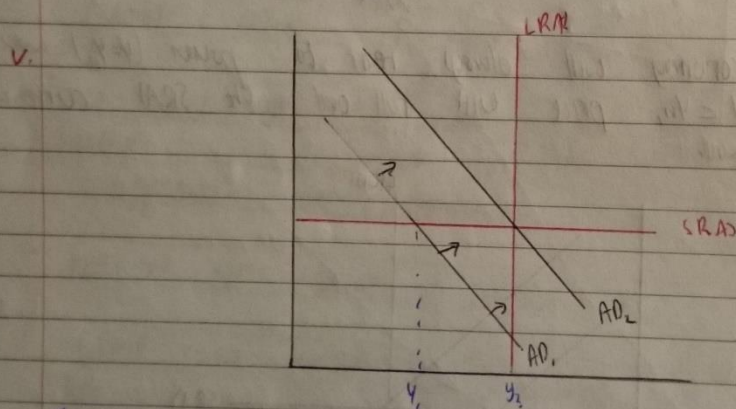
Since AD shifted leftward, SRAS will drop over time until the economy forms a new equilibrium with  $AD_2$ ,  $SRAS_2$ , and LRAS.

iii. Taylor rule:  $i^* = y + \pi + 0.5(\pi - \pi^*) + 0.5(y - y_n)$

$y = \text{constant}$      $\pi = \text{inflation}$      $\pi^* = \text{inflation target}$

If output is below potential ( $y - y_n < 0$ ), the Taylor rule dictates that the central bank should lower interest rate: by reducing the cost of borrowing, aggregate demand should rise to clear the output gap.

**Taylor rule:** monetary policy rule that stipulates how much the central bank should change its nominal interest rate in response to changes in inflation, output or other economic conditions.



- The sharp increase in money here came during the recession
- If the economy starts off in a recession, the central bank will likely expand the money supply to shift  $AD_1$  to  $AD_2$  and  $y_1$  to  $y_2$ .
- It is supposed to stimulate a higher AD