

## Classical Growth theory

1. Mercantilism: Wealth is limited. Validated idea of colonisation. Validate capture of wealth in a way.
2. Adam Smith : -Wealth is unlimited. Gold silver aren't the only measure of wealth.
  - Free market eco starts.
  - There is a production function in any society
  - There is also a consumption function
  - Invisible Hand concept of price (self regulation)
  - No government regulation
3. Market is a platform that hosts buying and selling of goods and services. It defines P, Q.
4. Doctrine of CGT:
  - Laissez faire: Let there be freedom
  - High production and consumption
  - Generate eco growth
5.  $Y = f(K, L, T)$  <-- Production function
6. Measure of National wealth in Adam Smith view: "the amount labor commanded".  
e.g. 100 dollar goods produced and  $w = 5$  dollar. so, 20 units of labor can be commanded
7. National wealth in a broad sense is the total produce.

### Smith's Methodology:

1. Increasing returns to scale: Output is greater than the amount invested
2. IRS is the reason behind economic growth
3. L and K increases --> Y increases higher comparatively.
4. With T increase, efficiency increases. This also leads to growth
5. Promotion of foreign trade is thus helpful because it allows more L and K to be used. So IRS helps here.  
Also it helps in cross pollination of ideas
6. IRS works because:
  - Incentive to maximize profits
  - So capital is accumulated
  - This gives rise to specialisation of labor force to perform better in particular tasks.
  - Thus greater output per unit of investment
  - In essence it's the technology that is behind production which constantly gets improved which finally leads to IRS
  - Hence, IRS works in an industrial society. Not in an agrarian society.
7. Capital Accumulation: Essentially investment. Do business -> save and invest further to acquire more capital -> grow.
8. Investment in new tech requires specialisation and further development in tech.
9. Potential deterrents of growth:
  - insufficient labor supply (unlikely)
  - exhaustion of natural resources
  - decline in motive of capital accumulation (less savings because of low profits)
    - +due to higher wages
    - +competition among capitalists (so low profits)
10. He still believed that new investment opportunities would always emerge which would stimulate profits

David Ricardo

1. Major Findings:

- profits inversely proportional to wages
- Rent tends to increase as population grows
- Comparative advantage theory

2. Production Function:

- Has DRS region also. (e.g. Fixed amount of land. So as capital accumulates, population increases and thus productivity of land decreases. i.e. Fertile lands would be exhausted)
- MP of labor or capital = MC criteria should be satisfied for maximizing profits
- Hence after some time, stagnation results and no incentive to invest more.
- However, this can be overcome with technological advancements.

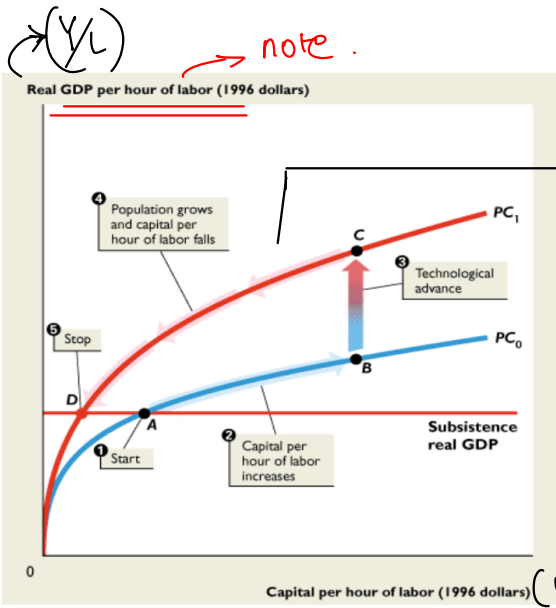
3. According to Adam Smith, capital accumulation and Tech advancements went hand in hand. But that's not true. They are independent. That's the reason why Adam Smith didn't consider DRS in his production function.

4. In developing countries, population needs to be controlled.

$K^+ \rightarrow w^+, L(\text{demand})^+ \rightarrow \text{Population}^+ (\text{Labor supply})$   
 $\rightarrow w^- (\text{back to subsistence}) \rightarrow \text{Population still grows} \rightarrow \text{profit}^+ \rightarrow \text{Investment}^+ \rightarrow K^+$

So, this cycle repeats, and  $K^+$  and  $L_s$  (labor supply)  
Thus, capital accumulation causes population to grow.  
This is how there is a periodic equilibrium reaching.  
The population growth would put more pressure on the lands and this would cause slowdown.

1. With an increase in population, there is increased demand for food which means demand for land increases.
2. Overtime, once the fertile lands are exhausted, less and less fertile land is brought under-cultivation (marginal land).
3. Now agricultural production reaches a stage where for every unit invested in it, less and less units of output are produced (DRS).
4. This implies that the cost of food increases as a result of which, wages increase (below which labour will not be able to reproduce itself)
5. This means that the rate of producers profit declines and when this happens continually, it reaches a point where the incentive to invest is lost. This results in a stationary stage.

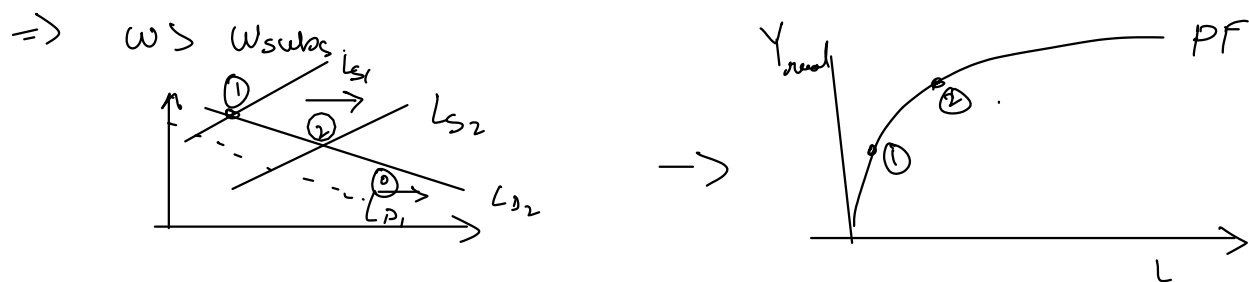


As  $L_s \uparrow \Rightarrow w \downarrow$   
 $w \downarrow \Rightarrow L_D \uparrow \Rightarrow L_{\text{employed}} \uparrow$   
Hence,  $\frac{K}{L} = \frac{K}{L_{\text{employed}}} \downarrow$

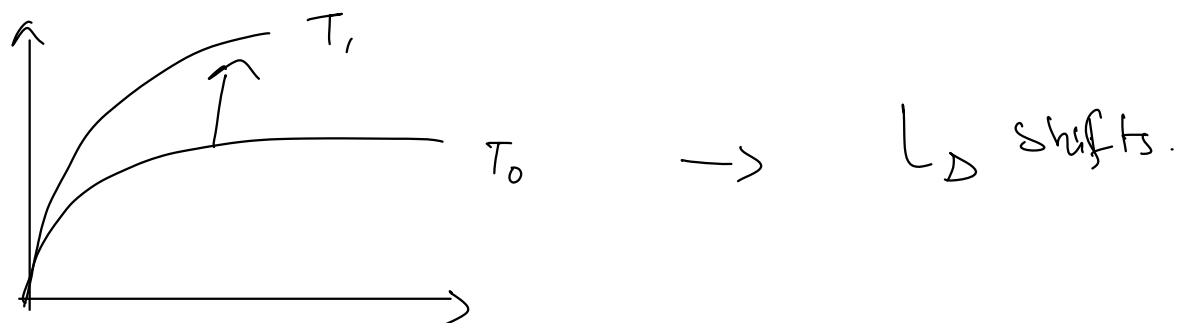
Also,  $\frac{Y_{\text{real}}}{L} \downarrow$  until wages go back to the subsistence level. (Note:  $Y_{\text{real}}$  still  $\uparrow$ )  
After this point,  $L$  can't be increased further as the real gdp ( $Y_{\text{real}}$ ) would start decreasing.

How wealth can be created:-

Capital Accumulation. As  $K \uparrow \rightarrow L_D \uparrow \rightarrow w \uparrow$ .



Along with this, Technological shift also plays a role.



$(K, T) \uparrow \rightarrow L_D \uparrow \rightarrow w \uparrow \rightarrow L_S \uparrow \rightarrow Y_{real} \uparrow$

Labor productivity  $\left(\frac{K}{L}\right)$  also plays a role in  $\uparrow Y_{real}$

As  $\left(\frac{K}{L}\right) \uparrow \rightarrow \frac{Y_{real}}{L} \uparrow \rightarrow w \uparrow \rightarrow \dots$

Malthusian:

1. Population increases in GP, and food increases in AP. Hence preventive measures are required.
2. Consumption should be there for economic growth. Only supplying in the market won't create its own demand. e.g. Japan. Extra savings is a deterrent to growth.
3. Concept of mutuality. Sectors are dependent on one another for growth and survival. Limited effective demand can stall growth in the sectors. And any one sector could result in inhibiting growth of other sectors.

$Y = R + W$ ( $Y$ = National Income; & $R$ = profits and $W$ = wages)	How?
$R = Y - W$	$I$ = Investments, $C_c$ = Consumption by capitalists $C_w$ = consumption by workers
$R = (I + C_c + C_w) - C_w,$ $W = C_w$ since workers spend close to all their wages on consumption.	
$R = I + C_c$ (shows that profits depend on Investments and Consumption expenditure)	