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- ∴ If there is an increase in labour supply, then ~~t~~ the eq. can be attained again at new employment level greater than the previous case.

- Even in the new eq. position, profit will be maximized for the firm, instead the profit will increase as output has increased.

Example:

~~Or~~	N	Y	W	P	$MPP_L = W/P$	M	V.
Original eq.	200	600	4.00	1.00	4.00	150	4
	↓ Inc.	↓ Inc.	↓ dec.	↓ dec.	↓ dec.	↓ same	↓ same
New eq.	300	800	2.25	0.75	3.00	150	4.

- Output increases less than proportionately wrt input because we are considering ~~diministig~~ diminishing MPP_L.

$$MV = PY$$
$$600 = (600)(1)$$
$$600 = (800)(0.75)$$

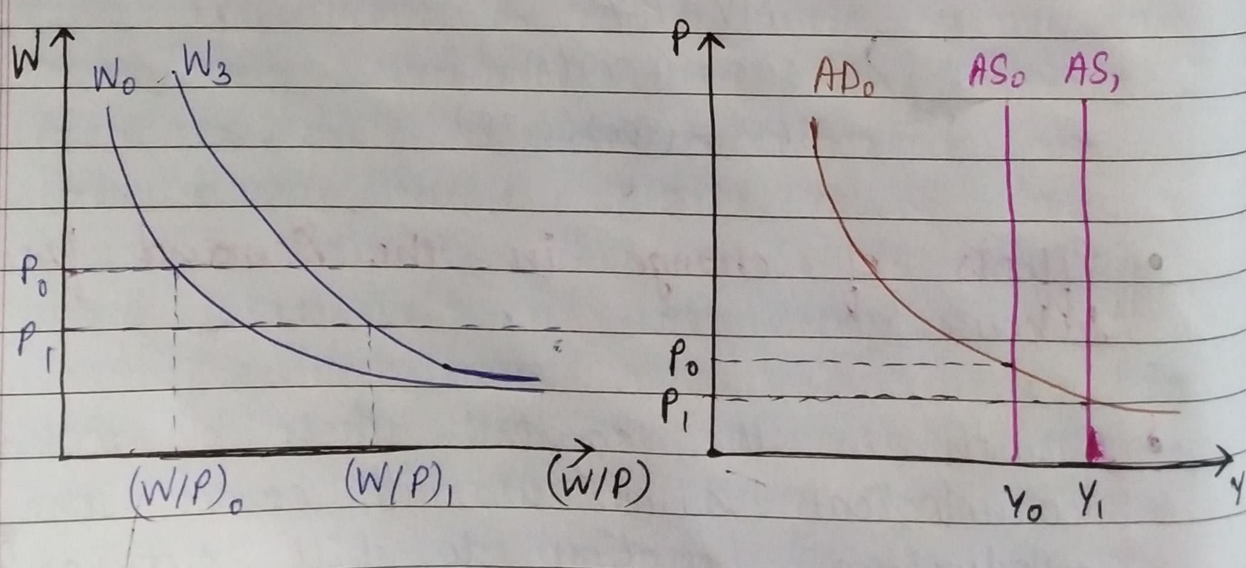
- Effects of change in the Demand for labour

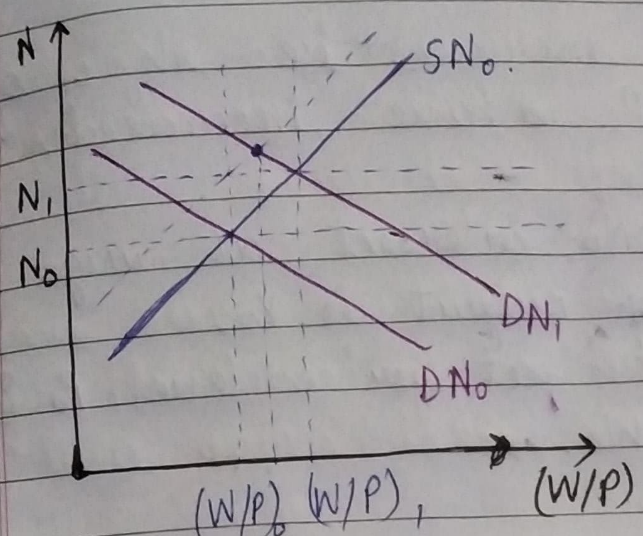
- Growth in the capital stock or ~~techno~~ technological advances will cause the production function to shift outward over time.

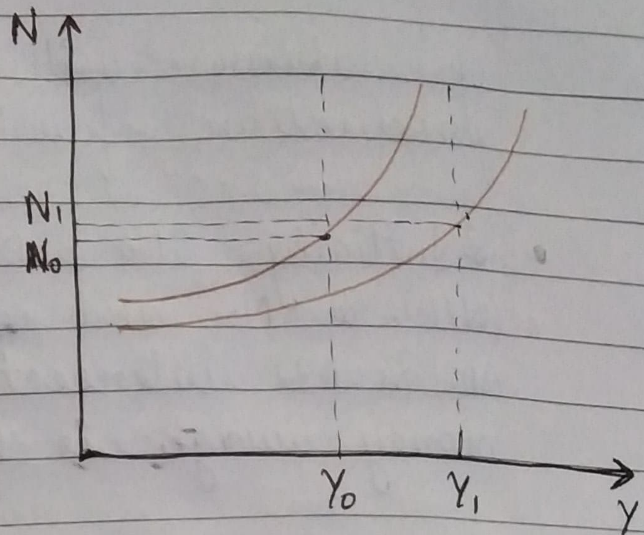
★ Basic propositions

- The gradual rise in the real wage or standard of living is the resultant effect of the gradual outward shift in the production function. The gradual rise in the real wage over the long run may occur if the growth in capital and the rate of technological advancement exceed the rate of growth in the labour force.

- The long run growth of output leads to of falling price level unless accompanied by an expansion in the money supply. Therefore, money supply must expand to avoid what otherwise must be a gradually falling price.







- A ~~of~~ particular production func^n curve is corresponding to a particular state of technology and fixed capital. But if there is some technological advancement then the same amount of labour would be able to produce more output ∴ production func^n will shift upwards.
- And if the same amount of labour is able to produce more output, then the demand for labour will increase & demand curve for labour will shift towards right.
- A particular demand curve for labour is based on a particular production func^n ∴ if production func^n changes then the demand curve for labour will change.
- As the production function shifts, MP_L has increased i.e. output produced per unit

of labour will increase i.e. slope of production func^n have increased.

- Initially, SN_0 & DN_0 intersect at wage rate $(W/P)_0$ & N_0 and eq. output is Y_0.
AD_0 & AS_0 intersect at price level P_0 & money wage is W_0.

- The new demand curve DN_1 intersects the supply curve at wage rate $(W/P)_1$ i.e. demand has increased given supply then the wage rate increases. ∴ amount of employment increases from N_0 to N_1 ~~correspondin~~ corresponding to the increased wage rate $(W/P)_1$.

- New eq. employment is N_1 and it is also full employment output (Y_1).

- As the employment increases from Y_0 to Y_1, price decreases from P_0 to P_1. If price decreases from P_0 to P_1 with money wage remaining constant then real wage will increase. But as ~~deman~~ demand for labour has risen, employers of labour compete among themselves to employ more labour but as supply is constant therefore, suppliers are not willing to supply more, so as a result, the suppliers of labour would be in a position to bargain for higher money

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wage, ∴ money wage will also increase.

- ∴ the combined effect of increased money wage (due to increased demand & same supply) & decreased price level (due to increase in supply given demand) will be that wage rate will rise from $(W/P)_0$ to $(W/P)_1$.

- ∴ ~~the~~ Money wage curve will shift towards right & will become W_3.

- ∴ If demand of labour increases, ~~or~~ eq. output rises, eq. employment rises & there is a fall in price. Then there is increased money which will cause higher real wage to prevail in the economy.

- If the supply of labour also increases corresponding to the demand of labour then the rise in real wage will be less & the change in price levels will also be different.

- As the real wage increases, standard of living increases. ∴ As production func^n shifts outwards or MPL rises, then the standard of living rises.

- If there is increase in labour force i.e. increase in supply of labour along with technological advancement i.e. increase in demand for labour then it is not necessary that the real wage will rise.

- If the supply of labour rises ~~prop~~ proportionally with the demand of labour then the real wage will remain constant.

- In order for living standard to rise, real wage should rise, ∴ increase in technological advancement & corresponding increase in demand for labour should be greater than that of increase in supply of labour.

- Higher is the technological advancement, higher is the demand for labour & if supply of labour is not as much as the demand for labour, price of labour will rise.

- This case is possible only in long run as the state of technology can change only in the long run.

- If along with the increase in output i.e. Y_1, there is a corresponding increase in money supply, then the price level will fall. And the fall in price level brings in deflationary trends in the economy.

- ~~If~~ Inflation: Continuous rise in price level.
- Deflation: Continuous fall in price level.
- Inflation is always preferred over deflation.
- Deflation is growth-retarding. Profit seeking producers will not produce more, therefore they will not employ more ∴ there will be a fall in employment, income and price level, etc. This is the deflationary trend.

Example:

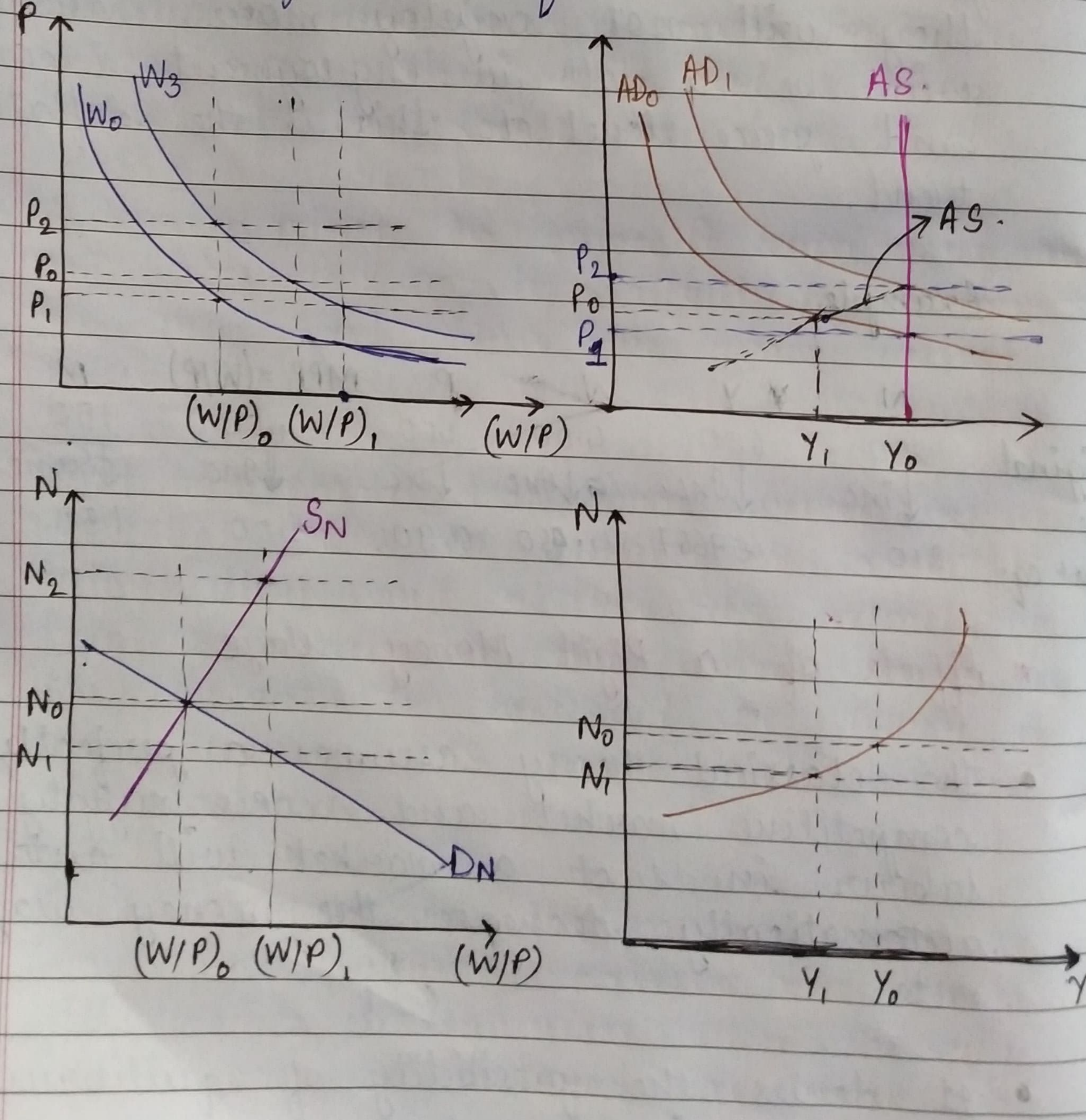
	N	Y	W	P	$MPP_L = (W/P)$	M	V
Original eq.	200	600	4.00	1.00	4.00	150	4
	↓ inc.	↓ Inc.	↓ Inc.	↓ Dec.	↓ Inc.	↓ Same	↓ Same
New eq.	210	~~66~~ 667	4.450	0.90	5.00	150	4

* Effects of a Rigid Money Wage

- The classical theory assumes a perfectly competitive market and excess supply of labour in such a market will ~~auto~~ automatically decrease the money wage rate.
- It denies the possibility of equilibrium

with unemployment.

- It is based on the assumption that the money wage was flexible.
- If money wage is rigid, ~~un~~ unemployment is the inevitable outcome.
- Money wage rigidity is common when there is presence of labour unions.



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- Initially eq. ~~wage~~ ~~is~~ real wage is $(W/P)_0$, employment is N_0 & price is P_1.

- Money wage can be increased but it cannot be decreased. So money wage ~~co~~ curve can shift towards right.

- Assume that money wage rises to W_3 from W_0, therefore real wage will increase. With increased real wage, owners of labour will be willing to supply more labour ∴ supply of labour will increase.

- At $(W/P)_1$ real wage, demand for labour is N_1 but supply is N_2.

- ~~E~~ Employment in an economy is determined by the ~~de~~ demand of labour & rather than supply of labour.

- ∴ Unemployment at real wage $(W/P)_1$
  $= N_2 - N_1$

- Amount of output will come down from Y_0 to Y_1, but the price can remain constant. If money wage is increased ~~corr~~ corresponding to the change in real wage, then the price will remain unchanged. ∴ the cost of labour i.e. the real wage ~~is~~ has risen. ∴ firms will produce less amount of output i.e. $Y_1 < Y_0$

- The AS curve is a vertical straight line in classical theory which is based on the assumption that there is diminishing MPP_L & the wage is flexible.

- But in this case, wage has become rigid. Therefore, when there is diminishing MPP_L & the money wage is rigid, producers will supply more only when price rises, they will not supply more if the price is same.

- ∴ Corresponding to price P_0, producers are not able to supply output Y_0 anymore. as they did when the wages were flexible.

- ∴ At increased real wage, producers will not be able to produce Y_0 amount of output. They will reduce the output, which implies lower is the price, lower is the output to be sold. i.e. lower is the supply. ∴ AS curve will become +vely sloped.

- With increase in the money wage, real wage rises which causes unemployment, ∴ if price also rises then the original ~~eq~~ eq. can be restored as real wage will remain same. ∴ If W is increasing, P should also increase.

- In order for P to increase, money supply should increase.

- Therefore, when supply is increased, AD curve shifts from AD_0 to AD_1, thus, increasing the price level to P_2 which on the curve ~~to~~ W_3 will ~~sto~~ restore the real wage to $(W/P)_0$.

★ Example:

	N	Y	W	P	$MPP_L = W/P$	M	V	S_L	D_L	u
Original eq.	200	600	4.00	1.00	4.00	150	4	200	200	0
↓	↓dec.	↓dec.	↓Inc.	↓Inc.	↓Inc.	↓same	↓same	↓inc.	↓dec.	
New eq.	180	545	4.80	1.10	4.36	150	4	204	180	24

- ∴ We can conclude that if money wage is rigid, then it will cause unemployment.

- S_L → Supply of labour

- D_L → Demand of labour

- u → unemployment.

W: 4.00 → 4.80

- ∴ Some adjustment inc. in price i.e. 1.00 → 1.10.
(P_0)

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- Price will have some upward revision, because of the decrease in output.

- Higher is the employment, lower is the MPP_L. In this case employment is decreasing, ∴ MPP_L will rise.

- Due to wage rigidity, demand for output has become equal to supply output where demand for labour is not equal to supply of labour.

- At $Y = 600$ (full employment output)
  $AS = AD$ & $S_L = D_L$
  But at $Y = 545$, $AS = AD$ but $S_L \neq D_L$.
  (Under employment eq.).

* Monetary Policy and Full Employment

- In the classical scheme, if the money wage is held artificially above the level necessary for full employment and appropriate expansion of the money supply may be an antidote.

- With a rigid money wage the rise in price reduces the real wage and provides the profit incentive for employers to expand employment and output towards the full employment level.

- Therefore, some appropriate expansion in the money supply is sufficient both to raise P in the level that reduces real wage to the full employment equilibrium level and to provide the increase in AD needed to purchase the full employment output at that price level.

Example:

	N	Y	W	P	$MPP_L = W/P$	M	V	S_L	D_L	U
Original eq.	200	600	4.00	1	4	150	4	200	200	0
New eq.	180	545	4.8	1.1	4.36	150	4	204	180	24
Final eq.	200	600	4.8	1.2	4.00	180	4	200	200	0