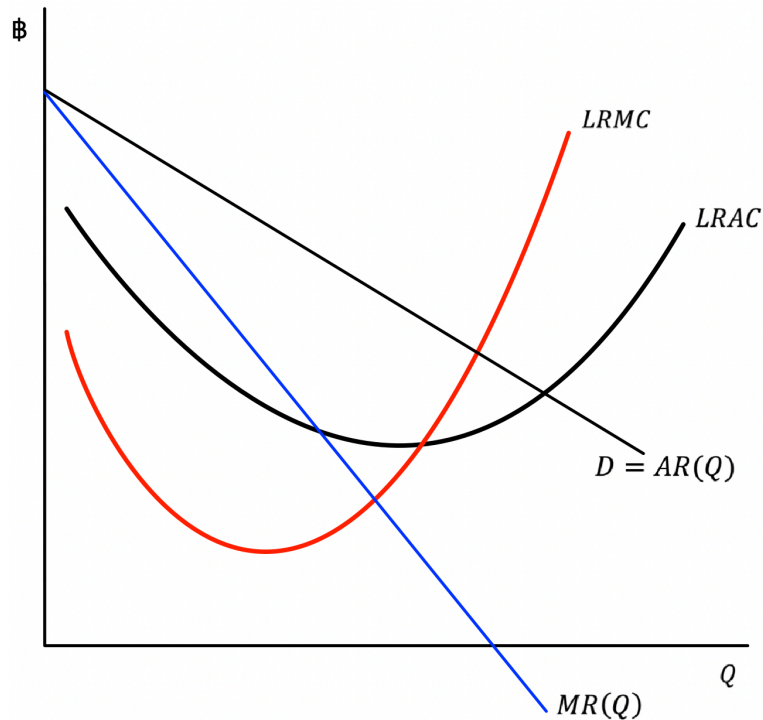


Chapter 21 Monopoly in Long Run

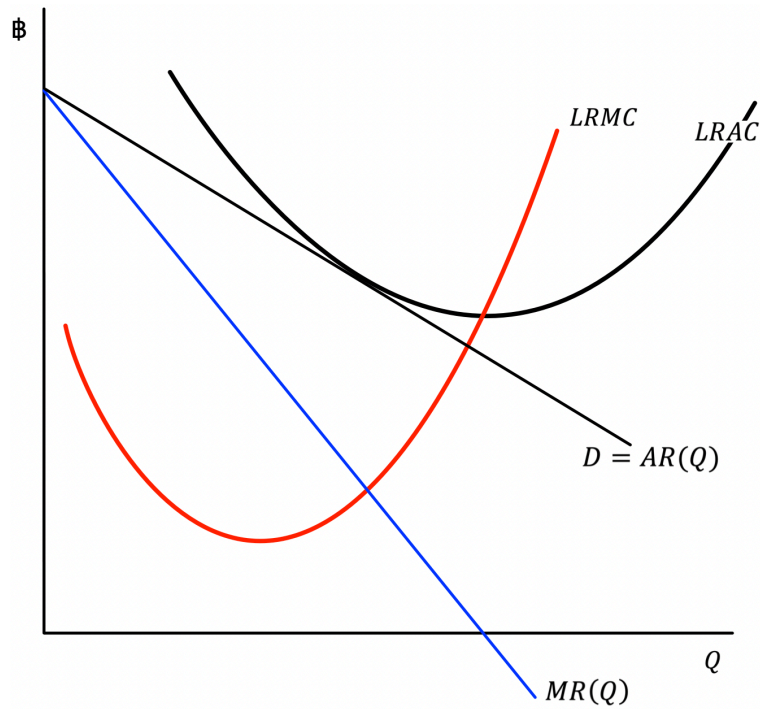
Equilibrium Conditions in Long Run: For a firm to maximize profit at Q^* if

1) $MR(Q^*) = LRMC(Q^*)$

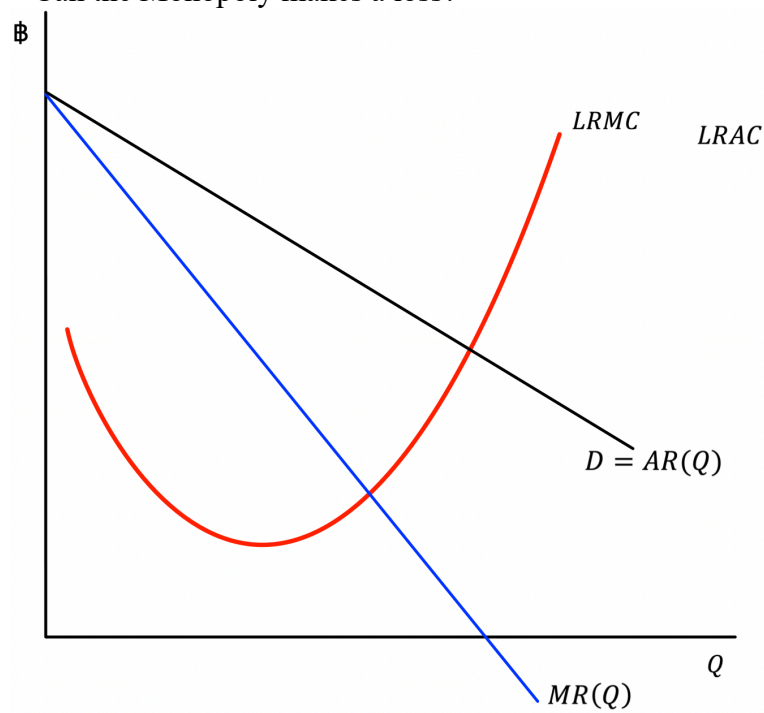
2) *slope of $MR(Q^*) < slope of LRMC(Q^*)$.*



- The equilibrium price is
- The equilibrium quantity is
- The monopoly has profit =
- If the LR costs includes the opportunity cost of the monopoly, this profit is Excess Profit.
- At the equilibrium, there will be Deadweight Loss because at Q^* , $P^* > LRMC(Q^*)$.
- The monopoly will receive Normal Profit when Excess Profit = 0.



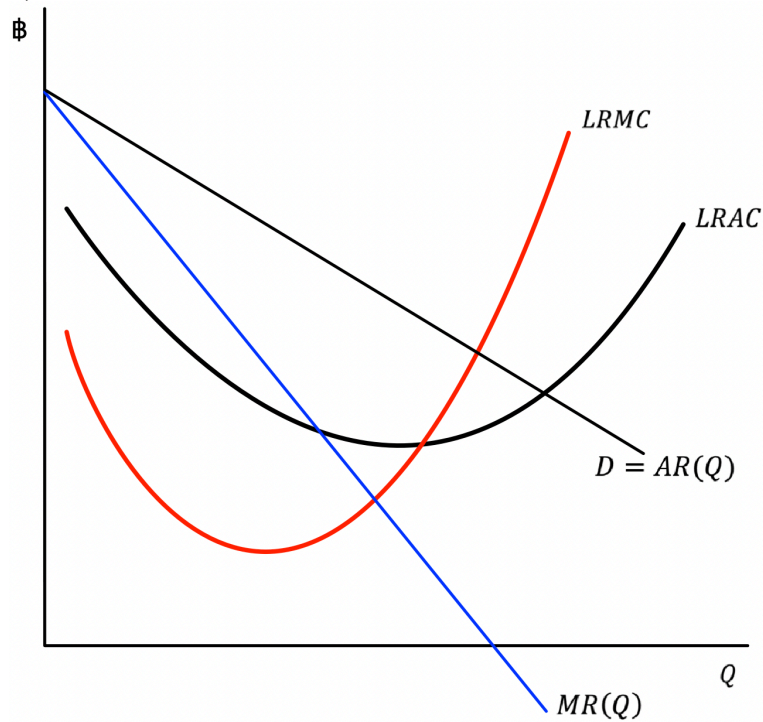
- Can the Monopoly makes a loss?



- Do you think the monopoly will shut down because of this loss in Long Run?

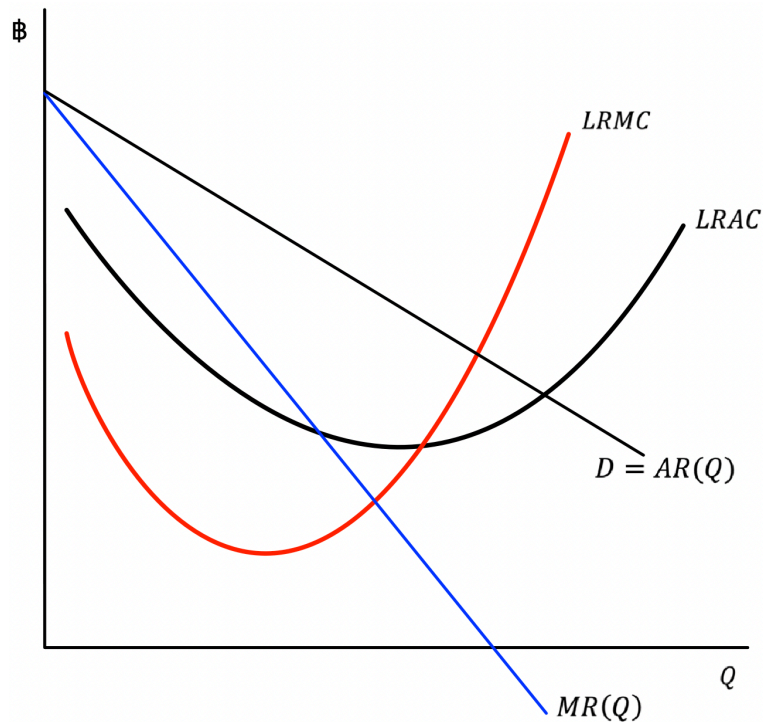
Changes in the Equilibrium of Monopoly in Long Run

1) Demand decreases



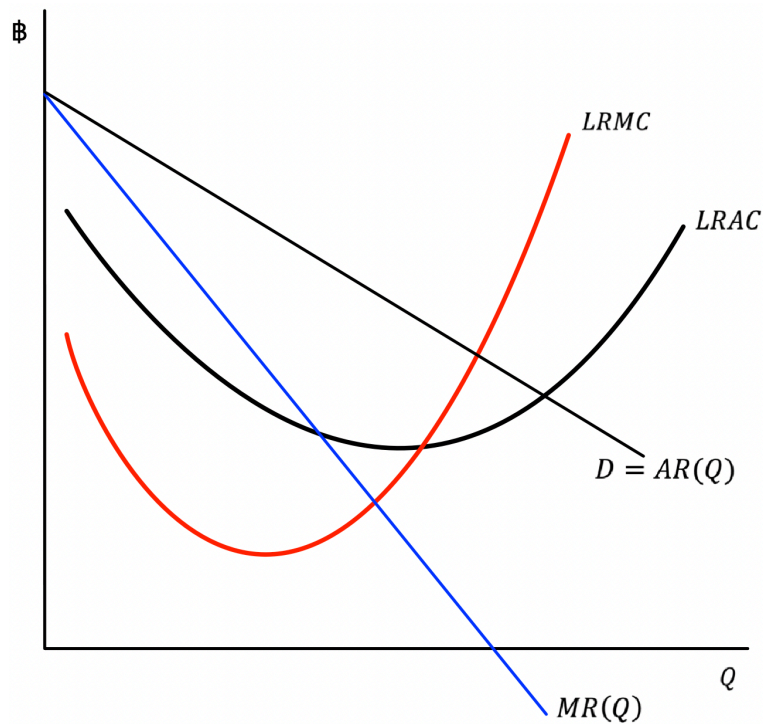
- Will the monopoly increase/decrease its price?
- Will the monopoly increase/decrease its quantity?
- Will the monopoly receive more/less profit?

2. License Fee the Monopoly has to pay in one single lump sum.



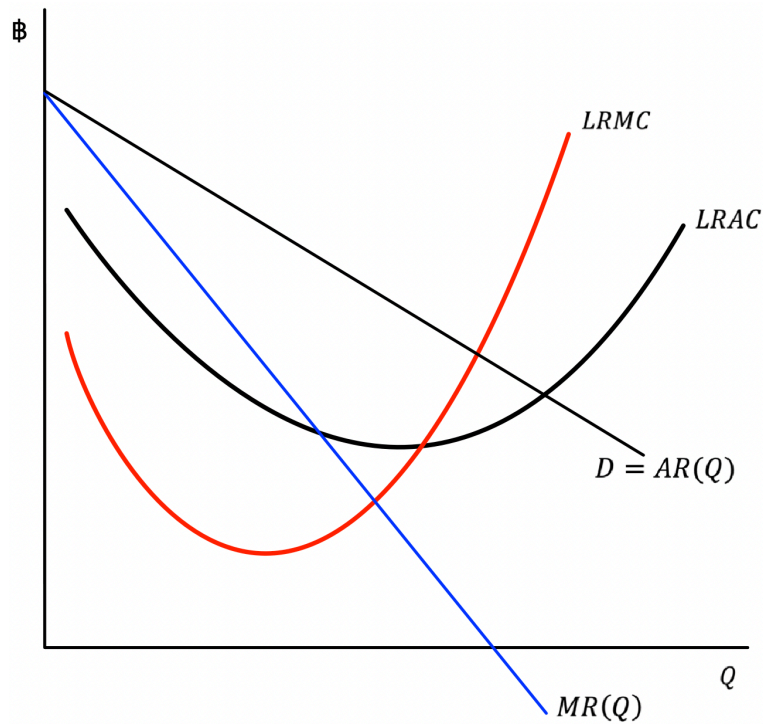
- Will the monopoly change its price and quantity?
- Will the monopoly receive more/less profit?

3) Tax the monopoly has to pay 10 bahts/unit. With the monopoly power, can the monopoly push all the tax burden upon the buyers?



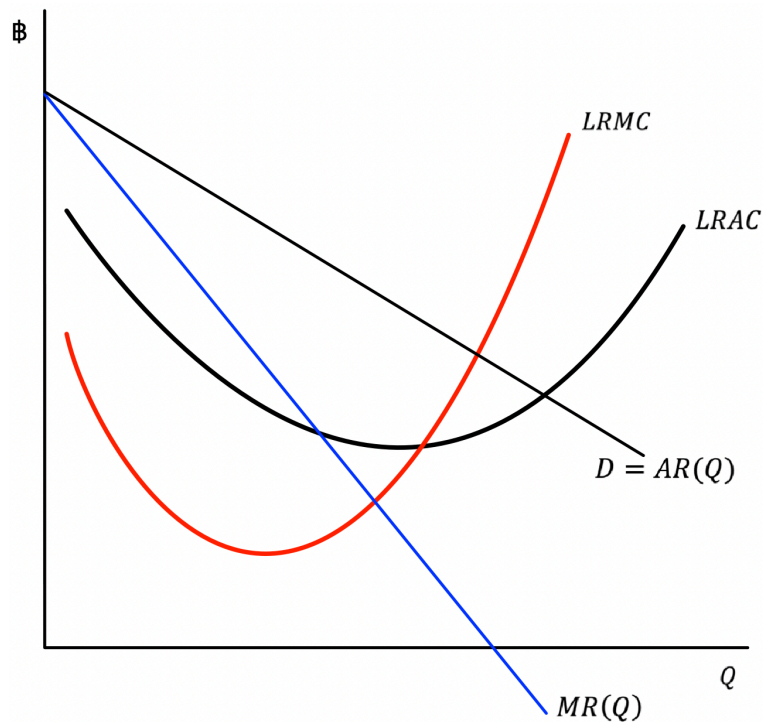
- Does the monopoly power allow the monopoly to set the price such that all the tax burden is on the buyers?
- Will the monopoly increase/decrease its price?
- Will the monopoly increase/decrease its quantity?
- Will the monopoly receive more/less profit?

4. The government gives a subsidy of 10 bahts/unit to the Monopoly.



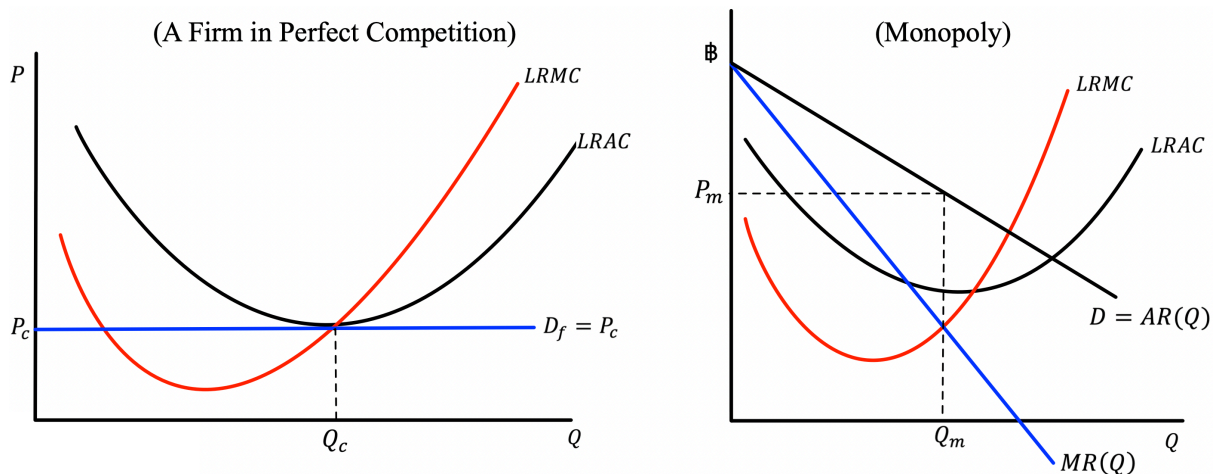
- With the monopoly power, can the monopoly keep all the subsidy benefit to himself?
- Will the monopoly increase/decrease its price?
- Will the monopoly increase/decrease its quantity?
- Will the monopoly receive more/less profit?
-

5. The government gives a lump sum subsidy of 10 m bahts to the Monopoly.



- Does this change the price and/or quantity the Monopoly wants to sell?
- Can the Monopoly keep all the subsidy benefit?
- Will the monopoly increase/decrease its price?
- Will the monopoly increase/decrease its quantity?
- Will the monopoly receive more/less profit?

Comparison of Perfect Competition and Monopoly

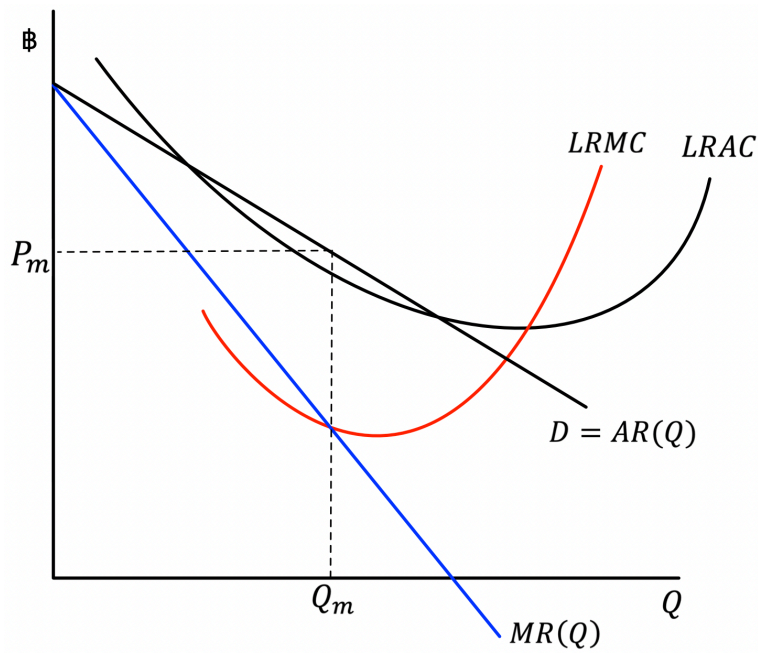
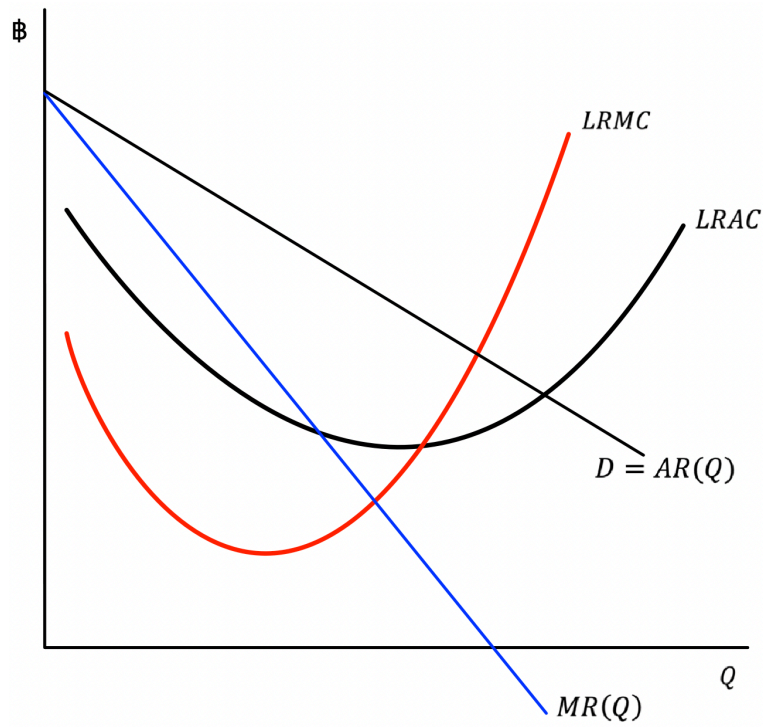


Perfect Competition	Monopoly
Equilibrium Conditions: (Q_c, P_c) 1. $P_c = LRM(Q_c) = LRAC(Q_c)$ 2. <i>slope of $LRM(Q_c) > 0$</i> ⇒ Normal Profit	Equilibrium Conditions: (Q_m, P_m) 1. $MR(Q_m) = LRM(Q_m)$ 2. <i>slope of $MR(Q_m) < \text{slope of } LRM(Q_m)$</i> . ⇒ Excess Profit
Efficiency of Resource Allocation: $P_c = LRM(Q_c)$ ⇒ No Deadweight Loss	Inefficiency of Resource Allocation: $P_m > LRM(Q_m)$ ⇒ Deadweight Loss
Efficiency in Production: $LRAC(Q_c)$ is at minimum at Q_c	Efficiency in Production: $LRAC(Q_m)$ is not at minimum at Q_m

Regulated Monopoly A monopoly can be forced to produce more to reduce its price and increase its production. As a consequence, the Deadweight Loss also is lessened.

Ideal Price $P_I = LRM(Q_I)$

Fair Price $P_F = LRAC(Q_F)$



Natural Monopoly due to Economies of Scale. The barrier to entry is due to large investment such that the production is in the range that $LRAC$ is decreasing.

