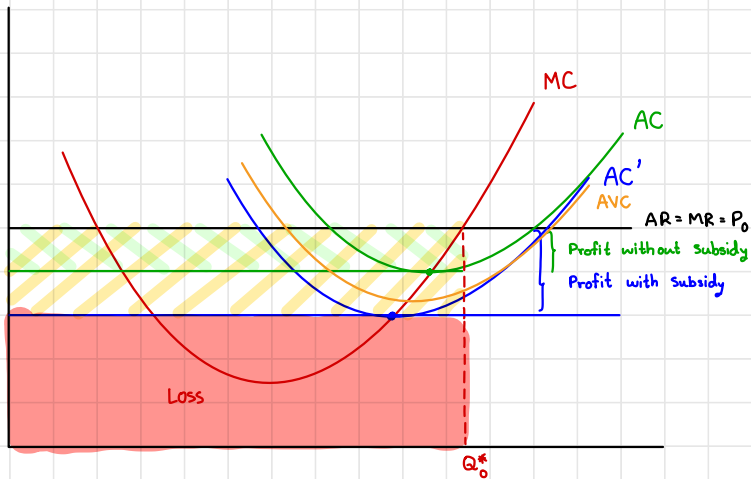


HW#11, Due May 6, 2021 Analyze the case the firm receives subsidy for the following two different cases to find out how the firm's quantity and profit change.

- a) The government gives a lump sum subsidy of 20,000 bahts to each firm.
- b) Suppose that the firm was producing 1,000 units and the government gives a subsidy of 20 bahts/unit so the total subsidy is also 20,000 bahts if the firm does not change its production of 1,000 units. Do you think, to maximize its profit with the subsidy of 20 bahts/unit, the firm will increase/decrease its production from 1,000 units? Does the firm receive higher profit? Does the firm receive more/less subsidy than 20,000 bahts?

a)



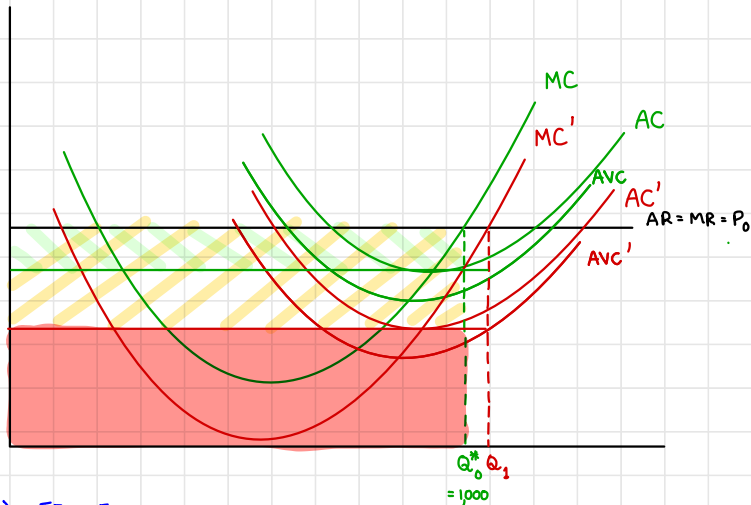
$$TC = TFC - 20,000 + TVC$$

$$\frac{TC'}{Q} = \frac{TFC'}{Q} + \frac{TVC}{Q}$$

$$AC' = AFC' + AVC$$

When firm get subsidy from government, Average total cost will reduce by 20,000 ₹ . So, the AC curve will move down vertically. Then when cost is less, the profit will increase.

b)



$$TC(Q) = TFC + TVC$$

$$TC'(Q) = TFC + TVC - 20(Q)$$

divide by Q $\int$

$$AC'(Q) = AFC + AVC'$$

ANS: When firm receive subsidy for 20 ₹ per unit, its AVC will decrease that also decrease AC as well. So it shifts down vertically. Then, to maximize profit, firm should produce more outputs at Q_1 . The firm will gain higher profit. The firm will definitely gain subsidy more than 20,000 ₹ .