

17. Correct. The answer is false. Assume a monopsonist uses one input (I) to produce one output (Q) according to the production function Q(I). Profits for a monopsonist are the price of output (P_Q) times the quantity of output Q(I) minus the price of the input P_I times the amount of input hired (I). Since the monopsonist has market power, the price of input I is a function P_I(I). Thus

$$\pi = P_Q * Q(I) - P_I(I) * I$$

$$\text{F.O.C. } P_Q(\partial Q / \partial I) - P_I - (\partial P_I / \partial I) * I \Rightarrow$$

$$P_Q(\partial Q / \partial I) = P_I + (\partial P_I / \partial I) * I \Rightarrow$$

The expression on the left is the marginal revenue product for the monopsonist. The expression on the right is the marginal factor cost or the cost of an extra factor. Then we can rewrite the above condition as

$$\text{MRP} = \text{MFC}$$

The monopsonist operates where marginal revenue product equals marginal factor cost not price. In addition S.O.C. are $\text{MRP}' < \text{MFC}'$, or marginal revenue product must have a smaller slope than marginal factor cost.

To better understand marginal factor cost and how it relates to supply or the marginal cost of producing the factor consider the following example. The monopsonist faces the supply curve $S = MC = 30 + 2Q$. Using this supply curve compute prices, total factor costs and marginal factor costs in the following table

I	P _I	TFC	MFC = ΔTFC / ΔI	MFC = P _I + (∂P _I / ∂I) * I
0	30	0		
1	32	32	32	32
2	34	68	36	34 + 2 * 1 = 36
3	36	108	40	36 + 2 * 2 = 40