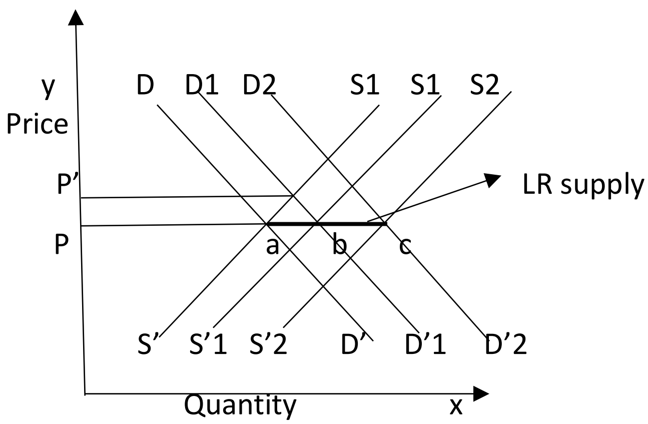
Answer on Question #88553, Economics / Microeconomics

QUESTION: Illustrate and explain using diagrams, the difference between long-run supply in a constant cost individual firm and industry and an increasing cost firm and industry.

A. LONG RUN SUPPLY WITH CONSTANT COST INDUSTRY



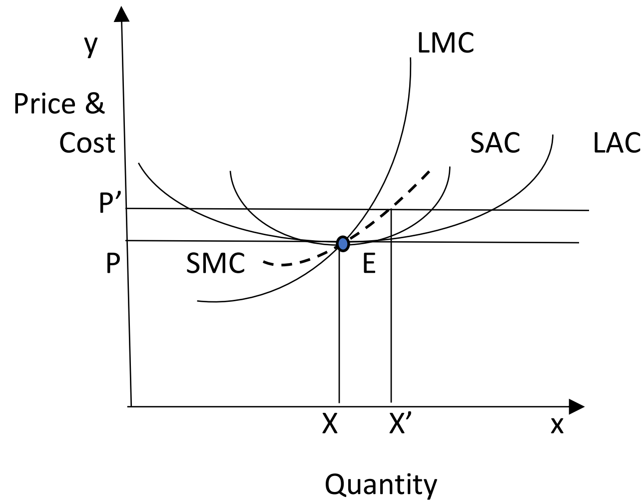
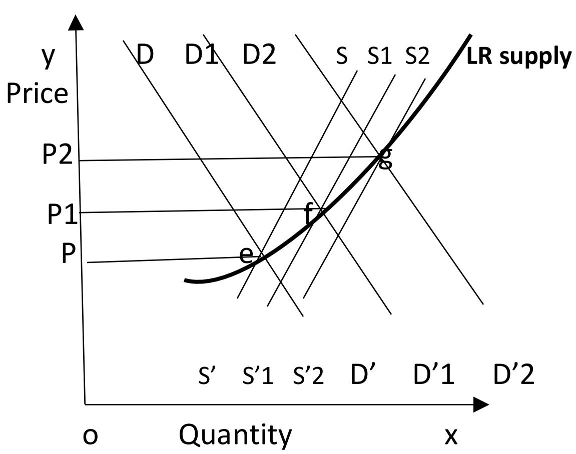


Fig. 1 - Constant cost industry **Fig.2 - firm**

B. LONG RUN SUPPLY WITH INCREASING COST INDUSTRY



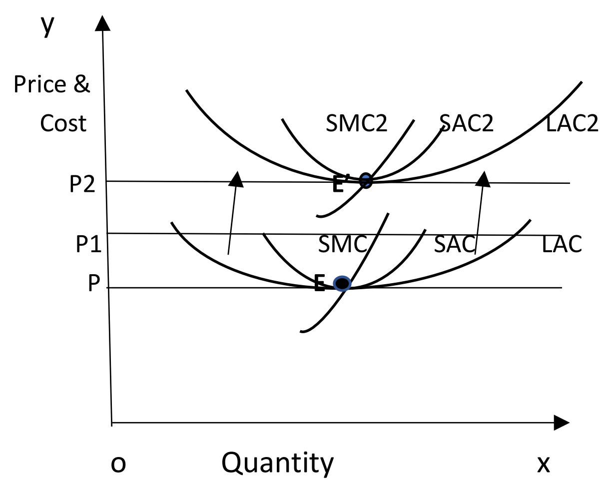


Fig. 3 - Increasing cost industry **Fig. 4 - firm**

EXPLANATION*:* ***A – LONG RUN SUPPLY OF A CONSTANT COST INDUSTRY***

Let us start from a situation where the demand curve or the price line of the firm is tangent to the long run (LAC) and short run average (SAC) total cost curves at their minimum points at E as shown in fig. 2. Now suppose the market demand shifts from DD' to D1D'1 as expressed in fig.1.

This will cause a short run increase in price from P to P’ in the industry and accordingly existing firms under perfectly competitive for scenario will also increase the output and operate above full capacity. This, consequently, will cause the shift in industry supply and this will cause movement along the market supply curve SS’. But, the situation will not last for long run and excess profits attract new entrants to the industry and therefore due to increased supply of factors of production will equate the derived demand for factors of production and factor prices will not increase and thus, the LAC curve of the firms as shown in fig. 2 will not shift upwards. The entry of the firms in the industry will continue further until the supply by all firms in the industry equalizes the increased demand and in turn the price will be restored to the original level P. ***Thus, the long run industry supply is a straight line (abc) in fig. 1 parallel to the X axis at the initial price level P.***

B- LONG RUN SUPPLY OF INCREASING COST INDUSTRY

As due to increased industry demand, the demand curve in Fig. 3 shifts from DD to D1D’1, the new short run level of prices will be established at P1. The firms will produce above the optimal capacity and the excess profit will in this case too will attract new firms to enter the industry. However, in this case the prices of factors increase as the demand expands and therefore the LAC curve of the firms shifts upwards to LAC2 as shown in Fig. 4. Since, supply will also increase due to new entrants, the supply curve of Industry will also shift to right. But the prices will not fall owing to increased factor prices even if the supply has expanded. The new equilibrium price will be higher than the original market price P. Therefore, the increase in supply shall be accompanied with establishment of market equilibria at increased prices even in the long run. ***And hence the supply curve of an increasing cost industry moves upwards and has a positive slope (efg) in fig 3***.