PART H: THE ANALYSIS OF SHORT RUN AND LONG RUN COST CURVES

Topic 12: THE DEVELOPMENT OF THE FIRM'S SHORT RUN COST CURVES

Reading: LR: Chapter 7 pp. 166 middle to 172 top.  
MP: Chapter 10 pp. 324 to 344 middle

Concept List:

short run production function with capital fixed and variable labour: another case of a one variable input model which involves diminishing marginal productivity and diminishing average productivity

the short run, with capital fixed [e.g., plant size and machinery in plant], the number of firms in the industry can not change [i.e., new firms can not enter the industry and existing firms can not leave the industry] and each firm’s plant size can not change

fixed costs in short run

variable costs in short run

total costs in short run: the sum of fixed costs and variable costs

the concept of normal profits, which constitutes a fixed cost [i.e., a factor reward for management] for a specific firm
the development of average fixed costs, average variable costs, average total costs for the firm

average total cost curve can be derived by taking the vertical summation of the average fixed cost curve and the average variable cost curve at each level of the firm’s output

the concept of marginal cost: the incremental cost of one additional unit of output

marginal cost depends only upon variable costs: marginal cost is independent of fixed costs

the u-shaped nature of the AVC curve depends upon increasing, constant and then decreasing APPL. When the APPL curve is increasing [through the specialization of labour], the AVC curve is forward falling; when the APPL curve is at a maximum, AVC is at a minimum and when AVC curve is rising, the APPL curve is falling. This assumes that the price of labour is unchanged.

short run cost curves are applicable to any form of competition e.g., pure competition, pure monopoly and oligopoly
in micro-economic analysis it is assumed that all firms in the industry have the identical cost curve, whether in the short run production period or the long run production period

**Topic 13: THE DEVELOPMENT OF THE FIRM'S LONG RUN COST CURVES**

**Reading:**  
**LR:** Chapter 8 pp. 181 to 194 top.  
**MP:** Chapter 10 pp. 344 bottom to 365 middle

**Note:** In MP on P359 under ‘Relations’ there is a mistake. The passage should read: “total, average and marginal cost are greater in the short run than in the long run”.

**Concept List:**

- the long run production period as an economic planning period: entrepreneurs wish to establish the most optimal plant size and are able to choose from an almost infinite list of possible plant sizes
- capital, along with labour, now becomes a variable input: there are no fixed costs in the long run
- number of firms in the industry is a variable in the long run: firms may enter or leave the industry in the long-run production period
- the plant size for each firm is also a variable in the long run: plant size may increase or decrease in the long-run production period
in the long run, all costs are variable costs i.e., fixed costs are a short run concept, thus there is only one average total cost curve for the firm in the long run

the development of the envelope planning curve, which becomes the long run average total cost curve

at each point on the long-run average total cost curve, a short run average total cost curve is tangent: this short run curve represents the plant size which would produce the specified output at the lowest average total cost in the short run

the long run marginal cost curve

the relationship between long run costs and the expansion path

increasing, constant and decreasing returns to scale correlated with the downward sloping part of the average total cost curve, the minimum point of the average total cost curve and the rising portion of the average total cost curve – assuming that the price of labour and the price of capital are fixed

the long run average total cost curve and the long run marginal cost curve apply to any firm in any form of competition i.e., to pure competition, pure monopoly, oligopoly and cartels