Webnote 153
Syllabus: Items 42 - 46

SYLLABUS REFERENCE 2.2 HL EXTENSION: Cost Curves: Short Run and Long Run Average Total Cost

What is the relationship in Economics between the following:

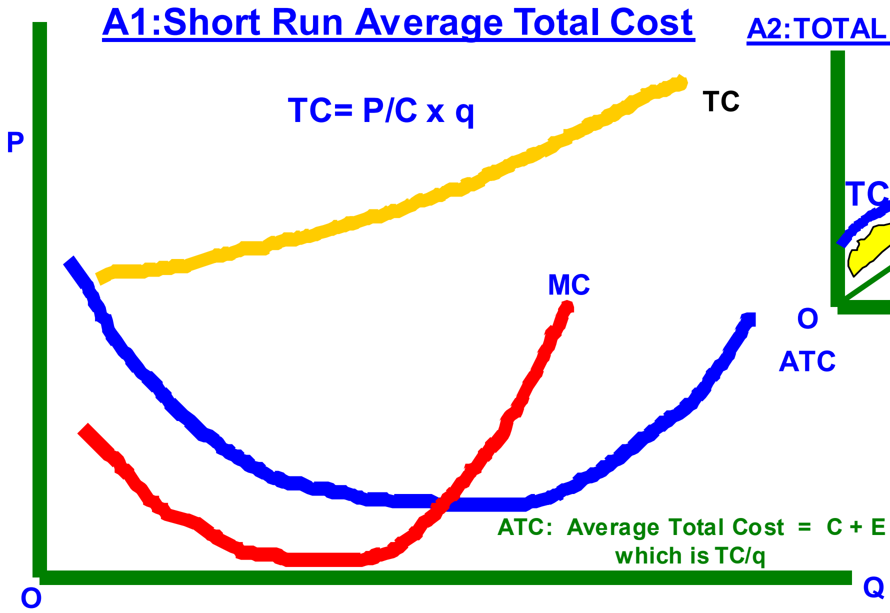
- Total
- Average
- Marginal

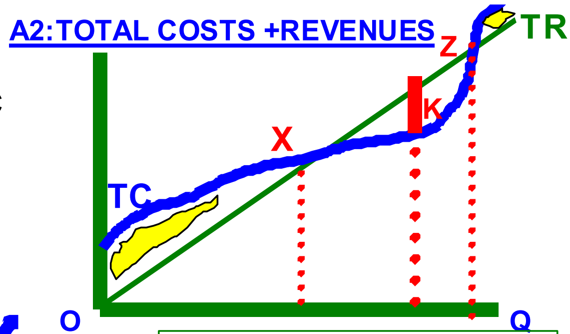
Note: marginal applies to revenue, cost and output etc

SHORT RUN AND LONG RUN

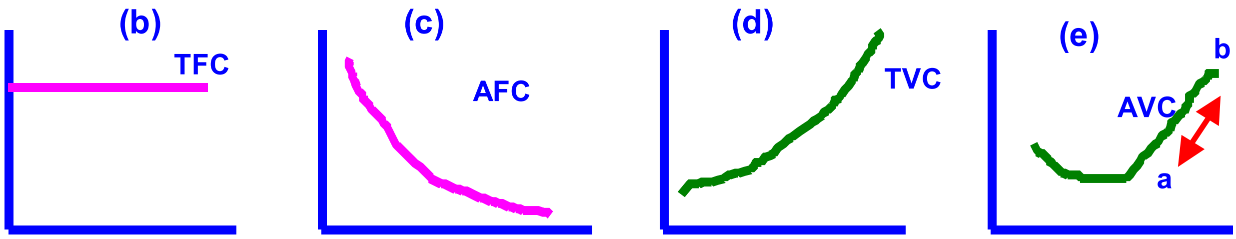
- Short run = at least one FoP is fixed. This allows for the existence of diminishing marginal returns of scale – see webnote 211 on diminishing marginal returns.
- Long run = all factors variable and therefore the firm can plan the ideal scale/size of operation

Note: the rise from a to b on diagram (e) is caused by diminishing marginal returns. This indicates inefficiency. Too many variable factors are being used with one fixed





X and Z = break even points
K = max profit quantity of production
shaded areas = economic loss



Every Firm must cover its AVC in the Short Run or it must shut down

Note:
The rise from a to b on diagram (e) above is caused by diminishing marginal returns. See webnote 211. This indicates inefficiency in the short run. Too many variable factors are being used with one fixed factor likely to be capital.

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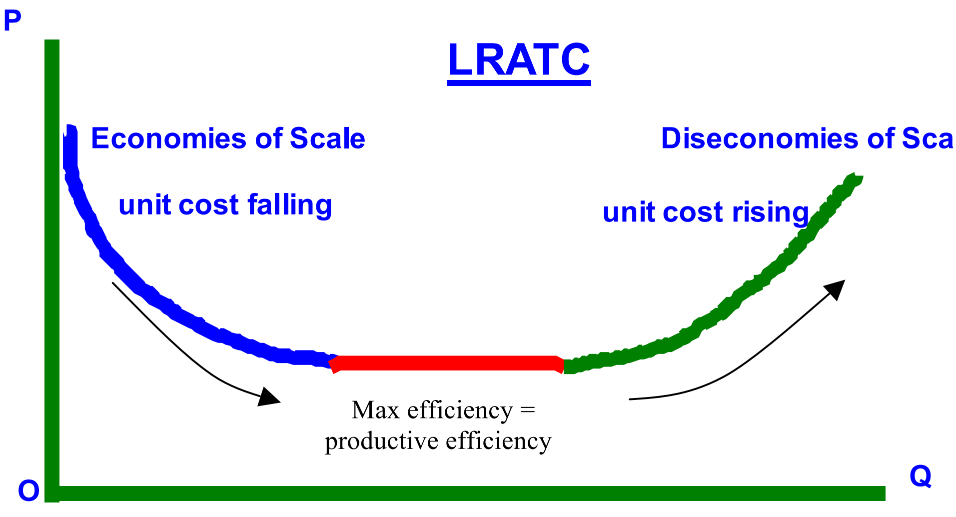
F: Long Run ATC Depends on Internal + External (DIS) Economies of Scale



Note: Growth does not necessarily bring lower cost
Note: no D.M.R. as all FoP's are variable in the long run
Note: see webnote 211 re increasing and decreasing returns to scale

Internal Economies of Scale
1. **Technical**
2. **Marketing**
3. **Managerial**
4. **Financial**
5. **R and D**

Internal Diseconomies of Scale
1. **Managerial**
2. **Technological**
3. **Labour**

External Economies of Scale
1. **Education and training**
2. **Infrastructure**
3. **Trade Journals/ publications / seminars**
4. **R and D**
5. **Supply firms may relocate**

External Diseconomies of Scale
1. **Labour shortages**
2. **Raw material shortages**
3. **Poor infrastructure**
4. **Government regulation / legislation**