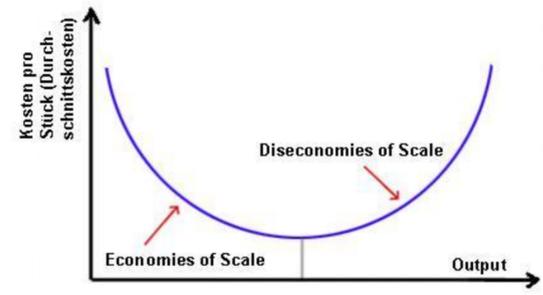




what is being exchanged is **operations performance** = **quality, speed, dependability, flexibility, cost**

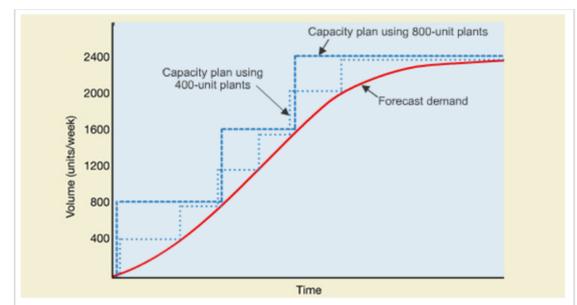
Network can't be designed but influenced and negotiated since some of the companies within the supply network are external firms



important = Demand forecast as input

Principle Economies of scale = All types of operation exhibit economy of scale effects where operating costs reduce as the scale of capacity increases

Principle Diseconomies of scale = Diseconomies of scale increase operating costs above a certain level of capacity resulting in a minimum cost level of capacity



Principle = Changing capacity in large units of capacity reduces the chance of achieving demand - capacity balance

Instead of building up "overcapacity" with high capacity tools, consider building up capacity in smaller steps (400 units or 800 units)

--> overcapacity = low capacity utilization --> higher unit costs

Supply network design
 Slack et al (2009) Chapter 3

3 questions

1 How should the supply network be shaped?

Operating principle= Reducing the number of suppliers can reduce transaction costs and enrich supplier relationships

Disintermediation = Cut out the middle man

Coopetition = Supplier, Customers, Competitors, complementors can work together --> Increase total value of supply network

Insourcing vs. Outsourcing = **Direction** (buy supplier or customer?), **Extent** (how far should the vertical integration be?), **Balance among stages** (exclusivity of the relationship --> supplier just supplies to 1 party)

Vertical integration or outsourcing? "Can we perform more effectively on the market?"

Outsourcing = Strategic importance needs to be considered

Offshoring = Obtain services, products etc. from companies in foreign countries

3 What capacity should each part of the network owned by the company have at any point in time?

2 Where should each part of the network owned by the company be located?

Decision of location **important** = cost and serving customers. Once done difficult to undo

2 reasons for relocating = 1. changes in demand, 2. changes in supply

5 criteria for evaluation

- Capital requirements
- Market factors
- Cost factors
- Future flexibility
- Risk factors

Scale of capacity

Capacity leads demand

Capacity lags demand = increase capacity utilization

Timing of capacity

Smoothing with inventory

to use overcapacity to meet undercapacity with inventories

Cost of inventory, Risk of obsolescence

$C = \text{Costs} = \text{Fixed cost} + \text{variable costs} \times \text{pieces}$

$R = \text{Revenue} = \text{pieces} \times \text{prices}$

$R - C = \text{Profit}$

Break even analysis