

# PRODUCTION PLANNING & CONTROL

## KEY CONCEPTS - WHAT ARE PRODUCTION RESPONSIBLE FOR:

Number of units of a specific product to be produced  
time intervals over which production will occur  
availability of equipment, materials and work force  
cost effective inventory and resource management.

## PRODUCTION AS A GOAL:

Resources are planned and used in the production process regardless of actual demand  
often based on economies of scale, where lower cost per item is presumed to generate product demand.

## PRODUCTION AS A MEANS:

resources are planned and used in the production process only because of product demand often based on economies of scope, where product demand has greater influence over production units and costs.

## ECONOMIES OF SCOPE VS. SCALE

### **Economies of scope production assumptions:**

responsive to demand  
flexible production plans  
variable cost per item  
smaller production runs  
increased total set up and change over costs  
lower product/inventory obsolescence  
minimized inventory carrying costs  
material is pulled through the production process as needed.



**ECONOMIES OF SCALE PRODUCTION ASSUMPTIONS:**

responsive to profit margin gains  
fixed production plans  
lower cost per item  
larger production runs  
less production set up and change over cost  
greater risk of product/inventory obsolescence  
higher inventory carrying costs  
material is pushed through the production process.

**ORDER DECOUPLING POINT**

How far does a customer order penetrate in the production process?

**PLANNING HIERARCHY**

Production Control Systems  
Formal production control systems for inventory include  
Economic Order Quantity (EOQ)  
Materials Requirements Planning (MRP)  
Just-in-Time concept (JIT)

**SUGGESTIONS:**

pull rather than push material through the production process  
produce nothing until it is needed  
reduce set up times  
reduce lot sizes  
try to move the order decoupling point to an early stage in the supply chain  
try to remove transaction (steps which add no value) from the process.

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