

**SOS POLITICAL SCIENCE AND PUBLIC ADMINISTRATION,**

**JIWAJI UNIVERSITY, GWALIOR**

**MBA HRD II SEM**

**PAPER - HRD 202**

**SUBJECT NAME: WAGES & SALARY ADMINISTRATION**

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**UNIT-V**

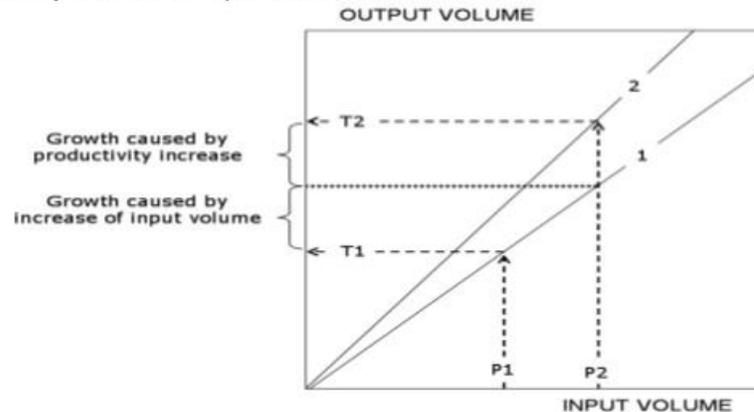
**TOPIC NAME: PRODUCTIVITY –**

**PRODUCTIVITY IMPROVEMENT MODELS**

**Productivity** in economics is usually measures as the ratio of what is produced (an aggregate output) to what is used in producing it (an aggregate input). Productivity is closely related to the measure of production efficiency. A **productivity model** is a measurement method which is used in practice for measuring productivity. A productivity model must be able to compute *Output / Input* when there are many different outputs and inputs.

# Productivity Model

- Economic growth is input dependent.
- Productivity increase is the production function.



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## Productivity – Productivity Improvement Models

The productivity improvement models are discussed in detail below:

### Model : 1. Material Based Measures:

This method includes material planning and control (MPC), purchasing, logistics, material storage and retrieval, source selection and procurement of quality material, waste elimination.

**It encompasses the following methods:**

- i. Material planning and control.
- ii. Material storage and retrieval.
- iii. Source selection and procurement of quality material.
- iv. Waste elimination.
- v. Recycling and reuse of waste materials.
- vi. Purchasing logistics.

**Model : 2. Process or Task Based Measures:**

Process based productivity is based on management style, communication in the organization, work culture, motivation, promotion group activities. Process based techniques include improvements in doing work like; process design and human factor engineering, to increase productivity; there are two main techniques (method Study and work measurement) of simplifying any task-

(a) Method Engineering is the systematic recording and critical examination of the present and the proposed way of doing work as a means of developing better economical, easier and efficient way of doing work and implementing it.

(b) Work Measurement is an application of technique designed to establish and time required by qualified worker to carry out specified tasks at defined level of performance. In short, measurement of time to do work.

### **Model : 3. Technology Based Measures:**

This included use of advanced and updated technology to increase productivity. It consist CAD/CAM/CIMS, Robotics, Laser technology, Modern maintenance technology, Energy technology, Flexible manufacturing system (FMS).

#### **(a) Computer Aided Design (CAD):**

CAD refers to design of products, processes or systems with the help of computers.

The impact of CAD on human productivity is significant. Speed of evaluation of alternative designs, Minimization of risk of functioning, and Error reductions are the advantages of CAD.

**(b) Computer Added Machining (CAM):**

CAM is very much useful to design and control the manufacturing. It helps to achieve the effectiveness in production system by line balancing. CAM helps in production planning and control (PPC), capacity requirements planning (CRP), manufacturing resources planning (MRP-II) and materials requirement planning (MRP) and automated inspection.

**(c) Computer Integrated Manufacturing (CIMS):**

Computer integrated manufacturing is characterized by automatic line balancing, machine loading (scheduling and sequencing), automatic inventory control and inspection. It includes robotics, modern maintenance techniques, energy technology, Flexible Manufacturing System (FMS).

**Model : 4. Product Based Measures:**

Productivity can be improved by improving product design, by improving the quality of parts of product.

**Productivity can be improved by taking following action regarding product:**

i. Value analysis and value engineering.

ii. Product diversification.

iii. Standardization and simplification.

iv. Reliability engineering.

v. Product mix and promotion.

**Model : 5. Employee or Labour Based Measure:**

Employee based method includes financial and non-financial incentives at individual and group level, employee promotion, job design, job enlargement, job enrichment and job rotation, worker participation in decision-making, Quality Circles (QC), Small Group Activities (SGA), personal development.

**It includes:**

- i. Financial and non-financial incentives at individual and group level.
- ii. Employee promotion.
- iii. Job design, job enlargement, job enrichment and job rotation.
- iv. Worker participation in decision-making.
- v. Quality circles (QC), small group activities (SGA).
- vi. Personal development.

**Model : 6. Management Based Measures:**

Management can increase productivity by taking the actions like; management technique, communication and promoting group activity, work culture and motivation.

**(a) Work Culture:**

Work culture is a combination of qualities in an organization and its employees that arise from what is generally regarded as appropriate ways to think and act.

Work cultures that mix of practices and ideologies arising from the interactions of people with their work environments have been shaped in all by diversity.

**(b) Motivation:**

To have motivated employees means increased productivity at work. To do this, offer rewards for milestones they achieve. If employees are rewarded, they will see their hard work paying off in tangible way i.e. productivity.

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