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Study of Theory of production

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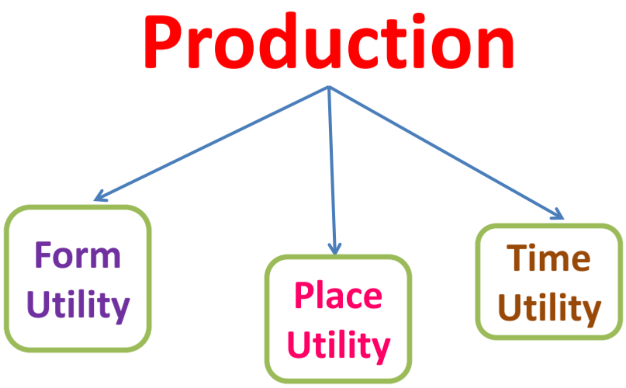
Abstract

The theory of production is an economic concept that attempts to explain the criteria by which a company chooses the quantity of each product it sells (its outputs or products) and the quantity of each type of labour, raw material, fixed capital good, etc., that it uses (its inputs or factors of production). The theory relies on several of economics' cornerstone concepts. Relationships between commodity prices and the prices (or wages or rents) of the productive factors used to produce them; "and relationships between the prices of commodities and productive factors, on the one hand, and the quantities of these commodities and productive factors, on the other hand, are all examples.

Key words: Theory, Production, Economics, Activity etc.

Introduction

Production may be thought of as any action that results in a physical object. Economically speaking, production refers to any activity taken to fulfil human needs and wants. Producing anything entails making something new or improving something already in existence.



Form Utility: Process of transforming raw materials into finished products with practical uses. The transformation of a log of wood into a table, or of a piece of iron into a piece of machinery, are two such examples.

Place Utility: moving resources from a less-than-ideal location to one where they may be put to better use.

Time Utility: Providing Access to Materials Outside of Their Typical Hours of Availability. Food grains, for instance, are stored until the following harvest season. Seasonal fruits are canned for year-round availability.

Factors of Production

Natural Resources

- **Land :** In economics, land refers to all of nature's free gifts, not only soil or the Earth's surface. This includes things like natural resources, soil fertility, water, air, and so on.

Human Resources

- **Labour :** Work, in this context, refers to any mental or physical exertion that results in the creation of a product or service. Labor in economics doesn't include work done for the sake of pleasure or love. Singing in front of one's friends, for instance, is not considered work because it is done voluntarily for enjoyment.
- **Capital**: A person's or a society's capital consists of the assets that are put to use in the creation of new forms of wealth. • It's a Flow Concept that involves a Stock Concept: Periodic Income. Man-made instruments of production, such as factories and dams, fall under this category.
- **Entrepreneur :** The entrepreneur gathers the necessary resources (land, labour, and capital), organises them into a workable whole, sets the production process in motion, and assumes any associated risks. Synonyms: The Manager, The Planner, The One Who Takes Chances.

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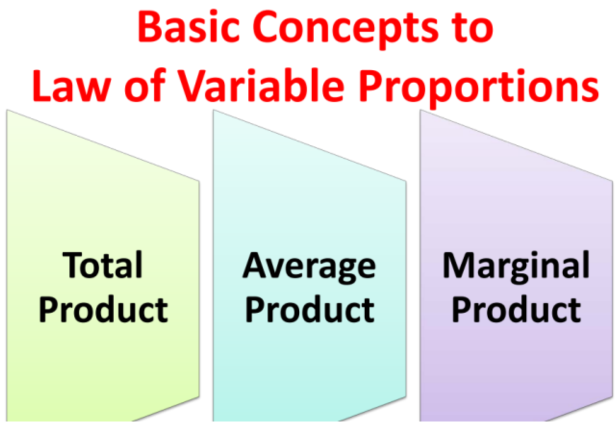

Average Product (AP)

Average Product is the Total Product per unit of the Variable Factor. i.e.

$$AP = \frac{\text{Total Product}}{\text{Units of Variable Factor}}$$

Marginal Product (MP)

Marginal product may be defined as the ratio of the change in total product to the change in the quantity of the variable factor. Marginal product is the value added to production from producing one more unit of output.

$$MP = TU_n - TU_{n-1}$$

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Product Schedule

Quantity of Labour	Total Product (TP)	Average Product (AP)	Marginal Product (MP)
(1)	(2)	(3)	(4)
1	100	100.0	100
2	210	105.0	110
3	330	110.0	120
4	430	107.5	100
5	520	104.0	90
6	600	100.0	80
7	670	95.7	70
8	720	90.0	50
9	750	83.3	30
10	760	76.0	10
11	740	67.2	-20

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Relationship Between AP & MP

- Derived from Total Product
- MP > AP, when AP rises as a result of an Increase in Quantity of Variable Input
- MP = AP, when AP is Maximum i.e. MP curve cuts the AP curve at its Maximum
- MP < AP, when AP falls as a result of a Decrease in Quantity of Variable Input

Law of Variable Proportions

- According to the Law of Variable Proportions, total output will increase if one resource's input is raised by equal increments per unit of time while the inputs of other resources are maintained constant, but above a certain threshold, the resulting Output Increased will become less and smaller.

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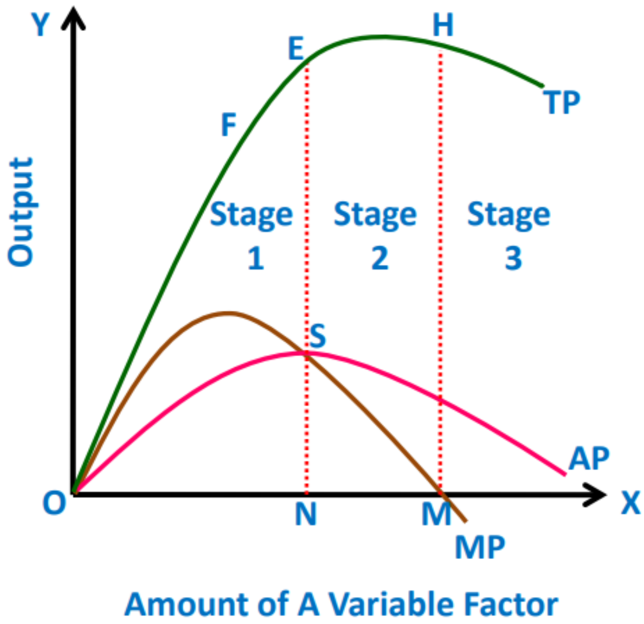
- According to the Law of Diminishing Returns, in a given State of Technology, a greater proportional increase in one Input over another Fixed Input will lead to greater overall output. However, once past a certain threshold, the additional output from the same addition of extra Inputs is likely to become Less & Less.

By: Samuleson



1st Stage (O to E) (MP > AP) Law of Increasing Returns

- **Total Product:** Initially it Increases at an Increasing Rate. Later at Diminishing Rate
- **Marginal Product :** Initially Increases & Reaches the Maximum Point. Then Starts Declining
- **Average Product :** Increases & Reaches its Maximum Point. Here AP=MP

2nd Stage (E to H) (MP < AP) Law of Diminishing Returns

- **Total Product :** Increases at Diminishing Rate & reaches its Maximum Point
- **Marginal Product :** Decreases & Becomes Zero at Point M.
- **Average Product :** After reaching its Maximum Point, begins to Decrease.

3rd Stage (Beyond H) Law of Negative Returns

- **Total Product**: Begins to Fall

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- **Marginal Product:** Becomes Negative
- **Average Product:** Continues to Diminish but remains Positive.

Conclusion

Production theory is a branch of economics that elucidates the guidelines that businesses must follow when deciding on factors like the quantity of a given good or service to sell, the quantity of that good or service to produce," and the quantity of the relevant inputs (such as fixed capital and human labour) to use in the production process. It specifies the linkages that hold commodity and factor prices, on the one hand, to the output of such goods and services, on the other. The result of production is anything that may be used by consumers. Adding value to people's lives is achieved via the production of goods and services. The inputs are transformed into the final products through this procedure.

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