# INTRODUCTION TO ECONOMICS

# LEARNING JOURNAL UNIT 3

***ECON 1580-01 INTRODUCTION TO ECONOMICS - AY2024-T3***

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## LAW OF DIMINISHING RETURNS:

This law states that increasing one input while other inputs remain constant eventually leads to smaller output gains. The additional output decreases as the variable input rises. “The law of diminishing marginal returns is a theory in economics that predicts that after some optimal level of capacity is reached, adding an additional factor of production will actually result in smaller increases in output” (Hayes, 2024).

### EXPLANATION:

This law applies only in the ***short-term period***. The short-term is defined as when at least one input factor stays fixed. Factors include land, capital, and skilled labor. In the short-term, adding more variable inputs such as labor or raw materials initially increases output rapidly. This stage shows increasing returns. The variable input works efficiently with the fixed factor.

However, continuing to add more variable inputs leads to a point where output growth slows. This stage is diminishing returns. Additional inputs result in smaller output increases than before. The fixed factor becomes overused. It cannot fully utilize extra variable inputs.

### EXAMPLE:

Let’s take the example of a farmer with a fixed amount of land. Adding more laborers first boosts output fast. But the limited land area cannot accommodate too many workers effectively. Extra labor produces progressively smaller output gains due to overcrowding and inefficient use of the fixed land.

In the ***long term***, all factors of production can vary. Producers can shift to different production setups. They can potentially overcome diminishing returns and achieve higher output levels. To increase productivity, a farmer can expand land holdings, upgrade equipment, or implement new farming methods. The producer can switch to a different production function by adjusting all variables, potentially leading to a temporary suspension of the law of diminishing returns.

## CONCLUSION:

In summary, diminishing returns occur in the short-term when at least one factor remains fixed. All factors can vary in the long term. This allows producers to escape diminishing returns through new production setups that increase output.

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## REFERENCE:

Hayes, A. (2024, January 30). Law of Diminishing Marginal Returns: Definition, example, use in Economics. Investopedia. https://www.investopedia.com/terms/l/lawofdiminishingmarginalreturn.asp