## GROSS DOMESTIC PRODUCT (GDP)

GDP: Set of all final goods and services produced within an economics system (usually a country) during a certain time period. It is used as a measure of the economic importance of a country but also measure of the well-being of a country.

Nominal GDP: \[YN = ∑piqi\]

Real GDP: \[Y = ∑pi°qi\]

The GDP is only an imperfect measure of the wealth of a country.

The GDP Deflator (p) is that average value of prices that transforms Real GDP into Nominal GDP:

\[p = YN/Y\]

It is an implicit price index.

Clicking on the textarea link to Drive Folder

## MARKET EQUILIBRIUM

Market: collection of buyers and sellers who, through their actual or potential interaction, determine the prices of products.

Buyers: consumers purchase goods, companies purchase labor and inputs.

Sellers: consumers sell labor, resource owners sell inputs, firms sell goods.

Fundamental theorem of the exchange:

-if all transactions are voluntary.

-if all stakeholders are involved in the transaction

-if the terms of the transaction are known to all parties

-if all parties are protected from extortion

The quantity demanded is expressed as a function of price: $QD = QD(P)$

The quantity supplied is expressed as a function of price: $QS = QS (P)$

Then, the characteristics of the equilibrium or market clearing price are:

1. $QD = QS$
2. No shortage
3. No excess supply
4. No pressure on the price to change as long as exogenous variables don't change

## UTILITY

Utility of a good: the ability of a good to satisfy needs.

-Different market bundles can satisfy different needs.

-The heterogeneity in needs of individual consumers can be reduced to a single fundamental need.

-In its original formulation, the utility depends on the intensity of the need to be satisfied.

-The increase in utility that follows from increasing consumption is gradually decreasing

Utility function has to satisfied three condition:

1. Preferences are complete
2. More is better
3. Preferences are transitive

Marginal utility: is the slope of the total utility function and it measures the rate of change in total utility at a specific point:

$MUy =dU/dy$

## PRODUCTION FUNCTION

Production function Indicates the maximum output (q) that a firm can produce for every specified combination of inputs (or factors of production):

The production function for two inputs: $q = F(K, L)$

Output (q) is a function of capital (K) and labor (L) only, here is where most important trade-offs are involved.

The production function is true for a given technology. It takes time for a firm to adjust production from one set of inputs to another.

-Short Run: Period of time in which quantities of one or more production factors cannot be changed. These inputs are called fixed inputs

-Long Run: Amount of time needed to make all production inputs variable.

Points on or below the production function make up the firm's production set, i.e. the feasible combinations of inputs and outputs: $q \leq f(L,K)$.

Output points below the production function are technically inefficient

## WELFARE

Welfare is measured by:

1. Consumers' surplus.

2. Producers' surplus.

3. Any benefits accruing to the government.

The impact of a policy is estimated as the net change in welfare.

The impact of the policy will be estimated on the market where the policy is operating: partial equilibrium approach.

Welfare (profit + consumer surplus) maximization: If $p - MC = 0$. So, under perfect competition, welfare

is maximized.

If a policy is not welfare-maximizing, it is imposing an efficiency cost.

There are cases where the market by itself does not lead to the most efficient outcomes: the market failures.

If prices fail to provide proper signals to consumers and producers, the unregulated competitive market is inefficient.