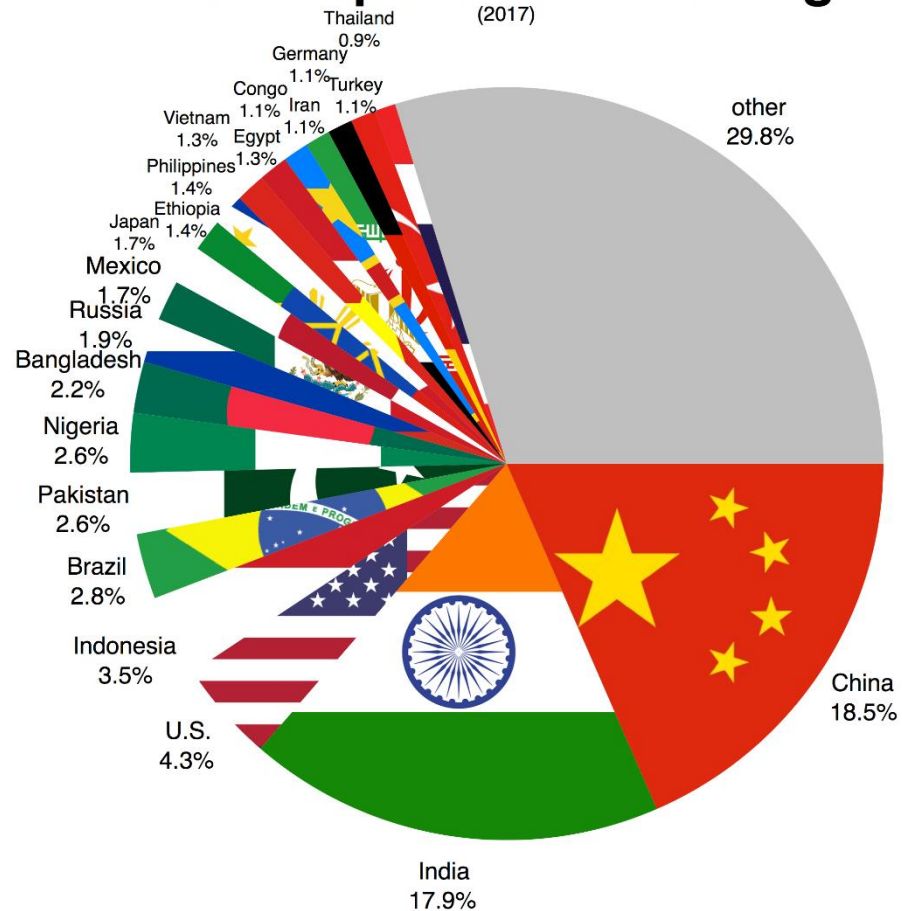
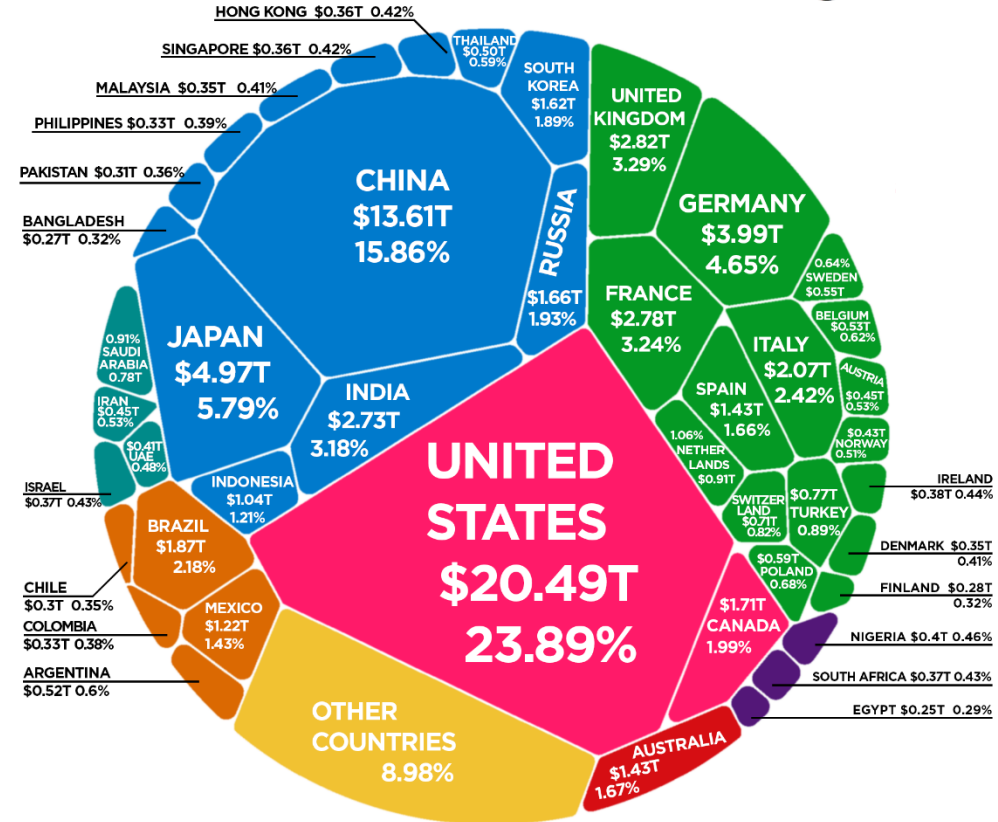


# SS 401: Managerial Economics

# World Population Percentages



## World Wealth Percentages



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# Definitions of Economics

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Economics is the study of how societies use **scarce resources** to **produce valuable goods and services and distribute** them among different individuals.

We find two key ideas that run through definition of economics:

- ✓ Resources are scarce and
  - ✓ Society must use its resources efficiently
- 
- A situation of scarcity is one in which goods are limited relative to desires.
  - Efficiency denotes the most effective use of a society's resources in satisfying people's wants and needs.

*The essence of economics is to acknowledge the reality of scarcity and then figure out how to organize society in a way which produces the most efficient use of resources.*

*The ultimate goal of economic science is to improve the living conditions of people in their everyday lives.*

# Key Concept: Opportunity Cost

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- ❑ Opportunity Cost: In a world of scarcity, choosing one thing means giving up something else. The opportunity cost of a decision is the value of the good or service forgone.
- ✓ Another way to look at it, is to ask yourself “If I do this, what will I have to give up?”
- ✓ You can then determine whether you are better off with your choice than the alternatives.
- ✓ Example: Imagine that Sam had the choice of going to the local state University cost \$15,000 per year. Sam could get a job at his local fast food restaurant for \$35,000 per year.
- ✓ Imagine you bought some shares that over one year period give you a return of just 3%. By using up that money to buy those shares, you gave up the opportunity to invest in a risk-free government bond that yielded 5%.

# Key Concept: Sunk Cost

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- ❑ Sunk Cost: Sunk cost is a cost that has already been incurred and cannot be recovered. In other words, a sunk cost is a sum paid in the past that is no longer relevant to decisions about the future.
- ✓ Example: A company spends \$20,000 to train its sales staff in the use of new tablet computers, which they will use to take customer orders. The computers prove to be unreliable, and the sales manager wants to discontinue their use. The training is a sunk cost, and so should not be considered in any decision regarding the computers.

# Key Concept

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- Economics is today divided into two major subfields,
  - ✓ Microeconomics and Macroeconomics.

## ❑ Microeconomics

The branch of economics that analyzes the market behavior of individual consumers and firms in an attempt to understand the decision making process of firms and households.

## ❑ Macroeconomics

Study of the entire economy in terms of the total amount of goods and services produced, total income earned, level of employment of productive resources, and general behavior of prices.

Macroeconomics examines economy-wide phenomena such as changes in unemployment, national income, rate of growth, gross domestic product, inflation and price levels.

# Key Concept

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- When considering economic issues, we must carefully distinguish **questions of fact** from **questions of fairness**. Based on this another classification is:
  - ✓ Positive economics and Normative economics
- Positive economics describes the facts of an economy, while normative economics involves value judgments.
  - ✓ Test yourself (Positive or Normative?)
    1. Why do doctors earn more than janitors?
    2. Should unemployment be raised or lowered?

# Definitions of Managerial Economics

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Managerial economics is concerned with the application of economic principles and methodologies to the decision making process within the firm or organization. It seeks to establish rules and principles to facilitate the attainment of the desired economic goals.

Scope of managerial economics:

- ✓ Demand Analysis
- ✓ Cost Analysis
- ✓ Pricing Practices and Policies
- ✓ Profit Management
- ✓ Capital Management
- ✓ Analysis of Business Environment
- ✓ Allied Disciplines

# Difference b/w Managerial and Traditional Economics

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Traditional	Managerial
It has Micro & Macro aspects	Micro aspect
It is both positive and normative science	Normative in nature
It deals with theoretical aspect	Practical Aspect
It studies human Behavior on certain assumptions	No assumptions
We study Economic aspects of the problem	Both economic and non-economic aspects
Studies principles underlying rent, wages, interest and profits	Only the principles of profit
Limited scope	Wide scope

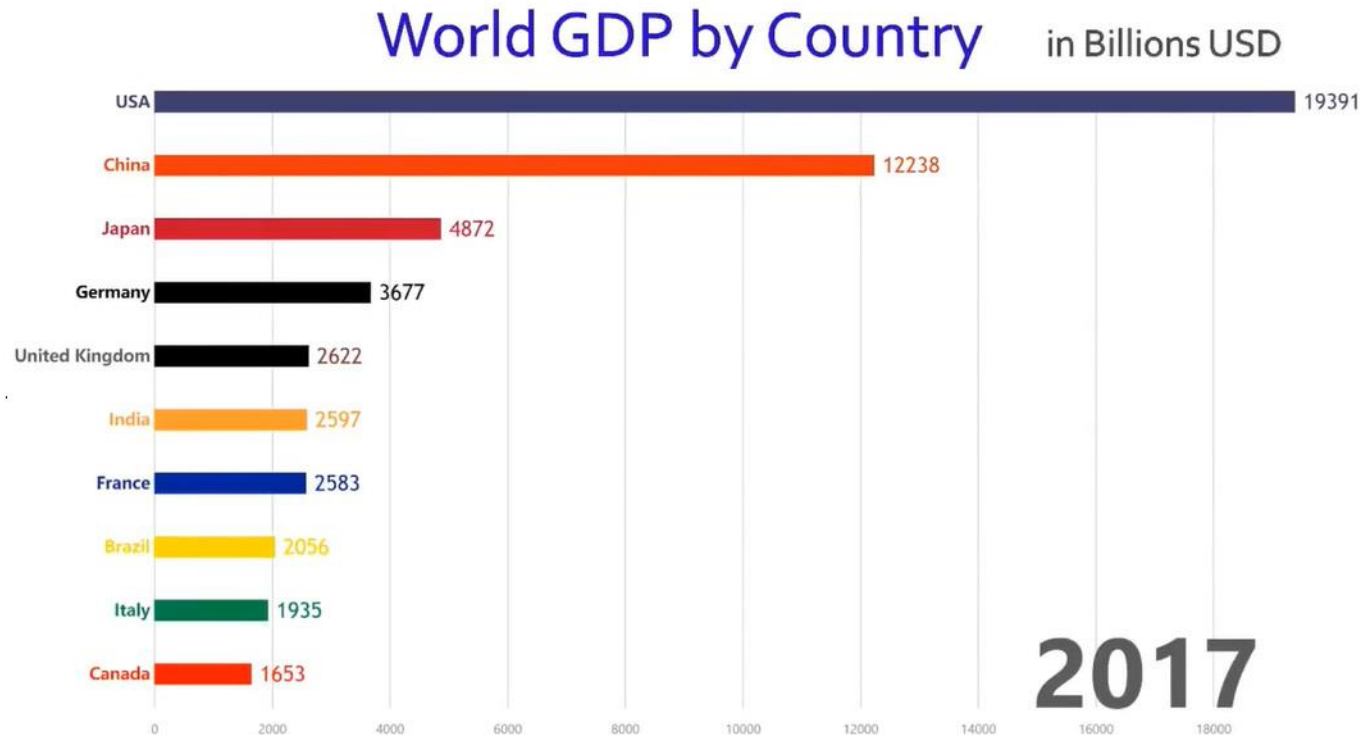


# Gross Domestic Product - GDP

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## Gross Domestic Product – GDP

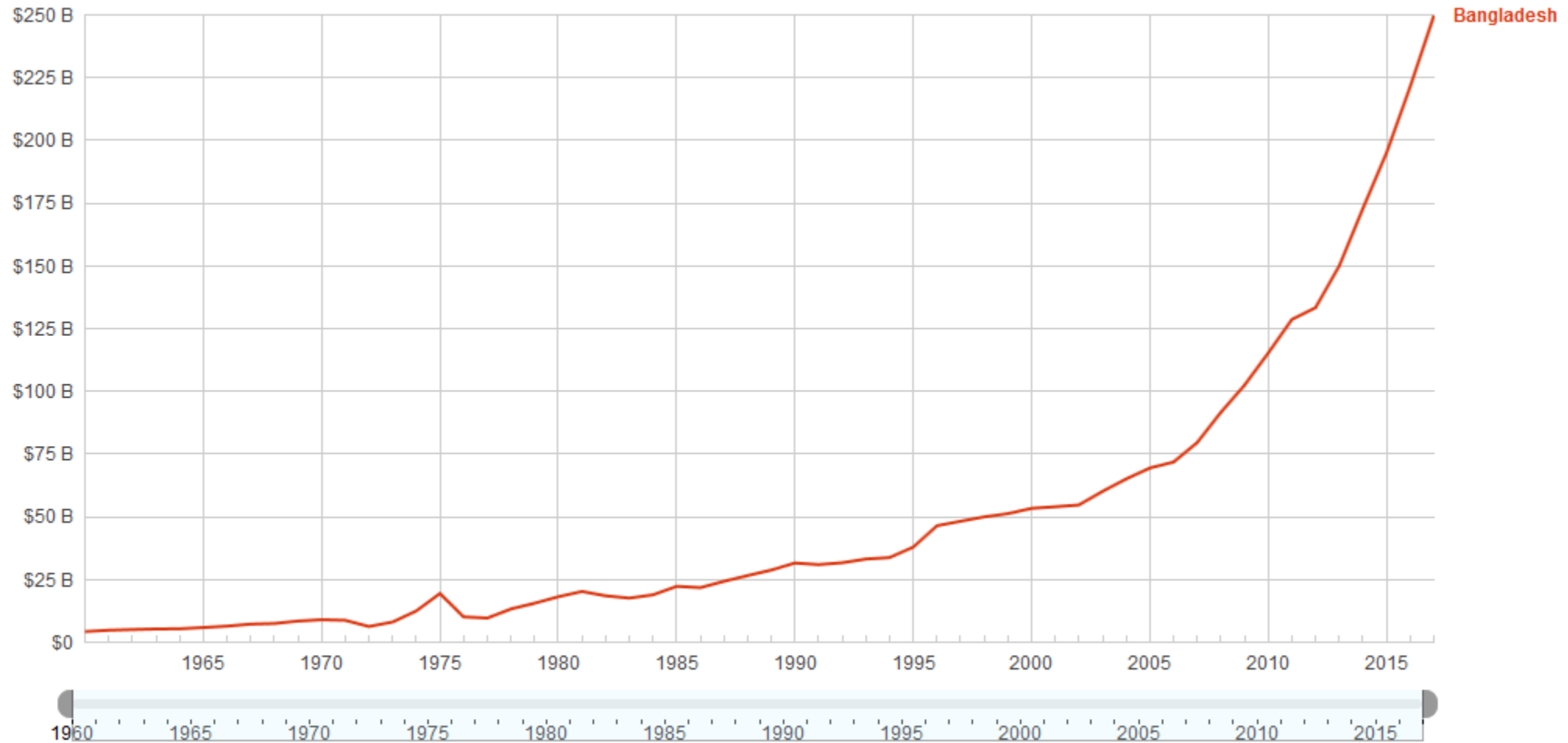
- ❑ Total market value of the final goods and services produced by a country's economy during a specified period of time.



✓ Any idea about GDP of Bangladesh?

# GDP of Bangladesh

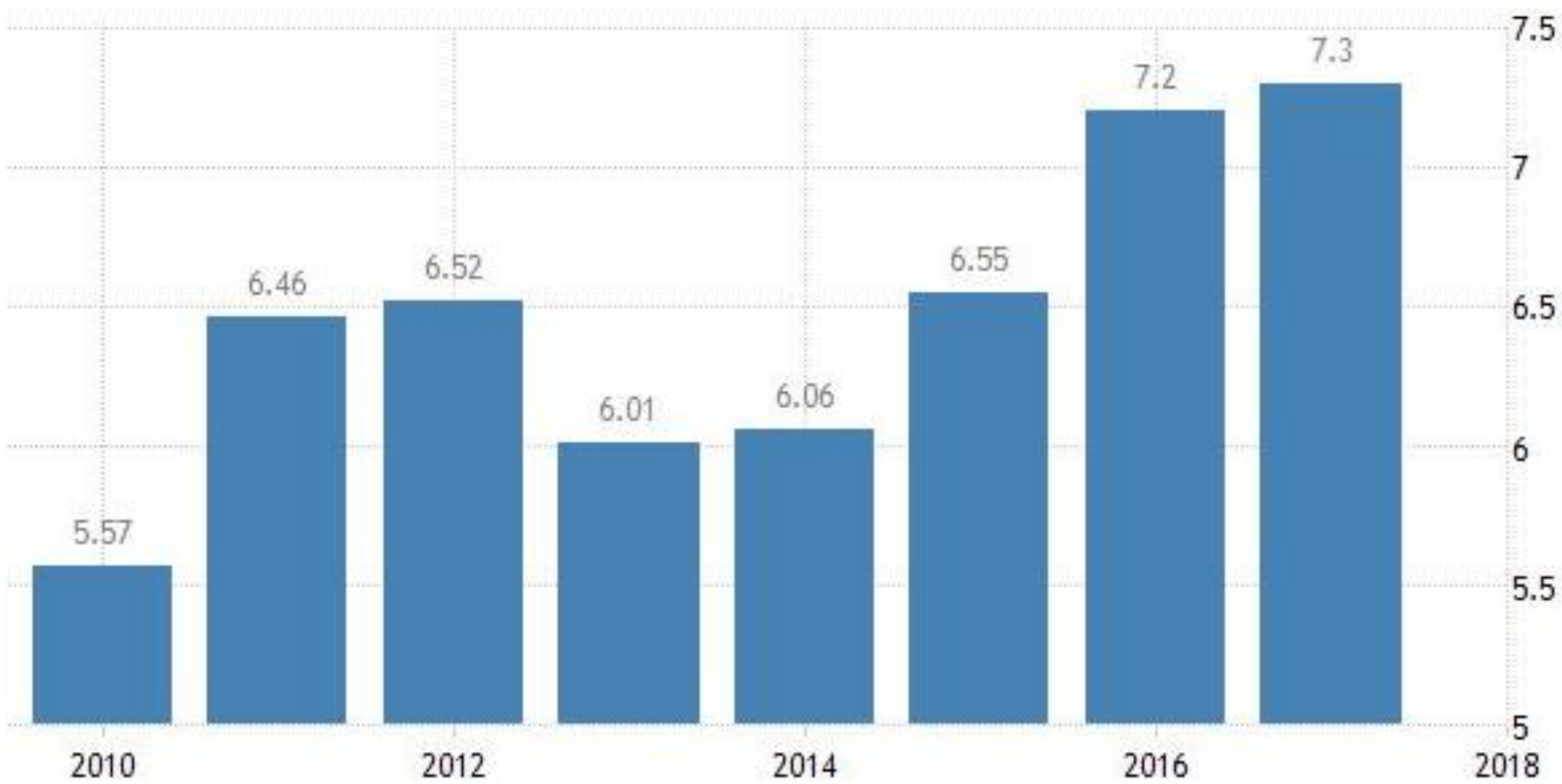
Gross Domestic Product ?



Data from [World Bank](#) Last updated: Jul 6, 2018

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# Gross Domestic Product - GDP



SOURCE: [TRADINGECONOMICS.COM](https://tradingeconomics.com) | BANGLADESH BANK

Bangladesh GDP Growth Rate

# How do we measure GDP?

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GDP can be calculated on the following approaches:

- ☐ Expenditure approach
- ☐ Income approach
- ☐ Output/Product approach

# The Expenditure Approach

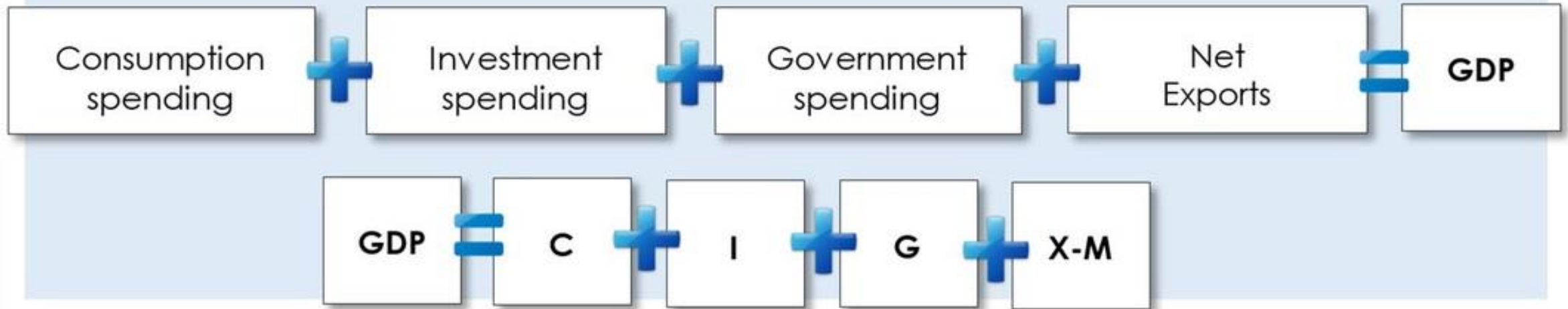
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The Expenditure approach totals annual expenditures on four categories of final goods or services:

1. Consumer goods and services
2. Business goods and services
3. Government goods and services
4. Net exports or imports of goods or services.

# The Expenditure Approach

## The expenditure method of determining GDP



Net Export = Exports (X) - Imports (M)

# The Expenditure Approach

- ❑ C = (consumption) private expenditures (household final consumption expenditure) in the economy.
- ❑ I = (investment) includes business investment in equipment, but does not include exchanges of existing assets.
- ❑ G = (government spending) is the sum of government expenditures on final goods and services.
- ❑ X = (Exports) Amount a country exported, including goods and services for other nations' consumption.
- ❑ M = (Imports) Amount a country imported, including goods and services for own consumption.

$$\text{GDP} = C + I + G + (X - M)$$

# The Income Approach

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The income approach calculates GDP by adding up all the incomes in the economy. Categories are:

1. Rents (R)
2. Interests (I)
3. Profits (P)
4. Statistical adjustments (SA)
5. Wages (W)

✓ Formula for GDP (Income approach)

$$\text{GDP} = R + I + P + SA + W$$

SA includes: Depreciation, Indirect business taxes, Net foreign income etc.



# The Output Approach

- ❑ The output approach focuses on finding the total output of a nation by directly finding the total value of all goods and services a nation produces.
- ❑ Only the final value of a good or service is included in the total output.

Can you calculate the GDP of a nation who only produce potatoes?



# What are excluded in GDP?

---

## ❑ Intermediate goods

Example:

- ✓ Bricks and cement used in the construction of house
- ✓ Steel used in production of cars
- ✓ Wood used in furniture like sofa, dining table and so on
- ✓ Glass used for making spectacles
- ✓ Vegetables used by restaurant owner
- ✓ Gold and silver used for making ornaments
- ✓ Cotton used for making clothes



# What are excluded in GDP?

---

❑ Home Production





# What are excluded in GDP?

---

☐ Pollution/environmental damage.

☐ Sales of used goods.



# What are excluded in GDP?

---

- ❑ Illegal Goods

Example: Fake/Counterfeit Products,  
Smuggled Goods.

- ❑ Sales of goods that were produced  
outside our domestic borders.





# What are excluded in GDP?

## ❑ Transfer payments

Example:

- welfare (financial aid)
- social security
- government subsidies

### Over 35.21cr textbooks to be distributed on Jan 1

BSS, Dhaka



As many as 35,21,97,882 free textbooks would be distributed among 4,26,19,865 primary and secondary level students on January 1 across the country in the academic year 2019.

# GDP Calculation?

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The national account data shown below, which lists the US national expenditures for the 2015.

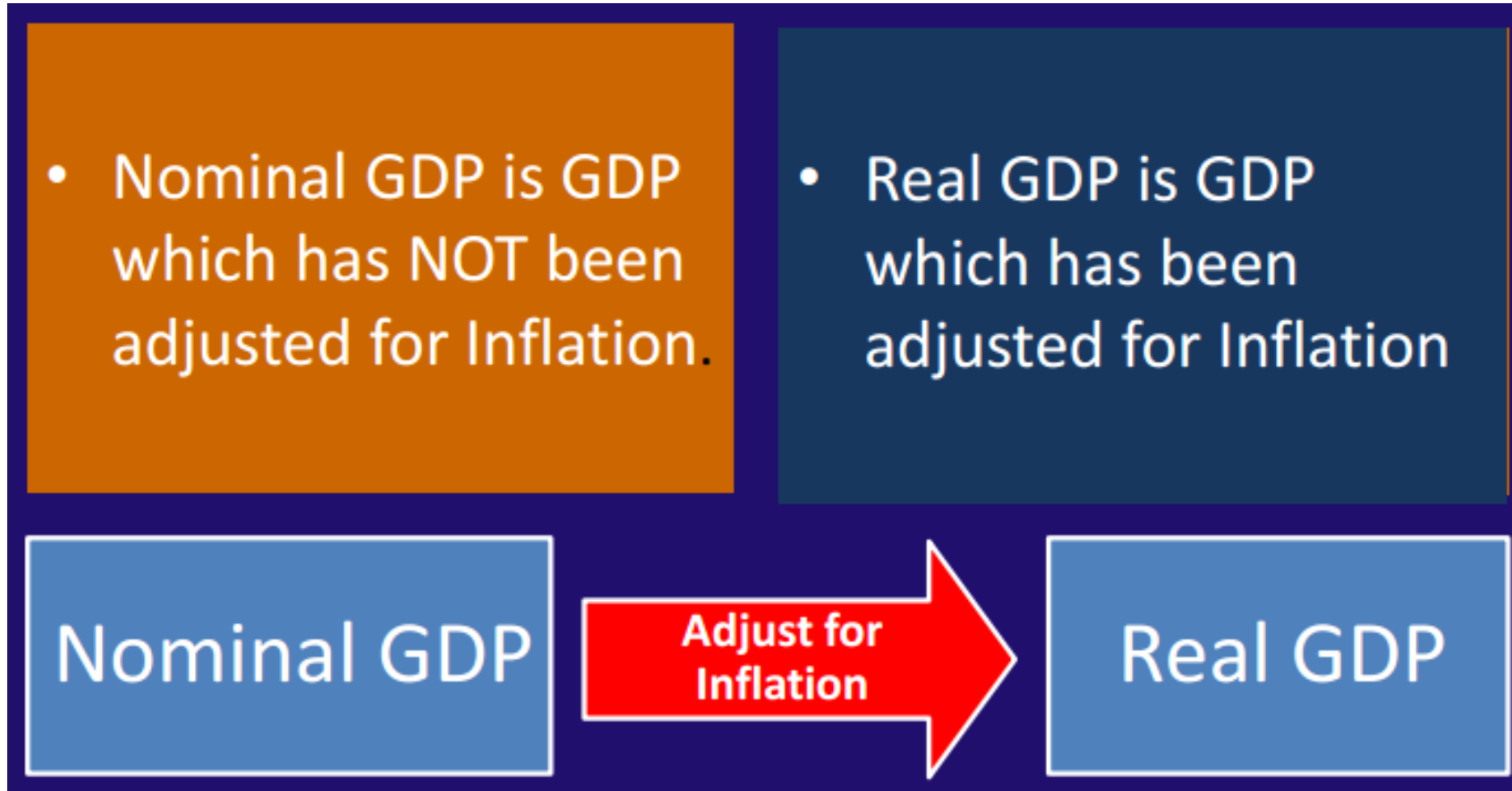
US GDP Accounts 2015		
Expenditure	Component	Amount \$US billion
Private final consumption expenditure	C	12 272
General government final consumption expenditure	G	2 572
Gross capital formation	I	3 632
Exports of goods and services	X	2 253
Imports of goods and services	M	2 782

Calculating nominal GDP.

# GDP Types

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GDP are of two types: Nominal GDP and Real GDP.





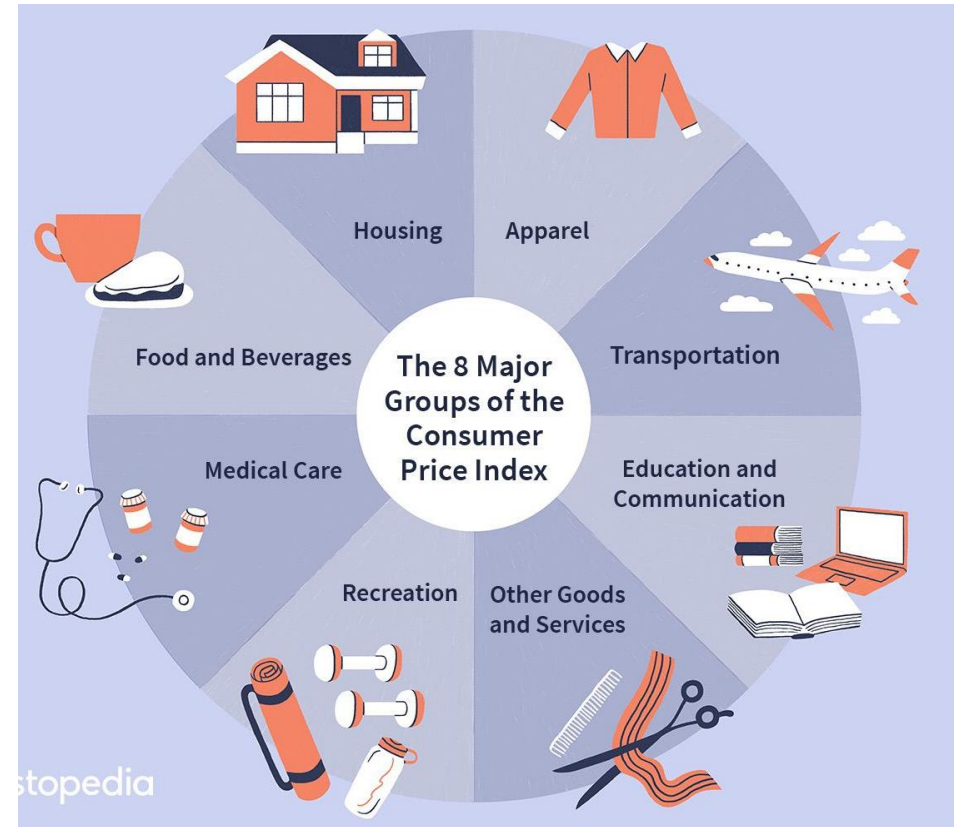
# Inflation

- ❑ In economics, inflation is a sustained increase in the general price level of goods and services in an economy over a period of time.



# CPI - Consumer Price Index

- ❑ The Consumer Price Index measures the average change in prices over time that consumers pay for a basket of goods and services.
- ❑ The CPI statistics cover professionals, self-employed, poor, unemployed and retired people in the country.
- ❑ The formula used to calculate the Consumer Price Index for a single item is as follows:
$$CPI = \frac{\text{Cost of Market Basket in Given Year}}{\text{Cost of Market Basket in Base Year}} \times 100$$



# Nominal GDP

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## ❑ Formula of Nominal GDP

$$\text{Nominal GDP} = (P \times Q)$$

Where: Output = Q and Prices = P

## ❑ Nominal GDP can grow because of three reasons:

- I. Output rises and prices remain unchanged
- II. Prices rise and output remains unchanged
- III. Both output and prices rise

# Real GDP

---

## ❑ Formula of Real GDP

$$R = N/D$$

where R = Real GDP, N = Nominal GDP, D = Deflator.

GDP deflator (D) = base year index (usually 100) + rate of inflation

For example:

If prices of rose increase 2.5% since the base year, the deflator is 1.025. If the nominal GDP were 10 million, the real GDP would be  $10,000,000/1.025 = 976,000$ .

Note: Across the years, the rate of inflation is accumulated in the GDP deflator calculations.

# Real GDP

Year	Nominal GDP	Real GDP	Rate of inflation	GDP deflator
2013†	\$3930 b	\$3 930	-	100
2014	\$4 011b	$\frac{4\,011}{102} \times 100 = \textbf{\$3 932.35b}$	2%	$100 + 2.0 = \textbf{102}$
2015	\$4 202 b	$\frac{4\,202}{103.5} \times 100 = \textbf{\$4 059.90b}$	1.5%	$100 + 1.5 + 2 = \textbf{103.5}$
2016	\$4 335 b	$\frac{4\,335}{106.4} \times 100 = \textbf{\$4 074.25b}$	2.9%	$100 + 2.9 + 1.5 + 2.0 = \textbf{106.4}$
2017	\$4 299 b	$\frac{4\,299}{105.9} \times 100 = \textbf{\$4 059.49b}$	-0.5%	$100 - 0.5 + 2.9 + 1.5 + 2.0 = \textbf{105.9}$

# GDP Deflator

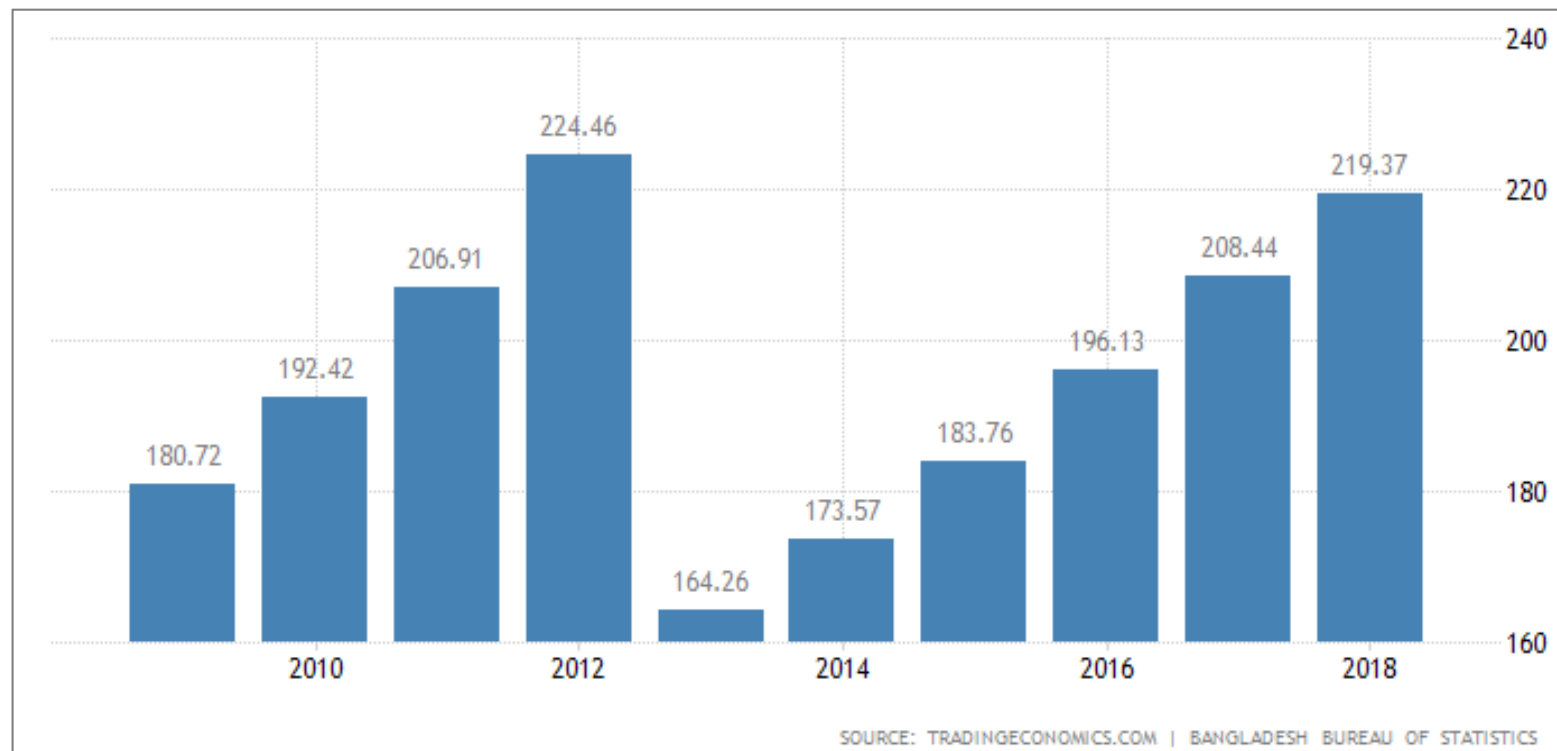
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❑ The GDP price deflator is an economic measure of inflation.

❑ FORMULA OF GDP DEFLATOR:

$$\text{GDP DEFLATOR} = (\text{NOMINAL GDP} \div \text{REAL GDP}) \times 100$$

❑ Bangladesh:

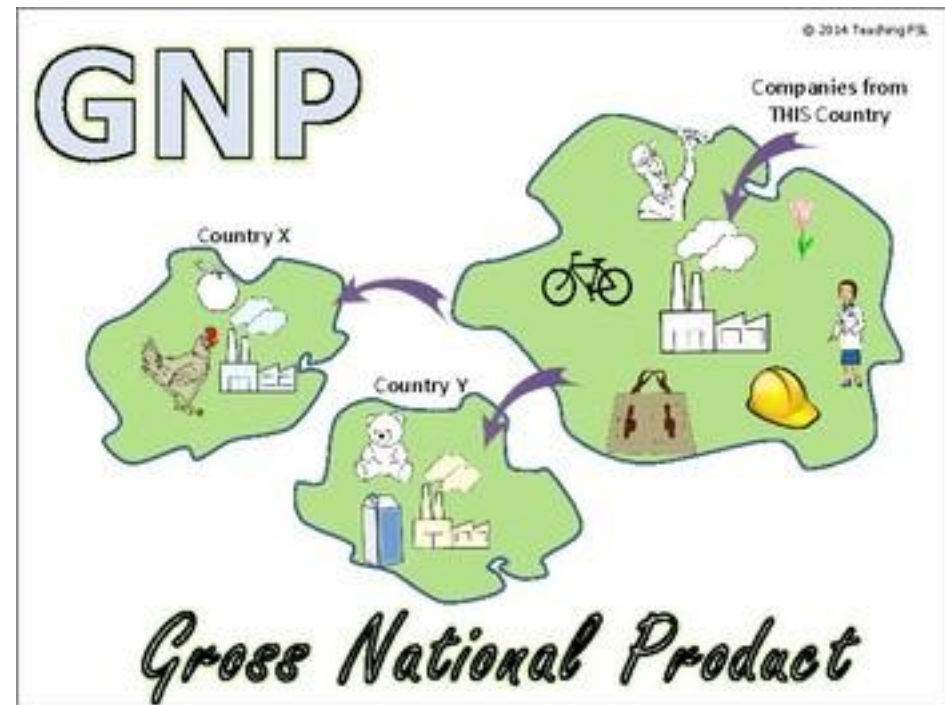




# Gross National Product - GNP

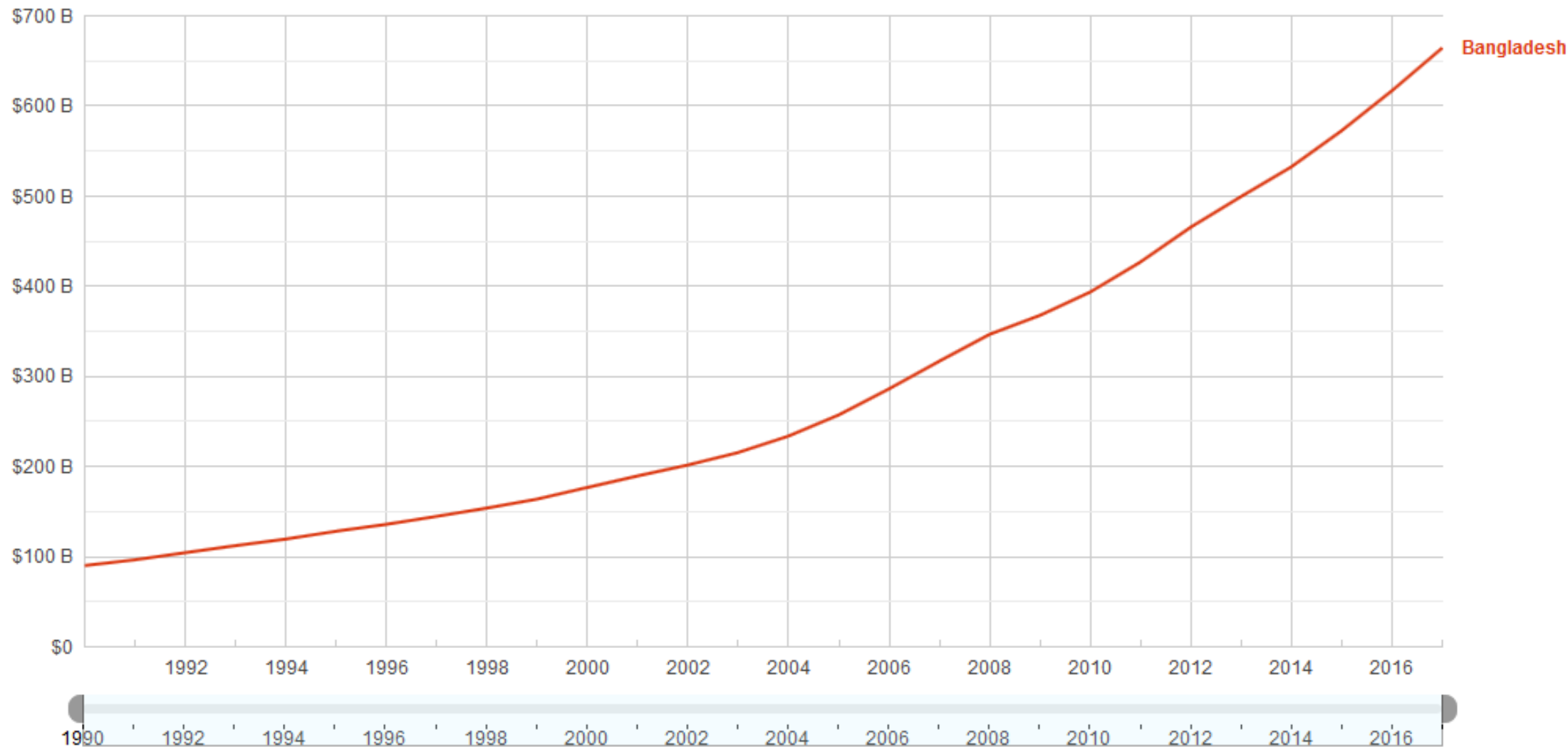
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- ❑ GNP meaning Gross National Product.
- ❑ GNP is an estimate of total value of all the final products and services produced in a given period by the means of production owned by a country's residents.



# GNP of Bangladesh

Gross National Income in PPP dollars ?





# GNP Formula

---

- ❑ C = (consumption) private expenditures (household final consumption expenditure) in the economy.
- ❑ I = (investment) includes business investment in equipment, but does not include exchanges of existing assets.
- ❑ G = (government spending) is the sum of government expenditures on final goods and services.
- ❑ X = (Exports) Amount a country exported, including goods and services for other nations' consumption.
- ❑ M = (Imports) Amount a country imported, including goods and services for own consumption.
- ❑ Z = (Net income earned by domestic residents from overseas) – (Net income earned by foreign residents from domestic).

$$\text{GNP} = C + I + G + (X - M) + Z$$

# GNP Example

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- ❑  $\text{GNP} = \text{Money value of every thing produced with in Bangladesh} + \text{incoming money from out side (Bangladesh)} - \text{out going money to abroad (foreigners)}.$
- ❑ Shakib Al Hasan goes to India to play Indian Premier League (IPL) and earn money and send to Bangladesh. (will be added in our own GNP)
- ❑ Chris Gayle come to Bangladesh to play Bangladesh Premier League (BPL) and earn money and send to West Indies. (will not add in our own GNP)

# GNP Vs GDP

	US				China			
	GDP	GNP	GNP-GDP	GNP/GDP-%	GDP	GNP	GNP-GDP	GNP/GDP-%
<b>2017</b>	19,390.64	19,729.06	338.42	1.75%	12,237.70	12,208.14	-29.56	-0.24%
<b>2016</b>	18,624.48	18,922.51	298.03	1.60%	11,190.99	11,150.78	-40.21	-0.36%

	UK				India			
	GDP	GNP	GNP-GDP	GNP/GDP-%	GDP	GNP	GNP-GDP	GNP/GDP-%
<b>2017</b>	2,622.44	2,589.73	-32.71	-1.25%	2,597.49	2,573.27	-24.22	-0.93%
<b>2016</b>	2,650.85	2,597.97	-52.88	-1.99%	2,274.23	2,249.35	-24.88	-1.09%

	Israel				Greece			
	GDP	GNP	GNP-GDP	GNP/GDP-%	GDP	GNP	GNP-GDP	GNP/GDP-%
<b>2017</b>	350.85	347.80	-3.05	-0.87%	200.29	200.39	0.10	0.05%
<b>2016</b>	317.75	313.92	-3.83	-1.21%	192.69	193.71	1.02	0.53%

Any country whose residents pay more to foreigners than they receive from foreigners will have a GDP that exceeds its GNP. Opposite may also happen.

# NNP - Net National Product

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- ❑ NNP meaning Net National Product.
- ❑ Net National Product (NNP) is the market value of all final goods and services produced by the factors of production of a country minus depreciation (often referred to as capital consumption).
- ❑ In economics, factors of production are resources or inputs which are used in the production process to produce output. Example: Land, labor, and capital goods.
- ❑ The formula for NNP is:

$$\text{NNP} = \text{Market Value of Finished Goods} + \text{Market Value of Finished Services} - \text{Depreciation}$$

# Depreciation

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- ❑ Depreciation is an accounting method of allocating the cost of a tangible or physical asset over its useful life or life expectancy.
- ❑ Salvage value is the estimated resale value of an asset at the end of its useful life.
- ❑ Depreciation =  $\frac{(\text{Cost of Asset} - \text{Salvage Value})}{\text{Useful life of asset}}$  per year
- ❑ Suppose a company buys a piece of equipment for \$50,000, the company can scrap the equipment for \$10,000 at the end of its useful life (10 years).

Find,

- ✓ Salvage value ?
  - ✓ Depreciation per year?
- 
- ❑ Is it possible to have a negative salvage value?

# Net National Product Example

- ❑ Let's assume Country XYZ's companies, citizens and entities produce \$1 trillion worth of goods and \$3 trillion worth of services this year. The assets used to produce those goods and services depreciated by \$500 billion. Using the formula above, Country XYZ's NNP is:
- ❑  $NNP = \$1 \text{ trillion} + \$3 \text{ trillion} - \$0.5 \text{ trillion} = \$3.5 \text{ trillion}$

❑ Depreciation ?



❑ The decrease in value of assets.