MANAGERIAL ECONOMICS

National Income: Concept and Measurement - II

ITM BUSINESS SCHOOL
PGDM 2021 - 2023 - SEM I
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Lecture 3

National Income

- As noted in lecture 11, macroeconomics deals with national aggregates like gross national product. employment, price levels, consumption and investment, money supply and demand, balance of payments, and so on of these, the gross national product (GNP) is the most important macro variable.
- The GNP is in fact, the source and pivot of all macro variables.
- For instance, the level of employment in a country depends largely on the level of GNP; given the money supply, price level depends on the change in GNP; the levels of consumption and savings are determined mainly by the GNP, and so on. Understanding the concept and measure of GNP is therefore, an essential element in the study of macroeconomics. Therefore, we begin our study of macroeconomics with a brief discussion on the concept of national income, methods of its measurement and the related aggregates, both flow and stock.

National Income

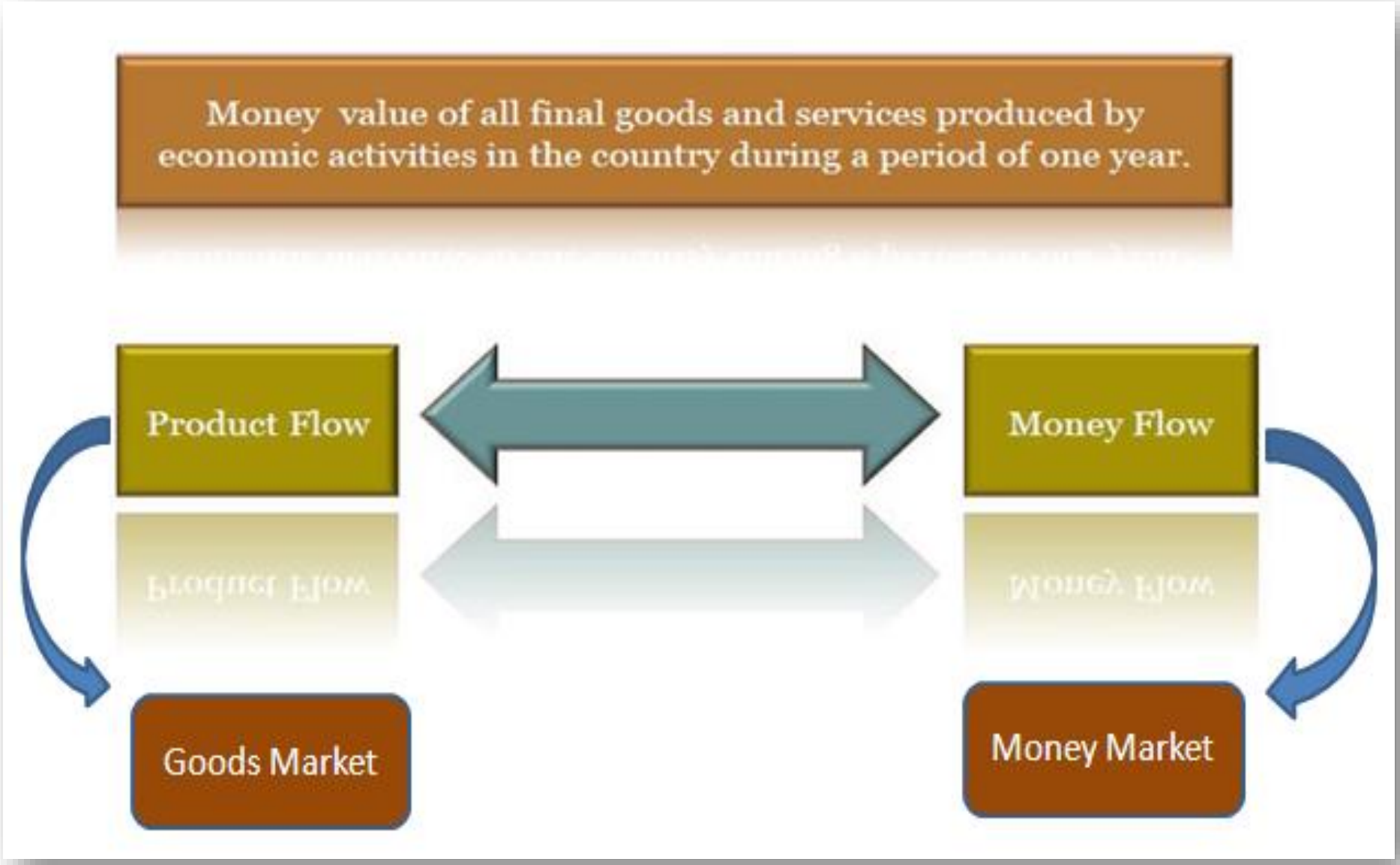
- National Measuring progress has been a major riddle for experts. Income as an indicator of progress was tried by many before the idea of the gross domestic product (GDP) was put forward by the US-economist Simon Kuznets in 1934.

- The method tries to calculate (account) a country's income at domestic and national levels—in gross and net forms—having four clear concepts (GDP, NDP, GNP and NNP)—

National Income

- National income is, broadly speaking, the money value of all final outcome of all economic activities of the people of a country.
- The term 'national income' is however used in a variety of senses depending on;
  - ❖ What is included in and excluded from the national income concept, and
  - ❖ What methods are used for estimating national income.
- ❖In Macroeconomic analyses: We Use different concepts and measures of national income—mainly Gross National Product (GNP) and Gross Domestic Product (GDP).

National Income



Gross Domestic Product(GDP)

The gross domestic product(GDP) is defined as the sum of market value of all final goods and services produced(by the residents in the country) in a domestic economy during a specific period of time, generally one year

Plus (+)

Incomes earned in the country by foreigners

Minus(-)

Incomes received by residents of a country from abroad.

For India, this calendar year is from 1st April to 31st March.

Gross Domestic Product(GDP)

- It is also calculated by adding national private consumption, gross investment, government spending and trade balance (exports-minus-imports). The use of the exports-minus-imports factor removes expenditures on imports not produced in the nation, and adds expenditures of goods and service produced which are exported, but not sold within the country.

- It will be better to understand the terms used in the concept, ‘gross’, which means same thing in Economics and Commerce as ‘total’ means in Mathematics; ‘domestic’ means all economic activities done within the boundary of a nation/country and by its own capital; ‘product’ is used to define ‘goods and services’ together; and ‘final’ means the stage of a product after which there is no known chance of value addition in it.

GDP Definition - Market Value

Market Value

- *The number of goods and services produced in an economy are both large and diverse. They cannot be reduced to a common unit of measurement. For example, an economy produces apples and also manufactures airplanes.*

Can we add the two?

- Clearly, we cannot. We, therefore, find out the total quantity of apples produced in an economy and multiply that with the price of apples to get the market value of apples.
- Then we take the total number of airplanes manufactured in an economy and multiply that with the price of airplanes to get the market value of airplanes.
- And, finally, add the two.
- In an economy, therefore, each good and service is valued at its market price and then aggregated to arrive at the total market value.
- There is no other way to arrive at the composite production.

GDP Definition - Market Value

Market Value = The final 'national product' is the money value of all final goods and services.

Market Value obtained by two-way **Constant Price** and **Current Price**.

Accordingly,GDP is known as **'GDP at Constant Prices' and 'GDP at Current Prices'.**

GDP Definition - Final

Final

- The second key word is final. GDP considers the final value of goods and services produced in an economy in order to avoid double counting.
- Let us take the example of a car. There is a market value attached to the car given by the price of the car.
- Now, certain amount of steel, along with various other intermediate goods, has gone into the manufacturing of the car.

Should we value those also?

- The answer is in the negative because the price of the final product, that is, the car, already includes the price of intermediate products that have gone into the making of the car. If we value them again, that will lead to **double counting.** Thus, all intermediate goods are excluded and only value of goods and services produced for final use, in a given period of time, enter into GDP.

GDP Definition - Produced

Produced

- Third is produced. GDP always refers to what is produced and, not necessarily, what is sold.
- Also, what is actually produced is equal to what is demanded.
- *In other words, the actual production of goods and services is a mirror image of aggregate demand for goods and services in an economy.*

How do we conceptualize this?

- Let us take an example of cement industry,
- Let the cement production capacity was 100 tons per annum.
- Assume the production in the first year was to its full capacity, i.e., 100 tons.
- But the actual sale turned out to be only 80 tons.

GDP Definition - Produced

How does the production equal demand then?

- In this example, production equals demand because the unsold inventory of 20 tons is actually considered as bought/demanded by the cement industry.
- The total demand, therefore, consists of 80 tons of, what we commonly understand as market demand and, 20 tons of inventory demand, even though unintended.
- Addition to stock of inventories from current year's production is, therefore, treated as **inventory demand.**

GDP Definition - Produced

But you may ask if actual production is equal to demand, where the slowdown is?

- It signals a slowdown, because next year, if 80 tons is projected to be the actual demand, the cement industry will cut production to 60 tons and meet the 80 tons demand from 60 tons of new production and 20 tons of unsold inventories from last year's production (a negative inventory demand this year).
- Actual production will be below capacity output, which is the definition of a slowdown.

GDP Definition - Time

Time

- The fourth and last key word is period of time. This is to emphasize that GDP is not a stock concept but a measure of the total flow of goods and services in an economy.
- And, if we are measuring the flow, it has to be over a specified time period. Normally, the time period is a year or a quarter.

Uses of the Concept of GDP

Growth Rate

- Per annum percentage change in it is the 'growth rate' of an economy. For example, if a country has a GDP of ₹107 which is 7 rupees higher than the last year, it has a growth rate of 7 per cent. When we use the term 'a growing' economy, it means that the economy is adding up its income, i.e., in quantitative terms.

Quantitative

- It is a 'quantitative' concept and its volume/size indicates the 'internal' strength of the economy. But it does not say anything about the 'qualitative' aspects of the goods and services produced.

Comparison

- This is the most commonly used data in comparative economics. The GDPs of the member nations are ranked by the IMF at purchasing power parity (PPP). India's GDP is today 3rd largest in the world at PPP (after China and the USA). While at the prevailing exchange rate of Rupee (into the US dollars) India's GDP is ranked 5th largest in the world.

Nominal GDP & Real GDP

- GDP is the value of final goods and services produced in an economy in a given period. Value is the price of the final good and service. Therefore, GDP is price times quantity of final goods and services produced. Or, GDP = P x Q aggregated over all goods and services produced in an economy.
- The problem begins here. If you look at the above relationship, you will see that it is quite possible for GDP to grow at an impressive pace with no change in Q. The entire increase can be due to P.

Is that what the manager wants to know?

No.

- His interest is in knowing to what extent GDP growth reflects growth in Q.

Nominal GDP & Real GDP

How do we get over this problem?

- We can solve this problem, if we can hold P constant at certain level. Because, if P is held constant, any change in GDP has to be due to Q, which is of interest to the manager.
- When P is held constant at a certain level and only change in Q is considered in arriving at GDP, this is called **'real GDP'.**
- If, on the other hand, P is not held constant and we multiply each year's P with that year's Q, to arrive at the GDP, we will get '**nominal GDP'.**
- Nominal GDP is of little interest to the manager.

Nominal GDP & Real GDP

'Nominal GDP'

- A gross domestic product (GDP) figure that has not been adjusted for inflation. Also GDP estimated at current prices is called 'Nominal GDP'

'Real GDP'

- GDP estimated at constant prices in a chosen year(called 'base year') is called Real GDP
- To remove the effects of price change, We have Real GDP,

= GDP at **constant** market price

= Price in **base year** x Output in current year

Nominal GDP & Real GDP

- It can be misleading when inflation is not accounted for in the GDP figure because the GDP will appear higher than it actually is. The same concept that applies to return on investment (ROI) applies here.
- If you have a 10% ROI and inflation for the year has been 3%, your real rate of return would be 7%. Similarly, if the nominal GDP figure has shot up 8% but inflation has been 4%, the real GDP has only increased 4%.

Nominal GDP & Real GDP

Calculation of real GDP, an example

Good or service (Items)	Base year (*P*	*Q*)	Current year (*P*	*Q*)
X_1	2	40	3	60
X_2	8	90	10	150
X_3	80	100	90	110
X_4	70	120	80	130

GDP/GNP Deflator

➢*The GDP/GNP deflator is essentially an adjustment factor used to convert nominal GDP into real GDP/GNP. The GDP/GNP deflator is the ratio of price index number (PIN) of a chosen year to the price index number (PIN) of the base year.* The *PIN of the base year* = 100, The chosen year is the year whose real *GDP/GNP is* to he estimated. The method of working out *GDP/GNP* deflator is given below.

GDP/GNP Deflator = PIN of the chosen Year /100

The formula for converting nominal GDP/GNP of a year into real GDP/GNP may be written as follows.

Real GDP/GNP = Nominal GDP/GNP / GDP/GNP Deflator

or

Real GDP/GNP = Nominal GNP / PINcy/100

(where PINcy, is the price index number of the chosen year).

GDP/GNP Deflator

Example: Suppose *nominal GDP* of a country, i.e., *GDP* estimated at current prices, in year 2000 is given at Rs 500 billion **and** Price Index Number *(PIN)* is given as base year 2000 = 100. Now let the nominal *GDP* increase to Rs 600 billion in year 2005 and *PIN* rises to **110.** Given this data, *GDP deflator* for the country can be obtained as follows.

GDP/GNP Deflator

Solution:

GDP Deflator = PIN 2005/100 = 110/100 = 1.10

Real GDP = Rs.600/1.10 = Rs.545.45 billion

GDP/GNP Deflator

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

➢**The GDP deflator (implicit price deflator for GDP)** is a measure of the level of prices of all new, domestically produced, final goods and services in an economy.

➢Like the **Consumer Price Index(CPI),** the GDP deflator is a measure of price inflation/deflation with respect to a specific base year; the GDP deflator of the base year itself is equal to 100. Unlike the CPI, the GDP deflator is not based on a **fixed basket** of goods and services; the "basket" for the GDP deflator is allowed to change from year to year with people's consumption and investment patterns.

GDP/GNP Deflator

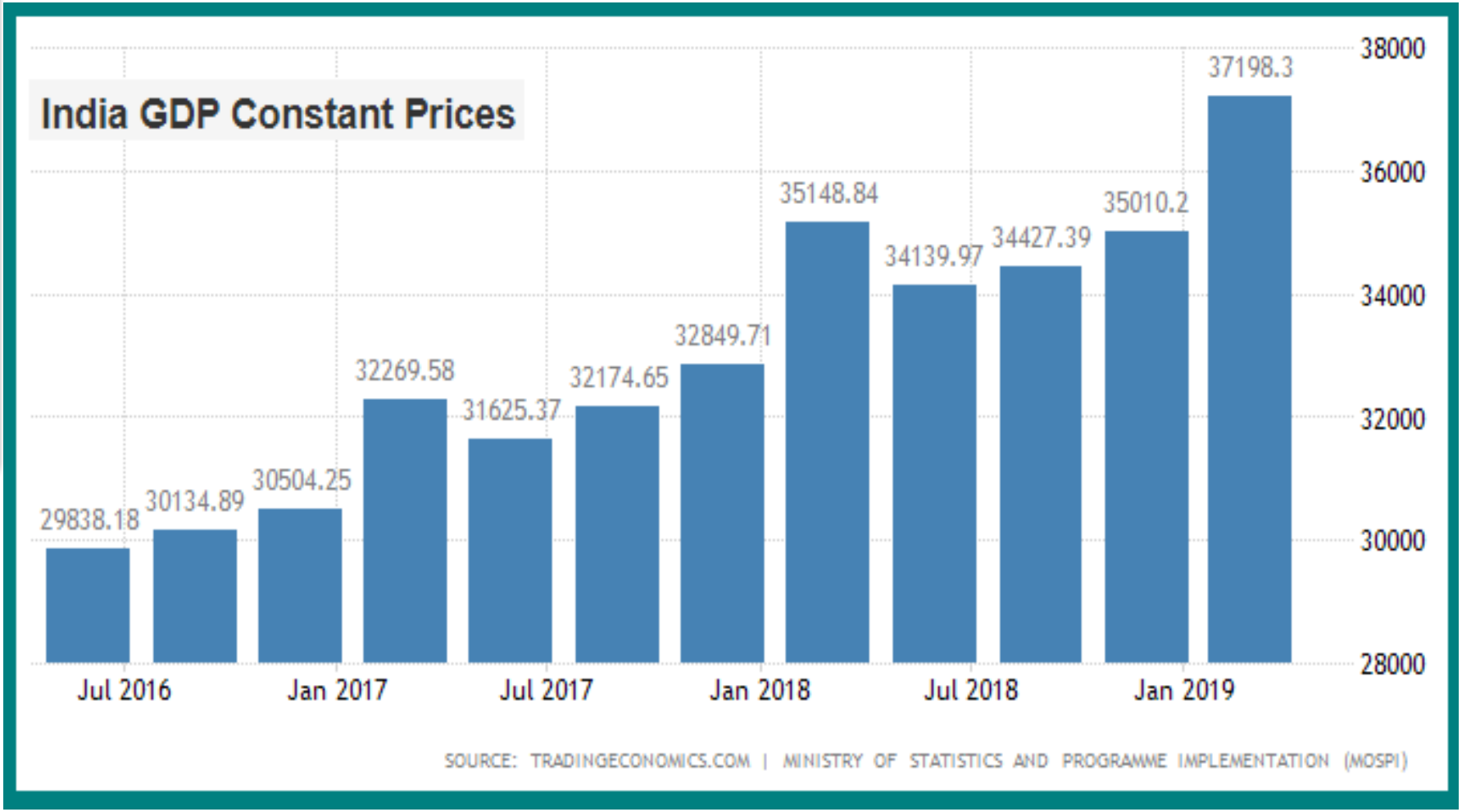
For example:

- For computer hardware, we could define a "unit" to be a computer with a specific level of processing power, memory, hard drive space and so on. A price deflator of 200 means that the current-year price of this computing power is twice its base-year price - price inflation.

- A price deflator of 50 means that the current-year price is half the base year price - price deflation. This can lead to a situation where official statistics reflect a drop in prices, even though they have stayed the same.

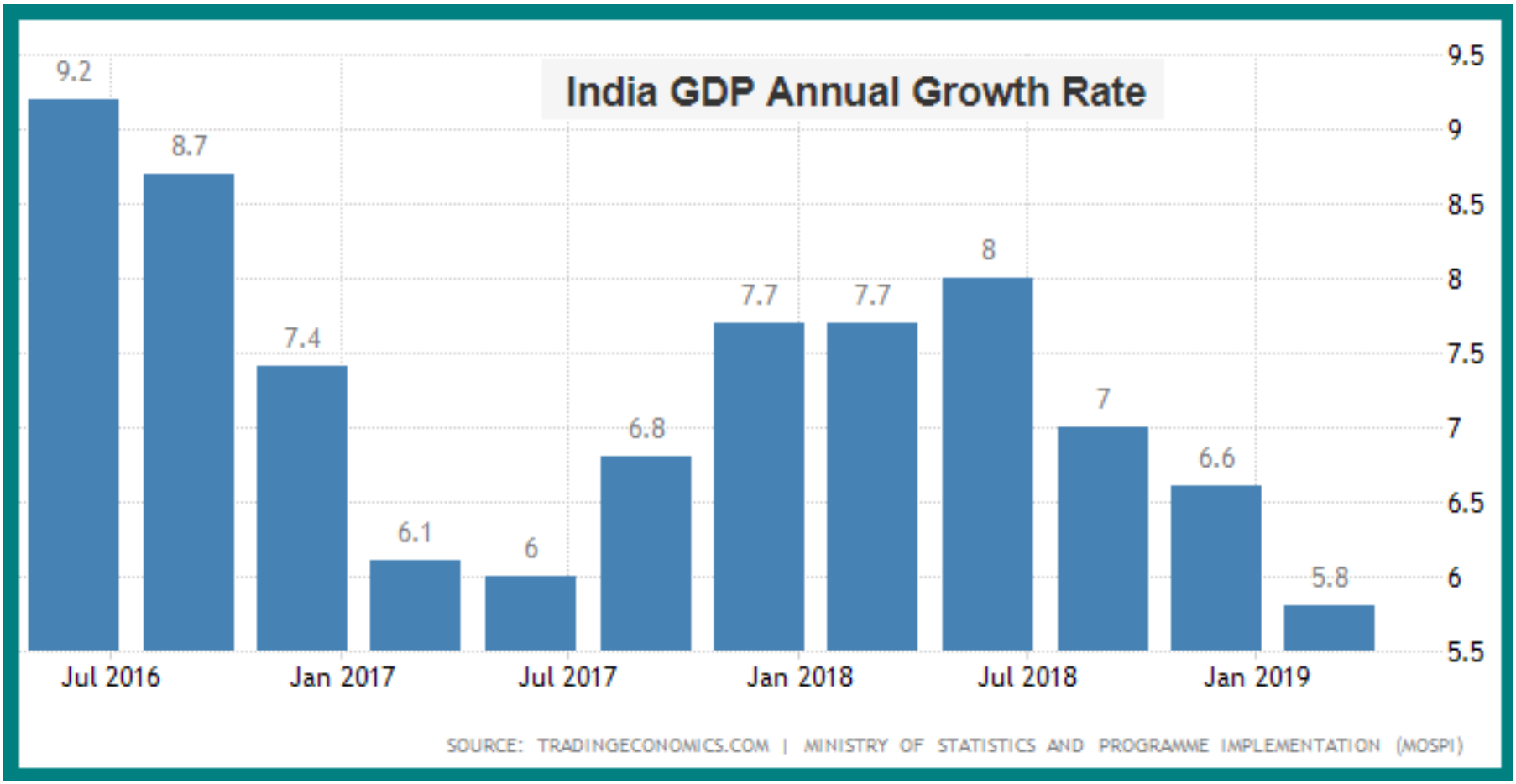
Current Economic Condition

GDP Constant Prices in India increased to 37198.30 INR Billion in the first quarter of 2019 from 35010.20 INR Billion in the fourth quarter of 2018. GDP Constant Prices in India averaged 19767.98 INR Billion from 2004 until 2019, reaching an all time high of 37198.30 INR Billion in the first quarter of 2019 and a record low of 7500.43 INR Billion in the second quarter of 2004.



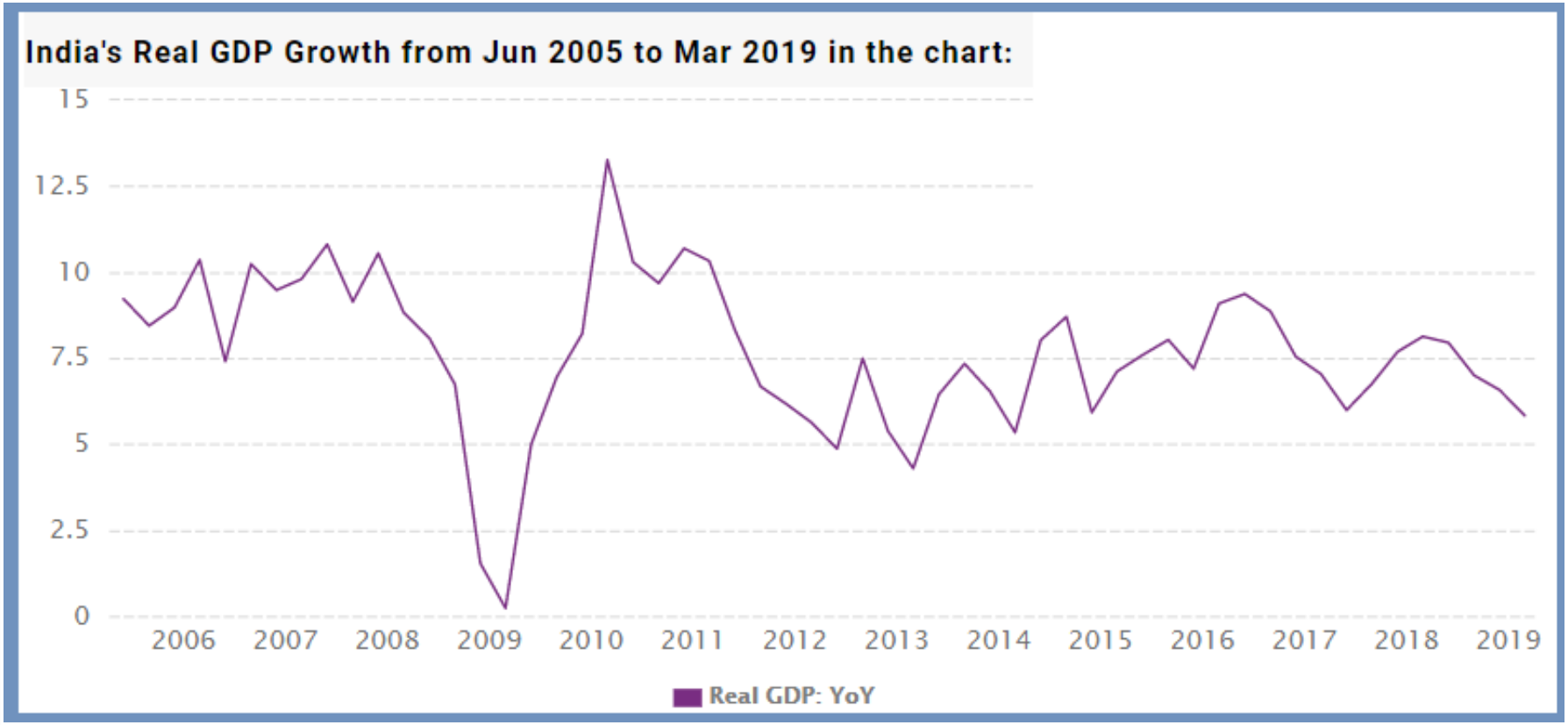
Current Economic Condition

The Indian economy advanced 5.8 percent year-on-year in the first quarter of 2019, **slowing from a 6.6 percent expansion in the previous period** and missing **market expectations of 6.3 percent.** It was the weakest growth rate since the first quarter of 2014, **amid weaker consumer demand and fixed investment.** GDP Annual Growth Rate in India averaged 6.21 percent from 1951 until 2019, reaching an all time high of 11.40 percent in the first quarter of 2010 and a record low of -5.20 percent in the fourth quarter of 1979.



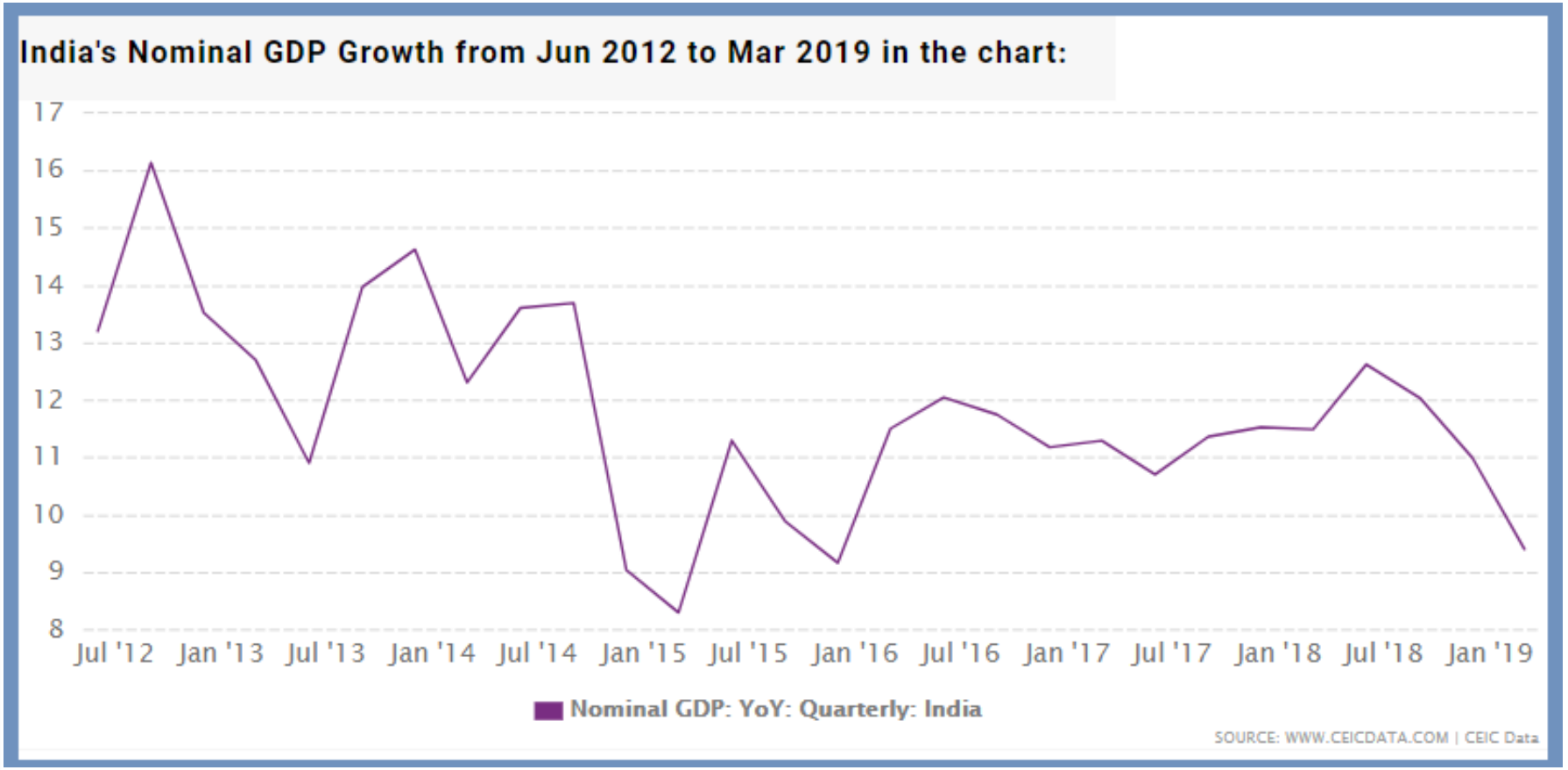
Current Economic Condition

Current Economic Condition



The Gross Domestic Product (GDP) in India expanded 5.8 % YoY in Mar 2019, following a growth of 6.6 % in the previous quarter. Real GDP Growth YoY data in India is updated quarterly, available from Jun 2005 to Mar 2019, with an average rate of 7.6 %. The data reached an all-time high of 13.3 % in Mar 2010 and a record low of 0.2 % in Mar 2009. CEIC calculates Real GDP Growth from quarterly Real GDP. Central Statistics Office provides Real GDP in local currency based on SNA 2008, at 2011-2012 prices. Real GDP prior to Q2 2012 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices.

Current Economic Condition



India's Nominal GDP Growth was reported at 9.399 % in Mar 2019. This records a decrease from the previous number of 10.992 % for Dec 2018. India's Nominal GDP Growth data is updated quarterly, averaging 11.511 % from Jun 2012 to Mar 2019, with 28 observations. The data reached an all-time high of 16.136 % in Sep 2012 and a record low of 8.292 % in Mar 2015. India's Nominal GDP Growth data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table: Nominal GDP: Y-o-Y Growth: Quarterly: Asia. CEIC calculates quarterly Nominal GDP Growth from quarterly Nominal GDP. Central Statistics Office provides Nominal GDP in local currency.

Case 1

India Q1 GDP Growth Slows to 5-Year Low

Slower growth rates were seen in household spending (8.1 percent compared to 8.4 percent in Q4) and **gross fixed capital formation** (10 percent compared to 10.6 percent). Meanwhile, **government consumption (9.2 percent compared to 6.5 percent) and inventories (4.8 percent compared to 3.9 percent) increased** further. **Net external trade contributed negatively to the GDP, as exports went up 12.5 percent (vs 14.6 percent in Q4) and imports rose at a faster 15.4 percent (vs 14.7 percent in Q4).**

Household spending accounted for 56.8 percent of the GDP (58.9 percent in Q4); gross fixed capital formation for 30.7 percent (33.4 percent in Q4); public expenditure for 9.9 percent (9.7 percent in Q4); and changes in stocks for 1.1 percent, the same as in the fourth quarter of 2018. Exports accounted for 20 percent (21.8 percent in Q4) while imports subtracted 23.3 percent (-25.7 percent in Q4).

Case 1

India Q1 GDP Growth Slows to 5-Year Low

Gross Value Added, that is, GDP excluding taxes grew 5.7 percent in the first quarter of 2019, easing from a 6.3 percent expansion in the prior period. **A slowdown was recorded in manufacturing (3.1 percent compared to 6.4 percent in Q4); trade, hotel, transport, communication and services related to broadcasting (6 percent compared to 6.9 percent);** and construction (7.1 percent compared to 9.7 percent). Also, agriculture, forestry and fishing shrank 0.1 percent, after expanding 2.8 percent in the prior quarter. On the other hand, output went up further in mining (4.2 percent compared to 1.8 percent); public administration and defence (10.7 percent compared to 7.5 percent); and financial, real estate and professional services (9.5 percent compared to 7.2 percent).

Case 2

India slips to 7th largest economy in 2018: World Bank

TNN | Updated: Aug 2, 2019, 14:16 IST

- US remains the top economy with a GDP of $20.5 trillion in 2018
- India has been pushed to the seventh place in the global GDP rankings in 2018
- China was the second largest economy with $13.6 trillion, while Japan took the third place with $5 trillion

NEW ORDER

Ranking	Country	GDP '18 ($ trillion)
1	US	20.5
2	China	13.6
3	Japan	5.0
4	Germany	4.0
5	UK	2.8
6	France	2.8
7	**India**	**2.7**
8	Italy	2.1
9	Brazil	1.9
10	Canada	1.7
11	Russia	1.7
12	S Korea	1.6
13	Australia	1.4
14	Spain	1.4

Source: World Bank

Case 2

India slips to 7th largest economy in 2018: World Bank

TNN | Updated: Aug 2, 2019, 14:16 IST

- India has been pushed to the seventh place in the global GDP rankings in 2018 with the UK and France forging ahead to the fifth and sixth spots, data compiled by the World Bank showed.
- In 2017, India had emerged as the sixth largest economy, while France was pushed to the seventh place in the global GDP league table.
- The US remains the top economy with a GDP of $20.5 trillion in 2018. China was the second largest economy with $13.6 trillion, while Japan took the third place with $5 trillion. India's GDP was at $2.7 trillion in 2018, while UK and France were at $2.8 trillion.
- In 2017, India was at $2.65 trillion, UK at $2.64 trillion and France at $2.5 trillion, helping the third-largest economy in Asia to emerge as the fifth largest economy at that time. Economists said India taking the seventh largest global economy tag in 2018 was largely due to the currency fluctuations and slowdown in growth.

Case 2

India slips to 7th largest economy in 2018: World Bank

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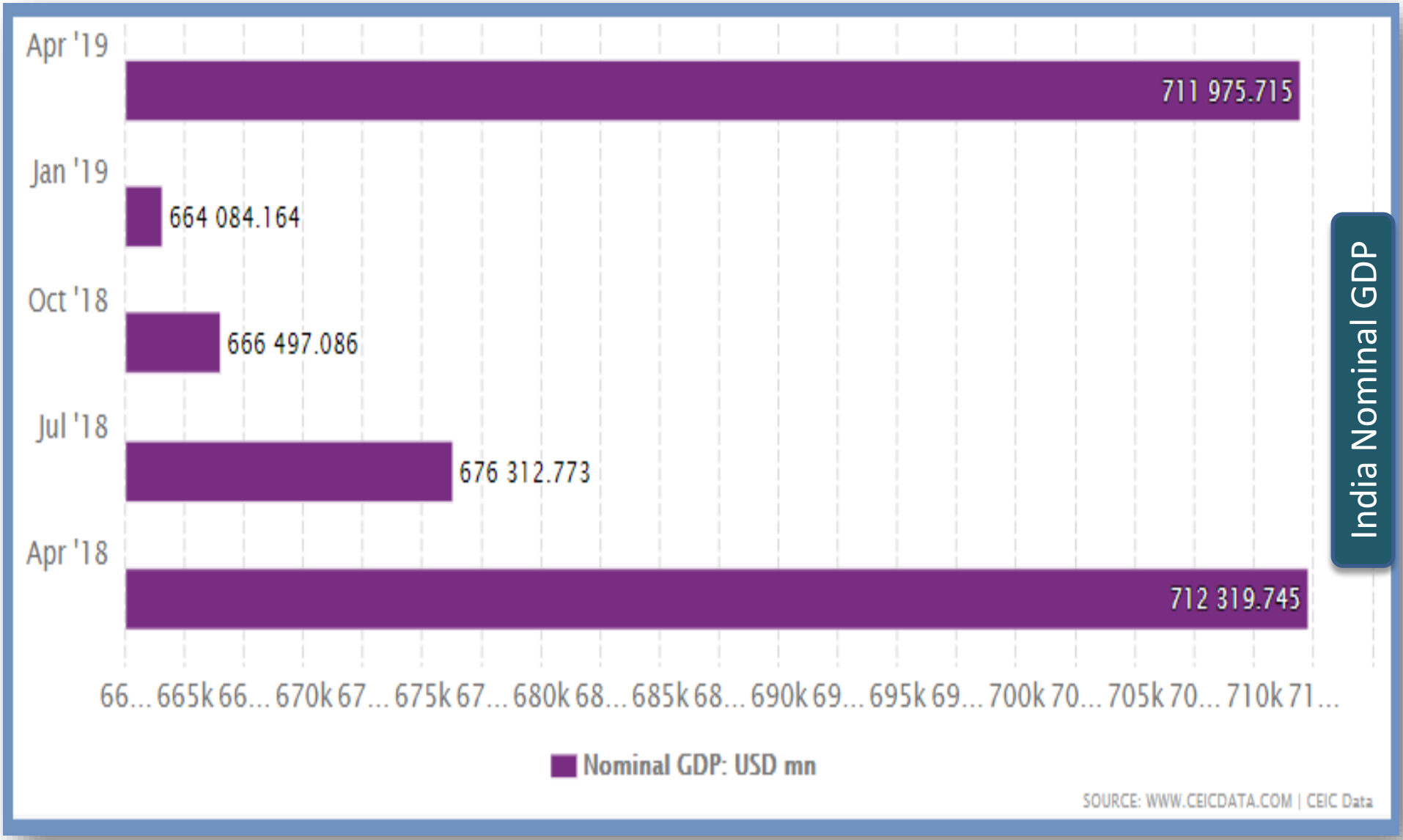
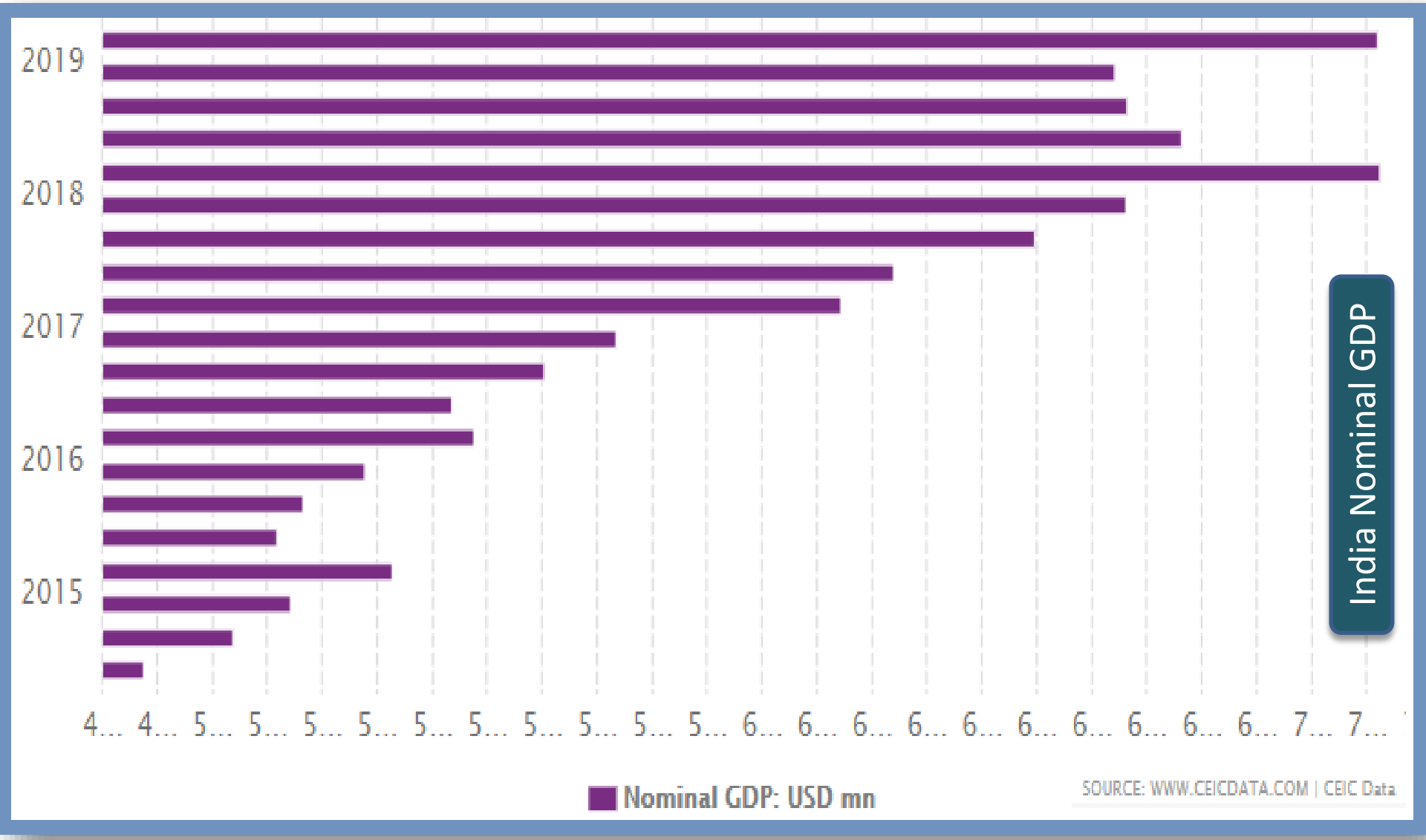
- **"In 2017, the rupee appreciated against the dollar, and in 2018 it depreciated against the dollar.** So, it is largely due to currency fluctuation and the growth slowdown," said Devendra Pant, chief economist at India Ratings and research. He added that the ranking could change if growth picks up.
- **India still remains the fastest-growing major economy in the world, although growth is estimated to slow to 7% in the current fiscal year that ends in March. China is expected to face a sharper slowdown due to the ongoing tariff war with the US.** Last month, research firm IHS Markit had said that India will overtake the UK as the fifth largest economy in the world in 2019 and is likely to shoot past Japan to emerge as the third-largest economy by 2025.
- **The government has unveiled a plan to emerge as a $5 trillion economy by 2024-25 and the Economic survey for 2018-19 has said that the country needs to sustain a real GDP growth rate of 8% to achieve the goal.** While growth is expected to be in the 7% range in the current fiscal year, most economists and multilateral agencies expect it to gather momentum and push past over the 7% mark next year as the impact of the measures unveiled by the government takes hold

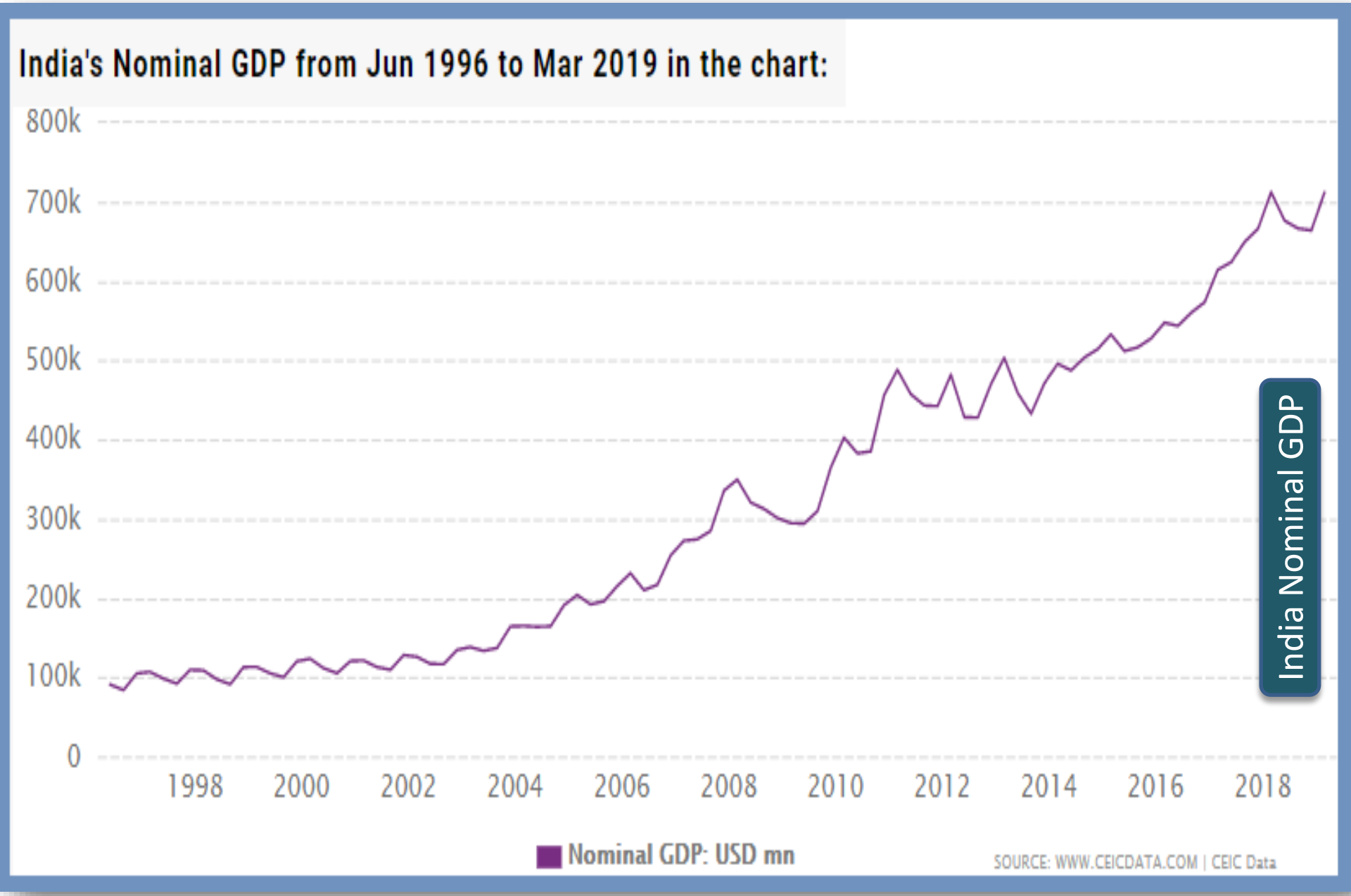
India Nominal GDP

India's Nominal GDP reached 712.0 USD bn in Mar 2019, compared with 664.1 USD bn in the previous quarter. Nominal GDP in India is updated quarterly, available from Jun 1996 to Mar 2019, with an average number of 289.6 USD bn. The data reached an all-time high of 712.3 USD bn in Mar 2018 and a record low of 84.1 USD bn in Sep 1996. CEIC converts quarterly Nominal GDP into USD. Central Statistics Office provides Nominal GDP in local currency based on SNA 2008, at 2011-2012 prices. Federal Reserve Board average market exchange rate is used for currency conversions. Nominal GDP prior to Q2 2011 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices and prior to Q2 2004 is based on SNA 1993, at 1999-2000 prices.

In the latest reports, India's GDP expanded 5.8 % YoY in Mar 2019. Its GDP deflator (implicit price deflator) increased 3.4 % in Mar 2019. India's GDP Per Capita reached 2,041.1 USD in Mar 2019. Its Gross Savings Rate was measured at 30.5 % in Mar 2018.


India Nominal GDP
Apr '19
711 975.715
Jan '19
664 084.164
Oct '18
666 497.086
Jul '18
676 312.773
Apr '18
712 319.745
66... 665k 66... 670k 67... 675k 67... 680k 68... 685k 68... 690k 69... 695k 69... 700k 70... 705k 70... 710k 71...
Nominal GDP: USD mn
SOURCE: WWW.CEICDATA.COM | CEIC Data


India Nominal GDP
2019
2018
2017
2016
2015
4... 4... 5... 5... 5... 5... 5... 5... 5... 5... 5... 5... 6... 6... 6... 6... 6... 6... 6... 6... 7... 7...
Nominal GDP: USD mn
SOURCE: WWW.CEICDATA.COM | CEIC Data


India's Nominal GDP from Jun 1996 to Mar 2019 in the chart:
800k
700k
600k
500k
400k
300k
200k
100k
0
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
India Nominal GDP
Nominal GDP: USD mn
SOURCE: WWW.CEICDATA.COM | CEIC Data

Case 3

India to be fastest growing economy again in 2018: World Bank

Mint Thu, Jan 11 2018. 01 22 AM IST

After conceding its position as the fastest growing major economy to China for a year in 2017,**India is likely to reclaim the position in 2018, with growth expected to accelerate to 7.3%** in the year, according to the World Bank's Global Economic Prospects.

The report projected China's economic growth to slow to 6.4% in 2018 from 6.8% in 2017. **The World Bank also revised India's growth estimate for 2017 to 6.7% from 7% projected in October,** blaming short-term disruptions caused by the **newly introduced goods and services tax (GST)** and a **softer-than-envisioned recovery in private investment.**

The estimates are on a different fiscal year basis for each country. India's fiscal year runs from April to March. China follows a January-December fiscal year.

Global growth is projected to edge up to 3.1% in 2018, as growth in advanced economies is projected to slow while growth in emerging economies is expected to accelerate.

India's statistics office on Friday **projected the economy to slow to 6.5% in 2017-18 from 7.1% a year ago.** The economy has been hurt by the lingering **impact of demonetization and disruptions caused by GST**.

Case 3

India to be fastest growing economy again in 2018: World Bank :

Mint Thu, Jan 11 2018. 01 22 AM IST

1. A gradual moderation in growth in China and temporary slowdown in India will be balanced by robust growth trends in other Asian economies," it added.
2. Economic affairs secretary Subhash Chandra Garg tweeted: "World Bank releases its GDP growth estimates. India projected to grow at 6.7% in 2017. Higher growth of 7.3% projected for 2018. Impressive advance corporate tax payments in 3rd quarter indicates India's growth turnaround to be much better."
3. **Direct tax collections grew by more than 18% in the first nine months (April-December) of the fiscal year 2017-18 to two-thirds of the full-year target**, which is expected to provide a breather to the government as it struggles to contain the fiscal deficit.
4. The World Bank said strong private consumption and services are expected to continue to support economic activity. **"Private investment is expected to revive as the corporate sector adjusts to the GST; infrastructure spending increases, partly to improve public services and internet connectivity; and private sector balance sheet weaknesses are mitigated with the help of the efforts of the government and the Reserve Bank of India,"** it said.
5. Over **the medium term, GST is expected to benefit economic activity and fiscal sustainability by reducing the cost of complying with multiple state tax systems, drawing informal activity into the formal sector, and expanding the tax base.** it said. "The **recent recapitalization package for public sector banks** announced by the government of India is expected to help resolve banking sector balance sheets, support credit to the private sector, and lift investment. The global trade recovery is expected to lift exports," it added.

Case 3

India to be fastest growing economy again in 2018: World Bank Mint
Thu, Jan 11 2018. 01 22 AM IST

- "**Corporate debt overhangs and high levels of non-performing loans** have been long-standing concerns in some countries (e.g. Bangladesh, India). Setbacks in efforts to resolve these domestic bottlenecks would continue to weigh on investment, and more broadly on medium-term growth prospects in the region," it added.
- "**Weak private investment was only partly mitigated by a public infrastructure investment push** and a surge in current expenditures after recent public pay hikes," the report said.
- The World Bank said strong **private consumption and services are expected to continue to support economic activity**. "Private investment is expected to revive as the corporate sector adjusts to the GST; infrastructure spending increases, partly to improve public services and internet connectivity; and private sector balance sheet weaknesses are mitigated with the help of the efforts of the government and the Reserve Bank of India," it said..

Case 4

India's Real GDP Growth to Average at 7.4% Over 2017, 2018: Deutsche Bank

The Economics Times: Aug 15, 2017, 10.28 AM IST

India's growth momentum will get stronger with revival in **private investment cycle** starts reviving gradually, along with **continuation of strong private consumption and real GDP growth is expected to average at about 7.4 per cent over 2017 and 2018**, which will mark about **200 bps improvement from the average outturn over 2012 and 2013**, a period when India's **macro came under severe pressure** says a Deutsche Bank report.

It also termed as 'faulty' the argument that **a 7.5-8 per cent real GDP growth in the next few years will still be lower than** what was achieved in the **boom period of 2006-2008.**

It said the global economy post the 2008 global financial crisis (GFC) has adjusted to a **new normal of low-growth low- inflation environment,** and India's growth achievement should therefore be judged taking this **structural shift into consideration**.

Case 4

India's Real GDP Growth to Average at 7.4% Over 2017, 2018: Deutsche Bank

Medium-Term Outlook

- The medium-term outlook for the country looks **"exceedingly positive"** driven by **supportive population dynamics,** steadily **rising aspirational middle class** and **a reforms oriented government**, it said.
- It termed India as **one of fastest growing economies in the world.**
- **India lost the tag of the fastest growing** major economy to **China in the March quarter with a GDP growth of 6.1 per cent,** which pulled down the 2016-17 expansion to **7.1 per cent**.

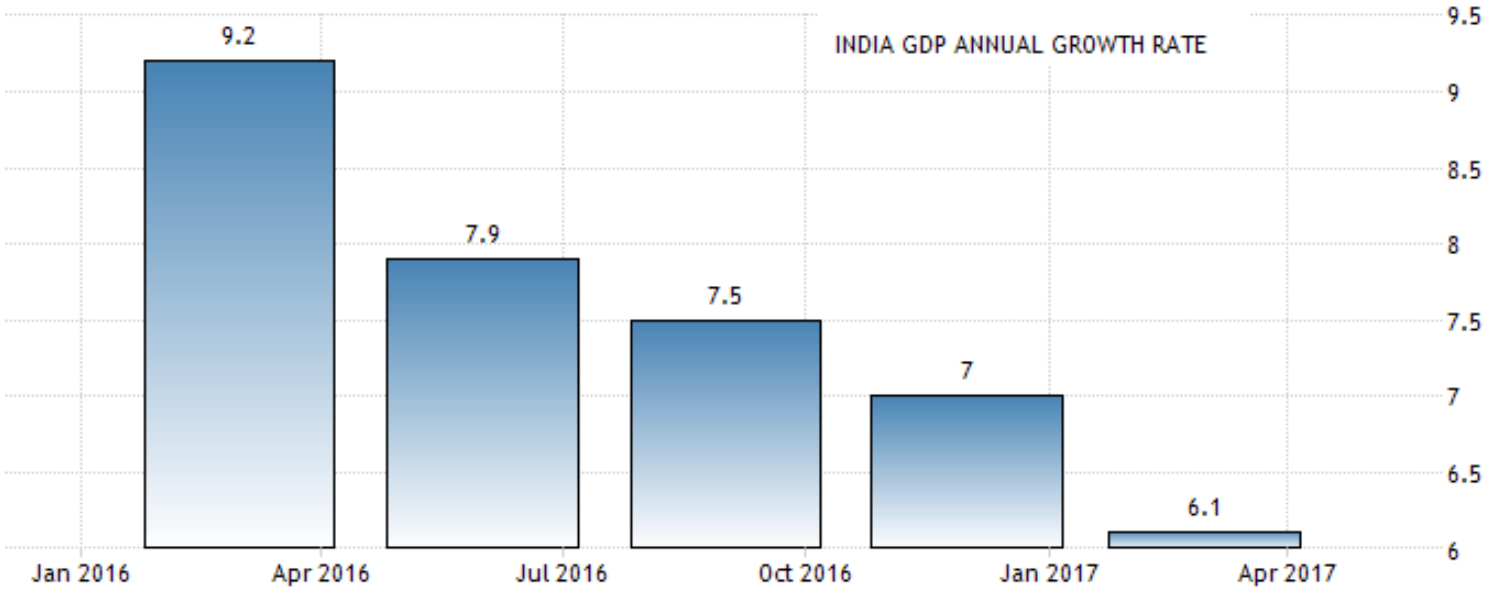
Case 5

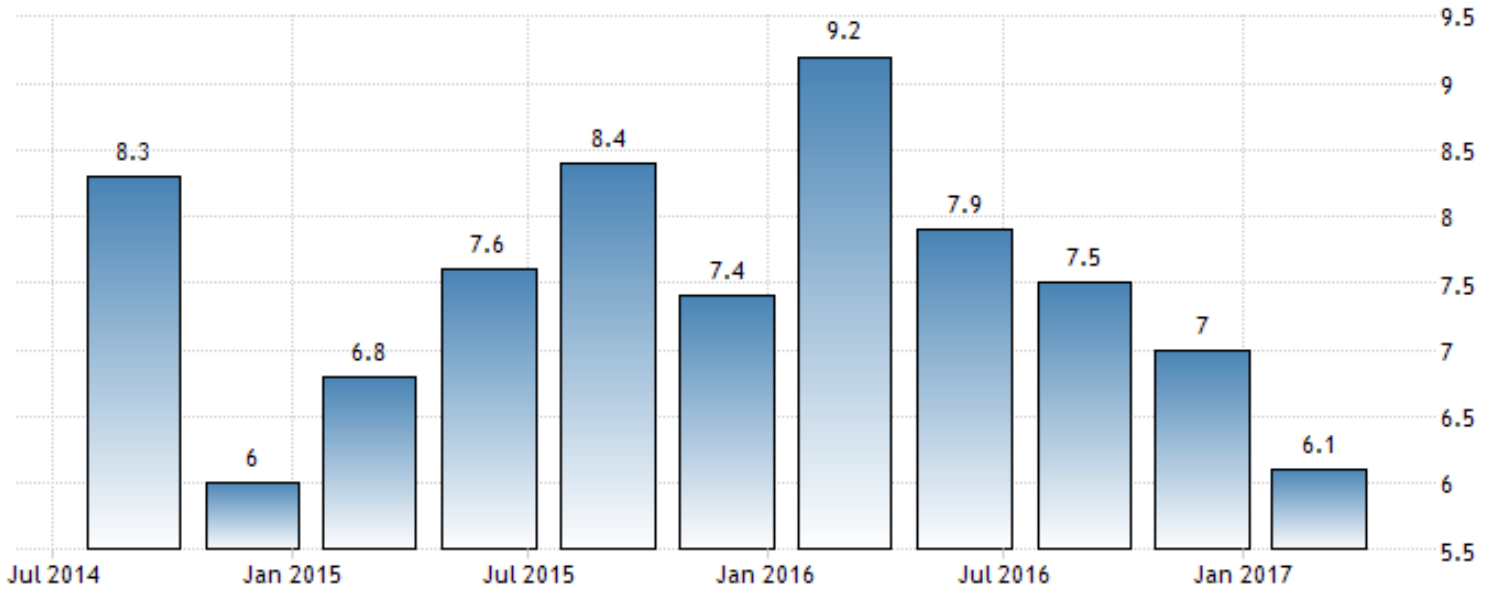
India GDP Growth Unexpectedly Slows To 6.1% In Q1

- The **Indian economy advanced 6.1 percent year-on-year in the first quarter of 2017**, slowing sharply from a **7 percent expansion in the previous period** and **well below market expectations of 7.1 percent.**
- It is the **lowest growth rate since the last quarter of 2014**, due to a **slowdown in consumer spending** and **a drop in investment, following the demonetization program** started in November of 2016 that removed 86 percent of India's currency in circulation.
- In addition, **the government changed the GDP base year for 2011-2012 from 2004-2005.** The same change was made earlier for **industrial production and wholesale prices indexes,** with adjustments in the weights of the different industries.
- Considering the **April 2016-March 2017 period, the economy advanced 7.1 percent**, in line with the **official estimate but below 8 percent in the previous year.**

Case 5

India GDP Growth Unexpectedly Slows To 6.1% In Q1





SOURCE: TRADINGECONOMICS.COM | MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION (MOSPI)

Gross National Product(GNP)

The gross national product(GNP) is defined as the sum of market value of all final goods and services produced in a country during a specific period of time, generally one year

Plus (+)

Incomes earned by the residents of a country in foreign countries

Minus(-)

Incomes earned by the foreigners in the country.

Gross National Product(GNP)

Market Value = The final 'national product' is the money value of all final goods and services.

Market Value obtained by two way **Constant Price** and **Current Price**.

Accordingly,GNP is known as **'GNP at Constant Prices' and 'GNP at Current Prices'.**

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

GDP refers to the value of final goods and services **produced within the geographical area of a country**, say, India. It **does not matter if the producers of these goods and services are residents or non-residents.** They just have to have a physical presence in the country.

GNP, on the other hand, focuses on **production of goods and services by the country's residents only, irrespective of the geographical area.** In case of GNP therefore, it does not matter where in the world the production is taking place; the producers of goods and services have to be Indian residents.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

Resident

- Resident: First, let us understand what a resident means? A resident of an economy could be an individual or an organization. Resident or non-resident status of individuals and organizations depend on the center of their economic interests.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

Infosys

- Infosys, whose center of economic interest is in India, if it invests in the United States, will be treated as an Indian resident organization and people working in this organization from Infosys India, will be treated as Indian residents.

IBM

- Similarly, IBM, whose center of economic interest is in the United States, when it invests in India, will be treated as a non-resident organization and the people working in this organization from IBM USA, will be treated as non-residents.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

Factor Incomes

- Secondly, **Factor incomes** are incomes accrued to various factors of production, i.e., rent for land; wages for labour; interest for capital and profit for organization. Factor incomes from abroad are incomes (profits, interest and wages that accrue to the residents, i.e., individuals and organizations through their investments in the rest of the world).

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

Infosys

- The factor incomes earned by Infosys in the United States are a part of US GDP by virtue of the fact that production of goods and services has taken place within the geographical area of the United States, but they are not a part of U.S. GNP because the incomes do not accrue to U.S. residents but to Indian residents.

IBM

- Similarly, factor incomes accrued to IBM in India are a part of Indian GDP because production of goods and services have taken place within our geographical boundaries, but they are not a part of India's GNP because they have not accrued to our residents.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

- The fundamental difference between GNP and GDP thus lies in the treatment of factor incomes from the rest of the world.

- Factor incomes of our residents from abroad are a part of India's GNP but not GDP; factor incomes earned by non-residents in India is a part of India's GDP but not GNP.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

Net factor income from abroad (NFIA) defined as;

factor incomes earned by our residents from the rest of the world minus factor incomes earned by non-residents from our country.

- **GNP = GDP + NFIA and**
- **GDP = GNP - NFIA**
- In India, GNP is slightly less than GDP, which means that NFIA in India is negative.

Gross Domestic Product (GDP) vs. Gross National Product (GNP)

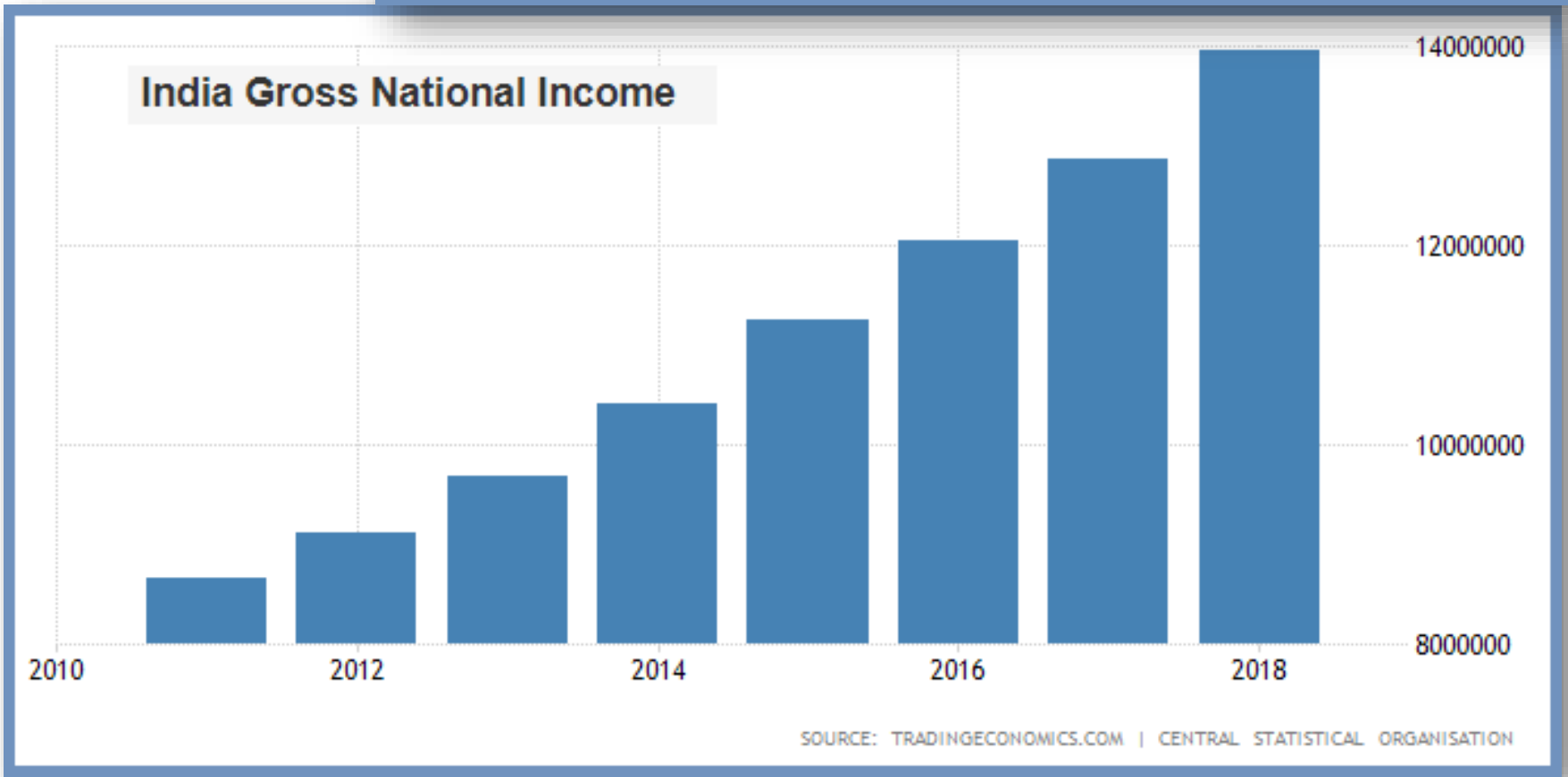
- GDP and GNP are both measures of economic activity.
- GDP measures the overall level of economic activity and does not consider whether the economic activity (employment, industrial production) are enabled by non-resident or resident investments.
- GNP, on the other hand, focuses more on incomes of residents.

More countries are moving towards GDP to fall in line with United Nation's System of National Accounts, which emphasizes GDP as a measure of economic activity. International comparisons become easier when all country follows same standards. But starting point of measure of a country's national income is clearly the GNP.

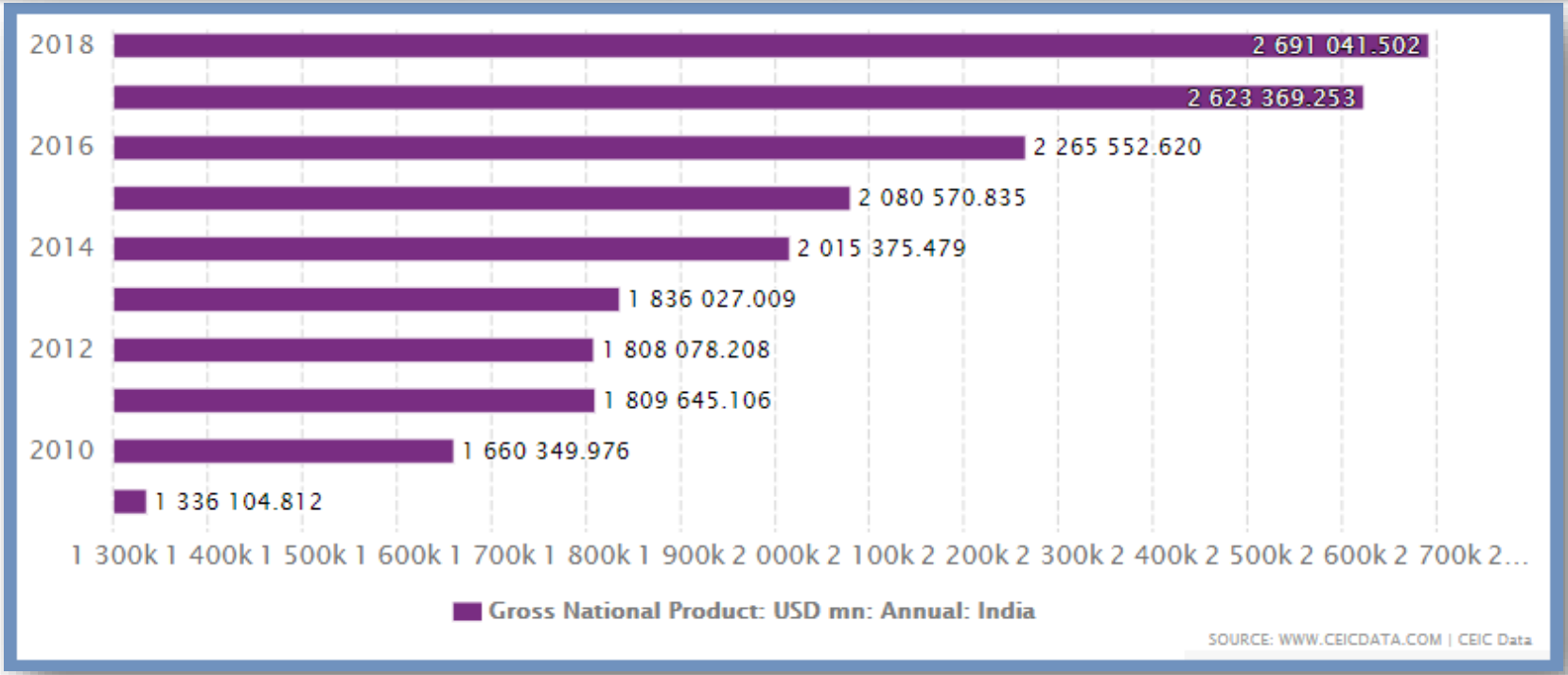
GNP from 2009 to 2018

Gross National Product in India increased to 13954956 INR Tens Of Million in 2018 from 12865461 INR Tens Of Million in 2017. Gross National Product in India averaged 10996192.88 INR Tens Of Million from 2011 until 2018, reaching an all time high of 13954956 INR Tens Of Million in 2018 and a record low of 8659505 INR Tens Of Million in 2011.

India GDP	Last	Previous	Highest	Lowest	Unit
Gross National Product	13954956.00	12865461.00	13954956.00	8659505.00	INR Tens Of Million

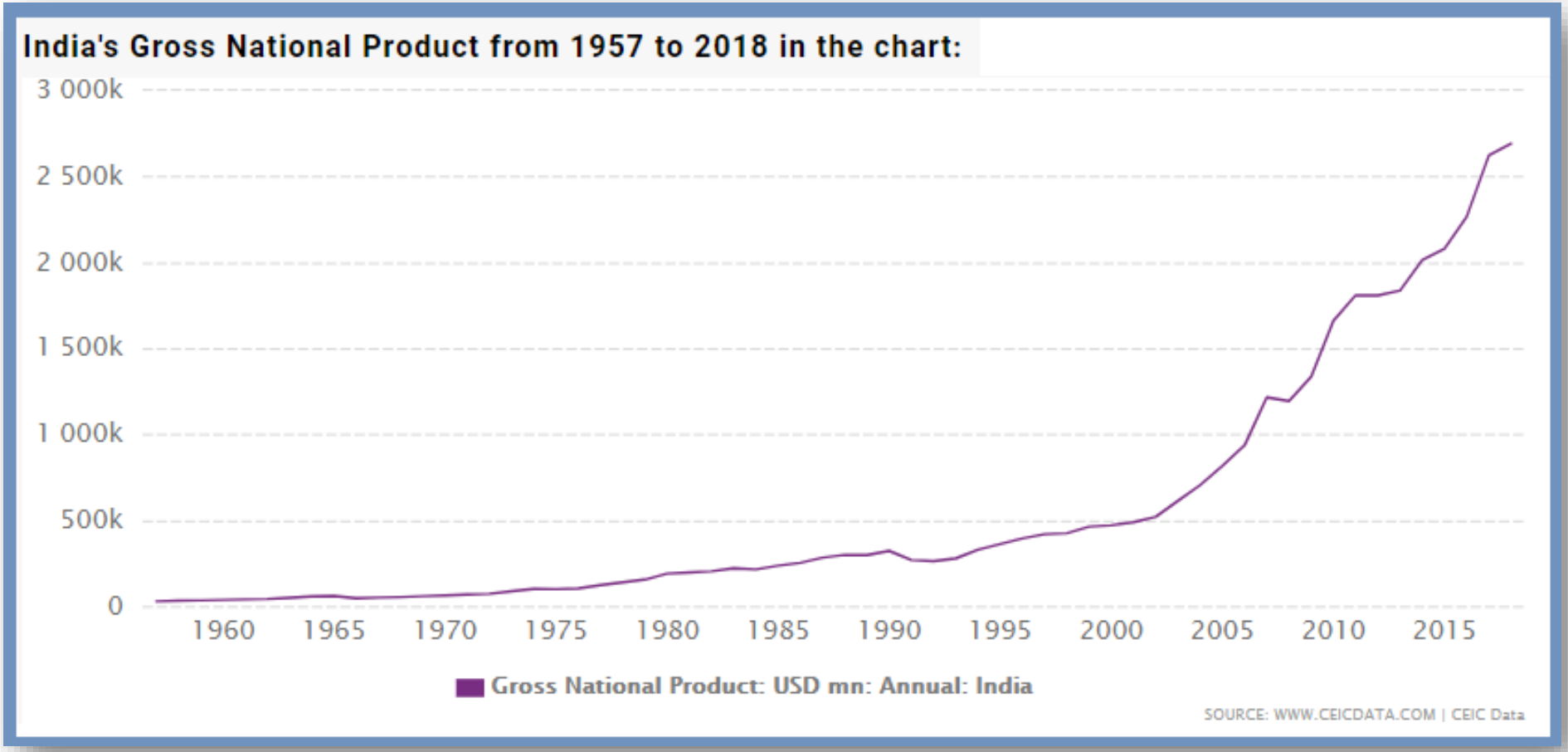


GNP from 2009 to 2018



India's Gross National Product was reported at 2,691.042 USD bn in Dec 2018. This records an increase from the previous number of 2,623.369 USD bn for Dec 2017. India's Gross National Product data is updated yearly, averaging 265.737 USD bn from Dec 1957 to 2018, with 62 observations. The data reached an all-time high of 2,691.042 USD bn in 2018 and a record low of 29.255 USD bn in 1957. India's Gross National Product data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table: Gross National Product: USD: Annual: Asia. CEIC shifts year-end for annual Gross National Product and converts it into USD. Central Statistics Office provides Gross National Product in local currency based on SNA 2008, at 2011-2012 prices. Federal Reserve Board average market exchange rate is used for currency conversions. Gross National Product prior to 2004 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices. Gross National Product is reported in annual frequency, ending in March of each year.

India's Gross National Product from 1957 to 2018



GDP at Factor Cost

- In theory, no government intervention local production of cigarettes Rs.24,
- Market value = factor income
  = total cost
  = total value-added =Rs.24

- But if there is indirect tax or subsidies, Market value ≠total value-added

Example 1: **Cigarettes** : market price =Rs.24

- Indirect business tax = Rs.4
- GDP at market price = Rs.24
- GDP at factor cost = Rs.24 – Rs.4 = Rs.20 = total value-added

GDP at Factor Cost

Example 2: Education in University

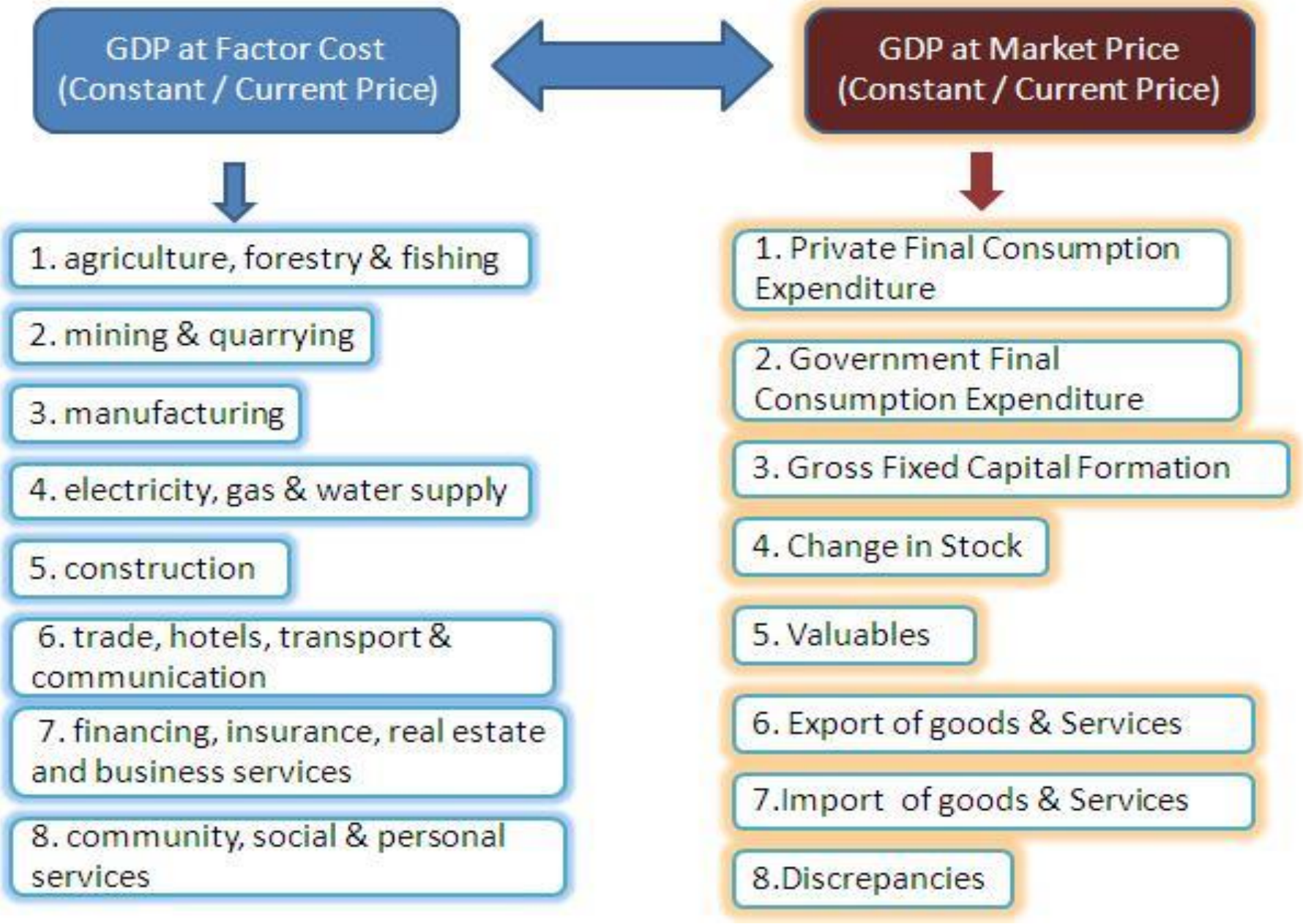
- Total value-added in university =Rs.140
- Subsidy = Rs.20
- School fee = Rs.120
- GDP at market price = Rs.120
- GDP at factor cost = Rs.120 + Rs.20 = Rs.140 = total value-added

GDP at factor cost (total value-added) = GDP at market price – indirect business tax (IBT) + Subsidies (S)

GDP at Factor Cost

- GDP at market price=C+I+G+(X-M)
- GDP at factor cost=sum of value added
- GDP at factor cost= wage+rent+interest+gross profits+depreciation

GDP at factor cost + indirect business taxes – subsidies = GDP at market price


GDP at Factor Cost
(Constant / Current Price)
GDP at Market Price
(Constant / Current Price)
1. agriculture, forestry & fishing
2. mining & quarrying
3. manufacturing
4. electricity, gas & water supply
5. construction
6. trade, hotels, transport & communication
7. financing, insurance, real estate and business services
8. community, social & personal services
1. Private Final Consumption Expenditure
2. Government Final Consumption Expenditure
3. Gross Fixed Capital Formation
4. Change in Stock
5. Valuables
6. Export of goods & Services
7.Import of goods & Services
8.Discrepancies

Economy –The Three Sided View

National Economy is an aggregate of productive units of different sectors.

National Economy is a combination of individuals and households °wining different -ends of factors of production.

National Economy is a collection of consuming, saving and investing units

Methods of Measuring National Income

GDP has been defined as market value of final goods and services produced in an economy, in a given period of time. There are three ways of measuring GDP: the expenditure method, the production method and, the income method. Theoretically, all should give the same results.

- **e.g.** Amol spends a final good Rs.10, the market value is Rs.10, the income to the factors is Rs.10

National Expenditure = National Output = National Income

1)Expenditure approach

2)Output approach

3)Income approach

Expenditure Approach

Expenditure method measures the expenditure or total spending on domestically produced final goods and services in an economy.

The idea here is that expenditure incurred on the purchase of a final good or service also captures the market value of the final good or service, which is the definition of GDP.

For example, if I want to know the contribution of Tata Indica to India's GDP, I can find out what is the expenditure incurred on the purchase of the car, which is nothing but its market value.

Expenditure Approach

Expenditure on final goods and services has four components:

GDP = C + I + G + (X- M)

Expenditure on consumption goods and services by the private sector usually referred to as 'C'. This includes consumer non-durables (food, clothing), consumer durables (air conditioners, TVs, cars) and consumption of various services (haircut, laundry and host of other services);

Expenditure on investment goods and services by the private sector usually referred to as 'I'. This includes addition to stock of capital (machineries, equipments), addition to structures (factories, buildings), addition to stock of inventories from current year's production and, investment in services (consultancy services, financial services);

Expenditure on final consumption and investment of goods and services, as defined above, by the government, usually referred to as 'G'; and,

Expenditure on final goods and services by the foreigners, which are our exports and usually referred to as 'X'.

Expenditure Approach

GDP = C + I + G + (X- M)

- C = Private consumption expenditure
- I = Investment Expenditure
- G= Government Consumption Expenditure
- X = Value of Exports
- M = Value of Imports
- Expenditure on final goods and services
- Expenditure on imports needed to be deducted from the calculation

Expenditure Approach

C= Private Consumption Expenditure (C)

1.Second Hand Goods

Ans: Exclude. There is no current production

2. Commission spent on buying a second-hand bag

Ans: Include. Current production

3. Expenditure on illegal goods/services

Ans: Exclude. No official record

Investment Expenditure (I)

= Gross Domestic Fixed Capital Formation + Change in Stock (Inventories)

- Gross Domestic Fixed Capital Formation: Expenditure on purchasing land, factories, flats, office, machinery, commission, legal charges

Expenditure Approach

Investors spend on intermediate goods and services

- E.g. raw materials, electricity charges, water charges
- Ans: Excluded because the value of the final goods already include the value of the intermediate goods and services

Investment

- I = Gross domestic fixed capital formation + Change in stock
- Gross domestic fixed capital formation = Net domestic fixed capital formation + depreciation
- I = Net domestic fixed capital formation + depreciation + Change in stock

Examples: Investment expenditure

- An investor spent Rs.1 million to buy 10 new printing machines and spent Rs.10 000 to repair the old printing machines.
- = Net domestic fixed capital formation (Rs.1 million) + depreciation (Rs.10 000)
- XYZ Company bought a new office in Mumbai at Rs.2 million. It spent Rs.70 000 on buying an old lorry and spent Rs.20000 on buying cloth from a HK importer.
- The total consumer expenditure on XYZ Company this year is Rs.5 million. And the value of its stock increases by Rs.0.5 million.

Expenditure Approach

Government Expenditure (G)

Items Included:

- e.g. Housing allowance of civil servants
- e.g. Medical allowance of civil servants
- e.g. Expenditure on building new airport
- Items Excluded: Transfer Payment/Public Assistance, because nothing gets produced.

Net Exports (X-M)

- = Domestic Exports of goods
- + Exports of Services
- - Imports of Goods (Sales of goods that were produced outside our domestic borders)
- - Imports of Services
- Count the VALUES of import and export

Output or Production (Valued-added) Approach

The output method, thus, arrives at the true value of goods and services produced in the economy not by adding up the total value of production, but the value added at each stage of production.

How does it work?

Suppose company A produces some raw materials for Rs. 1,000 and sells it to company B.

Company B uses the raw material to produce a finished product and sells it to a retailer for Rs. 1,500.

The retailer sells the product to the consumer at Rs. 2,000.

What is the contribution to GDP?

Output or Production (Valued-added) Approach

What is the contribution to GDP?

- The answer, for reasons mentioned in the preceding paragraph, is that we do not add up the total value but the extra value or value added by each firm to the item under consideration. In this example, the value added by company A is Rs. 1,000; that by company B is Rs. 500 and that by company C is another Rs. 500, giving us a total value of Rs. 2,000 as the items' contribution to GDP.
- You will notice that this is nothing but the market value of the final good produced. Expenditure and output methods of measuring GDP, therefore, give identical results.

GDP

- **GDP arrived at through expenditure and output or value-added method is also reported as GDP at market prices (GDP), which once again can be expressed in current market prices (nominal GDP) or constant market prices (real GDP).**

Income Approach

The idea for calculating GDP by income method is as follows: suppose the GDP of a country is Rs. 2,000. If we are estimating it through the expenditure method, this amount reflects total spending on domestically produced final goods and services.

The use of the word 'final', it may be recalled, means that the value of Rs. 2,000, which is the GDP of the country in this hypothetical example, includes the value of all the intermediate products that have gone into the production of goods and services in the economy.

Again, let us suppose we are estimating the GDP through the output method. In that case the GDP of Rs. 2,000 will reflect the sum of the value added at each stage of production by various goods and services in the economy. Value added, as we have seen earlier, is arrived at as total value (or, total revenue) minus the cost of intermediate products. Thus, the GDP of Rs. 2,000 in this hypothetical economy, irrespective of whether we use the expenditure or output method gives identical results and, is arrived at after allowing for the cost of all intermediate products.

Income Approach

In the income method we are asking the question:

What happens to Rs. 2,000, which is arrived at after taking into consideration the value of all intermediate products?

Who gets it?

- The answer is that it is paid as income to those who helped in producing the output. Those who help in the production of output are called factors of production and these, as are mentioned, are land, labour, capital and organization.

✓Payment for the use of land, say for setting up a factory or a shop, is rent (r);

✓payment for labour is wages (w);

✓payment for capital is interest (i) and,

✓finally, payment for organization is profit (p).

The income method of estimating GDP, therefore, adds up the total income that accrues to the various factors of production.

GDP Reported

- **And, this is reported as GDP at factor cost (GDP,) and can be expressed in current prices (nominal GDP) or constant prices (real GDP).**

Relationship between Expenditure, Output and Income Methods of Measuring GDP

Stage of production (1)	Sales receipts (2)	Cost of intermediate products (3)	Value added (4)	Factor incomes (5)
Wheat	24	0	24	$r + w + i + p$
Flour	33	24	9	$r + w + i + p$
Dough	60	33	27	$r + w + i + p$
Bread	90	60	30	$r + w + i + p$

Table summarizes the relationship between expenditure, output and income methods of measuring GDP.

- In this Table, we are looking at the contribution of bread in GDP.
- Different stages of production in bread are wheat, flour, dough and bread, which is the final product.
- Using the **expenditure method**, GDP is the value of the final product, equal to 90. This is nothing but the sum of sales.

Relationship between Expenditure, Output and Income Methods of Measuring GDP

Stage of production (1)	Sales receipts (2)	Cost of intermediate products (3)	Value added (4)	Factor incomes (5)
Wheat	24	0	24	$r + w + i + p$
Flour	33	24	9	$r + w + i + p$
Dough	60	33	27	$r + w + i + p$
Bread	90	60	30	$r + w + i + p$

Output method : Receipts (column 2), which is 207 minus the sum of costs of intermediate products (column 3), which are 117. Using the output method, we find out the value added at each stage of production (column 4) and add them up. This also comes to 90. Once again, this is nothing but the total revenue (value) at each stage of production (column 2) minus the cost of intermediate produce at that stage of production (column 3), aggregated over all stages.

Income method : Finally, the GDP of 90 is paid out to the various factors of production (column 5) in the form of rent (r), wages (w), interest (i) and profit (p).

Relationship between Expenditure, Output and Income Methods of Measuring GDP

Stage of production (1)	Sales receipts (2)	Cost of intermediate products (3)	Value added (4)	Factor incomes (5)
Wheat	24	0	24	$r + w + i + p$
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Bread	90	60	30	$r + w + i + p$

The relationship, thus, emerges as follows:

1. Total sales receipt - Cost of intermediate products = Final expenditure
2. Final expenditure = Value added =r + w + i + p
3. Expenditure method = Output method = Income method

From Conceptualization to Reality

GDP at factor cost (GDP_{fc})

Conceptually, as we have seen above, the three measures of GDP, i.e., the expenditure method (GDP_{mp}), the output method (also GDP_{mp}) and the income method (GDP_{fc}) are the same.

In reality, however, GDP_{mp} need not be equal to GDP_{fc}. This is because, when we purchase a final product, the market price of that product also captures the **indirect taxes** (say, excise duty) on that product, which is not available for distribution to the factors of production in the form of rent (r), wages (w), interest (i) and profits (p).

For example, let us say, the value of the final product, measured at its market price is Rs. 100. Also, assume that the excise duty on this product is Rs. 20. Then, what is available for distribution to the factors of production is not Rs. 100 but Rs. 100 — Rs. 20 = Rs. 80.

From Conceptualization to Reality

GDP at factor cost (GDP_{fc})

The reverse is true in case of a subsidy (negative indirect tax), which is revenue to the firm and available for distribution to the factors of production but does not show up in the posted market price. In other words, if the price of Rs. 100 for our product has a subsidy component of Rs. 10, then for all practical purposes, the market value of the product (in the absence of the subsidy) is Rs. 110 and so the value of the subsidy has to be added as incomes to the factors of production.

We can now see the relationship between GDP at market prices (GDP_{mp},) and GDP at factor cost (GDP_{fc}).

GDP_{mp} — (indirect taxes — subsidies) = GDP_{fc}

Let us define indirect taxes minus subsidies as net indirect taxes.

Then, **GDP_{mp} — net indirect taxes = GDP_{fc}**

In Table both indirect taxes and subsidies were assumed to be zero. Under the circumstances, understandably, all the three methods of measuring GDP turned out to be the same.

From Conceptualization to Reality

In reality, do all the three measures give identical results, even after market price and factor cost adjustments as discussed above are carried out?

The answer is that these estimates are similar but not identical.

- The differences are due primarily to statistical discrepancies, as each method relies on an independent source of data.
- The Statistical Office reconciles these differences through a balancing process such that the end result is identical.
- Clearly, the question of appropriateness does not arise as all the three methods give identical results.

Which Method is more Appropriate as a Measure of GDP?

Output method may be used while **comparing sectoral growth rates,** i.e., what is the value added by manufacturing, agriculture or service sectors to India's GDP and how each is changing over time.

Similarly, expenditure method is used to arrive at **estimate of aggregate demand,** i.e., to find out the trends in different components of demand (C + I + G + X — M) and how each may be affecting GDP.

Lastly, the income method may come in handy when the objective is to find out how **the income is distributed** to each factor of production, i.e.,

what is the percentage going to labour as wages, how much is profit, what is the outgo towards payment of interest, rent, and so on.

These data may form the basis for some policy announcements with regard to these factors of production.

Income method is also essential in estimating national income and per-capita income.

Gross Domestic Product (GDP) vs. Net Domestic Product (NDP)

Actual growth of GDP, in real terms, is a mirror image of actual growth of demand for goods and services in the economy. When the aggregate demand increases, this induces more production of goods and services and the GDP grows, assuming production potential exists.

The source is two-fold: new investments and the rate at which the new investment translates into increased production. The former depends on availability of savings and the latter on incremental capital-output ratio.

The important point to note here is that investment is a necessary prerequisite for growth and improved efficiency in production, which results in a reduction in incremental capital- output ratio and contributes to getting more out of a given investment.

Gross Domestic Product (GDP) vs. Net Domestic Product (NDP)

The investment figure that we consider in the estimation of GDP refers to gross investment.

Gross investment only considers the amount of capital added each year; it does not consider the fact that each year some capital also gets used up or depreciated.

Suppose Rs. 100 crores worth of investment goods (say, machines and tools) are added in the current year, but Rs. 25 crores of investment goods have been used up or have depreciated in the production of current year's output.

Gross Domestic Product (GDP) vs. Net Domestic Product (NDP)

What is the net addition to investment goods this year?

- It is not Rs. 100 crores but Rs. 75 crores, the difference being depreciation.
- The difference between GDP and NDP is the difference between gross investment and net investment, which is depreciation.
- **In other words, GDP - Depreciation = NDP.**

Why do we look at NDP?

- Since the difference between GDP and NDP is depreciation, and is arrived at by calculating the difference between gross and net investment, the size of depreciation also determines the size of net investment in the economy.

Gross Domestic Product (GDP) vs. Net Domestic Product (NDP)

Declining Economy	▪ If depreciation is greater than gross investment, net investment is negative;- **declining economy**
Stagnant Economy	▪ If depreciation is equal to gross investment, net investment is zero and,-**stagnant economy.**
Growing Economy	▪ If depreciation is less than gross investment, net investment is positive. - **growing economy.**

And, for sustained growth of an economy, what matters is net and not gross investment.

Gross Domestic Product (GDP) vs. Net Domestic Product (NDP)

Macroeconomics is concerned with the overall level of economic activity and uses 'gross' concepts. We, therefore, do not see frequent reference to NDP.

Another reason why we do not see frequent reference to NDP is because depreciation figures are difficult to estimate or may not be available on time.

But NDP, indeed, is a more accurate measure of level of economic activity in an economy.

Of course, if NDP, over a period of time, turns out to be a fixed proportion of GDP, implying thereby that depreciation rate is stable, GDP growth can be used as a reliable proxy for NDP growth also.

National Income (NI) and Per-Capita Income (PCI)

National income is defined as factor incomes accrued to the residents of a country.

How do we arrive at that?

Let us go step by step. From our discussion of GDP vs. GNP it should be clear that if we are talking about the incomes accruing to our residents, the starting point is GNP and not GDP.

In Step 1, therefore, we convert GDP into GNP, i.e.,

GNP = GDP + NFIA.

In Step 2, should we take GNP at market prices (GNP_{mp}) or GNP at factor costs (GNP_{fc})?

GNP_{mp}, would include net indirect taxes that do not accrue to the factors of production; hence, a correct point to measure of what accrues to the factors of production would be GNP_{fc}.

National Income (NI) and Per-Capita Income (PCI)

In the final step, we ask: does GNP_{fc} accurately reflect what accrues to the factors of production?

Or, is some more adjustment called for?

- Note GNP_{fc} would include depreciation, which is not a factor payment. If we take out depreciation from GNP_{fc}, we end up with NNP_{fc}.
- NNP_{fc}, indeed, accurately reflects what is paid out as factor incomes to our residents.
- NNP_{fc}, thus, is what is defined as national income (NI).

National Income (NI) and Per-Capita Income (PCI)

In other words, national income equals GNP_{mp} minus net indirect taxes (which gives us GNP_{fc}) minus depreciation (which gives us NNP_{fc}).

- Once the concept of national income is clear, per-capita income (PCI) is straightforward.
- Just divide national income (NNP_{fc}) each year by each year's population and we have the per capita income figure for that year.
- Per-capita income signifies the average standard of living of the people.

1. Convert GDP_{mp} to $GNP_{mp} \Rightarrow GNP_{mp} = GDP_{mp} + NFIA$
2. Convert GNP_{mp} to $GNP_{fc} \Rightarrow GNP_{fc} = GNP_{mp} - \text{Net Indirect Taxes}$
3. Convert GNP_{fc} to $NNP_{fc} \Rightarrow NNP_{fc} = GNP_{fc} - \text{Depreciation}$
4. $NI = NNP_{fc}$

Personal Income (PI) and Disposable Income (DI)

All earned income is not received

- National income, of course, is all earned. This income is earned by the resident factors of production for their contribution to current year's output. However, all earned income is not received by the factors of production in the same year.
- For example, profits earned may not be fully received by the owners in the form of dividends because part of it may go out in the form of corporate income taxes; another part may be retained in the form of undistributed profits.
- Similarly, wages received may vary from wages earned by the amount of deductions towards pension.

Personal Income (PI) and Disposable Income (DI)

Incomes that are not earned.

- While this is true, it is also true that factors of production receive incomes that are not earned.
- **What could these be?**
- For example, these could be gifts, welfare payments and pensions.
- These are called transfer payments and are payments that are not in lieu of any current factor services performed. These are, therefore, income received but not earned.

Now, we have the definition of personal income (PI):

Personal Income = National income — Income earned but not received + Income received but not earned

Personal Income (PI) and Disposable Income (DI)

The concept of PI, by itself, may not assume much significance to the manager but it is an important interim step to arrive at disposable income (DI), to which we turn now.

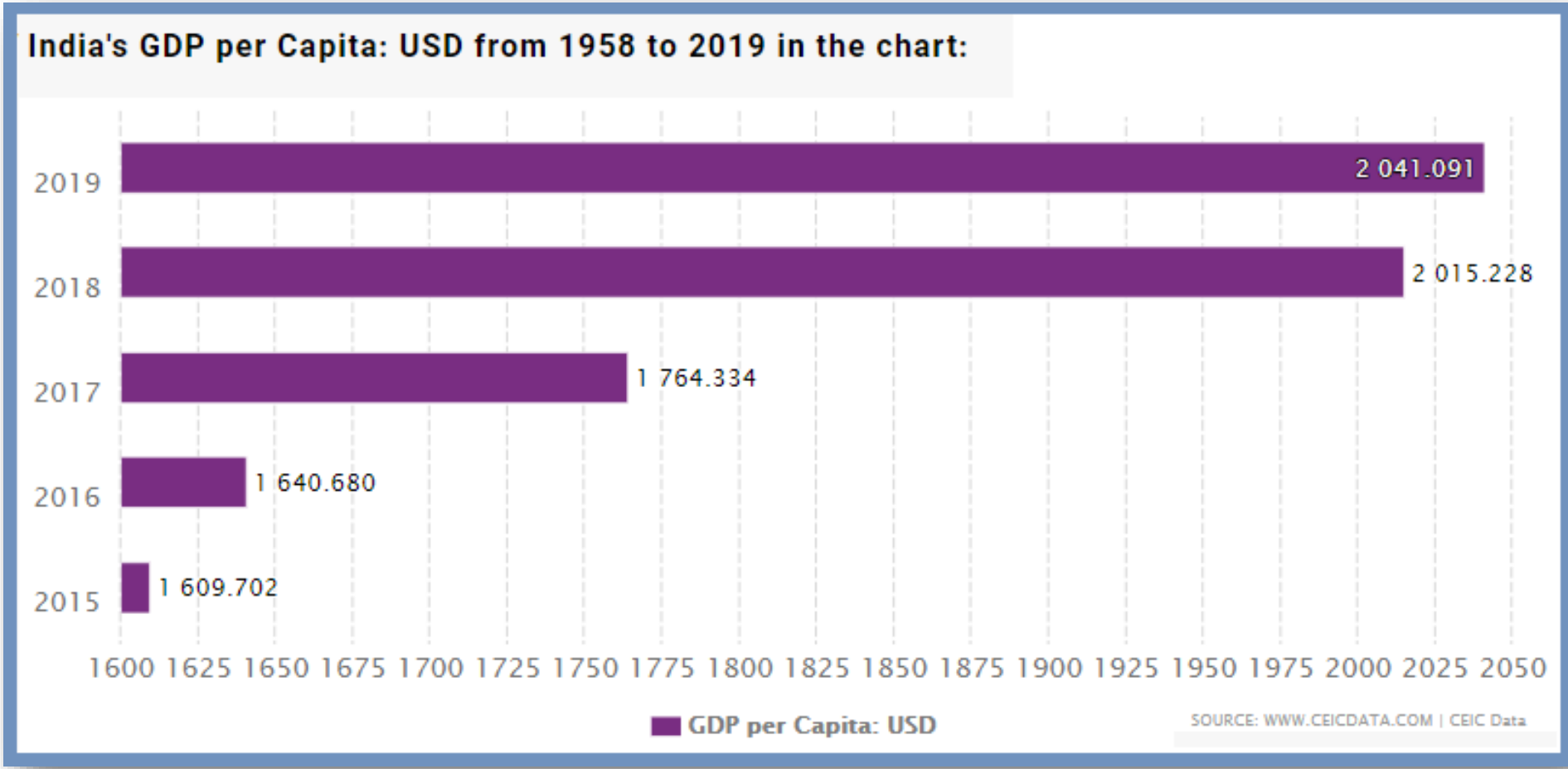
Disposable income (DI) is defined as Personal income (PI) — Personal taxes

- This is the income that goes either towards consumption (C) or saving (S).
- Consumption is a measure of current consumption while saving indicates future consumption.
- The amount that is consumed adds directly to increased current sales and revenue; the amount that is saved provides funds for investment, which is necessary for future production, income and consumption.
- Thus, if C is disproportionately high, future consumption growth may be assumed to be moderate and, if it is the other way round, one can assume a higher consumption at a future date.
- Disposable income is a key indicator of economic activity to the manager.

Accounting Identities

1. GDP/GNP measures are expressed in real terms
2. GDP/GNP can be measured using three different methods
3. GDP + NFIA = GNP
4. GDP/GNP_{mp} – Net indirect taxes = GDP/GNP_{fc}
5. GDP/GNP_{fc} – Depreciation = NDP/NNP_{fc}
6. NNP_{fc} = NI
7. NI ÷ Population = Per-capita income
8. NI – Income earned but not received + Income received but not earned = PI
9. PI – Personal taxes = DI
10. DI = C + S

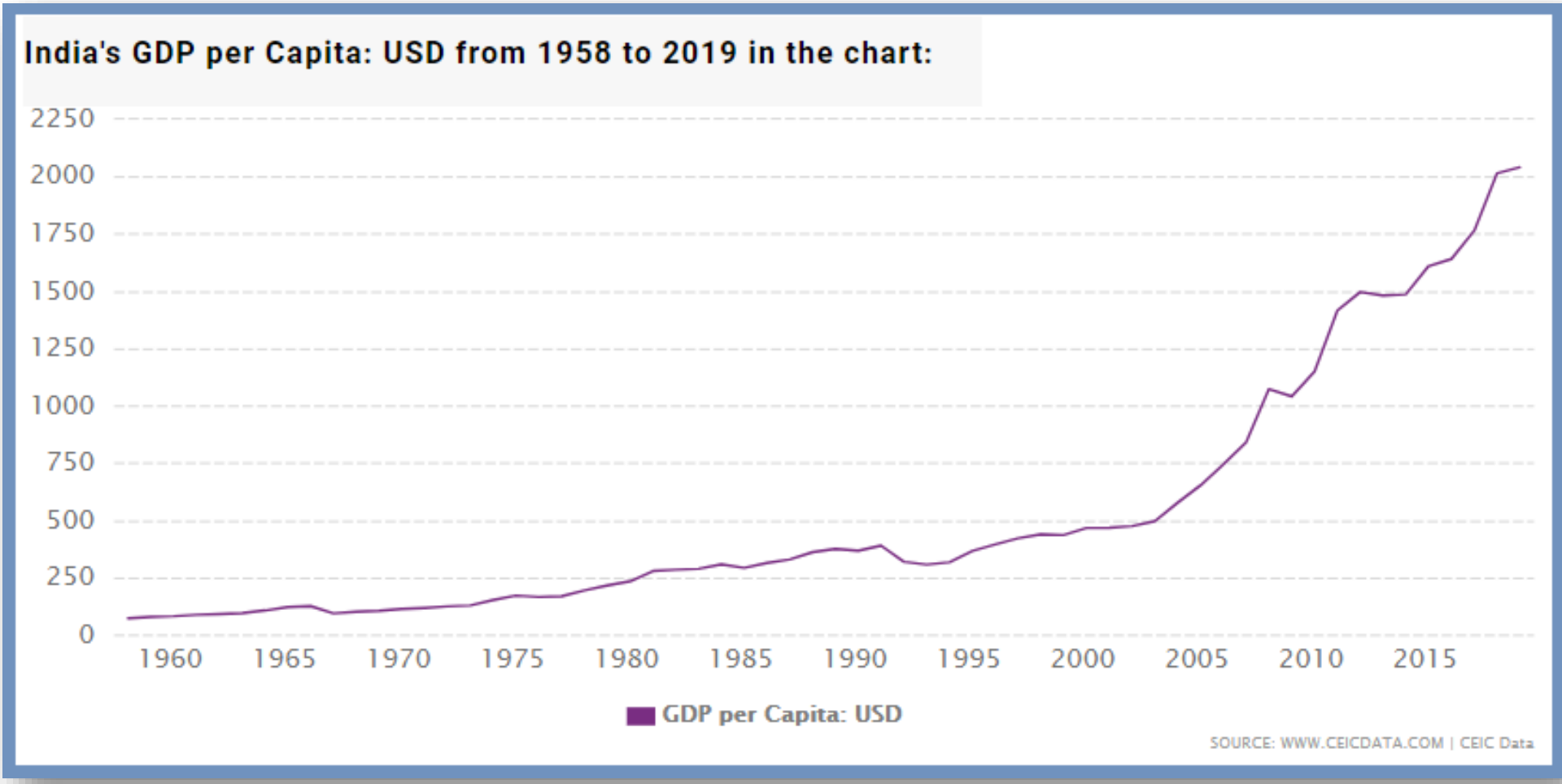
India GDP per Capita: USD



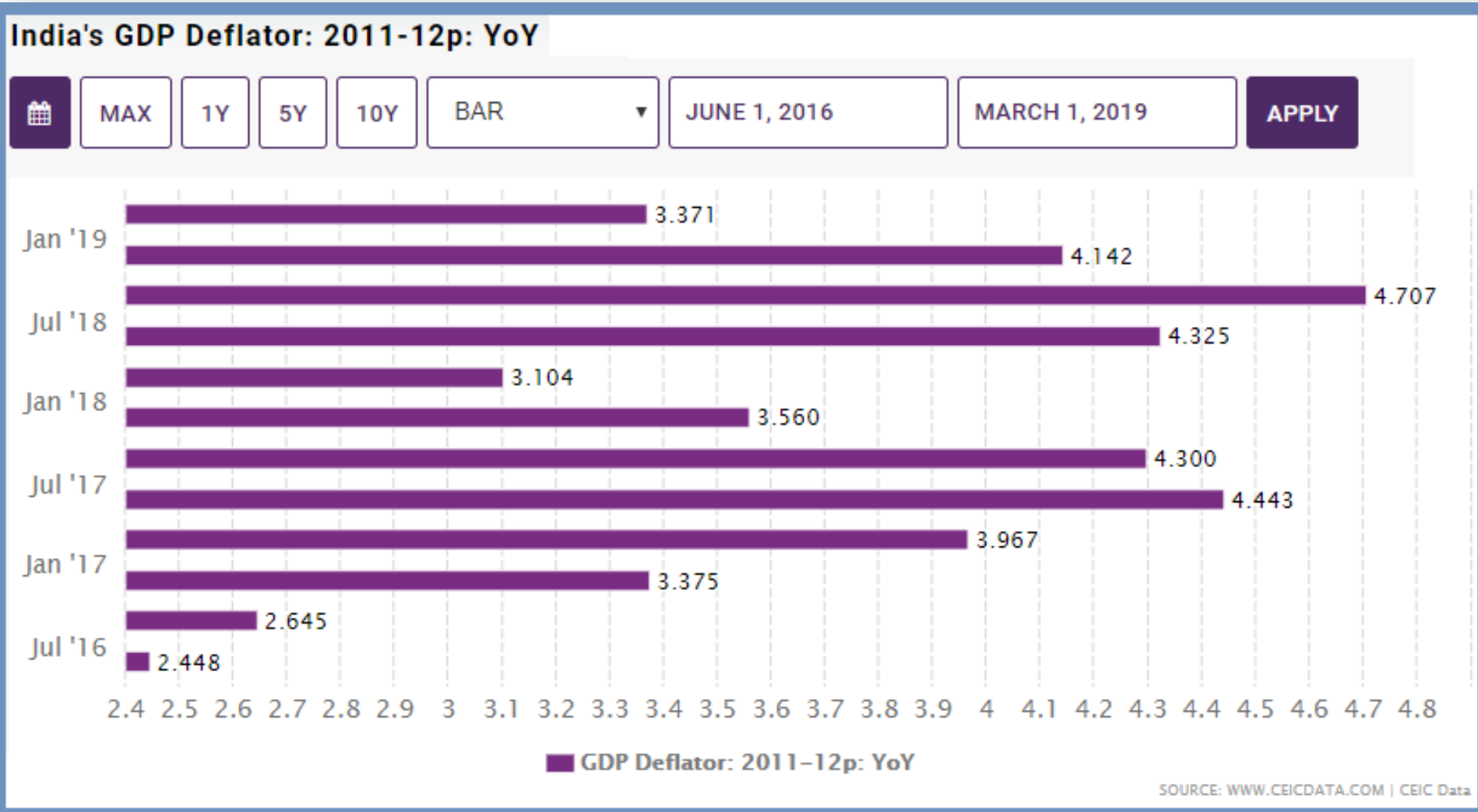
India GDP per Capita: USD

India's GDP per Capita: USD data was reported at 2,041.091 USD in Mar 2019. This records an increase from the previous number of 2,015.228 USD for Mar 2018. India's GDP per Capita: USD data is updated yearly, averaging 317.808 USD from Mar 1958 to 2019, with 62 observations. The data reached an all-time high of 2,041.091 USD in 2019 and a record low of 71.631 USD in 1958. India's GDP per Capita: USD data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table IN.AR001: Memo Items: Key Rates. CEIC calculates GDP per Capita from annual Nominal GDP and annual Population and converts it into USD. Central Statistics Office provides Nominal GDP in local currency based on SNA 2008, at 2011-2012 prices and Population. Federal Reserve Board average market exchange rate is used for currency conversions. Nominal GDP prior to 2005 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices. GDP per Capita is in annual frequency, ending in March of each year.

India GDP per Capita: USD



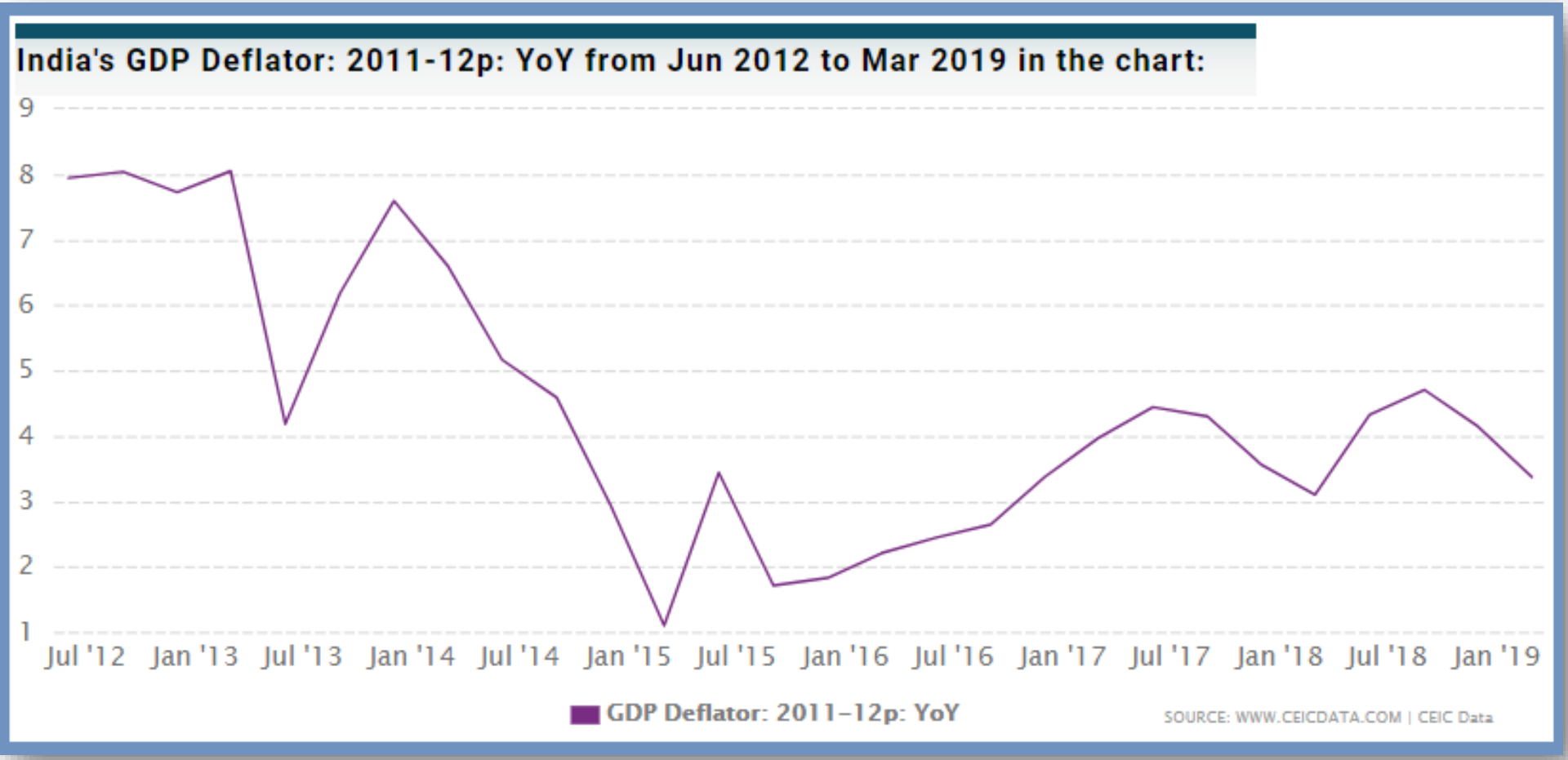
GDP Deflator



GDP Deflator

India's GDP Deflator: 2011-12p: YoY data was reported at 3.371 % in Mar 2019. This records a decrease from the previous number of 4.142 % for Dec 2018. India's GDP Deflator: 2011-12p: YoY data is updated quarterly, averaging 4.163 % from Jun 2012 to Mar 2019, with 28 observations. The data reached an all-time high of 8.051 % in Mar 2013 and a record low of 1.101 % in Mar 2015. India's GDP Deflator: 2011-12p: YoY data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table IN.AR001: Memo Items: Key Rates. CEIC calculates GDP Deflator Growth from quarterly Nominal and Real GDP. Central Statistical Office provides Nominal GDP in local currency and Real GDP in local currency, at 2011-2012 prices.

GDP Deflator

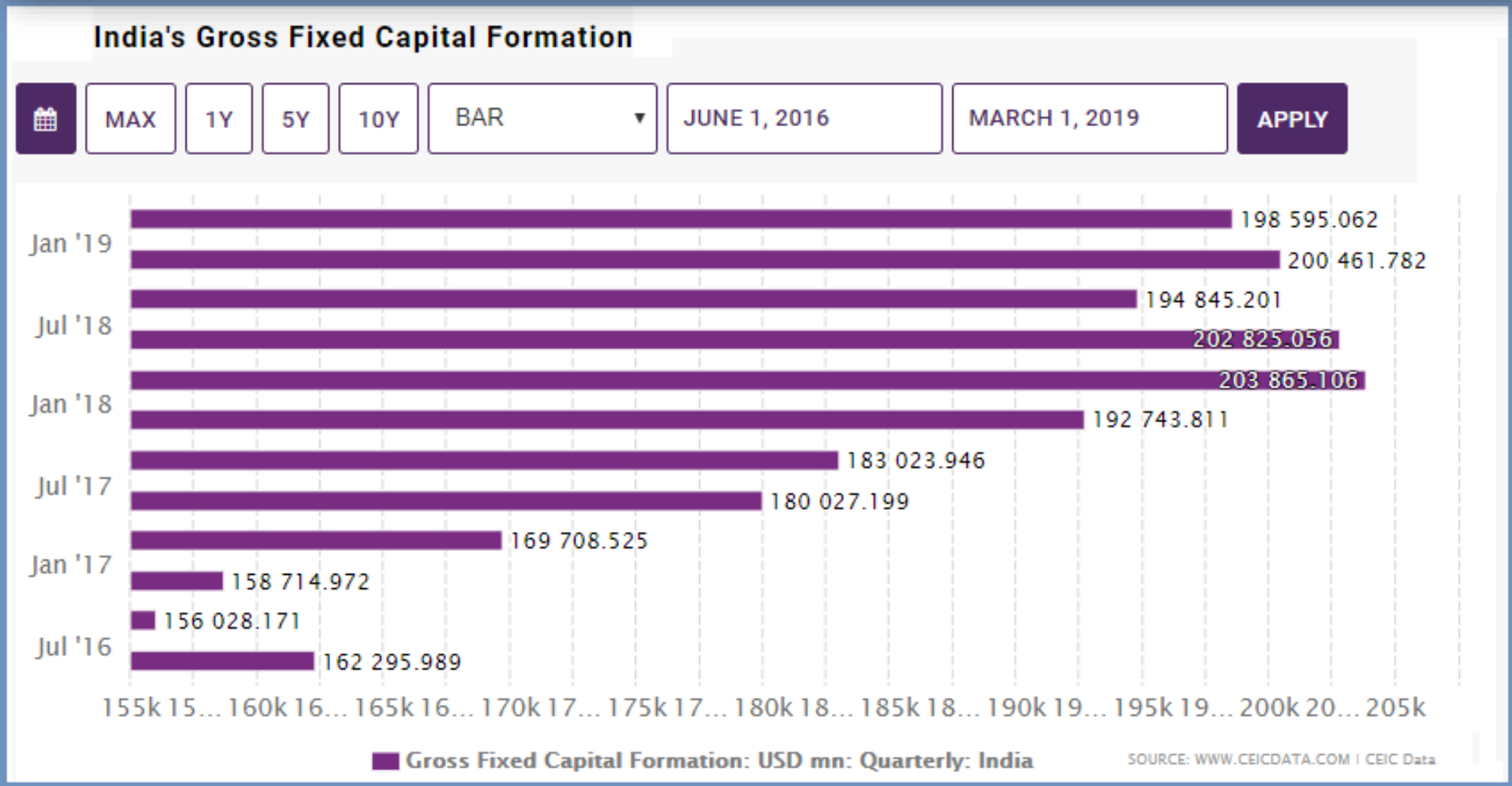


India Gross Fixed Capital Formation

India's Gross Fixed Capital Formation was reported at 198.595 USD bn in Mar 2019. This records a decrease from the previous number of 200.462 USD bn for Dec 2018. India's Gross Fixed Capital Formation data is updated quarterly, averaging 92.022 USD bn from Jun 1996 to Mar 2019, with 92 observations. The data reached an all-time high of 203.865 USD bn in Mar 2018 and a record low of 20.971 USD bn in Jun 1996. India's Gross Fixed Capital Formation data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table: Nominal GDP: Gross Fixed Capital Formation: USD: Quarterly: Asia. CEIC converts quarterly Gross Fixed Capital Formation into USD. Central Statistics Office provides Gross Fixed Capital Formation in local currency based on SNA 2008, at 2011-2012 prices. Federal Reserve Board average market exchange rate is used for currency conversions. Gross Fixed Capital Formation prior to Q2 2011 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices and prior to Q2 2004 is based on SNA 1993, at 1999-2000 prices.

India Gross Fixed Capital Formation

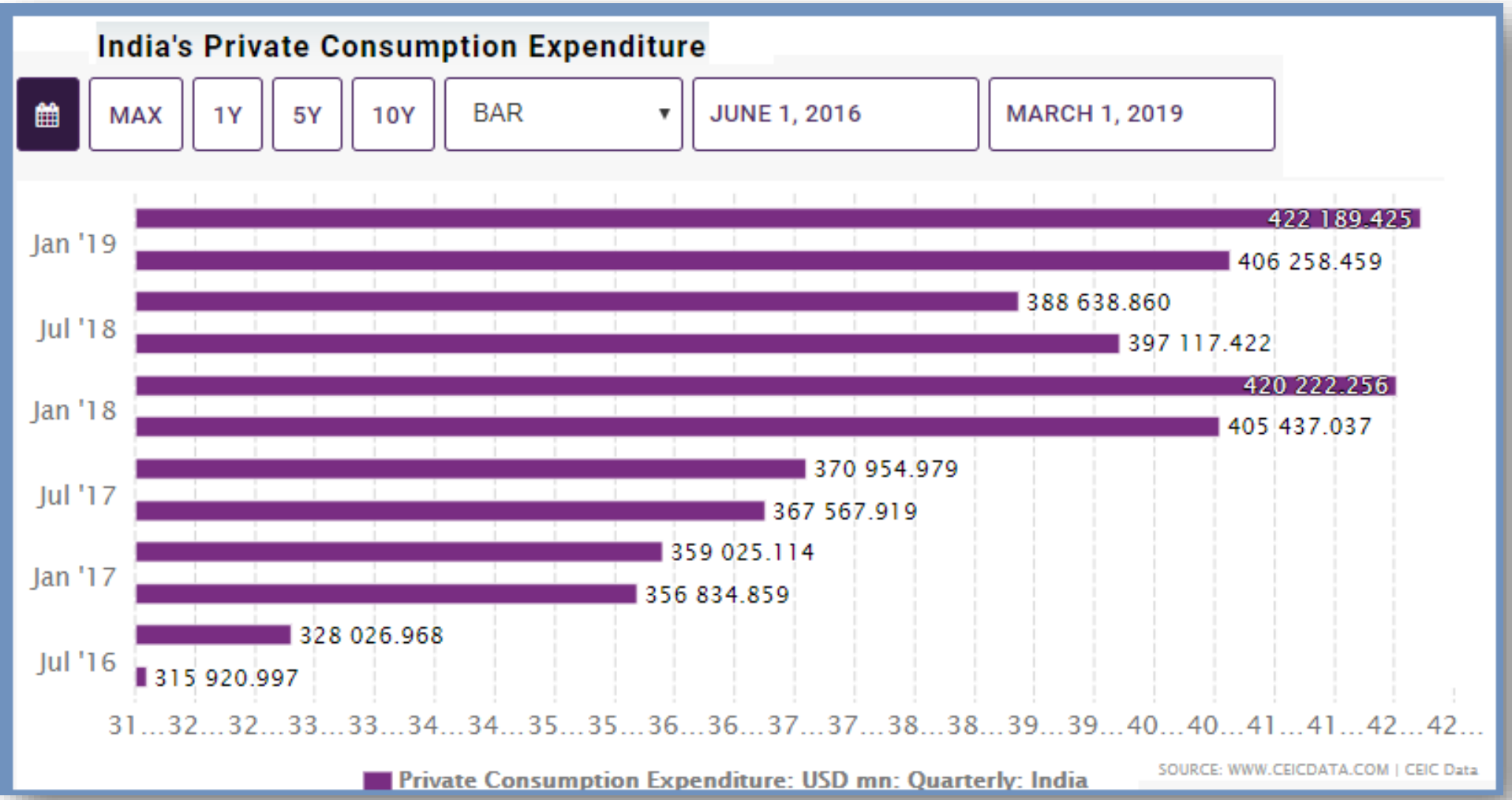
Last	Previous	Min	Max	Unit	Frequency	Range
▼ 198,595.062 Mar 2019	▲ 200,461.782 Dec 2018	20,971.334 Jun 1996	203,865.106 Mar 2018	USD mn	Quarterly	Jun 1996 - Mar 2019 Updated on 07 Jun 2019



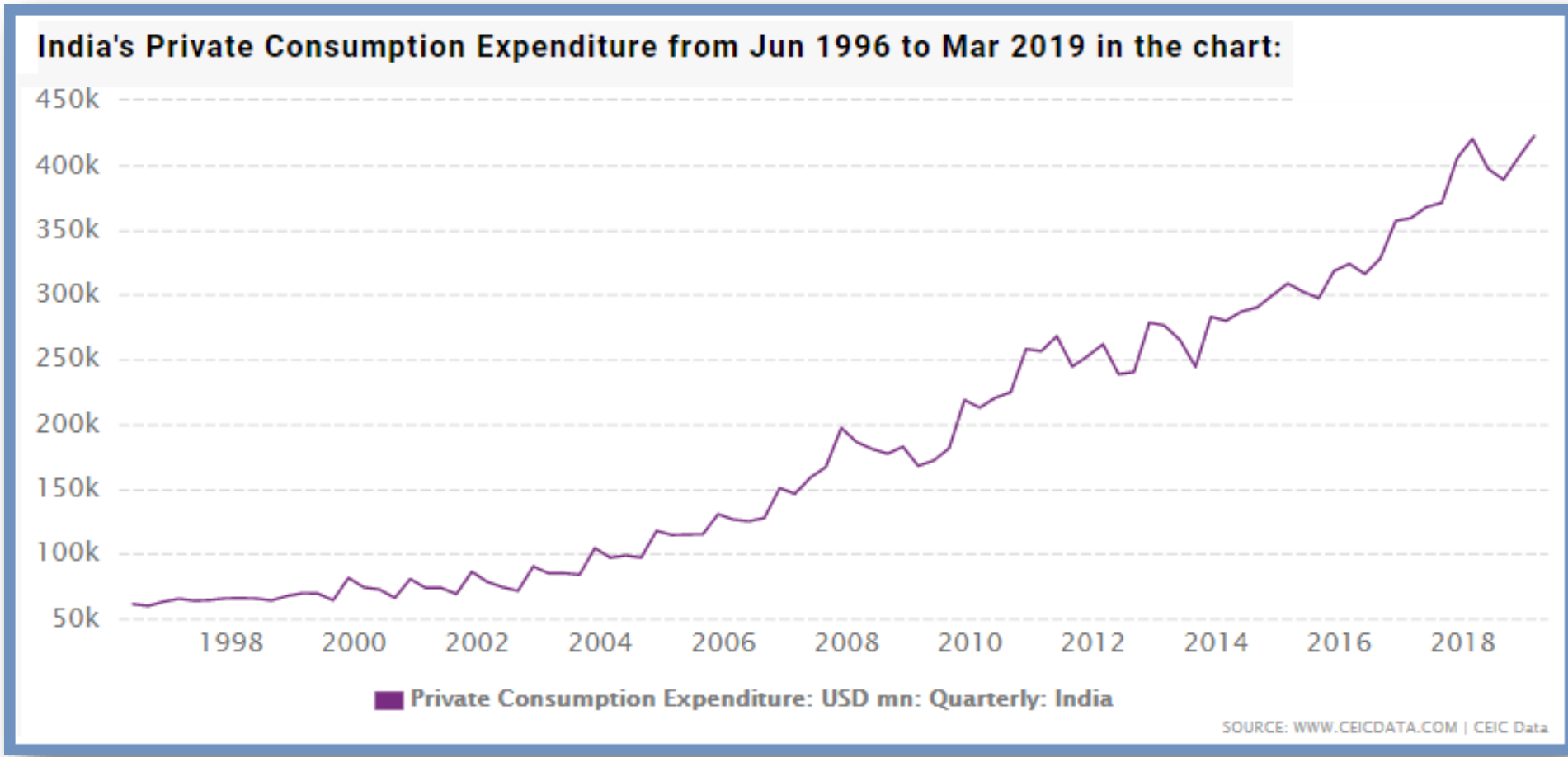
India Private Consumption Expenditure

India's Private Consumption Expenditure was reported at 422.189 USD bn in Mar 2019. This records an increase from the previous number of 406.258 USD bn for Dec 2018. India's Private Consumption Expenditure data is updated quarterly, averaging 167.403 USD bn from Jun 1996 to Mar 2019, with 92 observations. The data reached an all-time high of 422.189 USD bn in Mar 2019 and a record low of 59.752 USD bn in Sep 1996. India's Private Consumption Expenditure data remains active status in CEIC and is reported by CEIC Data. The data is categorized under World Trend Plus's Global Economic Monitor – Table: Nominal GDP: Private Consumption Expenditure: USD: Quarterly: Asia. CEIC converts quarterly Private Consumption Expenditure into USD. Central Statistics Office provides Private Consumption Expenditure in local currency based on SNA 2008, at 2011-2012 prices. Federal Reserve Board average market exchange rate is used for currency conversions. Private Consumption Expenditure prior to Q2 2011 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices and prior to Q2 2004 is based on SNA 1993, at 1999-2000 prices.

India Private Consumption Expenditure



India Private Consumption Expenditure

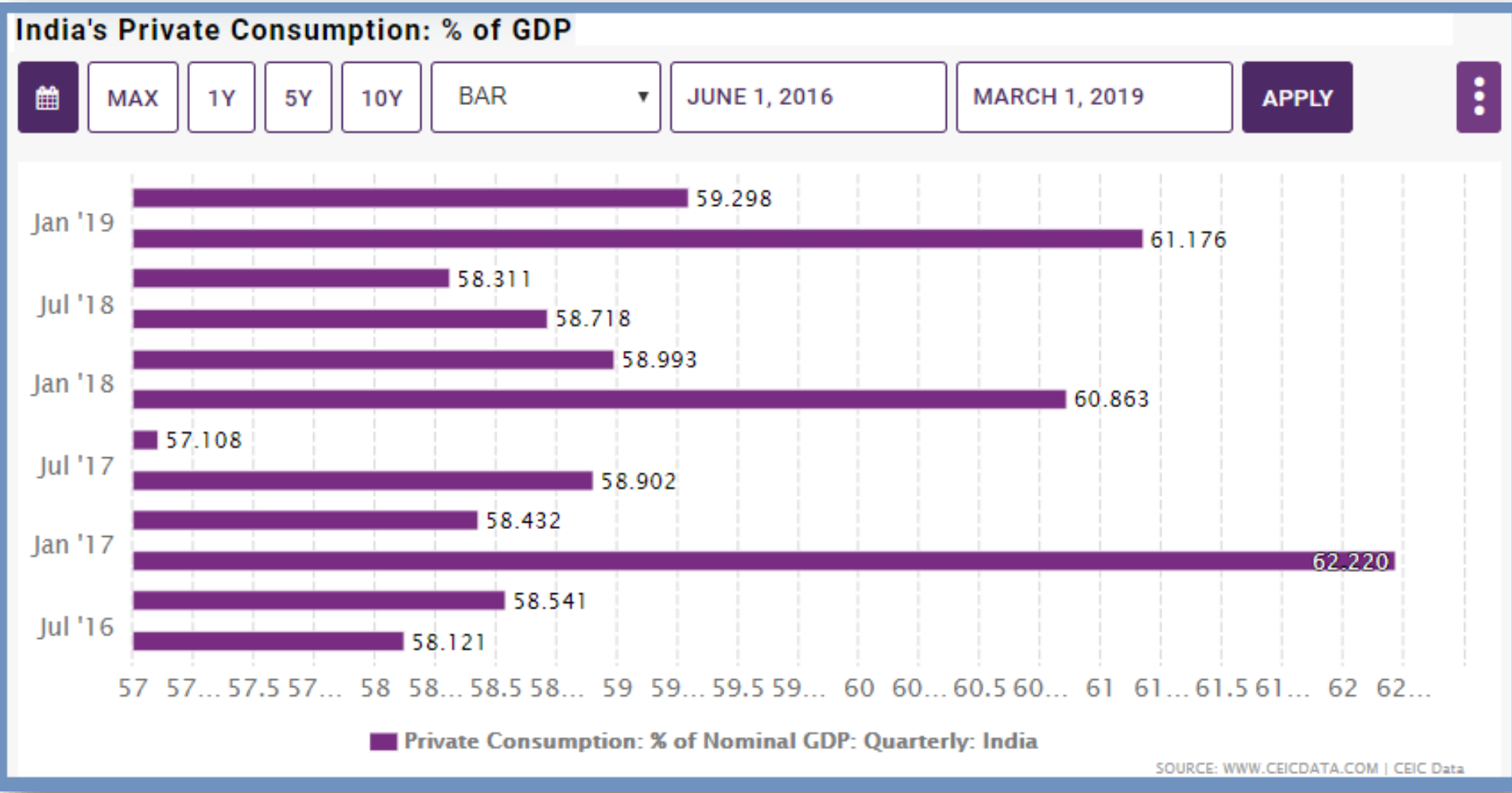


India Private Consumption: % of GDP

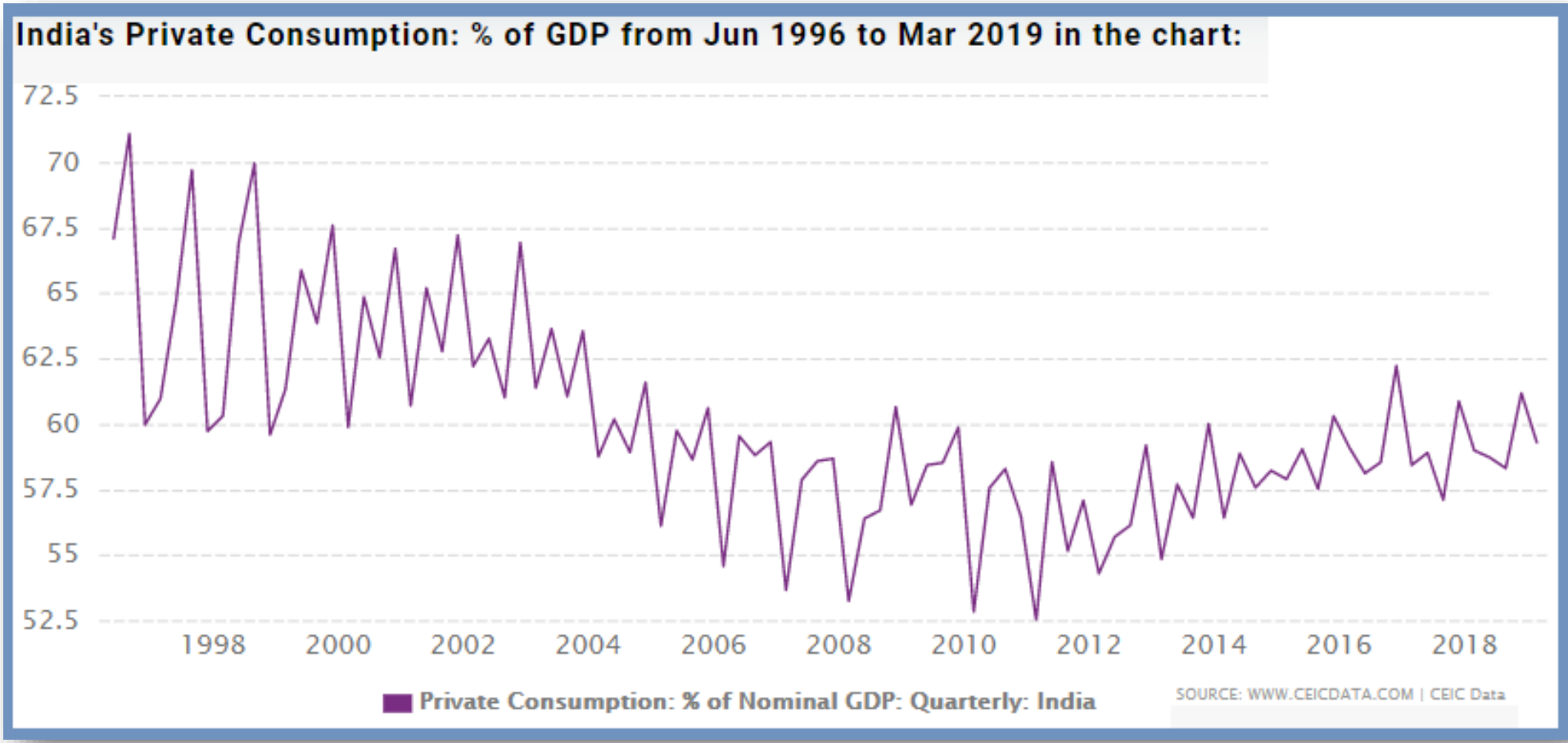
India's Private Consumption accounted for 59.3 % of its Nominal GDP in Mar 2019, compared with a ratio of 61.2 % in the previous quarter. India's Private Consumption contribution to Nominal GDP ratio is updated quarterly, available from Jun 1996 to Mar 2019, with an average share of 59.1 %. The data reached an all-time high of 71.1 % in Sep 1996 and a record low of 52.5 % in Mar 2011. CEIC calculates Private Consumption as % of Nominal GDP from quarterly Private Consumption Expenditure and quarterly Nominal GDP. Central Statistics Office provides Private Consumption Expenditure in local currency and Nominal GDP in local currency, based on SNA 2008 at 2011-2012 prices. Private Consumption as % of Nominal GDP prior to Q2 2011 is based on a combination of SNA 2008 and SNA 1993, at 2004-2005 prices and prior to Q2 2004 is based on SNA 1993, at 1990-2000 prices.

In the latest reports, India's GDP expanded 5.8 % YoY in Mar 2019. India's Nominal GDP reached 712.0 USD bn in Mar 2019. Its GDP deflator (implicit price deflator) increased 3.4 % in Mar 2019. India's GDP Per Capita reached 2,041.1 USD in Mar 2019. Its Gross Savings Rate was measured at 30.5 % in Mar 2018.

India Private Consumption: % of GDP



India Private Consumption: % of GDP



GDP of India

- Real GDP or Gross Domestic Product (GDP) at constant (2011-12) prices in the year 2018-19 is estimated at ₹140.78 lakh crore showing a growth rate of 6.81 percent over First Revised Estimates of GDP for the year 2017-18 of ₹131.80 lakh crore. Nominal GDP or GDP at current prices in the year 2018-19 is estimated at Rs. 190.10 lakh crore, with growth rate of 11.20 percent against 170.95 lakh crore for 2017-18 in Indian rupee.
- At constant prices GVA (Gross Value Added), GNI (Gross National Income) and NNI (Net National Income) of India are estimated at ₹129.07 lakh crore, ₹139.32 lakh crore, and ₹ 123.30 lakh crore, respectively. At current prices, these figures are ₹172.00 lakh crore, ₹188.17 lakh crore, and ₹168.37 lakh crore.
- In new series, figures are available since 2004-05. GDP of India has expanded by 2.57 times from 2004-05 to 2018-19.

GDP of India

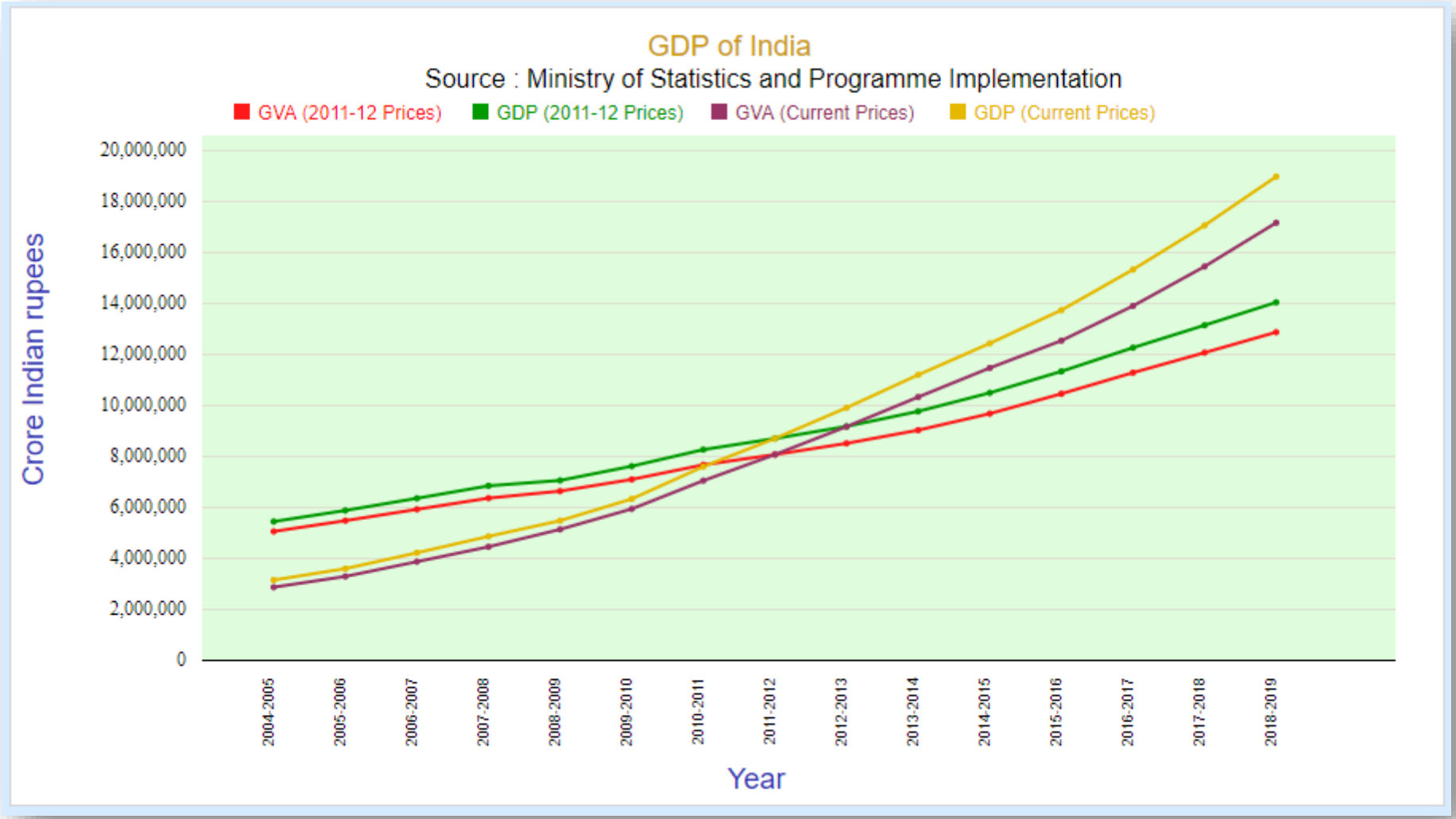
- According to International Monetary Fund World Economic Outlook (October-2018), GDP (nominal) of India in 2018 at current prices is $2,690 billion. India contributes 3.17% of total world's GDP in exchange rate basis. India shares 17.5 percent of the total world population and 2.4 percent of the world surface area. India is now 7th largest economy of the world. India is behind by only $105 and $119 bn from 6th and 5th ranked France and United Kingdom, respectively.
- India is at 3rd position after China and Japan among Asian Countries. India shares around of 9% of total Asia's GDP (nominal).
- On the basis of PPP, economy of India stands at 10,401 billion international dollar, 3rd largest economy of the world after United States and China. India contributes 7.7% of total world's gdp (ppp). India shares over 16 percent of total Asia's GDP (PPP). Gross domestic product (GDP) of India at purchasing power parity (PPP) is 3.87 times more than GDP at nominal.
- Indian economy has crossed $1 billion mark in 2007 and $2 billion mark in 2014 in nominal terms. In PPP methods, India has crossed one billion mark in 1991. Estimates by world bank are available since 1960 when country's gdp was 36 mn USD.

GDP of India

2011-12 series

Year	At 2011-12 prices (crore INR)				At current prices (crore INR)			
	GDP	GVA	GNI	NNI	GDP	GVA	GNI	NNI
2018-2019	1,40,77,586	1,29,06,936	1,39,32,287	1,23,29,646	1,90,10,164	1,71,99,815	1,88,16,538	1,68,37,219
2017-2018	1,31,79,857	1,21,04,165	1,30,34,121	1,15,31,159	1,70,95,005	1,54,82,715	1,69,10,192	1,51,28,474
2016-2017	1,22,98,327	1,13,18,972	1,21,53,754	1,07,72,800	1,53,62,386	1,39,35,917	1,51,85,986	1,35,95,261
2015-2016	1,13,69,493	1,04,91,870	1,12,34,571	99,63,681	1,37,71,874	1,25,74,499	1,36,12,095	1,21,62,398
2014-2015	1,05,27,674	97,12,133	1,04,02,987	92,24,343	1,24,67,959	1,15,04,279	1,23,20,529	1,09,78,238
2013-2014	98,01,370	90,63,649	96,79,027	85,78,417	1,12,33,522	1,03,63,153	1,10,93,638	98,97,663
2012-2013	92,13,017	85,46,275	91,04,662	80,94,001	99,44,013	92,02,692	98,27,250	87,66,345
2011-2012	87,36,331	81,06,947	86,59,507	77,42,332	87,36,330	81,06,947	86,59,506	77,42,332
2010-2011	83,01,235	77,04,514	82,11,816	73,73,384	76,34,472	70,83,671	75,52,665	67,56,720
2009-2010	76,51,078	71,31,836	76,06,319	68,37,719	63,66,407	59,74,906	63,28,407	56,38,126
2008-2009	70,93,403	66,74,215	70,52,191	63,58,644	55,14,152	51,72,838	54,81,229	48,87,836
2007-2008	68,81,007	63,98,295	68,52,740	62,19,065	48,98,662	44,90,188	48,78,150	43,69,214
2006-2007	63,91,375	59,58,367	63,42,389	57,70,565	42,54,629	39,04,895	42,21,395	37,83,068
2005-2006	59,14,614	55,14,228	58,72,936	53,51,624	36,32,125	33,26,914	36,06,009	32,26,040
2004-2005	54,80,380	50,92,503	54,42,938	49,67,090	31,86,332	29,04,299	31,63,957	28,29,998

GDP of India


GDP of India
Source : Ministry of Statistics and Programme Implementation
GVA (2011-12 Prices)
GDP (2011-12 Prices)
GVA (Current Prices)
GDP (Current Prices)
Crore Indian rupees
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
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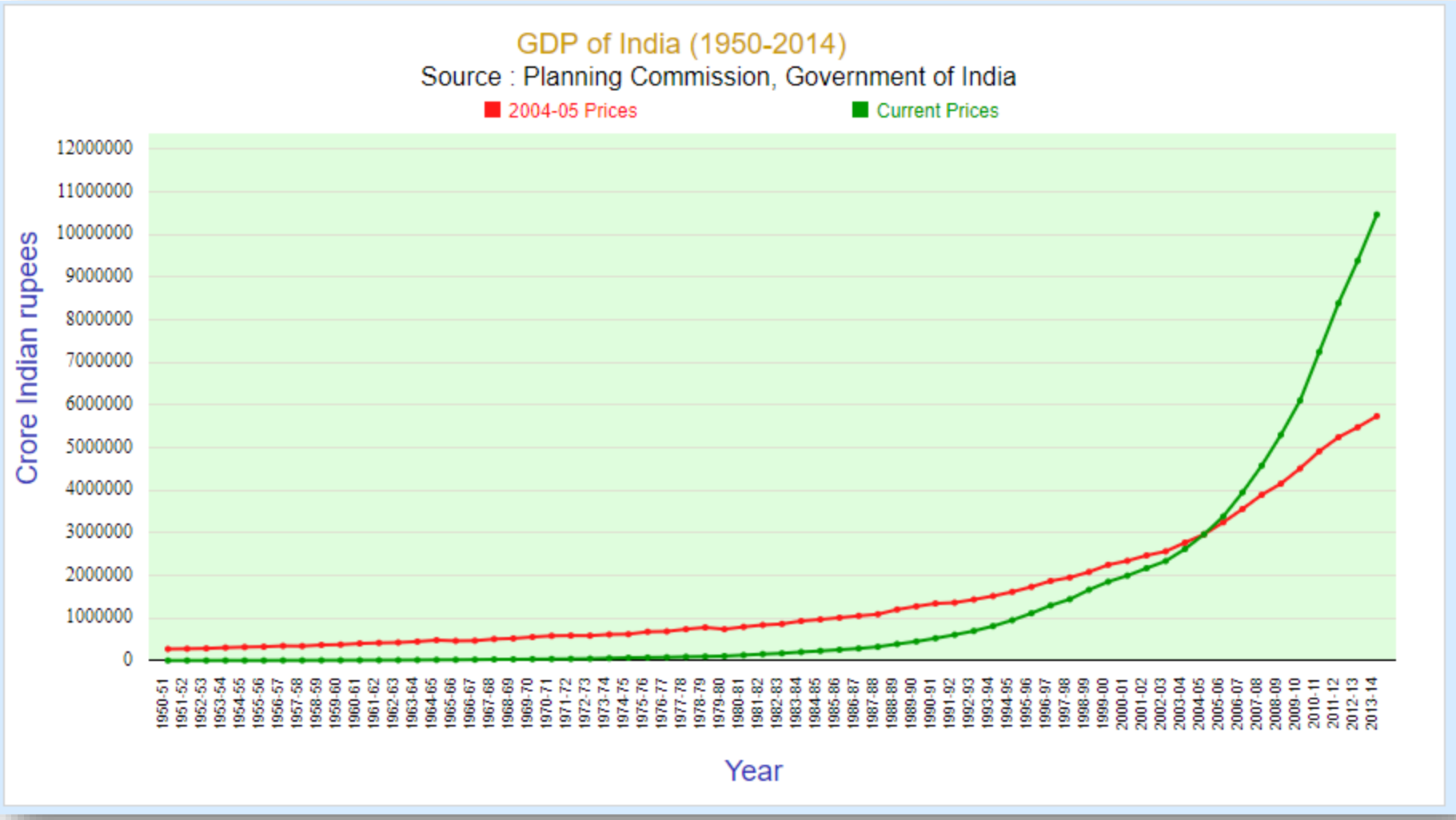
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Year

GDP of India


GDP of India (1950-2014)
Source : Planning Commission, Government of India
2004-05 Prices
Current Prices
Crore Indian rupees
12000000
11000000
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
1950-51
1951-52
1952-53
1953-54
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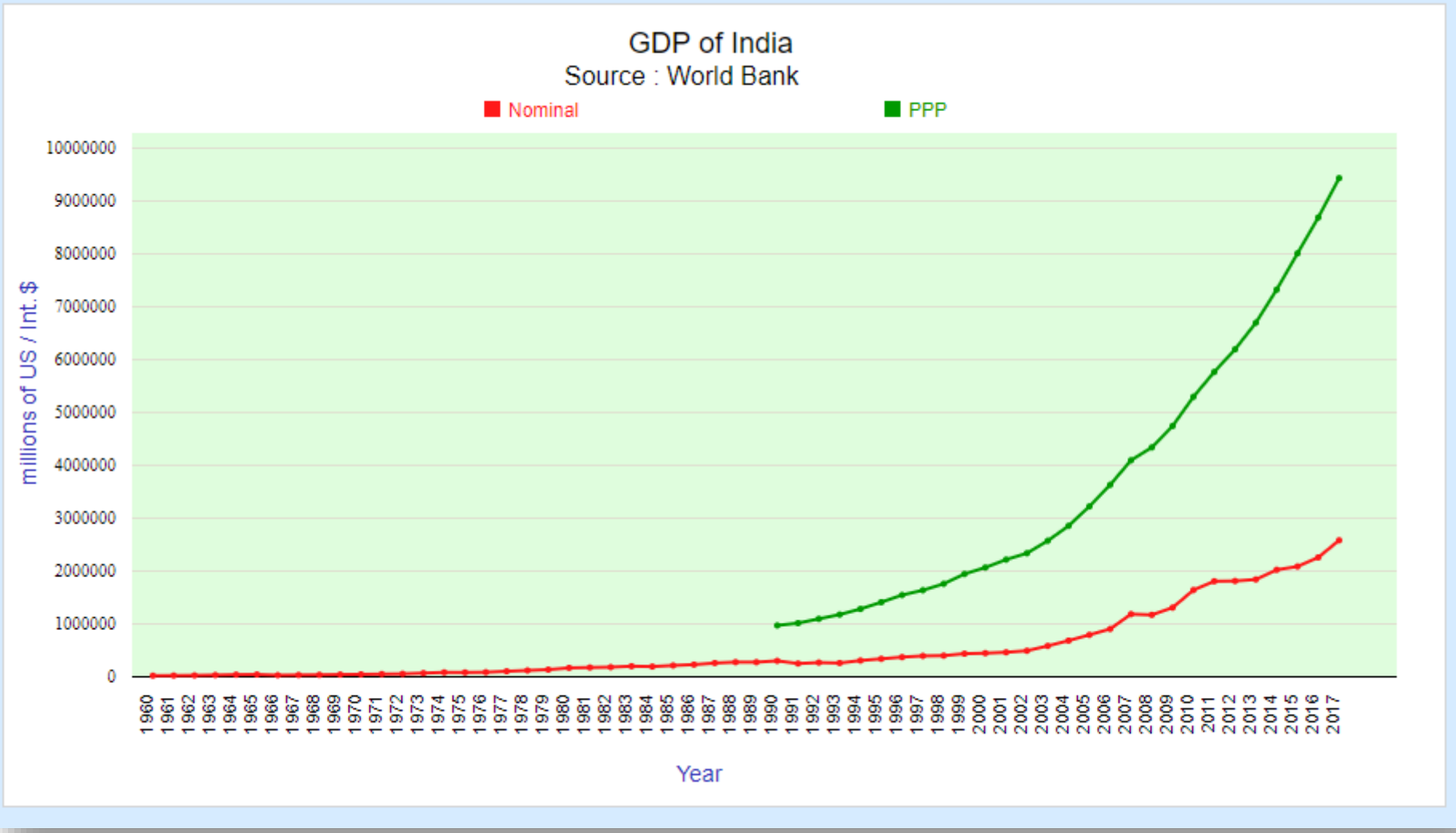
2013-14
Year

GDP of India



http://statisticstimes.com/economy/gdp-of-india.php

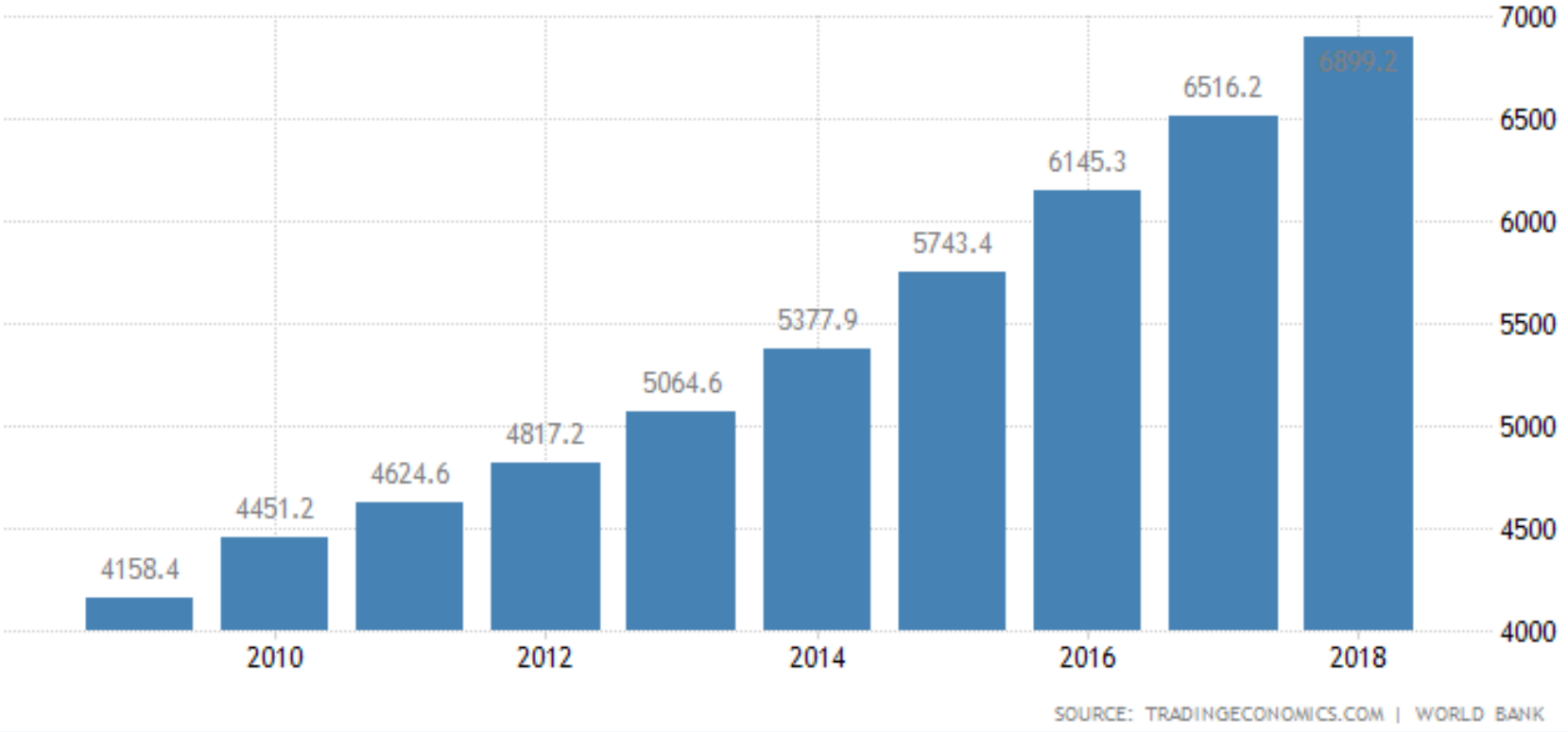
India Gross Fixed Capital Formation

Gross Fixed Capital Formation in India decreased to 11421.62 INR Billion in the first quarter of 2019 from 11690.21 INR Billion in the fourth quarter of 2018. Gross Fixed Capital Formation in India averaged 5774.76 INR Billion from 2001 until 2019, reaching an all time high of 11690.21 INR Billion in the fourth quarter of 2018 and a record low of 2021.90 INR Billion in the first quarter of 2002.

India GDP per capita PPP 1990-2018

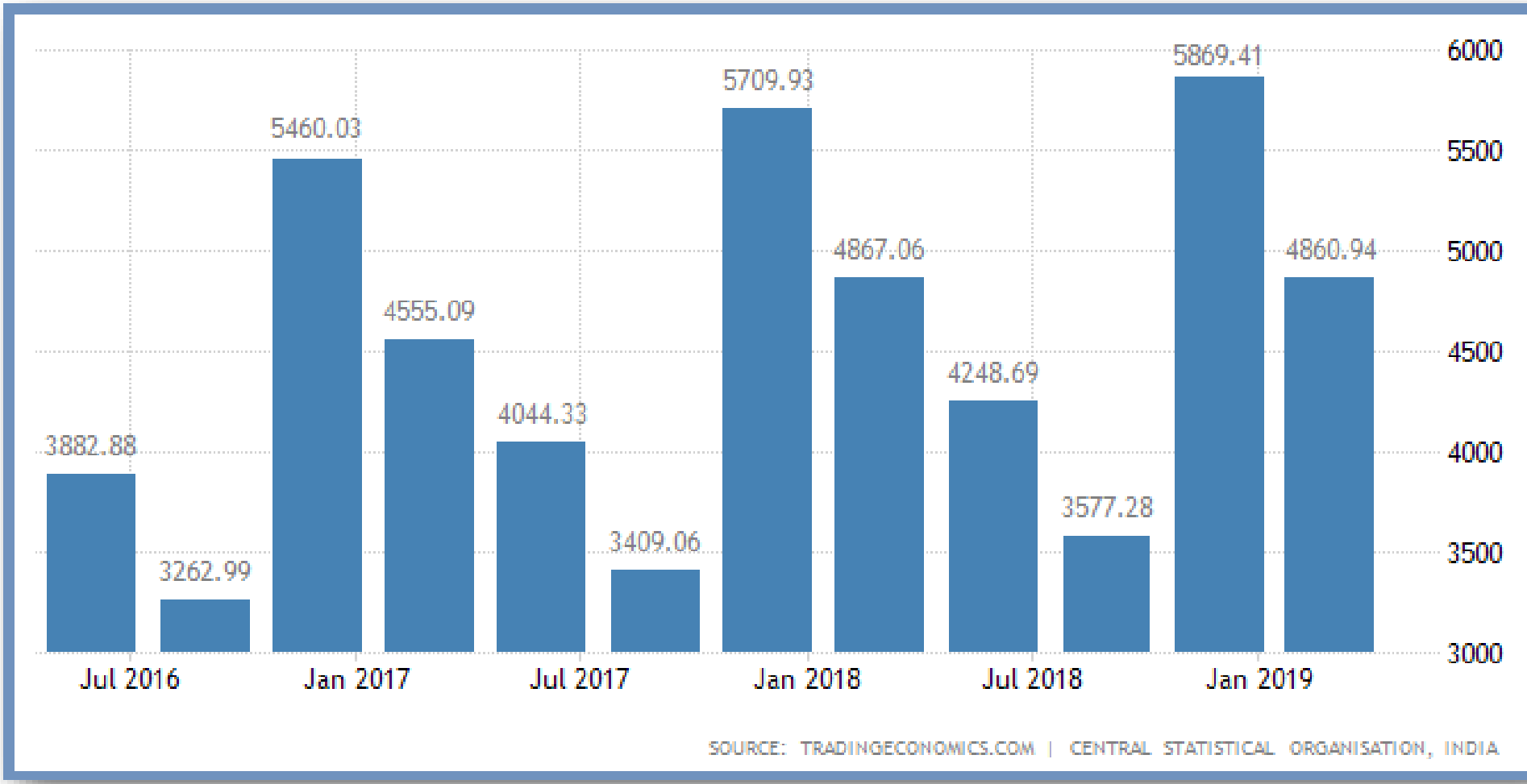
India GDP per capita PPP

The Gross Domestic Product per capita in India was last recorded at 6899.20 US dollars in 2018, when adjusted by purchasing power parity (PPP). The GDP per Capita, in India, when adjusted by Purchasing Power Parity is equivalent to 39 percent of the world's average. GDP per capita PPP in India averaged 3624.14 USD from 1990 until 2018, reaching an all time high of 6899.20 USD in 2018 and a record low of 1887 USD in 1991.



India GDP From Agriculture

GDP From Agriculture in India decreased to 4860.94 INR Billion in the first quarter of 2019 from 5869.41 INR Billion in the fourth quarter of 2018. GDP From Agriculture in India averaged 4134.73 INR Billion from 2011 until 2019, reaching an all time high of 5869.41 INR Billion in the fourth quarter of 2018 and a record low of 2690.74 INR Billion in the third quarter of 2011.



India GDP From Construction

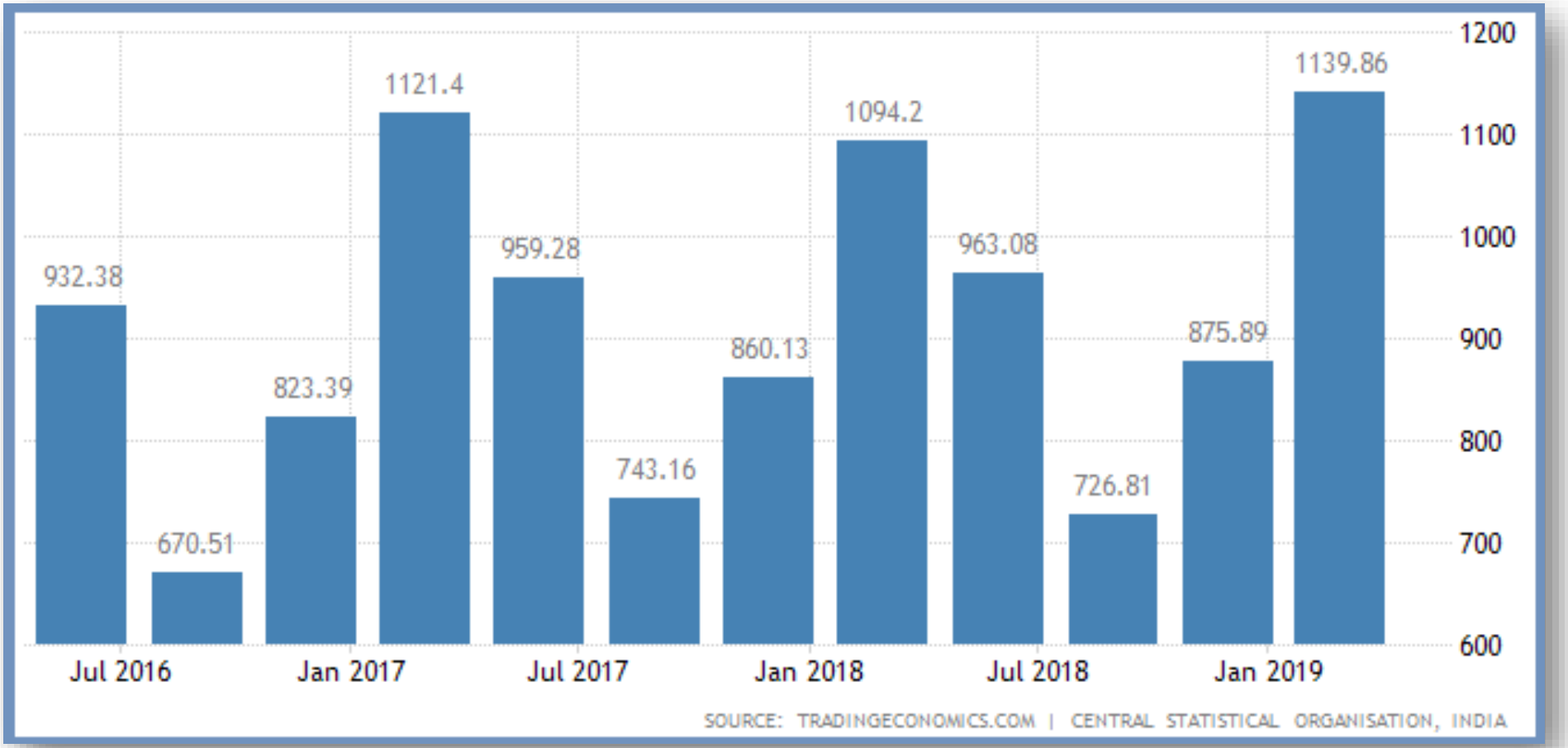
GDP From Construction in India decreased to 2586.14 INR Billion in the first quarter of 2019 from 2756.19 INR Billion in the fourth quarter of 2018. GDP From Construction in India averaged 2184.43 INR Billion from 2011 until 2019, reaching an all time high of 2756.19 INR Billion in the fourth quarter of 2018 and a record low of 1861.37 INR Billion in the third quarter of 2012.

India GDP From Manufacturing

GDP From Manufacturing in India increased to 6167.49 INR Billion in the first quarter of 2019 from 5638.04 INR Billion in the fourth quarter of 2018. GDP From Manufacturing in India averaged 4562.15 INR Billion from 2011 until 2019, reaching an all time high of 6167.49 INR Billion in the first quarter of 2019 and a record low of 3331.04 INR Billion in the third quarter of 2011.

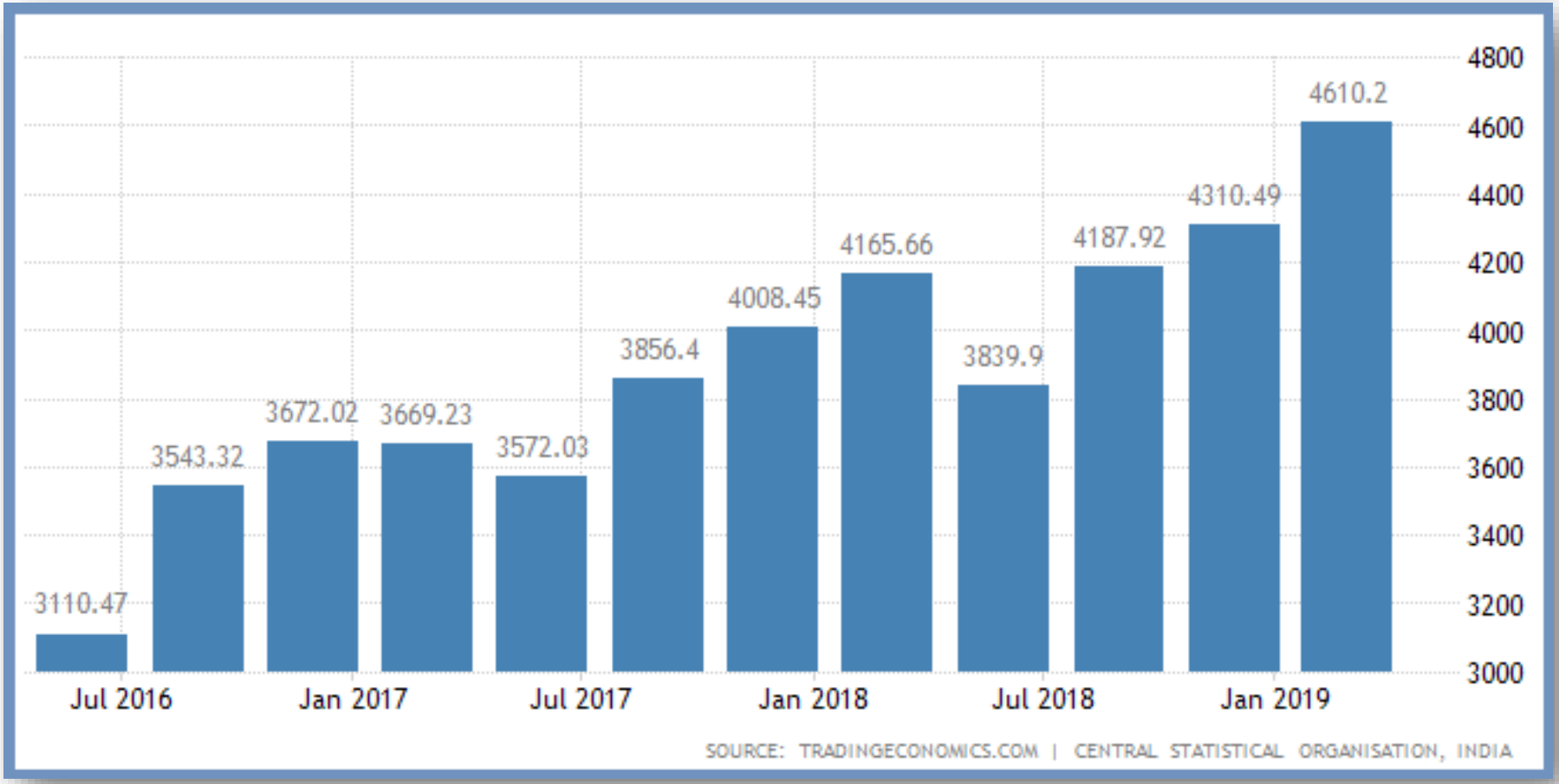
India GDP From Mining

GDP From Mining in India increased to 1139.86 INR Billion in the first quarter of 2019 from 875.89 INR Billion in the fourth quarter of 2018. GDP From Mining in India averaged 779.66 INR Billion from 2011 until 2019, reaching an all time high of 1139.86 INR Billion in the first quarter of 2019 and a record low of 556.18 INR Billion in the third quarter of 2012.



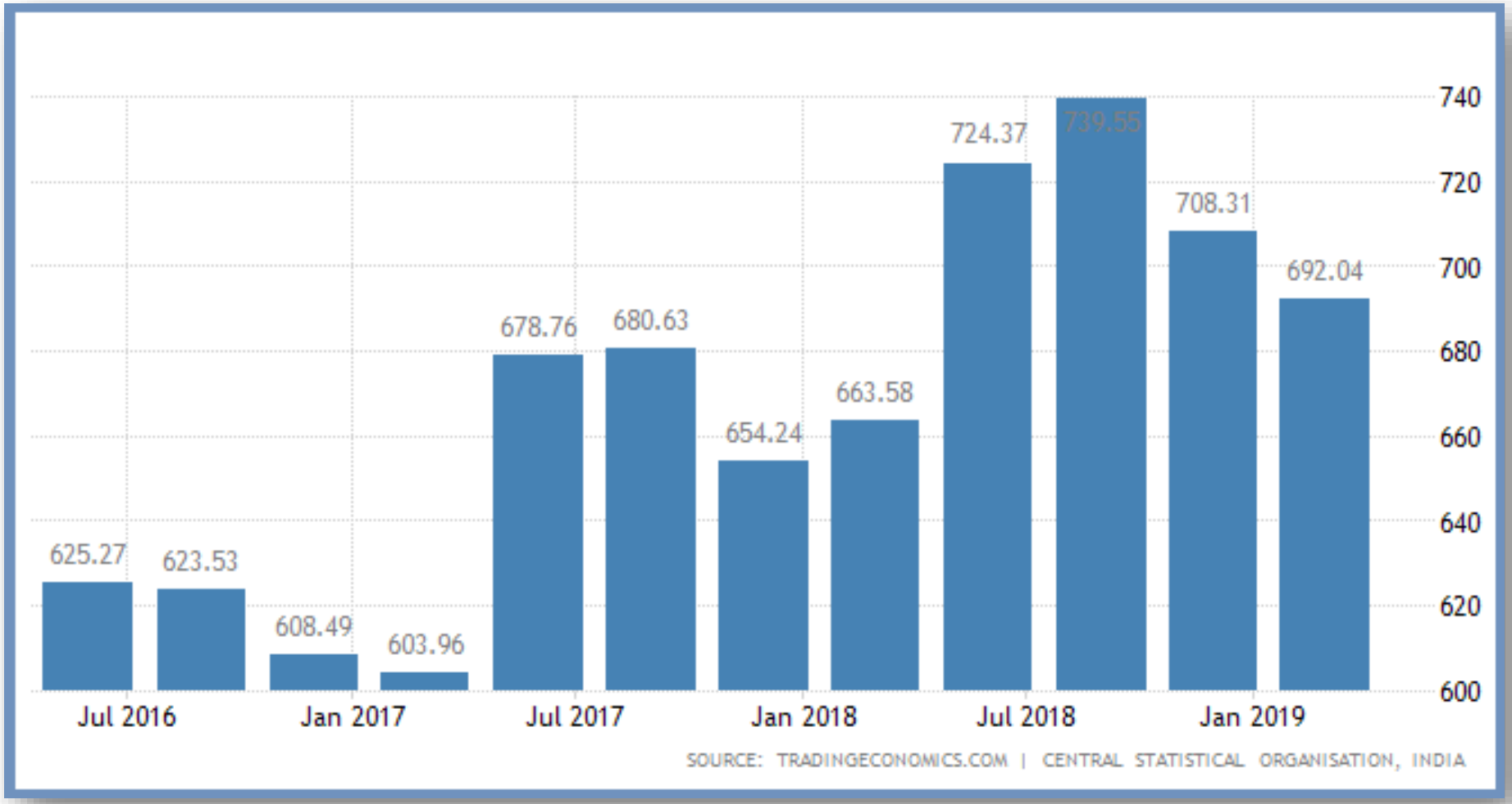
India GDP From Public Administration

GDP From Public Administration in India increased to 4610.20 INR Billion in the first quarter of 2019 from 4310.49 INR Billion in the fourth quarter of 2018. GDP From Public Administration in India averaged 3231.52 INR Billion from 2011 until 2019, reaching an all time high of 4610.20 INR Billion in the first quarter of 2019 and a record low of 2328.98 INR Billion in the second quarter of 2011.



India GDP From Utilities

GDP From Utilities in India decreased to 692.04 INR Billion in the first quarter of 2019 from 708.31 INR Billion in the fourth quarter of 2018. GDP From Utilities in India averaged 567.63 INR Billion from 2011 until 2019, reaching an all time high of 739.55 INR Billion in the third quarter of 2018 and a record low of 463.02 INR Billion in the second quarter of 2011.



NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR2011-12)

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation, revised its base year from **2004-05 to 2011-12** and released revised annual estimates of National Income and other macroeconomic aggregates on 30th January 2015.

Advance estimates of National Income for the financial year 2014-15, at constant (2011-12) and current prices were released on February 9, 2015.

Along with the advance estimates for 2014-15, CSO has also published these aggregates for the year 2011-12, 2012-13 and 2013-14.

It may be noted that because of change in the base year and also the methodology to estimate the national income and other macroeconomic aggregates, rate of growth pertaining to different years is also revised; both for aggregate national income and other macroeconomic aggregates, and for different sector of the economy.

NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR 2011-12)

It is notable that rate of growth of GDP as per the previous series (base year 2004-05) differs significantly from the rate of growth of GDP as per new series (base year 2011-12).

Rate of growth of GDP for the year 2012-13 and 2013-14 as per the previous series was estimated at 4.5 percent and 4.7 percent respectively.

However, as per the new series we find that the rate of growth of GDP for the year 2012-13 and 2013-14 are 5.1 percent and 6.9 percent respectively.

Advance estimates for 2014-15 released in February, projected India's GDP during the year to grow at 7.4%, making it the world's fastest growing large economy surpassing China.

However critics argue that data from other sources such as household spending, corporate earnings and tax collections and sales of goods and services are weak and do not mirror the revival trends seen in the GDP numbers.

Change in Base Year

The base year of the national accounts is the year chosen to enable inter-year comparisons. It is changed periodically to factor in structural changes in the economy and present a more realistic picture of macroeconomic aggregates The new series changes the base to 2011-12 from 2004-05.

Difference Between the Earlier and New Formula

IIP

- Earlier, the index of industrial production (IIP) or factory output served as the primary metric to gauge manufacturing and trading activity. The problem was, **it only counted the number of units produced and did not distinguish between the value of different models of the same product.** It is possible that factory output would have remained stagnant over a period of time, but its value would have multiplied.
- Earlier, organized industrial activity was based on IIP. It used to get **updated two years** later based on data coming in from the Annual Survey of Industries (ASI). This has limitations, as **ASI only captures goods' value at the factory gate, and that too only of firms registered under the Factories Act.**

Balance Sheet

- Now, the Corporate Affairs Ministry's MCA21 records, a comprehensive compendium **of balance sheet data of about 5,00,000 firms**, is used. This captures value added by activities even such as marketing, which can be significant for large companies.

Ground Level Data

- Critics have questioned the new methodology as it shows that manufacturing has grown at 5.3% in 2013-14 compared to 0.7% earlier.
- According to critics, theoretically one can justify this divergence. But it is hard to reconcile with ground level data.

Unlisted Firms

- According to CSO officials, the divergence is because of the MCA21 records have brought to light a segment of organized activity, which was earlier, for the most part, invisible. This is the **lower end of the corporate segment**. These are the companies which are **not listed in stock exchanges**. This category of companies was virtually invisible in CSO'S earlier analysis.

Difference Between the Earlier and New Formula

Financial Corporations	• Financial corporations in the private sector, other than banking and insurance, in the earlier series was limited to a few mutual funds (primarily UT!) and estimates for the **Non-Government Non-Banking Finance Companies as compiled by RBI.**
Financial Sector	• In the new series, the coverage of financial sector has been expanded by including **stock brokers, stock exchanges. Asset management companies, mutual funds and pension funds, as well as the regulatory bodies, SEBI, PFRDA and IRDA.**
Autonomous Institutions	• Earlier, estimates for local bodies and autonomous institutions were prepared on the basis of information received for seven autonomous institutions and local bodies of four States — Delhi. Himachal Pradesh,Meghalaya and Uttar Pradesh. • In the new series, there has been **an improved coverage of local bodies and autonomous institutions, covering around 60% of the grants transfers provided to these institutions**.
Livestock	• In case of agriculture, value addition in agriculture is now taken beyond farm produce. Livestock data is critical to new method**. Value attached to byproducts of meat including "heads and legs". "fat" "skin", "edible offal and glands" of cattle, buffalo, sheep, goat and pig.**

Difference Between the Earlier and New Formula

Critics question the estimates of national income based on new methodology, and say that despite broader coverage under new methodology, gross domestic product (GDP) has **marginally reduced the economy's size by Rs 10,000 crore to Rs 113.45 lakh crore in 2013-14, against Rs 113.55 lakh crore in the old data series.**

Critics question the estimates of national income based on new methodology, and say that despite broader coverage under new methodology, gross domestic product (GDP) has marginally reduced the economy's size by Rs 10,000 crore to Rs 113.45 lakh crore in 2013-14, against Rs 113.55 lakh crore in the old data series.

- This raises questions about the accuracy and legitimacy of new methodology.
- According to the official version of CSO this anomaly is because of flaws in the earlier data on unorganized trade, which is drawn from the NSSO's establishment survey.
- The last such survey was in 2011-12.1t was found that the value added in trade in 2011-12 was significantly lower than what CSO had been projecting in the old series. Principally that's what explains the shrink in the size of the economy in 2011-12 and later in the new series compared to the earlier series.

GDP or GVA? Economists Give Different Prescriptions

Indian Government has changed the metric it will use from GDP to GVA,

- **GVA + taxes - subsidies = GDP**
- But also GDP (at factor cost) + taxes - subsidies = GDP (market price).
- So are GDP at factor cost and GVA equivalent?
- Or the difference lies in types of taxes and subsidies?

GDP or GVA? Economists Give Different Prescriptions

Yes..the type of taxes/subsidies used for adjustment makes the difference

- GVA at basic prices = CE + OS/MI + CFC + Production taxes less Production subsidies
- Where CE: Compensation of Employees,
- OS: Operating Surplus,
- MI: Mixed Income (a combination of employment income and profits for self-employed people working on their own account) ,
- CFC: Consumption of fixed capital
- (Production taxes or subsidies are paid or received with relation to production and are independent of the volume of actual production.
- Some examples are: Production Taxes - Land Revenues, Stamps and Registration fees and Tax on profession
- Production Subsidies - Subsidies to Railways, Input subsidies to farmers, Subsidies to village and small industries, Administrative subsidies to corporations or cooperatives, etc)

GDP or GVA? Economists Give Different Prescriptions

GVA at factor cost (earlier referred to as GDP at factor cost) = GVA at basic prices – Production taxes + Production subsidies

GDP (at market prices) = Σ GVA at basic prices + Product taxes - Product subsidies

(Product taxes or subsidies are paid or received on per unit of product. Some examples are: Product Taxes (indirect taxes): Excise Tax, Sales tax, Service Tax and Import and Export duties
Product Subsidies: Food, Petroleum and fertilizer subsidies, Interest subsidies given to farmers, households etc through banks, Subsidies for providing insurance to households at lower rates)

GDP at FC is actually the submission of all GVA in different sectors of the economy. So GDP at FC is basically the aggregate of GVA.

GDP or GVA? Economists Give Different Prescriptions

GVA is a component of GDP and they are not equivalent as taxes on products and subsidies on products are not equal. While they are likely close in value, they shouldn't be used as substitutes for one another as they are technically measuring different things. Gross Value Added is how much various enterprises add to the economy, GDP is a measure of the entire economy. In nearly all circumstances, GVA will be smaller than GDP.

Similarly, product subsidies would not include interest subsidies, which will form part of production subsidies," explained National Statistical Commission chairman Pronab Sen. Now, GDP at market prices would come by adding product taxes and deducting product subsidies from GVA at basic prices.

With gross domestic product (GDP) and gross value added (GVA) numbers telling different stories about India's economic growth, consensus eludes economists as to which data should be used to gauge the economic direction.

GDP or GVA? Economists Give Different Prescriptions

While the Reserve Bank of India (RBI) uses GVA to give its projections nowadays, National Statistical Commission (NSC) chairman Pronab Sen says that one should focus on both GDP and GVA numbers to assess economic parameters.

CARE Ratings Chief Economist Madan Sabnavis is of the view that the headline number of GDP or GVA should be looked at, depending on the parameters one is studying.

"It depends on what we are looking at. For global comparison, GDP should be used. But if one wants to look at what is happening at the sectoral level, we should look at GVA. For overall direction, we should be focusing on GDP," he said.

CRISIL Chief Economist D K Joshi is of the opinion that GDP is an indicator of the health of the economy."We should definitely look at GDP numbers as that reflects the health of the economy. Earlier there was some confusion over whether we should use GDP at market prices or at factor cost, but now we should just look at GDP," he said.

Sajjid Z Chinoy, Chief India Economist at JPMorgan, writing in Business Standard said that given the issues with data, GVA seems to be a "better representation of economic activity on the ground."

GDP or GVA? Economists Give Different Prescriptions

In the first quarter of 2015-16, GDP growth slowed down to 7.1 per cent from 7.5 per cent in the previous quarter, while GVA growth rose to 7.1 per cent from 6.1 per cent. This has puzzled analysts.

It is puzzling, especially because indirect taxes - GDP is essentially GVA plus net indirect taxes (indirect taxes minus subsidies) - grew at a scorching 37.5 per cent in the first quarter.

Further, as the government's subsidy burden has also shrunk significantly due to a sharp collapse in oil prices, it should have increased net indirect taxes, leading to higher GDP estimates and not the other way around.

The situation was completely the opposite in the last quarter where GVA had grown at 6.1 per cent, while GDP had grown at 7.5 per cent. This meant that net indirect taxes had added 1.4 percentage points to the headline growth numbers. Surprisingly, the situation has completely reversed in the first quarter of the current financial year.

In nominal terms (current prices), there does not seem to be an issue. Net indirect taxes grew by around Rs 60,000 crore, which does reflect in the nominal GDP numbers.

The problem is in real terms. According to Sen, "The way real tax is calculated is that net indirect taxes in the previous quarter are taken and the growth in real GVA and imports is taken to arrive at the figure for the current quarter. Since imports in the current quarter are lower than the previous financial year, we are getting a lower GDP number." But analysts contend that the sharp increase in excise tax collections should have shown up in the data leading to higher GDP numbers. This, however, is not the case.

Data

Provisional Estimates of National Income and Expenditures on GDP, 2018-19 (At 2011- 12 Prices) (₹ crore)

S. No.	Item	2016-17	2017-18	2018-19 (PE)	percentage change over previous year	
					2017-18	2018-19
	Domestic Product					
1	GVA at basic prices	11,318,972	12,104,165	12,906,936	6.9	6.6
2	NetTaxes on Products	979,355	1,075,693	1,170,650	9.8	8.8
3	GDP (1+2)	12,298,327	13,179,857	14,077,586	7.2	6.8
4	NDP	10,917,373	11,676,896	12,474,945	7.0	6.8
	Final Expenditures					
5	PFCE	6,904,085	7,417,489	8,016,674	7.4	8.1
6	GFCE	1,199,041	1,378,563	1,506,035	15.0	9.2
7	GFCF	3,783,778	4,136,572	4,548,452	9.3	10.0
8	CIS	124,087	150,417	157,637	21.2	4.8
9	VALUABLES	150,784	192,120	174,780	27.4	-9.0
10	Exports of goods and services	2,490,437	2,607,310	2,933,969	4.7	12.5
11	Less Imports of goods and services	2,621,586	3,083,560	3,557,901	17.6	15.4
12	Discrepancies	267,700	380,947	297,939		
13	GDP	12,298,327	13,179,857	14,077,586	7.2	6.8

http://mospi.nic.in/sites/default/files/press_release/Press%20Note%20PE%202018-19-31.5.2019-Final.pdf

Data

Provisional Estimates of National Income and Expenditures on GDP, 2018-19 (At 2011- 12 Prices) (₹ crore)

S. No.	Item	2016-17	2017-18	2018-19 (PE)	percentage change over previous year	
					2017-18	2018-19
	RATES TO GDP					
14	PFCE	56.1	56.3	56.9		
15	GFCE	9.7	10.5	10.7		
16	GFCF	30.8	31.4	32.3		
17	CIS	1.0	1.1	1.1		
18	VALUABLES	1.2	1.5	1.2		
19	Exports of goods and services	20.3	19.8	20.8		
20	Less Imports of goods and services	21.3	23.4	25.3		
21	Discrepancies	2.2	2.9	2.1		
22	GDP	100.0	100.0	100.0		
23	GNI	12,153,754	13,034,121	13,932,287	7.2	6.9
24	NNI	10,772,800	11,531,159	12,329,646	7.0	6.9
	Per Capita Income, Product and Final Consumption					
25	Population *(in Million)	1,299	1,316	1,332	1.3	1.2
26	Per Capita GDP (₹)	94,675	100,151	105,688	5.8	5.5
27	Per Capita GNI (₹)	93,562	99,043	104,597	5.9	5.6
28	Per Capita NNI (₹)	82,931	87,623	92,565	5.7	5.6
29	Per Capita PFCE (₹)	53,149	56,364	60,185	6.0	6.8

**Relates to mid-financial year*

PE: Provisional Estimates

Data

STATEMENT 2: Provisional Estimates of National Income and Expenditures on GDP, 2018-19 (At Current Prices)
(₹ crore)

S.No.	Item	2016-17	2017-18	2018-19 (PE)	percentage change over previous year	
					2017-18	2018-19
	Domestic Product					
1	GVA at basic prices	13,935,917	15,482,715	17,199,815	11.1	11.1
2	Net Taxes on Products	1,426,469	1,612,290	1,810,349	13.0	12.3
3	GDP (1+2)	15,362,386	17,095,005	19,010,164	11.3	11.2
4	NDP	13,771,661	15,313,286	17,030,846	11.2	11.2
	Final Expenditures					
5	PFCE	9,115,769	10,083,121	11,290,029	10.6	12.0
6	GFCE	1,583,312	1,885,613	2,134,615	19.1	13.2
7	GFCF	4,335,014	4,896,813	5,569,998	13.0	13.7
8	CIS	139,714	173,890	187,671	24.5	7.9
9	VALUABLES	166,559	218,706	193,992	31.3	-11.3
10	Exports of goods and services	2,948,772	3,210,547	3,752,230	8.9	16.9
11	Less Imports of goods and services	3,220,591	3,758,519	4,493,933	16.7	19.6
12	Discrepancies	293,838	384,835	375,562		
13	GDP	15,362,386	17,095,005	19,010,164	11.3	11.2

Data

STATEMENT 2: Provisional Estimates of National Income and Expenditures on GDP, 2018-19 (At Current Prices)
(₹ crore)

S.No.	Item	2016-17	2017-18	2018-19 (PE)	percentage change over previous year 2017-18	2018-19
	RATES TO GDP					
14	PFCE	59.3	59.0	59.4		
15	GFCE	10.3	11.0	11.2		
16	GFCF	28.2	28.6	29.3		
17	CIS	0.9	1.0	1.0		
18	VALUABLES	1.1	1.3	1.0		
19	Exports of goods and services	19.2	18.8	19.7		
20	Less Imports of goods and services	21.0	22.0	23.6		
21	Discrepancies	1.9	2.3	2.0		
22	GDP	100.0	100.0	100.0		
23	GNI	15,185,986	16,910,192	18,816,538	11.4	11.3
24	NNI	13,595,261	15,128,474	16,837,219	11.3	11.3
25	GNDI	15,565,424	17,315,933	19,237,943	11.2	11.1
26	NNDI	13,974,699	15,534,214	17,258,624	11.2	11.1
	Per Capita Income, Product and Final Consumption					
27	Per Capita GDP (₹)	118,263	129,901	142,719	9.8	9.9
28	Per Capita GNI (₹)	116,905	128,497	141,265	9.9	9.9
29	Per Capita NNI (₹)	104,659	114,958	126,406	9.8	10.0
30	Per Capita GNDI (₹)	119,826	131,580	144,429	9.8	9.8
31	Per Capita PFCE (₹)	70,175	76,619	84,760	9.2	10.6

Note: Estimates of Disposable Income are compiled only at current prices.

PE: Provisional Estimates

STATEMENT 3: Provisional Estimates of GVA at Basic Price by Economic Activity

(At 2011-12 prices)

(₹ crore)

Industry	2016-17	2017-18	2018-19 (PE)	Percentage change over previous year	
				2017-18	2018-19
1. Agriculture, forestry & fishing	1,717,467	1,803,039	1,855,632	5.0	2.9
2. Mining & quarrying	348,089	365,677	370,564	5.1	1.3
3. Manufacturing	2,055,043	2,176,923	2,328,040	5.9	6.9
4. Electricity, gas, water supply & other utility services	246,491	267,720	286,427	8.6	7.0
5. Construction	917,754	969,194	1,053,901	5.6	8.7
6.Trade, hotels, transport, communication and services related to broadcasting	2,145,415	2,312,214	2,471,128	7.8	6.9
7. Financial, real estate & professional services	2,494,444	2,649,146	2,846,393	6.2	7.4
8. Public administration, defence and Other services	1,394,269	1,560,252	1,694,851	11.9	8.6
GVA at Basic Price	**11,318,972**	**12,104,165**	**12,906,936**	**6.9**	**6.6**

PE: Provisional Estimates

STATEMENT 4: Provisional Estimates of GVA at Basic Priceby Economic Activity

(At Current Prices)

(₹ crore)

Industry	2016-17	2017-18	2018-19 (PE)	Percentage change over previous year 2017-18	Percentage change over previous year 2018-19
1. Agriculture, forestry & fishing	2,496,358	2,670,147	2,775,852	7.0	4.0
2. Mining & quarrying	321,872	351,058	410,151	9.1	16.8
3. Manufacturing	2,335,068	2,542,089	2,818,218	8.9	10.9
4. Electricity, gas, water supply & other utility services	353,468	423,089	479,871	19.7	13.4
5. Construction	1,082,466	1,213,628	1,376,293	12.1	13.4
6.Trade, hotels, transport, communication and services related to broadcasting	2,538,268	2,823,263	3,151,709	11.2	11.6
7. Financial, real estate & professional services	2,911,901	3,252,789	3,666,326	11.7	12.7
8. Public Administration, defence and Other services	1,896,516	2,206,652	2,521,395	16.4	14.3
GVA at Basic Price	13,935,917	15,482,715	17,199,815	**11.1**	**11.1**

PE: Provisional Estimates

STATEMENT 5: Quarterly Estimates of GVA at Basic Prices for 2018-19

(at 2011-12 prices)

industry	PERCENTAGE CHANGE OVER PREVIOUS YEAR							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Agriculture, forestry & fishing	4.2	4.5	4.6	6.5	5.1	4.9	2.8	-0.1
2. Mining & quarrying	2.9	10.8	4.5	3.8	0.4	-2.2	1.8	4.2
3. Manufacturing	-1.7	7.1	8.6	9.5	12.1	6.9	6.4	3.1
4. Electricity, gas, water supply& other utility ser vices	8.6	9.2	7.5	9.2	6.7	8.7	8.3	4.3
5. Construction	3.3	4.8	8.0	6.4	9.6	8.5	9.7	7.1
6. Trade, hotels, transport & communication and services related to boardcasting	8.3	8.3	8.3	6.4	7.8	6.9	6.9	6.0
7. Financial, real estate & professional Services	7.8	4.8	6.8	5.5	6.5	7.0	7.2	9.5
8. Public administration, defence and Other Services	14.8	8.8	9.2	15.2	7.5	8.6	7.5	10.7
GVA at Basic Price	5.9	6.6	7.3	7.9	7.7	6.9	6.3	5.7

STATEMENT 6: Quarterly Estimates of GVA at Basic Prices for 2018-19 (at Current Prices)

industry	PERCENTAGE CHANGE OVER PREVIOUS YEAR							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Agriculture, forestry & fishing	2.8	7.3	9.1	7.7	6.8	4.2	2.1	3.8
2. Mining & quarrying	9.1	13.6	11.2	4.9	18.7	21.9	20.1	9.7
3. Manufacturing	1.0	9.8	11.6	12.9	16.4	11.6	10.9	5.7
4. Electricity, gas, water supply& other utility ser vices	21.0	20.4	17.2	20.1	12.6	16.7	15.6	8.8
5. Construction	9.0	11.0	15.6	12.8	14.8	14.0	14.6	10.3
6. Trade, hotels, transport & communication and services related to boardcasting	11.3	11.6	12.5	9.7	13.0	12.6	12.0	9.3
7. financial, real estate & professional Services	12.7	10.0	13.6	11.1	12.1	13.0	12.6	13.3
8. Public administration, defence and Other Services	18.4	12.7	14.2	20.4	13.6	14.3	12.7	16.3
GVA at Basic Price	9.3	10.6	12.4	12.0	12.7	12.0	10.3	9.5

STATEMENT 7: Quarterly Estimates of Expenditures of GDP for 2018-19 (at 2011-12 prices)

Item	(₹ crore)							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Private Final Consumption Expenditure (PFCE)	1,783,905	1,757,656	1,907,486	1,968,442	1,914,259	1,929,745	2,061,529	2,111,141
2. Government Final Consumption Expenditure	363,763	368,596	320,263	325,941	387,599	408,645	341,126	368,666
3. Gross Fixed Capital Formation (GFCF)	989,620	998,232	1,046,238	1,102,482	1,121,028	1,116,240	1,169,021	1,142,162
4. Change in Stocks	34,802	37,679	36,602	41,333	38,245	39,454	38,177	41,762
5. Valuables	62,728	46,187	39,401	43,804	42,303	45,958	40,421	46,099
6. Exports	633,368	647,213	652,539	674,190	697,740	729,297	761,502	745,430
7. Less Imports	777,543	754,113	787,035	764,869	863,352	926,895	901,231	866,423
8. Discrepancies	71,895	116,016	69,476	123,561	76,175	100,295	-9,524	130,993
GDP	3,162,537	3,217,465	3,284,971	3,514,884	3,413,997	3,442,739	3,501,020	3,719,830
GDP Growth rates	6.0	6.8	7.7	8.1	8.0	7.0	6.6	5.8

STATEMENT 7: Quarterly Estimates of Expenditures of GDP for 2018-19 (at 2011-12 prices)

Item	RATES of GDP (%)							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Private Final Consumption Expenditure (PFCE)	56.4	54.6	58.1	56.0	56.1	56.1	58.9	56.8
2. Government Final Consumption Expenditure	11.5	11.5	9.7	9.3	11.4	11.9	9.7	9.9
3. Gross Fixed Capital Formation (GFCF)	31.3	31.0	31.8	31.4	32.8	32.4	33.4	30.7
4. Change in Stocks	1.1	1.2	1.1	1.2	1.1	1.1	1.1	1.1
5. Valuables	2.0	1.4	1.2	1.2	1.2	1.3	1.2	1.2
6. Exports	20.0	20.1	19.9	19.2	20.4	21.2	21.8	20.0
7. Less Imports	24.6	23.4	24.0	21.8	25.3	26.9	25.7	23.3
8. Discrepancies	2.3	3.6	2.1	3.5	2.2	2.9	-0.3	3.5
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
GDP Growth rates								

Data

STATEMENT 8: Quarterly Estimates of Expenditures of GDP for 2018-19
(at Current Prices)

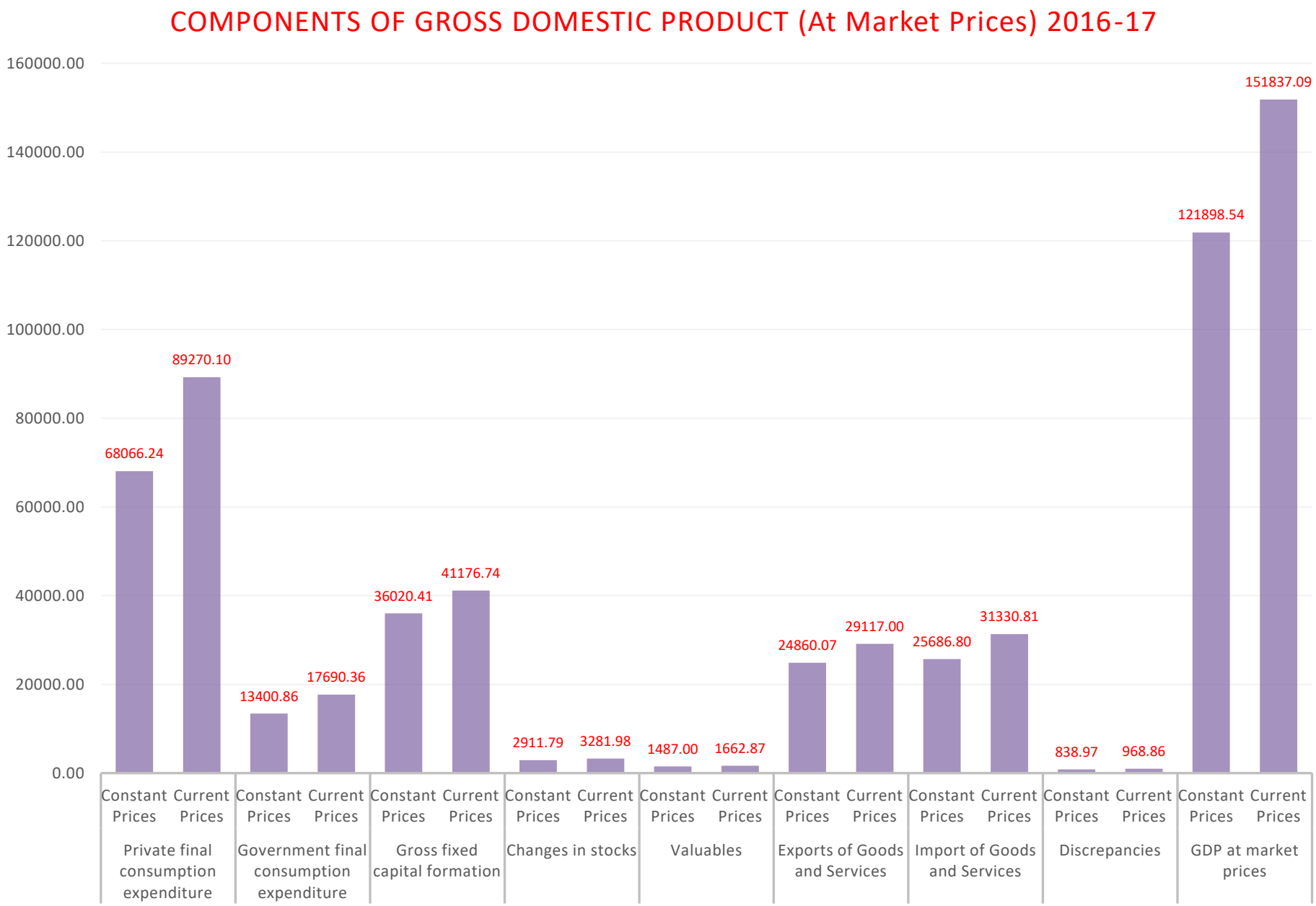
Item	(₹ crore)							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Private Final Consumption Expenditure (PFCE)	2,369,633	2,384,867	2,623,498	2,705,121	2,660,328	2,728,197	2,926,848	2,974,654
2. Government Final Consumption Expenditure	485,089	504,265	444,841	451,418	541,256	581,902	488,062	523,394
3. Gross Fixed Capital Formation (GFCF)	1,160,598	1,176,660	1,247,205	1,312,352	1,358,745	1,367,789	1,444,207	1,399,257
4. Change in Stocks	39,809	43,264	42,376	48,441	45,111	46,989	45,737	49,835
5. Valuables	73,678	53,176	49,288	42,564	45,964	51,240	51,147	45,641
6. Exports	764,061	792,960	821,407	832,118	877,750	932,669	990,617	951,194
7. Less Imports	928,583	914,135	983,113	932,688	1,073,071	1,170,093	1,159,618	1,091,152
8. Discrepancies	58,703	134,974	65,028	126,131	74,602	140,034	-2,673	163,601
GDP	4,022,988	4,176,031	4,310,530	4,585,456	4,530,685	4,678,727	4,784,328	5,016,424
GDP Growth rates	10.7	11.4	11.5	11.5	12.6	12.0	11.0	9.4

Data

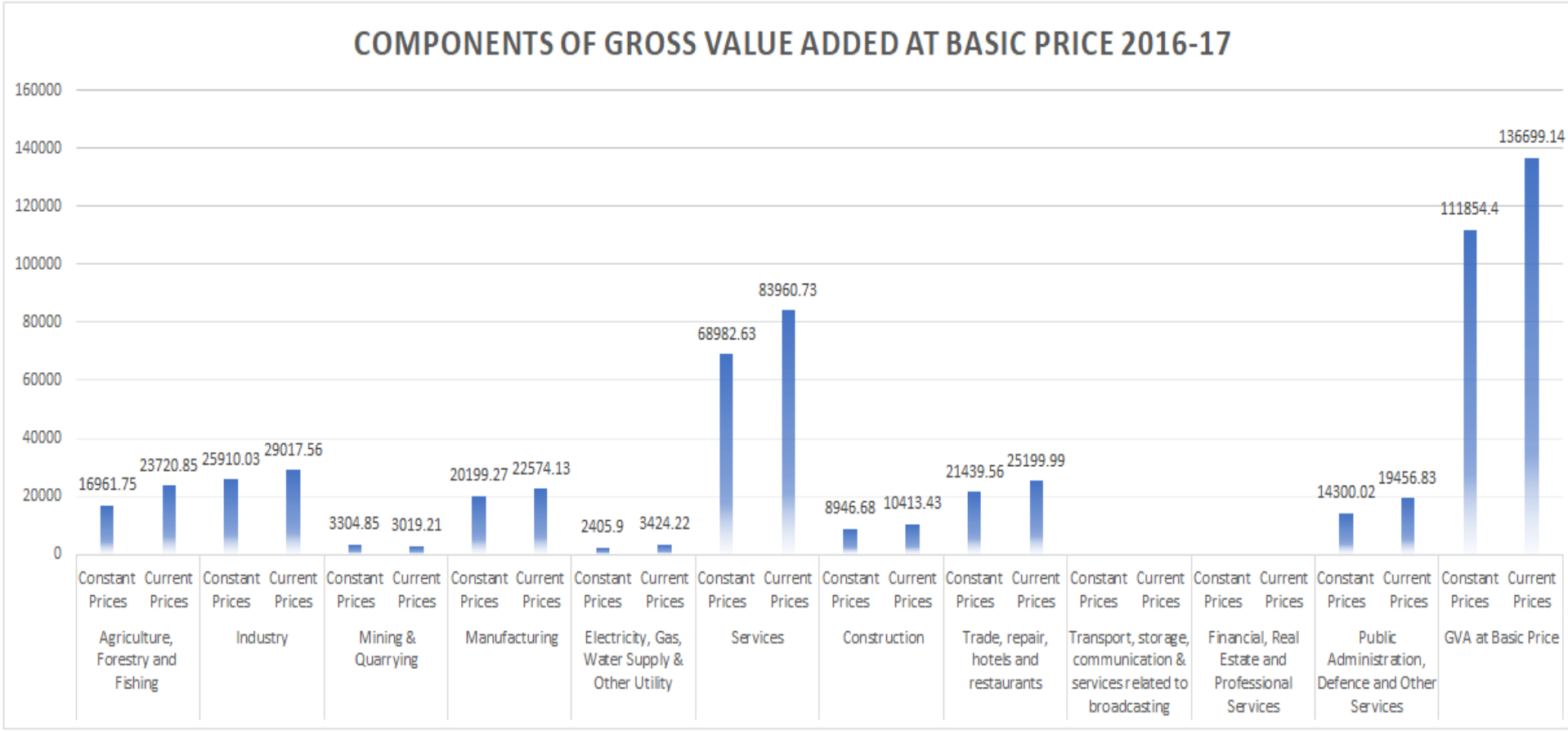
STATEMENT 8: Quarterly Estimates of Expenditures of GDP for 2018-19
(at Current Prices)

Item	RATES of GDP (%)							
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Private Final Consumption Expenditure (PFCE)	58.9	57.1	60.9	59.0	58.7	58.3	61.2	59.3
2. Government Final Consumption Expenditure	12.1	12.1	10.3	9.8	11.9	12.4	10.2	10.4
3. Gross Fixed Capital Formation (GFCF)	28.8	28.2	28.9	28.6	30.0	29.2	30.2	27.9
4. Change in Stocks	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0
5. Valuables	1.8	1.3	1.1	0.9	1.0	1.1	1.1	0.9
6. Exports	19.0	19.0	19.1	18.1	19.4	19.9	20.7	19.0
7. Less Imports	23.1	21.9	22.8	20.3	23.7	25.0	24.2	21.8
8. Discrepancies	1.5	3.2	1.5	2.8	1.6	3.0	-0.1	3.3
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR 2011-12)



NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR 2011-12)



NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR 2011-12)

MACROECONOMIC AGGRREGATES (At Current Prices)

Base Year: 2011-12

(Rupees Billion)

Year	Population(in million)	Consumption of Fixed Capital	Indirect Taxes less Subsidies	GDP at Market Prices	NDP at Market Prices	Net Factor Income from Abroad	GNP at Market Prices	NNP at Market Prices	GNP at Basic Prices	Gross Capital Formation	Gross National Disposable Income
2016-17	1299	15858.98	15137.95	151837.09	135978.11	-1896.00	149941.09	134082.11	134803.14		153795.09
2015-16	1283	14453.74	12233.93	136820.35	122366.62	-1597.79	135222.56	120768.82	122988.63	45593.18	139353.39
2014-15	1267	13439.38	9633.34	124451.28	111011.91	-1474.30	122976.98	109537.61	113343.64	42795.87	127028.52
2013-14	1251	11959.75	8703.69	112335.22	100375.47	-1398.84	110936.38	98976.63	102232.69	37941.35	114895.56
2012-13	1235	10609.05	7413.21	99440.13	88831.08	-1167.63	98272.50	87663.45	90859.29	38471.22	101773.31
2011-12	1220	9171.75	6293.83	87363.29	78191.54	-768.24	86595.05	77423.30	80301.22	34030.08	89644.07

Year	GVA at Basic Prices	Gross Savings	Net Capital Formation	Net National Disposable Income	Net Savings	NNP at Basic Prices	NVA at Basic Prices	Per Capita GDP	Per Capita GNP	Per Capita NNI	Per Capita PFCE
2016-17	136699.14			137936.11		118944.16	120840.16	116888.00	115428.00	103219.00	68722.00
2015-16	124586.42	44189.19	31139.44	124899.65	29735.45	108534.89	110132.68	106641.00	105396.00	94130.00	61826.00
2014-15	114817.94	41197.66	29356.49	113589.15	27758.28	99904.27	101378.56	98225.00	97062.00	86454.00	57086.00
2013-14	103631.53	36081.93	25981.60	102935.81	24122.18	90272.94	91671.78	89796.00	88678.00	79118.00	51764.00
2012-13	92026.92	33692.02	27862.17	91164.26	23082.97	80250.24	81417.87	80518.00	79573.00	70983.00	45461.00
2011-12	81069.46	30268.37	24858.33	80472.32	21096.62	71129.47	71897.71	71609.00	70980.00	63462.00	40250.00

NATIONAL INCOME ESTIMATES BASED ON NEW SERIES (BASE YEAR 2011-12)

MACROECONOMIC AGGREGATES (At constant prices)

(Rupees Billion)

Base Year:2011-12

Year	GVA at Basic Prices	Consumption of Fixed Capital	NVA at Basic Prices	Indirect Taxes less Subsidies	GDP at Market Prices	NDP at Market Prices	Net Factor Income from Abroad	GNP at Basic Prices	NNP at Basic Prices	GNP at Market Prices	NNP at Market Prices
2016-17	111854.40	13479.37	98375.03	10044.14	121898.54	108419.17	-1551.41	110302.99	96823.62	120347.13	213530.80
2015-16	104905.14	12641.93	92263.21	8904.88	113810.02	101168.09	-1346.97	103558.17	90916.24	112463.05	199283.99
2014-15	97190.23	11807.24	85382.99	8179.61	105369.84	93562.60	-1247.04	95943.19	84135.95	104122.80	184441.67
2013-14	90636.49	11006.10	79630.39	7377.21	98013.70	87007.60	-1223.43	89413.06	78406.96	96790.27	171749.25
2012-13	85462.75	10106.61	75356.14	6667.41	92130.17	82023.56	-1083.54	84379.21	74272.60	91046.62	161916.17
2011-12	81069.46	9171.75	71897.71	6293.83	87363.29	78191.54	-768.24	80301.22	71129.47	86595.05	154844.04

Year	Net Factor Income from Abroad	GNP at Basic Prices	NNP at Basic Prices	GNP at Market Prices	NNP at Market Prices	Gross Capital Formation	Net Capital Formation	Per Capita GNI	Per Capita GDP	Per Capita NNI	Per Capita PFCE
2016-17	-1551.41	110302.99	96823.62	120347.13	213530.80	-	-	92646.00	93840.00	82269.00	52399.00
2015-16	-1346.97	103558.17	90916.24	112463.05	199283.99	40235.85	27593.92	87656.00	88706.00	77803.00	48810.00
2014-15	-1247.04	95943.19	84135.95	104122.80	184441.67	37412.35	25605.11	82181.00	83165.00	72862.00	46586.00
2013-14	-1223.43	89413.06	78406.96	96790.27	171749.25	34482.36	23476.26	77370.00	78348.00	68572.00	44423.00
2012-13	-1083.54	84379.21	74272.60	91046.62	161916.17	36392.96	26286.35	73722.00	74599.00	65538.00	41936.00
2011-12	-768.24	80301.22	71129.47	86595.05	154844.04	34030.08	24858.33	70980.00	71609.00	63462.00	40250.00

MACROECONOMIC AGGRREGATES (At Current Prices)

Base Year: 2011-12

(Rupees Billion)

Year	GDP at Market Prices	NDP at Market Prices	GNP at Market Prices
	NAS-2011-12	NAS-2011-12	NAS-2011-12
2011-12	88320.12	79233.55	87551.88
2012-13	99885.40	89584.96	98717.77
2013-14	113450.56	101964.10	112051.69
2014-15	125412.08	112749.15	123839.08

MACROECONOMIC AGGREGATES (At constant prices)

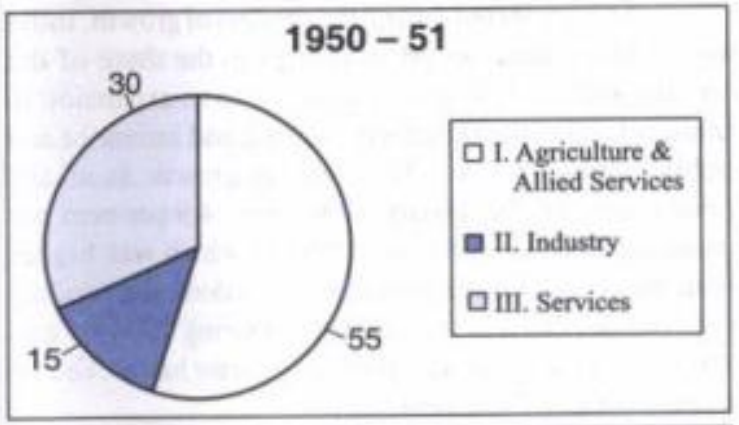
Year	GDP at Market Prices	NDP at Market Prices	GNP at Market Prices
2011-12	88320.12	79233.55	87551.88
2012-13	92808.03	83013.05	91729.25
2013-14	99211.06	88721.27	98008.13
2014-15	106439.83	95198.11	105131.63

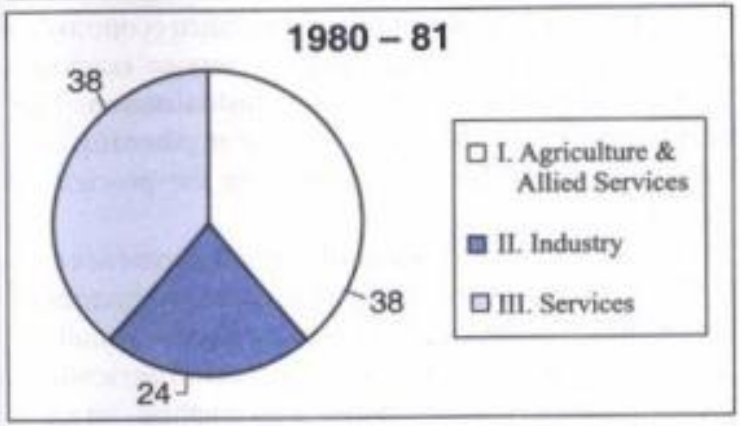
COMPONENTS OF GROSS VALUE ADDED at BASIC PRICE

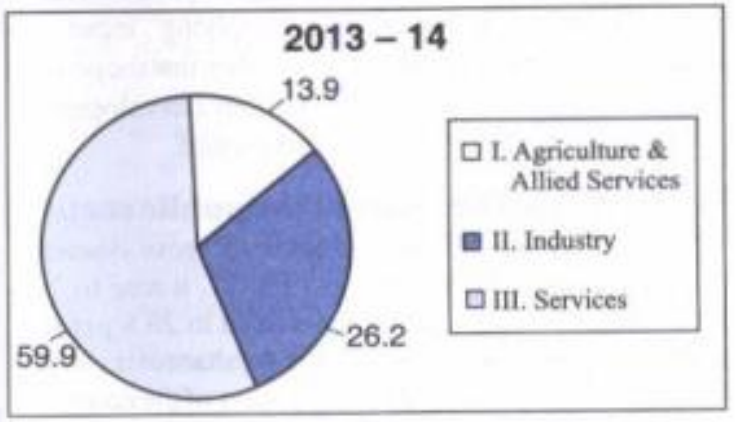
Base Year:2011-12 (Rupees Billion)

Year	TOTAL GVA at Basic Price	
	Constant Prices	Current Prices
2014-15	98270.89	115502.40
2013-14	91697.87	104771.40
2012-13	85992.24	92520.51
2011-12	81955.43	81955.45

Share of Gross Domestic Product by industry of Origin (1999-00 series)







Choice of Methods

Purpose of National Income Analysis

- *Factor Income Distribution*
- *Measuring National Income*
- *Expenditure Pattern*

Availability of Necessary Data

Net Product Method

Summary

- National Income is the money value of all final goods and services produced by economic activities in the country during a period of one year.
- Measures of National Income are GNP, GDP, NDP, NNP
- Methods of Measuring National Income are net output or value added method, factor income method and expenditure method
- Choice of Methods is based on purpose of national income analysis and availability of necessary data
- Measurement of National Income in India by National Income Committee(NIC) and Central Statistical Organization