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INDIAN GDP ANALYSIS WITH ECONOMIC INDICATORS

Economic Indicators is usually microeconomic scale that is used by analyst or economist to measure the current situation of the country and to predict the future possibilities for the business investment and it also useful to analysis of overall health of economy. With the help of data provided by government and Non-profit organisation different economic indicators can be used such as Gross domestic product (GDP), wholesale price index, Consumer price index, GDP growth rate are few of them This report is all about the Indian Economy and analysis of economy through economic indicators on Country.

1. Gross Domestic Product (GDP):

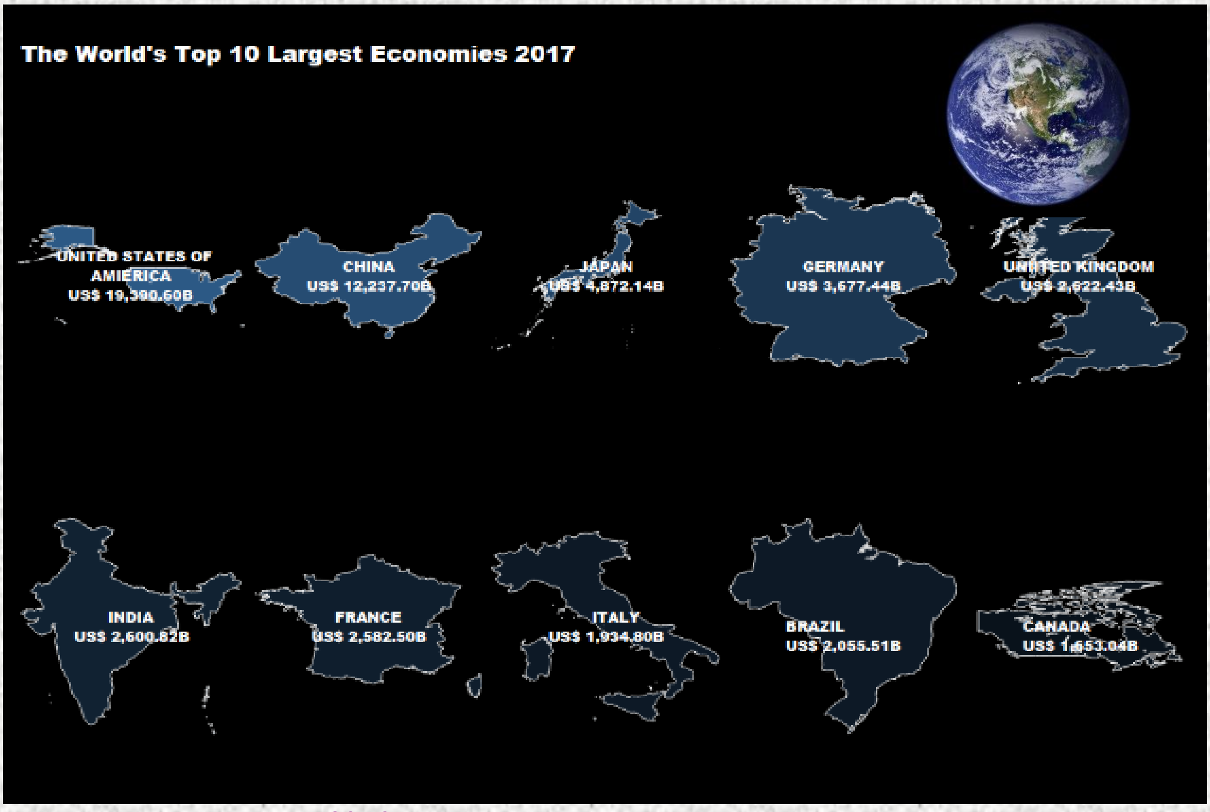

Figure 1: Data source: WorldGdpData

GDP is one of the main Economy Indictor, growth rate measures speed with which country's economy is growing." ***GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products"*** (DataMarket, 2019).

The World's Top 10 Largest Economies *(GDP in US $)*:

Whenever the topic comes on the top national economies in the world, United States of America (USA) leading this table from the beginning. ***figure1*** shows top 10 Economies with Highest GDP in the year. 2017.From the chart we can see that United States of America is the leading economy in 2017 with GDP of more than 19 trillion in (us number two with 12 trillion in (us $). Difference between first and second economy **figure 1** is more than 7 trillion. Indian economy is 7th in this list with 2.6 trillion in (US $) for the year 2017.

2 GDP Growth rate in percent (%)

There are different ways to measure the GDP growth rate of the Country, first one is by comparing the GDP of the quarter by previous quarter and second is by comparing the GDP growth rate for this year to previous year. **Year on Year GDP Growth Rate is calculated by formula**: (GDPQ - GDPQ-4) / GDPQ-4. When the GDP of any country is expanding shows that there are lot of opportunities for the business, jobs and personal income is increase.

Chain is the leading economy in Asia with economic growth rate of 6.90% and second is India whose growth rate is 6.68% in 2017. With is Growth rate of 0.98 Brazil is last in this chart. Despite of leading economy of the world, United States of America is at the 4th position behind to Canada.

2.1 Growth rate of Top 10 Largest Economies in *(%)*

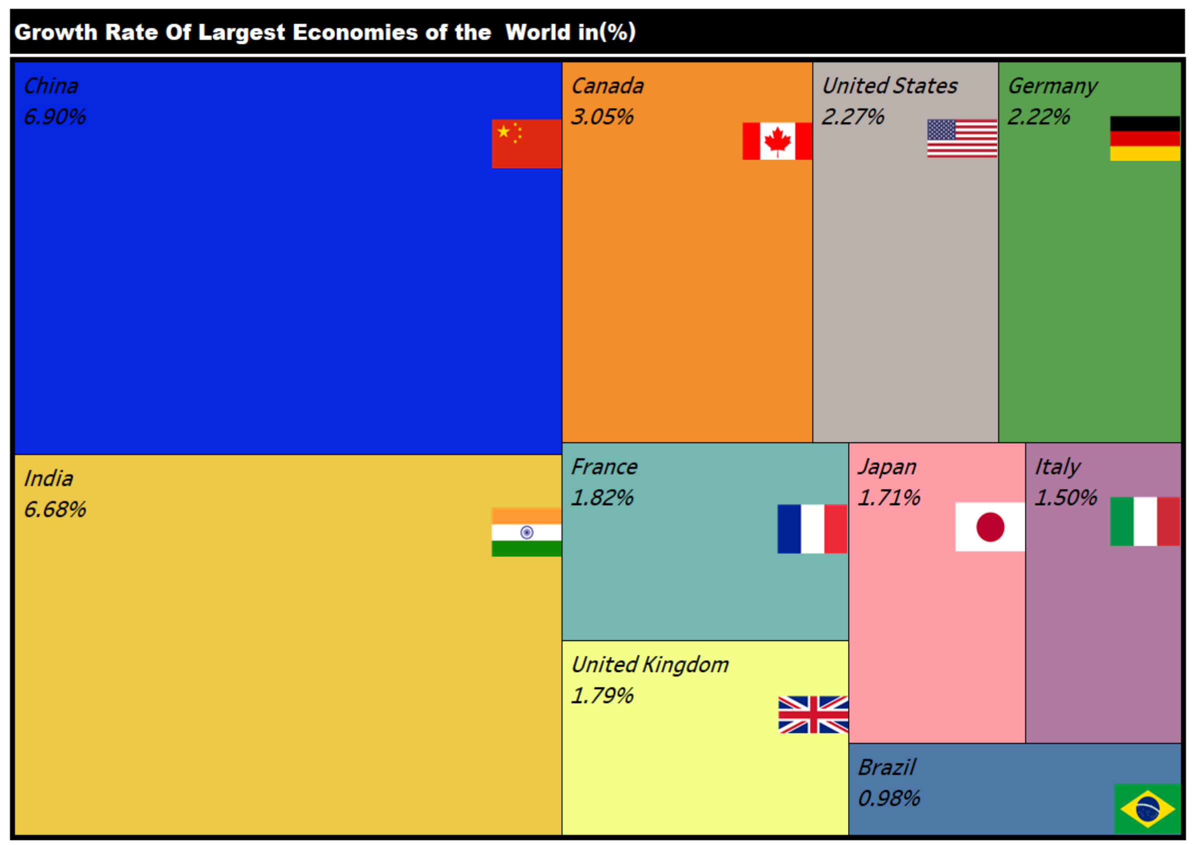

***Figure 2**:**Data source** https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG*

3. Indian GDP growth rate in %

Indian GDP growth rate is mainly depending upon the three main factors which are **Agriculture, Service and Industry**. Positive GDP growth rate indicates prosperity and expansion of the country. When GDP of the country is reduces growth, rate is negative, and this will create direct impact on the investments in the country, decreases in real income, increase in the rate of unemployment and decline in wholesale or retail sales. According to the ***figure3*** India's GDP Growth rate is 8.15% in year 2015. As per the **chief India economist at HSBC, Pranjul Bhandari**, ***"The key driver of GDP growth in 2015 was falling oil and other commodity prices which improved corporate margins and household purchasing power, while also improving government tax collections and lowering the subsidy bill,"*** (India economy year in review 2015, 2015). Lowest GDP Growth rate in 2016-2017 because of Demonetization and Imple mentation-related issues of the goods and services tax (GST). Positive growth is important for the countries progress.

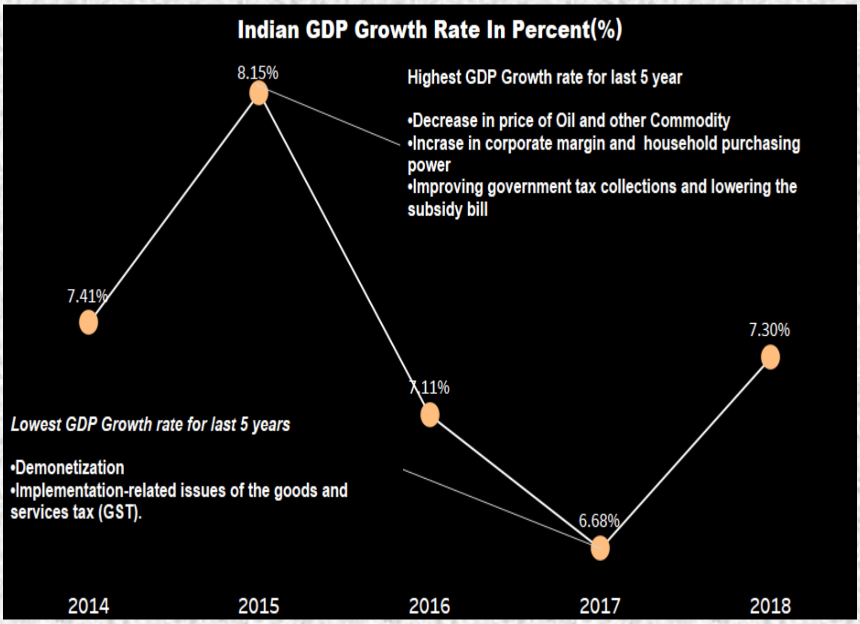

Figure3: data source [Indian Gdp]

4. DIFICIT:

Deficit is defined as amount of money which is short of what is expected. Deficit occurs in different ways such as Revenue of the country exceed by the Expenditure of the country. Import in the country Greater than Export and asset is greater than liabilities. Deficit is exactly opposite of the **Surplus.** There are Different type of Deficits out of which Primary deficit and fiscal deficit as % of GDP is showed In the ***figure4,***

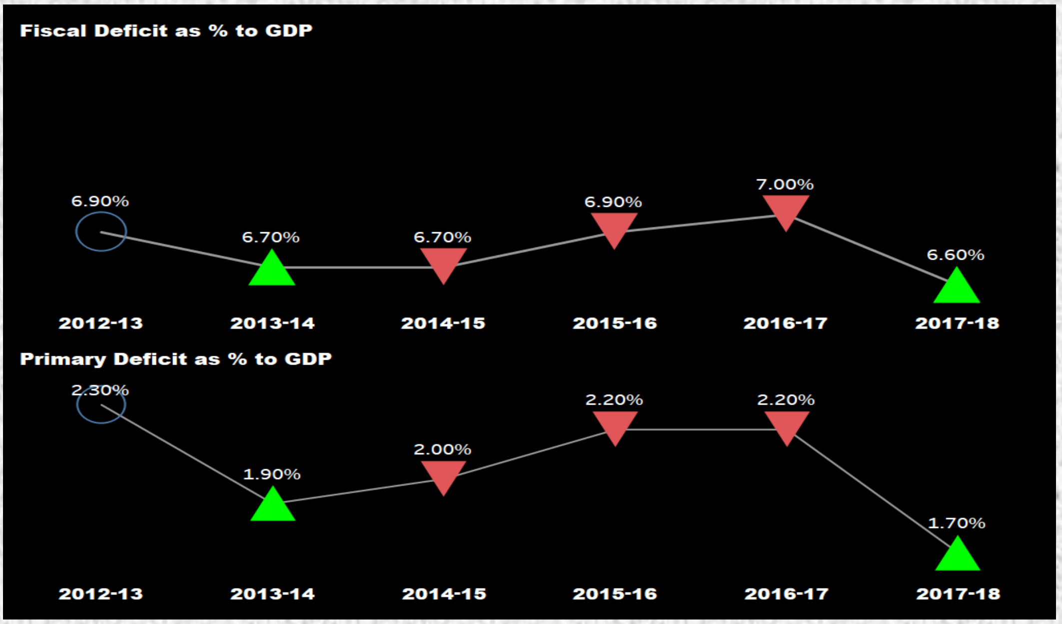

Figure 4: reserve bank of India

Fiscal Deficit is defined as the Expenditure of the Government is higher than Revenue Generated from the Different sources (excluding the Borrowing) As per the data available Fiscal Deficit is highest in 2016-17 which is 7.00% and lowest in 2017-18 which is 6.60%. ***Primary Deficit*** is the part of fiscal deficit and calculated by deducting the interest payment from the fiscal deficit. Primary deficit minimum in the year 2017-18 which shows that primary deficit is 1.70 % of the GDP which is lowest. In the chart arrow with the colour Red shows the down arrow which indicate decrease in the fiscal and primary deficit and blue arrow increase in the fiscal deficit. Deficit has direct impact on the country's economy, with ***increase in the Fiscal Deficit can cause increase in borrowing, Higher Debate interest rate, Higher Taxes and lower spending, Increased Interest rates, Inflation.*** Lower the fiscal deficit greater is the Progress in the growth of the Country in positive direction. So we can conclude that fiscal deficit play vital role in the Growth of the economy and in some extent is good to have deficit as money borrowed use in the production and rate o f return (ROI) from the invest is greater than interest paid.[(Lee, 2012)]

5. Key Sectors of Indian GDP

Three main sectors in India which contribute maximum value to the Indian GDP and these are **Agriculture, Service** and **industry**. Agriculture sector includes Forestry and fishing. Charts shows the Contribution of Agriculture, Industry and Service to Indian GDP in % from year 2012-2017.***figure 5***shows that among the three sectors Agriculture sector is lowest contributor which contribute 15.5% in the year of 2017 which is lowest contribution for the last six year. Service sector is leading contributor and contribution is increasing over the period. From the chart we also see that variation in growth of each sector. Agriculture sector contribute nearly 16% of GDP, service sector contribute near about 48% of GDP and average 28% of GDP from last 6 years. Fig2 Workforce Distribution to Agriculture, Industry and Service sector of India in % This is most important chart as this chart shows the contribution of label work in the India for the agriculture, service, Industry sectors from the chart we agriculture sector requires the maximum number of labour work among all

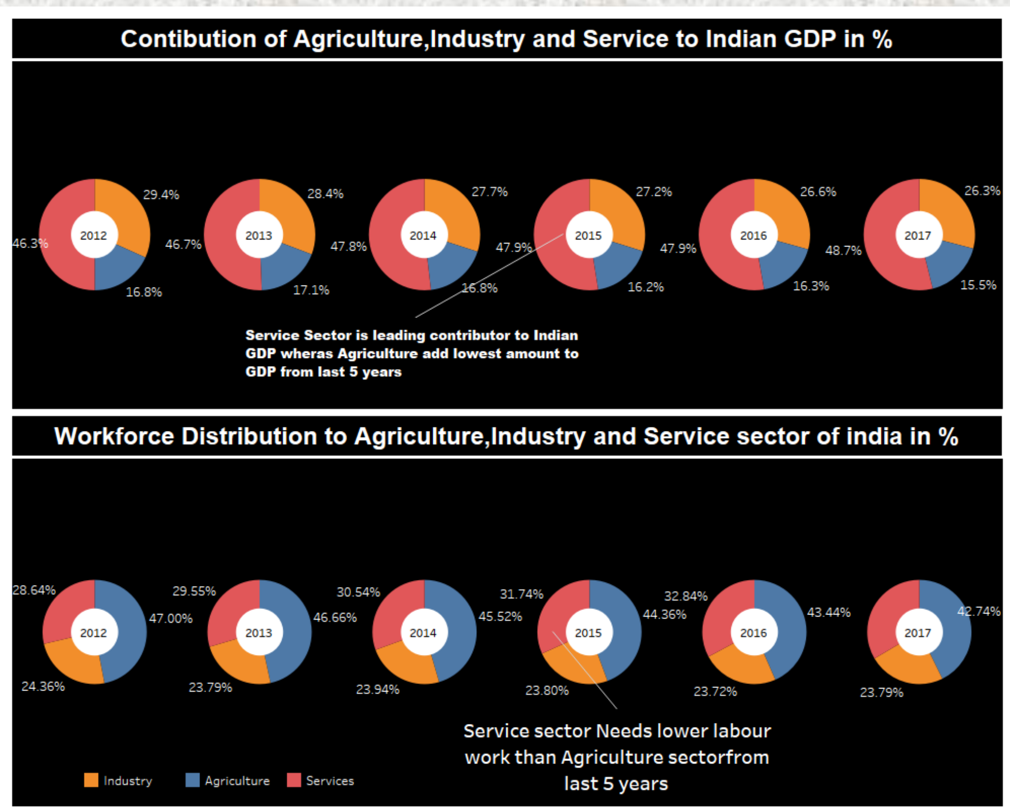

Figure 5   Data source DistributionofGDP

of three sectors. Industry sector requires less contribution of labour force so we can conclude that ***Agriculture sector requires highest labour work force but contribute less in the GDP where as Service sector require less manpower than agriculture still Contribute maximum to the GDP of India.***

6. Import and Export in (US) $and % of GDP:

Import is any purchase by the residence of the country such as Businessman, citizen or the Government from outside the country is called as Import. Export refer to the Goods and Services sends outside the country. ***Trade deficit*** is related to import and export

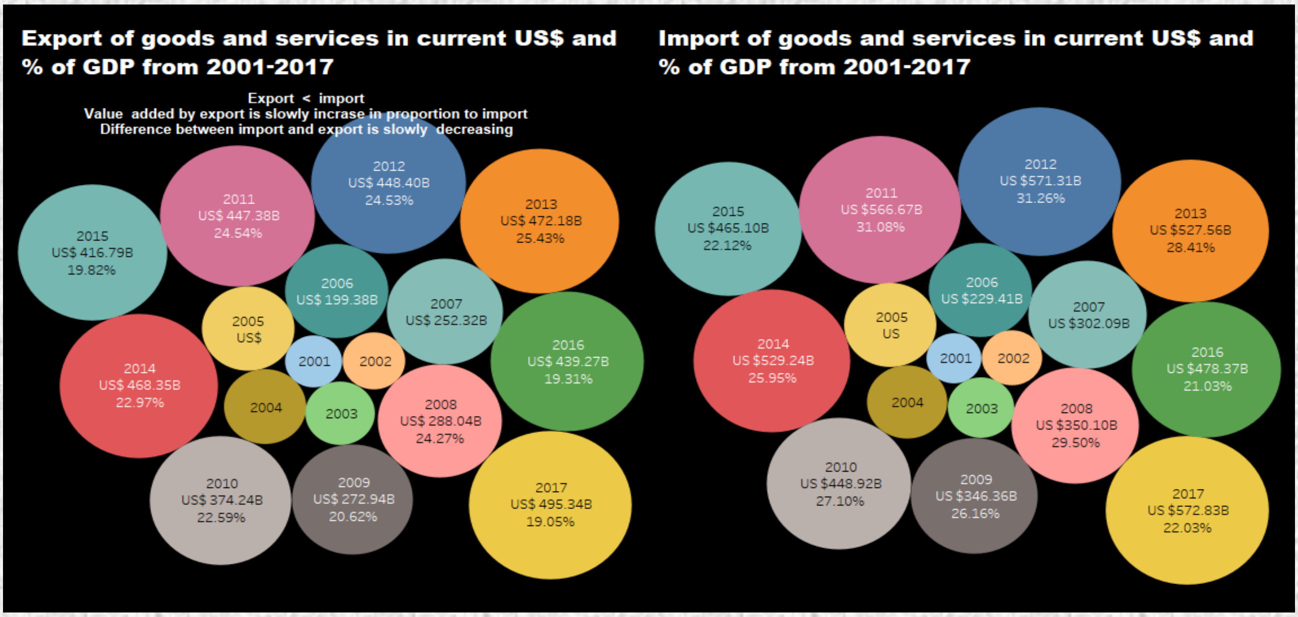

Figure 6 data source: [Import](), [export]()

and import of any country greater than its export cause Trade deficit. ***Trade surplus*** is exact opposite of the Trade deficit which shows Export of the country is greater than import of the country. ***Figure6*** shows the Import export of the country in US$ and % of GDP from the year 2001-2017 also fig shows that in Indian economy ***export always less than import*** Causes ***trade deficit***.fig also shows that revenue generated from the ***Export is increasing*** with respect to import over the time this will leads to **increase the opportunity in the job market and the domestic business** which learn to produce a variety of globally-demanded goods and services. **Increase in Import** makes country **Depended** on the other country's for **political** and **economic** power. Foreign reserves increase because payment of import is in foreign currency cause effect on inflation. Finally we can say that export must be greater than import to avoid the trade deficit and this will increases the economic growth of the country. Export can be increase by ***trade protectionism***, ***by providing subsidies to their industries and through trade agreements***.

7. Consumer price index

Consumer price index (CPI) is used to measure the Inflation which shows that yearly variation in % to the average consumer purchasing to the basket of goods and services that may be fixed or changes in particular year **Laspeyres formula** is used to calculate CPI. fig shows the variation in the CPI and % of GDP for the year 2012-17.for ***inflation*** price of the goods and services must be increasing ***such as housing, apparel, food, transportation, and fuel.***

Inflation causes increase in overall price level CPI explain whether economy experiencing inflation, deflation or stagflation. With increase in the CPI wages also increase and according to CPI it is difficult to afford new prices to the people to maintain good quality of life style.***GDP and CPI*** directly impacted to each other and healthy economic indicators. As we can see from the chart inflation rate is high which is 9.31% in year 2012 and Minimum in the year of 2017 3.33% there are

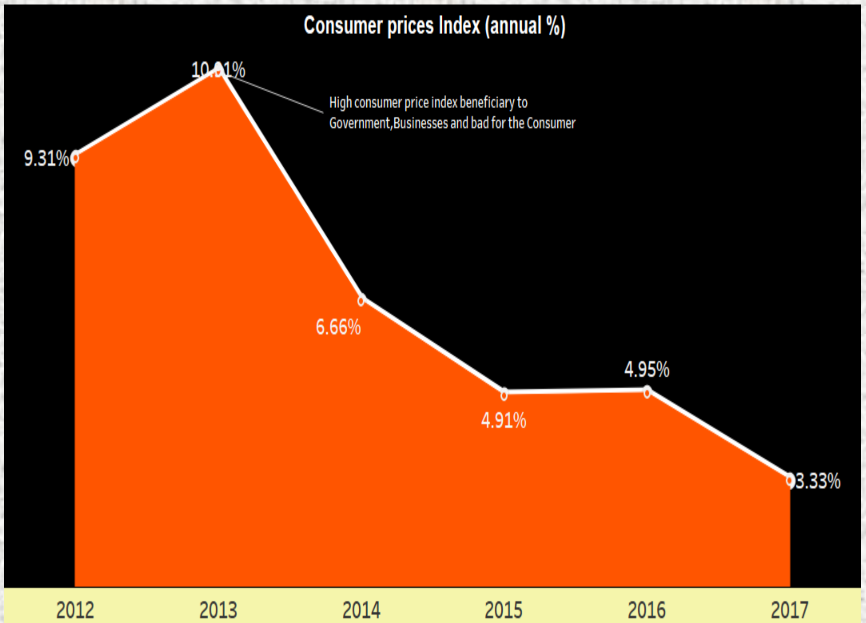

Figure 7 Datasource :CPI

good and bad impact of inflation on Indian economy **Impact on of increase CPI**

1.Goverment: Beneficial to the government for example if contract is made tod_ay 21/02/2019 for $300 and I'll get back money in the next year 21/02/2020 then the amount value of $300 is much more than the value I'll get in 2020 (This is main reason for the interest payment).

2. Consumer: Increase in CPI is bad for the consumer as must have to pay Higher amount for the same material he/she purchase in lower amount previously, with increase in inflation household prices increases and it is difficult to maintain the same lifestyle or standard of living.

8. Unemployment

Unemployment rate is good economic indicator and it is demand in the period of the tough economic time and recession. Unemployment Define as percent (%) of unemployed works in the available labour force. Unemployment rate of India is constant which is average 3% from the year 2014-2017 but is 2018 there is sudden decrease in the increase in the unemployment growth rate in India. Relation between economic growth and employment growth is decreases. We can conclude that India as to take the bold decision to increase the growth rate and with increasing the quality of the job along with creating the job. Increasing the demand in the service industry which is highest Contributor sector to the GDP need lot of skilful peoples in the field of AI, Augment reality, virtual reality and Blockchain.

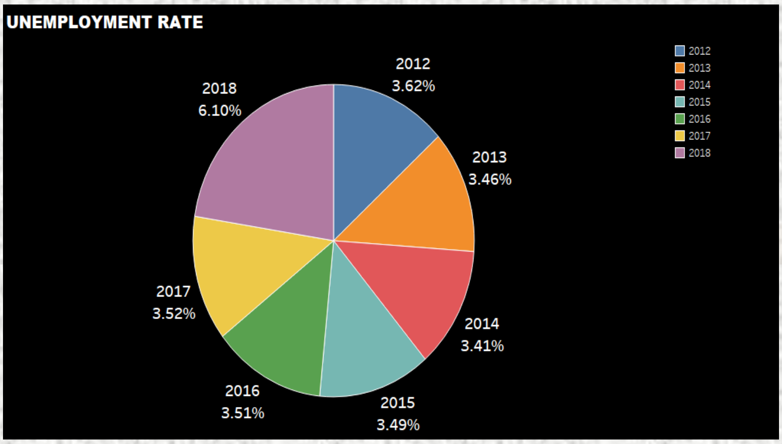

Figure 8 unemployment

9. Population of India:

Population of India is 2nd largest in the world which is 17.99 of the world's total population, meaning is 1 person in every 6 people is resident of the

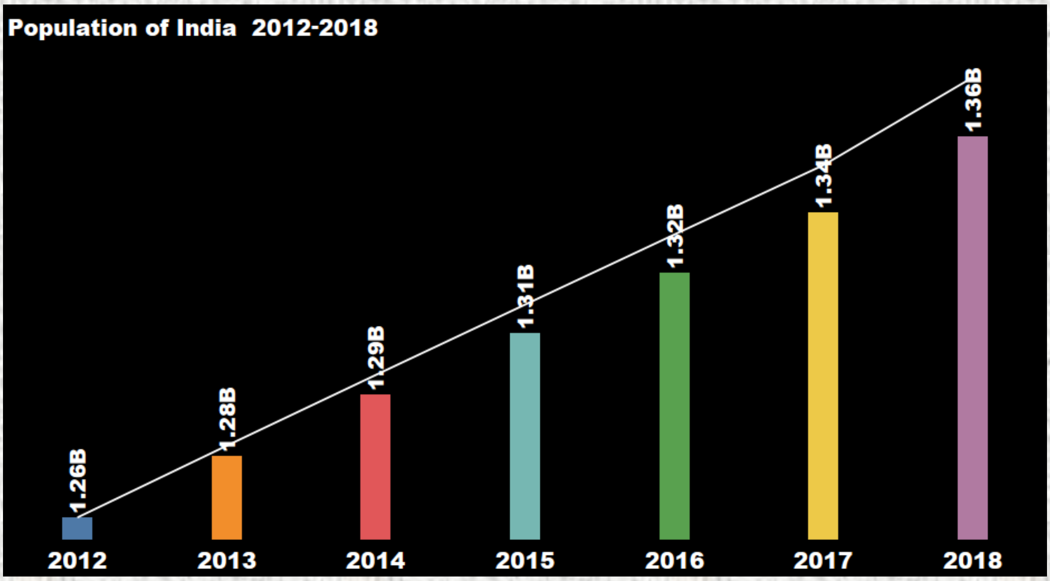

Figure 9:datasource [population]

India also population is measure economic indicator in and has impact on GDP. Indian population growth is 1.8% per year. To increase the per capita income larger investment is require capital output ration is 4:1 so total investment require is 4*1.8 which is equal to 7.2% of income must be invested. Due to increase in per population causes low per capita availability of cap (Worldbank, n.d.) (Statista, n.d.)ital also there are different problems with increases in Population and they are as follow ***indicates investment requirement, capital information, Effect on per capita income, effect on food problems, problem with unemployment, poverty, burden, low standard of living, More Pressure on Land, Impact on Maternity Welfare, Pressure on Environment, Population and Social Problems, Burden of Unproductive Consumers .(*** (mehta, n.d.)***)***

10 Foreign Direct Investment (FDI)

Foreign direct investment shows an investment made by firm or individual for the purpose of business interests and operations or purchasing the assent to explore the business. Investment can be done by two different way first one is Automatic route which doesn't require prior permission or the prior approvals and another is Approval route which requires the permission and the approvals fig shows FDI investment as % of the GDP growth. Chart shows the investment % increases from

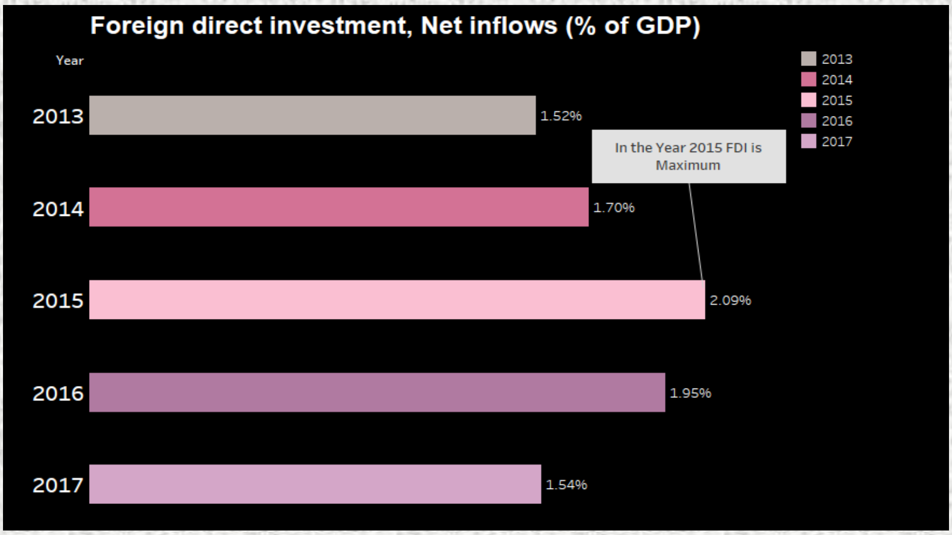

Figure 10 :datasource: [FDI]

year 2012 and it is at peak in the year 2015.India surpass chain in FDI in 2015 Because of the increasing the investment in the cola and power project. *"India replaced China as the top destination for FDI by capital investment following a year of high-value project announcements, specifically across the coal, oil and natural gas and renewable energy sectors,"* the FDI report said [(India replaces China as top FDI destination in 2015: Report , n.d.)]

Conclusion:

British Ruled over India for 200 year, this cause negative impact on the India. Productivity of Agriculture sector is very low and require large manpower. India have lost monopoly of jute export market; Still Indian Economy is achieving a new height and it is on the second number in the Asian continent and 6th in the world. Growth rate of Indian economy in 2017 was 6.90% and is increasing enormously from the last decade, will grow further because of the **re-transformation** and **structural changes** that support the **growth**. Export is increase and import is decrease because of the **start-ups** and growth in the job opportunity from the last 5 years. Value added by Key sectors are constant and service industry leading sector in this table with maximum contribution among the three sectors. Industry sector needs more Diversity, Public investment. CPI is main economic indicator which shows the rate of 3.3% which is reduces burden from the consumer. Population is main issue with India, despite of

such huge population Indian has maintained the fiscal deficit, that is revenue generation and expenditure is in control this shows the availability of young population, investment in new projects such as coal and power industries but because of new trends and technology India need lot of impartment in the sector of education to avoid the unemployment in the future. Overall, we can conclude that India may be fastest Growing country till 2020.

Appendix

SR. No	**Type of cart use**	**Why and how this chart is used**
figure1	**MAP**	**Dataset contain GDP data of top 10 countries. Separate sheet is created for each country and finally all 10 sheets are added using horizontal Container in Tableau. Colour used is blue and intensity of the colour is Decrease as GDP decreases.**
figure 2	Block chart	**Data is Country level data and shows the growth and map is used previously. block chart is Suitable for this dataset and shows the largest block for highest GDP growth rate. Size of the chart Decreases as GDP decreases. Downloaded Images for each country from Wikipedia. Created sheet and downloaded flags images pooled in the dashboard for understanding and visualization**
figure 3	**Dual Axis Chart (Line cart**	**Dual axis chart is used for visualization.**

	and Circle)	Dataset contain time series data, so line chart is used to show time variant data. Circle chart is created in the same sheet. dual axis is created from this sheet. Circle shows the GDP growth rate of India. For the understanding main the points on the line chart circle chart is created. Dashboard is created from this sheet formatting
figure 4	Dual axis chart (line and arrow)	Calculated Field is created which shows growth upper or downward direction. Line chart is created, and dual axis chart is created from these two charts from the same sheet. Colour green shows Growth and Red Shows growth in downward direction
figure 5	Donut Chart	Dataset contain data for three different Sector. From last 5 year each time one sector added highest value to the GDP and labour wot force Requirement is minimum for this sector so two sheets created separately and dashboard is created for this sheet. Annotation is used to provide information about this chart.
figure 6	Bubble chart	Dataset contain data from year 2011-2017 so bubble chart is useful in this case. Also, dataset contain Import and export. Also dataset is financial data (Import, Export) each circle shows the year as data is time series data. Comparing these data with each other. same kind of colour used in each chart
figure 7	Area Chart (Dual Axis)	Dataset contain time series data. Area Chart is used as this chart provides better understanding and area provide the information about the data over the time
figure 8	Pie chart	Pie chart is used as data set contain time series data is in proportion which make meaningful pie chart
figure 9	Dual axis (Vertical bar chart and line chart)	Simple comparison between the population for the years. Line chart shows the direction (upward).
figure 10	Horizontal Bar chart	Horizontal bar chart are simple and simple to Vertical bar chart Difference is in orientation. Dataset contain time series data and only one year value is maximum among all the values so this

		chart is suitable for this dataset.

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