

# SECTOR-WISE GROSS VALUE ADDITION OF INDIAN ECONOMY

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## Abstract:

Present paper compares the gross value addition by different sectors of the Indian economy namely; Agriculture, Industry and Services. The study also aims to analyse the trend or growth of the gross value addition of these sectors during the year 2011- 18. It is found that there is a growth in the gross value addition of the Indian economy during the year 2011-12 to 2017-18. All the sectors are showing growth in their share in the gross value addition of Indian economy, except for construction, Agriculture, Forestry and Fishing and Electricity, Gas, Water Supply & Other Utility sector. While, in Mining and Quarrying sector have shown consistency in the gross value addition during the period 2011-12 to 2017-18. The highest percentage of gross value addition was found to be of Services sector and lowest percentage of Gross value addition was found of Electricity, Gas, and Water Supply & Other Utility sector. This shows that service sectors are contributing highly towards the gross value addition of the Indian economy while Electricity, Gas, Water Supply & Other Utility sector is contributing lowest to the gross value addition of Indian economy. Further, the study showed the significant difference in the gross value addition of different sectors of Indian economy.

## Introduction:

Gross value added can be used as a measure of the contribution to the economy of a nation. GDP is generally calculated by using one of three hypothetical methods namely; based on production theory, income theory or expenditure theory. Gross value added can be differentiated from the gross domestic products based on the taxes and the subsidies amount. Gross value added is the total or summation of the value of outputs produced by an economy after deducting the total value of immediate consumption while gross domestic products is determined after adding the tax amount and deduction of amount of subsidies paid on the production of the goods during a particular year. Value addition by a sector mainly represents the value added by the labour forces of the nation and the capital invested for the production process of the sector. When the capital is invested and labour perform some work on the goods then it adds value to the products and the sales value gets increases, which is called value addition. Detailed sector-wise breakdown of the gross value addition can help the policymakers and government in taking decision related to the subsidies to be given, amount of taxes to be imposed, and the infrastructure facilities need to be

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providing to different sectors for the growth of the economy. Sector-wise gross value addition helps in taking decision about the incentives to be provided by the government for the growth of the various sectors. Some researchers argued that gross value addition is not a bet measure for determining the actual growth of the economy, as a sudden increase or decrease in the gross value addition of any sector can be due to the tax exemption by the government, or increase in taxes imposed or due to the subsidies provided. Hence, the real measure for the growth of the economy can be distorted due to the higher tax level, better legal system for collection of taxes and government welfare programs.

### **Review of Literature:**

Dev (2017)<sup>1</sup> stated that MCA21 data problems, effective labour input method, price deflators WPI vs CPI, GDP production and expenditure method, single vs double deflation and reference point for growth as the important aspects in the measurement of Gross Domestic Product in the new series. The study depicted the significant changes in Gross Domestic Product across the Industrial and Service sector as compare to Agricultural sector. The research also showed that new Gross Domestic Product series reflected the faster Gross Value Product than volume of output.

Business Intelligence Statistical Bulletin (2018)<sup>2</sup> has elucidated the higher growth rate of Gross Value Added by industry in Kent and Medway as compare to South East region and UK. Real Estate sector has experienced a stupendous increase in Gross Value Added in real terms whereas manufacturing industry has seen the highest percentage growth in Gross Value Added. Keeping in view the previous studies it can be said that the gross value addition is an important factor which can be used to determine the growth of an economy; hence, current study will be an attempt in this direction to measure the gross value addition of the different sectors of Indian economy.

**Objectives:** The main objective of this study is to compare the gross value addition by different sectors of the Indian economy namely; Agriculture, Forestry and Fishing, Industry, Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply & Other Utility, Services, Construction, Hotels, transport, communication and services related to broadcasting, Financial, Real Estate and Professional Services, and Public Administration, Defence and Other Services. Researcher also aims to measure the trend or growth of the gross value addition of these sectors during the year 2011- 18.

### **Research Methodology:**

Study utilised the secondary data related to the gross value addition by different sectors of Indian economy for the period 2011-12 to 2017-18. Data has been taken from the annual publication of the RBI related to the Indian economy for the above mentioned period. Trend or growth in the share of different sectors to the total gross value added of Indian economy, has been shown using the comparative study of Gross value addition by different sectors of Indian economy has been done using descriptive statistics and the One-way Anova test. Further, researcher has done post-hoc analysis using Tukey's test to highlight the particular groups of variables where the mean values were found to be significantly different if any. Welch test has

been used to measure the equality of means. Following hypothesis has been framed to test during current study.

*Null Hypothesis: Different sectors contribute equal gross value addition to the Indian Economy.*

*Alternate Hypothesis: Different sectors contribute different gross value addition to the Indian Economy.*



**Comparative Study of Gross value addition:** This section shows the comparison of Gross value addition of the different sectors of Indian economy using data for the year 2011-12 to 2017-18.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Agriculture, Forestry and Fishing	7	16200.72	953.29	360.31255	15319.0712	17082.3773	15019.47	17673.97
Industry	7	22747.59	3682.26	1391.76503	19342.0722	26153.1249	18576.89	27982.75
Mining & Quarrying	7	3081.65	525.29	198.54346	2595.8374	3567.4741	2610.35	3822.04
Manufacturing	7	17488.79	2883.64	1089.91704	14821.8605	20155.7223	14099.86	21531.47
Electricity, Gas, Water Supply & Other Utility	7	2177.15	283.20	107.04161	1915.2301	2439.0728	1866.68	2629.23
Services	7	59829.47	9695.16	3664.42846	50862.9423	68796.0092	47473.10	73988.07
Construction	7	8362.59	530.62	200.55597	7871.8472	8853.3328	7773.35	9158.78
Hotels, transport, communication and services related to broadcasting	7	18383.81	3262.14	1232.97653	15366.8308	21400.8006	14131.16	23139.32
Financial, Real Estate and Professional Services	7	20717.81	4013.38	1516.91606	17006.0530	24429.5728	15308.77	26126.70
Public Administration, Defence and Other Services	7	12365.25	1932.91	730.57285	10577.6055	14152.9002	10259.82	15563.27
Total	70	18135.48	15949.15	1906.28885	14332.5447	21938.4291	1866.68	73988.07

**Interpretation:** It can be interpreted from the descriptive analysis of the gross value addition of the different sectors of Indian economy, that the highest mean value of the gross value addition was found to be 59829.47 million by Service sector followed by Industrial sector and Financial, Real Estate and Professional Services, while; the least mean value of gross value addition was found to be Electricity, Gas, Water Supply & Other Utility sector. Hence, it can be said that the services sector and industrial sectors both are performing well and contributing highly towards the growth of the Indian economy. While; Electricity, Gas, Water Supply & Other Utility sector which is one of the important sector of the Indian economy and depicts the standard of living of the people is contributing least towards the growth of the Indian economy.

<b>Table 2: Robust Tests (Welch Test) of Equality of Means</b>				
	Statistic <sup>a</sup>	df1	df2	Sig.
Welch	257.902	9	23.573	.000
a. Asymptotically F distributed.				

#### **Interpretation:**

Table 2 shows the results of Welch test which is used to measure the robustness of the data by measuring the equality of the mean values of the gross value addition of seven different sectors. It was found that the value of Welch-test was 257.902, at a significant value of 0.000, which shows that the mean value of the gross value addition of seven sectors is significant different. Thus, the null hypothesis which states that the Different sectors contribute equal gross value addition to the Indian Economy got rejected in the study and alternate hypothesis which states that Different sectors contribute different gross value addition to the Indian Economy, got accepted. Hence, it can be said that there is a significant difference in the mean value of gross value addition by different sectors of Indian economy.

#### **Conclusion:**

The study shows that overall there is a growth in the gross value addition of the Indian economy during the year 2011-12 to 2017-18. All the sectors are showing growth in their share in the gross value addition of Indian economy, except for construction, Agriculture, Forestry and Fishing and Electricity, Gas, Water Supply & Other Utility sector. While, in Mining and Quarrying sector have shown consistency in the gross value addition during the period 2011-12 to 2017-18. The highest percentage of gross value addition was found to be of Services sector and lowest percentage of Gross value addition was found of Electricity, Gas, and Water Supply & Other Utility sector. This shows that service sectors are contributing highly towards the gross value addition of the Indian economy while Electricity, Gas, Water Supply & Other Utility sector is

contributing lowest to the gross value addition of Indian economy. Further, the study showed the significant difference in the gross value addition of different sectors of Indian economy. Hence, there is a need to focus on the findings of this study as the growth of all the sectors can contribute significantly to the overall growth of the Indian economy. Government and planning commission should put efforts for the overall growth of the various sectors in order to improve the current growth rate.

**References:**

1. Dev (2017), “Recent Changes in Measurement of India’s GDP: Overall Issues and Some Focus on Agriculture”, *Indira Gandhi Institute of Development Research*, September 2017, pp. 1-47.
2. Business Intelligence Statistical Bulletin (2018), “Gross Value Added (GVA) at 2016”, *Strategic Business Development & Intelligence, Research & Evaluation*, January 2018, pp. 1-24.

