

# **A Comparative Study of Direct and Indirect Tax Revenue Collection and its Impact on GDP**

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## **Abstract:**

Collecting a sufficient amount of revenue is the primary goal of the Government through which it meets all public expenditures, administration, and associated services. Since independence, the Indian tax structure is being modified as per requirements in order to develop our economy. Governments impose taxes as a way of raising funds from the income, sale of goods as well as services. In this background, the primary intention of the study is to know the direct and indirect taxes contribution upon total tax revenue collection in India and to identify whether there is significant difference between direct and indirect taxes contribution towards GDP from the financial year 2013-2014 to the financial year 2022-2023. In this respect, we have used charts, tables and two-sample t test.

The findings of the research work divulge that from revenue collection perspective, direct tax revenue collection has increased from 2013–14 to 2018–19. However, it decreased from 2018–19 to 2020–21 because of the COVID-19 impact. After that, collection has gradually increased. Indirect tax has continuously increased from 2013–14 to 2022–23. Hence, COVID-19 could not have any impact on collecting indirect tax revenue. The study also indicates that the variation in the contribution of GDP in India from indirect tax is comparatively as large as that from direct tax..

**Keywords:** *Direct Tax, GDP Contribution, Indirect Tax, Revenue*

## **Introduction:**

Collecting a sufficient amount of revenue is the chief goal of the Government through which it meets all public expenditures, administration, and associated services. (Bholane, 2020). Since independence, the Indian tax structure is being modified as per requirements in order to develop our economy. The Government impose taxes as a way of raising funds from income, sale of goods as well as services. The Government's main source of income is taxes,

which they use to improve the country's welfare. Therefore, the strength of an economy depends upon how good the tax

system is. An appropriate tax system can propel the economic growth of a country and lead to its prosperity. India has a federal tax system that has three levels: revenue collected by the State Government, Central Government, and local authorities such as the municipal Government. Any other authority can't collect taxes from others as stated in Article 256 of the Constitution. (Gupta & Narang, 2021). Taxes are mainly two types i.e., direct and indirect. The amount that is directly collected from the person as per IT Act, 1961 is termed as direct tax and it includes income tax, wealth tax, gift tax, corporate tax, estate duty, fringe benefit tax, etc. On the other hand, indirect taxes are those that are always collected from the end users. The government imposes indirect taxes, such as goods and service tax, excise duty, and customs duty..

This document is set in 10-point Times New Roman. If absolutely necessary, we suggest the use of condensed line spacing, rather than smaller point sizes. Some technical formatting software print mathematical formulas in italic type, with subscripts and superscripts in a slightly smaller font size. This is considerable.

## **Review of Literature**

In order to support my study, we have reviewed a few academic works. A few selections of them are listed below:

**Aamir, M. et al. (2011)** had studied the determinants of tax revenue in Pakistan and India from 1999–2000 to 2008–2009 by using two regression equations and the standardized betas. The result showed that Pakistan had generated more revenue from indirect tax as compared to direct tax, whereas in India's case, the opposite is true. **Owino, O. B. (2018)** analysed the trade-offs between Kenya's direct and indirect taxation. The result opined that a negative relationship existed between direct tax and economic growth, but a

positive relationship existed in the case of indirect tax and economic growth using time series data. **Choudhari, A. et al. (2019)** opined that the difference between the value of Indian rupee before GST introduction period was relatively as large as that after the GST introduction period. **Bholane, K. P. (2020)** examined the total tax collection with respect to both the tax like direct tax and indirect tax from the period 2013–2014 to 2017–2018. The results showed that the variation in the contribution of GDP in India from indirect tax was comparatively as large as that from direct tax. **Gupta, R. & Narang, S. (2021)** conducted an analytical study on tax revenue collection in India on the basis of secondary data collected from budget documents of the Government of India, Union finance accounts of respective years, reports of C&AG, and various journals and websites over a period of 10 years that ranged from 2013-2014 to 2022-2023. They researchers stated that Government tax revenue had drastically increased over the study period and tax to GDP ratio had indicated an increasing trend over the study period. **Kadakol, A.M. and Sadhani, U. (2023)** Conducted a study on the GDP contribution of GST and indirect taxes in India for the period of 8 years that ranged from 2013–14 to 2020–21 on the basis of charts, tables, and ANOVA techniques. The study stated that pre- and post-GST revenue collection had not changed the contribution of GDP during the period under study..

### Objective of the Study:

- To study the tax revenue collection in India with respect to direct and indirect tax.
- To study the contribution of direct and indirect taxes upon total tax revenue collection in India.
- To identify whether there is significant difference between direct and indirect taxes contribution towards GDP.

### Hypothesis of the study:

- H0: There is no momentous difference between direct and indirect taxes contribution towards GDP in India.
- H1: H0 is not true.

### Nature of the Study and Research Methodology:

A conceptual approach is used in the research design. The data used in our study are purely based on secondary data collected from budget documents of the government of India, Union finance accounts of respective years, reports of C&AG, and various journals and websites. The study spans over a period of 10 years, ranging from 2013–2014 to 2022–2023. To identify whether there is significant difference between direct and indirect taxes contribution towards GDP, we have used two-Sample t-Test assuming

unequal variances. The two-Sample t-Test assuming unequal variances is computed below:

$$t_{df} = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}\right)}}$$
$$df = \frac{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}\right)^2}{\left(\frac{s_1^2}{n_1}\right)^2 + \left(\frac{s_2^2}{n_2}\right)^2}$$

Where,  $\bar{x}_1$  and  $\bar{x}_2$  are the sample means,  $s_1^2$  and  $s_2^2$  are the sample variance,  $n_1$  and  $n_2$  are the sample sizes, and d.f. is degree of freedom.

**Table - 1: Framework to Study Contribution**

Year	Direct Tax/ Indirect Tax	GDP	Ratio	Percentage
2013-2014	A <sub>1</sub>	B <sub>1</sub>	A <sub>1</sub> - B <sub>1</sub>	(A <sub>1</sub> - B <sub>1</sub> ) *100
2014-2015	A <sub>2</sub>	B <sub>2</sub>	A <sub>2</sub> - B <sub>2</sub>	(A <sub>2</sub> - B <sub>2</sub> ) *100
2015-2016	A <sub>3</sub>	B <sub>3</sub>	A <sub>3</sub> - B <sub>3</sub>	(A <sub>3</sub> - B <sub>3</sub> ) *100
2016-2017	A <sub>4</sub>	B <sub>4</sub>	A <sub>4</sub> - B <sub>4</sub>	(A <sub>4</sub> - B <sub>4</sub> ) *100
2017-2018	A <sub>5</sub>	B <sub>5</sub>	A <sub>5</sub> - B <sub>5</sub>	(A <sub>5</sub> - B <sub>5</sub> ) *100
2018-2019	A <sub>6</sub>	B <sub>6</sub>	A <sub>6</sub> - B <sub>6</sub>	(A <sub>6</sub> - B <sub>6</sub> ) *100
2019-2020	A <sub>7</sub>	B <sub>7</sub>	A <sub>7</sub> - B <sub>7</sub>	(A <sub>7</sub> - B <sub>7</sub> ) *100
2020-2021	A <sub>8</sub>	B <sub>8</sub>	A <sub>8</sub> - B <sub>8</sub>	(A <sub>8</sub> - B <sub>8</sub> ) *100
2021-2022	A <sub>9</sub>	B <sub>9</sub>	A <sub>9</sub> - B <sub>9</sub>	(A <sub>9</sub> - B <sub>9</sub> ) *100
2022-2023	A <sub>10</sub>	B <sub>10</sub>	A <sub>10</sub> - B <sub>10</sub>	(A <sub>10</sub> - B <sub>10</sub> ) *100

**Data Analysis and Interpretation:**

**Table - 2: Tax Revenue Collection in India (Rs. in Crore)**

Year	Direct Tax	Indirect Tax	Total
2013-2014	638596	1119772	1758368
2014-2015	695792	1217289	1913081
2015-2016	741945	1466981	2208926
2016-2017	849713	1662518	2512231
2017-2018	1002738	1856945	2859683
2018-2019	1137718	2032864	3170582
2019-2020	1050681	2161306	3211987
2020-2021	947176	2441371	3388547
2021-2022	1412422	3173782	4586204
2022-2023	1661230*	3563841*	5225071*

**Sources:** Union Finance Accounts of respective years and reports of C&AG/Receipt Budget up to 2016-17 & Budget documents of the Government of India.

\*The figures of FY 2022-2023 are author's own calculation

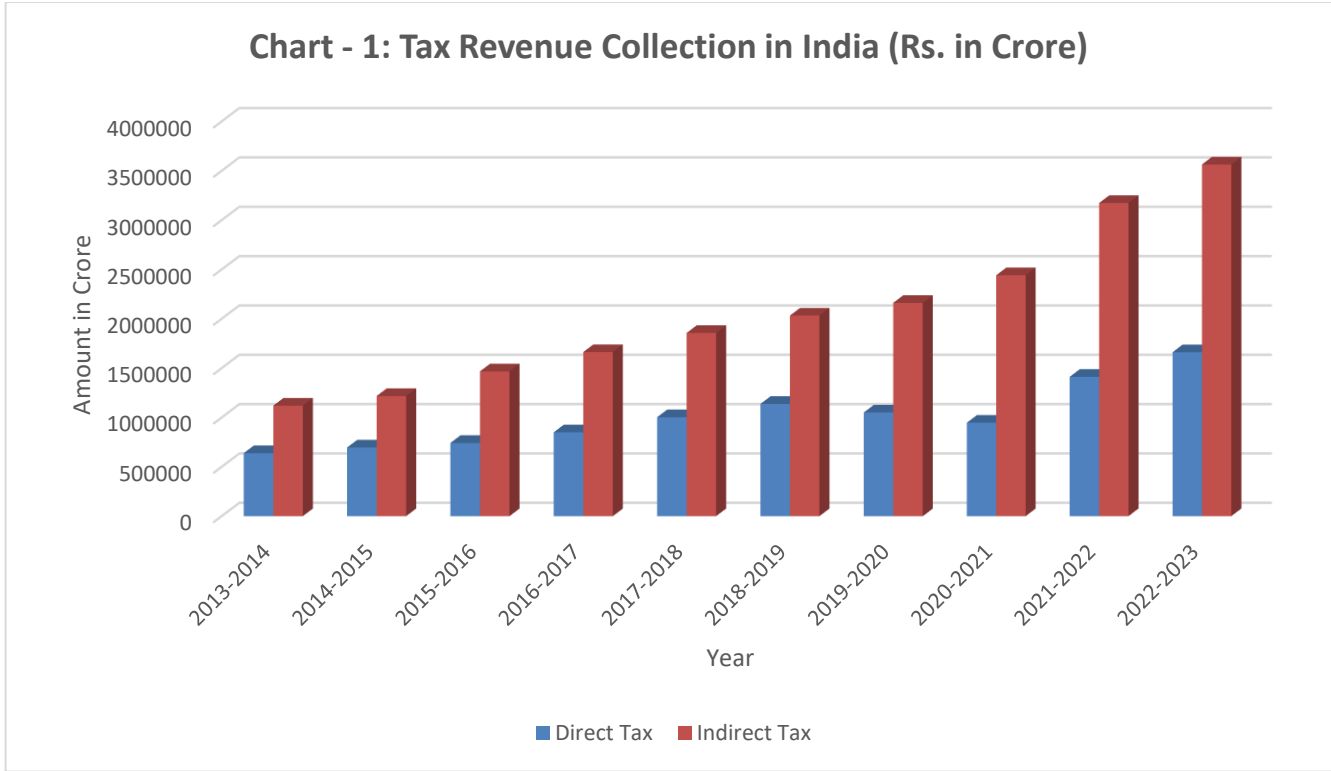


Table 2 and Chart 1 summarize the direct and indirect tax collections of India. Direct tax has increased from Rs. 638596 crores in 2013–14 to Rs.1137718 crores in 2018–19. However, it decreased from 2018–19 to 2020–21 because of the COVID-19 impact. After that, collection has gradually increased. Indirect tax continuously increased from Rs. 119772 crores in 2013–14 to Rs. 3563841 crores in 2022–23. Hence, COVID-19 has no impact on collecting indirect tax revenue.

**Table - 3: Percentage Share of Direct and Indirect Taxes in Total Tax**

Year	Direct Tax	Indirect Tax	Total
2013-2014	36.32	63.68	100
2014-2015	36.37	63.63	100
2015-2016	33.59	66.41	100
2016-2017	33.82	66.18	100
2017-2018	35.06	64.94	100
2018-2019	35.88	64.12	100
2019-2020	32.71	67.29	100
2020-2021	27.95	72.05	100
2021-2022	30.80	69.20	100
2022-2023	37.79	68.21	100
<b>Average</b>	<b>34.029</b>	<b>68.210</b>	<b>100</b>

Sources: Author’s own calculation.

Table 3 shows that direct taxes contributed an average of 34.029% to the total tax collection, while indirect taxes contributed an average of 68.210% to the total tax collection. Thus, it shows that the amount of indirect taxes is greater than that of the amount of direct taxes.

**Table - 4: Direct Tax to GDP ratio and percentage**

Year	Direct Tax	GDP	Ratio	Percentage
2013-2014	638596	11355073	0.056239	5.623883
2014-2015	695792	12541208	0.055480	5.548046
2015-2016	741945	13567192	0.054687	5.46867
2016-2017	849713	15362386	0.055311	5.531126
2017-2018	1002738	17098304	0.058645	5.864547
2018-2019	1137718	18886957	0.060238	6.023829
2019-2020	1050681	20074856	0.052338	5.233816
2020-2021	947176	19800914	0.047835	4.783496
2021-2022	1412422	23664637	0.059685	5.968492
2022-2023	1661230*	26794032*	0.062000	6.200000

Sources: @ MoSPI Press releases dated 29.05.2020, 31.5.2021 and 31.5.2022 & author's own calculation.

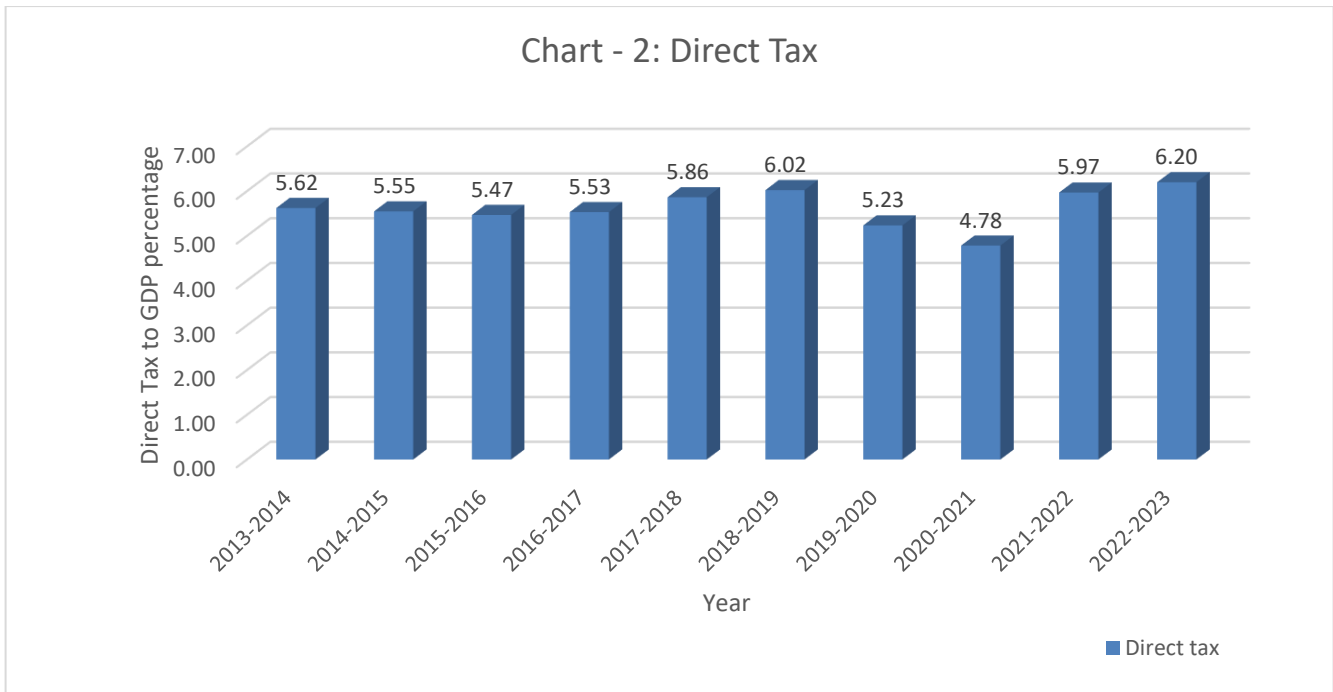


Table 4 and the Chart 2 show the direct tax-to-GDP percentage. Direct tax at a minimum of 4.78 percent and a maximum at 6.20 percent was the major contributor to GDP in India in our study period.

**Table - 5: Indirect Tax to GDP ratio and percentage**

Year	Indirect Tax	GDP	Ratio	Percentage
2013-2014	1119772	11355073	0.098614	9.861425
2014-2015	1217289	12541208	0.0970631	9.706314
2015-2016	1466981	13567192	0.1081271	9.706314
2016-2017	1662518	15362386	0.1082200	10.822004
2017-2018	1856945	17098304	0.1082200	10.860405
2018-2019	2032864	18886957	0.1076332	10.763322
2019-2020	2161306	20074856	0.1076623	10.766234
2020-2021	2441371	19800914	0.1232959	12.329587
2021-2022	3173782	23664637	0.1341150	13.411497
2022-2023	3563841*	26794032*	0.1330088	13.300876

Sources: @ MoSPI Press releases dated 29.05.2020, 31.5.2021 and 31.5.2022 & author's own calculation.

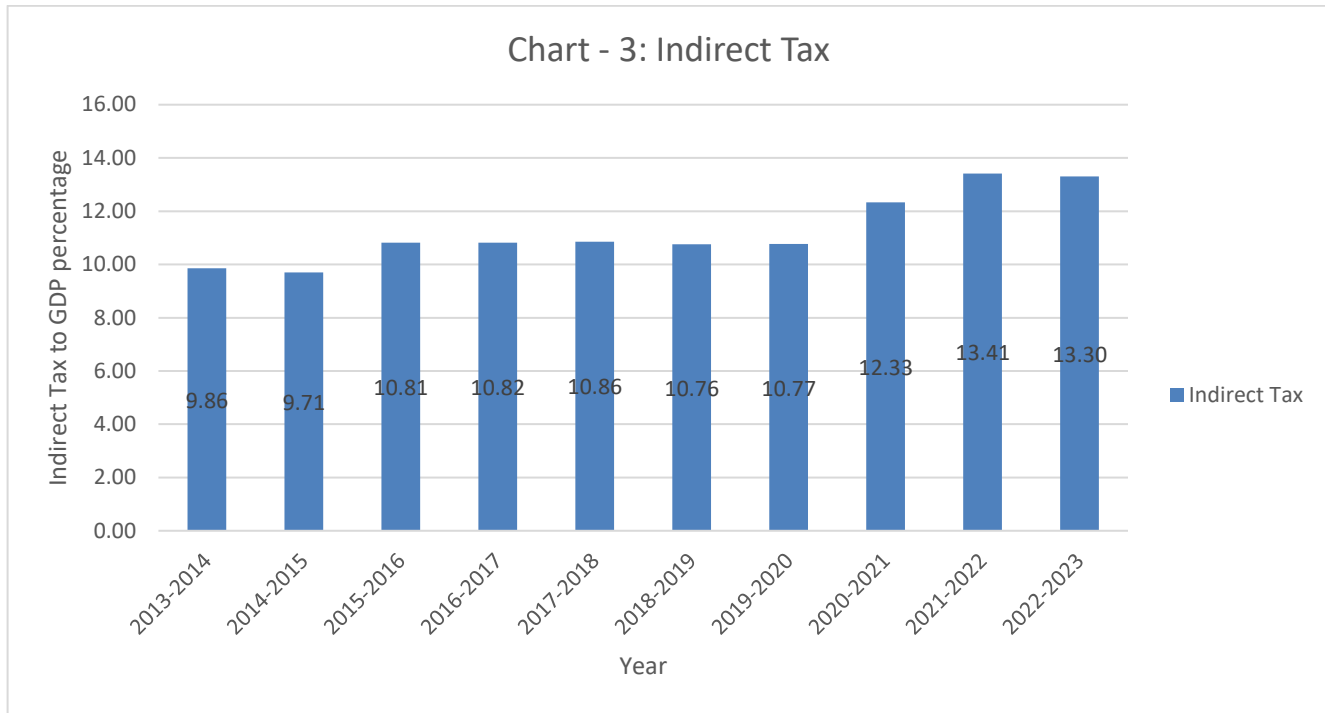


Table 5 and the Chart 3 show the indirect tax-to-GDP percentage. Indirect tax at a minimum of 9.70 percent and a maximum at 13.41 percent was the major contributor to GDP in India during the period under study.

Therefore, the most interesting factor that came out of Tables 4 and 5 of the study is that the variation in the contribution of GDP in India from indirect tax is comparatively as large as that from direct tax.

**Table - 6: t-Test: Two-Sample Assuming Unequal Variances**

Particulars	Direct tax to GDP ratio	Indirect tax to GDP ratio
Mean	0.0562458	0.11259594
Variance	1.73928E-05	0.00017091
Observations	10	10
Hypothesized Mean Difference	0	
df	11	
t Stat	-12.9855237269296	
P(T<=t) one-tail	2.57384E-08	
t Critical one-tail	1.79588481870404	
P(T<=t) two-tail	5.15E-08	
t Critical two-tail	2.20098516009164	

Source: Own calculation from secondary data.

\* Here level of significance is 0.05

From the above analysis (Table 6), we may conclude that our null hypothesis ( $H_0$ : There is no significant difference between direct and indirect tax contributions towards the GDP in India) is rejected at 5 percent level of significance.

### Conclusion

In fine, it can be concluded that when it comes to revenue collection perspective, direct tax revenue collection has increased from years 2013–14 to 2018–19, but decreased from 2018–19 to 2020–21 because of COVID-19 impact. After that, collection has

gradually increased. Indirect tax has continuously increased from 2013–14 to 2022–23. Hence, COVID-19 could not have any impact on collecting indirect tax revenue. Further, the variation in the contribution of GDP in India from indirect tax is comparatively as large as that from direct tax.

## Limitations of the Study:

The study has tried to know the direct and indirect taxes contribution upon total tax revenue collection in India and also to identify whether there is significant difference between direct and indirect taxes contribution towards GDP only for 10 years. Moreover, the analytical tools used for analysis in this study may have some limitations.

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