

DOI-10.53571/NJESR.2020.2.3.5-10

A Comparative Study of Tax Revenue With Cost Factors In India**Dr. Hemant Kaduniya****Assistant Professor****Department of Accountancy And Business Statistics****Shri Sanwaliaji Government College****Mandphiya**

(Received:15February2020/Revised:25February2020/Accepted:10March2020/Published:20March2020)

Abstract

Indian revenue system has two major types of collection system i.e. direct tax and indirect tax. Money collected from taxes is used to carry out many functions for the welfare of the society. Present study compares the growth of revenue collection with inflation and cost inflation index since year 2001. By applying correlation between various variables like direct tax revenue, indirect revenue, inflation and cost inflation index we conclude that each variable is highly correlated with each other. We conclude that as the inflation is rising the revenue growth is also rising but it should be more than the inflation growth so the surplus may be used for economic growth of the country.

Introduction

Indian revenue system has two major types of collection system i.e. direct tax and indirect tax. Both are the major source of revenue for Indian Government. Direct tax have Income tax, gift tax and wealth tax while indirect tax comprises goods and serviced tax, sales tax, excise, customs and luxury taxes etc. Money collected from taxes is used to carry out many functions for the welfare of the society. Income tax is collected from individuals, hindu undivided families, partnership firms, limited liability partnerships, body corporates, cooperative societies, local authorities and artificial judicial persons. Indirect taxes like GST, Sales tax and customs are collected from persons liable to register under the respective laws. Present study compares the growth of revenue collection with inflation and cost inflation index since year 2001. It compares the revenue collection of direct tax, indirect tax and inflation with each other.

Review of literature

A good tax system is characterized by a high responsiveness of tax revenue to changes in income of public bodies or national income; the technique of measuring this response is tax elasticity and tax buoyancy. Tax policy forms and important part of development process in a developing economy(Ankita 2009). Another common and most empirically used way to understand its role is the ratio of personal income tax to total tax revenue and national income(Agarwal 1991).

Objectives of study

1. To compare direct tax revenue collection with indirect tax collection.
2. To compare direct tax revenue collection with cumulative inflation in India
3. To compare indirect tax revenue collection with cumulative inflation in India
4. To compare direct tax revenue collection with cost inflation index in India
5. To compare indirect tax revenue collection with cost inflation index in India

Hypotheses

H0 =

- (1) There is no significant correlation between revenue collection of direct tax and indirect tax collection for the period 2001 to 2017;
- (2) There is no significant correlation between revenue collection of direct tax with cumulative inflation for the period 2001 to 2017;
- (3) There is no significant correlation between revenue collection of indirect tax with cumulative inflation for the period 2001 to 2017;
- (4) There is no significant correlation between revenue collection of direct tax with cost inflation index for the period 2001 to 2017;
- (5) There is no significant correlation between revenue collection of indirect tax with cost inflation index for the period 2001 to 2017;

Data Collection

Present study is based on secondary data. All the data is taken from Government official sites. This study applies correlation between various variables like direct tax revenue and indirect tax revenue, direct tax revenue and cumulative inflation and indirect tax revenue and cumulative inflation for the period 2001 to 2017.

Data Analysis

Direct tax revenue, indirect tax revenue, inflation rates and cost inflation index for the period taken in study from 2001 to 2017 is shown below:

Table 1: Absolute tax revenue of Indian Govt. and inflation rates

Year	Direct tax Rs. In Crore	Indirect tax Rs. In Crore	Total tax revenue Rs. In Crore	inflation rate	Cost inflation index for capital gain purpose
2001-2002	69063.36	117364.06	187060.1	5.16	100
2002-2003	61482.76	98495.38	160144	3.2	105
2003-2004	76476.44	111944.55	188581.8	3.72	109
2004-2005	95255.39	130373.24	226363	3.78	113
2005-2006	117624.9	150986.58	271766.2	5.57	117
2006-2007	164389.3	183340.5	353182.3	6.53	122
2007-2008	222115.2	209687.76	441347.1	5.51	129
2008-2009	241851.2	196816.1	445119.3	9.71	137
2009-2010	263679.6	187932.82	459695.7	14.97	148

2010-2011	306775.7	259249.63	574004.8	9.47	167
2011-2012	335661.4	291855.26	633704.4	6.49	184
2012-2013	385343.1	353750.78	744913.8	11.17	200
2013-2014	454623.1	360248.01	820765.9	9.13	200
2014-2015	484639.3	414362.29	907327.3	5.86	220
2015-2016	462904.5	478222.07	949698.1	6.32	240
2016-2017	509347.7	589697.51	1107968	2.23	254

[Source : https://cag.gov.in/sites/default/files/audit_report_files/Union_Government_Report_2_of_2017_Revenue_Direct_Taxes.pdf]

Table 2: Percentage of direct and indirect tax revenue to total tax revenue

Absolute tax revenue and percentage share in total collection

Year	Direct tax Rs. In Crore	%	Indirect tax Rs. In Crore	%	Others %	Total tax revenue Rs. In Crore
2001-2002	69063.36	36.92	117364.06	62.74	0.338244	187060.14
2002-2003	61482.76	38.39	98495.38	61.50	0.103588	160144.03
2003-2004	76476.44	40.55	111944.55	59.36	0.085295	188581.84
2004-2005	95255.39	42.08	130373.24	57.59	0.324404	226362.96
2005-2006	117624.91	43.28	150986.58	55.56	1.160821	271766.21
2006-2007	164389.32	46.55	183340.50	51.91	1.543806	353182.27
2007-2008	222115.17	50.33	209687.76	47.51	2.162513	441347.12
2008-2009	241851.24	54.33	196816.10	44.22	1.449499	445119.34
2009-2010	263679.57	57.36	187932.82	40.88	1.758398	459695.67
2010-2011	306775.70	53.44	259249.63	45.17	1.390131	574004.75
2011-2012	335661.35	52.97	291855.26	46.06	0.976443	633704.37
2012-2013	385343.12	51.73	353750.78	47.49	0.78129	744913.84
2013-2014	454623.12	55.39	360248.01	43.89	0.718202	820765.89
2014-2015	484639.27	53.41	414362.29	45.67	0.917612	907327.30
2015-2016	462904.48	48.74	478222.07	50.36	0.902556	949698.11
2016-2017	509347.68	45.97	589697.51	53.22	0.805307	1107967.73

From above table we can say that both direct and indirect taxes are the major source of revenue for Govt. For a developing country like India the tax revenue should be more than the inflation so that the collection and saving may be used for welfare of society. For analysis purpose taking base year 2001-02 we calculate index number for 2001 to 2017 as shown in below table 3:

Table 3: Absolute tax revenue, inflation rate with Index number taking year 2001-02 as base year

Year	Direct tax		Indirect tax		Total tax revenue		Inflation		
	Rs. In Crore	Index number	Rs. In Crore	Index number	Rs. In Crore	Index number	inflation rate	cumulative inflation rate	Index number
2001-2002	69063.36	100.00	117364.06	100.00	187060.14	100.00	5.16	5.16	100.00

2002-2003	61482.76	89.02	98495.38	83.92	160144.03	85.61	3.20	8.36	162.02
2003-2004	76476.44	110.73	111944.55	95.38	188581.84	100.81	3.72	12.08	234.11
2004-2005	95255.39	137.92	130373.24	111.08	226362.96	121.01	3.78	15.86	307.36
2005-2006	117624.91	170.31	150986.58	128.64	271766.21	145.28	5.57	21.43	415.31
2006-2007	164389.32	238.02	183340.50	156.21	353182.27	188.80	6.53	27.96	541.86
2007-2008	222115.17	321.61	209687.76	178.66	441347.12	235.93	5.51	33.47	648.64
2008-2009	241851.24	350.18	196816.10	167.69	445119.34	237.95	9.71	43.18	836.82
2009-2010	263679.57	381.79	187932.82	160.12	459695.67	245.74	14.97	58.15	1126.94
2010-2011	306775.70	444.19	259249.63	220.89	574004.75	306.85	9.47	67.62	1310.47
2011-2012	335661.35	486.01	291855.26	248.67	633704.37	338.77	6.49	74.11	1436.24
2012-2013	385343.12	557.95	353750.78	301.41	744913.84	398.22	11.17	85.28	1652.71
2013-2014	454623.12	658.26	360248.01	306.94	820765.89	445.92	9.13	94.41	1829.65
2014-2015	484639.27	701.73	414362.29	353.05	907327.30	485.04	5.86	100.27	1943.22
2015-2016	462904.48	670.26	478222.07	407.46	949698.11	507.69	6.32	106.59	2065.70
2016-2017	509347.68	737.50	589697.51	502.45	1107967.73	592.30	2.23	108.82	2108.91

When we apply correlation coefficient between various variables, we found the following results:

Correlation between direct tax revenue and indirect tax revenue	0.946514
Correlation between direct tax revenue and inflation	0.992569
Correlation between indirect tax revenue and inflation	0.942372
Correlation between total tax revenue and inflation	0.982404

At Degree of freedom $N - 2 = 16 - 2 = 14$ the critical value of correlation coefficient at 5% significant level is 0.574. From abovementioned calculation we conclude as follows:

In case of correlation between direct tax revenue and indirect tax revenue as find out is 0.9465 which is greater than critical value so first null hypotheses is rejected and we can say that direct tax revenue and indirect tax revenue have high degree correlation.

In case of correlation between direct tax revenue and inflation as find out is 0.9925 which is greater than critical value so second null hypotheses is rejected and we can say that direct tax revenue and inflation have high degree correlation. Means as inflation is going on year to year,

the direct tax revenue also in about same manner going on. In case of correlation between indirect tax revenue and inflation as find out is 0.9423 which is greater than critical value so third null hypotheses is also rejected and we can say that indirect tax revenue and inflation have high degree correlation. Means as inflation is going on year to year, the indirect tax revenue also in about same manner going on. In case of correlation between total tax revenue and inflation as find out is 0.982 which is greater than critical value we can say that total tax revenue and inflation have high degree correlation. Means as inflation is going on year to year, the total tax revenue also in about same manner going on.

Correlation between direct tax revenue and cost inflation index	0.973641
Correlation between indirect tax revenue and cost inflation index	0.981855
Correlation between total tax revenue and cost inflation index	0.989821

In case of correlation between direct tax revenue and cost inflation index as find out is 0.9736 which is greater than critical value so fourth null hypotheses is rejected and we can say that direct tax revenue and inflation have high degree correlation. Means as cost inflation index as declared is going on year to year, the direct tax revenue also in about same manner going on. In case of correlation between indirect tax revenue and cost inflation index as find out is 0.9818 which is greater than critical value so fifth null hypotheses is rejected and we can say that indirect tax revenue and inflation have high degree correlation. Means as cost inflation index as declared is going on year to year, the indirect tax revenue also in about same manner going on. In case of correlation between total tax revenue and cost inflation index as find out is 0.9898 which is greater than critical value so we can say that total tax revenue and inflation have high degree correlation. Means as cost inflation index as declared is going on year to year, the total tax revenue also in about same manner going on.

References

1. https://cag.gov.in/sites/default/files/audit_report_files/Union_Government_Report_2_of_2017_Revenue_Direct_Taxes.pdf
2. Directtaxcollection <https://timesofindia.indiatimes.com/business/indiabusiness/government-exceeds-2016-17-tax-collection-target-by-18/articleshow/58008546.cms>
3. <https://timesofindia.indiatimes.com/business/india-business/direct-tax-collection-exceeds-target-in-2017-18/articleshow/63581720.cms>
4. <http://www.statisticstimes.com/economy/india-vs-pakistan-gdp.php>
5. <https://www.incometaxindia.gov.in/Documents/Time-Series-Data-Final.pdf>
6. Singhania V.k. Taxmann, Income tax
7. <https://cleartax.in/s/cost-inflation-index>

