Impact of Corporation Taxes on GDP: A Study after Digitization

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Abstract:

Performance of a country is now measured in the global scenario by its GDP rate and growth. GDP calculation is based on the basis of expenditure spent or income received or on the basis of verity of products which are manufactured. Dependency of Gross Domestic Product of a country on the financial activities, such as total market value of the goods and services produced by a country's economy during a specified period of time. It includes all final goods and services possessed by households, investors, Government and Exports –imports. At present, the GDP rate for the year 2017-18 is 7.7 %. Taxation is one of the important source of revenue to the government. A country's standard of living is represented by per capita income. The country with higher per capita income is parameter for its economic progress. E-Filing of returns, rectifications, processing status and refunds for e-filed returns are the symbols of advent of technology in collection of taxes. It has enhanced the growth of GDP comparatively better. The present study aims to observe the impact of corporate taxes contribution on GDP. With few more aspects such GDP per capita, labour force, unemployment rate growth, which are directly related or can term them as growth parameters of country Time series data from 2000-2017 is studied special attention on post digital india scheme to assess the relation between the growth of GDP, GDP per capita, growth in labour force, unemployment and corporation Taxes. Canonical correlation, correlation test, Normality tests are conducted to examine the strength of the data. It was concluded that there is a significant impact of corporation taxes on the growth of GDP.

Keywords: (Corporate Taxes, GDP, Taxation, GDP per capita)

Introduction

Indian economy can be termed as most sustainable growing economy which is easily evident from the era of recession which has been faced by world special reference to gulf countries that time also indian economy grown but at slower speed and the entire credit goes to tax system and indian economists. Gross Domestic Product represents the increase or decrees in per capita income. Across the globe GDP calculation is different. Out of them here are the three methods which are most commonly used to measure GDP. In the first method is called as expenditure approach, (GDP) is calculated on the basis of the expenditure. The total of expenditure spent by three major category of users i.e., customers, investors and Government is ascertained to know the value of GDP. Calculation as follow GDP = Consumption + Government Spending + Investment + Net Exports (Exports-Imports). Under second method considered as income approach, GDP is foundon the basis of Income, in that country's total expenditure spent by the country should equal to the income generated by the country. Further, income of country must be higher than the expenditure of the country. 3rdapproach says GDP is the monetary value of all goods and services produced in a specific period of time by a particular country. In the income approach, the revenues of the country are evaluated to compute GDP. Taxes are the vital source of revenue to any government. They are known as mandatory charge or payment to meet the public expediency. Indian taxation system follows two different types. They are Direct taxes and Indirect Taxes. Direct taxes are personal Income tax and Corporate Tax. Indirect taxes are goods and service tax, Customs, and Excise on

tobacco product. While framing the taxation structure, it has to be kept note of that it should be in compliance to meet socio-economic objectives of the state. Direct taxes are progressive in nature as they increase to the proportion of the income of individual and corporates. Indirect taxes are regressive in nature, dependent on economic activities of every person.

SECTORWISE CONTRIBUTION IN GDP

Contributories for GDP are classified into three sectors Agriculture and allied 15.4%, Industry 23% and Services sector 61.5%. On the global front GDP contributories share has been presented.

Agriculture Sector:

With production of agriculture activity of $ 375.61 billion, India is the second largest producer of agriculture products and accounts for 7.39% of worlds agricultural output. Whereas china left behind India way in last two years as Total production of sector is $4,771,420 million. China and India are stands at top in contribution with 21.06 and 7.68 percent of total global agricultural output in 2017. And now china has $991 Billion GDP in agriculture sector. 6.1 percent share of total Indian economic production is from Agricultural Sector. Being the largest economy USA occupies third place. Contribution of agriculture sector in India economy is not much higher than worlds average 6.4%.

Industry Sector:

With GDP of 50.43 lakh crore Indian rupees, a share of 29.73% of total GDP comes from Industry Sector. If one compare with neighboring country like China stands at top in contribution of highest share of Industry sector in total GDP. $560.97 billion and amongst 21 countries the leading sector is Industry sector. China stand 6^{th} at global level.

Services Sector:

World's largest sector is Services sector. Service sector holds 54.40% of total global wealth. First amongst all is United States in producing of services sector with around 13.5 trillion USD. Services sector stands in top position in 194 countries. 30 countries receive more than 80 percent of their GDP from services sector. Indian GDP composition in the year 2018 is $1500 billion.

Review of literature:

Rajeswari and Susai (2014) study revenue trends and GDP ratio through a study and discussed on origin and growth of Indian tax system including direct and indirect taxes. The study also observed the tax buoyancy factor. It was found that Tax-GDP ratio has grown consistently up to 2008-09. Then after that was an impact of global economic crisis on tax buoyancy which was increased in upcoming years. The researcher recommended that mobilizing more direct tax revenue instead of indirect taxes. Indirect taxes affect haves and have-nots alike.

Subrahmanya and Urmi (2015) conducted a study on the various components of GDP with a special focus on income tax and indirect taxes. The study considered the effects on economic growth. ARDL Bounds test approach is applied to evaluate the time series data to reveal co-integration between tax rates and GDP. It was found that in the short run customs duty, excise duty had negative impact on economic growth. Among the components of direct taxes, personal income tax had no impact on economic growth while corporate income tax had a favorable statistically significant effect on economic growth in the long run.

Objectives of the study:

The present study is to analysis the impact of corporation taxes on Gross Domestic Product.
Along with other aspects like GDP per capita, growth of employment rate, available labour force, and unemployment rate.

Hypothesis of the study:

Ho: There is no impact of Net collection of corporate Taxes on GDP at Current Market Prices.
H1: There is impact of net collection of corporate taxes on GDP at current market price.

Ho: There is no effect of corporate tax collection on other aspect like GDP per capita and growth of employment.
H2: There is effect of corporate tax collection on other aspect like GDP per capita and growth of employment.

Methodology:

Time series data collected from Economic Survey 2017-18, relating to Net Collection of corporate Taxes and GDP, GDP per capita, employment growth and available labour force (above age of 15) in absolute terms for a period of 2000-2017 years. It has been analyzed by SPSS software. One-Sample Kolmogorov-Smirnov Test, method is used to analyze the research Hypothesis.

Growth of corporate Taxes & GDP:
Corporate taxes are the taxes which increase in proportion to the income of company's public and private both which are registered under companies act 1956. Corporate tax is collected on the aggregate income earned by acompany,the following two graphs reveal the growth of GDP and Net Collection of Direct Taxes. For the assessment year 2017-18 the domestic companies are taxed at the rate of 30%, and additional surcharge at the rate of 5% if the net income of that company is from rupees 1 crore to 10 crore, if net income exceeds 10 crores surcharge of 10 % is levied. Education cess of 3% is levied on the sum of income tax and surcharge irrespective of the level of net income. In case of foreign companies royalty fees received by them in a specific time are subject to tax at the rate of 50%. And other income are taxed at the rate of 40%. Surcharge of 2% is levied if income is in the range of rupees 1 corer to rupees 10 crore. Further increases in net income above 10 crore will attract surcharge of 5%. Education cess of 3% on both income tax and surcharges will be levied.

Year	Corporate tax	GDP	GDP per capita	Industrial growth rate	Labour force	Unemployment rate
2000-01	35696.0	5.50	1800	6.0	406000000	4.3
2001-02	36609.0	6.00	2200	7.5	417004000	4.3
2002-03	46172.0	4.30	2540	6.0	428865100	4.4
2003-04	63562.0	8.30	2900	6.5	472000000	4.3
2004-05	82680.0	6.20	3100	7.4	482200000	4.4
2005-06	101277.0	8.40	3400	7.9	496400000	4.4
2006-07	144318.0	9.20	3800	7.5	509300000	4.3
2007-08	193561.0	9.00	2600	8.5	516400000	4.6
2008-09	213395.0	7.40	2900	4.8	523500000	4.1
2009-10	244725.0	10.40	3200	9.3	467000000	3.8
2010-11	298688.0	7.20	3500	9.7	478300000	3.5
2011-12	322816.0	6.50	3700	4.8	478600000	3.5
2012-13	356326.0	3.20	3900	3.1	486600000	3.6
2013-14	394678.0	7.60	4000	.9	486600000	3.5
2014-15	428925.0	7.60	6700	7.4	487300000	3.4
2015-16	454419.0	6.70	7200	7.5	513700000	3.5
2016-17	493923.6	6.68	7308	14.4	521900000	3.5

Data Analysis

In calculating Gross Domestic Product, the total gross value of final products produced by the economy in a whole year, is taken into account. GDP technically called as Gross National Product. It is measured at market prices. GDP per capita calculated as value of final goods and services within a country in a given year, divided by the average population for the same year In USD.

Canonical Correlations

Canonical Correlations Settings

	Values
Set 1 Variables	Tax GDP, GDPpercapita
Set 2 Variables	Industrialproductiongrowth unemploymentrate laborforce
Centered Dataset	None
Scoring Syntax	None
Correlations Used for Scoring	3

Canonical Correlations

	Correlation	Eigenvalue	Wilks Statistic	F	Num D.F	Denom D.F.	Sig.
1	.969	15.610	.034	9.068	9.000	26.922	.000
2	.633	.670	.558	2.030	4.000	24.000	.122
3	.260	.072	.933	.941	1.000	13.000	.350

Set 1 Standardized Canonical Correlation Coefficients

Variable	1	2	3
Tax	.963	1.232	-1.013
GDP	.122	-.661	-.741
GDPpercapita	.034	-1.338	1.298

Set 2 Standardized Canonical Correlation Coefficients

Variable	1	2	3
Industrialproductiongrowth	.093	-.772	.665
Unemploymentrate	-.797	-.437	-.523
Laborforce	.399	-.426	-.895

Set 1 Unstandardized Canonical Correlation Coefficients

Variable	1	2	3
Tax	.000	.000	.000
GDP	.068	-.371	-.415
GDPpercapita	.000	-.001	.001

Set 2 Unstandardized Canonical Correlation Coefficients

Variable	1	2	3
Industrialproductiongrowth	.032	-.265	.228
Unemploymentrate	-1.841	-1.010	-1.208
Laborforce	.000	.000	.000

Set 1 Canonical Loadings

Variable	1	2	3
Tax	.992	.098	.075
GDP	.131	-.689	-.713
GDPpercapita	.849	-.317	.422

Set 2 Canonical Loadings

Variable	1	2	3
Industrialproductiongrowth	.157	-.862	.481
Unemploymentrate	-.911	-.326	-.251
Laborforce	.649	-.450	-.613

Set 1 Cross Loadings

Variable	1	2	3
Tax	.962	.062	.020
GDP	.127	-.436	-.185
GDPpercapita	.823	-.201	.110

Set 2 Cross Loadings

Variable	1	2	3
Industrialproductiongrowth	.153	-.546	.125
Unemploymentrate	-.884	-.207	-.065
Laborforce	.629	-.285	-.159

Proportion of Variance Explained

Canonical Variable	Set 1 by Self	Set 1 by Set 2	Set 2 by Self	Set 2 by Set 1
1	.574	.540	.426	.400
2	.195	.078	.351	.141
3	.231	.016	.224	.015

By using canonical correlation data is divided in two sets corporate Tax, GDP, and GDP per capita with set2 as industrial growth, available labour force and unemployment rate, results are showing correlation amongst Tax with GDP at significant level and GDP with industrial production and industrial production with growth in industrial production along with GDP and GDP per capita income only factor is less significance that is unemployment rate. If one calculate the same correlation by using Pearson correlation two tailed test then .682 which is above .5 level significance between corporate taxes with industrial production growth.

Correlations

		Tax	industrial production growth
Tax	Pearson Correlation	1	.107
	Sig. (2-tailed)		.682
	N	17	17
industrial production growth	Pearson Correlation	.107	1
	Sig. (2-tailed)	.682	
	N	17	17

Correlations

		Tax	labor force
Tax	Pearson Correlation	1	.585*
	Sig. (2-tailed)		.014
	N	17	17
labor force	Pearson Correlation	.585*	1
	Sig. (2-tailed)	.014	
	N	17	17

*. Correlation is significant at the 0.05 level (2-tailed).

One can easily read the relation between corporate tax and available labour force which is quit significant as .014with correlation .585.

Correlations

		Tax	GDP
Tax	Pearson Correlation	1	.008
	Sig. (2-tailed)		.974
	N	17	17
GDP	Pearson Correlation	.008	1
	Sig. (2-tailed)	.974	
	N	17	17

When it comes to corporate tax with GDP it's directly correlated with huge significance level .974 and correlation of .008.

HYPOTHESIS TEST

Ho: There is no effect of corporate tax collection on other aspect like GDP per capita and growth of employment.

H1: There is effect of corporate tax collection on other aspect like GDP per capita and growth of employment.

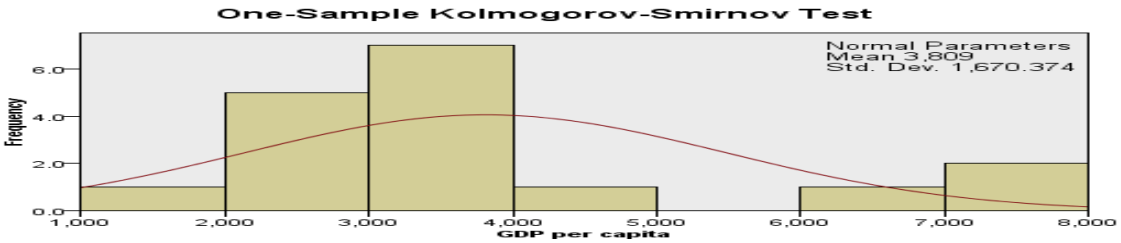
Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of GDP per capita is normal with mean 3,809 and standard deviation 1,670.374.	One-Sample Kolmogorov-Smirnov Test	.200[1,2]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1]Lilliefors Corrected

[2]This is a lower bound of the true significance.



Total N		17
Most Extreme Differences	Absolute	.278
	Positive	.278
	Negative	-.135
Test Statistic		.278
Asymptotic Sig. (2-sided test)		0.001[1,2]

[1] Lilliefors Corrected
[2] This is a lower bound of the true significance.

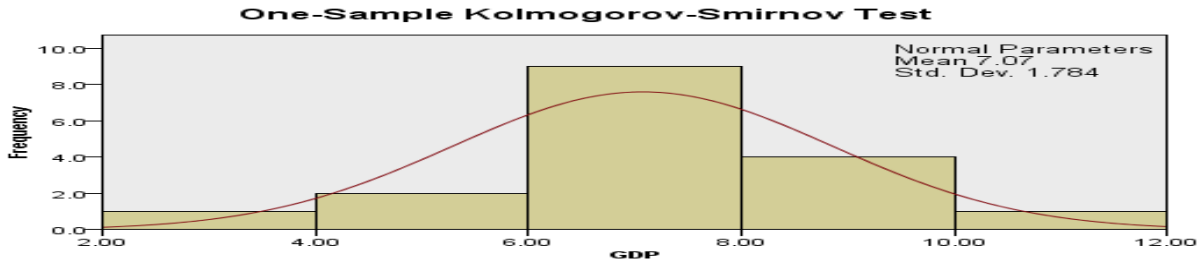
It seems that there is direct relation between corporation tax collections with GDP per capita as the results show reject the null hypothesis.

Ho: There is no impact of Net collection of corporate Taxes on GDP at Current Market Prices.
H1: There is impact of net collection of corporate taxes on GDP at current market price.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
3	The distribution of GDP is normal with mean 7.07 and standard deviation 1.784.	One-Sample Kolmogorov-Smirnov Test	.200[1,2]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.
[1] Lilliefors Corrected
[2] This is a lower bound of the true significance.



Total N		17
Most Extreme Differences	Absolute	.098
	Positive	.089
	Negative	-.098
Test Statistic		.098
Asymptotic Sig. (2-sided test)		0.2[1,2]

[1] Lilliefors Corrected
[2] This is a lower bound of the true significance.

Result shown is to retain null hypothesis as corporate tax not only single variable which has direct effect on GDP there are direct tax and other collection in form of taxes and various revenues of country or one can say corporate is not contributing at significant level towards GDP it can further improvise.

Conclusion and findings:

From the above study one can drove inference such as there is direct contribution of corporate tax towards GDP and GDP per capita is quit significant along with employment rate and growth of labour force, industrial production if industrial production is rising same time employment and PPP should also increase and there must be reduction in unemployment rate which is not yet recorded at any government records as may be one Couse growing population of india but same time one can infer there is reduction in employment after digitization in various sectors which finally conclude to reduction in income of every individual in total collection from corporate taxes and direct taxes. But the trend showing as per government records are inversely related to such economic aspect as there is growth in unemployment as well as in GDP which clearly shows that the **growth in GDP is only due to change in method of calculation not in real terms** just have a look on method of calculation done in last few years for various economic parameters.

The rate of unemployment is calculate as percent of labour force which is without job, industrial growth is calculated as annual percentage increase in industrial production including manufacturing, mining, and construction. GDP per capita is calculated on a purchasing parity basis divided by population as of 1st July same year, GDP growth on an annual basis adjusted for inflation and expressed as a percent (not compounded). Government should put more emphasis on corporate tax which will have a positive impact in near future for economic growth in real terms instead of again and again taxing goods and services.

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