Public Expenditure and Economic Growth in Chhattisgarh State: An Analytical Study

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ABSTRACT

The study examines the structure, direction, and pattern of government expenditure and economic growth in Chhattisgarh State from 2001 to 2020, the study attempts to establish a logical relationship between the variables. The study statistically evaluated the relationship between the variables by using the least-square method of regression analysis. Our empirical findings shows that the economy of Chhattisgarh is exhibiting an upward trend and pattern of economic growth and in the same way the variables are highly associated, and the regression analysis reveals that expenditure and economic growth have a positive cause and effect relations in the reference of the state.

KEYWORDS: Public Expenditure, Economic Growth, regression analysis, least square method

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INTRODUCTION

Prior to the Bifurcation of Chhattisgarh state, it was underneath the cognizance of Madhya Pradesh State having the name South Kosala (Dakshin Kosala), which was comprehending 16 districts of the undivided Madhya Pradesh. In November 2000, as part of the Madhya Pradesh Reorganization Act, the south-eastern part of the state split off to form the new state Chhattisgarh. One major connotation of the separation of the state was that Chhattisgarh has a low tax base compared to the rest of Madhya Pradesh. Besides, over 40 percent of its income were adventing from non-tax revenue, such as royalties on minerals and income from forests. Compared to the rest of Madhya Pradesh (M.P) the non-tax revenue was only 23 percent for Madhya Pradesh State, clearly, it was pointing out a resource dissemination from the eastern area of M.P to the western area of M.P. Chhattisgarh state was highly rich in the mineral as well as forest resources but the exercise of these resources for the out-growth of the domain was very trifling. For this rationale, demand for a separate state came into coerce. After its formation the economy of Chhattisgarh was recording an average growth rate around 14.13% till 2020-21. The current story line of the state exhibit that its nominal gross state domestic product (GSDP) is estimated at \neq 4.38 lakh crore (US\$57 billion) as of 2022-23 budget estimate over US\$43 billion in 2018–19.

The state became 18th largest economy in terms of GSDP in India (2022-23). The potency and mainstay of the state is its mineral resources like, coal, Iron ore, dolomite, bauxite, limestone and quartzite. It is the only state in India who produces tin concentrates with 35.4% of tin ore reserves of India. Being a highly resource rich state, the state has become the biggest investment destination in the country. It has also ranked 4th, in Indian states ranking on the basis of "ease of doing business" and also in 2020, it again won the title of cleanest state with more than 100 Urban Local Bodies (Swachh Survekshan 2020). With the purpose of economic development of this rearward region, Chhattisgarh State has come forth as one of the fastest growing states in India and one of

the top performing states on various fiscal indicators. The state has experienced a modest and consistently positive growth in Gross State Domestic Product. The data of state gross domestic product shows an increasing trend since its formation and also the state is performing fountainhead in agriculture, Industry and Service sectors with the contribution of 17%, 46% and 37% (2019-20) of contribution to state GDP respectively. These gauges of the economy pave the way to study the structure and pattern of the State GDP and the expenditure pattern of the economy to give an overall analysis and to unfold logical association between public expenditure and economic growth of Chhattisgarh state.

Review of Literature:

Working with Panel data (Ahuja & Pandit, 2020) examines the association between public spending and economic growth and found there is presence of unidirectional causality between economic growth and public spending and also it supports Keynesian hypothesis where public spending stimulates economic growth. It also exhibits that investment has significant positive effect on economic growth. In contrary Population growth and unemployment have detrimental effect on economic growth. (Nyasha & Odhiambo, 2019) By reviewing a basketful of literature found, there are three types of relation exists between government expenditure and economic growth, they are; Positive, Negative and neutral. The literature surveyed shows no clearcut evidence for the impact of government expenditure on economic growth, which leads to inconclusive analysis. In contrast Garry, S., & Rivas Valdivia, J. C., (2017) suggested a solid connection between public spending and economic growth and verified in various cities of western countries like Mexico, Central America and Dominican Republic and found that, public spending has a huge multiplier effect in short run and long run also highlighted its consistency over time. Following the introduction of the Chhattisgarh Fiscal Responsibility and Budget Management Act (FRBM) in 2005, the efforts towards revenue generation has increased. In recent years, the revenue receipts growth of Chhattisgarh State has increased rapidly as compared to the growth in Gross State Domestic Product (GSDP). The study found out that the revenue receipts of Chhattisgarh state are elastic over the study period from 2001-02 to 2015-16 (Ashis Kumar Mishra, 2017). In addition, Sasmal, R., & Sasmal, J., (2016) undertook a panel data analysis for India using state level data, focusing on the objective of poverty alleviation in developing countries and examines the effect of public spending on economic growth. The study resulted that the states having high expenditure on the development of infrastructure

found increase in per capita income and reduction in poverty. Which shows economic growth is important for reduction in poverty and also development of infrastructure is necessary for economic growth. Gangal and Gupta., (2013) in his study reveals that there is linear stationarity in both the variables and there is a positive impact of Total public expenditure on economic growth. A unidirectional relationship from total public expenditure (TPE) to gross domestic product (GDP) found by Granger causality Test, where a positive impact of shocks from TPE to GDP and vice versa is found. Mudaki, J., & Masaviru, W., (2012) By linearising the data through ordinary least square method the study gave a significant effect to education expenditure whereas the effect of government expenditure is low in other growth indicators like economic affairs, transport and communication etc. It also shows some insignificant effect on economic growth when expenditure redirected to health, defence, etc. and found out positive association between public spending and economic growth. Olugbenga A. Onafowora., (2009) by using the cointegration analysis and Error correction model the study shows a long-term relationship between the variables under study. Public expenditure grows at a lesser rate than the economic growth where, 16 countries supported the Keynesian hypothesis showing unidirectional causality runs from public expenditure to economic growth and for other 10 countries accepting Wagner's hypothesis. Four countries have shown a bidirectional causality between variables. Manh and sutheruga., (2006) studied the synchronous impact of government spending and foreign Direct Investment (FDI) on economic growth for 105 countries, the findings include a positive effect of FDI, government capital and private investment on economic growth. A negative impact found for government non-capital expenditure and on economic growth but extravagant expenses can block the valuable effects of FDI. By using some econometrics tools and techniques specially Granger causality and cointegration test the study of Bagdigen and etintas., (2004) found no causality between the variable, showing neither it satisfies Wagner's law nor it satisfies Keynesian hypothesis for Turkish economy for the period of 1965-2000. Again, Del Monte. A., & Papagni. E., (2001) studied the long run effect of administrative bribery on public spending whose value is declining day by day for the above reason. using a dynamic panel data regression analysis for 20 regions in Italy the study tries to estimate the effect of bribery on the efficiency of public spending on government investment. It is found that the effect is not direct and it is significant on growth rate.

Research Gap:

After outlining above literature, it is endowed that many researchers have analysed the relationship between public expenditure and economic growth of various national and international economy, but a few studies found in the state level. This study will focus on specially the economy of Chhattisgarh state to reveal the expenditure and growth pattern of the state since its constitution and will unfold the logical association between variables. Besides, the study will accord a guide map to other states which has been formed at the same year when Chhattisgarh has brought into being (01 November 2000).

Objectives of the study:

- 1. To analyse the structure, pattern and trend of public expenditure and economic growth since the formation of the state.
- 2. To unfold the logical association between the variables.

Data and Methodology:

The present study uses the data for the period of 2001 to 2020. Data of GSDP has been extracted from the Directorate of Statistics and Planning Department of Chhattisgarh government. The data related to public expenditure has been taken from the website of finance department of Chhattisgarh government. And also, we have used the data source of MoSPI (Ministry of Statistics and Planning Implementation). Various statistical tools have been used to calculate the average, percentage and ratios of the variable to put the study on the right direction.

Analysis of Data: Objective-1

As we see the economy of Chhattisgarh State, it has shown an increasing growth trajectory (Figure-1.1) since its constitution in 1 November 2000. The data has been depicted in table-1 given below and has shown in the following figure-1.6 where the GSDP and Total Expenditure of the state depicts an

increasing tendency for 20 years. The GSDP was Rs. 25846.16 crore in 2001 with Rs. 5471.48 crore of total government expenditure, and it increases to Rs. 47862.29 of GSDP and Rs 9291.53 for Government expenditure in 2005 with 85.18% and 69.82% growth rate respectively in first 5 year of its formation. In other way it shows the Government Expenditure as a Percentage of GSDP of 21.17% in 2001 and increased to 25.16% in 2003 after that although the Expenditure percentage of GSDP has not increased much in relative sense but the absolute value shows an increasing trend till 2015 after that the average increasing growth rate is around 26%. "The share of developmental expenditure has increased since 2001– 02, and it contributes around 78 percent of total expenditure. The state has received appreciation from centre and RBI for best fiscal performing state in 2015–16, But the human development of the state is not very significant" (Ashish Kumar Mishra, 2017). By looking at the data set from 2001 to 2020 the average growth in government Expenditure as a Percentage of GSDP is 22.86%. The growth rate of government expenditure was very high around 28% in 2003 after that it declined to 4% in 2004 and further increases to 26.71% in 2006, from this year it has shown a declining trend till 2020 (Figure-3). The average annual growth rate of GSDP for 20 years is 14.13% and the average annual govt. expenditure growth rate is 14.59%. Looking at the Average Per Capita GSDP and the average per capita expenditure which is Rs 48172.40 and Rs 12588.25 respectively which is below the national average. The government expenditure as a percentage of GSDP remains constant between 20 to 25% in the respective years. The GSDP of the state is measured in the nominal term that means it includes the inflation that's why the gap between the two curve is more. But if we look at the overall growth of GSDP which is more increasing than the growth in Govt. Expenditure.

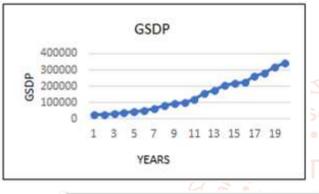
TABLE-1

| Year | GSDP (Rs. Crore) | Total Expenditure (Rs. Crore) | Government Exp. As a % of GSDP | Annual Growth Rate of GSDP (%) | Annual Growth Rate of Total Expenditure (%) |
|------|---------------------|----------------------------------|--------------------------------|--------------------------------|---|
| 2001 | 25846.16 | 5471.48 | 21.17 | 0 | 0 |
| 2002 | 29539.35 | 6408.59 | 21.70 | 14.29 | 17.13 |
| 2003 | 32492.65 | 8173.59 | 25.16 | 10.00 | 27.54 |
| 2004 | 38802.09 | 8495.22 | 21.89 | 19.42 | 3.93 |
| 2005 | 47862.29 | 9291.53 | 19.41 | 23.35 | 9.37 |
| 2006 | 53381.10 | 11773.40 | 22.06 | 11.53 | 26.71 |
| 2007 | 66874.89 | 14383.12 | 21.51 | 25.28 | 22.17 |
| 2008 | 80255.11 | 17226.08 | 21.46 | 20.01 | 19.77 |
| 2009 | 96972.18 | 20910.44 | 21.56 | 20.83 | 21.39 |

| 2010 | 99364.26 | 22876.16 | 23.02 | 2.47 | 9.40 |
|------|-----------|----------|-------|-------|-------|
| 2011 | 119419.76 | 27957.22 | 23.41 | 20.18 | 22.21 |
| 2012 | 158073.82 | 33778.67 | 21.37 | 32.37 | 20.82 |
| 2013 | 177511.32 | 38757.28 | 21.83 | 12.30 | 14.74 |
| 2014 | 206833.18 | 46204.07 | 22.34 | 16.52 | 19.21 |
| 2015 | 221118.11 | 51811.29 | 23.43 | 6.91 | 12.14 |
| 2016 | 225162.99 | 57916.70 | 25.72 | 1.83 | 11.78 |
| 2017 | 262801.75 | 66600.54 | 25.34 | 16.72 | 14.99 |
| 2018 | 282283.44 | 73569.86 | 26.06 | 7.41 | 10.46 |
| 2019 | 318101.13 | 82094.93 | 25.81 | 12.69 | 11.59 |
| 2020 | 344955.35 | 79107.54 | 22.93 | 8.44 | -3.64 |

Sources: Directorate of Economics and Statistics, Chhattisgarh and Finance Department of Chhattisgarh

FIGURE: 1.1







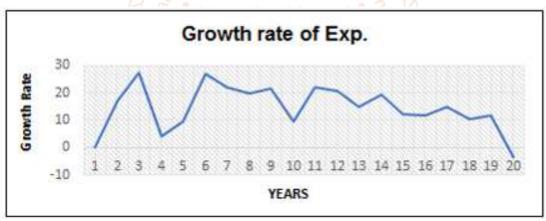


FIGURE: 1.3

FIGURE: 1.4

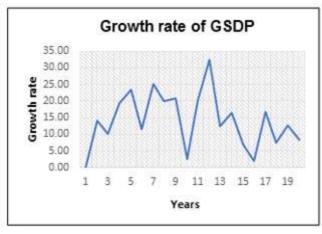


FIGURE: 1.5

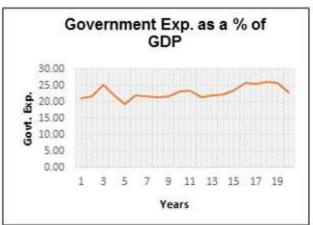


FIGURE: 1.6

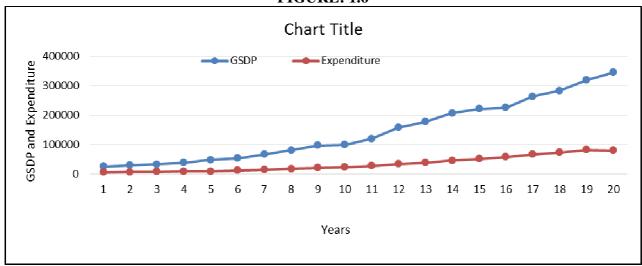
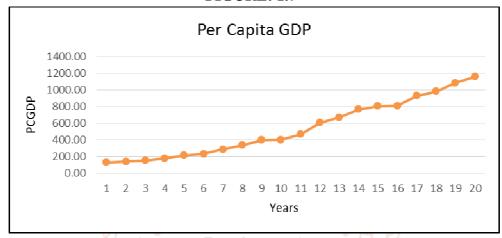


FIGURE: 1.7



The growth rate of GSDP shows no trend rather it increases and decreases frequently. The per capita GDP shows an increasing trend for the study period and it increases slowly.

STRUCTURE OF RECEIPTS:

The Receipts of government is of two types Revenue Receipts and Capital Receipts. Revenue receipts refers to that receipts which do not create any burden and do not lead to a claim on the government. It is of two types tax revenue and non-tax revenue. Tax is a compulsory payment that is made to the government by the people or the companies without having any direct benefit in return. Tax Revenue is of two types Direct tax and Indirect tax. In other way Capital Receipts refers to those receipts that are produced from the financing activities and the investment of a business or government, it is non-recurring in nature. The receipts structure of the state government is shown in the following table-2. The data shows increasing trend for Revenue and Capital receipts where capital receipts are showing no trend rather sometimes increases and decreases which is shown in figure-2.3 for the period of 2001 to 2020.

TABLE-2

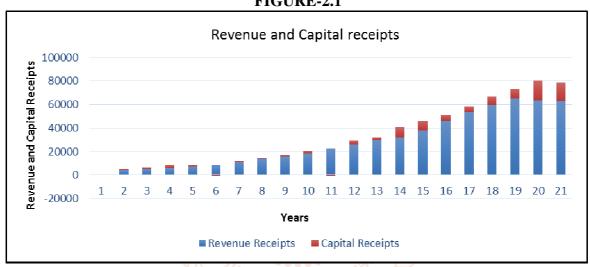
| Year | Revenue Receipts (Rs Crores) | Capital Receipts | Total Receipts |
|---------|-------------------------------------|-------------------------|-----------------------|
| 2001-02 | 4375.69 | 1207.12 | 5582.81 |
| 2002-03 | 5417.30 | 844.39 | 6261.70 |
| 2003-04 | 5959.32 | 2469.93 | 8429.25 |
| 2004-05 | 7248.87 | 1256.83 | 8505.70 |
| 2005-06 | 8838.50 | -39.84 | 8798.65 |
| 2006-07 | 11453.24 | 196.54 | 11649.79 |
| 2007-08 | 13878.65 | 508.06 | 14386.71 |
| 2008-09 | 15662.76 | 1908.68 | 17571.44 |
| 2009-10 | 18154.14 | 2550.01 | 20704.15 |
| 2010-11 | 22719.54 | -769.06 | 21950.49 |
| 2011-12 | 25867.38 | 3664.99 | 29532.37 |

| 2012-13 | 29578.08 | 2339.54 | 31917.63 |
|---------|----------|----------|----------|
| 2013-14 | 32050.27 | 8426.88 | 40477.14 |
| 2014-15 | 37932.80 | 8186.9 | 46119.71 |
| 2015-16 | 46067.71 | 5127.97 | 51195.68 |
| 2016-17 | 53685.25 | 4585.56 | 58270.81 |
| 2017-18 | 59647.08 | 7225.17 | 66872.25 |
| 2018-19 | 65098.55 | 8154.44 | 73252.98 |
| 2019-20 | 63868.70 | 16710.53 | 80579.23 |
| 2020-21 | 63176.18 | 15904.68 | 79080.86 |

Source: Department of Finance Chhattisgarh

Although we see different trend structure for different variables (Revenue and Capital receipts) the total receipt shows an increasing trend since 2001 which is clearly visible in figure-2.2. The data shows Rs 5582.81 crore of total receipts from which the contribution of capital receipt is Rs 1207.12 crore and Rs 4375.69 crore is contributed by Revenue receipts (both tax and non-tax revenue) in 2001. Further the total receipt increases to Rs 11649.79 crore in 2006-07 where the capital receipts was very low i.e., Rs 196.54 crore with revenue receipt Rs 11453.24 crore. The capital receipt was Rs -769.06 crore in 2010-11. Looking at the overall receipts the revenue receipts play an important role in the economy of Chhattisgarh.

FIGURE-2.1





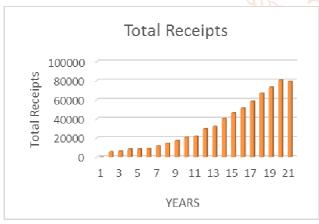
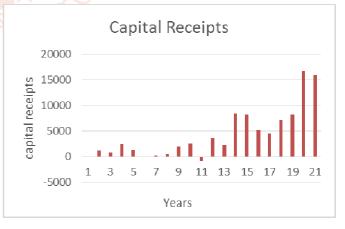


FIGURE-2.3



STRUCTURE OF EXPENDITURE:

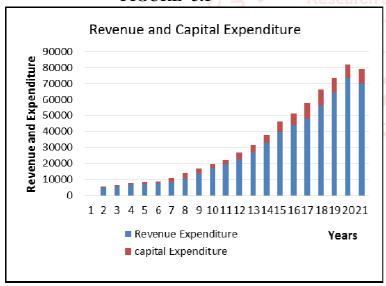
Again, if we look at the expenditure pattern of the Chhattisgarh economy it shows same pattern like revenue receipts. The total expenditure which consists of revenue and capital expenditure increases gradually from 2001 to 2010 and after that it increases at an increasing rate. At the same way revenue expenditure (expenditure made to finance the Payment of salaries, wages, pensions, subsidies and interest fall in this category) also follow the same path. From 2001 to 2020 the Revenue expenditure has increased from Rs 4914.36 crore in 2001 to Rs 70032.84 crore in 2020 which shows around 14 times increase in revenue expenditure since the formation of the state. Further the capital expenditure (creation of assets like schools, colleges, hospitals, roads, bridges, railways, airports and seaports etc.) in 2001 was Rs 476.26 crore and it is Rs 9024.19 crore in 2020 which is around 20 times more than the initial year. The figure-3.2 shows the trend and pattern of Plan and Non-plan expenditure of the government, both has been increasing as the year passes. The rate of growth is high in case of plan expenditure from 2010 to 2020, before that the non-plan expenditure was higher than the plan-expenditure.

TABLE-3

| Years | Total Expenditure (Rs Crores) | Revenue Expenditure | capital Expenditure |
|---------|-------------------------------|----------------------------|---------------------|
| 2001-02 | 5471.48 | 4914.36 | 476.26 |
| 2002-03 | 6408.59 | 5530.00 | 819.79 |
| 2003-04 | 8173.59 | 6600.42 | 1015.49 |
| 2004-05 | 8495.22 | 7103.05 | 1279.13 |
| 2005-06 | 9291.53 | 7457.14 | 1496.91 |
| 2006-07 | 11773.40 | 8802.44 | 2198.10 |
| 2007-08 | 14383.12 | 10750.08 | 3130.69 |
| 2008-09 | 17226.08 | 13793.71 | 2940.16 |
| 2009-10 | 20910.44 | 17265.44 | 2744.92 |
| 2010-11 | 22876.16 | 19355.75 | 2951.51 |
| 2011-12 | 27957.22 | 22628.05 | 4056.41 |
| 2012-13 | 33778.67 | 26971.84 | 4919.33 |
| 2013-14 | 38757.28 | 32859.58 | 4574.19 |
| 2014-15 | 46204.07 | 39497.20 | 6617.32 |
| 2015-16 | 51811.29 | 43701.06 | 7945.01 |
| 2016-17 | 57916.70 | 48164.60 | 9470.51 |
| 2017-18 | 66600.54 | 56229.75 | 10000.96 |
| 2018-19 | 73569.86 | 64421.50 | 8903.45 |
| 2019-20 | 82094.93 | 73472.39 | 8566.39 |
| 2020-21 | 79107.54 Internation | 70032.84 | 9024.19 |

Source: Department of Finance Chhattisgarh

FIGURE- 3.1



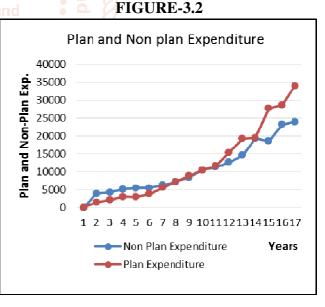
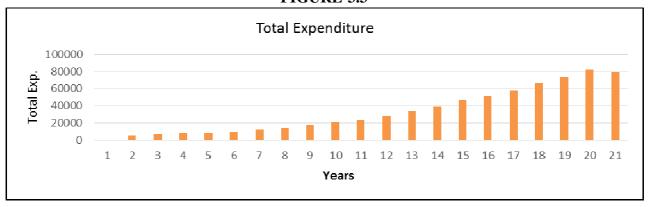


FIGURE-3.3



Besides all these analyses, the Chhattisgarh economy is facing a challenge for making investment for creation of assets rather maintaining those assets. As the capex creates more development in the economy the government should increase the capital expenditure (capex) as it is valid for a state like Chhattisgarh because of its richness in mineral resources which can make the desired investment fulfil.

Structure of Revenue and Fiscal Deficit, Loans and Advances:

Table-4 shows year wise revenue and fiscal deficit and loans and advances for the state of Chhattisgarh, where the data for loans and advances shows an increasing trend till 2014, after that it declines to a very low position in 2015 and further it increases slowly. Loan is a long-term financial support given by Banks and financial institutions to business firms or individuals where the organisation pays interest and other fees on the given amount annually, Where Advances refers to a short-term credit facility provided by financial institutions to businesses for 1 to 2 months and a maximum of 1 year and it must be repaid at a single transaction. Looking at the figure-4.2 the revenue deficit which is the difference between revenue receipts and revenue expenditure was slightly negative in the initial period till 2006 after that it became positive till 2019 and get negative after that. It was high in 2020 due to the pandemic (Covid-19) because the governments revenue expenditure was high than its revenue receipts. Again, the fiscal deficit was very low during the period of 2001 to 2012 but after that it has increased comparatively it was also high in 2019-20 about Rs -18064.63 crore and Rs -15822.38 crore in 2020-21 due to the Pandemic. Looking at the diagram the Fiscal Deficit showing an increasing trend from the period of 2011-12 to 2020-21 shown in Figure 4.2.

TABLE-4

| Years | Loan and Advances (Rs Crores) | Revenue Deficit/surplus | Fiscal Deficit |
|--------------|-------------------------------|-------------------------|----------------|
| | | 141A VIII | |
| 2001-02 | 80.87 | -538.66 | -1086.70 |
| 2002-03 | 58.80 | -112.7 | -972.60 |
| 2003-04 | 557.68 | -641.10 | -2203.63 |
| 2004-05 | 113.04 Internationa | Journal 145.82 | -1231.55 |
| 2005-06 | 337.48 Researc | 1381.35 | -435.12 |
| 2006-07 | 772.86 Develop | ment 2650.80 | 36.77 |
| 2007-08 | 502.36 ISSN: 2456 | -6470 3128.57 | -38.16 |
| 2008-09 | 492.21 | 1869.06 | -1026.66 |
| 2009-10 | 900.08 | 888.70 | -1757.67 |
| 2010-11 | 568.89 | 3363.79 | 409.76 |
| 2011-12 | 1272.77 | 3239.34 | -801.16 |
| 2012-13 | 1887.50 | 2606.25 | -2654.66 |
| 2013-14 | 1323.51 | -809.31 | -5057.81 |
| 2014-15 | 89.55 | -1564.40 | -8072.20 |
| 2015-16 | 165.22 | 2366.65 | -5615.81 |
| 2016-17 | 281.59 | 5520.65 | -4055.72 |
| 2017-18 | 369.83 | 3417.33 | -6837.03 |
| 2018-19 | 244.91 | 677.05 | -8298.88 |
| 2019-20 | 56.16 | -9603.69 | -18064.63 |
| 2020-21 | 50.51 | -6856.67 | -15822.38 |

Source: Budget (Finance Department of Chhattisgarh)

FIGURE- 4.1

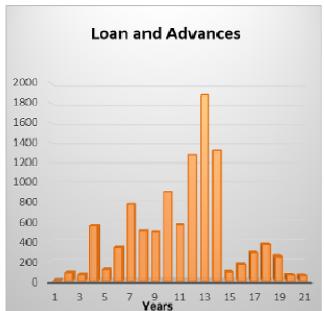
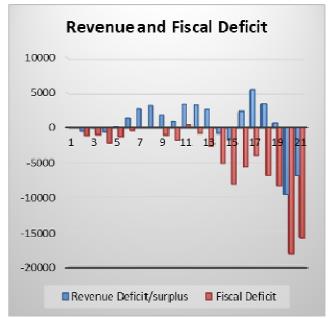


FIGURE- 4.2



Analysis of Data:

Objective:2

The second objective of the study wants to verify the logical relation between public expenditure and economic growth which is explained by the correlation analysis. It is a statistical tool used to measure the strength of the linear relationship between two or more variables and compute the degree of association.

| | EXPENDITURE | GSDP |
|-------------|-------------------|------|
| EXPENDITURE | ational Jburnal 🐍 | 0.99 |
| GSDP of Tre | nd in S0.99 tific | 2 1 |

The above table indicates that there is a high correlation between the two variables (GSDP and Public Expenditure) which is 99% that shows a high degree of positive correlation between the variable.

In other words, the Regression analysis which is all about determining how changes in the independent variables are associated with changes in the average value of dependent variable depicts that, the regression result of the two variables where public expenditure is the independent and GSDP is the dependent variable is shown in the following regression equation. The regression model is expressed as:

GSDP_t =
$$\alpha + \beta Exp_t + U_t$$

Where; α (alpha) is the intercept term β (Beta) is the slope coefficient Ut is the residual term

TABLE-5

| Dependent Variable: GSDP | | | | | |
|--------------------------|--|--------------------------------|-------------|----------|--|
| Method: Least Squares | | | | | |
| Included observations: | 20 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. | |
| С | 9873.637 | 4201.910 | 2.349797 | 0.0304 | |
| EXPENDITURE | 3.939877 | 0.098571 | 39.96981 | 0.0000 | |
| R-squared | 0.988859 | Mean dependent var 144382.5 | | | |
| Adjusted R-squared | 0.988240 | S.D. dependent var 103762.7 | | 103762.7 | |
| S.E. of regression | 11252.61 | Akaike info criterion 21.58923 | | 21.58923 | |
| Sum squared residual | 2.28E+09 | Schwarz criterion 21.68880 | | | |
| Log likelihood | -213.8923 | Hannan-Quinn criteria 21.60866 | | | |
| F-statistic | F-statistic 1597.586 Durbin-Watson stat 1.063453 | | | | |
| Prob(F-statistic) | 0.000000 | | | | |

Table-5 shows that both the intercept and slope coefficient of the regression equation shows significant result as the p-value (probability value) is less than 5% (P < 0.05). where p-value tells that, if these coefficients are significantly different from zero or not. The result reveals that the coefficient values are significantly different from zero. In other words, it shows that a unit change in regressor gives a change approximately 39% change in regressand which is positive.

Again, In the same way Table-6 shows that the GSDP is used as regressand and the govt. expenditure is used as regressor in the equation of regression which is stated as:

 $Exp_t = \alpha + \beta GSDP_t + U_t$

| TA | BI | Æ- | 6 |
|----|----|----|---|
| | | | |

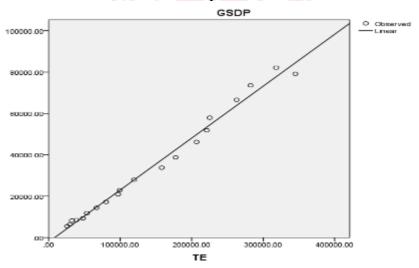
| Dependent Variable: EXPENDITURE | | | | | |
|--|---------------------------------------|-------------------------------|-------------|----------|--|
| Method: Least Square | es | | | | |
| Included observations | s: 20 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. | |
| С | -2097.782 | 1106.937 | -1.895124 | 0.0743 | |
| GSDP | 0.250987 | 0.006279 | 39.96981 | 0.0000 | |
| R-squared | ed 0.988859 Mean dependent var 34140. | | | | |
| Adjusted R-squared | 0.988240 | S.D. dependent var 26189. | | | |
| S.E. of regression | 2840.126 | Akaike info criterion 18 | | 18.83572 | |
| Sum squared resid | 1.45E+08 | Schwarz criterion 18.93530 | | | |
| Log likelihood 💪 | -186.3572 | Hannan-Quinn criter. 18.85516 | | | |
| F-statistic 1597.586 Durbin-Watson stat 1.059569 | | | | | |
| Prob(F-statistic) | 0.000000 | | 2 V) | | |

Graphical representation:

The diagram shows the fitted line of the regression function where GSDP and Public Expenditure considered as regressand and regressor of the model. The dot line represents the observed value and the graph shows that the observed variables are very close to the fitted line. That clearly shows that the estimated line best fit the data observed.

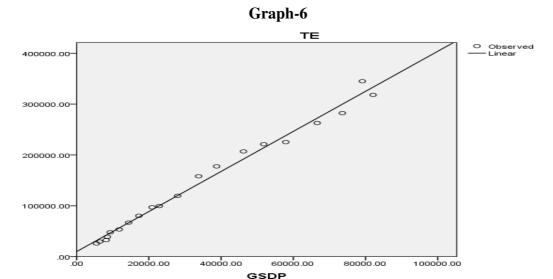
$$GSDP_t = 9873.637 + 3.939877 Exp_t + U_t$$





Again, the graph shows the best fitted line of the regression equation where, total expenditure and economic growth (GSDP) treated as dependent and independent variables.

$$Exp_t = -2097.782 + 0.250987 GSDP_t + U_t$$



The summary of the second objective is that there is a relationship between GSDP and Public expenditure and the fitted line can predict the value of dependent variable knowing the value of independent variable. Further the coefficient value shows that a positive relation observed between the said variables. The analysis recommends that public expenditure gives a push to economic growth and vice-versa.

Conclusion and Discussion:

After analysing the above literature, data and figures [2] the information about the Chhattisgarh state provides a wide view of the economy. Although previous literatures have not analysed the performance of the economy for two decades where, the present study is filling this gap. Studies have explained partial view of the economy in terms of revenue receipts (tax and non-tax revenue), capital receipts or GSDP only, many studies have shown the relationship between public expenditure and economic growth but none of the study has given an overall analysis of the structure and pattern of public expenditure and economic growth. Maximum literature studies have given their apprehension on the relationship between the variable concerned. Very few studies have analysed the structure and pattern of the state economy. Looking at the facts and figures of state GDP and Expenditure it shows an increasing trend whereas the growth rate of GSDP and government expenditure shows an average declining trend. As the economy's maximum revenue coming from the non-tax revenue where a major share holds its mineral resources for which the revenue receipts increasing largely. Coming to the capital receipts of the state it is very low and increasing slowly which will create pressure upon the economy in the coming future. The state needs to increase its capital receipts as well which will push the earnings of the economy and further development.

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