



Impact of Revenue Expenditure on Revenue Deficit: Empirical Evidence from Odisha

On 11th October, 2004, the Government of Odisha has signed a Memorandum of Understanding (MoU) with Government of India (FRBM ACT, 2005) to bring down its revenue deficit ratio relative to revenue receipts by 5 percent per annum (recommendation made by 11th Finance Commission) and to raise its revenue receipts over revenue expenditure in order to create more savings (Fiscal Stabilization). Hence, these savings can be channelized through productive capital outlay to boost economic growth of the state. Further, in February 2012, with recommendation of the Thirteen Finance Commission (13th FC), the state government made amendment to the FRBM Act, 2005 to achieve zero revenue deficit since 2011-12.

In this backdrop, this study examines the trend in the decadal average growth rate of revenue deficit to the revenue receipts (RD/RR) and revenue expenditure to the revenue receipts (RE/RR). Decadal average growth rate is presented in Table-1.

Table-1: Average Decadal Growth Rate

Year	Avg. Decadal Growth of RD/RR	Avg. Decadal Growth of RE/RR
1980-89	-2.20%	102.20%
1990-99	-18.80%	118.80%
2000-09	-5.30%	105.30%
2010-15	10.10%	89.90%
2005-15 (Since FRBM)	10.40%	89.60%

*RD=, RR =, RE=

During these four decades (Table 1), the negative relationship between the improvement RD/RR and decline in RE/RR is established.

In order to assess the impact of revenue expenditure on revenue deficit, the empirical model is designed:

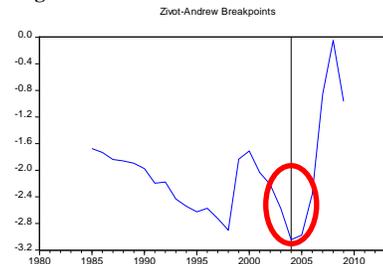
$$RD_t = \alpha_1 + \alpha_2 RE_t + \alpha_2 D_t + \varepsilon_{1t} \quad (1)$$

'D' is the dummy variable and **t** shows the time period. This study covers the period from 1980-81 to 2014-15. Deflator is used to transform the nominal variable to real variable. Thus, all the variables are taken at 2004-05 constant prices¹.

After examining the time series properties (exhibit unit root problem) of RD and RE, growth rate of these respective variables are taken in the Equation (1). The objective of taking the growth rates is to avoid spurious regression. Zivot-Andrew² (2001)

test has been conducted in order to find out structural break in RD and the result is presented in Figure-1.

Figure-1: Zivot-Andrew Structural Break Test



From the Figure-1, this study found out that RD has a structural break in FY 2004-05. FRBM ACT was also implemented in Odisha in FY 2004-05. In order to capture the impact of the FRBM Act, the structural dummy (D) is introduced in the Equation (1), where D equal to **'0'**(zero) during the FY 1980-81 to 2003-04 and **'1'**during FY 2004-05 to 2014-15.

The results of the model are presented in the Table-2. All residual diagnostic checks have been made to accept the results.

Table-2: Result of OLS

Dependent variable: RD

Variable	Coefficient
Constant	7.03 (0.97)
RE	-0.35** (0.03)
R-Square	0.35
DW statistic	1.97

Note: Figure in parenthesis shows the p-value and ** indicates significance at 95% confidence interval.

Interpretation of the Results

1% rise in real revenue expenditure leads to 0.35% decline in real revenue surplus. In other words, 1% increase in real revenue expenditure leads to 0.35% rise in real revenue deficit. Odisha is experiencing revenue surplus since the implementation of FRBM Act 2005. The results of the model validates that the revenue surplus since FY 2005-06 has resulted because of compression in revenue expenditures.

Policy Implications

The possible way to boost economic growth of Odisha is to generate surplus funds by compressing the revenue expenditure relative to revenue receipt which will supplement the financing of the capital outlay.

¹All the data used in this study has been collected from Financial Account, Govt. of Odisha.

² Zivot, E. and Andrews D. W. K., "Further Evidence of the Great Crash, the Oil Price Shock and the Unit-root Hypothesis", Journal of Business and Economic Statistics, 1992, Vol.10, pp. 251-270.