

## MACRO-ECONOMIC ENVIRONMENT-A CASE STUDY OF SPECIFIC INDIAN STATES

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### ABSTRACT

The current study aims to analysis the macro economic performance Index of the eleven specific states of India and also to make a comparative analysis of Indian States on the basis of macro-economic indicators. The study is purely based on the secondary data derived from the website of National planning commission of India, Reserve bank of India, government of India, newspapers, and economic survey reports of the states and official websites of each of the selected states of India. The secondary data has been collected for a period of three years from 2011-14. It was found from the study that the macro economic performance of selected eleven specific states show the regional imbalance in Indian economy. Tripura has found to be top performing states among the selected states of India at macro-economic level while Mizoram has found to be the lowest performing state of India at macro-economic level. Wide disparities were observed in the level of macro-economic development between different specific states of India.

**KEYWORDS:** India, Economy, Performance, Macro-Economic, Specific States, Fiscal Deficit

### INTRODUCTION

Indian economy has witnessed a phenomenon growth over the past couple of decades mainly after the economic reforms of early 1990s. Today Indian economy has attained the status of global footage with potential to transform the economy into more formal economy with greater cashless transactions, courage to launch the major indirect tax reforms through GST, boost to the manufacturing hubs, economic environment of improvement in ease of doing business, food security, etc. The national level reforms of promoting investment avenues are widely seen in the past decade, however in the recent past Indian states are equally partner in creating a healthy competitive environment of promoting investment opportunities through various state level investment summits in order to improve the macroeconomic performance of states.

These developments motivate the researchers and policymakers to assess the likely gains to Indian states in their macro-performances in past decade and to identify the relative position of states in the ongoing economic context. Having identification of relative macro performance can serve a purpose of guiding factor to the entrepreneurs for selecting the investment destination and policy makers to understand the macro performance gaps for attaining the next better level in the state. The present study has major objective to assess the macro-economic performance of specific Indian states. The findings have enough abilities to understand the dynamics of states for further advancements. The broader classification of an economy constitutes three sectors viz. - agriculture and allied, industry and services.

Agriculture sector includes agriculture (Agriculture proper & Livestock), forestry & logging, fishing and related activities. Industry includes manufacturing (Registered & Unregistered), electricity, gas, water supply, and construction. Services sector includes trade, repair, hotels and restaurants, transport, storage, communication & services related to broadcasting, financial, real estate & professional services, community, social & personal services.

As per the CIA Fact-book, services sector constitutes larger pie of GDP with a share of 58 percent followed by industry 24 percent and 18 percent by agriculture sector. India has registered growth rate of over 7 percent for last three months particularly the time when world economic are suffering with lower growth outcomes. India's contribution in world GDP has gone up from 4.8 per cent during 2001-07 to 6.1 per cent during 2008-13(IMF). Keeping in view the aggregate economic performance study gets motivation to look into the regional performances of Indian states along with more detailed indicators based analysis. The macro-economic environment of the states have been measured through various dimensions covering the national output, productivity, fiscal strand, tax revenue capabilities, debt burden, banking sector development, productive capacities, inflation, etc.

The possible indicators cover net state domestic growth rate, Percentage share of agriculture, industry and service in the state gross state domestic product, Own tax revenue as percentage of GSDP, public debt, Fiscal and Revenue deficit as percentage of GSDP and inflation rate. These variables are taken into consideration after vast literature related to regional economic performances international as well as national.

## REVIEW OF LITERATURE

In this section the studies related to various macro-economic performance indicators and their relationship with the growth of the economy has been discussed. Various researchers have measured the relation between public debt and growth of GDP. Reinhart and Rogoff (2010) in their study found that countries having more than 90 percent public debt have shown lower growth performance than other countries whose public debt percentage are less. Kumar and Woo (2010), have found in their study that higher level of public debt leads to negative growth of an economy.

The research clearly shows that initially the higher ratio of public debt can lead to larger negative effect on the GDP of a country. Similarly, study of Cecchetti et al (2011) have also proved that more than 96 percent public debt ratio creates problem situation for the country. Country with high level of debt to GDP ratio needs to take quick decision to address the problem of fiscal deficit sometimes. Baum, Checherita and Rother (2013) also conducted a study which focus on the Euro Area alone, and found that public debt to GDP ratio has a non-linear effect on growth, leading to lower growth when it exceeds 95 percent. Herdon, Ash, and Pollin (2013), have shown a contrasting view and found that public debt does not affect the growth rate of an economy. Rangarajanans Srivastava (2004) have stated in their study that higher ratio of fiscal deficit to GDP will lead to sharp increase in debt to GDP ratio

The researcher also found that higher fiscal deficit negatively affects the rate of saving and investment in an economy. Bernheim, (1989) have shown in their research that due to revenue deficit the savings of government will get reduce and that reduction cannot be fully offset even with the increase in private savings, thus the overall rate of savings gets reduces. Thus both the fiscal and revenue deficit will lead to decrease in rate of saving and investment which will result into low growth rate of economy.

The researcher also found a positive and significant relationship between banking development and growth of economy. Financial indicators have a direct impact on the growth of the economy. Credit deposit ratio is one of the best financial indicators which show that usage of financial service by the people.

Higher level of credit deposit ratio shows the higher level of usage of banking services among the citizens and thus lead high growth rate of economy (Cetin, 2015). Researchers have also conducted study to find the relation between inflation and growth of the economy. (Omoke, 2010) Researchers have argued that a high level of inflation can interrupts the smooth functioning of a market economy.

Researchers have found a mix of results while conducting study to measure the relation between inflation and economic performance of a country. Some researchers have found positive relation; some have found negative relation while some researchers have found neither positive nor negative relation between inflation and economic performance of a country. Johansen (1967) have found no relation between inflation and macroeconomic performance of a country. While De Gregorio (1993), Fischer (1993), Barro (1995, 1996), Malla (1997) and Brunno and Easterly (1995) have a found a negative correlation between inflation and economic performance. Studies of Faria and Carneiro (2001) have established a positive relation between inflation and economic performance.

From the literature review it is clear that majority of the study have measured the macroeconomic performance at national level, or have made a comparison of various economies but very few studies are available where the macroeconomic performance at state level has been measured or analyzed by the researchers. Current study will be an attempt in the direction of filling this gap.

## OBJECTIVES

To measure the macro economic performance Index of the specific states of India.

## Sample Design

Currently, eleven states of India have been given the 'special state statuses'-Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland, Sikkim, Tripura, Uttarakhand, Himachal Pradesh, Jammu Kashmir. Special categories status is classification given Centre to assist in development of those states that face geographical and socio-economic disadvantages like; high terrains, strategic international borders, economic and infrastructural backwardness non-viable state finances.

The classification came into existence in 1969 as per the suggestion given by the fifth finance commission, set to devise a formula for sharing the funds of Centre government among the states. Now current study is based on the secondary data derived from the Reserve bank of India, "Hand book statistics on Indian states" and Economic Survey Reports of the state and official websites of the states. The secondary data has been collected for period of 2011-14. The composite index for macro-economic performance of the different states of India has been calculated on the basis of Wroclaw Taxonomic method which has been explained in detail.

## RESEARCH METHODS

The composite index of macro-economic development is constructed applying Wroclaw Taxonomic Method developed by Florek et al. (1952) and Narain et al. (1991) have also used this statistical method for calculating the

Composite index which can include any number of indicators. Let  $[X_{ij}]$  be the data matrix,  $i = 1, 2, \dots, n$  (Number of unit) and  $j = 1, 2, \dots, k$  (number of indicators).  $[X_{ij}]$  are transformed to  $[Z_{ij}]$  as follows:

$$[Z_{ij}] = \frac{(X_{ij} - \bar{X}_j)}{S_j}$$

$\bar{X}_j$  = mean of the  $j$ th indicator,  $S_j$  = standard deviation of the  $j$ th indicator and  $[Z_{ij}]$  is the matrix of standardized indicators. From  $[Z_{ij}]$ , identify the best value of each indicator, maximum value or minimum value depending upon the direction of the impact of indicator on the macro economic development.

$$P_{ij} = (Z_{ij} - Z_{oj})^2 \text{ and } (C_i) = \sqrt{\sum_{j=1}^k \frac{P_{ij}}{cv_j}}$$

Where  $P_{ij}$  = pattern of development,  $Z_{oj}$  = Best value for indicator, and  $(C.V.)_j$  is the coefficient of variation of the  $j$ th indicator in  $X_{ij}$ .

$$D_i \text{ (Composite Index)} = \frac{C_i}{C}$$

Where  $C = (\text{Mean Value of } C_i + 3 * (\text{Standard deviation of } C_i))$

## RESULTS AND DISCUSSIONS

### The Development Level

The composite indices of macro-economic development have been worked out for specific states of India in respect of macro-economic performance. The states have been ranked on the basis of composite indices. The values of composite indices along with the rank of states are given in table 1. It may be seen from table 1 that in case of macro-economic environment development, the state of Tripura was ranked first the state of Mizoram was ranked last. The composite indices varied from 0.52 to 0.90. The macro- economic performance plays a very important role in enhancing the level of development and investment flow in the state.

**Table 1: Composite Index (C.I.) and Rank of Specific Indian States**

STATE	C.I	RANK
Arunachal Pradesh	0.5995	6
Assam	0.5965	5
Himachal Pradesh	0.6202	7
Jammu and Kashmir	0.5825	4
Manipur	0.5446	3
Meghalaya	0.5375	2
Mizoram	0.9010	11
Nagaland	0.6251	8
Sikkim	0.8205	10
Tripura	0.5233	1
Uttarakhand	0.6911	9

### Regional Disparities and Policy Implications

The broad conclusions emerging from the study are as follows:

With respect macro-economic development, the state of Tripura, Meghalaya, Manipur and Jammu & Kashmir are found to be better developed in comparison to other states. The states of Mizoram, Sikkim, Uttarakhand and Nagaland are low developed. Special care should be taken for the implementing the developmental programmers in these state

## REFERENCES

1. Acharya, Shankar (2013), “*BoP: Zero Dark Thirteen?*”, Business Standard, March 13, available at <http://www.business-standard.com/article/opinion/bop-zero-dark-thirteen>.
2. Baum, Anja, Cristina Checherita and Philipp Rother (2013), “*Debt and Growth: New Evidence from the Euro Area*”, Journal of International Money and Finance, Vol. 32, pp. 809–21.
3. Barro, R. J. (1995), “*Inflation and Economic Growth*” National Bureau of Economic Research Working Paper No. 5326.
4. Bernheim, Douglas B. (1989), “*A Neoclassical Perspective on Budget Deficits*”, Journal of Economic Perspectives, Vol. 3 No. 2, pp. 55-72.
5. Bruno, M., and Easterly, W. (1995), “*Inflation Crises and Long-Run Growth*”, World Bank Policy Research Working Paper No.1517
6. Cecchetti, S. G., Mohanty, M.S., and F. Zampolli, 2011, “*The Real Effects of Debt*”, Federal Reserve Bank of Kansas City, Economic Symposium 2011: Achieving Maximum Long-Run Growth, pp. 145–96.
7. Cetin, H. (2015), “*The Relationship between Turkey’s Financial Indicators and Economic Growth Rates*”, Journal of Economics, Business and Management, Vol. 4 No. 1, pp. 159-66
8. De Gregorio, Jose (1993), “*Effects of Inflation on Economic Growth: Lessons from Latin America*”, European Economic Review, Vol. 36 (April), pp. 417–25.
9. Faria, J. R. and Carneiro, F.G. (2001), “*Does High Inflation Affect Growth in the long and short run?*” Journal of Applied Economics, Vol. IV, No. 1, pp. 89-105.
10. Fischer, S., (1993), “*The role of macroeconomic factors in economic growth*” Journal of Monetary Economics, vol. 32, pp. 485-512.
11. Herndon, Thomas, Michael Ash, and Robert Pollin, (2013), “*Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff*”, Political Economy Research Institute, Working Paper No. 322.
12. IMF (2013), India: Staff Report for the 2013 Article IV Consultation.
13. Johansen, S. and K. Juselius (1990), “*Maximum Likelihood Estimation and Inference on Co-integration with the Application to the Demand for Money*” Oxford Bulletin of Economics and Statistics, Vol. 52, pp. 169-210.
14. Kumar, Manmohan, and Jaejoon Woo (2010), “*Public Debt and Growth*”, IMF Working Paper No. 10/174, July (International Monetary Fund: Washington, DC).
15. Malla, S. (1997), “*Inflation and Economic Growth: Evidence from a Growth Equation*” Department of Economics, University of Hawaii at Manoa, Honolulu. Available at [www.hawaii.edu/~malla](http://www.hawaii.edu/~malla)

16. Mishra, Prachi (2013), “*Has India’s Growth Story Withered*”, Economic and Political Weekly, Vol. XLVIII, No.15, pp.51-59.
17. Mody, Ashoka and Michael Walton (2013), “*What Type of Crisis for India?*”, Business Standard, May 6.
18. Nagaraj, R. (2013), “*India’s Dream Run, 2003-08: Understanding the Boom and Its Aftermath*”, Economic and Political Weekly, Vol. XLVIII, No.20, pp.39-51, May 18.
19. Omoke Philip Chimobi (2010), “*Inflation and Economic Growth in Nigeria*”, Journal of Sustainable Development Vol. 3, No. 2, pp. 159-160.
20. Rangarajan, C. and D.K. Srivastava, (2003), “*Dynamics of Debt Accumulation in India: Impact of Primary Deficit, Growth and Interest Rate*, Economic and Political Weekly”, Vol. 38 No. 46, November, 2003.
21. Reinhart, Carmen M. and Kenneth S. Rogoff (2010), “*Growth in a Time of Debt*”, American Economic Review: Papers & Proceedings, Vol. 100, No. 2, pp. 573–78.
22. Tarapore, S.S. (2013), “*A Plot to Destroy RBI*”, Business Line, May 2.