



AUDIT

Index the states of India based on their economic performance

PROBLEM STATEMENT



Indian Institute Of Technology , Kharagpur



Problem Statement

Aim

The participants have to develop an index of performance of state governments on a given set of parameters. At present, state ranking on financial performance or economic management is generally either journalistic effort or credit rating exercise by rating agencies. There is a need to develop an index of state government performance that captures the economic management, the improvement in socio economic structure and the financial conditions of the government. Such an index would be a useful commentary on the quality of a state government's performance year on year. These would be useful inputs for the markets, central and state governments. This would also help to understand why certain states are performing better than the other and where the scope for improvement lies. The index should be based on set of parameters chosen for doing comparative analysis of different states. Ultimately all round development needs to reflect using fiscal numbers.

The three essential categories for measuring state performance are:

- Economic management
- The improvement in socio economic structure
- The current financial condition

Parameters

Below is a broad list of parameters to be considered in the three categories mentioned earlier for developing index. The parameters have been grouped under Economic Structure, Economic management and State Finance.

Parameters	Detailed parameter	Description
ECONOMIC STRUCTURE	Ratio	Shows how strong the economy is to begin with.
Per capita GDP	GDP/Population	Indicates how rich/poor an economy is.
Diversity of economy	Mix of primary, secondary, tertiary sectors in GDP	The more diverse economies are more resilient.
Quality of physical infrastructure	Availability of power, roads, telecom, hospitals, irrigation etc.	A good infrastructure is a requirement for growth.
Quality of human infrastructure	Literacy rate, mortality rate	
ECONOMIC MANAGEMENT	Ratio	Shows how well the economy is being managed
GDP growth	Growth percentage of GDP	
Improvement in quality of physical infrastructure	Improvement in availability of power, roads, telecom, hospitals, irrigation etc.	
Improvement in quality of human infrastructure	Improvement in literacy, mortality levels	
industrial development	New industries setup, corresponding revenue generation and employment generated	





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STATE FINANCE	Ratio	State finances reflect economic structure & management
Growth in revenues	growth percentage of tax and non-tax revenues	Ultimately good management must reflect in growth of revenues.
Extent of non-developmental expenditure	(Salaries+Debt repayments+Interest)/Total expenditure	Shows extent of expenditure spent on administration.
Social sector expenditure	Social expenditure/Total expenditure	Shows what % of expenditure goes in improving human infrastructure.
Extent of fiscal deficit	Fiscal Deficit/GDP	Extent of budget gap
Extent of Revenue deficit	Revenue Deficit/Fiscal Deficit	Shows what % of fiscal deficit went to meeting current expenses.
Level of indebtedness	Outstanding Debt/GDP	It indicates future liabilities.
Level of Guarantees	Outstanding guarantees/GDP	It indicates health of state level enterprises; weaker these entities, greater the number of guarantees issued.

Instructions for Developing Index:

The participants are required to develop the following:

- Develop 3 different indices for the 3 categories mentioned above to capture state performances in these categories.
- Participants should decide on the weight given to each factor (some factors have been mentioned in the data table below) in different categories for developing the three indices and also **justify the same**. Participants can mail at: pritish.jha@ktj.in asking for excel document of the data separately.
- Make a cumulative index to measure the net state's performances combining the state performance in all 3 categories. You are required to give 30% weight age to economic management, 30 % to the improvement in socio economic structure and 40% to the financial conditions of the government.
- Use the net index developed using all 3 categories for comparative analysis between different states: Namely West Bengal, Bihar, Gujarat, Maharashtra, Karnataka, Kerala, Uttar Pradesh, Rajasthan, Odisha.



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Data

Factors (2011-2012)		West Bengal	Bihar	Gujarat	Maharashtra	Karnataka	Kerela	Uttar Pradesh	Rajasthan	Odisha	India
GDP, Sector wise GDP, Literacy and Mortality Rates											
Nominal GDP (in crores of rupees)		339844	144278	398884	805031	286410	210107	423261	227822	130669	5243582
Population	2011	91347736	103804637	66280383	112372972	61130704	33387677	199581477	68621012	41947358	1210193422
	2001	80176197	82998509	50671017	96878627	52850562	31841374	166197921	56507188	36804660	1028737436
Agriculture and Allied GSDP (in crores of rupees) at 2004-05 constant prices		59400	34005	51775	59501	43688	20457	95376	47597	22642	739495
Industry GSDP (in crores of rupees) at 2004-05 constant prices		64789	29801	163821	249168	82593	42624	99217	64306	48913	1442498
Services GSDP (in crores of rupees) at 2004-05 constant prices		209395	88059	183526	496363	165380	145387	225423	103551	66030	3061589
GSDP growth %		6.58	13.26	8.53	8.54	5.5	9.51	6.86	6.11	4.92	6.88
Per Capita NDP (in crores)		34166	13178	57508	64951	42218	53877	18249	28851	24134	38037
Literacy rate 2011 in %		77.08	63.82	79.31	82.91	75.6	93.91	69.72	67.06	73.45	74.04
Literacy rate 2001 in %		68.64	47	69.14	76.88	66.64	90.86	56.27	60.41	63.08	64.84
Crude Birth Rate or CBR 2011(Per 1000 of population)		16.3	27.7	21.3	16.7	18.8	15.2	27.8	26.2	20.1	21.8
Crude Birth Rate or CBR 2010(Per 1000 of population)		16.8	28.1	21.8	17.1	19.2	14.8	28.3	26.7	20.5	22.1
Crude Death Rate or CDR 2011 (Per 1000 of population)		6.2	6.7	6.7	6.3	7.1	7	7.9	6.7	8.5	7.1
Crude Death Rate or CDR 2010 (Per 1000 of population)		6	6.8	6.7	6.5	7.1	7	8.1	6.7	8.6	7.2
Infant Mortality Rate 2011 (Per 1000 of live births)		32	44	41	25	35	12	57	52	57	44
Infant Mortality Rate 2010 (Per 1000 of live births)		31	48	44	28	38	13	61	55	61	47
CBR-CDR 2011 (Per 1000 of population)		10.1	21	14.6	10.3	11.7	8.2	20	19.6	11.6	14.7
Statewise % BPL	2011-12	20.0	33.7	16.6	17.4	20.9	7.1	29.4	14.7	32.6	21.9
	2004-05	34.3	54.2	31.8	38.1	33.4	19.7	40.9	34.4	57.2	37.2
Infrastructure and Employment											





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Unemployment(out of 1000 for above 15 age)	78	83	10	28	25	99	25	17	30	38
Industrial Growth rate % of GSDP at 2004-05 constant prices	3.7	18.27	-	9.15	3.65	6.97	3.5	5.08	8.49	3.49
Total Energy in MW	8507.29	1833.93	23887.54	28310.83	13465.44	3827.73	13680.99	10247.48	6596.33	205340.26
Thermal Energy in MW	7229.54	1624.7	18841.32	20354.72	6355.65	1687.94	10822.87	5777.15	4332.1	136436.18
Hydro Energy in MW	1116.3	129.43	772	3331.84	3599.8	1881.5	1821.42	1527.8	2166.93	39291.4
Nuclear Energy in MW	0	0	559.32	690.14	254.86	95.6	335.72	573	0	4780
Renewable Energy in MW	161.45	79.8	3714.9	3934.13	3255.13	162.69	702.98	2369.55	97.3	24832.68
Growth Rate Of Installed Generating Capacity of Electricity (%)	3.4	2.01	44.92	18.36	16.44	0.68	43.44	17.21	16.42	15.17
Household access to safe water in %	92.2	94	85.7	83.4	87.5	33.5	95.1	78.1	75.3	85.5
Toilet Facility (% of household)	58.8	23.1	57.3	53.1	51.2	95.2	35.6	35	22	46.9
Total surfaced roads 2011-12	115534	57198	141565	339794	179099	110359	297674	194979	58719	
Total surfaced roads 2010-11	108000	54601	140991	336006	177188	110328	283135	176964	46767	
Growth rate of telecom subscribers % 2013	-4.49	-1.44	2.72	2.14	0.23	-4.48	2.44	4.1	1.07	0.28
Financial health-Revenue and Expenditure										
2011-12 revised tax estimates in million	435218.5	414147	495224.1	997485.1	568500.7	326233	1027859.8	392039	254094	8111900
2011-12 revised non tax estimates in million	156220.4	147209.5	127698.1	255643	115475.1	69645.9	348361.1	169172.3	148118.9	3302800
Total revenue(2011-12) in million	591438.9	561356.5	622922.2	1253128.1	683975.8	395878	1376220.9	561211.3	402213	11414700
2010-11 accounts of tax estimates in billion	370.8	338.5	430.2	864.5	479.8	268.6	845.7	336.1	216.9	6802
2010-11 accounts of non tax estimates in billion	101.8	106.8	93.5	194.2	102.3	41.3	266.1	123.1	115.9	2551.5
Total revenue(2010-11) in billion	472.6	445.3	523.7	1058.7	582.1	309.9	1111.8	459.2	332.8	9353.5
Non-Development Expenditure in billion	319.2	207.5	224.4	441.9	180.8	193.1	546.7	193.7	129	4132.9
Social Sector Expenditure/Total expenditure in %	44.1	41.8	38.6	42.2	39.3	34.9	40.3	43.7	43.3	39.8
Social Sector Expenditure in billion	388.2	301	308.9	645.2	331.4	187.8	661.7	299.2	194	5702.4
Fiscal Deficit in billion	216.8	128.9	127.7	206.8	126.7	113	186.9	76.9	20.6	2078.8
Revenue Deficit in billion	172.7	-6.9	-19.2	20.6	-31.4	54.7	-79.8	-4.4	-31.5	-60.9
Outstanding debt as a percentage of GDP	38.6	29	26.7	21.5	23.2	28.9	38.7	29.1	21	22.6



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In addition to the data provided above, participants are free to use additional data from the sources mentioned below. But the data used should not contradict the provided one. **Also the source of data used must be clearly mentioned in the abstract.**

Data resources: The primary documents that would be required for building the index are the RBI publication on state finances and the economic surveys of the state. The various data resources available are:

- RBI's annual publication on state government budgets. <http://tinyurl.com/rbidata>
- Individual state government websites- the finance department of state governments host the detailed budget documents
- The website of the Planning commission of India also provides information on state government finances and schemes
- Data Portal India – data.gov.in/

Note: Data from media reports or rating agencies will not be considered valid.

Submission Format

- The abstract should be submitted in PDF format (Times New Roman font, size 12, with single spacing, font color black in MS word). The cover page should contain the details of the team.
- **The submission would be considered void if any kind of plagiarism is found. So any sources or reports used in framing the abstract must be clearly mentioned.**

Judging Parameters for Submission Round

- **Methodology used:** The logic of construction, the number of variables captured and how comprehensive the index is?
- **Analytical rigor:** The accuracy of the analysis.
- **Quality of results and their interpretation:** The quality of the findings and how the team has interpreted them to arrive at conclusions.



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Final Round

- 10-12 teams shall be selected on the basis of the first round.
- The selected teams will give their presentation in Kshitij 2014
- Computer for presentation will be provided by us.
- The teams will get 8 minutes to discuss their analysis in brief and present the salient features of their abstract covering all the parameters used by them.
- They will then have 4 minutes to wind up. Teams should point out to the loopholes in the various economic structures and recommend strategies to overcome the same.
- This will be followed by a question and answer session by judges for 3 minutes duration.

Judging Parameters for Final round

- **Presentation:** Clarity in approach and way of presentation.
- **Content:** Methodology used; accuracy of analysis and quality of interpretation.
- **Understanding:** Based on Q & A session.



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