

ECONOMIC FREEDOM

for states of India 2005

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This study represents the personal views of the two authors. It does not represent the views of the Rajiv Gandhi Institute for Contemporary Studies and its Governing Council, the Rajiv Gandhi Foundation and its Board of Trustees, or the Chairperson of these two organizations.



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Introduction

This is the second year's Economic Freedom Index for the States of India. This year's ratings follow the same methodology, broadly the same data sources, but updated to the latest available. The difference in ratings for each of the States therefore allows us to follow how economic freedom has been changing in different parts of India. We find that many States have improved their ratings, but some have fallen significantly, reflecting greater intervention in the economy by the government, as well as a general fall in the freedom with which people can carry on their economic activities.

The term economic freedom has many connotations. Different studies and measures of economic freedom use different definitions of economic freedom. According to Milton Friedman, economic freedom is one part of the concept of 'human freedom' - which is a mix of economic, social and political freedom. The State economic freedom ratings for India are limited to measuring economic freedom. Economic freedom itself here is considered to be one where the involvement of the government is minimal, and is largely aimed at protecting property and life and facilitating smooth transactions.

The Index of Economic Freedom (Heritage Foundation, 2002) defines economic freedom as "the absence of government coercion or constraint on the production, distribution, or consumption of goods and services beyond the extent necessary for citizens to protect and maintain liberty itself". This Economic Freedom Index for India accepts this definition of freedom, but carries it a little further. While identifying that the government should not interfere in the working of the market, it further requires that the government should fulfill its duty of protecting life and property, and enforcing legal contracts and law. This study is more on the lines of the Economic Freedom of the World conducted by the *Liberale Institut* and the Fraser Institute for various years. (*Liberale Institut, Economic Freedom of the World: Annual Report*, various years, The Fraser Institute, Vancouver, Canada.).

Few studies are available on the calculation of economic freedom at the sub-national level. Canada (*Economic Freedom of North America*, Fraser Institute, December 2002), and United States (Byars, J., R. McCormick and B. Yandle, *Economic Freedom in America's 50 States*, Clemson University, Clemson, USA, 1999) have attempted this. A recent effort has also been made in China (See National Economic Research Institute. 2001. *NERI Index of Marketization of China's Provinces*, Beijing). In India this is the second year of the first such study. At the sub-national level some of the issues are different from those that apply at the national level. For one, the scope of powers of sub-national governments tends to be limited and therefore many areas are irrelevant for sub-State economic freedom. Which factors are more relevant for nations and which for sub-nations is of course a matter of country-specific policy.

Other studies

The Economic Freedom of the World index measures the consistency of a nation's policies and institutions with economic freedom. The Economic Freedom Index for India is also similar. This index considers economic freedom to mainly consist of personal choice, voluntary exchange, freedom to compete, protection of person and property and availability of legal and monetary arrangements that not only protect property rights of owners, but also ensure an even-handed enforcement of contracts. It recognizes that economic freedom is furthered when the government does not interfere with personal choice, voluntary exchange, freedom to enter and compete in labour and product markets and entry into occupations and business activities. However, since this is a sub-national level study, some considerations of economic freedom do not apply. Also some indicators of economic freedom could not be included due to lack of good quality data.

The Economic Freedom of the World measures the performance of different countries using 5 major areas, namely, size of the government; legal structure and security of property rights; sound (legal and readily exchanged) money; freedom to trade with foreigners; and regulation of credit, labour and business. Together these 5 major areas make use of 37 variables to measure economic freedom. This study includes only 3 of them. This study captures the extent to which the states rely on government budget and political decision-making rather than personal

choice and markets, the extent to which justice is served, the levels of corruption, functioning of free markets and the extent of regulation in labour markets. The ease with which economic agents can access and use alternative and more credible currencies and get access to credit and save their earnings; and the ease (extent of red-tape and convertibility) and extent of international trade are however not included. Such issues are meaningful only at the national level since there is a central policy for them.

Byars *et al's* index of economic freedom at the sub-national level for the United States (1999) involved the creation of indices of economic freedom for the fifty U.S. states and ranked the same on the basis of measured economic freedom. They use the following definition of economic freedom: "The right of individuals to pursue their own interests through voluntary exchange under a rule of law". Using data from the mid- to late- 1990s, the study accumulates data on economic freedom. The study assembled state level data on a wide variety of economic activities. These were then categorized into five different sectors, fiscal, regulatory, judicial, government size, and welfare. From these five sectors a number of indices of economic freedom were created. Finally, one single index was derived using Principal Component Analysis.

Their index is based on many different individual measures of economic freedom, spanning government spending, regulation, welfare, school choice, taxation, and the judicial system. The index is somewhat subjective since in some places the authors used own judgments on relevance and importance of variables. However, the final aggregation makes use of Principal Component Analysis (PCA) that eliminates subjectivity in aggregation.



India and its States

There are 29 large & small states and 6 Union Territories that make up the federation of India. The administrations are divided as those of “States” and “Union Territories”. Geographical sizes differ highly across states and UTs. The latter tend to be smaller than the former. All of these have independently elected governments. The administrative divisions are based on distinct language (West Bengal, Kerala, *etc.*), distinct cultural roots (Tamil Nadu, Rajasthan), colonial past (Goa, Pondicherry), and geographical characteristics (Himachal, *etc.*). These divisions are largely aimed at administrative efficiency.

States have elected legislatures with greater control over state level policy, own tax and revenue collection, and self determined expenditure allocations. Union territories have less freedom since they are centrally governed. Governance is mainly of a multi-tier form with intervention at the central, state, and local level. Each tier has its own elected representatives.

Some functions are exclusive to the State or Central Governments, while they share others. The constitution assigns functions through the state list, union (central) list, and concurrent list.

Under State Control

Law, Order, Justice and local governance

Public health and environment

Land and water

Airports, post & telegraph

Some types of taxes

Infrastructure, except national highways

Some aspects related to Commerce & Industry

Under Central Control

Administrative functions such as defense, foreign affairs

Labour, quality standards

Railways, shipping, ports,

Income tax, customs and excise

Deals with the RBI, public debt

Natural resources

The Concurrent list

Both the State and the Central Governments have control over these areas. While it is mainly the states that decide, in case of disagreement, the decision of the central government prevails.

Under Common Control

Inter state interactions

Labour issues

Education

Environment

Power

Shipping and inland waterways

It is because of this division of control that certain indicators that are meaningful in terms of economic freedom at the national level are not valid indicators at the sub-national or state level. This study considers only 20 out of the 35 states and union territories. Further, it considers areas that are predominantly affected by state-level efforts and not central/local government efforts.

This study

This study aims to minimize subjectivity by not using any qualitative measures. Instead it creates an index value for each measure on the lines of EFW, calculates a mean index for each major area and then takes the arithmetic mean of the different category indices to arrive at the composite economic freedom index at the sub-national level. The data and methodology used are explained in detail in the next sections.

The Economic Freedom Index for India derives from the Economic Freedom of the World report in that this report uses the same definition of economic freedom and the same major areas. Laws are similar across different states. Freedom of entry into and exit from different activities is also similar across different states. By merely studying the existence of such freedoms one is not likely to obtain any differences between different sub-national units. As a result, the major areas - 'Freedom to Exchange with Foreigners' and 'Access to sound money' - do not figure in this report at all. Many indicators that were included in EFW, therefore, could also not be included in this report. The indicators used within each area differ from those used in EFW. Indicators that were meaningful for a state-level analysis have been included instead of those that were used at the country level. Also, alternative indicators that facilitated measurement of freedom within a specific category were included.

This report is organized as follows. The report is divided into 4 parts. This (first) section has presented a brief introduction of economic freedom and discussed other freedom rankings and motivates what follows. The second section discusses the data and the third discusses the methodology used to arrive at the economic freedom index. It explains the variables included in the index and how they represent economic freedom. The fourth section presents the results of the composite economic freedom index. The fifth section presents a discussion on the state level results. Other outcome variables that help estimate the validity of the index are considered in the sixth section. Finally, the last section presents a discussion on the data that could not be included in the index, but are important indicators of economic freedom.

Data

Data used for representing the level of economic freedom is defined in this section. Data have been taken from various government and private sources and a detailed list of the sources is presented in the appendix (see Appendix 1). Each of the different measures can broadly be categorized on the following lines:

- Size of government: expenditures, taxes and enterprises
- Legal structure and security of property rights
- Regulation of credit, labour, and business

The economic freedom index however is calculated for each of those categories, and also in the aggregate. Each category is important for indicating a specific aspect of economic freedom.

Area 1: Size of government: expenditures, taxes and enterprises

Economic freedom exists when the government plays the role only of providing protection to the citizens from physical harm and protects property rights. Interference of the government in the functioning of the economy or the role of the government as a producer and provider of services and goods or of redistribution of resources reduces the level of economic freedom. Government revenue expenditure, administrative GDP, and a large employment in the public sector are therefore indicators of size of the government. Power subsidy to domestic consumers, taxes on income, commodities and services, property and capital transactions, and other duties are indicative of the extensive role played by the government in the economy. Recently there has been a move towards privatization of the public sector in India. This has also been captured in the economic freedom index through this category.

- 1) Government revenue expenditure as a share of Gross State Domestic Product (GSDP)
Higher revenue expenditure by the Government is indicative of a large size of the government. Inverse of this ratio is considered.

- 2) Administrative Gross State Domestic Product as a ratio of total GSDP Administrative GDP is the contribution of government services to the national product. This is not an addition to the production in the country. The lower this ratio, the better is the level of economic freedom as the government's role is lower.
- 3) Per capita subsidy on power for domestic consumers
This is the ratio of the amount of power subsidy extended to State Electricity Boards (SEBs) for domestic consumers to total population of the state. Inverse of this ratio is considered, as higher subsidy implies higher government intervention and lower level of economic freedom.
- 4) Share of government in organized employment
This is the ratio of employment with the government and quasi government institutions to total organized sector employment. This ratio is a direct indicator of the size of the government. Inverse of the ratio is considered. A high value indicates higher economic freedom.
- 5) State taxes on income as a ratio of GDP
This is the ratio of income tax collected by the state to the GDP. Lower the state taxes on income, higher will be the economic freedom. Therefore, the inverse of this ratio has been incorporated.
- 6) Ratio of taxes on property and capital transactions to state GDP
This is the ratio of taxes on property and capital transactions to state GDP. High transaction costs and taxes tend to restrict the trade activities. Therefore, inverse of the variable is used and economic freedom is considered to be inversely related to level of taxation.
- 7) Taxes on commodities and services to GDP
This is the ratio of taxes collected on commodities and services *i.e.* sales tax, service tax, excise, *etc.* to the GDP. Lower taxes on commodities would result in a higher freedom index.
- 8) Stamp duty rate
Stamp duty is defined as tax collected by the state by requiring a stamp to be purchased and attached on the commodity. Higher duties impose higher constraints on trade and economic activities

and curb the economic freedom of agents. Inverse of this variable is taken to ensure higher level of economic freedom is reflected by a higher ratio.

9) Disinvestment rate of public enterprises

This is the ratio of state level public enterprises that have been disinvested or that have been initiated for disinvestments to the total number of state level public enterprises. Disinvestment paves the way for privatization of public enterprises and therefore the higher the ratio, the higher is the level of economic freedom.

Area 2: Legal structure and security of property rights

The efficiency of the government in protecting human life and property is measured by this category. Quality of the legal infrastructure is measured by the availability of judges, by the completion rate of cases by courts and the police. The level of safety in the region is measured by the recovery rate of stolen property, and by rate of violent and economic crimes.

10) Ratio of total value of property recovered to total value of property stolen

One of the key ingredients of economic freedom is protection of property. This is the ratio of total value of property recovered to the total value of property stolen. Higher value of this variable would mean efficiency of law enforcing agencies in protecting property rights and would therefore signify greater economic freedom.

11) Violent crimes as a share of total crimes

This is the ratio of violent crimes, including murder, attempt to murder, culpable homicide not amounting to murder, rape, kidnapping and abduction, robbery, riots, arson and dowry deaths, to total crimes under the Indian Penal Code. Inverse of this ratio is considered, relating higher economic freedom to lower incidence of violent crimes.

12) Cases under economic offences as a share of total cases registered

This is the ratio of economic offences (criminal breach of trust and cheating) to the total crimes reported under the Indian Penal Code. Inverse of this ratio is considered. Lower incidence of economic offenses is indicative of better protection of property rights and therefore higher economic freedom.

13) Vacant posts in judiciary as a ratio of total posts sanctioned

This is the ratio of total vacant posts of judicial officers in district/subordinate courts to total posts sanctioned. A high value of the ratio indicates that adequate infrastructure for getting justice is not in place. Inverse of this ratio is considered.

14) Percentage cases were investigations completed by police

This is the ratio of total cases were investigations were completed by the police as a ratio of total cases reported to them. Higher value of this ratio indicates higher economic freedom.

15) Percentage cases where trials were completed by courts

This is the ratio of total trials completed by the courts as a ratio of total cases tried. Higher value indicates higher economic freedom.

Area 3: Regulation of credit, labour, and business

An entrepreneur needs to take many decisions that cannot cater to the sentiments of all the workers and management that his firm employs. Decisions such as retrenchments *etc.* at the time of a slump are an essential part of maximizing profits. Constraints on exiting seriously hamper an entrepreneur's freedom. Labor laws for many decades have unduly favored the 'rights' of the workers in the country. The number of strikes and industrial disputes that take place in the economy portray the amount of economic freedom in terms of the control that an entrepreneur has over his own business. Other areas where an entrepreneur may lack control over his own business is in terms of unavailability of adequate infrastructure and raw material. Such limitations severely constrain the entrepreneur's ability to enforce decisions that may be beneficial for his business. High transaction costs are well known deterrents of trade and economic activity. They also contribute to 'black' market transactions. Higher the costs, in terms of licenses, the more constraints they impose on carrying out trade and economic activity and therefore serve as restraints on economic freedom of agents. Corruption also translates into higher transactions costs.

16) Ratio of average wage of unskilled workers (males) to minimum wages

Yearly average of daily wages for harvesting for males is considered as a ratio of minimum wages in the state. A higher ratio indicates that wages received by workers is higher than the specified minimum.

- 17) Average wage of unskilled workers (females) to minimum wages
Yearly average of daily wages for harvesting for females is considered as a ratio of minimum wages in the state. A higher ratio indicates that wages received by workers is higher than the specified minimum.
- 18) Man-days lost in strikes and lockouts/ total number of industrial workers
This is the ratio of man-days lost due to disputes (strikes and lockouts) resulting in stoppages to the total number of workers. A large number of man days lost indicates the inability of arbitration and other consensus mechanisms. Lower the man-days lost, the better the economic freedom. Therefore, inverse of the variable it is considered.
- 19) Unorganized labour force as a ratio of organized labour force in the manufacturing sector.
Economic freedom would ensure that the entrepreneur is able to hire and fire in order to maximize efficiency of workforce and profits. A higher value of this ratio implies higher economic freedom.
- 20) Number of special economic zones (SEZs)
No subsidies are given to units in SEZs, but tax breaks are given, regulations are also fewer and less intrusive in SEZs. SEZs offer a free-market atmosphere to traders, implying a higher level of economic freedom.
- 21) Inverse of minimum license fee for traders
Traders are required to pay a minimum amount of fees for obtaining a license from the government to indulge in market activities. Therefore, the higher the license fees, the more restricted traders get in trading in the market. Inverse of the variable is taken for higher levels of economic freedom.
- 22) Market fees charged by government run/regulated market boards on all commodities as a percentage of estimated value of commodities.
- 23) Implementation rate of Industrial Entrepreneurs Memorandum (IEM)
IEM denotes the intention to invest. However, when there are bureaucratic or other delays, the rate of implementation is low. This

indicator is the ratio of total amount invested as a ratio of total amount proposed for investment through IEMs.

24) Inverse of power shortage as a percentage of total demand (power shortage exists either due to low investment on the part of the government or due to low levels of private sector generation)
This is the ratio of power shortage to the total power demand. Higher power shortage will tend to slow down the production process and thus would relate directly to inability of an entrepreneur to control his business. Again, inverse of the ratio is taken.

25) Pendency rate of cases registered under prevention of corruption and related acts
This is the ratio of cases pending investigation from the previous year of cases registered under prevention of corruption and related acts as a share of total cases registered under the same acts. Economic freedom is higher when justice is served promptly.

26) Persons arrested as a share of total cases being investigated under prevention of corruption and related acts

This is the ratio of persons arrested under prevention of corruption and related acts as a share of total cases registered under the same acts. The higher the ratio, the higher is the level of economic freedom.

The variables have been included in the index on the lines of the Economic Freedom of the World report. Since all the variables that were included in EFW could not be replicated at the sub-national level, proxies are used that are more meaningful at the state level. Often proxies were attempted but data were unavailable, in which case those indicators had to be eliminated from the study. A detailed table that correlates the indicators used in EFW and those included in the study is presented in the appendix (see Appendix 2). The methodology adopted for creating the index is discussed in the following section.

Methodology

The Economic Freedom Index has been calculated for 20 states of India. Ideally, all 35 states and union territories should have been included; however, data unavailability prevented this. (Efforts are currently on to expand the number of states, the next year's ratings are expected to include all the states of India.) As a result only those states and union territories are included, for which data were available for most of the variables that are used to construct the index. No imputations were made.

Further, many variables that would have found a suitable place in this index could not be included as data were not available for many states. Eventually 26 variables covering diverse aspects of economic freedom from different areas were utilized to arrive at the composite freedom index. There were a few variables wherein data were not available for some of the 20 states. However, since the indicator was essential for the credibility of the index, such indicators were retained.

There are many different ways for constructing a composite index. One way to do this is to assign subjective weights to different variables. However, in order to ensure objectivity, this ranking refrains from such an exercise. No subjective weights have been used and as a result each variable is considered to be equally important.

The following steps were followed in constructing the economic index:

- Identifying the appropriate variables: The variables in the freedom index were chosen such that a comprehensive view of economic freedom could be obtained while working within constraints of data availability.
- Normalizing the variables: The size and composition of the states is not uniform. Indian states vary in their geographical area,

topography, social and economic milieu. Depending on the variable and what it aspires to measure, each variable has been appropriately 'normalized'.

- Comparability of data: Since data is collected at the state level, care has to be taken to ensure that the data are defined in the same way for different states and also that they are for the same time point. Further, since the ranking exercise implies that higher values reflect better performance, appropriate ratios have been developed. Often this implied taking an inverse of a particular indicator or subtracting a percentage from 100.
- Creating an index of each variable: While the composite index gives an overall view of freedom, it may be that while a state performs extremely well in certain indicators, its performance may not be as satisfactory in others. An index of each variable or indicator is also constructed, so that a ranking of the states is available for a detailed understanding of the situation of freedom. Details of the construction of individual indices are presented ahead.
- Creating a composite index for each category: Simple arithmetic mean was used to calculate the category indices.
- Calculating a composite/overall index: This final step required all 3 category indices to be put together to come up with a composite indicator of relative economic freedom for 20 states.

The last three steps in constructing the economic freedom index are now explained in detail.

Creating an index of each variable: An index is obtained for each of the 26 ratios as mentioned earlier. The following formula was used to obtain each of the 26 indices:

$$I_{ij} = \frac{S_{ij} - \text{Min}(S_{2j}, \dots, S_{20j})}{\text{Max}(S_{1j}, S_{2j}, \dots, S_{20j}) - \text{Min}(S_{1j}, S_{2j}, \dots, S_{20j})}$$

Where S_{ij} represents the value of ratio j for state i . The index is constructed for 20 states of India and therefore i ranges from 1 to 20. There are 27 ratios for which the indices have been constructed, $j=1, 2, \dots, 27$. I_{ij} is the index value that is derived for state i over ratio j . The index value lies between 0 to 1 for each ratio. The state corresponding to index value 0 can be interpreted as having the lowest level of economic freedom and the state with index value of 1 can be said to have the highest level of economic freedom relative to other states.

Creating a composite index for each category. Arithmetic mean was used to calculate the category index as follows:

$$C_{ik} = \frac{\sum_j I_{ijk}}{n}$$

Where C_{ik} is the category index of the i^{th} state for the k^{th} category over n indices within the category.

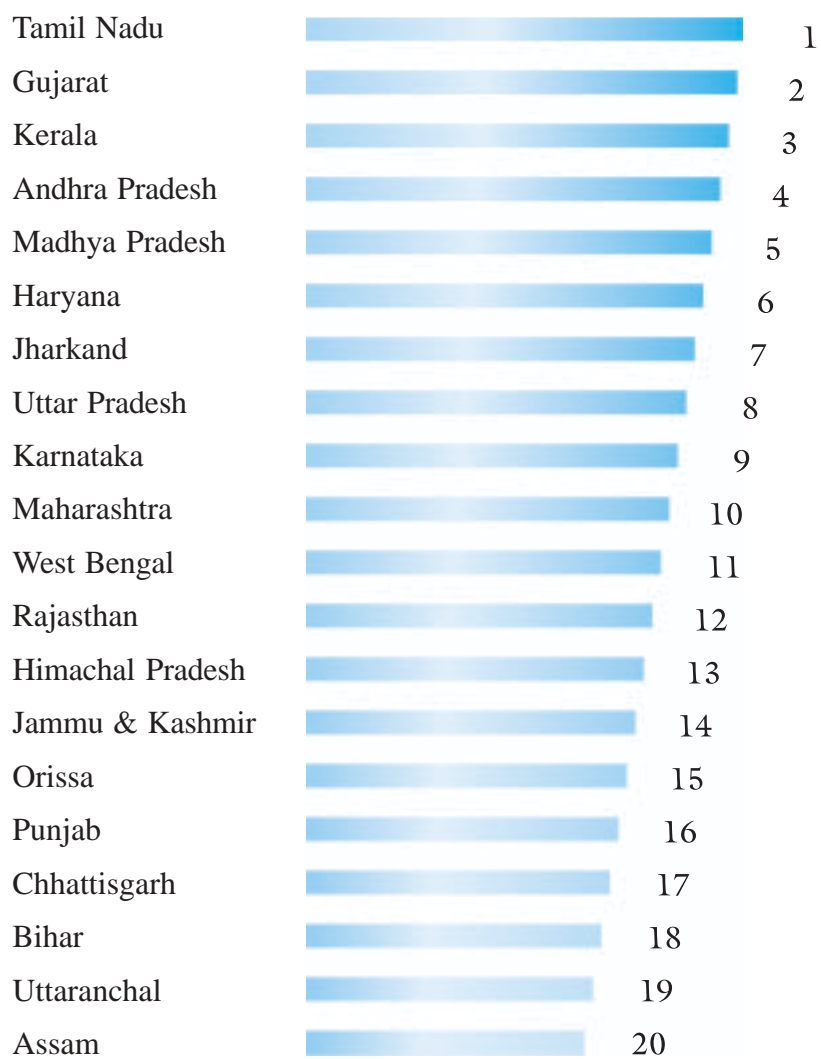
Calculating a composite/overall index: Once all the indices for the 26 ratios were obtained, a composite index was obtained using all these indices. An arithmetic mean of all the indices helped to arrive at the additive index. The formula used to calculate the composite index is as follows:

$$M_i = \frac{\sum_{k=1}^N C_{ik}}{N}$$

Where M_i is the additive index value for the i^{th} state over the N category indices of freedom. Here N is 3.

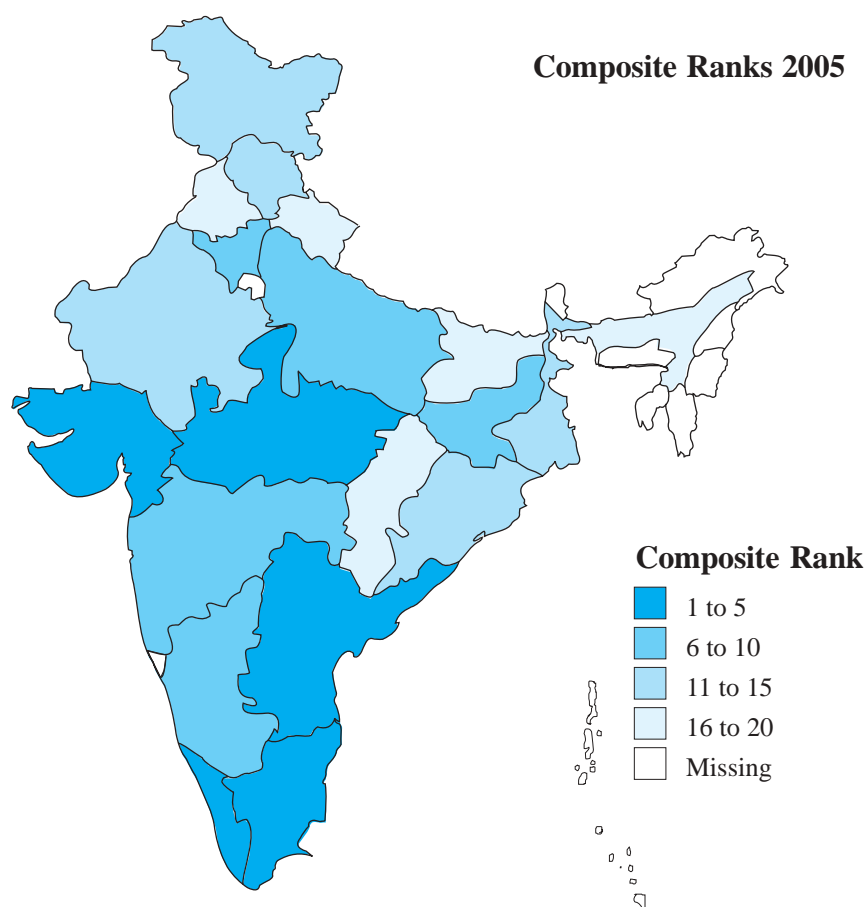
Results

The Composite Economic Freedom Index for India-Ranks



Composite Ranks and Economic Freedom Index

State	Rank 2005	Rank 2004	Economic Freedom Index 2005	Economic Freedom Index 2004
Tamil Nadu	1	5	0.515	0.371
Gujarat	2	1	0.450	0.404
Kerala	3	3	0.447	0.374
Andhra Pradesh	4	2	0.381	0.377
Madhya Pradesh	5	9	0.374	0.332
Haryana	6	8	0.366	0.348
Jharkhand	7	16	0.354	0.294
Uttar Pradesh	8	13	0.347	0.303
Karnataka	9	12	0.337	0.309
Maharashtra	10	6	0.335	0.365
West Bengal	11	14	0.335	0.299
Rajasthan	12	7	0.335	0.348
Himachal Pradesh	13	15	0.317	0.296
Jammu & Kashmir	14	10	0.311	0.328
Orissa	15	11	0.295	0.316
Punjab	16	17	0.290	0.292
Chhattisgarh	17	4	0.266	0.373
Bihar	18	19	0.240	0.265
Uttaranchal	19	18	0.224	0.276
Assam	20	20	0.218	0.222





Summary of States

This section broadly introduces the major changes in the rankings of the states. Details on why certain states have improved or deteriorated in their ratings are provided in the following sections where each area is discussed separately.

The top 3 states in the composite economic freedom index are Tamil Nadu, Gujarat and Kerala. Tamil Nadu has moved up four places from

last year on the strength of better performance in areas 2 and 5. That is, legal structure (area 2) and regulation (area 5) have both shown significant improvements. Gujarat has moved down from the first place to second this year, a major part of the fall being accounted for by area 2, which deals with the legal structure. Other areas regulation (area 5) and government size (area 1) have shown improvements compared to last year. Kerala maintains status quo at number 3. The overall rating for Kerala however shows a rise, the fall in area 2 being made up by an improved performance in area 5.

Like last year, Bihar, Assam and Uttaranchal share the bottom 3 places in the index. While Assam remains at number twenty, Bihar and Uttaranchal have exchanged positions. Uttaranchal has shown an improvement in legal structure,

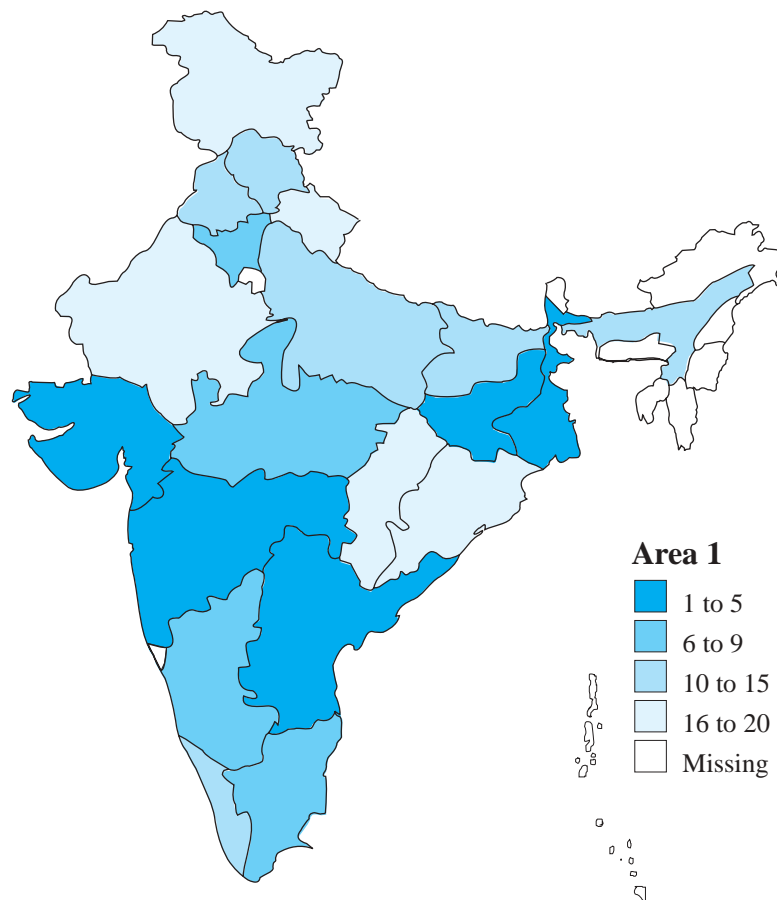
Area 1: Size of Government: Expenditures, Taxes and Enterprises

State	Rating 2005	Rating 2004
Andhra Pradesh	0.413	0.419
Assam	0.276	0.280
Bihar	0.314	0.359
Chhattisgarh	0.231	0.472
Gujarat	0.522	0.457
Haryana	0.324	0.289
Himachal Pradesh	0.287	0.300
Jammu & Kashmir	0.209	0.210
Jharkhand	0.522	0.356
Karnataka	0.374	0.355
Kerala	0.273	0.287
Madhya Pradesh	0.326	0.319
Maharashtra	0.386	0.342
Orissa	0.184	0.173
Punjab	0.312	0.301
Rajasthan	0.248	0.265
Tamil Nadu	0.330	0.344
Uttar Pradesh	0.280	0.282
Uttaranchal	0.144	0.334
West Bengal	0.370	0.358

but it is not enough to offset the poor performance on account of a large government size. Bihar shows a decline in the overall rating although its rank in the index has improved due to a marginal betterment in the regulatory environment in the state.

States that have registered major changes in their positions from last year are Chhattisgarh, Jharkhand and Rajasthan. Chhattisgarh moves down thirteen places to number 17 this year due to poor performance in all 3 areas, viz., government size, legal structure and regulation. On the other hand, Jharkhand has shown a great improvement in respect of the size of the government (area 1) and legal structure (area 2) due to which its rank shoots up to 7 from 16 last year. Rajasthan has fallen five places to number 12 owing to a decline in the performance in government size(area 2) and regulation (area 5).

Area 1: Size of Government: Expenditures, Taxes and Enterprises



The top 5 states in the overall economic freedom index do fairly well in terms of size of the government. Tamil Nadu, Gujarat, Andhra Pradesh and Madhya Pradesh all have relatively small sizes of the government, but Kerala is the worst of the top 5 states with a large government size relative to its economy. Among the lowest 5 states as per the overall index, Uttaranchal and Chhattisgarh show poor results while Punjab, Assam and Bihar are placed in the middle range of the index for this particular area.

Size of the government can be measured by many indicators, one of them being Government revenue expenditure as a share of the state's GDP. West Bengal, Maharashtra and Gujarat show the lowest values for this ratio, while Himachal Pradesh, Jammu & Kashmir and Assam have the highest values.

The contribution of government services to GSDP is also considered to gauge the size of the government. In Gujarat, Haryana, Karnataka and Jharkhand, only a small share of the GSDP is accounted for by government services. The poor performers under this indicator of economic freedom are Jammu & Kashmir, Bihar, Uttaranchal and Himachal Pradesh.

The government should play a very minimal role as a subsidizer of non-essentials. Power subsidies to domestic users as a ratio of population of the state are lowest for Jharkhand, Bihar, Karnataka and Gujarat, signifying greater economic freedom. On the other hand, the same ratio is quite high for Kerala, Himachal Pradesh and Andhra Pradesh.

Income tax and other taxes, act as constraints on economic freedom. In an economically free state individuals have the right to receive fully the returns from their efforts, whether manual or intellectual. In Assam, Chhattisgarh, Andhra Pradesh, Madhya Pradesh and Maharashtra, income tax revenues as a ratio of GSDP are quite high whereas tax revenues account for a small share of the GSDP in Haryana, Kerala, Tamil Nadu and Uttar Pradesh.

Total revenues from taxes on property and capital transactions as a ratio of GSDP are much higher in Haryana, Karnataka, Kerala, Maharashtra and Uttar Pradesh as compared to the states of Jammu & Kashmir, Jharkhand and Himachal Pradesh.

Most states ranking high on the composite economic freedom index show high ratios of taxes on commodities and services to GSDP. These essentially include Tamil Nadu, Gujarat, Haryana, Andhra Pradesh and Kerala. West Bengal, Jharkhand, Bihar and Assam do not generate a large proportion of their revenues from this head of taxation.

Likewise, high stamp duty rates as observed in Orissa, Haryana, Bihar, Jharkhand, Karnataka, Uttar Pradesh and Uttaranchal signify lower economic freedom. On the other hand, considerably lower stamp duty rates are seen in Andhra Pradesh, Punjab, West Bengal and Maharashtra.

Larger the proportion of government and quasi-government employees in the organized labor force, lower is the economic freedom in a state. Assam, Gujarat, Kerala, Karnataka and Maharashtra perform quite well in this indicator, while the poor performers include Bihar, Chhattisgarh, Jammu & Kashmir, Orissa and Uttaranchal.

The number of state-owned enterprises also indicates the size of the government. The rate of disinvestments in state level public sector enterprises is quite high in Uttar Pradesh, Madhya Pradesh, Himachal Pradesh, Andhra Pradesh and Gujarat as compared to the states of Bihar, Haryana, Jammu & Kashmir, Maharashtra and West Bengal.

Area 2: Legal structure and security of property rights

State	Rating 2005	Rating 2004
Andhra Pradesh	0.431	0.451
Assam	0.129	0.140
Bihar	0.099	0.136
Chhattisgarh	0.430	0.467
Gujarat	0.311	0.389
Haryana	0.554	0.476
Himachal Pradesh	0.429	0.368
Jammu & Kashmir	0.313	0.277
Jharkhand	0.178	0.127
Karnataka	0.399	0.344
Kerala	0.462	0.486
Madhya Pradesh	0.611	0.543
Maharashtra	0.221	0.257
Orissa	0.346	0.354
Punjab	0.373	0.374
Rajasthan	0.472	0.454
Tamil Nadu	0.755	0.545
Uttar Pradesh	0.401	0.274
Uttaranchal	0.279	0.269
West Bengal	0.175	0.169

Crime rates and the police and legal machinery are the chief components of this area of economic freedom. The top 5 states in the composite economic freedom index perform quite well in this indicator but for Gujarat. Among the lowest 5 states in the index, most perform quite dismally with the exception of Punjab and Chhattisgarh, which are moderate performers.

Protection of property rights is an essential ingredient of economic freedom. A high rate of protection would be indicated by a high recovery rate of property stolen, which is the case in Tamil Nadu, Haryana, Uttar Pradesh, Punjab and Rajasthan. As against this, Gujarat, Bihar, Maharashtra, Kerala and West Bengal show very low recovery rates for stolen property.

The share of total crimes under the Indian Penal Code being accounted for by economic offences is quite low in Chhattisgarh, Himachal Pradesh, Madhya Pradesh and Tamil Nadu. On the other hand, the high proportion of economic offences in Punjab, Uttaranchal, Uttar Pradesh and Andhra Pradesh indicate lower economic freedom.

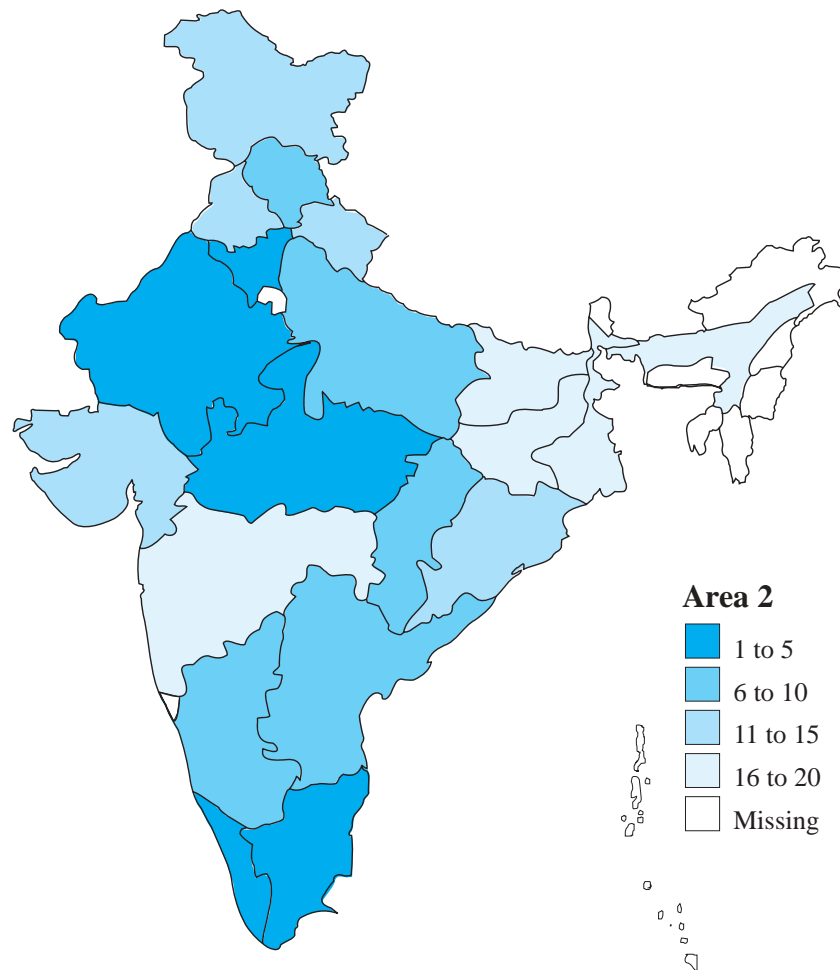
Safety of life is also an important component of economic freedom. Uttaranchal, Uttar Pradesh, Jharkhand, Jammu & Kashmir, Bihar and Assam have a high proportion of violent crimes to total IPC crimes, while these crimes are much less rampant in the states of Tamil Nadu, Gujarat, Andhra Pradesh and Madhya Pradesh.

A higher level of economic freedom is indicated if justice is served more efficiently and effectively. In Chhattisgarh, Gujarat, Haryana, Madhya Pradesh and Rajasthan, a larger share of the cases taken up by the police

are seen through to their completion, unlike in Jharkhand, West Bengal, Punjab, Assam and Bihar. Also, the completion rate of trials by courts is high in the southern states of Tamil Nadu, Andhra Pradesh and Karnataka as compared to West Bengal, Maharashtra, Gujarat, Chhattisgarh, Bihar and Orissa.

The ratio of vacant posts to posts sanctioned for the judiciary is high in Assam, Jharkhand, Bihar, Madhya Pradesh, Uttar Pradesh and Uttaranchal. The same ratio is low for Kerala, Punjab, Karnataka, Himachal Pradesh, and Chhattisgarh.

Area 2: Legal Structure and Security of Property Rights



**Area 5: Regulation of credit,
labour and business**

State	Rating 2005	Rating 2004
Andhra Pradesh	0.301	0.262
Assam	0.249	0.245
Bihar	0.308	0.299
Chhattisgarh	0.139	0.181
Gujarat	0.517	0.367
Haryana	0.221	0.279
Himachal Pradesh	0.235	0.221
Jammu & Kashmir	0.411	0.496
Jharkhand	0.360	0.398
Karnataka	0.238	0.228
Kerala	0.607	0.348
Madhya Pradesh	0.186	0.134
Maharashtra	0.399	0.498
Orissa	0.355	0.420
Punjab	0.186	0.200
Rajasthan	0.284	0.326
Tamil Nadu	0.458	0.223
Uttar Pradesh	0.360	0.353
Uttaranchal	0.248	0.224
West Bengal	0.461	0.371

Regulation of credit, labor and business serves as a direct constraint to the free market mechanism, adversely affecting the level of economic freedom in the region.

The top 5 economically free states perform from moderate to well, except for Madhya Pradesh, which shows very poor performance under this indicator. As for the bottom 5 states in the composite index, with the exception of Bihar and Assam, which are average performers, the other 3 perform quite poorly on this front.

Lower wages to workers may indicate lower levels of economic freedom for the workers. Bihar, Gujarat, Haryana, Jammu & Kashmir, Tamil Nadu and Rajasthan exhibit much higher average wage rate than the specified minimum for males. As for females, Bihar, Gujarat and Haryana are the

best performers in this ratio. Andhra Pradesh, Madhya Pradesh and West Bengal perform poorly when it comes to average male wages while in case of female wages, West Bengal, Andhra Pradesh, Karnataka, Kerala, Orissa and Madhya Pradesh exhibit poor ratios.

Industrial disputes are major constraints for an entrepreneur and his business, and hence, are considered harmful for economic freedom. In Assam, Madhya Pradesh, Orissa, Gujarat and Uttaranchal the least number of mandays were lost due to strikes or lockouts as a ratio of total industrial workers in the state. The disruption rate in West Bengal, Rajasthan, Karnataka and Kerala was much higher.

An unorganized labor force contributes to a higher likelihood of availability of cheap labor. Ability to employ contract and casual labor ensures flexibility to the entrepreneur to hire and lay off as per market

ups and downs. The ratio of unorganized to organized labor force is among the highest in Bihar, Jammu & Kashmir and Orissa while the lowest ratio is observed in Haryana, Gujarat and Punjab, signifying lower economic freedom on this count.

Constraints on trade imposed by market and license fees have also been included in this area of economic freedom. A high rate of market and license fees would indicate lower economic freedom. Gujarat and Maharashtra exhibited low minimum license fee for traders, while Chhattisgarh, Madhya Pradesh, Uttar Pradesh and Uttaranchal charge a very high license fee. The market fee charged by Gujarat, West Bengal, Maharashtra, Karnataka, Assam and Andhra Pradesh is low compared to Uttar Pradesh, Uttaranchal, Madhya Pradesh, Haryana and Chhattisgarh.

In recent times, many Special Economic Zones have been set up or approved to be set up in the country. Although no subsidies are given to units in SEZs, tax breaks are provided and regulations governing them are fewer and also less intrusive. This promotes trade and production. Gujarat, Uttar Pradesh, Tamil Nadu, West Bengal and Kerala have a large number of such zones.

After reforms in the 90s, most licensing was abolished. However industries not requiring compulsory licensing have to file an Industrial Entrepreneurs' Memorandum (IEM) to the Secretariat for Industrial Assistance (SIA). This is however similar to licensing and therefore implementation rates of IEMs are considered as indicators of economic freedom. Assam, Haryana, Rajasthan and West Bengal are among the top performers here, while in Uttaranchal, Orissa, Bihar and Chhattisgarh a large number of IEMs do not get implemented.

A severe constraint on business can be a power shortage at peak production hours and hence this variable is taken as an indicator of economic freedom. Himachal Pradesh, Rajasthan, Bihar, Tamil Nadu and Andhra Pradesh are among those with least power shortage, but Gujarat, Punjab, Uttar Pradesh and Maharashtra count among the poor performers.

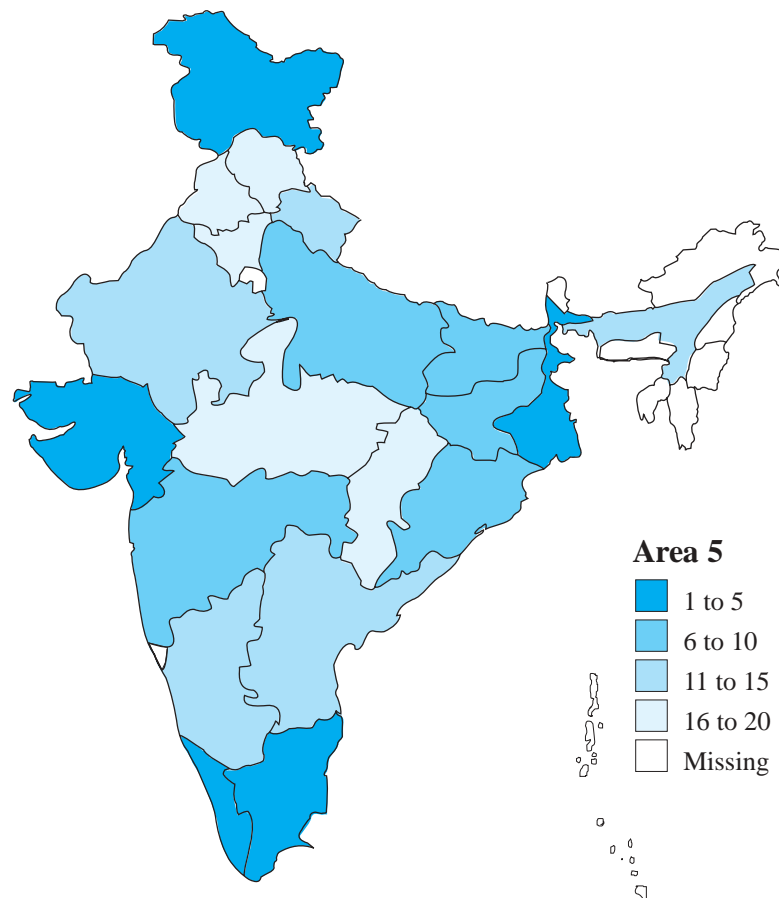
Corruption is measured in terms of cases pending investigation from the previous year as a ratio of total cases for investigation in the current year under Prevention of Corruption and related acts and is included in the freedom index. In Tamil Nadu, Gujarat, Maharashtra, Andhra Pradesh and Orissa a smaller proportion of the total cases are pending

investigation from the previous year, as opposed to the poor situation in Chhattisgarh, West Bengal, Bihar, Uttaranchal and Jammu & Kashmir.

We also considered persons arrested as a share of total cases being investigated under the Prevention of Corruption and related acts. Tamil Nadu, Maharashtra, Haryana, Gujarat, Madhya Pradesh and Andhra Pradesh have a high value for this ratio, while Kerala, West Bengal and Uttaranchal show a lower ratio, indicating greater economic freedom.

States that perform well in the overall economic freedom index do not necessarily perform well in all individual indicators of economic freedom. Similarly, states that rank low in the overall index do exceedingly well in certain individual indicators. The point to be noted is that all states have scope for improvement in providing an economically free environment for their citizens; however, the individual areas requiring attention differ from one state to the other.

Area 5: Regulation of Credit, Labor, and Business



B

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Appendix 1 - Data Sources

Normalised variables	Variables	Year	Units	Source
GSDP/Revenue expenditure	GSDP (1993-94 prices)	2002-03	Rs. Crore	CSO & estimates
	Revenue expenditure	2002-03	Rs. Crore	RBI, State Budgets
% of GSDP accounted for by public administration	% of GSDP accounted for by public administration	2002-03	%	CSO
Population/Subsidy on power for domestic consumers	Population	2001	Number	Census 2001
	Subsidy on power for domestic consumers	2000	Rs. Crore	Rajya Sabha Unstarred Question No. 1957, dated 9.8.2000
Total organized employment/ Government employment	Total employment in organised sector	31st March 2002	in '000	Directorate General of Employment & Training, Ministry of Labour
	Total employment in government and quasi government institutions	31st March 2002	in '000	Directorate General of Employment & Training, Ministry of Labour
GSDP constant prices /State taxes on income	GSDP (1993-94 prices)	2002-03	Rs. Crore	CSO & estimates
	State revenues from income tax	2002-03	Rs. Lakh	State finances, RBI
GSDP constant prices /State taxes on property and capital transactions	GSDP (1993-94 prices)	2002-03	Rs. Crore	CSO & estimates
	State revenues from taxes on property and capital transactions	2002-03	Rs. Lakh	State finances, RBI
GSDP constant prices /Taxes on commodities and services	GSDP (1993-94 prices)	2002-03	Rs. Crore	CSO & estimates
	State revenues from taxes on commodities and services	2002-03	Rs. Lakh	State finances, RBI
Stamp Duty Rate	Stamp Duty Rate	2005	%	www.indiaproperties.com
SLPEs in which disinvestment process initiated or completed /Total SLPEs	Number of state level public sector enterprises (SLPEs) where disinvestment process initiated or completed	2002-03	Number	Deptt of Disinvestment, Ministry of Finance
	Total number of SLPEs	2002-03	Number	Deptt of Disinvestment, Ministry of Finance

Normalised variables	Variables	Year	Units	Source
Total value of property recovered /Value of property reported stolen	Total value of property recovered	2003	Rs. Lakh	Crime in India, 2003
	Total value of property reported stolen	2003	Rs. Lakh	
Total number of posts in judiciary /Vacant posts	Total judiciary posts sanctioned in district/ subordinate courts	1998-2002	Number	Rajya Sabha Starred Question No. 101, dated 22.07.2002.
	Vacant posts of judicial officers in district/subordinate courts	1998-2002	Number	
Total cases/Economic offences	Total incidence of crimes under Indian Penal Code (IPC)	2003	Number	Crime in India, 2003
	Economic offences (criminal breach of trust, cheating and counterfeiting)	2003	Number	
Cases completed by police/ Total cases registered with police	Cases where investigation completed by police	2003	Number	Crime in India, 2003
	Total cases registered for investigation by police	2003	Number	
Trials completed by courts / Total cases for trial by courts	Total number of trials completed by courts	2003	Number	Crime in India, 2003
	Total number of cases awaiting or undergoing trial by courts	2003	Number	
Total Cases /Violent crimes	Total incidence of crimes under Indian Penal Code (IPC)	2003	Number	Crime in India, 2003
	Cases of murder, attempt to murder, CH not amounting to murder, rape, kidnapping and abduction, preparation and assembly for dacoity, robbery, riots, arson and dowry deaths	2003	Number	
Yearly average of daily wages for harvesting (Males) /Minimum notified wages	Yearly average of daily wages for harvesting (Males)	2003	Rs.	Labour bureau, Ministry of labour , Govt. of India
	Minimum notified wages	as on 30.06.2003	Rs. per day	Wage Cell, Ministry of Labour, Govt. of India

Normalised variables	Variables	Year	Units	Source
Yearly average of daily wages for harvesting (Females) / Minimum notified wages	Yearly average of daily wages for harvesting (Females)	2003	Rs.	Labour bureau, Ministry of labour, Govt. of india
	Minimum notified wages	as on 30.06.2003	Rs. per day	Wage Cell, Ministry of Labour, Govt. of India
Total number of industrial workers/Man days lost in strikes and lockouts	Total number of industrial workers	2001	Number	ASI Data, CSO
	Man days lost in strikes and lockouts	2001	Number	Industrial Disputes in India, 2001, Ministry of Labour
Unorganized labour force / Organized labour force	Unorganized labour force in manufacturing sector	2000-01	'00	NSSO, 56th round
	Organized labour force in manufacturing sector	2000-01	Number	ASI Data, CSO
Number of SEZs	Number of Special Economic Zones	2005		sezindia.nic.in
Minimum license fee for traders	Minimum license fee for traders (Rs. Per Annum)	2002	Rs. per annum	Task Force on Agricultural Marketing Reforms (2002)
Market fee charged on all commodities as % of estimated value of commodities	Market fee charged by government run regulated market boards on all commodities as % of estimated value of commodities	2002	Rs. per annum	Task Force on Agricultural Marketing Reforms (2002)
Actual IEMs/Value of Proposed IEMs	Actual value of Industrial Entrepreneurs Memorandums that were implemented	1991-2005	Rs. Crore	Secretariat for Industrial Assistance, Govt. of India
	Total value of proposed Industrial Entrepreneurs Memorandums	1991-2005	Rs. Crore	Secretariat for Industrial Assistance, Govt. of India
Met peak demand/Peak demand	Met peak demand for electricity	Apr-Nov 2004	MW	Source : Rajya Sabha, Unstarred Question No. 645, dated 08.12.2004.
	Peak demand for electricity	Apr-Nov 2004	MW	
Total cases registered for corruption /Cases pending investigation	Total cases for investigation under prevention of corruption and related acts	2003	Number	Crime in India, 2003
	Cases pending investigation from previous year	2003	Number	
Total cases registered for corruption /Persons arrested for corruption	Total cases for investigation under prevention of corruption and related acts	2003	Number	Crime in India, 2003
	Persons arrested under prevention of corruption and related acts	2003	Number	

Appendix 2 - EFW and Corresponding Data for States of India

EFW Categorization		Variables at the state level for India		
<i>Area 1: Size of government: expenditures, taxes and enterprises</i>				
a	General government consumption spending as a percentage of total consumption	(1) Government revenue expenditure/Gross State Domestic Product (GSDP)	(2) Administrative Gross State Domestic Product/ Total GSDP	
b	Transfers and subsidies as percentage of GDP	(3) Subsidy on power for domestic consumers/ Population		
c	Government enterprises and investment as a percentage of GDP	(4) Govt employment/ total organized employment	(5) Percentage of State Level Public Sector Enterprises in which Disinvestment completed or initiated	
d	Top marginal tax rate (and income threshold to which it applies)	(6) State taxes on income/ GDP	(7) State taxes on property and capital transactions/ GDP	(9) Stamp/ duty
i	Top marginal tax rate (excluding applicable payroll taxes)		(8) Taxes on commodities and services/ GSDP	
ii	Top marginal tax rate (including applicable payroll taxes)	Data not available - also many different types of state income taxes		
<i>Area 2: Legal structure and security of property rights</i>				
		(10) Total values of properly recovered/ Total Value of properly reported stolen	(11) Vacant posts in judiciary as a ratio of total posts sanctioned	
a	Judicial Independence - the judiciary is independent and not subject to interference by the government or parties in disputes			
b	Impartial court - a trusted legal framework exists for private businesses to challenge the legality of government actions or regulation	Not Applicable		
c	Protection of intellectual property			
d	Military interference in the rule of law and the political process			
e	Integrity of the legal system	(12) Cases under economic offences/ Total cases	(13) % cases where trials were completed by courts	(14) % cases where investigations were completed by police (15) Violent crimes

EFW Categorization Variables at the state level for India

<i>Area 3; Access to sound money</i>	
a	Average annual growth rate of money supply in the last 5 years minus average annual growth of real GDP in the last 10 years Not Applicable
b	Standard inflation variability in the last 5 years
c	Recent inflation rate Inflation rate calculated on basis of GDP deflator
d	Freedom to own foreign currency bank accounts domestically and abroad Not Applicable
Area 5: Regulation of credit, labour, and business	
a	Credit market regulations
i	Ownership of banks- percentage of deposits held in privately owned banks
ii	Competition- domestic banks face competition from foreign banks
iii	Extension of credit - percentage of credit extended to private sector
iv	Avoidance of interest rate controls and regulations that lead to negative real interest rates
V	Interest rate controls- interest rate controls on bank deposits and/or loans are freely determined by the market
b	Labour Market Regulations
1	Impact of minimum wage- minimum wage set by law has little impact on wages because it is too low or not obeyed (16) Average wage of unskilled workers/ Minimum wages
ii	Hiring and firing practices- hiring and firing practices of companies are determined by private contract (17) Man-days lost in strikes and lockouts/ total number of industrial workers

Financial sector overseen by central government, no state level differences

EFW Categorization		Variables at the state level for India	
iii	Share of labor force whose wages are set by centralized collective bargaining	(18) unorganized labour force as a ratio of organized labour force	
iv	Unemployment benefits: the unemployment benefit system preserves the incentive to work	Not Applicable	
V	Use of conscripts to obtain military personnel		
c	Business regulations		
i	Price controls - extent to which businesses are free to set their own prices		
ii	Administrative controls and new business-administrative procedures are an important obstacle to starting a new business	(19) Number of Special economic zones (no subsidies are given to units in SEZs, but tax breaks are given, regulations are also fewer and less intrusive in SEZs)	(21) Market fees charged by government run/regulated market boards on commodities as % of estimated value of commodities
iii	Time with govt. bureaucracy - senior management spends a substantial amount of time dealing with government bureaucracy	(22) Implementation rate of Industrial Entrepreneurs Memorandum (IEM denotes the intention to invest, but when there are bureaucratic or other delays the rate of implementation is lower)	
iv	Starting a new business - starting a new business is generally easy		
v	Irregular payments - irregular, payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan applications are very rare.	(23) Power shortage as a percentage of total demand (power shortage exists either due to low investment on the part of the government or due to low levels of private sector generation)	
		(24) Cases pending investigation from the previous year of cases registered under prevention of corruption and related acts as a share of total cases registered under the same acts	(25) Persons arrested as a share of total cases being investigated under prevention of corruption and related acts

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