

Have Gujarat and Bihar Outperformed the Rest of India?

A Statistical Note

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In the popular and media imagination, fed by economists and columnists, Gujarat and Bihar have both recorded an extraordinary economic performance in the past decade. But a careful analysis shows that Gujarat, always one of the richest states, has done no better than before. In neither industry nor agriculture has its position radically changed. The only dramatic difference has been the emergence of import-dependent and export-oriented petroleum refining, which has few linkages with the state economy. As in the past decades, Gujarat's social development continues to lag behind its economic development. Likewise, Bihar's position at the bottom of the league has not changed dramatically. Change seems to take place very slowly at the regional level.

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Gujarat is among the richest states in the country. It contains only 4.9% of the population (2011) but contributes to 7.9% of the total domestic output of all states. Bihar is one of the poorest, with 8.2% of the population and producing 3.0% of the domestic output.¹ Gujarat is highly urbanised with 42.6% of its people living in towns and cities, whereas only 11.3% of Bihar's population is urban (national average is 31.2%). These states also represent almost the extreme ends of the income distribution among the Indian states, with Gujarat's per capita income being nearly 4.6 times that of Bihar in 2011-12.²

Lately, these states have drawn considerable attention for their supposedly outstanding economic performance, which is credited to the good governance of their political leadership. So because of Gujarat's economic standing, some believe that on this count Chief Minister Narendra Modi has demonstrated an ability to be a candidate for the prime minister's post in next year's general elections.

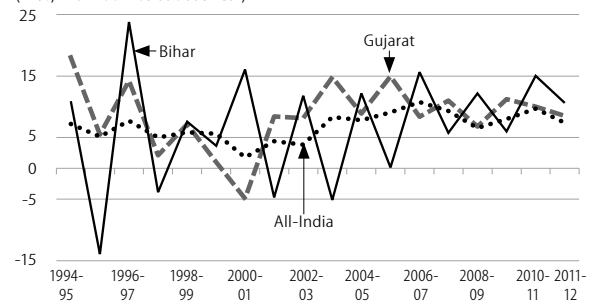
Bihar, on its part, is shown to have grown faster than most states in the last decade. Newspaper columnists believe that a catching-up process is apparently finally on which would eventually reduce or eliminate interstate disparity in levels of living. The optimism stems from the political leadership's ability, it is said, to discharge its principal responsibility after a long lapse such as in law and order, and safety of life and property – yielding chart bursting growth rates (as expected in a truly liberal state).

Yet, in all the discussion the underlying empirical basis is surprisingly weak. Often trend growth rates are computed for the gross state domestic product (GSDP) series for short time periods, ignoring the wild fluctuations in the official data, yielding large standard errors for the estimated parameters (Figure 1). To overcome such problems, this note has avoided computing growth rates but examines the ranks of Gujarat and Bihar relative to the national average to shed light on their performance over the last two decades. However, Gujarat's performance gets scrutinised in more detail as it has attracted far greater public attention.

Ranking and Shares in GSDP

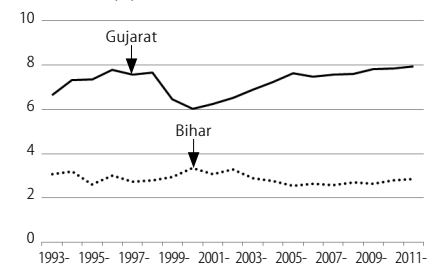
Figure 2 shows Gujarat's and Bihar's shares in total GSDP at constant prices from 1993-94 to 2011-12. Gujarat's share has remained roughly stable between 7% and 8% for most years, though it slipped below 7% for four years in the first half of the first decade of the 21st century. But there is no evidence of Gujarat's share surging ahead of the rest of the country as popularly believed. If anything, the state has only recently recovered its share of 8% of total GSDP as attained in 1996-97. So the best

Figure 1: Annual Growth Rates in Gujarat, Bihar and All-India
(in %, with 2004-05 as Base Year)

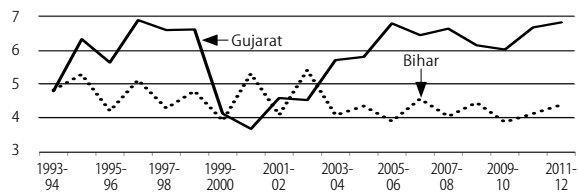


Source: Based on data in Module: "Domestic Product of States of India", EPWRF Online Database.

Figure 2: Shares of Gujarat and Bihar in the Total GSDP (%)



Source: Same as Figure 1.

Figure 3: Share of Gujarat and Bihar in the Total Agriculture GSDP (in %)

Source: Same as Figure 1.

interpretation one can make is that the state has maintained its growth rate, relative to the national average over a long period. Similarly, Bihar's share has remained around 3% of total GSDP. So the much-celebrated improvement in the economic performance of these states relative to the rest of the country has simply not taken place.

Table 1 ranks the states by per capita income at constant prices from 1993-94 to 2011-12. For most years, Gujarat's rank

Table 1: Ranking of the States by Per Capita Income at Constant Prices

Year	Gujarat	Bihar
1993-94	9	31
1994-95	8	31
1995-96	7	31
1996-97	8	31
1997-98	8	31
1998-99	6	31
1999-2000	10	32
2000-01	12	32
2001-02	12	32
2002-03	11	32
2003-04	10	32
2004-05	9	32
2005-06	8	32
2006-07	8	32
2007-08	8	32
2008-09	8	32
2009-10	9	32
2010-11	9	32
2011-12	9	32

Until 1998-99 there were 31 states and union territories; increased to 32 afterwards.

Source: Same as Figure 1.

has remained at 8th or 9th, though it slipped a few notches during the first half of the previous decade. Bihar has all along stubbornly remained at the bottom of the league table. This corroborates the above finding of relative stability of the performance of the states.

Performance of Agriculture

The growth of agricultural output in Gujarat is said to have accelerated in the last decade on account of efficient

groundwater usage and the diffusion of Bt cotton (Shah et al 2009). Indeed, we find that between 2001-02 and 2011-12, Gujarat's share in agriculture GSDP of all states went up from around 5% to 7% (Figure 3). However, if one takes a longer time horizon from 1993-94, then the observed surge in Gujarat's agriculture in the last decade merely represents a recovery of the lost ground of the 1990s. During the entire period since 1993-94, Bihar's share has remained constant, between 4% and 5% of national agriculture value added.

Gujarat's Industrial Performance

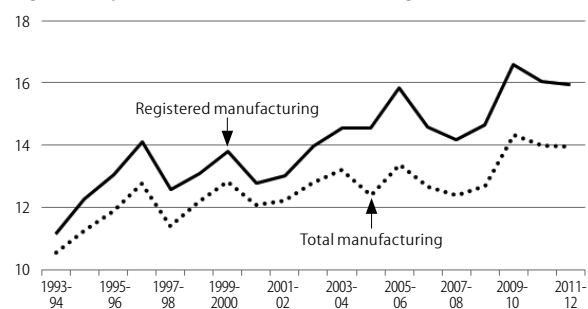
Gujarat is known to be an industrialised state with industry (mining, manufacturing, electricity, gas and water and construction) constituting 37% of its GSDP in 2011-12 (compared to 27.5% for India). It is also known to be an entrepreneurial and industry-friendly state. Has its performance improved during the last decade, as many believe? Table 2 shows that for most years the state held the 2nd rank in GSDP in total

Table 2: Gujarat's Rank in GSDP in Manufacturing at Constant Prices (1993-94 to 2011-12)

Year	Gujarat's Rank
1993-94	3
1994-95	3
1995-96	2
1996-97	2
1997-98	2
1998-99	2
1999-2000	2
2000-01	3
2001-02	2
2002-03	2
2003-04	2
2004-05	2
2005-06	2
2006-07	2
2007-08	2
2008-09	2
2009-10	2
2010-11	2
2011-12	2

Source: Same as Figure 1.

manufacturing since 1993-94 (after Maharashtra). But, its share in GSDP of total manufacturing of all the states has steadily gone up from about 11% in 1993-94 to 14% in 2011-12 (Figure 4). The rise is sharper in registered manufacturing – that is, in factories employing 10 or more workers using power or 20 or more workers without using power – from about 11% to 16%.

Figure 4: Gujarat's Share in Total Manufacturing GSDP (in %)

Source: Same as Figure 1.

However, on a closer look, the incremental manufacturing output is mostly coming from a single industry – petroleum refining – whose share in gross value added in the state's registered manufacturing has risen from 4% in 2000-01 to nearly 25% a decade later (Table 3). This is on account of output from just two refineries – the shore-based refineries of Reliance and Essar in Jamnagar. In other words, excluding petroleum refining, the contribution of the rest of manufacturing industries in the state has actually declined. Pending a deeper inquiry, it seems reasonable to infer that Gujarat's industrial lead is mainly on account of petroleum refining. As it is

Table 3: Petroleum Industry in Gujarat

(1998-99 to 2009-10)

Year	Petroleum Industry's Share in Gross Value Added in Registered Manufacturing Industries at Current Prices
1998-99	6.5
1999-2000	5.8
2000-01	4.0
2001-02	16.0
2002-03	24.4
2003-04	25.0
2004-05	26.7
2005-06	32.2
2006-07	25.9
2007-08	24.7
2008-09	25.3
2009-10	22.8

Source: Based on data in Module "Annual Survey of Industries", EPWRF Online Database.

an import-dependent, capital-intensive, coast-based, export-oriented industry, its linkages with the rest of the regional economy are not likely to be very strong.

Social Development

As a measure of social development, we have computed the physical quality of life index (PQLI) – a simple average of the literacy rate, infant mortality and life expectancy at age 1 – for India and for the two states from 1981 to 2011. To identify the position of the states in relation to the national average, an indexed value of PQLI is reported in Table 4. It shows that Gujarat has all along maintained a marginally better status than the national average. Gujarat ranked 7th among 17 major states of India in 2001 as well as in 2011 (Table 5). In other words, Gujarat has not improved its position in social development relative to other states. Bihar was well below the national average, though it has narrowed the gap during the last three decades. Yet it ranks 13th among 17 major states in 2001 (as well as in 2011). In other words, there has been

Table 4: Index of PQLI for Gujarat and Bihar

	1981	1991	2001	2011
India	100.0	100.0	100.0	100.0
Gujarat	103.4	109.9	105.6	104.3
Bihar	81.6	92.7	91.7	94.6

Physical Quality of Life Index = (Literacy Rate + INDEXED Infant Mortality Rate + INDEXED Life Expectancy) / 3
Source: Sample Registration System (SRS), Office of the Registrar General India, Ministry of Home Affairs.

Table 5: PQLI Ranking of the Major States in 2001 and 2011

States	PQLI Ranking in	
	2001	2011
1 Andhra Pradesh	11	11
2 Assam	14	15
3 Bihar	13	13
4 Gujarat	7	7
5 Haryana	8	10
6 Himachal Pradesh	2	4
7 Jammu & Kashmir	10	9
8 Karnataka	9	8
9 Kerala	1	1
10 Madhya Pradesh	15	17
11 Maharashtra	3	2
12 Odisha	16	14
13 Punjab	4	5
14 Rajasthan	12	12
15 Tamil Nadu	5	3
16 Uttar Pradesh	17	16
17 West Bengal	6	6

Source: Same as Table 4.

little improvement in social development ranking of the two states over the decades.

These findings reinforce earlier research that reported a divergence between Gujarat's economic performance (which is almost at the top of the table) and its social development (which is close to the national average). The late Raj Krishna said:

The fact that Gujarat had a low PQLI illustrates a general point. Economic backwardness is generally associated with a low level of social services development, but it is possible for particular regions to be economically better off and socially backward, or vice versa. Gujarat has a high industrial development status but remains backward in social service development (1980: 50).

Conclusions

To answer the question posed in the title, this note has examined the economic performance of Gujarat and Bihar (relative to the national average) for the period 1993-94 to 2011-12. It has found that there has been no change in their national ranking. Gujarat has remained roughly the ninth richest state. Its manufacturing sector is the second largest (after Maharashtra), though its share in national manufacturing value added has steadily gone up in the last two decades. However, the incremental output has come mainly from export-oriented petroleum refining, accounting now for about a quarter of gross value added in registered manufacturing. This implies that the contribution of the other industries to Gujarat's industrial output has declined. Its position in social development is only marginally better than the national average, ranking seventh in PQLI among the major states in 2001 and 2011. Contrary to popular and political perceptions, in none of the indicators has there been a measurable improvement in Gujarat in the last decade relative to the national average.

Bihar, at the other end of the spectrum, remains the poorest state in terms of per capita income. Faster growth during the last decade has made little difference to its ranking. Its rank in social development, marginally lower than the national average, is somewhere in the bottom.

Contrary to popular and political discourse then, there is not much to write home about the economic performance of the two states during the last decade. The one difference is perhaps the rising contribution of the import-dependent and export-oriented petroleum refineries on Gujarat's coast to that state's manufacturing.

What then could account for the seeming "changelessness" of the relative position of these states? For perceptive observers of India's development in a regional or spatial context, these findings may be neither new nor surprising. They perhaps reinforce the view of the relative stability of the regional economies – pointing to deeper social and political factors at work, impervious to electoral competition and personal charisma of the leaders at the helm.

NOTES

- 1 As the gross state domestic product of all states do not add up to be the same as GDP on account of statistical discrepancies, we use the sum of state GSDP as a proxy for GDP for computing the relevant ratios.
- 2 For reference it might be instructive to know that per capita income in the richest US state (Maryland) is only 1.9 times higher than the poorest state (Mississippi) in 2010, as per the US Census.

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