



## Urban Development Strategy for Bihar: A Management Perspective

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**W.P. No. 2008-04-02**  
April 2008

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## Urban Development Strategy for Bihar: A Management Perspective

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### Abstract

*Bihar is among the least urbanized states in India with a level of urbanization just above 10% in 2001. The present study suggests a four-stage strategy for the urban development of Bihar. The stages are- (i) Increase in the rate of urbanization (ii) Increase in the resources of Urban Local Bodies (ULBs) (iii) Improvement in delivery of urban services, and (iv) Local economic development for employment generation in cities.*

*The current state of finances of ULBs in Bihar is very poor on account of low yield of own revenue sources and low level of grants. The quality of services provided by ULBs in Bihar, measured by expenditure on these services is inferior in comparison to standard benchmarks and other selected cities in India. The location quotient analysis of cities in Bihar reveals lack of industrial development, and reliance on primary activities for employment. Positive correlation between economic growth and share of service sector in employment and negative correlation between economic growth and primary sector employment justify the need for efforts towards development of industrial and service sectors in the state.*

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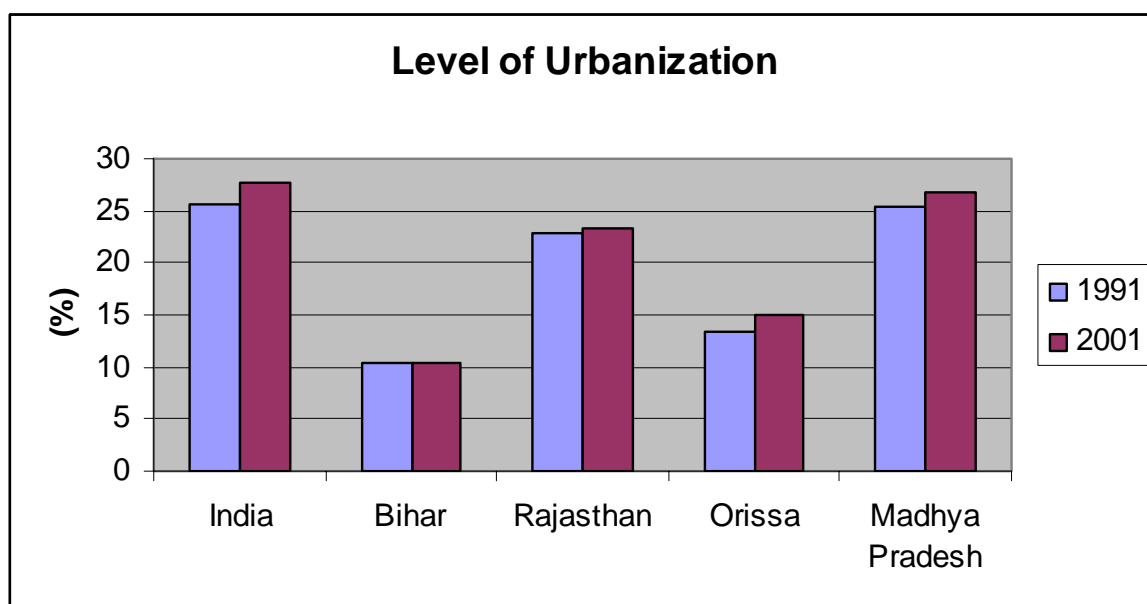
## Urban Development Strategy for Bihar: A Management Perspective

### Introduction

Urbanization is both a driver and a consequence of economic growth. Expansion of economic activities and industrialization lead to evolution of cities as growth centers. These urban centers facilitate sustained economic growth in three major ways - through the real sector, by raising the productivity of output and employment, -through the financial sector, by mobilizing and channeling savings and allowing accumulation of wealth in the form of urban real estate, -and through fiscal flows, providing major share of governments tax revenue (World Bank, 2000). The development of an urban area is also closely linked with the rural economy through exchanges of goods, services, labor, capital, information - technology and social transactions. If properly managed, the process of urban development provides the key to overall national and regional development.

Bihar is among the least urbanized states in India. In 2001, where the level of urbanization in India as a whole was 27.78%, in Bihar, it was only 10.47%. It is lower than the other less urbanized states in India, such as Orissa and Rajasthan (Figure 1).

**Figure 1: Level of Urbanization in selected States in India**



Source: Mathur O.P and Thakur S, "India's Municipal Sector, a study for Twelfth Finance Commission", 2004, NIPFP, New Delhi.

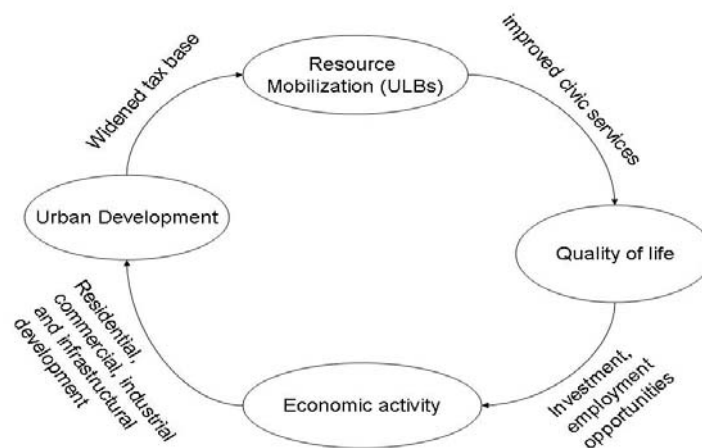
The present study suggests four stage strategy for urban development for Bihar. The stages are- (i) Increase in the rate of urbanization (ii) Increase in resources of Urban Local Bodies (ULBs) (iii) Improvement in delivery of urban services, and (iv) Local economic development for employment generation in cities. This four stage spiral connects ULBs with the economic development of the state by assigning them the critical role of inducing urbanization and employment generation.

The present study focuses on the current situation, issues, and policy implications for the state of Bihar with respect to the four suggested parameters. The first section presents the rationale of the strategy. Factual evidence is given wherever possible. Where data was discrepant or inadequate, logical justification is provided. The next section analyses the present level of urbanization in Bihar. The present state of ULBs is analyzed with respect to their size, functions and fiscal powers. The implementation of 74<sup>th</sup> Constitutional Amendment Act, 1992 (74<sup>th</sup> CAA) in Bihar is also discussed. The following section throws light on current state of finances of ULBs in Bihar. The next section evaluates the quality of services currently provided by the ULBs in Bihar. The last section deals with the current employment profile of the cities in Bihar.

## I. Rationale for the Four Stage Spiral Strategy

Urban growth and its relationship with civic services, quality of life and economic activity can be explained by the urban development spiral (Figure 2).

**Figure 2: Urban development spiral**



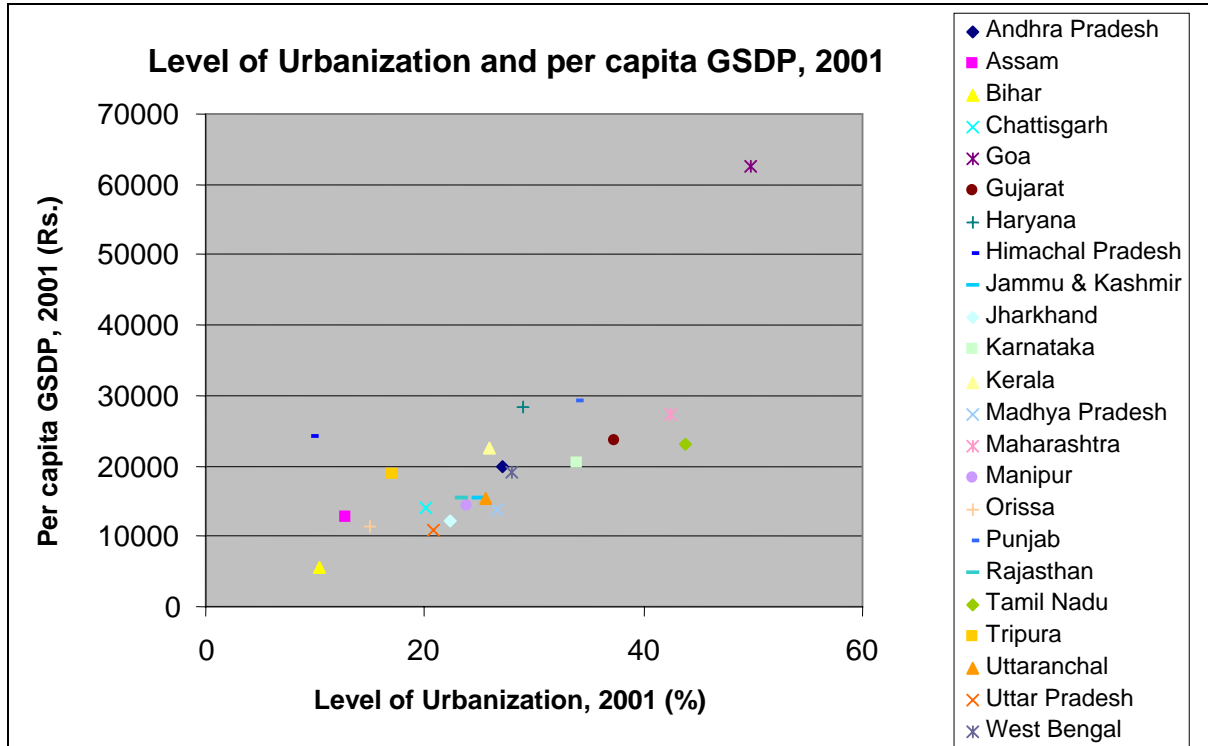
Increase in the revenues of ULB's would facilitate resource mobilization and therefore infrastructure and services in the area. This would improve the quality of life in the cities. These in turn would attract investments and create employment opportunities. Economic growth leads to urban development. Urban growth and development leads to more revenues to the ULBs with widening of tax base. That would flow back into the spiral. The model then becomes self sufficient as a whole.

Economic growth is linked with the level of urbanization in a two-way manner. When economic activities expand and industrialization takes place, centralization of activities leads to emergence of urban centers. Increased urbanization in turn provides scope for specialization and efficiency gains in economic activities and leads to further economic growth. Level of urbanization in year 2001 and per capita GSDP of some Indian states are plotted in Figure 3. The figure clearly shows a positive correlation between per capita income and urbanization.

The level of urbanization and fiscal health of ULBs are closely related. As urban centers expand in size, the tax base widens, providing opportunities for the ULBs to generate higher revenues from tax and non-tax sources. Also, highly developed urban centers demand for specialized services, which can be charged for accordingly, by the ULBs. Mathur (2006) has reported a significant positive correlation (0.61) between level of urbanization and own revenues of ULBs in India. Higher revenues of the ULBs would provide them with the ability

to efficiently perform the functions. Higher per capita expenditures on infrastructural services by ULBs lead to better quality of life.

**Figure 3: Level of Urbanization and Per Capita Gross State Domestic Product of selected India States**



Source: Central Statistical Organization

Better quality services create healthy environment for economic growth. Availability of Social overheads attracts directly productive investment from private sector. ULBs function as facilitators, providing congenial set up for private entities to set up and grow. Safe and prosperous public life leads to efficiency and growth. Mathur (2006) calculated correlation between per capita own resources of the ULBs and Per Capita GSDP for some Indian states. The figure comes out to be 0.51, showing a positive relation between the two.

The four-stage strategy is therefore used to study the prospects of urban development in Bihar. The focus is on identifying critical implementation issues and deriving policy implications.

## II. Level of Urbanization: Evaluation of present status of ULBs in Bihar<sup>3</sup>

According to the Bihar Municipal Act, 2007 (BMA, 2007), Municipal corporations are defined as large urban areas or cities, where the population is more than 2 lakh and percentage of employment in non-agricultural activities is 75% or more. Municipal councils are defined as medium sized urban areas with population between 40,000 to 2 lakh and percentage of employment in non agricultural activities at least 75%. These are further divided in to class A, class B and class C, having population between 1.5 lakh to 2 lakh, 1 lakh to 1.5 lakh, and 40,000 to 1 lakh respectively. Nagar Panchayats are defined as transitional areas where population is between 12,000 and 40,000 and percentage of employment in non agricultural activities is 75%. These nagar panchayats are also termed as urban growth centers.

Bihar has 7 municipal corporations including Patna, Arrah, Bhagalpur, Bihar Sharif, Darbhanga, Gaya and Muzzaffarpur. Patna is the largest corporation with 44.1% share of the population of all corporations, and 20% of total urban population of Bihar. Next is Gaya with 12.3% share of the population of municipal corporations and 5.6% of the total urban population of Bihar. Bihar has 42 municipal councils, out of which 4 are class A, 8 come under class B and rest 30 are class C municipal councils. The number of nagar panchayats in Bihar is 73.

### Functional and Fiscal domain of the ULBs

ULBs in Bihar are governed by BMA, 2007. The Act incorporates recommendations and provisions of the 74<sup>th</sup> Constitutional Amendment (74<sup>th</sup> CAA). Functional domain of the ULBs in Bihar has been expanded to cover all of the 18 functions listed in the 12<sup>th</sup> schedule of the Constitution of India, divided into core functions and supplementary functions (Appendix II). It suggests that core functions should be given priority and supplementary functions should be undertaken only if sufficient resources are available with the ULBs. The Act also provides fiscal powers to the ULBs to levy taxes and user charges equivalent to the cost of services provided. ULBs are given powers to determine tax rates with prior permission from the state government. However, in practice, the functions have not been fully devolved to ULBs. This is due to the perceived inability of the ULBs to discharge these functions assigned to them efficiently. Also, presence of various line departments and parastatal agencies introduce complexity in the system<sup>4</sup>.

<sup>3</sup> As per the old classification of cities, according to population, Bihar has total 122 ULBs. Out of them 19 are of Class I type, having population more than 1 lakh. Class II cities are 18 in number, with a population in the range 50,000 to 1 lakh. Class III cities are 67 with population between 20,000 and 50,000. Class IV cities, with population less than 20,000, are 18 in number (Appendix I).

<sup>4</sup> For example, department wise urban service management chart of Patna Municipal Area is given in Appendix V, which clearly shows overlapping in the assignment of functions, leaving no single body fully responsible. Maintenance of Water Supply network has been carried by Patna Municipal Corporation(PMC) and Bihar Rajya Jal Parishad(BRJP), whereas PMC is not concerned with up gradation and lying of network, which is a function

Decentralization requires sufficient fiscal autonomy to ULBs in order to strengthen them for smooth and efficient functioning. Octroi was a major revenue source of ULBs. It has been abolished and no compensatory transfer has been earmarked for the same.

The major source of revenue for municipalities in Bihar now is property tax. The receipts from property tax are also not very promising, for example, for PMC, receipts from Property tax show a declining trend during previous years (Appendix III). Bodh Gaya, a class III city in Bihar, shows 25% collection efficiency for property tax (CDP, Bodh Gaya). PMC has developed a new model for the assessment of Property tax (Patna Model), which de-links the tax from the annual rental value and charges tax on the basis of area utilized by the property. This system has not been implemented yet in Bihar. However, implementation of Patna Model in Uttar Pradesh for the assessment of Property tax has not shown any sign of improvement in collections as compared to the old system (Mathur, 2006).

The other sources of revenue with ULBs are stamp duty, user charges, fees and fines. ULBs in Bihar have not imposed many user charges and fees for the services provided. PMC has charged only Professional and Trade tax, and Animal and Carriage Tax, although the BMA, 2007 grants ULBs in Bihar to tax activities like advertisements, entertainment, electricity consumption, congregation, pilgrims and tourism etc. Property tax includes cesses on water, sanitation, health and education. BMA, 2007 also empowers ULBs to levy user charges for services such as water supply, solid waste management, parking facilities etc.

The 74<sup>th</sup> CAA also recommends formation of State Finance Commissions (SFCs) to look into the criteria and mechanism of transfer of funds between state governments and local bodies. In Bihar, three SFCs have been formed; two of them were not able to submit any report. Third SFC submitted its report, which is not available in public domain to be analyzed; however it is known that third SFC has suggested fund transfers to ULBs from state fund, which are only 3% of state revenues (Minutes of the meeting of Steering group on Urban Development of Bihar, 2007). It can be believed that such a small amount would be insufficient for the ULBs to effectively perform new and extended functions assigned to them as per 74<sup>th</sup> CAA. Twelfth Finance Commission has recommended transfers from central government funds to municipalities and panchayats. According to these recommendations, Rs. 142 crore are sanctioned for municipalities in Bihar in the year 2005-06, which equals only Rs. 14.5 per capita, assuming projected urban population for Bihar to be 9.72 crore.

74<sup>th</sup> CAA also advised formation of District Planning Committee and Metropolitan Planning Committees (DPC/MPC). These committees are meant to be specialized bodies which would look into the planning for the development of district and metropolitan areas respectively. In Bihar, however, no special act for this purpose has been passed. The power to form these committees has been assigned to state government. The BMA, 2007 has provisions for

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of BRJP and Public Health and Engineering department (PHED). Similar overlaps and misalignments exist in provision of almost all the urban services. This issue needs to be addressed carefully in order to facilitate decentralization and devolution of powers to ULBs as desired by 74<sup>th</sup> CAA.



municipalities to act as supporting and executing agencies with the DPC/MPC. But, without formation of these committees, all these provisions are yet to be activated.

BMA, 2007 also allows ULBs to invite private participation as much as possible. It clearly states that ULBs at their discretion involve private participation for operation, maintenance and management of any urban infrastructural service. The act also clarifies that any form of participation e.g. build-operate-transfer, build-lease-transfer etc. are acceptable. In spite of the extent of freedom from legislature, municipalities are not able to involve private sector actively due to long gestation periods, hesitation of municipalities to levy user charges, and weak private sector. It can be assumed that in future, private participation would play a significant role in the provision of urban services in Bihar.

### **Suggestions:**

- Formation of DPC/MPC would provide the state with specialized institutions to prepare development plans. Although initiative has been taken to form DPCs, no steps have been taken to form MPCs. A state level MPC, comprising of members from Urban Development department, Bihar Urban Development Authority and other such agencies would provide a base to further formation of individual MPCs for cities. Community participation in these committees should be ensured, in the form of inviting local knowledgeable people.
- The cash based accounting system presently followed, is conservative and tends to underestimate expenditures. ULBs should move to Accrual system of accounting, which provides a more accurate assessment of finances of ULBs.
- Cost accounting system would help ULBs to determine the costs involved in providing various services. These costs then can be recovered by imposing sufficient user charges.
- Overlapping of responsibilities among ULBs and parastatal agencies should be kept at the minimum.
- ULBs should invite private involvement wherever possible. This would impart efficiency to the system.
- Use of Information Technology would provide speed and efficiency for effective delivery of wide ranging urban services. Online availability of information and interactive systems would make the system transparent and efficient.

### **III. Analysis of Municipal Finances for Bihar**

Condition of municipal finances reflects the ability and efficiency of ULBs to provide basic urban services to its residents. A comparative analysis of finances of ULBs in Bihar is

undertaken with respect to the financial condition of other ULBs in India<sup>5</sup>. Figures for the ULBs of Patna and Bodhgaya are also compared with those of Bihar and India to represent a clearer view of the situation in large and small cities in the state.

One important aspect of the four stage spiral growth strategy is augmentation of the municipal revenues to facilitate increased expenditures on urban services. To analyze the fiscal powers and capacity utilization by municipalities in Bihar, internal resource generation by the ULBs is analyzed, which includes both tax and non tax revenues generated by the municipalities in Bihar.

A comparison of per capita internal resource generated for India and Bihar show a grim picture of fiscal power of municipalities in Bihar. The average per capita own resources generated by municipalities in Bihar is more than ten times lower than that of India (Table 1). The capital city Patna has a higher per capita own resources figure, however it has a negative growth rate. The higher average for Bodhgaya as compared to Bihar as a whole indicates that the situation is still worse in other urban local bodies<sup>6</sup>.

**Table 1: Municipal Finance: Revenues**

<b>Municipal Finance: Indicators (2001-2005)</b>					
	<b>Unit</b>	<b>India</b>	<b>Bihar</b>	<b>Patna</b>	<b>Bodhgaya</b>
<b>Internal resource generation</b>					
<b>(Tax + Non Tax Revenue)</b>					
Per capita average	Rs.	564.5	41.5	117	54.2
CAGR	%	10.1	3.6	-9.2	31.9
<b>Tax Revenue</b>					
CAGR	%	6.4	3.5	-7.6	13.4
<b>Non Tax Revenue</b>					
CAGR	%	12.1	3.5	20.4	38.3
<b>State Transfers</b>					
Per capita average	Rs.	277.9	70.3	31.1	41.1
as % of Total Revenue Receipts	%	34.1	62.8	21.1	44.7

Source: City Development Plan, Patna and Bodhgaya.

Another major of the efficiency and autonomy of ULBs is their Tax revenue. In India, the growth rate in tax revenue of municipalities is only 6.41% as compared to that for non tax revenue, which is 12.14% (Table 1). Bihar has 3.56% growth both in tax and non tax

<sup>5</sup> Figures for India and Bihar are calculated on the basis of data given in Mathur O.P and Thakur S, "India's Municipal Sector, a study for Twelfth Finance Commission", 2004, NIPFP, New Delhi. Population projections are made on the basis of exponential growth assumption, using data from Census of India, 1991 and 2001.

<sup>6</sup> One reason for this low performance of Bihar is abolition of Octroi, which was a major source of revenue. However, now Stamp Duty has been introduced in all the urban local bodies as a source of revenue as a component of reform package suggested by 74<sup>th</sup> CAA, which is expected to provide a boost to ULB finances.

revenues. However, PMC's figure show cause of concern, as it has negative growth in tax revenue. Bodh Gaya shows a rapid growth in both tax and non tax revenue sources.

Municipalities in India are heavily dependent on state government fund transfers to fulfill their revenue requirements. There are significant fluctuations in these transfers attributed to various external factors such as recommendations of Pay Commissions, State Finance Commissions, and abolition of taxes such as Octroi. Municipalities in Bihar also show the same dependence; however, the per capita level of transfers is low as compared to average transfers to ULBs in India (Table 1). Patna has a very low figure for transfers as a percentage of Revenue Receipts. Figures for Bodh Gaya show a gradually increasing trend.

Dependency of Bodh Gaya on state transfers is 45%, whereas for Bihar it is 63%, almost double of that for India. This represents a pessimistic situation for the municipalities in Bihar as they have low revenues, and transfers from state governments is growing at a very low rate, although the dependency of municipalities on these transfers is high. This indicates the failure of objectives of devolution of power to municipalities, suggested by 74<sup>th</sup> CAA. The expectation that functional devolution would lead to enhancement of fiscal powers of the municipalities has not been met.

Efficiency in the performance of ULBs in Bihar is also judged through their revenue expenditure. It is assumed that higher revenue expenditure shows higher level and quality of municipal services. For municipalities across India, the average per capita revenue expenditure for the period 2001-2005 is Rs. 646, whereas this figure is only Rs. 95 for Bihar (Table 2). Annual growth rate of per capita expenditure is also lower for Bihar than India taken as a whole. On the other hand, Patna has performed much better than rest of Bihar, though still very low as compared to rest of India. Bodh Gaya, has a higher average than that of Bihar as a whole, reflecting still worse condition of other municipalities in Bihar.

**Table 2: Municipal Finance: Expenditures**

<b>Municipal Finance: Indicators (2001-2005)</b>					
	<b>Unit</b>	<b>India</b>	<b>Bihar</b>	<b>Patna</b>	<b>Bodhgaya</b>
<b>Revenue Expenditure</b>					
Per capita average	Rs.	646.2	94.9	174.2	96.4
CAGR	%	7.3	5.5	10.9	14.9
<b>Non-discretionary expenditure</b>					
Per capita average (as % of Revenue Income)	%	42.9	29.5	90.4	30.5
<b>Establishment expenditure</b>					
Per capita average (as % of own Revenue Income)	%	63.8	79.1	114.9	57.1
<b>O&amp;M expenditure</b>					
Per capita average	Rs.	271.8	78.6	15.4	20.3

Source: City Development Plan, Patna and Bodhgaya.

Table 2 shows that municipalities with higher average own revenue income also have higher per capita average revenue expenditure. This clearly indicates that internal resources are an important factor in determining the service levels, implying that devolution of fiscal powers to municipalities would enhance their resource generation capacities and result in better provision of services.

Another important criteria for judging the performance of municipalities is to analyze the discretionary (operations and maintenance) and non discretionary (establishment and salaries) components of revenue expenditure. The fraction of revenue income left after non-discretionary expenditure is spent by the municipalities on operations and maintenance. Therefore a lower ratio between per capita non-discretionary expenditure and per capita revenue income shows larger scope for discretionary functions of the municipalities.

In India, on average the municipalities spend 43% of their revenue receipts on establishment and salaries, whereas this figure is 30% for Bihar<sup>7</sup> (Table 2). One possible reason could be that small municipalities do not maintain separate capital and revenue accounts. Patna spends 90.5% of its revenue on establishment and salary expenditures. Other revenue expenditures such as operations and maintenance are taken care of by capital receipts.

Autonomy of municipalities is also reflected by ratio of establishment expenditure with own revenue receipts. The lower the ratio, higher is the scope for discretionary expenses by municipalities with out being dependent on State transfers and Grants.

Indian municipalities on an average spend more than half of their own revenues on non discretionary works (Table 2). Municipalities in Bihar have less autonomy as compared to Indian average. PMC lacks autonomy, which is evident from the fact that PMC spends more than its own revenues on establishments etc. It is not even able to recover its establishment costs from the taxes and levies. It fulfills the non discretionary expenditure with the help of grants, transfers and capital receipts. Bodh Gaya shows a better performance, although, it could be due to non payment of salaries, or inefficient management.

Operations and maintenance (O&M) expenditure on key services like sewerage, solid waste management, roads, water supply etc reflects the quality of services. Revenue surplus left after meeting establishment expenditures is meant to provide flexibility and discretion to municipalities in meeting with O&M requirements. Data for Indian ULBs show on an average Rs. 272 annual expenditure per capita on O&M activities, whereas Bihar spends only Rs. 79 on this head, which clearly reflects the poor quality of infrastructural services being provided in the state (Table 2). This makes it clear that ULBs in Bihar are not able to provide sufficient and good quality services to the citizens.

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<sup>7</sup> The reason behind low establishment and salary expenditure figures for Bihar is non-payment of salaries to the staff at ULBs for long time (Minutes of the meeting on Urban development of Bihar, 2007).

Main issues emerging out of the above analysis are:

- ULBs in Bihar are unable to meet their expenditure requirements from their own revenues, which makes them heavily dependent on state transfers.
- Small ULBs do not maintain proper separate capital and revenue accounts, which lead to unavailability of authentic data. Therefore sometimes ULBs are able to show surpluses in their accounts.
- The tax collection mechanism is highly inefficient, for example in Bodh Gaya, the collection efficiency for property tax is 25%. PMC relies on Property tax for 70% of its own resources. Proceeds from this tax show a declining trend in Patna, generating revenue deficit, which is bridged with the help of capital receipts, giving rise to debt servicing burden on the corporation.

#### **IV: Quality of Services**

##### **Analysis of expenditures on urban services by ULBs in Bihar**

A comparison of per capita expenditure on urban services in the city of Patna with some other million plus cities in India is taken up in this section to reflect the availability and quality of services. Sridhar, 2006 has compiled per capita expenditure data for 6 cities (Bangalore, Chandigarh, Jaipur, Lucknow, Pune, and Surat) with million plus population, classifying them into benchmark cities (Chandigarh and Surat, for their good performance), non benchmark cities (Jaipur, Pune, Lucknow and Bangalore), cities situated in BIMARU<sup>8</sup> states (Lucknow, Jaipur) and cities in states having Octroi in 2006-07 (Surat in Gujarat).

The data from Table 3 clearly show the poor performance of Patna Municipal Corporation (PMC). Benchmark cities, such as Chandigarh and Surat on an average spend Rs. 331.55 per capita annually for water supply, whereas this figure is only Rs. 8.59 for PMC. Comparing with non benchmark cities, such as Jaipur or Lucknow, PMC still spends significantly lesser amount.

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<sup>8</sup> acronym given to underdeveloped states, in the order Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh

**Table 3: Comparison of the performance of Patna with other classes of cities in India**

	Water Supply	Sewerage	Street Lighting
<b>Per Capita Expenditure (at constant prices, base 1993-94) (Rs.)</b>			
<b>Patna</b>			
2001-02	13.60	3.22	0.76
2002-03	5.77	20.04	1.38
2003-04	9.22	19.23	0.72
2004-05	5.76	17.79	0.96
<b>Average (2001-2005)</b>	8.59	15.07	0.95
<b>Benchmark cities (Average 1995-2003)</b>	331.55	41.95	21.68
<b>Non Benchmark cities (Average 1995-2003)</b>	229.99	42.26	12.92
<b>Non Octroi Cities (Average 1993-2003)</b>	208.25	16.28	13.38
<b>Cities in BIMARU States (Average 1991-2003)</b>	21.22	45.92	NA

Source: City Development Plan, Patna; Mathur O.P., Nandy A, *Costs of Urban Infrastructure: Evidence from Indian Cities*, 2006, NIPFP, New Delhi.

Similarly, on sewerage, where all non benchmark cities spend on an average Rs. 42 annually, PMC spends only Rs. 15.07. Expenditure on street lighting by PMC is also very low. On an average; PMC spends only around Rs. 1 per capita annually, which is far less than all other comparable figures.

Patna even spends less than cities in other BIMARU states on urban services. Capital cities situated in BIMARU states such as Lucknow in Uttar Pradesh and Jaipur in Rajasthan perform better than Patna on providing quality infrastructure, as is evident by the per capita expenditure figures for these cities. On an average, these cities spend annually per capita Rs. 21.22 and Rs. 45.92 on water supply and sewerage respectively, whereas Patna spends only Rs. 8.59 and Rs. 15.07 per capita annually respectively on these heads.

### **Assessment of Future Resource Requirements:**

In order to increase the level of urbanization, it is essential that the availability and quality of services at the urban centers is improved. This is supported by theoretical argument of following the path of Social Overhead Capital for development. Once the infrastructure is developed, economic activities would be smooth and prospects of employment and income generation would increase, further increasing the level of urbanization.

**Table 4: Projected revenues and resource requirement for Bihar as per Zakaria committee norms (Rs. Million)**

Head	2000	2005	2010
1. Water supply	17320	20056	23093
2. Sewerage and storm water drainage	19497	22577	25996
3. City roads	3256.2	3770.7	4341.6
4. Street lighting	4787.4	5543.8	6383.2
5. Fire fighting	728.92	844.08	971.889
6. General Administration	7308.4	8463.1	9744.58
<b>7. Total resource requirements (1 to 6)</b>	<b>52898</b>	<b>61255</b>	<b>70530.3</b>
<b>8. Revenue Receipts (Projected)</b>	<b>8,720</b>	<b>12,920</b>	<b>19,007</b>
<b>Resource Gap (7-8)</b>	<b>44,178</b>	<b>48,335</b>	<b>51,523</b>

Source: Calculated on the basis of Table 4.1.

\* Population projections are done assuming exponential growth using data from Census of India, 1991 and 2001.

In order to judge the requirements for the ULBs to provide sufficient amount and quality of services, norms and standards given by Zakaria Committee (1963) and revised by Price Waterhouse Coopers (PWC) for Chattisgarh at 2000-01 prices are used (Appendix XII). Using these per capita norms and population projections, total requirements of funds for the state of Bihar for providing various urban services have been calculated.

The total resource requirement for Bihar, for the year 2000 is Rs. 52898 million, whereas the actual revenue income of ULBs in Bihar in 2000 is only Rs. 8720 million, fulfilling only 16% of the requirements. The projected revenue receipts and the expected revenue gap are also shown in Table 4<sup>9</sup>. These estimates are for six important urban infrastructural services. Expenditure on these services ensures quality of life and increases the rate of urbanization. But, it is evident from Table 4 that there is huge gap between requirements and revenues of ULBs<sup>10</sup>. 74<sup>th</sup> CAA grants the power to decide the transfers between state and ULBs on the state finance commissions. These commissions should look into the huge gap and recommend the mechanisms of transfer accordingly.

## V. Analysis of Employment potential at Urban Centers in Bihar

Bihar has been divided into North and South divisions for the purpose of analysis. This division is naturally supported by River Ganga, which draws a fine line between the two divisions (Figure 4). The classification of cities as per population classes in the two divisions is shown in Appendix I. North Bihar is largely agrarian, with most of the cities also

<sup>9</sup> For detailed results, see Appendix XIV.

<sup>10</sup> Another assessment of resource requirements is presented in the Bihar Development Report (Appendix VII) based on per capita expenditure norms suggested by Planning Commission and Zakaria Committee. Although these are comparatively conservative norms, as they include only 3 urban services, namely, water supply, sanitation and public roads, revenues of ULBs in Bihar are not able to meet even these.



supporting primary activities. South Bihar is comparatively better developed with sizeable employment in “trade and commerce” and “services”. However, across all the districts, industrial sector is highly underdeveloped in Bihar. A Location Quotient analysis of the two divisions of Bihar shows the same results as discussed. Results of the analysis are presented in Appendix XV and XVI respectively.

**Figure 4: North Bihar and South Bihar**



The Location Quotient technique compares the local economy to a reference economy, and thereby identifies specializations in the local economy. Location quotient (LQ) is the ratio of share of an industry in the employment in the local economy, to the share of same in the national economy. A value of location quotient greater than one ( $LQ > 1$ ) for any industry indicates that the local economy is a net exporter of the goods and services provided by the particular industry. On the other hand, if the value of the location quotient is less than one ( $LQ < 1$ ), it indicates that employment in the respective industry is lesser in the local economy as compared to the reference economy, and therefore, the local economy is a net importer. In the framework of the standard export base model, the industrial sectors with  $LQ > 1$  are designated as “basic” sectors while those with  $LQ < 1$  are designated as “non-basic” sectors.

The analysis for North Bihar shows that in Class I cities, primary activities such as agriculture, mining, quarrying etc. are main resource absorbers, with cities such as Purnia, Chapra, Bettiah, Motihari and Saharsa still having primary activities as their basic sector.



However, some of the cities show deviation towards trade and commerce, e.g. Darbhanga, Siwan and Muzzaffarpur. Katihar is mainly occupied with services. Most of these cities also have larger share in services, as compared to reference economy of Bihar. Among Class II cities, 7 out of 9 show preferences towards primary activities, only Sitamarhi and Samastipur have trade and commerce as their basic activity. Among Class III cities, 26 out of 28 cities examined are primary activities based, only 2 have Trade and Commerce as their basic employment sector. Same is the case with Class IV cities, where 9 out of 10 examined cities show preference towards primary activities as their basic sector. Industrial sector has very low proportion of employment among cities in North Bihar .

South Bihar also has a strong presence of primary activities in almost all the cities and towns. However, the situation is slightly better here for other sectors as compared to North Bihar. Among Class I cities, 3 largest cities namely, Patna, Gaya and Bhagalpur have services as their basic sector. These cities serve to total 30.78% urban population of Bihar. Dehri Dalmianagar employs larger share of people in Trade and Commerce as compared to Bihar as a whole. Rest 5 Class I cities namely, Bihar Sharif, Arrah, Munger, Hajipur and Sasaram in South Bihar indulge largely in Primary activities. However, Bihar Shariff has Industry as its second basic sector, being the only large city in whole Bihar to show such a trend. Among Class II cities, 4 out of 8 examined have primary activities as their basic sector, 3 are indulged into Trade and Commerce and 1 specializes in services. Many of the Class II towns also have services as their basic sector, showing growth and alignment with the national economy. Total 35 Class III cities are analyzed in South Bihar, out of which 33 specialize in Primary agriculture oriented activities. Only 2 have services as their basic sector. All the 7 Class IV cities specialize in Primary activities.

These results clearly show low contribution of industrial sector in the employment profile in Bihar, as none of the cities there specialize in industrial activities<sup>11</sup>.

### **Drawing Linkages:**

Employment profile of a district affects the degree of urbanization. A strong negative correlation between share of primary activities in urban employment and level of urbanization in the district was observed (Table 5). For North Bihar this negative correlation is -0.36, and for South Bihar, it's even stronger, -0.42. This result is significant since, in most of the ULBs in Bihar urban workers are primarily engaged in Primary Activities, related to agriculture. Negative correlation implies that this dependence on primary activities must be reduced in order to improve the level of urbanization. Analysis also indicates that an increase in the share of services would increase level of urbanization. Investment in services such as financial, educational, recreational should be promoted.

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<sup>11</sup> Contribution of Industrial sector in the Gross State Domestic Product (GSDP) is also very low as compared to other states such as Madhya Pradesh, Orissa and Rajasthan (Appendix XII). In 1993-94 where Industries contributed 21%, 20% and 25% of GSDP for Madhya Pradesh, Orissa and Rajasthan, this was only 10% for Bihar. In 2005-06 the contribution of Industries went up, but reached only 12% for Bihar, whereas it was 26%, 21% and 30% for other three states respectively.

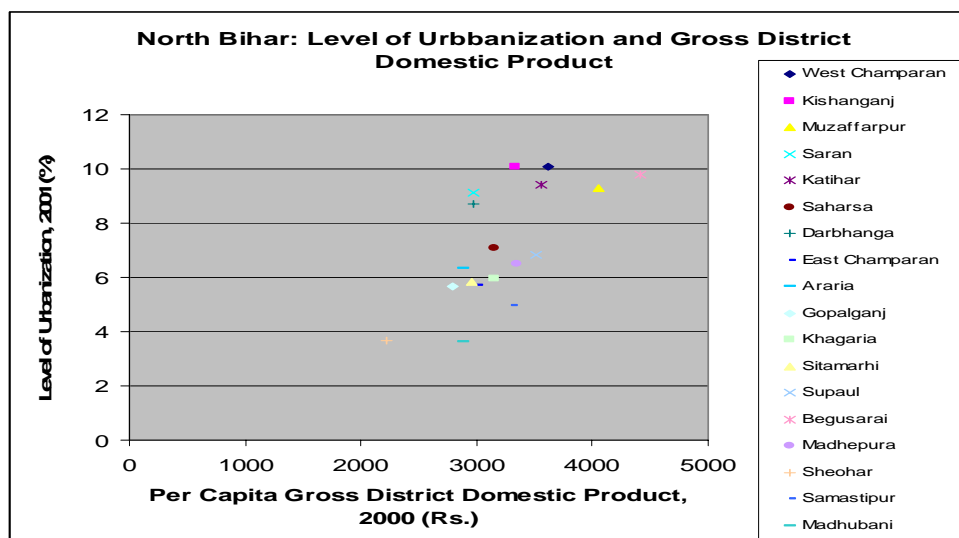
**Table 5: Correlation Coefficients: For Cities in Bihar**

Parameter I	Parameter II	North Bihar	South Bihar
Share of Primary activities in Employment	Level of Urbanization	-0.36	-0.42
Share of Services in Employment	Level of Urbanization	0.63	0.4
Per Capita Gross District Domestic Product	Share of Primary activities in Employment	-0.47	-0.49
Per Capita Gross District Domestic Product	Share of Services in Employment	0.58	0.57
Per Capita Gross District Domestic Product	Level of Urbanization	0.68	0.8

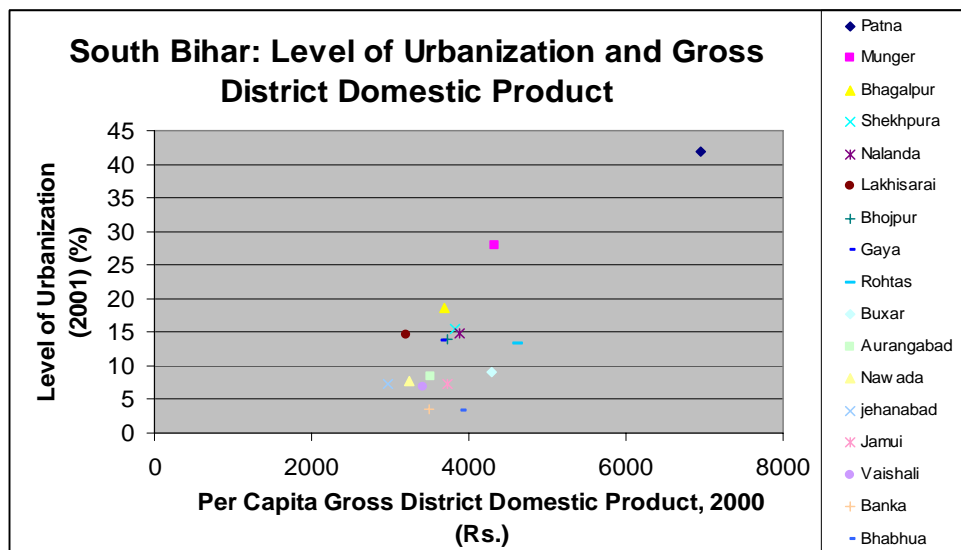
Source: Calculated on the basis of data taken from Economic Survey of Bihar, 2005, and National Sample Survey.

Similar correlation analysis is undertaken between share of different sectors in urban employment and per capita gross district domestic product (GDDP). GDDP here has been taken as a proxy for income to measure economic growth. The correlation between share of primary activities in employment and per capita GDDP is again negative. This implies that the districts with higher share of agricultural activities in employment have performed poorly on GDDP parameter. The correlation figure for North Bihar is -0.47 and for South Bihar it is -0.49. Services have shown a positive correlation as a sector for employment with per capita GDDP.

The districts in Bihar have been plotted on level of urbanization, and per capita GDDP. This shows a positive trend, with correlation coefficients being 0.68 and 0.8 for North Bihar and South Bihar respectively (Figure 5 and Figure 6). This positive trend again signifies the rationale for a development strategy for Bihar.

**Figure 5: Level of Urbanization and Per Capita GDDP (North Bihar)**

Source: Economic Survey of Bihar, 2005, Bihar Development Report, 2001.

**Figure 6: Level of Urbanization and per capita GDDP in Districts of South Bihar**

Source: Economic Survey of Bihar, 2005, Bihar Development Report, 2001.

### Implications:

- Industries in Bihar need a big push. Identifying the potential industries and inviting investment projects could help the private sector gain confidence to invest in the state.
- A high correlation among level of urbanization and GDDP for North as well as South Bihar shows the importance of urbanization for economic development of the state.
- A high correlation between share of services in urban employment and GDDP for Bihar shows the importance of service sector in the development of the state. Services sector is developed in highly urbanized districts such as Patna. In other urban centers too, efforts should be made to development environment for service sector such as financial services, real estate and knowledge based services, such as Business Process Outsourcing etc.
- Negative correlation between primary activities employment and GDDP shows clearly that specialization and mechanization is essential for cities to develop. Efforts should be made in Bihar to shift focus from primary activities and diversify into other sectors as well.

## Conclusion:

Analysis of the four parameters of the development strategy show immense scope of development for the state of Bihar. Some steps have been taken to empower ULBs in the wake of 74<sup>th</sup> CAA, but substantial efforts are still to be made. A greater fiscal autonomy is essential for ULBs to effectively discharge wider functional responsibilities assigned to them. Reforms in the areas of accounting practices, information handling and technology will increase the efficiency of ULBs. Possibilities of participation of private sector in the provision of municipal services should be explored.

Augmenting revenues of the ULBs is a major requirement for the state. Adequate charges for the services provided by the ULBs are one option to increase the fiscal independence of the ULBs. The quality of services is badly affected by the lack of sufficient revenue. In future, the requirements of the ULBs would further increase, with the increase in services demanded and upward movement in the level of urbanization. Therefore it is essential for the state government to think of ways and means of dispensing ULBs with sufficient fund.

Another important aspect is development of cities as urban hubs, providing employment opportunities, attracting migration and providing facilities. Mechanization and specialization in primary activities are essential to increase productivity, so that the sector can contribute positively towards economic growth and urbanization. Focused efforts to develop services, trade, commerce and transport sectors will certainly provide impetus for development to the state.

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**Appendix I: Classification of Cities in Bihar into Classes as per Population**

Cities	Population Range	Bihar	North Bihar	South Bihar
Class I	> 1,00,000	19	9	10
Class II	50,000 - 99,999	18	9	9
Class III	20,000 - 49,999	67	31	36
Class IV	10,000 - 19,999	18	11	7

Source: Government of Bihar

**Appendix II: Functional Domain of Municipalities in Bihar****Functional Domain of Municipalities****Core Municipal Functions.**- (1) Every Municipality shall-

- (a) provide on its own or arrange to provide through any agency the following core municipal services:-
- (i) water-supply for domestic, industrial, and commercial purposes,
  - (ii) drainage and sewerage,
  - (iii) solid waste management,
  - (iv) preparation of plans for development and social justice,
  - (v) communication systems, construction and maintenance of roads, footpaths, pedestrian pathways, transportation terminals, both for passengers and goods, bridges, over-bridges, subways, ferries, and inland water transport system,
  - (iv) transport system accessories including traffic engineering schemes, street furniture, street lighting, parking areas, and bus stops,
  - (vii) community health and protection of environment including planting and caring of trees on road sides and elsewhere,
  - (viii) markets and slaughterhouses,
  - (ix) promotion of educational, sports and cultural activities, and
  - (x) aesthetic environment, and

Source: Bihar Municipal Act, 2007

### Appendix III: Property tax revenue of Patna Municipal Corporation

Revenue from Property Tax				
	2001-02	2002-03	2003-04	2004-05
<b>Total Revenue(in Rs. Lakhs)</b>	1750.34	1397.92	1810.8	1387.01
<b>Per Capita Revenue (in Rs.)</b>	127.12	97.48	121.25	89.18

Source: City Development Plan, Patna.

### Appendix IV: Provision of Urban Services in Patna Urban Area

Table 9.1: Department wise Urban Services Management					
Urban Services	PMC Area	Phulwari NP	Khagaul NP	Danapur NP	PRDA
<b>A. Water Supply</b>					
Supply of Water	PMC	PHED	PHED	PHED	PHED
Maintenance of network	PMC, BRJP	PHED	PHED	PHED	PHED
Up gradation and laying of Network	BRJP, PHED	BRJP, PHED	BRJP, PHED	BRJP, PHED	BRJP, PHED
Collection of Water Charges	PMC	PHED	KNP	DNP	PHED
<b>B. Sewerage System</b>					
Construction of STP	Bihar Rajya Jal Parishad has constructed 3 Sewage Treatment Plant in PMC. There is no STP for Nagar Parishads in PUA.				
Laying of Network	BRIJP	BRIJP	BRIJP	BRIJP	BRIJP
Construction of Community	DUDA,	DUDA, UDD,	DUDA,	DUDA, UDD,	DUDA,
Toilets	UDD, PMC	PNP	UDD, KNP	DNP	UDD
Maintenance on System	PMC	PNP	KNP	DNP	PHED
Collection of User Charges	PMC	PNP	KNP	DNP	PHED
<b>C. Solid Waste Management</b>					
Collection of Waste	PMC	PNP	KNP	DNP	NA
Collection of User Charges	PMC	PNP	KNP	DNP	NA
<b>D. Storm Water Drainage</b>					
Construction of Drains	PWD, PMC, BRJP	PWD, PNP, BRJP	PWD, KNP, BRJP	PWD, DNP, BRJP	PWD, NHAI
Cleaning of Drains	PMC	PNP	KNP	DNP	PWD, NHAI
<b>E. Roads</b>					
Construction of Main Road	NHAI, PWD, PMC	NHAI, PWD	NHAI, PWD	NHAI, PWD	NHAI, PWD
Construction of Streets	PMC	PNP	KNP	DNP	PWD
Collection of Road Tax	RTO, DTO	RTO, DTO	RTO, DTO	RTO, DTO	RTO, DTO
<b>F. Building Plan Approval</b>					
	PRDA	PRDA	PRDA	PRDA	PRDA
<b>G. Street Lighting</b>					
Installation of Lights	BSEB, PMC	BSEB, PNP	BSEB, KNP	BSEB, DNP	NA
Maintenance	PMC	PNP	KNP	DNP	NA
<p>Note: PMC-Patna Municipal Corporation; PNP-Phulwari Sherif Nagar Parishad; KNP-Khagaul Nagar Parishad; DNP-Danapur Nagar Parishad; PRDA-Patna Regional Development Authority; PWD-Public Works Department; PHED-Public Health and Engineering Department; BRJP-Bihar Rajya Jal Parishad; RTO-Regional Transport Office; DTO-District Transport Office; BSEB-Bihar State Electricity Board; NHAI-National Highways Authority of India</p>					



Source: City Development Plan, Patna.

### Appendix V: Internal Resource Generation (Rs. Per capita)

	Per Capita Internal Resource Generation (Rs.)					Average
	2001-02	2002-03	2003-04	2004-05	CAGR(%)	
<b>India</b>	482.10	533.34	590.02	652.72	10.1	564.54
<b>Bihar</b>	39.46	40.39	42.37	43.91	3.62	41.53
<b>Patna</b>	135.39	103.08	127.15	102.62	-9.237	117.06
<b>Bodh Gaya</b>	37.51	35.90	45.89	97.73	31.9192	54.26

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

### Appendix VI: Annual Growth Rates for Per Capita tax and Non Tax Revenues

Compound Annual Growth Rate in Per Capita Revenue during 2001-02 to 2004-05 (%)		
	Tax Revenue	Non Tax Revenue
<b>India</b>	6.41	12.14
<b>Bihar</b>	3.56	3.56
<b>Patna</b>	-7.6	20.44
<b>Bodh Gaya</b>	13.43	38.3

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

### Appendix VII: Per capita state transfer (PCST) to ULBs, as % of Revenue Receipts (RR)

	2001-02		2002-03		2003-04		2004-05		Average PCST	Avg PCST as % of RR
	PCST	% of RR	PCST	% of RR	PCST	% of RR	PCST	% of RR		
<b>India</b>	224.4	31.7	256.8	33.3	293.9	34.9	336.4	36.7	277.9	34.1
<b>Bihar</b>	64.3	61.9	68.2	62.5	72.2	63.0	76.6	63.6	70.3	62.8
<b>Patna</b>	37.2	21.5	32.2	23.8	25.3	16.6	29.9	22.5	31.1	21.1
<b>Bodh Gaya</b>	32.4	46.3	30.9	46.3	59.5	56.5	41.6	29.8	41.1	44.7

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

**Appendix VIII: Per Capita Revenue Expenditure (in Rs.)**

	Per Capita Revenue Expenditure (Rs.)				CAGR(%)	Average Per Capita Rev. Exp
	2001-02	2002-03	2003-04	2004-05		
<b>India</b>	576.71	620.76	668.17	719.20	7.36	646.21
<b>Bihar</b>	87.2	92.16	97.40	102.94	5.53	94.93
<b>Patna</b>	125.73	162.04	234.72	174.58	10.94	174.27
<b>Bodh Gaya</b>	88.71	67.03	91.25	138.86	14.94	96.46

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

**Appendix IX: Non Discretionary Expenditure as % of Revenue Income**

	Per Capita Est. exp as a % of Revenue Income				Average
	2001-02	2002-03	2003-04	2004-05	
<b>India</b>	44.19	43.35	42.54	41.74	42.95
<b>Bihar</b>	35.87	31.26	27.23	23.73	29.52
<b>Patna</b>	54.69	100.75	97.31	109.17	90.48
<b>Bodh Gaya</b>	44.78	30.46	24.77	22.04	30.51

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

**Appendix X: Per Capita Establishment Expenditure as % of Own Revenue Receipts**

	Per Capita Est. Exp as a % of Own Revenue Receipts				
	2001-02	2002-03	2003-04	2004-05	Average
<b>India</b>	64.83	64.20	63.57	62.95	63.89
<b>Bihar</b>	94.37	83.36	73.63	65.04	79.10
<b>Patna</b>	69.73	132.24	116.72	140.97	114.92
<b>Bodhgaya</b>	83.52	56.73	57.04	31.43	57.18

Source: City Development Plan, Patna and Bodhgaya. Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

**Appendix XI: Per Capita O&M Expenditure by Municipalities (in Rs.)**

	Per Capita Operations and Maintenance Expenditure by ULBs(Rs.)				
	2001-02	2002-03	2003-04	2004-05	Average
<b>India</b>	230.31	256.04	284.64	316.44	271.86
<b>Bihar</b>	49.96	65.58	86.09	113.02	78.66
<b>Patna</b>	15.93	15.00	16.95	14.09	15.49
<b>BodhGaya</b>	15.96	32.47	19.08	13.94	20.36

Source: City Development Plan, Patna and Bodhgaya Mathur O.P. and Thakur S. (2004). India's Municipal Sector: A study for the Twelfth Finance Commission. New Delhi: NIPFP.

**Appendix XII: Zakaria Committee Norms (for O&M Expenditure), Revised at 2000-01 prices for Chhatisgarh**

	(Rs/capita/annum) - 2000-01 prices					Weighted Average
	>20 lakh	5-20 lakh	1-5 lakh	0.5-1lakh	0.2-0.5 lakh	
Population==>						
Heads						
Water supply	213.34	201.49	193.59	170.67	149.34	206.19
sewerage and storm water drainage	241	235.07	183.72	171.86	161.99	232.11
City roads	43.45	35.55	26.67	23.71	21.73	38.76
Street lighting	59.26	56.29	49.39	45.44	42.47	56.99
Fire fighting	9.87	7.9	5.93	3.96	1.97	8.68
General Administration	98.77	79.02	59.26	39.51	39.51	87.01

Source: Infrastructure Development Action Plan for Chhatisgarh – Final Report

### Appendix XIII: Requirements for Core Services for ULBs in Bihar, at current prices

Total Requirements for core services at current prices (Rs. Million)					
	2002	2003	2004	2005	2006
<b>Planning Commission (Low)</b>	11841	12465	13464	14919	16963
<b>Planning Commission (High)</b>	16610	17485	18886	20927	23794
<b>Zakaria Committee</b>	11034	11615	12546	13902	15807
<b>Revenue Receipts(Projected)</b>	10249	11072	11961	12920	13957

Source: Bihar Development Report

### Appendix XIV: Resource Requirements, Projected Revenue and Resource Gap for ULBs in Bihar

	Resource Requirement for Bihar as per Zakaria Committee Norms(Rs. Million)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1. Water supply	17320	17938.3	18445.8	18967.73	19504.4	20056	20624	21207	21807	22424	23093
2. Sewerage and storm water drainage	19497	20193.3	20764.7	21352.15	21956.3	22577	23216	23873	24549	25243	25996
3. City roads	3256.2	3372.49	3467.91	3566.028	3666.92	3770.7	3877.4	3987.1	4099.9	4215.9	4341.6
4. Street lighting	4787.4	4958.38	5098.67	5242.923	5391.26	5543.8	5700.6	5861.9	6027.8	6198.3	6383.2
5. Fire fighting	728.92	754.95	776.309	798.2733	820.859	844.08	867.96	892.52	917.77	943.74	971.889
6. General Administration	7308.4	7569.45	7783.62	8003.836	8230.29	8463.1	8702.6	8948.8	9202	9462.4	9744.58
<b>7. Total resource requirements (1 to 6)</b>	<b>52898</b>	<b>54786.9</b>	<b>56337</b>	<b>57930.95</b>	<b>59570</b>	<b>61255</b>	<b>62988</b>	<b>64771</b>	<b>66603</b>	<b>68488</b>	<b>70530.3</b>
<b>8. Revenue Receipts (Projected)</b>	<b>8,720</b>	<b>9,488</b>	<b>10,249</b>	<b>11,072</b>	<b>11,961</b>	<b>12,920</b>	<b>13,957</b>	<b>15,078</b>	<b>16,288</b>	<b>17,595</b>	<b>19,007</b>
<b>Resource Gap (7-8)</b>	<b>44,178</b>	<b>45,299</b>	<b>46,088</b>	<b>46,859</b>	<b>47,609</b>	<b>48,335</b>	<b>49,031</b>	<b>49,693</b>	<b>50,315</b>	<b>50,893</b>	<b>51,523</b>

Source: Calculated on the basis of Table 4.1.

\* Population projections are done assuming exponential growth using data from Census of India, 1991 and 2001.

## Appendix XV: Results of Location Quotient Analysis for Cities in North Bihar

The table below shows names of cities and towns for which the value of the Location Quotient is greater than one, indicating that the city or town is a net exporter

Sector	Class I Cities	Class II Cities	Class III Cities	Class IV Cities
<b>Primary Activity (LQ&gt;1)</b>	Purnia, Chapra, Bettiah, Motihari, Siwan, Saharsa	Begusarai, Bagaha, Kishanganj, Madhubani, Araria, Supaul, Gopalganj, Sitamarhi	Khagaria, Madhepura, Narkatiaganj, Bairstania, Barauli, Ramnagar, Raxaula Bazar, Sonepur, Revelganj, Dhaka, Gogri Jamalpur, Sugauli, Dighwara, Jogabani, Banmankhi Bazar, Bahadur Ganj, Murliganj, Jhanjharpur, Mirganj, Chanpatia, Motipur, Manihari, Maharajganj, Dalsingh Sarai, Kanti, Sheohar	Jainagar, Mairwa, Birpur, Belsand, Nirmali, Chakia, Thakurganj, Katiaya, Ghoghardigha
<b>Industry (LQ&gt;1)</b>	-	-	-	-
<b>Trade and Commerce (LQ&gt;1)</b>	Darbhanga, Siwan, Muzaffarpur	Sitamarhi, Samastipur, Madhubani	Forbesganj, Rosera, Khagaria, Narkatiaganj, Raxaul Bazar, Jogabani, Mirganj, Maharajganj, Dalsinghsarai	Jainagar, Mairwa, Nirmali, Thakurganj, Janakpur Road
<b>Transport and Communication (LQ&gt;1)</b>	-	Samastipur	Sonepur	-
<b>Services (LQ&gt;1)</b>	Bettiah, Darbhanga, Katihar, Motihari, Purnia, Shaharsa, Muzaffarpur	Begusarai, Kishanganj	Forbesganj, Rosera, Madhepura	Birpur

Source: Functional Classification of Urban Agglomerations/Towns of India 1991, Ministry of Home Affairs, Govt. of India.

## Appendix XVI: Results of Location Quotient Analysis for Cities in South Bihar

(The table below shows names of cities and towns for which the value of the Location Quotient is greater than one, indicating that the city or town is a net exporter)

Basic Sector	Class I Cities	Class II Cities	Class III Cities	Class IV Cities
<b>Primary Activity (LQ&gt;1)</b>	Bhagalpur, Bihar Sharif, Arrah, Munger, Sasaram, Hajipur	Mokamah, Buxar, Lakhisarai, Nawada, Jeanabad, Aurangabad, Jamui	Barh, Khagaul, Dumraon, Sheikhpura, Sultanganj, Masaurhi, Barahiya, Naugachiya, Jhajha, Mahnar Bazar, Fatwah, Daudnagar, Barbiga, Hilsa, Bikramganj, Banka, Bhabua, Bakhtiarpur, Sherghati, Kharagpur, Islampur, Lalganj, Maner, Rajgir, Warlisganj, Makhdumpur, Bodh Gaya, Jagdishpur, Hisua, Rafiganj, Piro, Amarpur, Behea, Nokha, Silao	Nasriganj, Nabinagar, Tikari, Koath, Shahpur, Koilwar, Khusrupur
<b>Industry (LQ&gt;1)</b>	Bihar Sharif	-	Silao	-
<b>Trade and Commerce (LQ&gt;1)</b>	Gaya, Sasaram, Dehri	Buxar, Nawada,	Behea, Hisua, Warlisganj, Dumraon	Nasriganj, Tikari, Khusrupur
<b>Transport and Communication (LQ&gt;1)</b>	-	Jamalpur	-	-
<b>Services (LQ&gt;1)</b>	Patna, Gaya, Bhagalpur, Arrah, Munger, Dehri	Jamalpur, Mokamah, Jehanabad, Aurangabad	Masaurhi, Jhajha, Daudnagar, Bikramganj, Bhabua, Sherghati, Islampur, Rafiganj,	

Source: Functional Classification of Urban Agglomerations/Towns of India 1991, Ministry of Home Affairs, Govt. of India.

**Appendix XVII: Sectoral Share in GSDP for Selected States – 1993-94**

	Sectoral Share in Gross State Domestic Product(%)			
	Bihar	Madhya Pradesh	Orissa	Rajasthan
Primary Activity	0.49	0.43	0.45	0.36
Industry	0.10	0.21	0.20	0.25
Trade and Commerce	0.17	0.13	0.12	0.16
Transport & Communication	0.05	0.06	0.07	0.05
Other Services	0.19	0.17	0.17	0.18
Total	1	1	1	1

Source: National Account Statistics

**Sectoral Share in GSDP for Selected States – 2005-06**

	Sectoral Share in Gross State Domestic Product(%)			
	Bihar	Madhya Pradesh	Orissa	Rajasthan
Primary Activity	0.35	0.32	0.37	0.27
Industry	0.12	0.26	0.21	0.30
Trade and Commerce	0.19	0.15	0.14	0.16
Transport & Communication	0.06	0.08	0.09	0.06
Other Services	0.28	0.19	0.18	0.21
Total	1	1	1	1

Source: National Account Statistics.