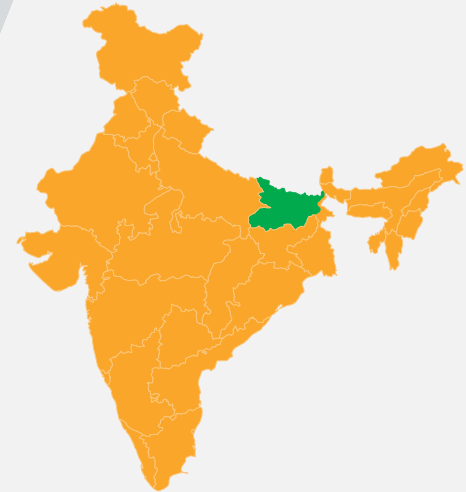




# BIHAR

## THE LAND OF BUDDHA



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November 2017

# Table of Content

- ▶ Executive Summary.....3
- ▶ Advantage State.....4
- ▶ Bihar Vision.....5
- ▶ Bihar– An Introduction.....6
- ▶ Annual State Budget 2016-17.....16
- ▶ Infrastructure Status .....17
- ▶ Business opportunities .....37
- ▶ State Acts & Policies.....66
- ▶ Doing Business in Bihar.....61
- ▶ State Acts & Policies.....62



# EXECUTIVE SUMMARY

## Fastest growing state in India

- The Gross State Domestic Product (GSDP) of Bihar grew at a CAGR of 12.14% between 2011-12 and 2016-17.

## Fastest per capita income growth

- Bihar has witnessed strong growth in per capita net state domestic product. At current prices, per capita NSDP of the state grew at a CAGR of 10.35% during 2011-12 to 2016-17.

## Leader in the production of fruits and vegetables

- Bihar is the 3<sup>rd</sup> largest producers of vegetables & the 6<sup>th</sup> largest producer of fruits in India.

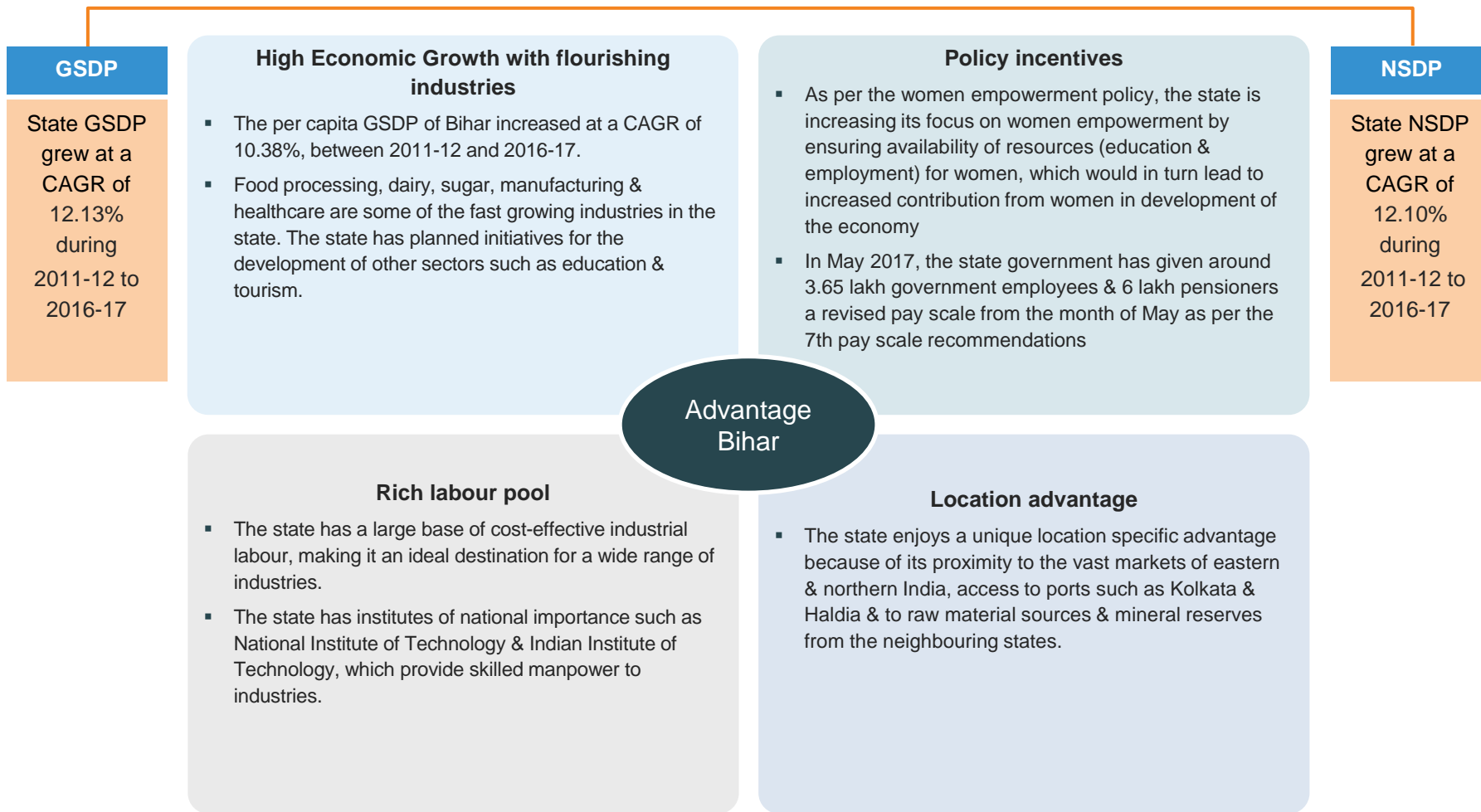
## Strong agriculture sector

- Bihar has high agricultural production making it one of the strongest sectors of the state. About 80% of the state's population is employed in agriculture, which is much higher as compared to India's average. The state has developed as the number one state in the eastern region in terms of agricultural production.

## Fifth largest mobile subscriber base

- With 69.31 million mobile subscribers in February 2017, Bihar accounted for the third largest mobile subscriber base among all Indian states.

*Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Ministry for Integrated Development of Horticulture, NSDP- Net State Domestic Product*



GSDP: Gross State Domestic Product NSDP: Net State Domestic Product EBC: Extremely Backward Class

- Knowledge and religious hubs to be built & will attract 100,000 tourists per year by 2022.
- Construct mega religious theme parks (Buddhism & Jainism).
- Eight centres for educational, cultural & religious tourism planned.
- Planned roadmap for improved connectivity; luxury hotels to be constructed through PPP mode.
- Tourism service centres to be set up.

- Agriculture to play a significant role with opportunities in food processing & agro-based industries.
- Use quality seeds & fertilisers & upgraded technology
- Provide institutional credit & crop insurance.
- Develop infrastructure with focus on roads & energy sector.

- Build medical institutions, create awareness & bring about technological advancements.
- Introduce radiology & pathology services in every district.
- Government hospitals across 36 districts to be provided with CT scan services.
- All government hospitals likely to commence dialysis services.

- Achieve zero dropout rate in secondary education.
- Increase spending on building schools and colleges with easy access and upgraded infrastructure.
- Launch policy initiatives to ensure compulsory enrolments
- Open vocational training institutes.



Source: Confederation of Indian Industry



- Bihar is located in the eastern part of India. The state is surrounded by Nepal in the north, West Bengal in the east, Uttar Pradesh in the west & Jharkhand in the south.
- The state has a number of rivers; the most important of which is the Ganges.
- Patna, Gaya, Bhagalpur, Muzaffarpur & Darbhanga are some of the key cities in Bihar.

- The most commonly spoken languages in the state are Hindi, English, Urdu, Bhojpuri, Maithili & Angika.
- The 4 agro-climatic seasons and fertile soil of Bihar support cultivation of a wide range of crops.

Parameters	Bihar
Capital	Patna
Geographical area (sq km)	94,163
Administrative districts (No)	38
Population density (persons per sq km)	1,106
Total population (million)	104.1
Male population (million)	54.3
Female population (million)	49.8
Sex ratio (females per 1,000 males)	918
Literacy rate (%)	61.8

Source: Government of Bihar website, Census 2011

# BIHAR IN FIGURES ... (1/2)

Parameter	Bihar	All states	Source
Economy	2016-17	2016-17	
GSDP as a percentage of all states' GSDP	2.88	100.0	Directorate of Economics & Statistics of Bihar, Central Statistics Office
GSDP growth rate (%)	12.13	11.69	Directorate of Economics & Statistics of Bihar, Central Statistics Office
Per capita GSDP (US\$)	598.29	1,788.95	Directorate of Economics & Statistics of Bihar, Central Statistics Office
Physical Infrastructure			
Installed power capacity (MW)	3,839.60	331,117.58	Central Electricity Authority, as of October 2017
Wireless subscribers (No)	85,603,927	1,186,790,005	Telecom Regulatory Authority of India, as of July 2017
Internet subscribers (No)*	23,780,000	431,210,000	Telecom Regulatory Authority of India, as of June 2017
National Highway length (km)	4,678.79	100,087.08	NHAI & Roads and Building Department
Airports (No)	2	125	Airports Authority of India

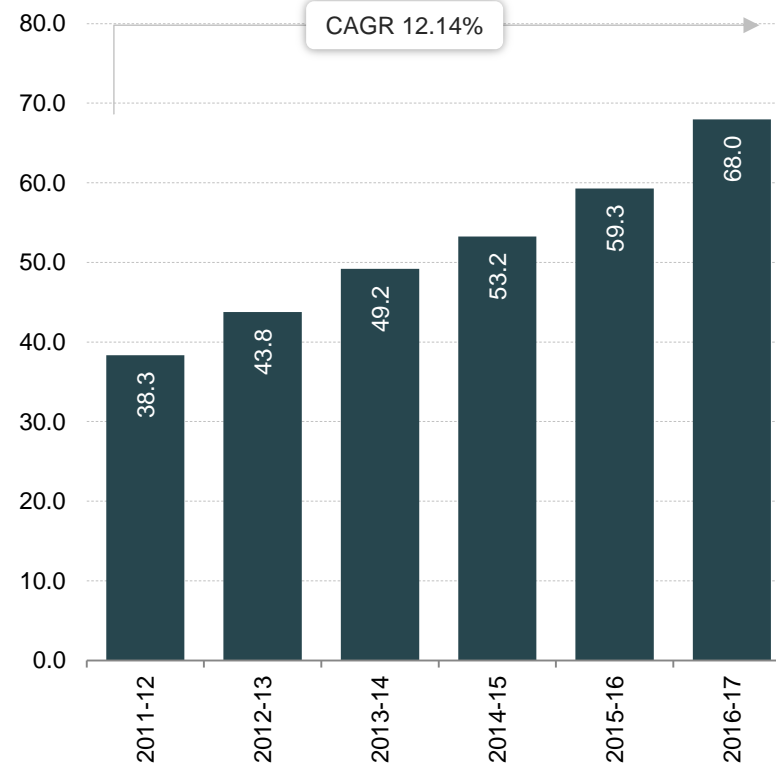
Note: \* includes Jharkhand

Parameter	Bihar	All states	Source
<b>Social Indicators</b>			
Literacy rate (%)	61.8	73.0	Census 2011
Birth rate (per 1,000 population)	26.8	20.4	SRS Bulletin
<b>Investments</b>			
FDI equity inflows (US\$ billion)	0.113 <sup>1</sup>	342.52	Department of Industrial Policy & Promotion, April 2000 to June 2017
<b>Industrial Infrastructure</b>			
PPP projects under construction & operational (no)	7	479	DEA, Ministry of Finance, Government of India
PPP projects operational (no)	8	717	DEA, Ministry of Finance, Government of India

<sup>1</sup>Including Jharkhand, PPP: Public-Private Partnership, SRS: Sample Registration System

- In 2016-17, Bihar's GSDP at current prices was around US\$ 68 billion.
- The state's GSDP grew at a CAGR of 12.14% between 2011-12 and 2016-17.

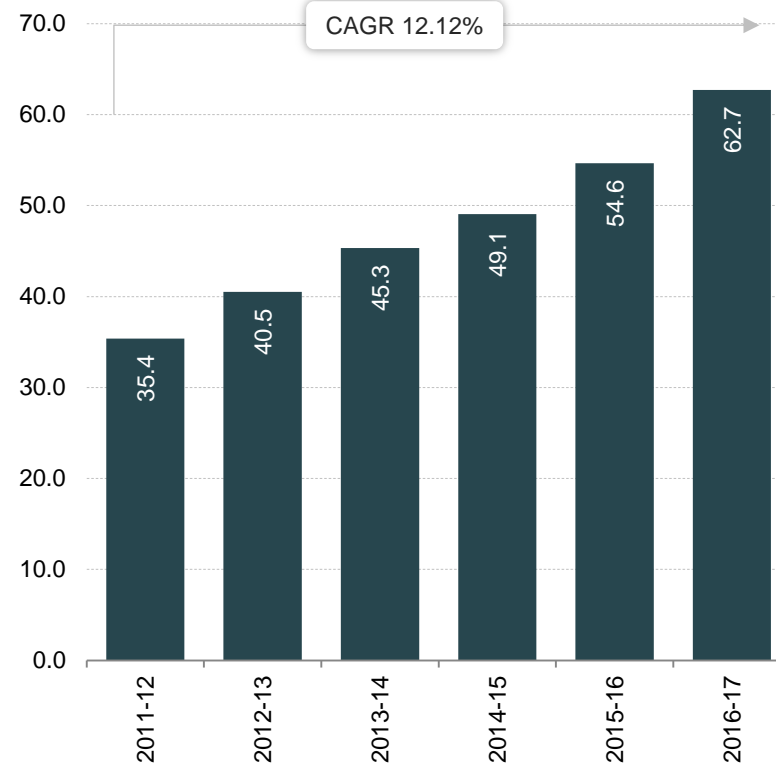
**GSDP of Bihar at current prices (in US\$ billion)**



Source: Directorate of Economics & Statistics of Bihar, Central Statistics Office

- In 2016-17, NSDP of Bihar was US\$ 62.7 billion.
- Average NSDP growth rate in the state was about 12.12% between 2011-12 and 2016-17.

**Bihar's NSDP at current prices (in US\$ billion)**

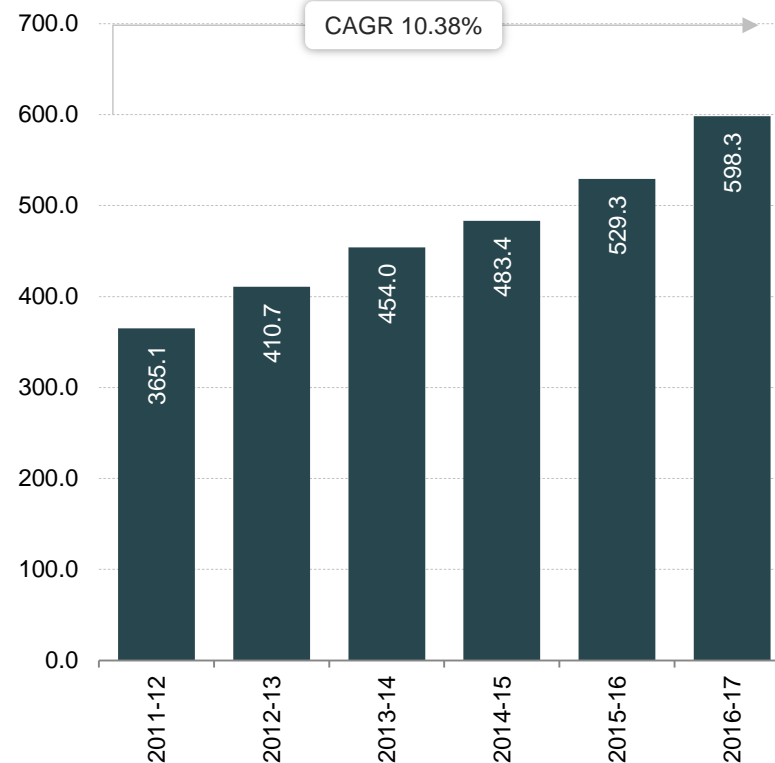


Source: Directorate of Economics & Statistics of Bihar, Central Statistics Office

# ECONOMIC SNAPSHOT – PER CAPITA GSDP

- The per capita GSDP of Bihar increased from US\$ 365.1 in 2011-12 to US\$ 598.3 in 2016-17.
- The per capita GSDP of Bihar increased at a CAGR of 10.38%, between 2011-12 and 2016-17.

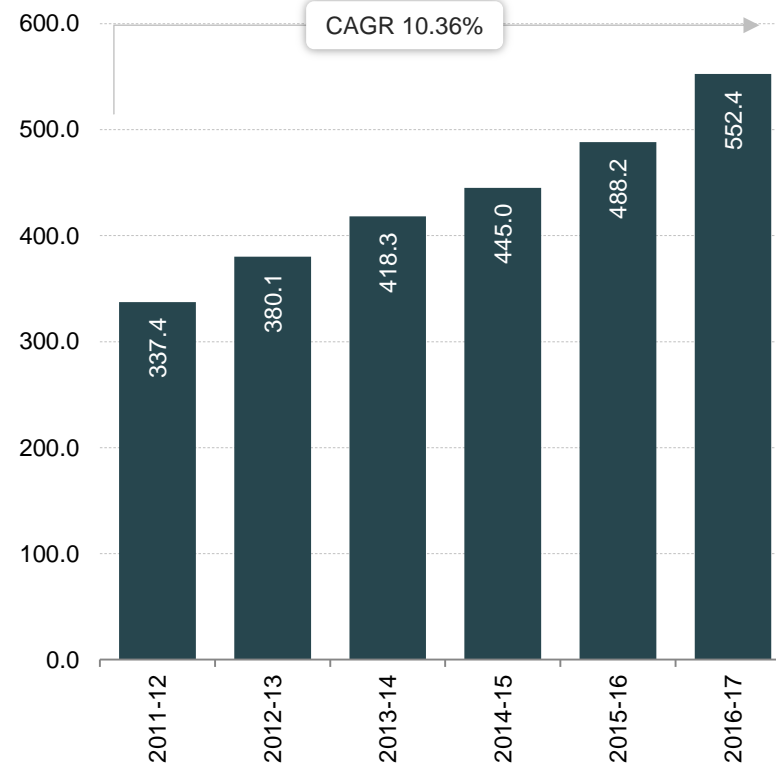
**Bihar's per capita GSDP at current prices (US\$)**



Source: Ministry of Statistics and Programme Implementation, Government of India

- Bihar's per capita NSDP increased from US\$ 337.4 in 2011-12 to US\$ 552.4 in 2016-17.
- Robust growth across secondary & tertiary sectors resulted in growth in average per capita NSDP of Bihar at a CAGR of around 10.36% between 2011-12 and 2016-17.
- The state government has taken measures to improve the investment climate of the state & to achieve industrial growth rate of 15% per annum. This will increase contribution of secondary sector in the GSDP to more than 25%, in line with the National Manufacturing Policy & Make in India initiative.
- The Bihar Government formulated the Bihar Industrial Investment Promotion Policy, 2016, to increase focus on the development of support infrastructure, prioritising the core sectors & emphasising on advanced technology, skill development, a modified structured package of assistance & balanced regional development i.e. uniformly extending the benefits of investment to all geographical areas of the state.

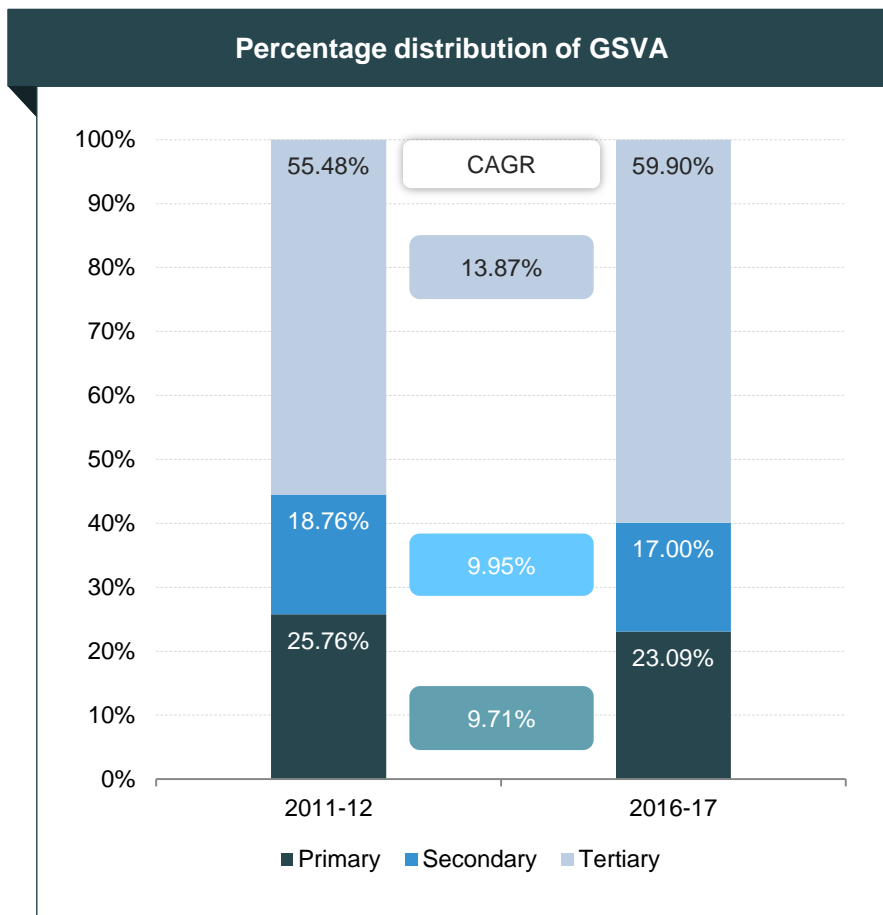
Per capita NSDP of Bihar at current prices (in US\$)



Source: Directorate of Economics & Statistics of Bihar, Central Statistics Office

# ECONOMIC SNAPSHOT – PERCENTAGE DISTRIBUTION OF GSVA

- The tertiary sector contributed 59.90% to the GSVA of Bihar (at current prices) in 2016-17, followed by primary sector & secondary sector contributing 23.09% and 17%, respectively.
- Between 2011-12 and 2016-17, tertiary sector was the fastest growing sector in the state, witnessing growth at a CAGR of 13.87%, followed by secondary sector, which witnessed growth at a CAGR of 9.95%, during 2011-12 and 2016-17.
- This growth has been supported by various sectors such as manufacturing, electricity, gas & water supply; construction & services industries.
- In the state of Bihar, the primary sector witnessed growth at a CAGR of 9.71%, between 2011-12 and 2016-17.
- As per Bihar's Economic survey 2016-17, the tertiary & secondary sectors registered a growth of 10.4% & 8.4%, respectively, over the previous year, which is faster than the overall economic growth.



Source: Sector-wise %share of GSVA

- During 2016-17, an area of 1,182.34 thousand hectares was used for production of horticulture crops in the state. The total production of horticulture crops in 2016-17 stood at 18,624.31 thousand metric tonnes.
- Bihar is among the leading producer of fruits & vegetables in India. Major crops produced in the state include sugarcane, rice, wheat, maize & potato.
- During the period of Agriculture Road Map II from 2017-22, an increase in construction of tissue culture laboratories in the state, is anticipated.
- By the end of August 2016, there were around 407 food processing units in the state, of which 278 were operational.

Crop	Annual production 2016-17 ('000 MT)
Rice	6,490
Wheat	4,750
Total coarse cereals	2,430
Total pulses	430
Total food grains	14,100
Onion	1,247.34
Honey	8.89
Plantation	98.27
Sugarcane	14,680
Fruits	4,272.94
Vegetables	14,225.04

### Leading districts of crop production

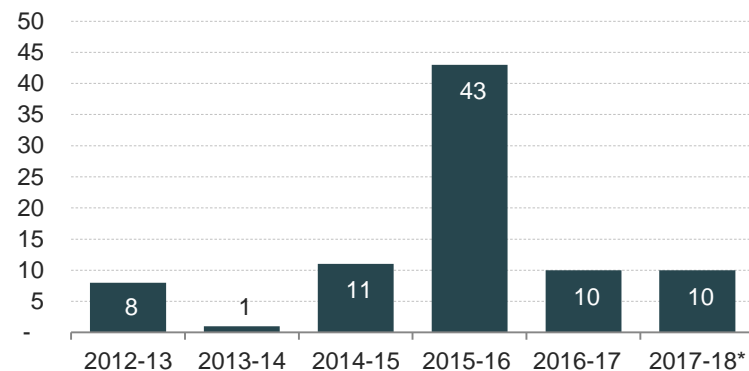
Rice	Rohtas, Aurangabad, West Champaran, Gaya
Maize	Madhepura, Khagaria, Saharsa, Katihar, Bhagalpur
Wheat	Rohtas, East Champaran, Muzaffarpur, Siwan
Pulses	Patna, Aurangabad, Bhojpur

Source: Economic Survey of Bihar, 2015-16, Horticulture Database 2014-15 National Horticulture Board, Department of Agriculture Co-operation & Farmers Welfare

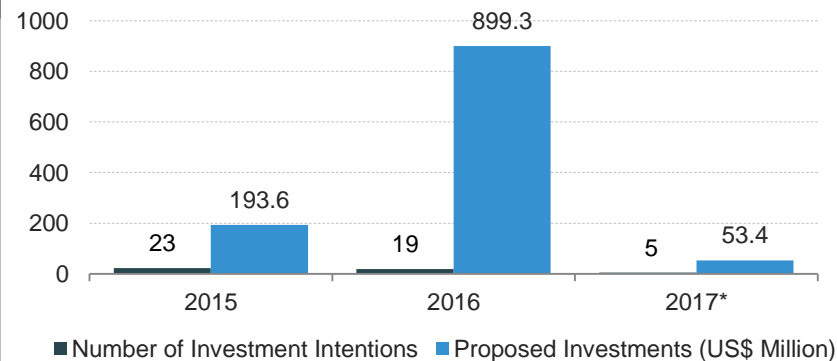
# ECONOMIC SNAPSHOT – FDI INFLOWS & INVESTMENTS

- Total FDI for Bihar & Jharkhand, between April 2000 and June 2017, stood at US\$ 113 million.
- Up to September 2017, a total of 465 investment proposals have been approved by SIPB, of which 222 proposals are related to food processing, 55 proposals related to manufacturing, 39 proposals for plastic and rubber and so on.

**FDI inflows<sup>1</sup> in Bihar (in US\$ million)**



**Investment intentions in terms of IEMs filed, LOIs/DILs issued**



**Source:** Department of Industrial Policy & Promotion 1 Including Jharkhand, Ministry of Commerce & Industry, Government of India, 2 - As of December 2016 IEMs – Industrial Entrepreneur Memoranda, LOIs – Letters of Intent DILs – Direct Industrial Licences, \* - data from April-June 2017

# STATE BUDGET 2017-18

The total expenditure for state as per budget 2017-18 is estimated to stand at around US\$ 24.85 billion.

Name of Department	Expenditure (US\$ billion)
Education	3.92
Pension	3.09
Energy	1.69
Health	1.09
Home	1.16
Panchayati Raj	1.35
Other Department	8.54

*Source: Andhra Pradesh State Portal, Directorate General of Commercial Intelligence and Statistics, Directorate of Economics and Statistics, AP NA – Not Available, <sup>(1)</sup>2014-15*



- Bihar has 4,621 km of national highways & 4,253 km of state highways. Besides, the state has 11,054 km of major district roads.
- As of June 2017, 1,114 major & minor roads in the state were completed under Mukhyamantri Setu Nirman Yojna along with 824 major, minor & mega roads under various other heads. In the 2017-18 budget, capital outlay of US\$ 1.03 billion is proposed for the development of roads & bridges in the state compared to US\$ 863.26 million in the 2016-17 budget.
- In October 2016, Cabinet Committee on Economic Affairs (CCEA) approved construction of a new highway project worth US\$ 292 million, between Sahibganj in Jharkhand (NH-131A) to Manihari in Bihar (NH-133B).
- In November 2016, Government of India & Asian Development Bank signed a US\$ 500 million loan to build India's longest river bridge across Ganga to improve connectivity between North & South Bihar.

- In January 2017, the government approved a highway project worth US\$ 731.51 million, to widen NH-2 in Jharkhand & Bihar.
- Construction work of 2,232 km national highways through state fund, 2,104 km state highways under National Development Scheme & 251 km roads under the state plan was completed during 2015-16.
- During 2015-16, the total road length of Bihar stood at 209,758 km. The government has plans for connecting all the unconnected regions of the state with a population greater than 250 people, in the road communication sector.
- Moreover, during 2015-16, construction, widening & repairing of 12,554 km of major district roads was accomplished by the state government. As per budget 2016-17, for development of state highways & major district roads, action plans costing around US\$ 348.67 million & for construction of 20 bridges in the state, an action plan of US\$ 71.68 million was approved by the state government. As per the 2017-18 budget, around US\$ 855 million have been allocated for construction of state highways and around US\$ 70 million has been allocated to for the India- Nepal border end.

Type of road	Length (km) (up to September 2016)
National highways	4,621
State highways	4,253
Major district roads	11,054

*Source: Economic Survey of Bihar, 2015-16, NHAI, Ministry of Road Transport & Highways, State Budget 2015-16, Road Construction Dept., Bihar Rajya Pul Nirman Nigam Ltd*

- Hajipur in Bihar is the headquarter of the East-Central Railway. The state's main railway junctions are at Patna, Gaya, Muzaffarpur, Katihar & Samastipur.
- In 2015, the central government approved an FDI project worth US\$ 396.03 million for manufacturing world class diesel and electric locomotive factories in Bihar.
- Several link-lines, such as Muzaffarpur-Samastipur-Barauni-Katihar & Muzaffarpur-Chapra-Siwan, have been converted to broad gauge from metre gauge.
- Bihar is speeding up on execution of the Patna metro rail project & has constituted an SPV for the same. In 2015, the Detailed Project Report (DPR) has been submitted for the Patna metro project. The DPR amount for the project is estimated at US\$ 1.99 billion.
- In 2015, a plant was built for the Indian Railways in Saran district Bihar, at an estimated cost of US\$ 247.5 million on an area of 285 acres. The plant has a capacity to produce 50,000 wheels of goods wagons, passenger coaches & locomotives per year. Contract for construction of project was awarded to Larsen & Toubro on EPC basis.

Source: Economic Survey 2014-15



Source: Maps of India

- The construction work worth US\$ 484.57 million, for rail-cum-road bridge on the Ganga river between Digha & Sonapur, near Patna is taken care by the railways. The state's share of US\$ 205.71 million in the total cost of the project would be paid by the Planning Commission. The rail-cum-road bridge is now functional.
- Construction work for 11 ROBs (road over bridges) on railway crossings is under progress. As per Economic Survey 2015-16, railways made a contribution of US\$ 39.26 million & the state made a contribution of US\$ 93.03 million in this project.

- Bihar has 1 domestic airport in Patna & 1 international airport in Bodh Gaya. Several domestic airlines connect Patna to Delhi, Kolkata, Mumbai, Lucknow, Bengaluru, Hyderabad & Ranchi.
- The airport in Bodh Gaya is used for international connectivity with Bangkok (Thailand), Colombo (Sri Lanka), Yangon (Myanmar), Dhaka (Bangladesh), Paro (Bhutan) & Kuala Lumpur (Malaysia). In March 2015, the Airports Authority of India announced plans to develop the Indian Air Force airport of Bihar as an international airport. This airport would be used for international transport purposes.

## Airport indicators April 2017- September 2017

Parameter	Patna	Gaya
Aircraft movement (nos.)	10,524	724
Passenger traffic (nos.)	1,435,229	43,176
Freight handled (tonnes)	4,031	0

Source: Airport Authority of India

# PHYSICAL INFRASTRUCTURE – WATERWAYS

- The 1,620 km stretch of the river Ganges that flows between Allahabad in Uttar Pradesh & Haldia in West Bengal has been declared 'National Waterway 1', & is being developed by the Inland Waterways Authority of India.
- Patna has a low-level fixed terminal on National Waterway-1 for handling containers. The National Inland Navigation Institute has been set up in Patna to train vessel crews.
- In 2015, the state government requested the central government for funding the development of 6 rivers, including Gandak, Ghaghra, Koshi, Punpun, Sone & Karamnasa, for inland waterways. This project is being undertaken to make them navigable & connect 2,000 panchayats with waterways.
- As of May 2015, the central government has proposed an inland waterways project through which several road projects are taken up with an investment of US\$ 8.3 billion which will facilitate transportation of cargo between Haldia & Allahabad via Patna in Bihar.
- As per National Waterways Act, 2016, 111 waterways have been declared as National Waterways (NWs) including the 5 existing NWs. The techno-economic feasibility for the newly declared 106 NWs has been initiated. Under this new scheme, 6 NWs have been planned in the state of Bihar.
- Under the plan for development of NW-1, ferry services, ship repair facilities, roll-on roll-off (RO-RO) services, state-of-the-art terminals at Kalughat & Gaighat will be developed in the state of Bihar. The projects are likely to create direct & indirect employment for more than 50,000 people in the state

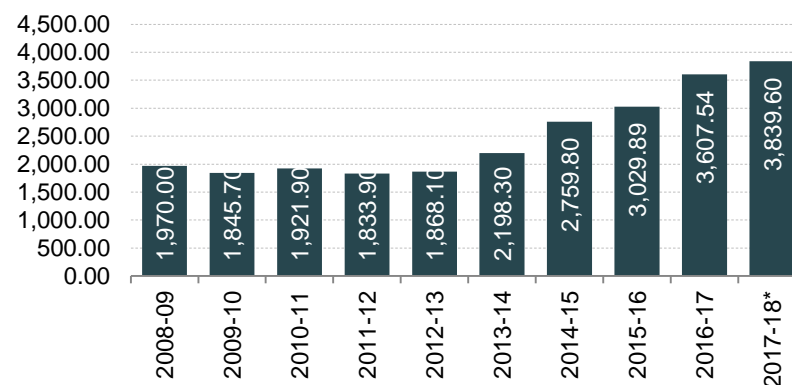
Source: Bihar Report Card 2015, Press Information Bureau



S. No	National Waterways	Approximate length (km)	State
1	NW-37	300	Bihar & UP
2	NW-40	340	Bihar & UP
3	NW-54	86	UP & Bihar
4	NW-58	236	Bihar
5	NW-81	35	Bihar
6	NW-94	160	Bihar

- As of October 2017, Bihar had a total installed power generation capacity of 3,839.60 MW, of which 3,024.32 MW was contributed by central utilities, 280.70 MW by state utilities & 534.58 MW by private utilities.
- During the same time period, of the total thermal power plant capacity, coal-based plants accounted for the largest share with capacity contribution of 3,430.33 MW.
- Hydropower plants accounted for a power generation capacity of 110 MW. Besides, 295.22 MW of installed power generation capacity came from renewable sources.
- Distribution network in Bihar comprises 11 kV lines through 73,359 circuit km network, low tension lines with 1,33,491 circuit km as well as 33 kV lines through the 9815 circuit km network by the end of October 2015.

**Installed power capacity (MW)**



**Power Supply in Bihar**

Year	Peak demand (MW)	Peak availability (MW)	Deficit (MW)	Deficit (%)
2013-14	3,000	2,335	665	22.0
2014-15	3,500	2,831	669	19.0
2015-16	4112	3459	653	15.6
2017-18*	4,394	4,131	263	6.0

Source: Central Electricity Authority, Bihar Economic Survey 2014-15, \* - data upto September 2017

- The BSEB is a vertically integrated agency & is responsible for generation, transmission & distribution of electricity in Bihar. As of 2015, BSPTCL operates a transmission network of 6,182 Km of 132 K.V. Lines & 1,663 Km of 220 K.V. lines & 75 Km of 400 K.V. Line as well as 97 operational EHV sub- stations with 7,360 MVA transformation capacity.
- In August 2015, NTPC planned to set up Kajra TPP 1320 MW, a new power project in Bihar. This would be undertaken as a joint venture of NTPC with the state government. Under the recently announced projects for harnessing solar energy in the state of Bihar, the government is planning to install solar photovoltaic projects on the lands recognised for the expansion of inland fresh water aquaculture such as ponds.
- As per the budget 2016-17, the Government of Bihar allocated a capital outlay of US\$ 1.3 billion for various power projects in the state.
- In January 2017, NTPC at Nabinagar, has started commercial operation of its 1st unit of 250 MW of Bhartiya Rail Bijlee Company Ltd., thereby increasing its capacity to 46,178 MW.
- In June 2017, a student studying in 12<sup>th</sup> grade from Model High School in Naugachia town of Bhagalpur district, Bihar invented an eco-friendly way of producing electricity from banana stems at a national programme “Innovation in Science Pursuit for Inspired Research (INSPIRE)”, implemented by the Department of Science & Technology.

## Forecast of Annual Requirement of Energy for Rural & Urban households (in MU)

Household category	2016-17	2017-18	2018-19
Existing electrified household	6,807	7,542	8,278
Unelectrified households when electrified	5,525	9,158	13,557
New household when electrified	1,246	2,150	3,252
Total domestic requirement	13,578	18,850	25,087
Consumers other than domestic (growing annually at 20%)	7,760	9,312	11,175
New agricultural connections	2,739	4,888	7,573
Total	24,077	33,050	43,835

## Forecast of Peak Load and Energy Requirement

Year	Peak load (MW)	Energy requirement (MU)
2016-17	5,108	29,539

Source: Central Electricity Authority, Bihar Economic Survey 2015-16 Bihar State Power Holding Company, GOB BSEB - Bihar State Electricity Board

- The peak load value in the state reached 3,459 MW in October 2015. Further, the construction of 2 new units of 195 MW each is under process in the state, as per the budget 2016-17.
- The number of grid sub-stations in the state increased to 98, which led to increase in power evacuation potential of transmission systems.
- Ashoka Buildcon has been awarded 5 power projects worth US\$ 145.13 million in Bihar. The North & South Bihar Power Distribution Co Ltd., authorised the letter of intent for 5 districts, namely, West Champaran, Sitamahri, Sasram, Munger & Patna, for carrying out rural electrification work in the state. The projects will be executed under the Deendayal Upadhyay Gram Jyoti Yojna.
- Bihar government has announced that every household in the state would be supplied electricity by the end of 2016. The government will provide free electricity connection to about 50 lakh households that are deprived of power connection so far. The objective would be met at an investment of US\$ 283.76 million.
- In January 2017, Bihar division of NTPC began commercial operation of the first unit of 250 MW of Bharatiya Rail Bijlee Company Ltd.

## Forecasted capacity expansion

Household category	2016-17	2017-18	2018-19
State thermal	720	720	720
State small hydro	88	88	208
Central generating stations thermal	3,346.50	3,561.20	3,722.40
Central generating stations hydro	469.53	1,344.53	1,344.53
Ipps projects (case1)	460	460	960
JV/partnership (thermal)	584	1,500	2,873
NCE/RNES	248	398	398
Total	5,916.03	8,071.73	10,225.93

*Source: Central Electricity Authority, Bihar Economic survey 2015-16, Bihar State Power Holding Company, GOB BSEB - Bihar State Electricity Board NCE = Non-Conventional Energy; RNES = Renewable Energy Source*

- According to Telecom Regulatory Authority of India (TRAI), Bihar had nearly 85.60 million wireless subscribers and 283,845 wire-line subscribers, as of July 2017.
- The tele-density in the state stood at 61.45%, as of July 2017 & as of March 2017, the state had 9,037 post offices.
- By the end of July 2017, 10,712,149 subscribers had submitted requests for mobile number portability in Bihar.
- As of March 2017, Megasoft Limited, a BSE-listed managed service company, secured a cloud enabled solution and services contract, leased by the Bihar State Electronics Development Corporation (BELTRON)

## Telecom Infrastructure (As of July 2017)

Wireless subscribers	85,603,927
Wireline subscribers	283,845
Internet subscribers <sup>(1)</sup>	23,780,000
Tele density (in%)	61.45

## Performance status of NOFN Project (As of September 2017)

No. of GPs in Phase-I	5,202
Pipe laid (km)	12,971
Cable laid (km)	12,944
GPs for which cable laid	4,742

## Postal facilities (As of March 2017)

Departmental Head Post Offices	32
Departmental Sub Post Offices	1,023
Branch Post Offices	7,982
Total Post Offices	9,037

Source: Telecom Regulatory Authority of India <sup>(1)</sup> As of March 2017

As per the budget 2016-17, capital outlay of US\$ 4.97 million has been provided by the state government for the development of telecommunication sector in Bihar.

## Postal Traffic (2015-16)

Registered ('000)	4,902
Unregistered (crore)	7.34
Speed Post ('000)	9,707.9
International Speed Post ('000)	0.5
Foreign Postal Unregistered ('000)	1,665.9
(i) To Foreign Counters ('000)	1,143.0
(ii) From Foreign Counters ('000)	1,002.9

- Non metro markets like Patna & other tier II cities have grown rapidly in regard to consumption, thus becoming main target markets, posing a huge potential of transforming themselves into new business centres in comparison with metro cities.

## Urban Infrastructure in Bihar

Scheme	Estimated cost US\$ million
Solid Waste Management for Danapur, Khagaul and Phulwari	1.92
Khagaul Water Supply Scheme	2.18
Danapur Water Supply Scheme	11.44
Phulwarisharif Water Supply Scheme	4.09
Patna Water Supply Scheme	70.83
Solid Waste Management for Patna	6.13
Purchase of buses for Patna Urban Transport	6.62
Bodhgaya Water Supply Scheme	5.56
Bodhgaya Sewerage Scheme	15.92
Purchase of buses for Bodhgaya Urban Transport	1.12

*Source: JNNURM, Ministry of Urban Development, Government of India, Bihar Economic Survey –2014-15, Department of Urban Development and Housing, GOB , JNNURM - Jawaharlal Nehru National Urban Renewal Mission*

# DEVELOPMENT PROJECTS: KEY PUBLIC-PRIVATE PARTNERSHIP (PPP) PROJECTS

Project name	Sector	PPP type	Project cost (US\$ million)	Stage
Khagaria-Bakhtiarpur section	Roads	BOT	355.4	Under bidding
Bridge across river Ganga connecting Bakhtiarpur-Shahpur Patori	Roads	BOT-Toll	313.3	Construction
Hajipur-Muzaffarpur	Roads	BOT-Annuity	196.0	Construction
Chappra-Hajipur	Roads	BOT-Annuity	171.0	Construction
Khagaria Purnea section	Roads	BOT -Annuity	138.5	Construction
Kosi Bridge Project	Roads	BOT-Annuity	90.9	Construction
Mokama-Munger	Roads	BOT-Annuity	74.3	Construction
Forbesganj-Jogbani	Roads	BOT-Annuity	15.6	Construction
Development of a new five star hotel at the site of Hotel Kautilya Vihar at Patna	Tourism	DBFOT	14.4	Under bidding
Development of a four star hotel at the site of Gautam Vihar at Rajgir	Tourism	DBFOT	6.2	Under bidding
Mokama-Munger NH-80 Road Project	Transport	Build-Operate-Transfer (BOT) Annuity	53.7	Operational
Road Upgradation (Purnea-Khagaria) Project	Transport	Build-Operate-Transfer (BOT) Annuity	Not Available	Operational

Source: Ministry of Finance, Government of India BOT: Build-Operate-Transfer, DBFOT: Design-Build-Finance-Operate-Transfer

- The literacy rate of the state was recorded as 61.8%. Male literacy rate in the state is 71.2% and female literacy rate is 51.5%. In the 2016-17 budget, an amount of US\$ 3.48 billion has been allotted for education, sports, art & culture sectors. In addition, the state allocated a sum of US\$ 160.84 million under capital outlay for the development of these sectors.
- The total number of students enrolled in primary & upper primary (up to class VIII) schools rose to 21.6 million in 2014-15 from 17.7 million in 2007-08. The enrolment of girls in the state is progressing, with the rate of re-enrolment of girls increasing at a faster rate than that of the boys. However, the dropout rates have witnessed a decline over the past years.
- The state's budget expenditure on the education sector has witnessed a decline of 4.13%. In 2015-16, education expenditure in the state was US\$ 3.63 billion, which decreased to US\$ 3.48 billion in 2015-16. Development of 6 institutions analogous to AIIMS are proposed by the central government at an amount of around US\$ 303.7 million, of which, one has been developed in Patna, Bihar.
- The prestigious IIT was established in Patna in August 2008. The institute offers B.Tech programmes in 3 disciplines: Computer Science & Engineering, Electrical Engineering & Mechanical Engineering. PhD programmes are offered in Engineering, Science & Humanities & Social Sciences.
- In March 2017, the state government made an announcement to change the Bihar Private University Act, 2013, by relaxing norms to meet the infrastructure requirement of new institutions. It is a proposal for universities to allow to start functioning from their temporary makeshift venues while meeting all other conditions.

## Education infrastructure (2015)

- Universities: 22 (Out of which 21 are traditional and 1 open)
- Government colleges: 276
- Engineering/technical colleges: 23
- Medical colleges: 17
- Local body colleges: 468
- Teacher training colleges: 60

## Reputed technical institutes in Bihar

- Indian Institute of Technology, Patna
- National Institute of Technology, Patna
- National Institute of Fashion Technology, Patna

## Reputed medical institutes in Bihar

- Indira Gandhi Institute of Medical Sciences, Patna
- Jawaharlal Nehru Medical College, Bhagalpur
- Patna Medical College, Patna

*Source: Economic Survey of Bihar 2015-16, Medical Council of India, University Grants Commission, Bihar Government Budget 2016-17 IIT - Indian Institute of Technology*

- The state government is coming up with various initiatives for increasing employment prospects in the state under the Bihar Skill Development Mission. The project aims at upgrading skills of 10 million youth in the state by 2017. The scheme has been allotted a budget of US\$ 2.9 million. In addition, 5 private universities are also being set up in the state.

### Primary, Secondary and Higher Education:

- **Rahstriya Madhyamik Shiksha Abhiyan (RMSA):** This scheme is sponsored by the central government & aims at improving the quality & access of secondary education, so that by 2017, the gross enrolment ratio & by 2020, the universal retention would be more than 90%. In 2014, an amount of US\$ 1.37 billion was approved under RMSA.
- In order to increase the number of residential schools for SC/ST students in the state, an amount of US\$ 2.67 million will be spent by the government. These schools will have an additional capacity of 560 students.
- In the year 2014-15, an amount of US\$ 0.04 million was sanctioned in order to benefit 1,550 students who aimed at acquiring technical education.
- In March 2017, on the occasion of Bihar Diwas, the Bihar government announced the launch of an ambitious programme of facilitating the colleges and universities of Bihar with free Wi-Fi.

- Manav Vikas Mission (MVM) (2013-17), has set the following targets & time frames for secondary as well as for higher education & literacy:

Indicators	Target 2016-17
Gross Enrolment Ratio (GER) of Class 9th	85% for children of all categories
No. of girls of SC/ST/EBC/minorities passing class 10th	All Girls - 7,15,000 SC Girls - 92,000 ST Girls - 7,000
Gender ratio of candidates appearing in class 10th Board Exam	52:48
Pupil Teacher Ratio (PTR) - Secondary/higher secondary (a teacher for every group of 60 students in each subject)	60:1
Gross Enrolment Ratio (GER) in higher education	30%

Source: Economic Survey of Bihar 2015-16 Bihar Report Card 2015

- As of 2016, the health centres under various categories had reached 11,612 in the state, of which 533 are primary health centres, 1,350 are additional primary health centres and 9,729 are sub centres. There were 36 district hospitals, 70 referral hospitals and 55 sub-divisional hospitals in the state.
- In 2016-17, the total budgeted expenditure for health services in the state was US\$ 1.17 billion. The total capital outlay for the sector is US\$ 141.26 million for 2016-17.
- The state government is aiming to increase the number of 1st Referral Units from 60 to 100 during 2016-17.

## Government initiatives in the health sector

- Increase in sanctioned manpower in departments such as medical, public health and family welfare.
- Higher level of personnel appointments and training.
- Involving private sector in support services related to cleaning, pathology and radiology.
- Free drug distribution and indoor treatment

## Health indicators (2017-18 ,up to September 2017)

Average Number of outpatient visits per day <sup>^</sup>	339
Birth rate <sup>(1)</sup>	26.8
Death rate <sup>(1)</sup>	6.0
Infant mortality rate <sup>(2)</sup>	38

## Life expectancy at birth (years)

Male (2010-14)	67.8
Female (2010-14)	68.4

## Health infrastructure (2016)

District hospitals	36
Referral hospitals	70
Sub divisional hospitals	55
Primary health centres	533
Sub centres	9,729
APHCs	1,350

Source: Bihar, 2014-15, Sample Registration System (SRS) Bulletin, State Budget 2015-16, (1) Per thousand persons, (2) Per thousand live births, ^ - upto September 2016

- Till 2021, a total of 23 medical universities, 9 nursing colleges, 38 GNM and 101 ANM schools are planned to be established in the state, under the government & private sector.
- In order to improve the medical knowledge & develop super speciality facilities in the state, the Government of Bihar is working towards implementation of Bihar Health Service Investment Incentive Policy.

## **New Interventions in Health Sector (2014)**

- Introduction of HMS (Hospital Management System) in Indira Gandhi Institute of Medical Science (IGIMS), 6 district hospitals of the state & in 6 Medical Colleges & Hospitals
- MCTS (Mother and Child Tracking System) implementation in order to reduce mortality rates of mother and child
- HRIS (Human Resource Information System) utilization for providing decisions in issues related to human resources
- 'Under the Sanjivani Programme, OPD Registration, Radiology/Pathology & Drug Distribution would be provided on-line. Under the same program, development of new modules is done for doctors attendance, drug inventory, patient diagnosis information, bed availability & service availability
- The government plans to open a new dental college at Paaithna, Rahui (Nalanda)
- Six super-speciality departments to be established for neurology, nephrology, cardiology, neuro surgery, geriatrics & radio therapy. Posts in 6 medical colleges would be created. The colleges include - Patna Medical College Hospital (Patna), Sri Krishna Medical College (Muzaffarpur), Nalanda Medical College Hospital (Patna), Jawahar Lal Nehru Medical College (Bhagalpur), Darbhanga Medical College Hospital (Darbhanga) & Anugrah Narayan Magadh Medical College Hospital (Gaya)

Source: Bihar Report Card 2015, State Budget 2016-17

- According to the 'Sports Policy, 2007', the state government is undertaking various initiatives to promote sports in the state by augmenting sports infrastructure, providing coaching facilities and supporting promising players. The state government is planning to develop outdoor stadiums in 534 blocks of the state that come under Chief Minister Development Scheme. However, the permission for setting up 239 stadiums has been given, out of which 80 stadiums have already been developed in the state.
- Moreover, in accordance to international standards, a new science museum is being set up in Patna.
- As per Economic Survey 2016-17, major initiatives taken by the state government for the development of cultural infrastructure in the state are as follows –
  - Out of the target of 5,045 community hall-cum-worksheds, construction has been completed for 2,732 units with an expenditure of Rs 243.5 crore (US\$ 36.29 million), for promoting cultural as well as sports development of Mahadalits community of in the state.
  - Implementation of Bihar State Women Empowerment Policy, 2015, which aims at abolishing the discrimination based on gender to confiscate the difficulties being faced by women in accessing the resources, is being planned.

## Major museums in Bihar

- Patna Museum, Patna
  - Chandra Dhari Museum, Darbhanga
  - Gaya Museum, Gaya
  - Nardaha Museum, Nawada
  - Bhagalpur Museum, Bhagalpur
  - Maharaja Lakshmishwar Sing Museum, Darbhanga
  - Sitaram Upadhyay Museum, Buxar
  - Bihar Sharif Museum, Nalanda
  - Chandra Sekhar Singh Museum, Jamui
  - Ramchandra Shahi Museum, Muzaffarpur
  - Jananayak Karpoori Thakur Memorial Museum, Deshratna Marg, Patna
  - Chapra Museum, Chapra
- The state government is coming up with new initiatives for encouraging and safeguarding various forms of folk music and dances in the state.
  - At an amount of US\$ 74.85 million, the work on manufacturing of an International Convention Centre is under progress.

Source: Economic Survey 2015-16, Youth, Art & Culture Department, Government of Bihar

## CULTURAL INFRASTRUCTURE...(2/2)

- The state government is taking various actions to setup a Youth Welfare Board for the upliftment of youth in the state.
- An international conclave on 'Experience Buddhism - In the land of its origin' was organised in February 2010 to give a major thrust to cultural tourism and explore the tourism potential related to the Buddhist circuits in India, especially Bihar.
- The directorates under Youth, Art & Culture Department are the Directorate of Museum, Directorate of Archaeology, Directorate of Cultural Affairs & Directorate of Student & Youth Welfare.
- The autonomous bodies under Youth, Art & Culture Department are Bihar State Sports Authority, Bihar Sangeet Natak Academy & Bihar Lalit Kala Academy.

Year	International stadiums (nos.)	Stadiums at block level (nos.)		Play fields (nos.)	Indoor stadiums (nos.)	Stadium and coaching centres (nos.)		Sports academies (nos.)
		Target	Achievement			Target	Achievement	
2014-15	1	100	79	2206	4	15	15	-
2015-16	-	134	-	2200	3	14	-	-
2016-17	-	-	-	2000	-	-	-	-
Total	1	234	79	6406	7	29	15	-

Source: Youth, Art & Culture Department, Government of Bihar, Bihar Report Card. 2015

- The central government of India approved the formation of an AKICDC (Amritsar-Kolkata Industrial Corridor Development Corporation), development work of which started in 2014. The BIADA is responsible for promoting and assisting rapid development of industries in the industrial areas and estates.
- Operations of BIADA are divided into 4 regions – Patna, Muzaffarpur, Darbhanga, Bhagalpur – to facilitate quick services to entrepreneurs. The total developed land by BIADA is of 5,930.81 acres; of which industrial units have been allotted 3,370.65 acres (56.8%). BIADA of Patna has attained the maximum share of 3,144.82 acres during 2014-15.
- As of November 2015, the Consumer Price Index for industrial workers was recorded to be 287. Further, there has also been an increase in the number of micro, small & medium enterprises in the state.
- In May 2017, Ultra Tech Cement started manufacturing slag cement in its 0.3 mtpa manufacturing capacity at Patliptura, Bihar. After this move, the cement manufacturing capacity of the company stands at 70.6 mtpa.

Region	Acquired land (acre)	Land reserved for infrastructure, administrative block, road etc. (acre)	Allotted land (acre)	Total vacant land (acre)	No of running units
Patna	3,144.82	252.51	2,127.65	51.42	656
Bhagalpur	1,347.29	101.42	415.84	16.6	248
Darbhanga	411.96	76.67	305.51	29.78	324
Muzaffarpur	1,026.74	183.22	521.65	55.4	274

Source: Economic Survey of Bihar, 2015-16 BIADA - Bihar Industrial Area Development Authority

# INDUSTRIAL INFRASTRUCTURE ... (2/2)

- As per budget 2017-18, total capital outlay for the industry & minerals is estimated to be US\$ 145.29 million. Out of this outlay, US\$ 24.30 million is for the village & small industries & US\$ 3.91 million is for non-ferrous mining & metallurgical.

Centres	Industries
Patna	Major agricultural centre of trade, exporting grain, sugarcane, sesame & medium-grained rice; has also emerged as a manufacturing hub in Bihar, with the highest number of industrial units.
Tirhut	Has the 2nd highest number of industrial units in the state; food/beverage processing & manufacturing units located here.
Muzaffarpur	Important trade centre for cloth; famous for exporting fruits, particularly mango & litchi.
Barauni	Has major industrial units including those of Indian Oil Corporation; capacity of the existing thermal power station has undergone major renovation & modernisation.
Bhagalpur	Famous globally for tussar silk; trading of agricultural produce & cloth is an important economic activity; other major industries include rice, sugar milling & wool weaving.
Gaya	Major weaving centre; important tourist hub.
Darbhanga	Main industries are paper, sugar & handloom; Darbhanga city is noted for its trade in fish, mango & makhana.

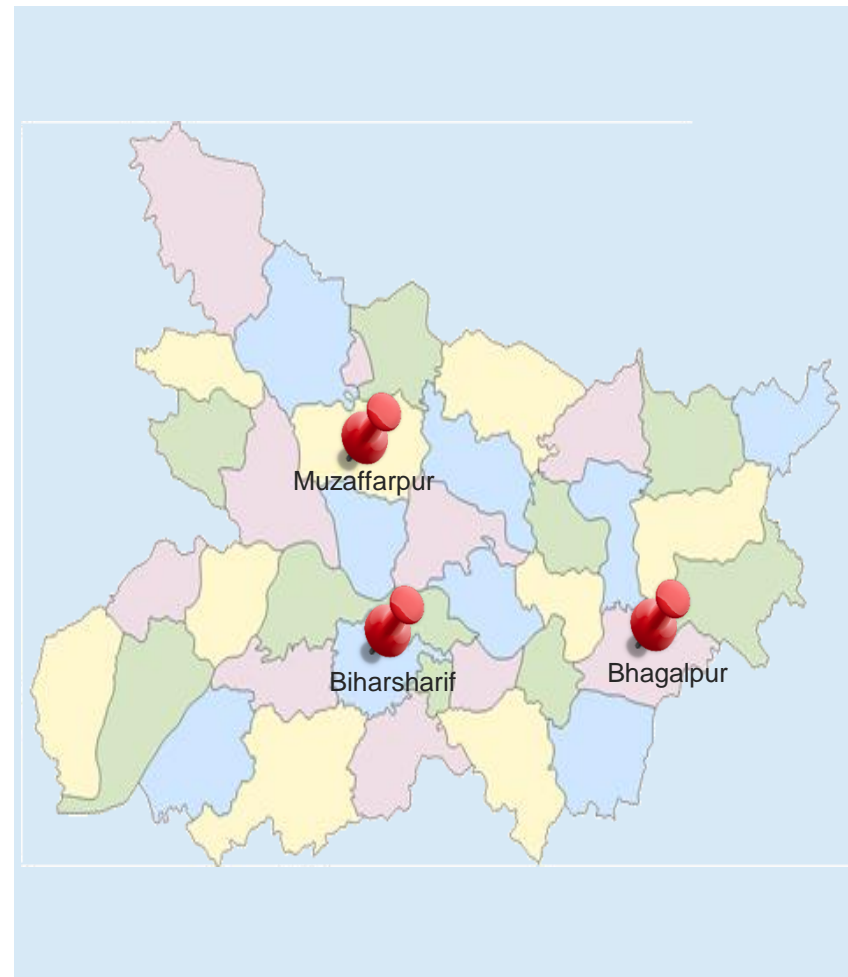


Source: Economic Survey of Bihar, 2015-16 Annual Financial Statement for the Government of Bihar 2016-17

- As of August 2017, 4 cities of Bihar namely, Bhagalpur, Bihar Sharif, Patna & Muzaffarpur are to be developed as smart cities.
- As of June 2015, along with the selected smart cities, 26 cities of Bihar were selected for infrastructure development under AMRUT scheme.
- As on April 2017, under the AMRUT scheme, US\$ 13.84 million were sanctioned to the state of Bihar as a part of the approved central share towards the projects.
- During FY 2016-17, Bihar Sharif Nagar Nigam plans to provide water supply connections to 60% of the population. The Nigam also plans to achieve 90% coverage of toilets & cover draining network of around 40% in the city.

## Smart Cities in Bihar

Cities	Population	Area (sq km)	Literacy rate
Bhagalpur	412,209	2,569	63.14%
Bihar Sharif	297,268	23.5	74.80%
Muzaffarpur	396,590	3,172	83.08%
Patna	2,049,156	3202	83.37%



Source: Aranca Research Bihar Sharif Nagar Nigam

- Bihar's natural resources & policy incentives support the agro-based sector. Britannia Industries, Ramco Industries & Hindustan Petroleum are some of the promoters whose units were granted approval.
- Medium and small scale industries & micro & artisan enterprises play a major role in terms of generating employment. A majority of the industries are located in Patna, Magadh, Tirhut & Munger. Bhagalpur, Purnea & Darbhanga are the other major industrial centres.
- In order to facilitate VAT reimbursement to different industrial units in the state, the commercial tax department approved an amount of US\$ 111.73 million in 2014-15 and US\$ 41.50 million for 2015-16.
- For electricity tariff/AMG-MMG concessions, the Government of Bihar sanctioned US\$ 61.89 million in 2014-15 & US\$ 22.37 million in 2015-16 to the Bihar State Power Holding Co. Ltd.
- As on June 2016, the State Investment Promotion Board (SIPB) approved 2345 projects, with a capital investment of US\$ 33.52 billion.

## Key Industries in Bihar

- Food and beverages
- Rubber and plastics
- Transport equipment
- Chemicals
- Tobacco
- Textiles
- Leather
- Paper, printing & publishing
- Mines & minerals
- Dairy
- Tea
- Sugar
- Tourism
- Health

*Source: Economic Survey of Bihar, 2016-17, Bihar Report Card, 2015 Sugarcane Industries Department, Government of Bihar*

# KEY INDUSTRIES – FOOD PROCESSING AND DAIRY

## ... (1/3)

- Bihar is one of the largest producers of vegetables & fruits in the country, making it a suitable place for setting up units in the food processing sector. The state is one of the leading producers of fruits such as banana, mango, guava, litchi & vegetables such as onion, tomato, potato and eggplant in the country.
- In 2015-16, total fruit production in Bihar was 4.18 million tonnes & total production of major vegetables was recorded to be 15.29 million tonnes.
- Food processing is a priority sector for the state government.
  - Up to 40% of the project cost for setting up food processing units is subsidised by the state government.
  - A grant of up to 35% of the project cost, subject to maximum of US\$ 1 million, is provided in case of an individual investor.

### Food processing units (As of August 2016)

Project	Physical Progress		Employment (nos)
	Total number of units	Units in commercial production	
Rice mills	174	120	6,438
Wheat milling	44	33	1,806
Maize processing	43	32	2,120
Rural agri business centres (RABCs)	53	37	1,807
F&V processing	16	8	122
Milk processing	9	6	586
Makhana processing	4	2	70
Honey processing	3	3	41
Biscuits manufacturing	12	8	1,946
Edible oil manufacturing	10	9	2,001
Ice Cream	7	4	203
Other projects	27	16	2,087
Food park	2	0	28,597
<b>Total</b>	<b>407</b>	<b>278</b>	<b>48,404</b>

Source: Economic Survey 2015-16, Bihar Report Card 2015

- In March 2015, the government announced plans to establish a mega food park in Bihar. The food park was set up by Amarapali Group. Currently, two units operate inside the food park with capacity to process 175 Mt/month of corn flakes and 100 Mt corn grit.
- At the end of August 2016, the state recorded an increase in the number of food processing units from 366 in 2014-15 to 407. Out of these 407 units, 278 are operational in the state.
- The Food Park scheme has been declared to be the most admired scheme by the Ministry of Food Processing Industry in the history of food processing in India.
- Paddy, maize, fruits & vegetables, wheat and sugarcane are the major crops for which food processing units may come up under Vision 2022.
- Various schemes under which the Directorate of Food Processing is delivering special assistance to the sector are Integrated Development project, food park scheme, cold storage scheme, modernization scheme for established rice mills, etc.

### Milk procurement per functional dairy cooperative society (2015-16) in kilo litres per day

Patna	123.58
Barauni	232.24
Muzaffarpur	100.60
Samastipur	192.10
Ara	106.20
Bhagalpur	71.02
Gaya	30.19
Ranchi Dairy	347.17
Purnea	42.03
Ranchi	347.17
<b>Total</b>	<b>124.18</b>

Source: Economic Survey of Bihar, 2016-17 COMFED, GOB

- An increase of 3% was witnessed in the total daily collection of milk in comparison with the previous year.

## Key players in Bihar's food processing and dairy industry



**Bihar State  
Cooperative Milk  
Producers' Federation  
(COMPED)**

- COMPED is an organised milk processing cooperative which collects milk through district level cooperative unions, and processes and markets the same.
- It supports members with interventions across technology, supply chain, marketing, training, etc.
- COMPED covers five districts directly and 26 districts through six district level cooperative unions.
- Around 11,000 women have been already trained under its training management program



**Usher Agro Ltd**

- Usher Agro Limited is one of the largest basic food grain (rice and wheat) processing companies in India. The company established its rice processing mill in Buxar, Bihar in 2003.
- The company's product list consists of rice, bran, wheat and husk which are sold under the brand name of 'Rasoi Raja'. During Q1 FY18, the company reported revenue of US\$ 3.69 million.

- The major drivers of chemical, oil and gas industry in Bihar are proximity to sea ports (Kolkata and Haldia), availability of labour & the vast market of eastern India. Petroleum & allied sectors remain large contributors to Bihar's industrial value output as it has one of the largest public sector refineries in the country under IOCL.
- ONGC is carrying out exploration activities for petroleum & natural gas in an area of 2,537 sq km in Purnea basin. It also expects oil reservoirs in Kishanganj & is likely to start drilling operations soon.
- As of July 2015, a tender has been raised by GAIL India for establishing the sub-divisions of pipelines of length 236 km. As a part of reviving the fertiliser units, the state government has proposed the laying of a pipeline of length 2,050 km in Bihar & Uttar Pradesh in the middle of 2015.
- In the year 2014-15, a MOU was signed between Government of Bihar and Indian Oil Corporation (IOCL). This was undertaken as a step to develop infrastructure of natural gas in the state, so as to meet energy requirements in domestic, industrial, commercial and transportation sectors. In the year 2014-15, the estimated biogas production in Bihar stood at 537.02 lakh cu.m. The project is expected to be completed by early 2018.
- The permission for investigating natural gas and petroleum in 2,227 sq km of area in Betiah district has been accorded to the Oil and Natural Gas Corporation and Petrodine.
- In 2015, the central government has promised to invest US\$ 4.1 billion in oil and gas related projects of the state. Investments are directed towards the construction of Jagdishpur-Haldia gas pipeline, whereas the Ministry of Petroleum & Natural Gas has decided to expand the capacity of Barauni refinery to 9 million metric tonnes per annum (MMTPA) from 6 million metric tonnes per annum (MMTPA).
- The Bihar Government in February 2017 passed a US\$ 14.42 million ethanol project of Majhaulia Sugar Industries Pvt Ltd. The project aims to take the advantage of revised ethanol off-take policy of the central government to encourage its blending with petrol.
- The Barauni fertiliser unit of Hindustan Fertilizer Corporation (HFCL) in Bihar will start production in 2020-21.

*Source: Economic Survey of Bihar 2014-15, News Articles ONGC - Oil and Natural Gas Corporation Limited Bihar Report Card, 2015*

## Key players in Bihar's chemical, oil and gas industry



IndianOil

Indian Oil Corp Ltd  
(IOCL)

- IOCL, India's leading petroleum refining company, has a refinery at Barauni, which has an annual refining capacity of 6 million metric tonnes. Total revenue of the company stood at US\$ 17.30 billion in Q2 FY18.
- Secondary processing facilities, such as a resid-fluidised catalytic cracker, diesel hydro-treating and a sulfur recovery unit, have been added to the main refinery.
- The 498-km long Haldia-Barauni Crude Oil Pipeline (HBCPL) receives crude oil at the Haldia oil jetty and transports it to the Barauni refinery, and is scheduled to open three additional bottling plants.



Graphite India Ltd (GIL)

- GIL was incorporated in 1963. The company has eight plants located across India and produces graphite products, coke and power. In Q2 FY18, the company registered revenue of US\$ 74.84 million.
- The coke division of the company at Barauni manufactures calcined petroleum coke (CPC) and has an installed capacity of 30,000 tonnes per annum.



Krishi Rasayan Exports  
Pvt Ltd (KREPL)

- KREPL is a flagship company of Krishi Rasayan Group. Having five manufacturing units, the company is considered as one of the major agro-chemical manufacturers. Total revenue of the Krishi Rasayan Group in 2014-15 was US\$ 225 million.

- During 2014-15, the Government of Bihar provided scholarships to 3,677,871 scheduled caste & scheduled tribe students of class I to X. During 2012-15, about 21,087 new primary schools were introduced in the state & 19,581 existing primary schools were upgraded to middle schools.
- Under the “Mukhyamantri Balika Poshak Yojna”, the Government of Bihar distributed free uniforms & books to 15,595,048 students during 2014-15.
- Under the state budget 2017-18, the estimated total expenditure for developing the education sector in the state stood at US\$ 3.81 billion, in comparison with US\$ 3.48 billion in 2016-17.
- Further, the state government has allocated a capital outlay of US\$ 160.84 million as per the budget 2016-17 for the development of education sector.
- As per the Manav Vikas Mission, the 2015-16 target for Pupil-Teacher Ratio (PTR) in elementary education should be 32:1 based on attendance and 42:1 based on enrolment.
- As of March 2017, 21 super specialty departments in 3 government hospitals have been finalised by the state & central government, which are expected to be operational by 2019, with a funding of US\$ 29.75 million for each.
- The goals and actions points set up by the Bihar State Council under the Bihar@2022 vision document for improving the education sector are as follows:

## Goals to achieve by 2022

- Achieve near-zero dropout rate in secondary education.
- Build a base of 12 million graduates and 10 million certified technicians.
- Increase the capacity of higher education institutions and vocational training institutions by 10 times.
- Increase focus on becoming an “education export hub” of the region by attracting students from within and outside India.
- Increase capacity of medical institutions.
- Create exclusive science parks for nanotechnology, biotechnology and pharmaceuticals.
- Produce one Nobel laureate by 2022

Source: Bihar Report Card, 2015 Annual Financial Statement of Government of Bihar 2016-17

## Action points – Vocational training

- Ensure access to vocational training institutes to all; replicate initiatives such as the “ICT academy” to provide vocational training through e-learning.
- Plan curriculum in cooperation with industry to ensure employability and minimise skill gap.
- Provide a boost to private training facilities to train more nurses & paramedics.
- Provide short-term vocational courses with diploma for special skills, such as plumbing & housekeeping, to ensure that these skills can be monetised

## Action points – Higher school

- Quadruple the capacity & infrastructure of higher institutions to accommodate the projected 3 million students.
- Capacity of medical colleges needs to be immediately tripled to ensure minimum provision of quality healthcare to the state’s population.
- Going by the current projection, the required capacity would be 4 times the present capacity. Hence, to meet the demand, the state should facilitate speedy approval of medical colleges.
- Collaboration of educational institutions & industry should be such that students remain updated with the latest industrial processes & technologies, besides ensuring their employability.

Source: Bihar Report Card, 2015

- Sugar, the largest agro-based industry in the state, plays a prominent role in Bihar's economy. The northern part of the state is climatically well suited for producing good quality sugarcane with minimum inputs as compared to other states.
- In order to promote the sugarcane industry, the state government grants various rebates and concessions, some of which include - VAT reduction on denatured spirit and ethanol from 12.5 to 4.0% and eradication of literage fees on liquor and ethanol. Sugar companies made considerable investments for capacity expansion; consequently, increasing their daily crushing capacity from 37,000 tonnes in 2005 to over 66,400 tonnes in 2014.
- The crushing capacity of sugar mills in the state increased from 32,000 TCD in 2005-06 to 55,000 TCD in 2015-16, pushing the state's sugar production to 5 lakh tonnes during 2015-16.
- During 2015-16 the total area under sugarcane farming in the state is about 300,000 hectares, as compared to 314,900 lakh hectares, during 2014-15.
- Sugarcane production in the state during 2015-16 stood at 18.75 MT, whereas sugarcane production during 2014-15 stood at 154.98 lakh MT. Total sugar produced in the state during 2015-16 stood at 5 lakh MT.

## Sugarcane prices (US\$/quintals) – as of 2016-17

Early variety	4.46
General variety	4.16
Low variety	4.06

Source: Economic Survey of Bihar, 2016-17, Bihar Report Card, 2015 Sugarcane Industries Department, Government of Bihar

## Key players in Bihar's sugar industry



**K. K. Birla Group**

- K K Birla Group's sugar company, Upper Ganges Sugar & Industries Limited (UGSIL), has two units in Bihar: Bharat Sugar Mills at Sidhwalia [crushing capacity of 5,000 tonnes per day (TPD)] and Hasanpur Sugar Mills at Hasanpur (crushing capacity of 3,000 TPD).
- The Sidhwalia unit has an 18 MW cogeneration power plant.



**Riga Sugar Co Ltd**

- The company belongs to the Dhanuka Group and was incorporated in 1980.
- It manufactures ethyl alcohol, molasses and sugar at Sitamarhi. The plant has a crushing capacity of 5,000 tonnes per day. The company recorded revenues of US\$ 4.42 million in Q1 FY18.

**Vishnu Sugar Mills Ltd**

- The company is promoted by the Bajoria family and was incorporated in 1932.
- It manufactures molasses and sugar at Gopalganj in Bihar.



**Eastern Sugar & Industries Ltd**

- The company was incorporated in 1964.
- It manufactures molasses and sugar at Purba Champaran, in Bihar.
- The plant has a crushing capacity of 2,500 tonnes per day.

- Apart from a few engineering units, prominent industries in Bihar are leather, textiles & handlooms. The state has ample raw materials (hides & skin of livestock), technical skills (leather technology institutes) & manpower, which are the major drivers of the leather industry.
- Under the Mega Leather Cluster (MLC) scheme, the leather industry of Bihar will be provided infrastructural support which will help the entrepreneurs in setting up of new units. The new branch of FDIIs in Patna, Bihar, has been constructed and is expected to start functioning shortly. Bihar has 85 leather units, of which 60 are manufacturing units & 25 units take up job work.
- In 2014-15, the textile industry of Bihar accounted for 6.8% share in the total output of the state. Bihar has a large number of handloom units, of which 10,850 are under the cooperative sector and 25,503 are outside. Besides these, the state has 14,000 power looms. Raw silk production in the state increased from 60.61 tonnes in 2014-15 to 72.15 metric tonnes in 2015-16.
- Out of the 74 textile parks sanctioned by Ministry of Textiles in the country, under the Integrated Textile Parks scheme, 1 textile park, JVL Textile Park, is located in the state.

## Handloom concentrated districts in Bihar

Bhagalpur	Silk, cotton, furnishing cloth, staple chadar, exportable silk and cotton cloth
Banka	Tussar silk, exportable silk cloth
Gaya	cotton and silk cloth
Nalanda	Ornamental curtain, bed cover, interior decoration material and exportable ornamented cloth
Nawada	Tussar silk and ladies dress material
Darbhanga, Madhubani, Sitamarhi	Fine cotton, long cloth, dhoti, shirting
Aurangabad, Rohtas	Woolen blanket, woolen carpet and sari
Kaimur	Woolen carpet, banarasi sari
Patna, Siwan	Cotton cloth and furnishing cloth

Source: Economic Survey of Bihar, 2014-15, Department of Industries, Handloom, Government of Bihar

# KEY INDUSTRIES – TEXTILE & LEATHER INDUSTRY ...

## (2/3)

- Government allocated a sum US\$ 1.53 million during FY 2015-16, for the development of five common facility centres (CFCs) under the Jute Common Facility Centres (CFCs) scheme for product development, training, market development, etc. These CFCs are sanctioned at five locations, with 3 locations situated in West Bengal, 2 locations in Assam and 1 location in Bihar.

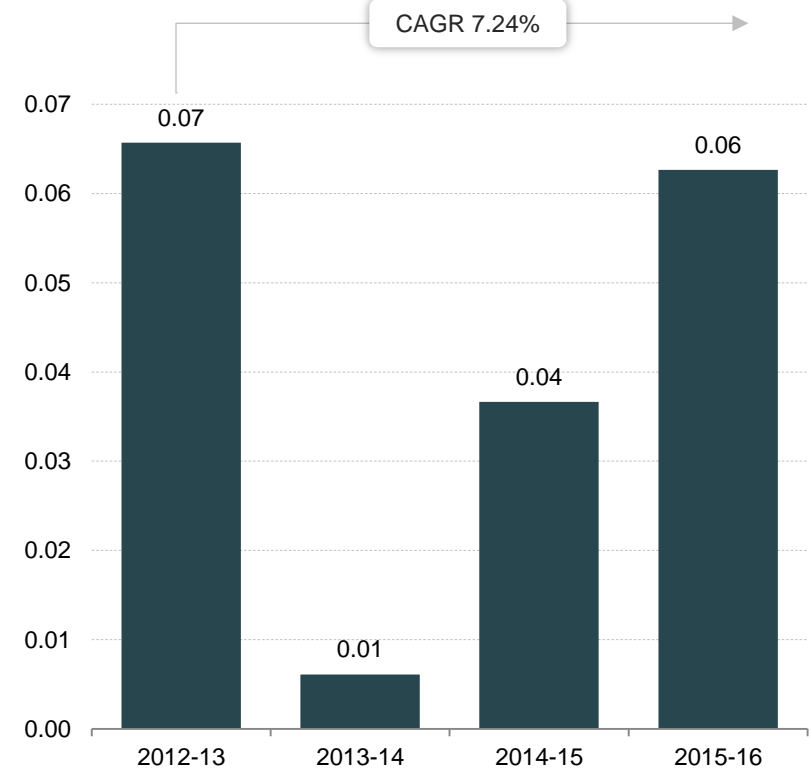
### Funds released under National Handloom Development Programme (2014-15) – US\$ million

Handloom Marketing Assistance (HMA)	0.03
Diversified Handloom Development Scheme (DHDS)	2.13

### Funds released under handicraft schemes (2016-17) – US\$ thousand

Ambedkar Hastshilp Vikas Yojna (AHVY)	31.27
Human Resource Development Scheme	16.85
<b>Total</b>	<b>48.12</b>

### Financial assistance to handloom weavers (in US\$ million)



**Note:** CHDS: Comprehensive Handloom Development Scheme, RRR: Revival, Reform & Restructuring (RRR) Package, IHDS: Integrated Handloom Development Scheme, HMA: Handicraft Manufacturers Association, DHDS: Diversified Handloom Development Scheme

**Source:** Economic Survey of Bihar, 2015-16, Department of Industries, Handloom, Government of Bihar, Ministry of Textiles

## Key players in Bihar's manufacturing industry



**Bata India Ltd**

- Bata is one of India's leading manufacturers and marketers promoted by the Toronto-based Bata Shoes, of footwear products.
- The company has a tannery at Mokamehghat in Bihar and a leather footwear factory at Bataganj in Patna. During Q2 FY18, the company earned revenues of US\$ 93.59 million.



**Bharat Wagon & Engineering Co Ltd**

- The Bharat Wagon and Engineering Company is a part of Bharat Bhari Udyog Nigam, a Government of India undertaking. It has over 50 years of experience in heavy-steel fabrication.
- It has two units at Mokama and Muzaffarpur, which are ISO 9001 certified for manufacturing wagons; its third unit at Muzaffarpur manufactures gas cylinders. All three plants have captive-power generation capacity.



**GANGOTRI  
GROUP**

**Gangotri Iron & Steel  
Co Ltd**

- The company produces Mild Steel (MS) bars and billets and has established a production unit in January 2009 in Bihta, Bihar.
- In December 2013, company recorded revenues of US\$ 14.44 million which declined to US\$ 10.57 million in December 2014. The company has two factories in Bihar at Nayatola and Mahadevpur Phulari. In 2013, the company introduced a new variant GISCO Duramaxx 500D. This product is certified with ISI FE 500D Certification.

# KEY INDUSTRIES – TOURISM ... (1/3)

- The state has a rich cultural heritage as it is associated with pilgrimages and historical monuments related to religious gurus such as the Buddha, Mahavir and Guru Gobind Singh. Tourism in the state revolves around Buddhism (Bodhgaya, Rajgir, Nalanda), Jainism (Bisram, Mandar hill, Champanagar) and Sufism.
- A fortnight-long Pitripaksha mela, held every year at Gaya, attracts large number of tourists from all over the country, as well as from foreign countries.
- The Government of Bihar has started presenting awards such as CNBC Awaz Travel Award Nalanda, Best Managed Historical Monument, Safari India South Asia Travel Award Bihar, Best State for Buddhist Tourism and Best Heritage Tourism Destination Award, to various departments of the tourism sector for promoting tourism in the state.
- Under the Prasad Scheme, for the promotion of Patna Sahib, the government sanctioned US\$ 6.34 million during 2015-16. The government has also released US\$ 1.26 million for the improvement of basic facilities in Gaya's Vishnupad temple.
- During 2016, the state witnessed arrival of 1,010.531 thousand foreign tourists.
- The Bihar government is preparing a new road map to attract tourists from across the world, and it will be approved by the end of May 2017. The government has identified total 900 spots, which are to be developed as tourist places.



Source: Ministry of Tourism, Government of Bihar

Goals and actions set up by the Bihar State Council under the Bihar@2022 vision document for improving the tourism sector are as follows:

## Goals to achieve by 2022

- Construction of 2 mega religious tourism circuits of Buddhism & Jainism
- Construction of 2 mega theme parks based on the lives of Buddha and Mahavir at Rajgir & Bodh Gaya
- Construction of 8 mega centres for religious, educational & cultural education at Bodh Gaya, Patna, Rajgir, Vaishali, Ashok Dham, Nalanda, Vikramasila, Yoga Sansthana & Munger
- By 2022, the state is targeting 100 lakh Indian & foreign tourists every year

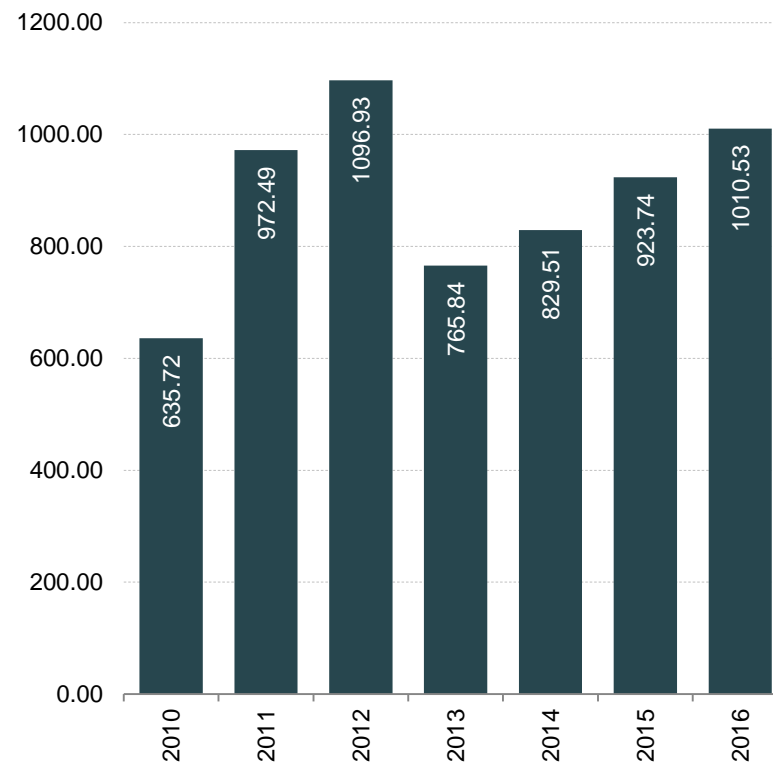
## Action points

- Establishment of schools within a 1 km radius of every habitation in order to increase access to schools irrespective of the capacity to pay.
- Fast track upgradation of the infrastructure of state schools & ensuring availability of sufficient teachers
- Policy initiatives & awareness campaigns in order to ensure higher enrolment & zero dropout
- Establishment of centres of excellence in all primary schools in rural areas.
- Improvement of hygiene in schools & colleges

Source: Ministry of Tourism, Government of Bihar

- As of July 2015, in order to attract tourists to the state of Bihar, the state government announced plans to establish an information centre in Mumbai. The information centre will provide all the information about the tourist places of the Bihar.
- The state government has established the Bihar State Tourism Development Corporation with the prime objective of developing hotels, transports, railways, swimming pools, health tourism, etc. and running them on a commercial basis for the benefit of tourists. Other initiatives taken up are as follows: Bihar Paryatan Neeti (formulated), Paryatan Suraksha Bal (sanctioned), 48-seater AC floating Restaurant on the river Ganga, Buddha Smriti Park in Patna, etc.
- The government has planned two mega religious tourism circuits (Buddhism & Jainism), two mega theme parks based on the life of Buddha and Mahavir (to be constructed at Bodh Gaya and Rajgir) and eight mega centres for educational, cultural and religious tourism [Bodh Gaya, Rajgir, Patna city, Vaishali, Nalanda, Vikramasila, Ashok Dham, Yoga Sansthan (Munger)].
- In February 2015, the tourism department of Bihar announced plans to set up rope way systems at seven tourist places of the state. These places would be Rajgir, Barabar cave, Mandar ki Pahadi, Mundeshwari Dham, Dungeshwari cave, Brahmayoni Hills and Rohtasgarh fort.
- At the end of January 2016, the state government has executed a total of 19 important schemes at a cost of US\$ 4.99 million.

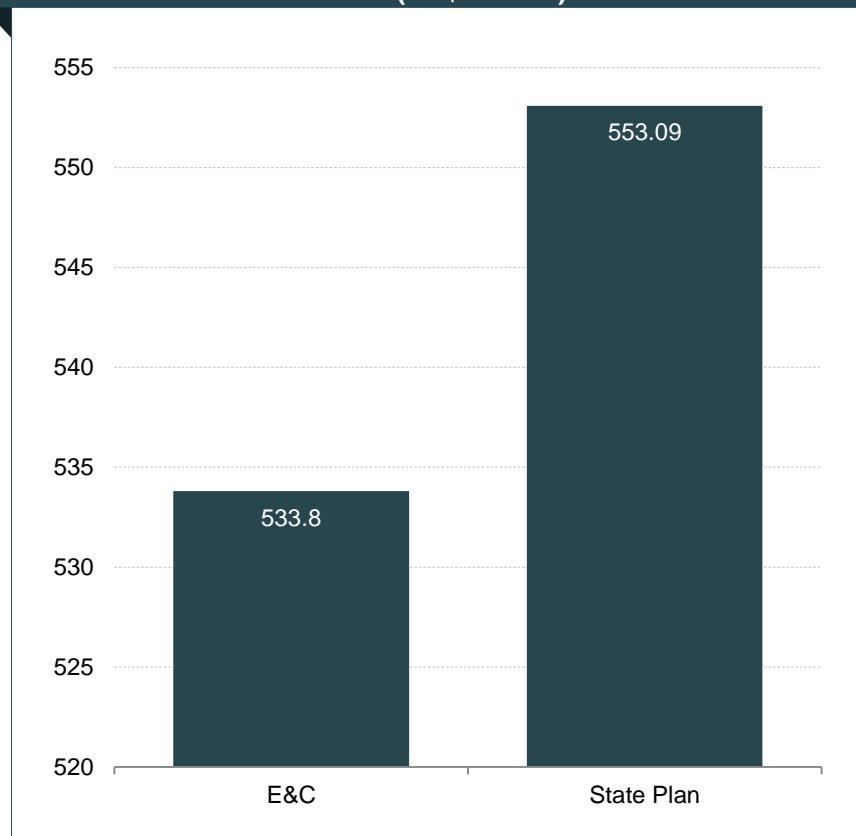
Arrival of foreign tourists in Bihar (in '000s)



Source: Bihar State Tourism Development Corporation Ltd.

- As of September 2015, out of 533 total block level primary health centres in the state, 410 primary health centres were in the process of being upgraded to 30 bedded community health centres (CHCs).
- The Government of Bihar is focusing towards the growth of Indian medicine systems. In order to provide OPD services, the government has appointed Ayush doctors across the state. The average number of outpatients that visited the hospitals per day was recorded to be 339, during 2016-17 (up to September 2016).
- During 2016-17, the state had 36 district hospitals, 70 referral hospitals, 55 sub divisional hospitals, 9,729 HSCs, 533 PHCs and 1,350 APHCs.
- For the improvement of health infrastructure of the state, the Government of Bihar has employed around 3,154 regular doctors and 852 contractual doctors as of September 2016.

**Funds allocated for the health sector in Bihar as per Budget 2017-18 (US\$ million)**



Source: Economic Survey 2016-17, State Budget 2017-18

The goals and actions points set up by the Bihar State Council under the Bihar@2022 vision document for improving the health sector are as follows:

## Goals to achieve by 2022

- Increase the number of hospitals; beds per thousand population to be increased from the current 0.25 to 4 beds per thousand population, which includes the addition of 3,01,084 beds.
- Increase the number of doctors per thousand population from 0.40 to 3.
- Provide a thrust to health insurance.
- Increase the number of medical colleges by four times.
- Establish super-specialty hospitals under public-private partnership at 8 district headquarters.

## Action points

- Build medical institutions & set up institutes in each district to train nurses, technicians & paramedics to serve the ageing population.
- Increase spending on healthcare to US\$ 1,600 million from the present level of US\$ 300 million.
- Build awareness regarding preventive medicines through mass media & with the assistance of healthcare professionals & non-governmental organisations.
- Outsource medical services.
- Increase the use of technologies to achieve increased productivity.
- Increase focus on medical research to incorporate nanotechnology and biotechnology in providing medical services.

Source: Bihar Economic Survey, 2014-15

## Key players in Bihar's healthcare industry



**AIIMS Patna**

- The hospital services of the All India Institute of Medical Sciences, Patna (AIIMS-P) was established in the state.
- The hospital provides full-fledged emergency services to handle serious injury cases and patients suffering from heart ailments and brain stroke.
- AIIMS Patna plans to start hair transplant very soon.



"सर्वे सन्तु निरामयाः सेवा धर्मं हमारा"

**PMCH**

- Patna Medical College and Hospital (PMCH) was established in 1925 as the Prince of Wales Medical College. It is located in Ashok Rajpath.
- The hospital has 1,760 beds. It is the biggest hospital in Bihar.

# SINGLE-WINDOW APPROVAL MECHANISM

- Bihar Single Window Clearance Act, 2006 & the Bihar Industrial Incentive Policy, 2011, promote industrial growth by giving rapid clearances, issuing licenses & certificates & providing an overall investor-friendly environment in the state.
- The industries department of the state and the DIC act as nodal agencies for investments.
- Proposals for investments greater than US\$ 21.7 million are routed through the Chief Minister & the cabinet for approval.

Investment handled	Body	Chairman	Nodal agency
US\$ 2.17 million to US\$ 21.7 million	State-Level Investment Promotion Board	Industries Development Commissioner	Industries Development (Udyog Mitra)
Below US\$ 2.17 million	District-Level Committee	District Collector	DIC

DIC - District Industries Centre

# KEY INVESTMENT PROMOTION OFFICES ... (1/2)

Agency	Description	Contact information
<p>Industries Department, Government of Bihar</p>	<ul style="list-style-type: none"> <li>It is the state-level nodal body under the single-window regime for investments of above US\$ 2.17 million.</li> <li>Its primary functions involve coordinating applications from investors, processing applications &amp; facilitating the process of obtaining clearances from various departments.</li> <li>The department, headed by the Principal Secretary, supervises District Industry Centres (DIC), industrial area development authorities &amp; industrial premises in the state.</li> </ul>	<p>Vikas Bhawan Bailey Road, Patna - 800 001, Bihar. Phone: 91-612-2215 211 Fax: 91-612-2217 991 Website: <a href="http://industries.bih.nic.in/">http://industries.bih.nic.in/</a></p>
<p>District Industry Centre (DIC)</p>	<ul style="list-style-type: none"> <li>This is the district-level nodal agency for investments below US\$ 2.17 million.</li> <li>DIC supports entrepreneurs in identifying local resources, supply of raw materials &amp; equipment, arrangement of credit facilities, marketing, quality control, etc.</li> </ul>	<p>District Industries Centre, Patna Phone - 0612-2270865 Fax: 0612-2218900</p>
<p>Bihar Industrial Area Development Authority (BIADA)</p>	<ul style="list-style-type: none"> <li>It was constituted with a mission to promote industrialisation &amp; create awareness about the state's Industrial Policy. It supports entrepreneurs in setting up industries and availing incentives offered by the state government.</li> <li>The organisation runs under the guidelines &amp; policies of the Board of Directors, having directors nominated by the State Government under the chairmanship of the principal secretary, Department of Industries, Government of Bihar.</li> </ul>	<p>1st Floor, Udyog Bhawan, East Gandhi Maidan, Patna - 800 004, Bihar Phone: 91-612-2675 991, 2675 002, 2675 352 Fax: 91-612-2675 889 E-mail: <a href="mailto:biada@rediffmail.com">biada@rediffmail.com</a>, Website: <a href="http://www.biadabihar.in/">http://www.biadabihar.in/</a></p>

# KEY INVESTMENT PROMOTION OFFICES ... (2/2)

Agency	Description	Contact information
Bihar State Finance Corporation	<ul style="list-style-type: none"> <li>▪ It is the main state-level institution that provides term lending facilities to industrial entrepreneurs.</li> <li>▪ The corporation has entered into an agreement with Small Industries Development Bank of India (SIDBI), under which joint financing will be done by SIDBI and BSFC in the proportion of 90:10. Under this scheme, a minimum of US\$ 0.3 million loan can be provided to one unit.</li> </ul>	<p>Fraser Road, Patna - 800 001, Bihar Phone: 91-612-2332 785 E-mail: bsfcpatna@gmail.com Website: <a href="http://bsfc.bih.nic.in/">http://bsfc.bih.nic.in/</a></p>
Bihar State Electricity Board (BSEB)	<ul style="list-style-type: none"> <li>▪ The board is responsible for the synchronised development of generation, transmission and distribution of power in the state.</li> </ul>	<p>Vidyut Bhawan, Bailey Road, Patna - 800 001, Bihar. Phone: 91-0612-2504 036 Fax: 91-0612-2504 968 Website: <a href="http://bseb.bih.nic.in/">http://bseb.bih.nic.in/</a></p>
Bihar State Pollution Control Board	<ul style="list-style-type: none"> <li>▪ The purpose of the organisation is prevention &amp; control of pollution through inspection of treatment plants, standards application, research &amp; development activities, etc.</li> <li>▪ Headquartered at Patna, the organisation has seven zonal offices.</li> </ul>	<p>Beltron Bhawan, Shastri Nagar Jawahar Lal Nehru Marg, Patna - 800 023, Bihar Phone: 91-0612-2281 250 Fax: 91-0612-2281 050 Email: bspsb@vsnl.net, Website: <a href="http://bspcb.bih.nic.in/">http://bspcb.bih.nic.in/</a></p>

# KEY APPROVALS REQUIRED ... (1/2)

Approvals and clearances required	Departments to be consulted	Estimated time
Incorporation of company	Registrar of Companies	NA
Registration, Industrial Entrepreneurs Memorandum (IEM), Industrial Licenses	Nodal Agency (Industries Department)	NA
Allotment of land	Bihar Industrial Area Development Authority	Seven to 21 days (up to 90 days for acquisition of non-industrial land)
Permission for land use	Revenue and Land Reforms Department, Government of Bihar	30 days (45 days for conversion of non-industrial land for use)
Registration under Factories Act and Boilers Act	Offices of Inspector of Factories, Inspector of Boilers	Up to 120 days
Site environmental approval, no objection certificate and consent under Water and Pollution Control Acts	Bihar State Pollution Control Board and Ministry of Environment and Forests, Government of Bihar	60 days
Approval of construction activity and building plan	Urban Development and Housing Department, Government of Bihar	Seven days
Sanction of power	Bihar State Electricity Board	Up to 30 days
Sanction of water	Water Resources Department, Government of Bihar	Up to 30 days
Fire service clearance	State Fire Service Headquarters, Government of Bihar	Up to 15 days
Registration under state's Sales Tax Act, and Central and State Excise Act	Sales Tax Department, Central and State Excise Departments	Seven days

NA: Not Available

# COST OF DOING BUSINESS IN BIHAR

Cost parameter	Cost estimate	Source
Industrial land (per acre), as of January 2017	US\$ 1,715,111 in Patliputra, US\$ 252,222 in Muzaffarpur	Bihar Industrial Area Development Authority
Labour (minimum wages per day)	US\$ 2.3 to US\$ 5.7	Ministry of Labour and Employment, Government of India
Office space rent (per sq ft per month)	US 50 cents to US\$ 1.2	Industry sources
Residential rent (2,000 sq ft per month)	US\$ 175 to US\$ 350	Industry sources
Five-star hotel room (per night)	US\$ 100-200	Leading hotels in the state
Commercial and industrial electricity (per kwh)	Industrial: US 10.3 cents to US 11.1 cents Commercial: US 9.8 cents to US 11.2 cents	Bihar State Electricity Board

## Objectives

### Bihar State Hydro-Power Policy – 2012

- To enhance the overall generation capacity of the state, including hydro power.
- To obtain optimal thermal-hydro generation mix in a 60:40 ratio.
- To encourage participation of independent power producers by offering them the best policy framework and support.

[Read more](#)

### Bihar Industrial Incentive Policy – 2011

- To promote balanced industrial development and enable industries to contribute towards the social and economic development of the state.

[Read more](#)

### Bihar Policy for Promotion of New and Renewable Energy Sources 2011

- To develop all forms of new and renewable energy sources, including biomass- and biogas-based projects, cogeneration projects, mini/micro/small hydro projects (up to 25 MW), wind power projects, solar projects, municipal solid waste-based projects, and other renewable resources-based projects.

[Read more](#)

### Information and Communication Technology Policy 2011

- To create world-class IT infrastructure in the state.
- To promote investment in the IT/ITeS/Electronic Hardware Manufacturing (EHM) units by private industry to accelerate the pace of IT enablement in the state.

[Read more](#)

### Food Processing Policy

- To address the infrastructure, technology, skills & marketing constraints being faced by the food processing units for rice, maize, pulses, honey, makhana, fruits & vegetables & others by facilitating the setting up of new food processing units.
- To aid the expansion and upgradation of the existing units.

[Read more](#)

## Objectives

Bihar Industrial Incentive Policy – 2011

- To promote balanced industrial development and enable industries to contribute towards the social and economic development of the state. [Read more](#)

Investment subsidies for NRIs

- The state government has offered incentive packages in the form of various tax concessions, capital and interest subsidies, reduced power tariffs, etc. to attract foreign funds in the region.

Incentives for NRIs

- Bihar Foundation organized a two-day global meet of Non-Resident Bihari's on 18–19 February 2012 with an aim to attract NRIs from across the world so that they can share their views on the state and its development. NRIs from Bihar who have been successful in their respective fields were invited to the event to share their experiences.

Availability of finance for NRIs

- The government is taking steps to provide adequate facilities to enable NRIs to start small scale industries in the state.

Incentives for new investments in plant and machinery

- Companies investing US\$ 18.7 million or more in plant and machinery during the period from 1 April 2013 to 31 March 2015 would be entitled to deduct an investment allowance of 15% of the investment.
- Incentives to semiconductor wafer fabrication manufacturing facilities including zero customs duty for plant and machinery.

Incentives for waste to energy projects

- The Government would provide low interest-bearing fund from the National Clean Energy Fund to IREDA to lend to viable renewable energy projects. 'Generation-based incentive' has been reintroduced for wind energy projects and a sum of US\$ 150 million has been allocated for this purpose.

Bihar Women Empowerment Policy 2015

- As per the women empowerment policy, the state is increasing its focus on women empowerment by ensuring availability of resources (education and employment) for women, which would in turn lead to increased contribution from women in development of the economy. [Read more](#)

## Exchange rates (Fiscal Year)

Year	INR equivalent of one US\$
2004-05	44.81
2005-06	44.14
2006-07	45.14
2007-08	40.27
2008-09	46.14
2009-10	47.42
2010-11	45.62
2011-12	46.88
2012-13	54.31
2013-14	60.28
2014-15	60.28
2015-16	65.46
2016-17	67.09
Q1 2017-18	64.46
Q2 2017-18	64.29

Source: Reserve Bank of India

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