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National
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Corporation



District wise skill gap study for the State of Uttar Pradesh



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List of Abbreviations and acronyms

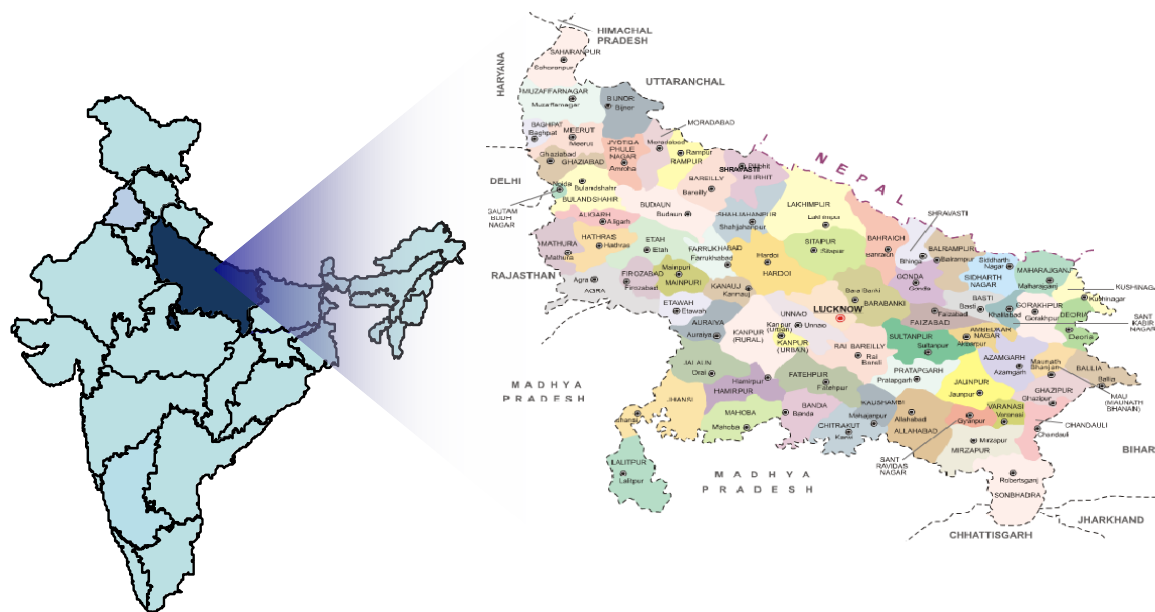
Abbreviation/ acronym	Full form
ASI	Annual Survey of Industries
BFSI	Banking, Financial Services and Insurance
BPO	Business Process Outsourcing
CADD	Computer Aided Design and Drawing
CAM	Computer Aided Manufacturing
CEC	Central Empowered Committee
CNC	Computer Numerical Control
Cr.	Crore
Deptt.	Department
DIC	District Industries Centre
DRDA	District Rural Development Agency
e.g.	Example
EDP	Entrepreneurship Development Programmes
Eoi	Expression of Interest
FDI	Foreign Direct Investment
GDDP	Gross District Domestic Product
GDI	Gender Development Index
GDP	Gross Domestic Product
GSDP	Gross State Domestic Product

Abbreviation/ acronym	Full form
ha	Hectares
HDI	Human Development Index
HHI	Household Industry
HR	Human Resources
HRD	Human Resource Development
IT	Information Technology
ITC	Industrial Training Centre
ITES	IT Enabled Services
ITI	Industrial Training Institute
KPO	Knowledge Process Outsourcing
LMIS	Labour Market Information System
MES	Modular Employment Scheme
MHRD	Ministry of Human Resource Development
MMTPA	Million Metric Tonne Per Annum
MMV	Mechanic Motor Vehicle
MNCs	Multi-national companies
MoU	Memorandum of Understanding
MSME	Micro, Small & Medium Enterprises
MW	Megawatt
n/a	Not applicable
NBFC	Non-Banking Financial Corporations
NGO	Non-Governmental Organisations
NH	National Highway
NIFT	National Institute of Fashion Technology
No.	Number
NSR	National Skills Registry
PPP	Public-Private Partnership
R&D	Research and Development
RBI	Reserve Bank of India
SC	Scheduled Caste
SEZ	Special Economic Zone
SHGs	Self-Help Groups
SOP	Standard Operating Procedure
sq.ft.	Square Feet
sq.km.	Square kilometre
SSC	Sector Skill Council
SSI	Small Scale Industry
ST	Scheduled Tribe
SWOT	Strengths, Weaknesses, Opportunities, Threats
WSHGs	Women Self Help Groups

UTTAR PRADESH

1.1. Background of the study

Uttar Pradesh is the largest State in India in terms of population (16.49 per cent) and fifth largest in terms of geographical area (7.2 per cent). At 828 persons per sq.km, it ranks ninth in terms of population density among all states and Union Territories. Uttar Pradesh has 75 administrative districts (71 as of Census 2011; four more created subsequently). Lucknow is the state capital. Noida, Ghaziabad, Allahabad, Kanpur, Meerut and Saharanpur are the other key cities. It is bifurcated into 18 revenue divisions' viz. Agra, Aligarh, Allahabad, Azamgarh, Bareilly, Basti, Chitrakoot, Devipatan, Faizabad, Gorakhpur, Jhansi, Kanpur, Lucknow, Meerut, Mirzapur, Moradabad, Saharanpur and Varanasi.



The state was created on 1 April 1937 as the United Provinces with the passing of the States Reorganization Act and renamed Uttar Pradesh in 1950. It shares its border with the Himalayan nation, Nepal, in the North and the Indian states of Uttarakhand and Himachal Pradesh in the Northwest; Haryana, Delhi and Rajasthan in the West; Madhya Pradesh in the South; Chhattisgarh and Jharkhand in the Southeast and Bihar in the East. The state covers a large part of the highly fertile and densely populated upper Gangetic plains. Its total forest area is just about 6.9 per cent. Uttar Pradesh has two major rivers: the Ganges and the Yamuna. Other major rivers are the Ghaghra, Gomati and the Ramganga. Hindi is the most commonly spoken language. English and Urdu are the other common languages in use.

About 16.6 per cent of India's villages are located in Uttar Pradesh. About 78 per cent of the State's population is rural. Districts with over 30 per cent urban population are: Agra, Aligarh, Bareilly, Jhansi, Firozabad, Gautam Buddha Nagar, Ghaziabad, Lucknow, Kanpur (urban), Meerut, Moradabad, Saharanpur and Varanasi.

As per Census 2001, Uttar Pradesh had the largest outward migration among all states, at around 27 lakh persons. Movement with households and for work was the key reason for migration. The key drivers for large migration can be found in the state's socio-economic performance.

Uttar Pradesh's Gross State Domestic Product (GSDP) at current prices for 2011-12 is estimated at Rs. 6.76 lakh crore, contributing to 8.2 per cent of India's Gross Domestic Product (GDP). The GSDP at constant prices has increased at a CAGR of 6.9 per cent in the last five years (2006-07 to 2011-12) lower than the GDP growth of India at 7.9 per cent.

Presently, industrial and services sector both together contribute about 74.8 per cent of GSDP, while primary sector's contribution is about 24.2 per cent. The per capita income of the State at current prices is estimated at Rs.26,051 in the year 2010-11 – much lower than the All-India average of Rs.60,972 per annum.

As per India Human Development Report, 2011 Human Development Index (HDI) of India average is 0.467 and Uttar Pradesh ranks 18th in the country with HDI of 0.380. As of Census 2011, the State's literacy rate was 67.7 per cent – lower than All-India average of 74 per cent.

As mentioned earlier, Uttar Pradesh makes largest contribution to India's population – thus directly contributing to the India's demographic dividend. As of Census 2011, Uttar Pradesh has a population of 19.98 crore persons. Of this, 52 per cent of the population is in working-age group, while only 34 per cent is in the labour force. The gap is attributed to people who do not want to work. This could be due to aspirations for higher studies or voluntary unemployment or unwillingness to work.

As of 2011, the State's workforce is estimated at 6.69 crore persons. Majority of these are employed in agriculture at 66 per cent as either cultivators or agricultural labourers. The remaining 34 per cent are employed in non-agricultural activities. Given this background, the skill development assumes greater significance.

Uttar Pradesh Government's Education sector Goals for 12th Five-Year Plan Period

- Achieve 85 per cent literacy rate by 2017.
- Universal primary enrolment and reduce gender gap from 20 per cent to 10 per cent.
- Drop out ratio in Elementary Education to be reduced to 5 per cent by 2017.
- To improve teacher-pupil ratio from the present level of 1:40 to RTE norms.

Source: Uttar Pradesh Government's submission to the Planning Commission; IMACS Analysis

The Government has put in place an institutional structure for skill development in the State up to the district level. The key highlights are given in the box below.

Uttar Pradesh's focus on skill development

Uttar Pradesh has set up a State Skill Development Mission (SSDM) headed by the Chief Minister. The State has also set up a separate department for vocational education, which is the nodal agency for skill development and coordination of 18 different departments. A Vocational Education Board has also been set up for coordinating various aspects of skill development.

The objectives of the Mission include:-

- ✓ To integrate efforts of various departments of State and Central Government engaged in Skill Development Training
- ✓ Imparting training in vocational skills to 45 lakh youth in the age group of 14 to 35 years in 12th five year plan period
- ✓ Out of 45 lakh, 24.18 lakh to be trained through short duration training programs rest through regular institutes
- ✓ Ensuring placement of preferably at least 70% of the trained youth in gainful wage and self employment

Given the above background and the growing importance of skill development in the State of Uttar Pradesh, the District Wise Skill Gap Study for the State of Uttar Pradesh has been conducted. The findings of the study are presented in this report.

1.1.1. Study objectives

The terms of reference for the study are as follows:

1. Review the socio-economic profile of the district covering demography, economic profile of district by industry, state of education etc.,
2. Identify developmental opportunities keeping in mind factor endowments and stakeholder perspectives
3. Identify specific developmental initiatives/projects which have impact on employment generation
4. Articulate the aspirations of the youth
5. Identify the current and future (2012 to 2022) skills and manpower requirement by industry and estimate the gap that exists
6. Study the existing VT infrastructure both in the private sector and the government domain
7. Identify current schemes and programmes relating to skill development and their achievements / challenges.
8. Suggest suitable interventions/recommendations to address the skills gap
 - Recommendations have to be specific and actionable
 - Recommendations should also include specific initiatives that NSDC can take based on the mandate of the organisation

9. Create an action plan with indicative timelines

1.1.2. Approach and Methodology

The study has been conducted in three phases: (1) Diagnostics; (2) Synthesis; and (3) Recommendations. The same has been achieved through a combination of primary and secondary survey.

Phase – 1: Diagnostic Phase

The objective of this phase was to review the socio-economic profile of the State and all the 75 districts of Uttar Pradesh. We focused on analyzing the economic and social position of the districts based on evolution of the district and type of economic activity and status of education. The factor advantages, constraints facing the district either due to intrinsic factors or common among the State, and the challenges going forward were analysed. We thus understood the factor endowments of the district and the potential it holds. At the end of this stage, we have presented the SWOT analysis of each of the districts.

Phase – 2: Synthesis Phase

The objective of this phase was to map the development and employment opportunities in the district, and assess the sectoral skill requirement. This was carried-out in three modules:

Module 1-Assessment of Development Potential: The objective of this phase was to identify development opportunities across formal and informal sectors which provide livelihood opportunities for employment.

Module 2 - Assessment of Employment Potential: For the developmental opportunities identified, we forecasted district level employment potential for 2012 to 2022

Module 3 -Assessment of sectoral skill requirement and gap analysis: As a part of this, we assessed the current and future skills required among the district level workforce and identified the skill gaps which currently exist.

Phase – 3: Recommendations

Based on the results from Phase 1 and Phase 2, we framed our recommendations. Our recommendations focus on various measures targeted at all 'levels' of the skill pyramid towards skill building at a 'district and state level'. Recommendations have interventions for the Government, Private Players, Industry and NSDC. Our interventions focus on various measures/potential ideas/projects required to be pursued for development and employment generation.

Primary Research

Given the nature of assignment, IMAcS met key Government officials to review the policy direction. We also interacted with industry representatives in the formal and informal sector to understand human resource and skill requirements from a district and regional as well as State level. In addition, we administered a structured questionnaire to select companies and educational institutions to map the current and future skill requirement.

As part of the field survey, some of the key stakeholders we interacted with at the district level were:

- District Collectors / Additional District Collectors
- General Manager – District Industries Centre
- Employment Exchange Officer
- Tribal Development Officer
- District Agricultural officer
- Project Director – District Rural Development Agency
- District Vocational Education and Training Officer
- Other Government departments such as animal husbandry, sericulture, fishery, tourism etc.
- Select industrial associations
- Select industries – both large and MSME
- NGOs and SHGs
- Select educational institutions such as universities, colleges, ITI, polytechnics, private training institutes etc.
- Youth groups
- District Level Single Window Clearance Committee (DLSWCC), if any

The list is not exhaustive and varies from district to district depending upon the availability of the personnel.

Secondary Research

We also relied on information available in the public domain that we considered reliable to validate the findings of our primary survey.

1.1.3. Methodology used for forecasting demand and supply

As a part of the study, we have forecasted the demand and supply of human resources from 2012 to 2022. The demand and supply forecasts help determine the potential skill gaps (quantitative) in the State as well as its different districts.

Demand side estimation

Different methodologies have been used for different sectors – based on difference in sector dynamics as well as data availability. Broad methodology used for different sectors is elucidated in the table below.

Sector	Data sources	Factors considered
Agriculture and allied	NSSO 55 th round, 61 st round and 66 th round, Census 2001, Census 2011	Historical trends, employment elasticity, district wise number of cultivators and agricultural workers, share of agriculture in total workers, discussions with stakeholders
Auto and auto components	ASI, Primary survey, Uttar Pradesh Statistical Abstract 2011 , Udyog Bandhu	Historical trends in employment, output, productivity, growth of auto manufacturing industry, penetration of automobile, demand

Sector	Data sources	Factors considered
		for auto servicing, discussions with stakeholders
BFSI	RBI, IRDA, Uttar Pradesh Statistical Abstract 2011	Historical trends, growth of banking, insurance, mutual funds, NBFCs and financial intermediaries, discussions with stakeholders
Construction	NSSO 55 th round, 61 st round and 66 th round, Department of Economics and Statistics Uttar Pradesh	Historical trends, employment elasticity, upcoming investments, advancements in technology, discussions with stakeholders
Chemicals and pharmaceuticals	ASI, Primary survey, Udyog Bandhu	Historical trends in employment, output, productivity, discussions with stakeholders
Education & skill development	Department of Education, Uttar Pradesh, MHRD – GoI, DISE, Uttar Pradesh Statistical Abstract 2011	Historical trends, number of teachers, students, pupil-teacher ratio, GER, population in different age-groups, discussions with stakeholders
Electronics and IT hardware	ASI, Primary survey, Udyog Bandhu	Historical trends in employment, output, productivity, discussions with stakeholders
Food processing	ASI, Primary survey, Udyog Bandhu	Historical trends in employment, output, productivity, discussions with stakeholders
Furniture & furnishings	ASI, Primary survey	Historical trends in employment, output, productivity, discussions with stakeholders
Healthcare	Centre for Enquiry into Health and Allied Themes, Central Bureau of Health Intelligence and Statistical Abstract of Uttar Pradesh 2011	Historical trends, availability of medical personnel such as allopathic doctors, dental surgeons, ayush doctors, nurses, pharmacists, health assistants and health workers, number of hospitals, number of hospital beds, discussions with stakeholders
IT & ITES	NASSCOM,	Historical trends, companies present across various districts, discussions with stakeholders
Leather & leather products	ASI, Primary survey, Udyog Bandhu	Historical trends in employment, output, productivity, discussions with stakeholders
Media & entertainment	FICCI Frames, Primary survey and discussions with industry stakeholders	Historical trends, employment elasticity in TV, films, print media, animation, and gaming, both production and distribution sides, upcoming investments and industry growth rates, discussions with stakeholders
Organised retail	IMaCS estimates	Historical trends, upcoming retail capacity and employment elasticity, discussions with stakeholders
Textiles & clothing	ASI, Textile Commissioner of India, Udyog Bandhu	Historical trends in employment, output, productivity, discussions with stakeholders
Transportation, logistics, warehousing and packaging	NSSO 55 th round, 61 st round and 66 th round, Uttar Pradesh Statistical Abstract 2011	Historical trends, employment elasticity, discussions with stakeholders

Sector	Data sources	Factors considered
Tourism, travel, and hospitality	NSSO 55 th round, 61 st round and 66 th round, Uttar Pradesh Statistical Abstract 2011	Historical trends, tourist inflow, number of hotel beds, discussions with stakeholders
Unorganised sector (domestic workers, security guards, facility management, handloom, handicrafts, beauty culture)	IMaCS estimates	Historical trends, income wise availability of households, number of enterprises, women in a particular age bracket, per capita income, discussions with stakeholders
Other manufacturing (Included manufacturing of basic metals, fabricated metal products and other transport equipment.	ASI, Primary survey, Department of Economics and Statistics - Uttar Pradesh	Historical trends in employment, output, productivity, discussions with stakeholders

Supply side estimation

The current stock of labour force is estimated by applying labour force participation rate (LFPR) to the population. The stock of labour force is divided into different skill levels based on the level of educational attainment.

The addition to the labour force (incremental supply to labour) is estimated based on the following:

- **Gross out-turn:** Out-turn of students at different levels of educational attainment. Out-turn is based on student enrolment, adjusted for drop-out rates and pass rates.
- **Net out-turn:** Adjust the out-turn for voluntary unemployment (i.e. students who are not interested in joining the job market).
- **Supply adjusted for retirees:** Adjust the net out-turn for population that will be retiring from the work-force, to arrive at net additions to the workforce.
- **Migration adjusted supply:** Uttar Pradesh exports a large number of people to outside the State as well. Thus, the number of in-migrants is subtracted and the number of out-migrants is added to reach the migration adjusted supply numbers.

1.1.4. Key definitions used in the report

- **Skill in formal sectors:** Skill levels for formal sectors have been assessed based on the level of education attainment in combination with experience, as follows:
 - **Minimally-skilled workforce:** Literate but below Xth standard
 - **Semi-skilled workforce:** Xth + 2/3 years of education
 - **Skilled workforce:** Xth + 5 years of education
- **Skill in informal sectors:** Skill levels for informal sectors have been assessed mainly based on the experience and number of years spent in a particular trade. Number of years for which experience is counted varies from sector to sector.

1.1.5. Study limitations

- **Data availability:** In some of the cases, it was a challenge conducting analysis based on secondary data, as some of the data (especially at the district level) was unavailable – especially on the time series basis. In some cases, there was also discrepancy in the data obtained from the district level vis-à-vis the State level. Therefore, we used data sources which we deemed reliable. Data for some indicators was even out-dated (e.g. Census 2001), as latest data is still not available / published. Wherever, data availability was an issue, we have used proxy indicators along with our own estimations.
- **Unavailability of key personnel:** In some of the districts, some key stakeholders were unavailable for meetings. However, we tried to establish contacts with next in-line referred by stakeholders.
- **Employment numbers:** For certain sectors, number of people currently employed is not available in public domain. Thus, we have relied on industry interactions and our approximations in those cases. This is especially true for unorganised sectors.

1.2. Socio-economic profile of Uttar Pradesh

Uttar Pradesh is situated in the northern India. The State is divided into 18 revenue divisions which are further divided into 75 districts. Lucknow is the capital of Uttar Pradesh and is known as a multicultural city that flourished as a cultural and artistic capital of North India in the 18th and 19th centuries and as a seat of power of Nawabs.

1.2.1. Demography

Uttar Pradesh is the largest State in India in terms of population contribution – 16.5 per cent. As of 2011 Census, the State has a population of 19.9 crore persons. In the last ten years, the State's population has grown at a CAGR of 1.86 per cent, as compared to 1.6 per cent All-India growth rate.

Table 1: Key demographic indicators

Indicator	Uttar Pradesh	India
Administrative Units (Census 2011)	2011	2011
No. of districts	75*	640
No. of sub-districts/Tehsils	312	5,924
No. of Towns (Statutory and Census)	915	7,935
No. of Villages	106,704	640,867
Population	2011	2011
Total population (Crore)	19.9	121
Percentage of India's population	16.4%	100.0%
Population growth (Decadal)	20.1%	17.6%
Urban population	22.3%	31.1%
Sex ratio (females per 1,000 males)	908	940
Human Development Indicators		
Human Development Index (HDI:2007-08)	0.38	0.47
HDI rank among 23 states	18	-
Gender Development Index (GDI: 2005-06)	0.51	0.59
GDI rank among 35 states/UTs	34	-
Vital Statistics	2009-10	2009-10
Literacy rate (Census 2011)	69.7%	74.0%
Birth rate (per 1,000 population)	28.0	22.1
Death rate (per 1,000 population)	8.0	7.2
Maternal Mortality Ratio (Maternal deaths per 1 lakh live births; 2007-09)	359	212
Infant Mortality Rate (per 1,000 population)	61.0%	47.0%
<5 years Mortality rate (per 1,000 population)	79.0%	59.0%
Poverty	2009-10	2009-10
Poverty headcount	37.7%	29.8%

*Working age population is the population in the age-group of 15 to 59 years. ^ Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population.

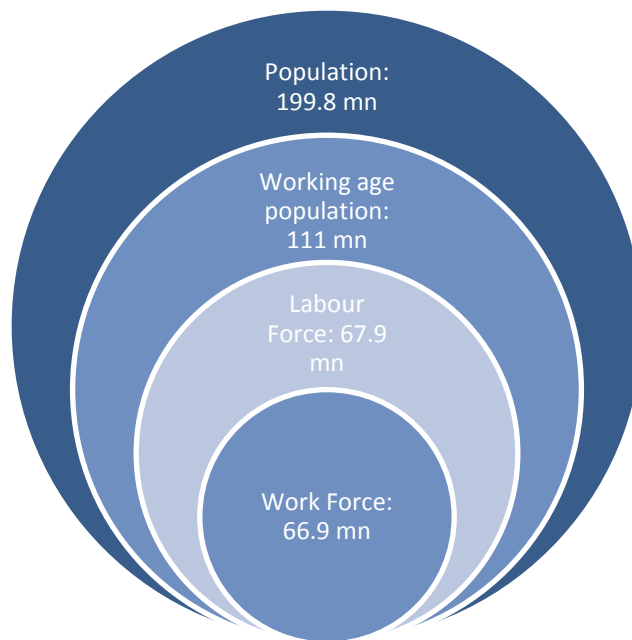
Source: UNDP; Census 2011, CMIE; Government of India Press Note; ImaCS Analysis

Of the total population of Uttar Pradesh state, around 77.73 percent live in the villages of rural areas. In actual numbers, males and females were 80,992,995 and 74,324,283 respectively. Total population of rural areas of Uttar Pradesh state was 155,317,278. The total figure of population living in urban areas is 44,495,063 (22.27%) of which 23,487,515 are males and while remaining 21,007,548 are females. The urban population in the last 10 years has increased by 22.27 percent.

As of Census 2011, literacy rate in Uttar Pradesh has seen upward trend and is 67.68 percent as per 2011 population census. Of that, male literacy stands at 77.28 percent while female literacy is at 51.36 percent. In 2001, literacy rate in Uttar Pradesh stood at 56.27 percent of which male and female were 67.30 percent and 43 percent literate respectively.

As of 2011, the State's workforce is estimated at 6.69 crore persons. Majority of these are employed in agriculture at 66 per cent as either cultivators or agricultural labourers. The remaining 34 per cent are employed in non-agricultural activities.

Figure 1: Demographic and worker profile of Uttar Pradesh



Source: Census 2001, Census 2011, NSSO 66th Round

According to NSSO 66th round on 'Employment and Self-Employment' conducted in 2009-10, majority of the workers in Uttar Pradesh in rural areas at 76.3 per cent are in agriculture and allied activities. While in urban areas, majority of the workers are in 'trade, hotels and restaurants' at 29.5 per cent and also in 'manufacturing' at 25.5 per cent.

1.2.2. Migration

A major phenomenon in Uttar Pradesh is the migration of people to other states – looking for opportunities. As of census 2001, the state has the highest number of migrants – about 4.1 million – who went out of the state looking for opportunities. As compared to the 1991 census, this number has shown an increase of about 69 per cent. Predominantly, this migration stemmed from the need to find better income, standard of living and education opportunities.

The proximity of the national capital to several districts in the state has also aided to the cause. In fact, from the district of Bulandshahr more than 64,000 people found their way to Delhi from 1991-2001¹. The NCR thus acts as a magnet to attract people from the state. In the decade from 1991-2001 over 8 lakh people migrated from the state to the NCR.

Figure 2: Migration to Delhi – 1991-2001

District	Migration numbers	District	Migration numbers
Aligarh	50,068	Gorakhpur	30,961
Azamgarh	33,381	Hardoi	10,803
Agra	28,970	Jaunpur	15,031
Allahabad	18,015	Jhansi	6,631
Bareilly	17,180	Kanpur	24,314
Bijnor	19,217	Lucknow	14,545
Budaun	25,412	Mahoba	5,880
Bulandshahr	64,373	Mainpuri	13,836
Baghpat	18,846	Mathura	18,131
Ballia	13,175	Meerut	44,274
Basti	16,241	Moradabad	21,362
Deoria	9,805	Muzaffarnagar	25,180
Etah	36,477	Pratapgarh	15,858
Etawah	22,177	Rae Bareli	12,800
Faizabad	18,135	Rampur	5,840
Farrukhabad	15,046	Saharanpur	8,993
Firozabad	8,699	Shahjahanpur	6,763
GB Nagar	8,020	Sultanpur	21,290
Ghazipur	8,690	Unnao	8,207
Ghaziabad	37,418	Varanasi	9,820
Gonda	15,187		

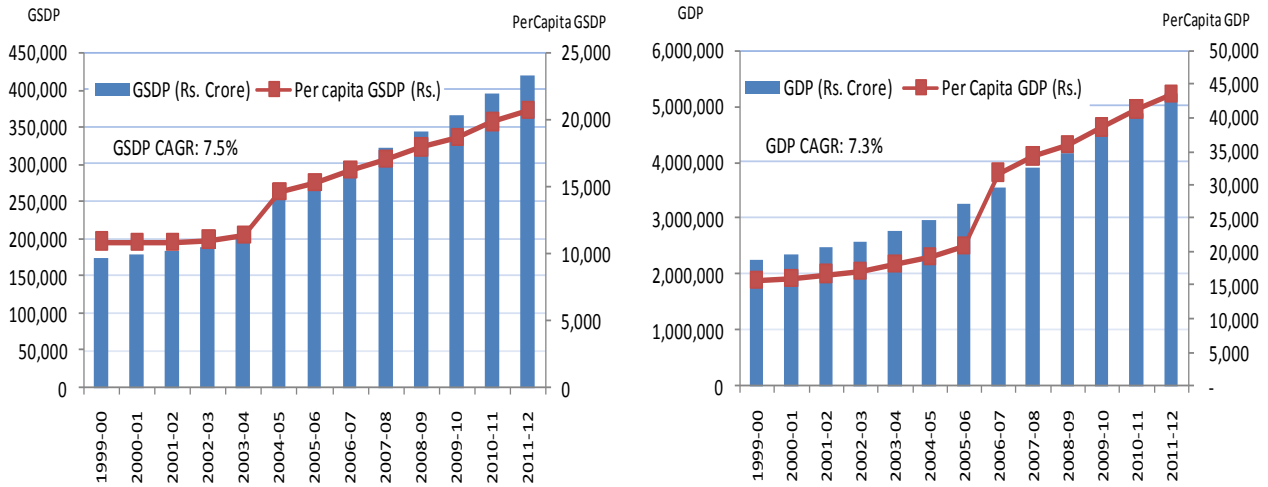
Source: Report on Study of Magnet Areas to Delhi and NCR

¹ Source: Report on Study of Magnet Areas to Delhi and NCR

1.2.3. Economy

Uttar Pradesh's Gross State Domestic Product (GSDP) at current prices for 2011-12 is estimated at Rs. 6.76 lakh crore, contributing to 8.2 per cent of India's Gross Domestic Product (GDP). The GSDP at constant prices has increased at a CAGR of 6.9 per cent in the last five years (2006-07 to 2011-12) lower than the GDP growth of India at 7.9 per cent.

Figure 3: GSDP of Uttar Pradesh, in '000 Rs. Crore

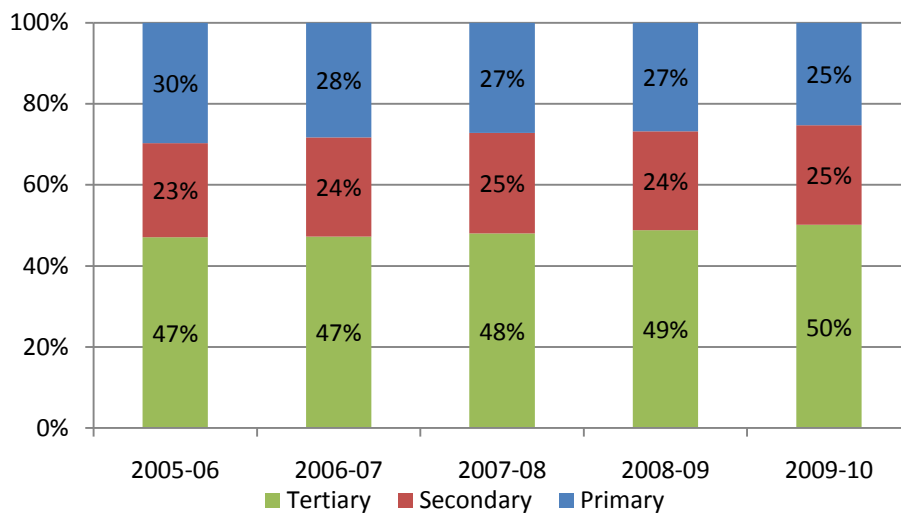


GSDP – Gross State Domestic Product; Numbers given at constant prices (base year: 2004-05).

Source: Central Statistical Organisation, Economic Survey 2012-13

The state economy is pre-dominantly service based, with service sector's share in GSDP at close to 50 per cent in 2009-10. This is followed by secondary sector and primary sector.

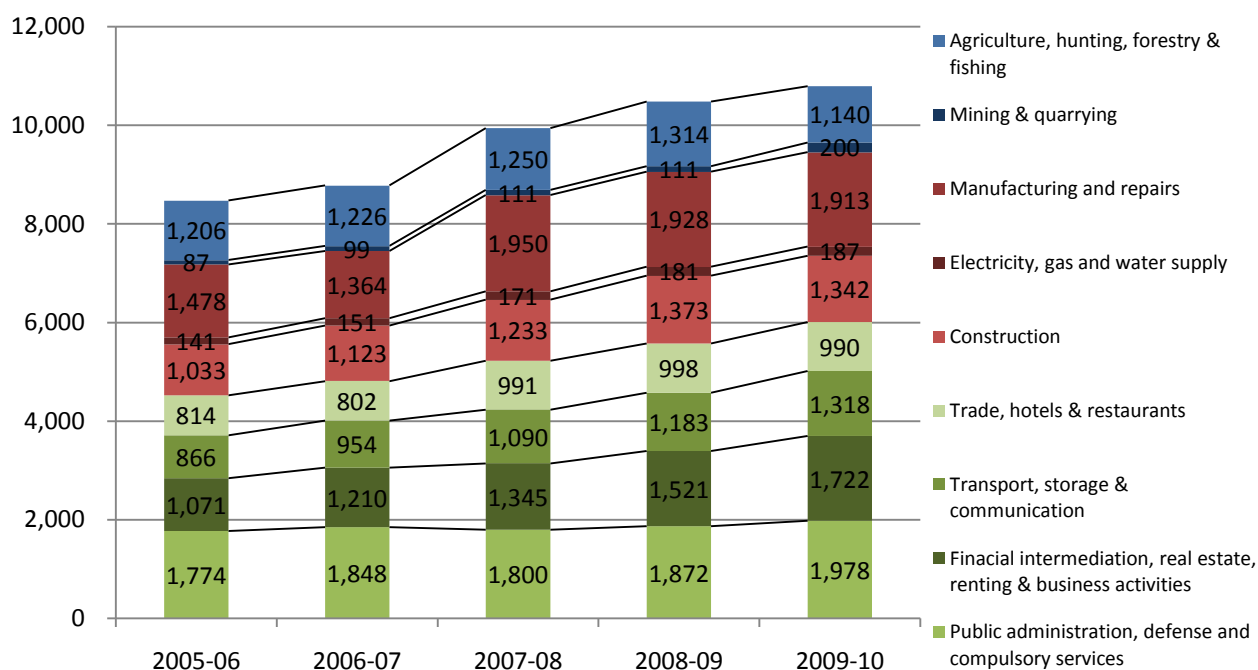
Figure 4: Share of primary, secondary and tertiary sectors in Uttar Pradesh's GSDP



Source: MoSPI, CSO, IMAcS analysis

At a more granular level, we see that ‘Agriculture, forestry and fishing’ make the biggest contribution to GSDP at 23.9 per cent, followed by ‘Financial intermediation, real estate, renting & business activities’ at 15 per cent and ‘Manufacturing and repairs’ at 14.6 per cent.

Figure 5: Sector wise composition on Uttar Pradesh’s GSDP, as of 2009-10 100% = 364 thousand crore



Others include forestry, electricity, gas & water supply, communications, railways, mining & quarrying and fishing.

1.2.4. Agriculture and allied activities

Agriculture and allied sector contributes to about 21 per cent of the GSDP, as of 2011-12. The strong performance of this sector in the state and its importance to the national economy is well documented. Of the total land area, over 69 per cent is net sown area and the majority of the population – 66 per cent – is employed in the agriculture sphere. The confluence of several major rivers in the state – including the Ganga, Yamuna, Ramganga, Gomti and Ghaghara – ensures fertility and thus sets the foundation for a strong agriculture based economy. In fact, third of the wheat produced in India comes from UP and it also accounts for the highest sugarcane production.

It is also the largest producer of food grains with a share of 19.9 per cent in the country’s total production in 2008-09. The major food grains produced in the state include rice, wheat, maize, bajra (millet), gram, pea and lentils. In 2009-10, mango production in state was around 3.5 million tonnes.

The agriculture snapshot of Uttar Pradesh reveals the production of several key crops.

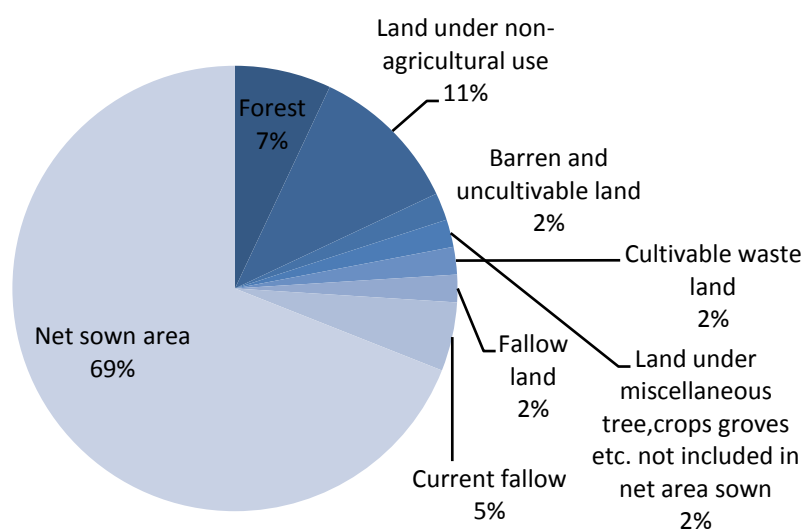
Table 2: Agriculture Snapshot

Parameters	Value
Food Grain production- (FY2011)	47,243 (Thousand Tonnes)
State's contribution to national food grain production (FY2011)	19.55%
State's rank in national food grains production (FY2011)	1 st
State's contribution to national sugarcane production (FY2011)	35.5%
Yield food grains- (FY2010)	2260 (kg/hectare)
Rice Production (FY2011)	120,14 (Thousand Tonnes)
Wheat Production (FY2011)	30,001 (Thousand Tonnes)
Coarse Cereals(FY2011)	3,217 (Thousand Tonnes)
Pulses(FY2011)	2,012 (Thousand Tonnes)
Oil Seeds(FY2011)	911 (Thousand Tonnes)

Source: PHD Research Bureau – Report on Uttar Pradesh

The land utilization pattern in Uttar Pradesh reveals that 69 per cent is the net sown area.

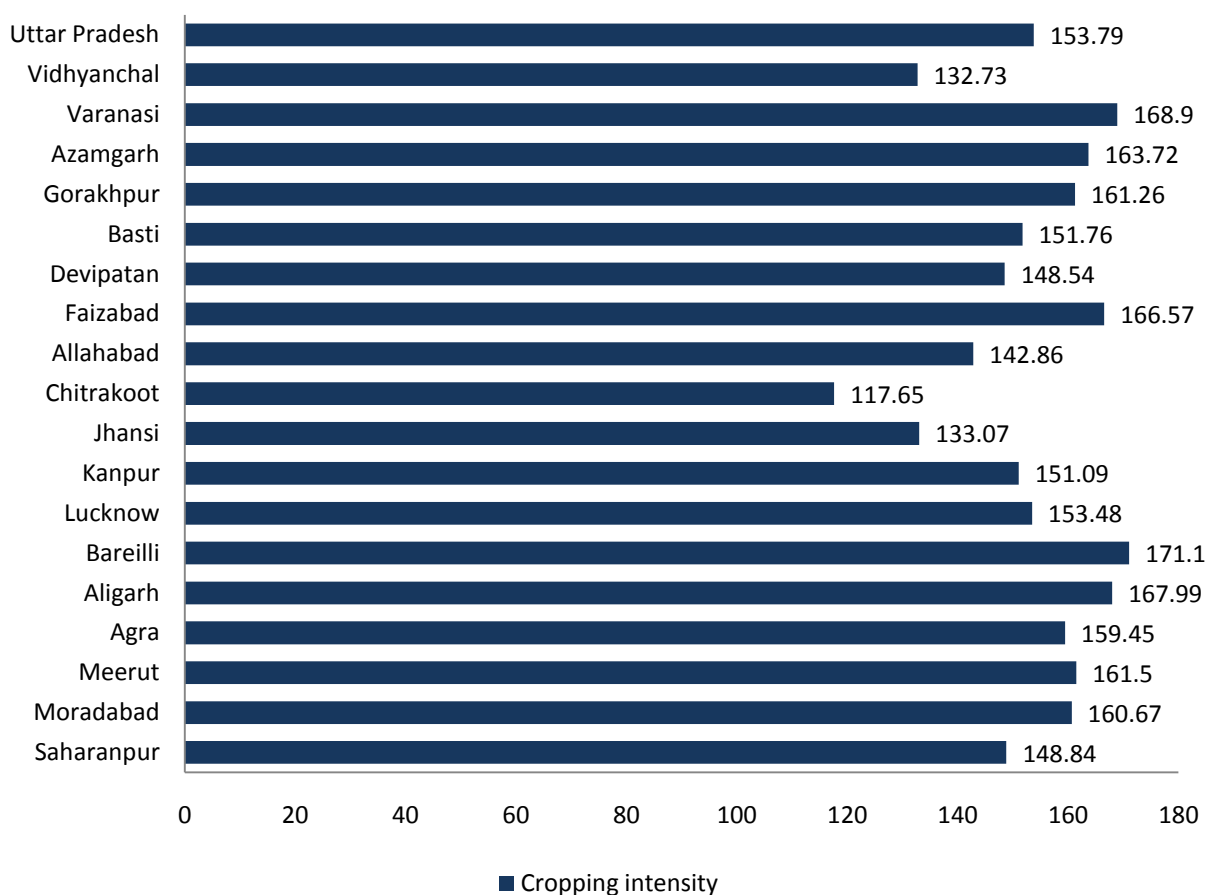
Figure 6: Land Utilization pattern in Uttar Pradesh – 2008-09



Source: Statistical Abstract of Uttar Pradesh – 2010

The cropping intensity reflects a strong agricultural performance of the state across the key regions, with Bareilly being the highest with a value of about 171. In fact, with the cropping intensity being over 100 shows that the regions all have multiple cropping cycles that translate to good land usage pattern.

Figure 7: Cropping intensity in Uttar Pradesh – 2008-09



Source: Statistical Abstract of Uttar Pradesh – 2010

The data on the productivity of the state when compared to other states that also have strong agricultural base shows the high productivity of Uttar Pradesh.

Table 3: Productivity of key crops – a comparison

Qt/Ha	Wheat	Rice	Sugarcane	Potato	Gram
Uttar Pradesh	30.02	21.71	523.26	219.7	10.14
Punjab	44.62	40.22	576.54	186.98	11.72
Tamil Nadu		26.83	1061.97	165.85	6.38
Madhya Pradesh	17.23	9.27	421.99	125.32	9.81
Haryana	43.9	27.26	570	176.98	10.41
Maharashtra	14.83	15.01	789.69	46.88	6.77
Andhra Pradesh	11.43	32.46	784.69	125	14.12

Source: Statistical Abstract of Uttar Pradesh – 2010

As we see the data on productivity suggests the strength of Uttar Pradesh in Agriculture. It is the second highest in terms of productivity of rice and wheat and the highest productivity in potato in the country. The resultant ample potato production in particular presents with huge opportunities in the state within potato processing.

Animal husbandry: As of 2009-10, the state had 2,200 veterinary hospitals, 5,043 artificial insemination centres, 180 sheep and wool extension centres nine poultry breeding farms and eight pig breeding farms to support the animal husbandry sub-sector. As an additional source of income animal husbandry holds considerable potential.

Dairy: Uttar Pradesh has got good potential in the dairy sub-sector. Uttar Pradesh is the largest milk producing state of India contributing 17 per cent of the total milk production of India. In the year 2010-2011, the total milk production in the state was 21033.3 thousand kilograms per day. The dairy sub-sector was catalyzed by a milk cooperative society in a village in Allahabad district set up in 1918 marked the beginning of milk cooperatives in Uttar Pradesh. Successful efforts gave way to formation of Lucknow Milk Union in 1938-the only Milk Union in the country -giving Uttar Pradesh the credit of being a pioneer state in the country in this segment.

The UP government-owned Pradeshik Cooperative Development Dairy Federation Limited (PCDDF), which processes milk and markets its products with the brand name Parag is set to establish a dairy plant of 5 lakh litre daily capacity near Lucknow, to further boost the sub-sector. It has also been included in the National Dairy Plan (NDP) of the National Dairy Development Board (NDDB) – along with the states of Punjab, Karnataka, Tamil Nadu, Gujarat, Madhya Pradesh, Odisha and Maharashtra.

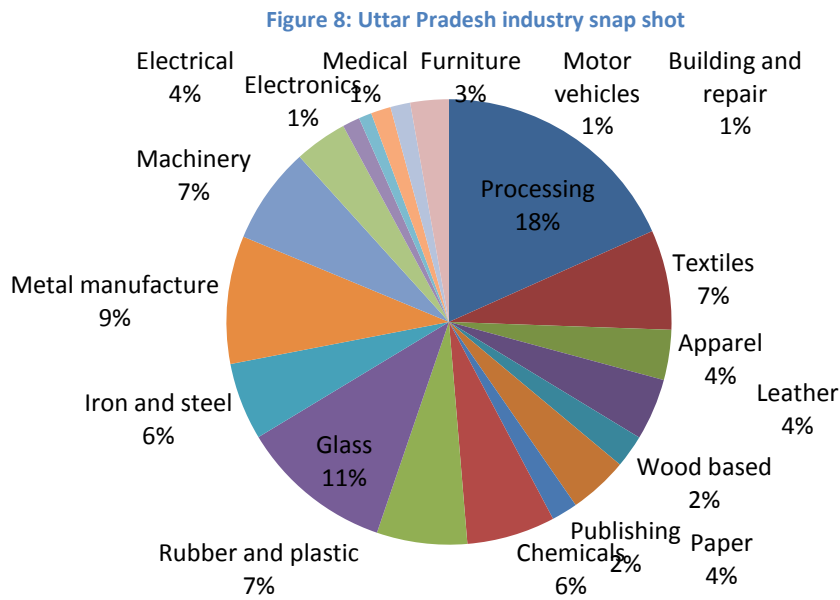
Horticulture: Uttar Pradesh is blessed with favourable climatic condition ideal for the growth of horticultural crops. Major fruits grown in the district are Mango, Guava, Banana and Litchi. The state is a leader in mango production with the key areas being Saharanpur, Muzaffarnagar, Bijnore, Meerut, Lucknow, Barabanki, Unnao, Sitapur and Hardoi. Overall productivity of fruits in Uttar Pradesh is about 12.30 tons / hectare when compared to the national average of 11.9 tons / hectare. The state is the second largest producer of vegetables in the country with the major vegetables grown being potato, peas and cabbage. The key spices grown in the district are turmeric, chilli, garlic, fennel and fenugreek

1.2.5. Industry

The industry sector has contributed 24 per cent to the state's GSDP. The state is home to several industrial giants like LG, Samsung, Xerox, Areva, Atlas Cycles, Eveready Industries amongst others. These companies are located in Gautam Buddha Nagar and Ghaziabad.

Drawing the focus away from the industrial giants, the state of Uttar Pradesh's industrial development follows a unique pattern – with small units scattered across the state. Manufacturing contributes to about 19 per cent to the state's GSDP. The growth story of the state is organic by nature – with several

small scale units leading the way. The snapshot of the industrial activity in UP shows the key industry sectors.



Source: ASI, IMAcS Analysis

We see that the maximum number of units exist in the food processing, glass, metal manufacturing and textiles subsectors. With the exception of glass, all other sectors have been identified as being high growth sectors.

The district-wise distribution of the manufacturing clusters in Uttar Pradesh show case the wide penetration of manufacturing across the state.



Source: Uttar Pradesh development report, Planning commission

Table 4: Industry distribution snapshot

Industry classification	Districts
Manufacture of vegetable and animal oils and fats	Agra, Aligarh, Budaun, Kanpur Dehat, Jaunpur
Manufacture of dairy products	Aligarh, Etah, Hathras, Mathura, Kaushambi,

Industry classification	Districts
	Lucknow, JP Nagar, Chandauli
Manufacture of grain mill product	Hathras, Mainpuri, Kaushambi, Pratapgarh, Pilibhit, Shahjahanpur, Sant Kabir Nagar, Mahoba, Bhraich, Ambedkar Nagar, Maharajganj, Etawah, Hardoi, Sitapur, Ghazipur
Manufacture of prepared animal feeds	Chandauli
Manufacture of sugar	Azamgarh, Ballia, Mau, Bareilly, Pilibhit, Basti, Balrampur, Bharaich, Gonda, Barabanki, Faizabad, Deoria, Kushinagar, Maharajganj, Hardoi, Kheri, Sitapur, Baghpat, Meerut, Bijnor, JP Nagar, Moradabad, Muzaffarnagar, Saharanpur
Manufacture of other food products	Etah, Firozabad
Preparation and spinning of textile fibre including weaving textiles	Mathura, Allahabad, Azamgarh, Ballia, Mau, Banda, Ambedkar Nagar, Rae Bareli, Bulandshahar, Ghaziabad, Ghazipur, Jaunpur, Mirzapur, Sant Ravidas Nagar, Bhadoi
Manufacture of carpets and rugs	Sant Ravidas Nagar, Bhadoi
Manufacture of wearing apparel except of fur	Kanpur Nagar, Gautam Buddha Nagar
Manufacture of footwear	Agra, Pratapgarh
Manufacture of pulp, paper and paper board	Bijnor
Publishing of news papers, journals and periodicals	Varanasi
Manufacture of coke oven products	Mirzapur, Sonbhadra
Manufacture of refined petroleum products	Chitrakoot, Auraiya, Farrukhabad
Manufacture of fertilizers and nitrogen compounds	Allahabad, Bareilly, Budaun, Sultanpur, Gorakhpur, Kanpur Nagar
Manufacture of soaps, detergents, perfumes and toilet preparations	Hamirpur, Jalaun, Kanpur Dehat
Manufacture of other chemical products	Lalitpur
Manufacture of rubber tubes and tyres	Meerut
Manufacture of plastic products	Shahjahanpur, Gautam Buddha Nagar
Manufacture of glass and glass products	Firozabad
Manufacture of cement, lime and plaster	Jhansi
Manufacture of basic iron and steel	Fatehpur, Hamirpur, Sultanpur, Jalaun, Unnao, Ghaziabad, Muzaffarnagar
Manufacture of basic precious and non-ferrous metals	Aligarh
Casting of iron and steel	Agra, Aligarh, Mathura, Fatehpur
Manufacture of other fabricated metal products	Fatehpur
Manufacture of domestic appliances	Varanasi
Manufacture of electric motors, generators and transformers	Rampur, Jhansi
Manufacture of insulated wires and cables	Rae Bareli
Manufacture of electric lamps, and lighting equipment	Firozabad, Sultanpur

Industry classification	Districts
Manufacture of television and radio transmitters and apparatus	Gautam Buddha Nagar, Ghaziabad
Manufacture of television and radio receivers and associated goods	Gautam Buddha Nagar
Manufacture of motor vehicles	Gautam Buddha Nagar, Lucknow
Manufacture of motorcycles	Gautam Buddha Nagar, Kanpur Nagar
Other manufacturing	Moradabad

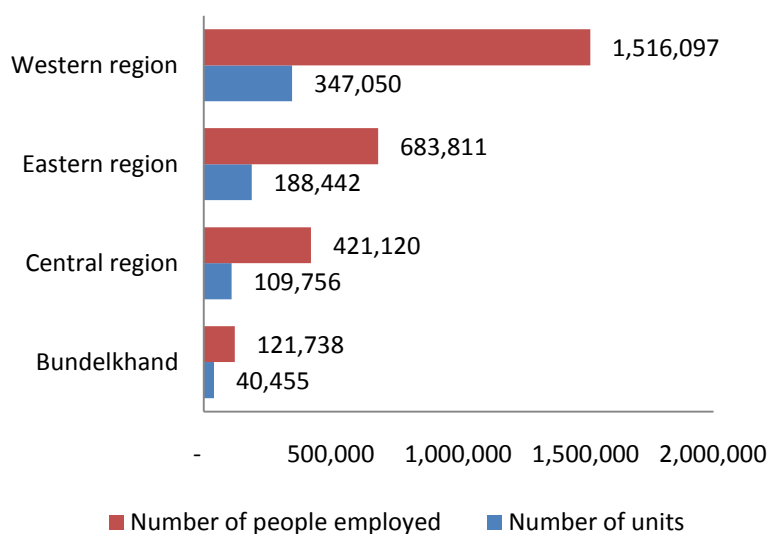
Source: Planning Commission Report on Uttar Pradesh; IMaCS Analysis

SSI PROFILE

As stated above, the small scale industries dominate the industrial scenario in the state. As of 2010, the state has set up about 6.7 lakh units, which has generated employment for about 27 lakh people and has attracted investment of more than Rs. 12,000 crore.

Figure 9: SSI profile in Uttar Pradesh – 2010

We see that about 50% of the number of SSI units as well as manpower employed is in the Western Region alone. This primarily is a result of concentration of manufacturing units at Gautam Buddh Nagar, Ghaziabad, Meerut, Muzaffarnagar and Bulandshahr.



Source: Planning Department, Government of Uttar Pradesh

EXPORT AND INFRASTRUCTURE

The industrial scenario in the state is also lifted by the export activities. Several varied products like carpets, leather, etc is exported from the state. The region-wise compilation of the key export items again show cases the diversity in the products.

Table 5: Key export centres in Uttar Pradesh

Location	Export Item/Major Crafts
NOIDA, Export Processing Zone(NEPZ)	Gems & Jewellery, Apparel, Electronics, Computer Hardware & Software, Leather.
Greater Noida, Noida, Gautam Buddh Nagar	Electronics, Computer Hardware & Software, Apparel, Engineering, Automobiles, Chemicals
Sahibabad, Loni, Pilkhua Ghaziabad	Chemicals, Engineering, Apparel, Textiles, Hand Printing, Herbal Medicines & Cosmetics, Stocks, bones buttons & Beads, art Jewellery, Carpentry
Khekra, Meerut	Sports Goods, Textiles, Hand Printing - Block & Screen, Handloom
Saharanpur	Wood Carving, Toys, Wooden Fancy Items, Furniture, Screens, Rice
Khurja, Bulandshahr	Pottery, Pottery Painting, Ceramics, Ceramic Tiles, Bathroom Utilities, Bone China
Aligarh, Purdilnagar	Locks, Builders Hardware, Art metal, Piled Durries, Glass & Ceramics Beads & Craft Items
Hathras	Glass & Ceramics Beads, Piled Durries, Stone/Bead Studded Brass Lamps
Agra	Silk Carpets, Handicrafts items, Embroided goods, jewellery, studded articles, Marble goods, Marble inlay, stone Art pieces leather shoes, chappals, bags
Firozabad	Cut Glass, Glass items, Glass bangles, Scientific instruments
Moradabad	Art Metal Ware, Art Jewellery, Bone Jewellery.
Rampur	Applique Work
Bareilly	Zardozi, embroidered articles, Rice.
Mathura	Stone craft, Block Printing, Hand Printing, Ghungru, Miniature Printing
Nagina Bijnore	Comb, bone Craft, Wood Carving
Almora	Ganga Jamuni(Brass-Copper) utensils, handicrafts, Woollens ,Painting
Shahzahanpur	Carpet
Kannauj	Attar, Perfumes, Rose Water, Sandal Wood oil based Perfumes
Farukkahabad	Hand printed Cotton and silk bed spreads, Zardozi Work, Wooden block , Tarkeshi
Lucknow	Miniature painting Chikan Zardozi, Floriculture, Ayurvedic/Herbal Medicine, Mango, Tobacco, Batik, Camel bone carving
Mainpuri	Tobacco, Garlic products, Tarkashi work on wood
Muzaffarnagar	Rice, Paper
Kanpur	Leather, Leather shoes, Suitcases, Bags, Leather Garments, Software export, Chemicals, Engg. Automobiles.
	Textiles, Handloom, Power loom, Essential oils and Perfumes. Pharmaceuticals, Spices
Unnao	Leather and Leather goods.
Fatehpur	Potato based products, Hand printing
Mahoba	Betel leaves

Azamgarh	Sarees, Silk, Dress Material, Black Pottery
Mau	Handloom and Power loom Textiles
Jaunpur	Hand-woven woollen carpet, hand needle work
Varanasi	Woollen Handicraft, Fancy articles, Jamdani, Silk, Zari and Zardozi , Handicrafts, repoussi work, Brocade, Wooden Toys, meenakari
Mirzapur	Woollen and cotton Durries, Hand-woven
Chandauli	Rice
Udham Singh Nagar	Rice
Gorakhpur	Disposable syringe, terrecota
Tanda, Faizabad	Jamdani
Sitapur	Durries
Jhansi	Brass work
Lalitpur	Brass work
Banda	Shajar Stone
Bahraich	Cotton yarn
Gonda	wooden block

Source: Export Promotion Bureau, Government of Uttar Pradesh; IMAcS Analysis

The state has ramped-up significant infrastructure to boost the industry growth. Some of the illustrative measures that the state has adopted for the same include²:

- 15 industrial areas, 12 specialized parks, four growth centres and Industrial Infrastructure Development Centres (IIDC).
- SEZs – about 21 identified as of August 2011
- Development proposed for 40 IT/ITeS parks (apart from IT SEZs), two biotech zones and a knowledge park.
- Development of integrated agro/food processing zones at Hapur
- Integrated logistics hubs (free-trade warehousing zones) have been proposed in collaboration between IL&FS, Mineral and Mining Trading Corporation and Mitsui (Japan). The Greater Noida Phase-II has 19 per cent land reserved for industrial use.

Some of the current infrastructure supports, area-wise in the state are:

Table 6: Industrial Parks in Uttar Pradesh

#	Location	Area (acres)
Growth centres	Bijoili, Jhansi	385
Growth centres	Shajahanour	311
Growth centres	Dibiyapur	346
Growth centres	Jainpur	357
Agro parks	Barabanki	180
Agro parks	Varanasi	261

² Source: IBEF

#	Location	Area (acres)
Apparel parks	Tronica city	145
Textile and hosiery parks	Kanpur	174
Leather technology parks	Banthal, Unnao	233
Export Promotion Industrial Parks	Greater Noida	200
Export Promotion Industrial Parks	Shastripuram, Agra	102

Source: Annual Plan 2008-09 (Planning Commission of Uttar Pradesh)

1.2.6. Services

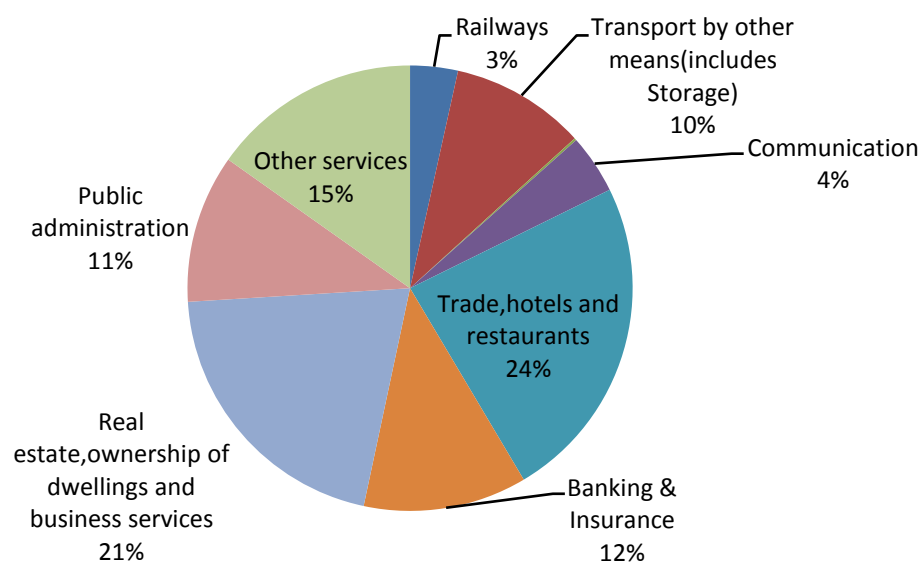
The services sector in Uttar Pradesh contributes to about 50 per cent to the State's GSDP. The biggest contributor to services is 'trade, hotels and restaurants' followed by 'real estate, ownership of business dwelling, business and legal services'. These two together accounts for about 45 per cent of service sector GSDP in Uttar Pradesh.

The services sector's key highlights which has aided in good economic performance include:

- Evolution as a key hub for IT and ITeS. This is centred on the Noida region – which has three operational SEZs for the same
- Travel, tourism and trade also drives the services segment – with the state attracting tourists for the Kumbh Mela, Taj Mahal amongst other places.
- BFSI also has made strides in the state with the state ranking first in terms of commercial banking – with about 12,000 branches

The detailed break-up of the same is showcased in figure 16

Figure 10: Percentage share of services in service sector GSDP



Source: CSO, IMaCS Analysis

1.3. Education and training profile

According to census 2011, literacy rate in the state stood at 69.72% as against 74.04% at national level. The table below presents the key literacy indicators for the state.

Table 7: Key Literacy indicators, Uttar Pradesh

Literacy in 2011	Uttar Pradesh	India
Overall Literacy	69.72%	74.04%
Male Literacy Rate	79.24%	82.14%
Female Literacy Rate	59.26%	65.46%
Rural Children (6 – 14) out of school	6.4%	3.3%

Source: Census 2011 & ASER 2012

Uttar Pradesh' school education infrastructure consists of 1,47,376 primary schools, 53,281 upper primary schools and 17,644 higher secondary schools as on 30th Sep, 2011³. And for higher education⁴, the state has around 2,361 degree colleges, 212 engineering institutes, 104 medical institutes, 128 teacher training institutes, 299 other colleges as on 30th Sep, 2009. Also, the state has 163 polytechnic institutes.

The State is also home to some of the premier institutions such Indian Institute of Technology (Kanpur and Varanasi), Indian Institute of Management (Lucknow), National Institute of Technology (Allahabad), Rajiv Gandhi Institute of Petroleum Technology (Rae Bareli) and Indian Institute of Information Technology (Allahabad).

Some of the other leading R&D institutes in the State are the Centre for Development of Advanced Computing (C-DAC), Central Leather Research Institute (CLRI), National Sugar Institute (NSI), Government Textiles Institute (GTI), Central Drug Research Institute, National Botanical Research Institute, Indian Institute of Pulses Research (IIRP).

Table 8: School education infrastructure in Uttar Pradesh, as of 30th Sep, 2011

Sl. No.	Category	No. of schools	Enrolment, in '000	No. of teachers, in '000	Pupil-Teacher Ratio
1	Primary	147,376	27,320	345	79
2	Upper Primary	53,281	9,805	143	69
3	Higher Secondary	17,644	11,722	227	51
4	Total Schools	218,301	48,847	715	68

Source: Statistical Abstract Uttar Pradesh 2011

³ Source: Statistical abstract Uttar Pradesh 2011

⁴ Source: Statistics of Higher & Technical Education, 2009 - 10

Table 9: Enrolments in Higher Education courses for Uttar Pradesh state, as of 30th Sep, 2009

Type of Degree	Courses	Number of enrolled students
	Ph. D / M. Phil	8,226
Post Graduate Degree	Arts	174,287
	Commerce	17,418
	Science	43,553
	Engineering / Technology / Architecture / Design	3,018
	Medicine	2,027
	Agriculture & Allied	2,085
	Management / Travel / Tourism Management	17,707
	Education / Teacher Training	753
	Law	957
	Others	1,264
	Under Graduate Degree	Arts
Commerce		194,472
Science		280,848
Engineering / Technology / Architecture / Design		93,053
Medicine		9,724
Agriculture & Allied		20,237
Management / Travel / Tourism Management		411
Education / Teacher Training		72,280
Law		45,999
Others		4,833
	Post School Diploma	41,383
	Post Graduate Diploma	1,057

Source: Statistics of Higher & Technical Education, 2009 - 10

There are around 36 universities and University level institutes in the state. This includes four central universities, 19 state universities, two private universities, eight deemed universities, one institution established under state legislature act and two Institutes of National importance.

The state currently has about 328 polytechnic institutes offering diploma certificates in various streams. In addition the state is also home to 1,590 Industrial Training Institutes (ITI) :-

Table 10: Vocational Training Institutes in Uttar Pradesh

	ITIs	Polytechnics
Government	226	97
Private	1,364	231
Total	1,590	328

Source: Uttar Pradesh Skill Development Policy 2013

In addition to the above, the State has several training institutes for vocational training run by both Government and private sectors. These institutes offer varied courses such as tailoring and cutting, embroidery, computer operation, beauty culture, information technology, auto-CAD, electrical wireman etc.

Private Sector supported Vocational training in the state:

There are some private training providers in the state offering vocational training courses. They are mostly National Skill Development Corporation (NSDC) partners and some are partners under various skill development scheme or initiatives. An indicative list of NSDC's private training providers in highlighted in the below table:

Table 11: Indicative list of NSDC partner training providers in Uttar Pradesh state

S. No	Name of the Training Provider	Sectors targeted for training	No of centres	Indicative locations*
1	AISECT	IT (Software & Hardware)	32	Allahabad, Firozabad
2	B-ABLE	Retail Accounting	3	Amroha, Behat, Hapur
3	Centum Learning	Organised Retail	8	Meerut, Noida
4	Drishtee	Textiles	17	Salempur, Ladpur
5	GRAS Education & Training Services Pvt Ltd	Banking/ insurance and finance Electronics hardware Entrepreneurial Skills IT Organised Retail	18	Saharanpur, Varanasi
6	Laurus Edutech	Accounting IT	1	Noida
7	NIIT YUVA JYOTI LIMITED	Banking/ insurance and finance ITES-BPO Organised Retail	6	Ghaziabad, Meerut
8	ASTM	Security	1	Gautam Buddh Nagar

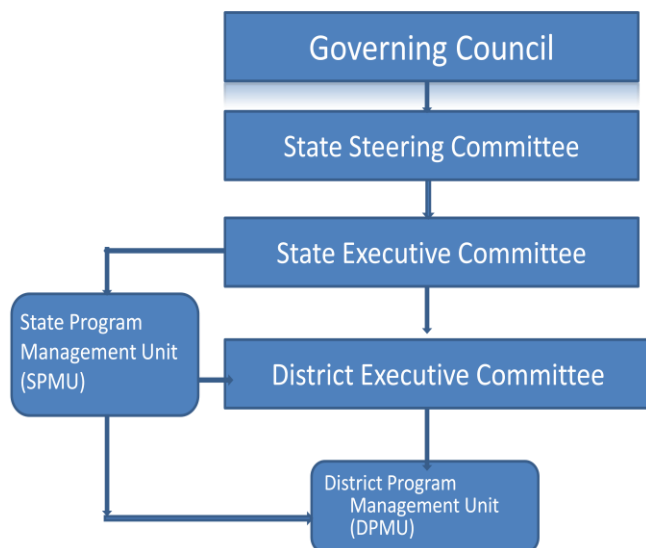
Source: National Skill Development Corporation (NSDC)

It can be observed that most of the training providers are offering courses related to IT, ITES and Retail sectors and are generally located in district capital.

1.4. Skill development initiatives

Government of Uttar Pradesh in the process of putting in place an institutional structure for skill development in the State up to the district level. It has set itself up a target of imparting training in vocational skills to 45 lakh youth in the age group of 14 to 35 years in 12th five year plan period.

Figure 11: Skill development infrastructure set up by the State Government in Uttar Pradesh



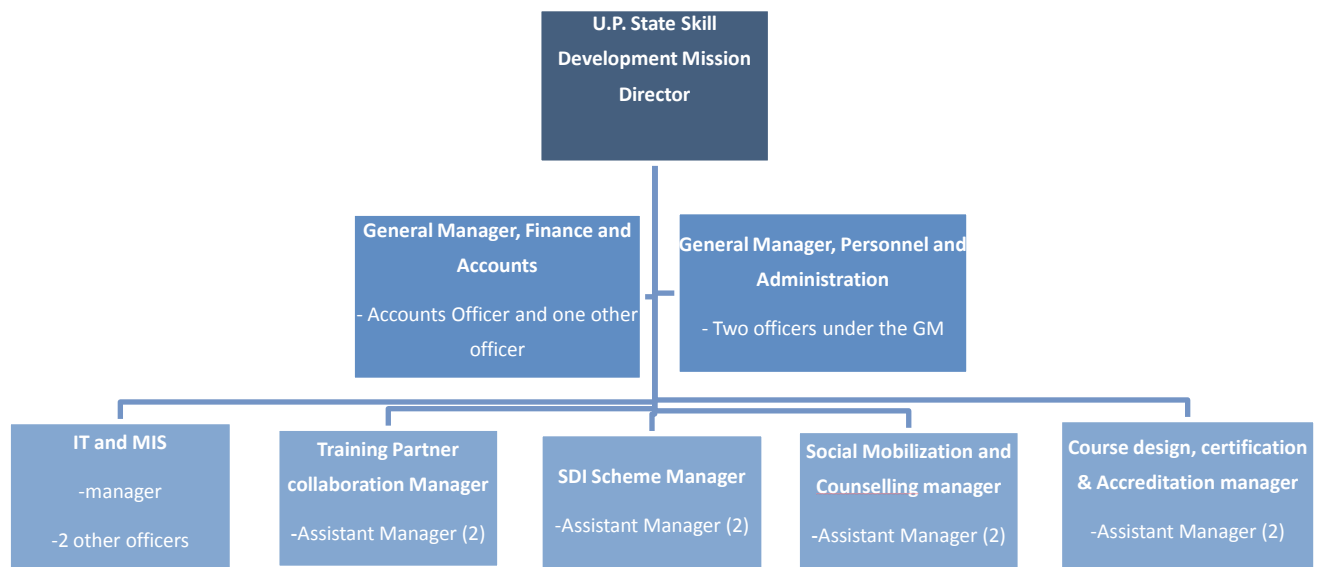
Key features of the UP Skill Development Policy include:

- Creation of a comprehensive and integrated mission (UPSSDM) to implement all skill development initiatives
- The mission will be a registered society with a governing council, state steering committee, state executive committee, district executive committee
- There will be professionally managed functional units SPMU and DPMU at state and district level to implement the programs
- 7 different government schemes will be implemented by UPSSDM-
 - Multi Sectoral Development Programme (MSDP),
 - National Rural Livelihoods Mission (NRLM),
 - Building and Other Construction Workers' (BOCW) welfare cess,
 - Special Central Assistance (SCA) to Scheduled Castes Sub Plan (SCSP) ,
 - Skill Development Initiative (SDI),
 - Swarna Jayanti Shahri Rozgar Yojana (SJSRY) and
 - Border Area Development Programme (BADP)
- There will be State Skill Development fund to fill the gap
- Standardization of all courses and training fees
- UPSSDM will organize short duration trainings (minimum 2months or 240 hours)
- Target group for training will be youths between the age group of 14-35 years preferably 8th pass

- No fees from trainees will be charged by UPSSDM except in SDI and SSDF which will be refundable
- Trainings will be linked to wage employment to the extent possible
- Trainings will be provided by the training providers (TPs) both government and private
- Private Training Providers (PTPS) will be engaged through a transparent bidding process
- Database will be created of all candidates through a social mobilization campaign.
- The criteria for batch formation would be
 - Candidate's choice
 - training needs
 - local industries needs
 - TPs consultations
- Payments will be in instalment and linked to performance , employment and retention
- Web based real time on line monitoring system for transparency
- Bio metric devices will be used for attendance

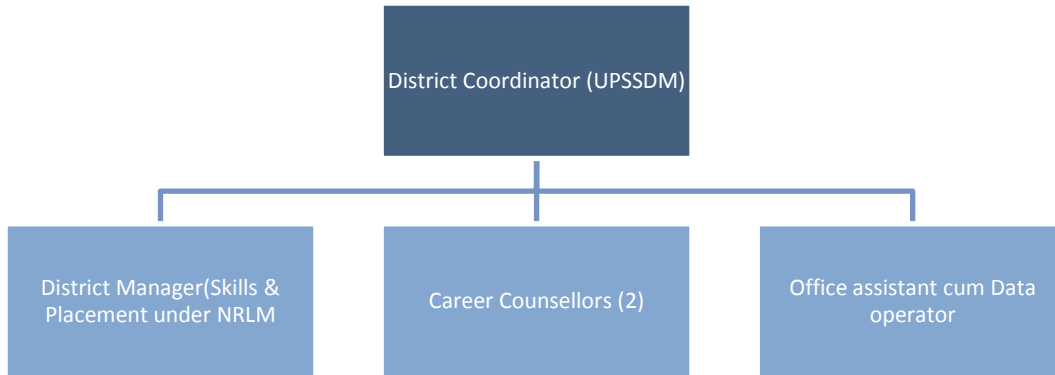
UPSSDM-State Program Management Unit

There shall be a state program management unit. The mission director shall be an IAS officer on deputation to the mission. He shall be responsible for proper administration of the affairs and funds of the Mission, and implementation of its' various activities and programs in a Mission Mode under the control, directions and guidance of the Chairman of the State Executive Committee. The SPMU shall be managed by professionals and shall have following organizational structure



UPSSDM- District Program Management Unit

Each district shall have a district level program management unit. This unit will be responsible for mobilization, registration, implementation, data collection, MIS, supervision, inspection and monitoring of the programs.



1.5. Mapping of high growth sectors

Based on the entire diagnostic analysis above and our discussions with the key stakeholders in the district, we have identified sectors which will be the development and employment growth engines in the State in the next ten years and will have skill training requirements. The training requirements could be for the new manpower entering these sectors or up-skilling of the existing manpower in the sectors.

The sectors which have been identified for the districts are presented in the table below, while the detailed description of the district wise opportunities is given in the respective district profiles only. In the following section, we have given brief overview of the some of the key high growth sectors of Uttar Pradesh.

District	Agriculture and allied	Auto and Auto component	BF SI	Building , Construction industry and Real Estate	Chemicals & Pharmaceuticals	Education and Skill Development	Electronics and IT hardware	Food Processing	Health care Services	IT & IT ES	Organised Retail	Textile and Clothing	Transportation, Logistics, Warehousing and Packaging	Tourism, Travel, Hospitality & Trade	Unorganised	Other manufacturing
Agra	Orange	Red	Light Green	Green	Red	Light Green	Red	Orange	Yellow	Red	Red	Red	Light Green	Light Green	Green	Yellow
Aligarh	Orange	Red	Light Green	Green	Red	Light Green	Red	Yellow	Yellow	Red	Red	Light Green	Light Green	Red	Green	Orange
Allahabad	Orange	Red	Light Green	Green	Red	Yellow	Red	Red	Yellow	Red	Light Green	Red	Light Green	Green	Light Green	Orange
Ambedkarnagar	Yellow	Orange	Light Green	Green	Red	Green	Red	Red	Light Green	Red	Red	Yellow	Light Green	Red	Light Green	Orange
Auraiya	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Azamgarh	Yellow	Yellow	Light Green	Green	Red	Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Baghpat	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Green	Yellow
Bahraich	Yellow	Yellow	Light Green	Green	Red	Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Ballia	Yellow	Yellow	Light Green	Green	Red	Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Balrampur	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Banda	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Bara Banki	Yellow	Red	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Orange	Light Green	Orange	Green	Red
Bareilly	Orange	Red	Light Green	Light Green	Orange	Light Green	Red	Yellow	Light Green	Red	Red	Red	Green	Red	Green	Yellow

District	Agriculture and allied	Auto and Auto component	BF SI	Building , Construction industry and Real Estate	Chemicals & Pharmaceuticals	Education and Skill Development	Electronics and IT hardware	Food Processing	Health care Services	IT & ITES	Organised Retail	Textile and Clothing	Transportation, Logistics, Warehousing and Packaging	Tourism, Travel, Hospitality & Trade	Unorganised	Other manufacturing
Basti	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Bijnor	Orange	Orange	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Red	Light Green	Red	Green	Yellow
Budaun	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Green	Light Green	Red	Red	Red	Yellow	Red	Light Green	Orange
Bulandshahr	Orange	Red	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Orange	Light Green	Red	Green	Yellow
Chandauli	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Yellow	Green	Red	Light Green	Orange
Chitrakoot	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Yellow	Green	Light Green	Orange
Deoria	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Etah	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Yellow
Etawah	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Yellow	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Faizabad	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Red	Yellow	Green	Light Green	Orange
Farrukhabad	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Yellow
Fatehpur	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Green	Light Green	Red	Light Green	Orange
Firozabad	Orange	Orange	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Red	Light Green	Red	Green	Yellow
Gautam Buddha Nagar	Red	Yellow	Light Green	Green	Red	Yellow	Yellow	Orange	Orange	Green	Light Green	Light Green	Yellow	Red	Green	Yellow
Ghaziabad	Red	Red	Light Green	Green	Red	Yellow	Yellow	Orange	Orange	Red	Green	Light Green	Light Green	Red	Light Green	Orange
Ghazipur	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Gonda	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Orange	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Gorakhpur	Orange	Red	Light Green	Green	Red	Light Green	Red	Orange	Yellow	Red	Red	Yellow	Green	Light Green	Light Green	Red
Hamirpur	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Hardoi	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Orange	Light Green	Red	Red	Red	Light Green	Red	Light Green	Yellow
Jalaun	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Jaunpur	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Orange	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange

District	Agriculture and allied	Auto and Auto component	BF SI	Building , Construction industry and Real Estate	Chemicals & Pharmaceuticals	Education and Skill Development	Electronics and IT hardware	Food Processing	Health care Services	IT & IT ES	Organised Retail	Textile and Clothing	Transportation, Logistics, Warehousing and Packaging	Tourism, Travel, Hospitality & Trade	Unorganised	Other manufacturing
Jhansi	Yellow	Orange	Yellow	Green	Red	Yellow	Red	Red	Yellow	Red	Red	Red	Green	Green	Green	Orange
Jyotiba Phule Nagar	Yellow	Red	Yellow	Green	Orange	Green	Red	Orange	Green	Red	Red	Red	Yellow	Red	Green	Yellow
Kannauj	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Green	Yellow
Kanpur Dehat	Orange	Red	Yellow	Green	Red	Green	Red	Yellow	Green	Red	Red	Yellow	Yellow	Red	Yellow	Orange
Kanpur Nagar	Red	Red	Yellow	Yellow	Orange	Yellow	Red	Red	Yellow	Red	Green	Yellow	Green	Red	Green	Orange
Kanshiram Nagar	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Green	Yellow
Kaushambi	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Green	Yellow	Yellow	Orange
Kheri	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Yellow	Red	Red	Red	Yellow	Orange	Green	Yellow
Kushinagar	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Yellow	Yellow	Orange
Lalitpur	Yellow	Yellow	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Orange
Lucknow	Red	Orange	Yellow	Orange	Red	Yellow	Red	Red	Yellow	Green	Green	Red	Green	Yellow	Yellow	Red
Mahamaya Nagar	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Yellow	Red	Red	Red	Green	Red	Green	Yellow
Mahoba	Yellow	Yellow	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Green	Orange
Mahrajganj	Yellow	Yellow	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Yellow	Orange
Mainpuri	Yellow	Yellow	Yellow	Green	Red	Green	Red	Orange	Green	Red	Red	Red	Yellow	Red	Yellow	Orange
Mathura	Orange	Red	Yellow	Green	Red	Yellow	Red	Yellow	Yellow	Red	Red	Red	Green	Green	Green	Orange
Mau	Yellow	Orange	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Green	Yellow
Meerut	Red	Orange	Yellow	Green	Red	Yellow	Red	Yellow	Yellow	Red	Red	Green	Green	Red	Green	Orange
Mirzapur	Yellow	Yellow	Yellow	Green	Red	Green	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Orange
Moradabad	Orange	Red	Yellow	Green	Red	Green	Red	Orange	Yellow	Red	Red	Yellow	Green	Red	Green	Yellow
Muzaffarnagar	Orange	Yellow	Yellow	Green	Red	Yellow	Red	Orange	Yellow	Red	Red	Red	Green	Red	Green	Yellow

District	Agriculture and allied	Auto and Auto component	BF SI	Building , Construction industry and Real Estate	Chemicals & Pharmaceuticals	Education and Skill Development	Electronics and IT hardware	Food Processing	Health care Services	IT & IT ES	Organised Retail	Textile and Clothing	Transportation, Logistics, Warehousing and Packaging	Tourism, Travel, Hospitality & Trade	Unorganised	Other manufacturing
Pilibhit	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Yellow	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Pratapgarh	Yellow	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Rae Bareli	Yellow	Orange	Light Green	Light Green	Orange	Green	Red	Red	Light Green	Red	Red	Red	Green	Red	Light Green	Yellow
Rampur	Orange	Red	Light Green	Green	Red	Yellow	Red	Yellow	Light Green	Red	Red	Green	Light Green	Red	Light Green	Orange
Saharanpur	Orange	Orange	Light Green	Green	Red	Yellow	Red	Light Green	Light Green	Red	Red	Red	Light Green	Red	Green	Yellow
Sant Kabir Nagar	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Light Green	Yellow	Light Green	Orange
Sant Ravidas Nagar	Yellow	Orange	Yellow	Green	Red	Light Green	Red	Red	Light Green	Red	Red	Light Green	Green	Red	Light Green	Orange
Shahjahanpur	Yellow	Orange	Light Green	Green	Red	Light Green	Red	Green	Yellow	Red	Red	Red	Light Green	Red	Light Green	Orange
Shrawasti	Light Green	Orange	Light Green	Light Green	Red	Green	Red	Red	Green	Red	Red	Red	Light Green	Yellow	Yellow	Orange
Siddharthnagar	Light Green	Yellow	Light Green	Green	Red	Light Green	Red	Red	Green	Red	Red	Red	Yellow	Red	Light Green	Orange
Sitapur	Orange	Red	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Yellow	Light Green	Red	Green	Orange
Sonbhadra	Yellow	Orange	Light Green	Green	Orange	Light Green	Red	Red	Light Green	Red	Red	Red	Light Green	Red	Green	Yellow
Sultanpur	Yellow	Orange	Light Green	Green	Red	Green	Yellow	Red	Light Green	Red	Red	Red	Light Green	Red	Light Green	Orange
Unnao	Orange	Red	Light Green	Green	Red	Light Green	Red	Yellow	Light Green	Red	Red	Yellow	Light Green	Red	Green	Orange
Varanasi	Orange	Red	Light Green	Green	Red	Yellow	Red	Orange	Yellow	Red	Light Green	Red	Light Green	Green	Light Green	Red

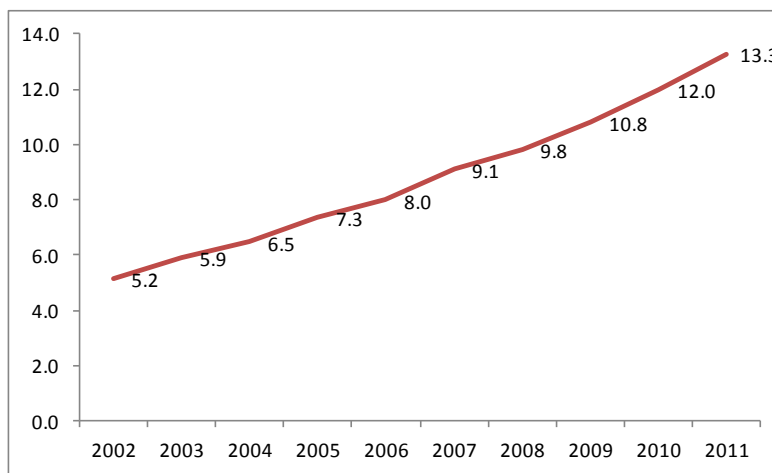
Source: IMaCS Analysis; Note: Shades from red to green indicate low growth to high growth (red = lowest growth; green = highest growth, colours in between = medium growth). Note: We have mapped only those sectors for each of the districts where new skills or skill up-gradation is required. Over and above these, there may be other sectors which will lead high employment but might not require skill interventions.

1.5.1. Auto and auto components

Noida and Lucknow have emerged as two key hubs for automobile and auto component sectors. India Yamaha Motors was one of the first entrants in Uttar Pradesh who set up their plant in Greater Noida in 1984. Tata Motors soon followed suit in 1992 and Honda Cars India set up their facility in 1997. Due to presence of big MNC as well as Indian OEMs we have seen a lot of auto component companies which have set up their bases in greater Noida and Lucknow belt to cater to the automobile companies.

Also, with respect to auto sales and service, the state has seen a huge rise in number of registered motor vehicles on road leading huge potential for employment generation across the sales, spares and services sub sectors

Total Registered Motor Vehicles in Uttar Pradesh (mn units)

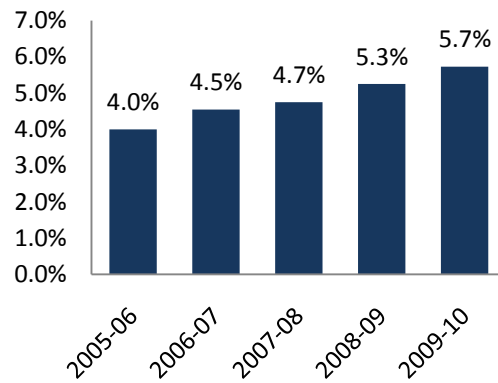


The total number of registered vehicles in Uttar Pradesh has increased from 5.2 million units in 2002 to 13.3 million units in 2011. As of today about 1200 auto dealers exist in the state across all categories – 2-wheelers, 4-wheelers and commercial vehicles. To service the large population of automotive vehicles, the major OEMs – TATA Motors, Honda, Ford Motors, General Motors, Hyundai, Hero Motors, Mahindra & Mahindra (including for tractors), Eicher Motors, Ashok Leyland etc. have established large network of dealership, authorised service station and mobile service station creating significant employment opportunities. Even premium car manufacturers like BMW, Audi, Mercedes, Skoda etc have setup their sales and service stations, though it is currently restricted only to districts such as Gautam Buddh Nagar, Lucknow etc.

1.5.2. Banking, financial services and insurance (BFSI)

The contribution of Banking, Financial Services and Insurance (BFSI) in Gross State Domestic Product (GSDP) has increased from 4.0 per cent to 5.7 per cent between 2005-06 and 2009-10. The Compounded Annual Growth Rate (CAGR) of its contribution is 9.4 per cent which is second highest compared to the CAGR of other components of GSDP.

As of March-2012, the state ranks first in terms of number of offices of commercial banks. It had 12,121 offices of commercial banks and has grown at a CAGR of 4.5 percent between 2010 and 2012. The average population per bank office in 2012 was 17,658.



The state has seven per cent share in total deposits and four per cent share in total credits of India. But as of 2012, the credit to deposit ratio of UP was 44.04 per cent which is much lower than the credit to deposit ratio of Tamil Nadu which has the highest credit to deposit ratio at 116.16 per cent. The sector employs 42,077 offices, 39,700 clerks and 19,710 sub ordinates⁵.

With the rising awareness in the public with the various schemes, the BFSI sector is poised for growth in the state. However, some of the challenges the state faces are, specific to the BFSI sector are:

1.5.3. Building, construction and real estate

Building, construction and real estate is one of the major support activities in Uttar Pradesh, contributing around six per cent to the state's GSDP. The sectors growth in the region is also supported by increasing urbanization in some of the regions. The growth can be equally attributed to the mushrooming of commercial as well as residential constructions in the state.

The major residential markets in the state include Kanpur Nagar, Lucknow, Noida- Agra belt, and Gorakhpur. In the residential space of tier II towns, the growth will be driven by demand for affordable housing. The entry of new players into the state and capacity expansion of the existing industrial units will drive the commercial construction sector. The real estate growth of Noida, however, will additionally be driven by shifting of commercial and residential establishments from Delhi.

The growth in infrastructure will be driven by its presence in the Mumbai Delhi Kolkata Industrial corridor. Some of the infrastructure projects in the region are Northern Peripheral Expressway project, Housing projects under Madhuban-Bapudham residential scheme, Ganga expressway, Upper Ganga canal, International airport at Kushinagar, 3x660 MW Dopaha Thermal Power Project, Metro rail in Lucknow etc.

Out of the total plan outlay of around Rs 69,200 crore for 2013-14, the Government is aiming at utilizing 20 per cent of infrastructure towards economic infrastructure and 12 per cent towards housing and urban development. Some of the measures taken by the Government to thrust the sector further include:

⁵ Source: Reserve Bank of India

- The Government also provides 100 percent stamp duty concessions given to private sector infrastructure development projects excluding PPP projects
- 75 per cent concession on stamp duty to new units on purchase of land from government agencies and 50 per cent in case of private sources
- Reimbursement of Interest on loan taken by industrial units for developing infrastructure facilities for self-use, such as road, sewer, water drainage at the rate of 5 percentage points with a ceiling of Rs. 100 lakh per annum for a maximum period of 5 years

The major drivers for growth of the segment include:

- Second highest urban population in the country
- High levels of migration towards the select regions
- High disposable income and buying power
- Greater institutional support towards real estate financing
- Presence in the Industrial corridor connecting the major markets

1.5.4. Food processing

Uttar Pradesh's excellence in the food processing segment is driven by a strong raw material base. It has the largest cropped area in the country at around 25 million hectares. It is also the largest player in potato, livestock, and milk and one of the top 10 players in other fruits and vegetables. The food processing units in the district include fruits processing (mango, guava, aonla), vegetable processing (Tomato, potato, peas, okhra), dairy processing (Buffalo milk), grain processing (Rice, Dal, Wheat), meat, poultry and fisheries sectors.

A majority of the units in the state are small and medium scale enterprises. The processing units will be in the vicinity of the place of production (For eg: the rice mill clusters in Muzzafarnagar, Kanpur dehat, and Saharanpur, Tomato processing in Sonebhadra, Sugarcane mills in Eastern Uttar Pradesh) or located at places with superior infrastructure and greater connectivity to the target markets (For eg: Masala products, dairy and vegetable oil in Kanpur region). The dairy processing units are spread across the state and are majorly for buffalo milk processing.

Government provides infrastructure support as well as policy support for the growth of the food processing segment in the state. Towards improving the competitiveness of the food processing products, the government has setup an Integrated dairy park in Lucknow and Agro parks in Barabanki, Gorakhpur, Saharanpur, and Varanasi. The policy support includes

- Stamp duty exemption on land for setting up food processing units
- Mandi fee exemption for export oriented units
- One time grant towards quality certification for units
- Capital investment subsidy under National food processing mission
 - 25% for upgradation/ modernization
 - 50% for cold chain infrastructure

The major factors driving the growth of the sector include

- Availability of raw material – One of the largest producers in most of the product segment
- Closeness to the major consumption markets of NCR and Kolkata
- Historical presence in the region
- Availability of cheap labour
- Untapped potential for food processing (less than 2 per cent of F&V is commercially processed)

1.5.5. Handloom and Handicraft

The state offers a wide range of handloom products, viz. home furnishings, heavy dress materials, chenille cotton carpets, bedspreads, terry towels, linen, Chikan work, etc. ‘Banaras Brocades and Sarees’ have earned the right of Geographical Indication (GI). As per the GI rights, only six districts of U.P., viz. Varanasi, Mirzapur, Chandauli, Bhadohi, Jaunpur and Azamgarh can only use the brand name of ‘Banaras Brocades and Sarees’. As per the handloom census of 2009-10, the state has 1.1 lakh handloom units which is 4 per cent of total number of handloom units, 2.57 lakh handloom weavers and allied workers which is 6 per cent of total number of handloom weavers and allied workers and 0.8 lakh handlooms which is 3.4 per cent of total number of handlooms⁶. Major handloom production centres in Uttar Pradesh is shown below.

Table 12 : Major handloom production centres in Uttar Pradesh

Centres	Products
Amroha	Picnic durries
Azamgarh	Kharri printing
Agra	Durries, bed sheets, furnishings, heavy dress materials, chenille cotton carpets
Etawah	Bedspreads, sheetings, dress materials, mixed fabrics
Farrukhabad	Cotton prints, bed sheets, dress materials, durries, cotton carpets, mixed fabrics
Fatehpur Sikri	Heavy cotton fabrics, dress materials, durries, chenille cotton carpets, mixed fabrics
Ghaziabad	Jacquard furnishings, bedspreads, terry towels, linen and home furnishings
Gorakhpur	Terry towels, towelling, furnishings, dress materials
Hathras	Chenille rugs, cotton carpets and fabrics
Lucknow	Chikan work
Maunath Bhanjan	Cotton bed spreads, sarees, dress materials, mixed fabrics
Tanda	Figured muslin fabrics, jamdanis, cotton dress materials, mixed fabrics
Varanasi	Saris, mixed fabrics, cut-work items, dress materials, furnishings, stoles, scarves, gauze and leno fabrics, brocades

Source: Development report of Uttar Pradesh by Planning Commission

The factors which will continue to drive the growth of the segment in Uttar Pradesh are:

- Presence of traditional skill
- Demand of the goods in the market

⁶ Source: Planning commission of India

- Strong tourist inflow, which can be used to project the goods
- Available labour pool
- Historical presence in the region

1.5.6. Leather Goods

The state account for bulk of the output of leather and leather goods produced in India. The major production centres are Kanpur, Agra, Unnao and Noida. The city of Kanpur is also known as leather city. Major Leather products manufactured in the state include footwear, garments, belts, bags and saddler products. Majority of these products in the state are manufactured from buffalo leather. Uttar Pradesh is the second largest producer of footwear in the country after Tamil Nadu. Although all types of leather products are manufactured across these regions, Agra is a prominent player in the footwear segment; Kanpur in saddler products; while Noida is emerging as a major player in leather garments and footwear. Prominent leather shoe brands of the region include are Red Tape, Red Chief, Allen Cooper, Mardigrass, Zara, Topshop, Metro, and Kickers

Uttar Pradesh comprises of almost 28 per cent⁷ of the national exports of leather and leather products with an estimated export of Rs 5300 crore. Footwear covers the majority of the exports (~45 percent) followed by leather goods (20-25 percent), finished leather (15-20 percent), leather garments (15- 20 percent) and saddler & harness (<5 percent).

A leather technology park had been developed over an area of 233 acre at Banthar in Unnao to establish tanneries and leather goods units. As per the Assistance to States for Developing Export Infrastructure (ASIDE) Scheme of the Government of India, following initiatives are being taken to develop the industry:

- **Testing laboratory at Kanpur Unnao Leather cluster**- Project Cost Rs.1111.91 Lakh
- **Multi Skill Development Centre at Kanpur Unnao Leather Cluster** - Project Cost Rs.1062.09 Lakh

The factors which will continue to drive the growth of the segment in Uttar Pradesh are:

- Large raw material base (livestocks)
- Historical presence in the region
- Strong availability of labour
- Presence of modernized tanning and manufacturing units especially in medium and large scale units
- Presence of support industries like leather chemicals
- Educational infrastructure like Footwear Design & Development Institute, Noida

⁷ Source: CII-KPMG Study : Invest North 2013 – Uttar Pradesh State Profile

1.5.7. Textile and clothing

Uttar Pradesh is a major player in the textile segment with strong presence in both knitting and weaving product segments. The major textile centres are Varanasi (Silk), Kanpur (Hosiery) and Noida (Woven garments).

Additionally, Meerut, Farrukhabad, Mau, Bahraich and Azamgarh are also major production centres. Mirzapur and Sant Ravi das nagar (Bhadohi) districts are the major segments in the country for hand knotted carpets.

The hand knotted carpets segment in the Mirzapur and Bhadohi regions has a combined annual turnover of more than Rs 2000 crore. The annual turnover of the Noida Garments industry is estimated to be around Rs 3500 crore with majority contribution from the Ladies' and Kids' wear segments.

UP is also the third largest player in the Hosiery segment (with a market share of 20 percent) after Tamil Nadu (Tiruppur) and West Bengal (Kolkata). UP continues to have a strong presence in the traditional handloom sector. The state accounts for around 5.6 per cent of the total handloom weaving units in the country. According to estimates, the annual textile export from the state is estimated to be around Rs 4,000 crore.

The Government has initiated many steps towards improving the infrastructure support to the apparel segments which include UPSIDC's Apparel Parks at Ghaziabad and Hosiery Park at Kanpur. These centres have textile training centres, fashion designing centres, Quality control laboratories and workshop cum tool room (at ALT training college and Apparel Training and Design centres) facilities. The sector is also supported by the presence of domain specific training institutions/ courses which includes UP textile technology institute (Kanpur), Blitz Institute of Creative Arts (Varanasi) etc. The institutions in the state provide wide variety of training ranging from designing to manufacturing.

The major factors driving the growth of the sector include:

- Strong connectivity to the domestic consumption and national sourcing/ procurement hub of Delhi NCR region
- Availability of raw material
- Historical presence in the region
- Availability of labour

1.5.8. Organized retail

In terms of absolute numbers, Uttar Pradesh has the second largest urban population at 35 million after Maharashtra (41 million). The high number of urban population led to the growth of organized retail in the state. Organized retail's presence has been in the following regions: Noida, Ghaziabad, Kanpur, Lucknow, Allahabad and Varanasi. The state has the presence of almost all the major retailers in the country including Big Bazaar, Shopper's stop, Lifestyle and Pantaloon retail. The current estimated mall

space across the 6 mentioned districts is about 15 million square feet. This is expected to grow to about 121 million square feet by 2022.

Noida has traditionally been a hub for organized retail in the country with the presence of all the major players across product segments. However, the rest of the aforementioned cities have seen a surge in the organized retail players in the last decade. The product segments include food retail, Entertainment, Textile and consumer durables.

The attrition rates have been high in Noida due to high competition while it's lower in the tier II cities. The major drivers for growth of the segment include:

- High urban population especially the youth population
- High disposable income
- Changing consumer preference (with respect to products, shopping, quality perception etc)
- The increased focus of retailers on tier II towns
- High preference for jobs

1.5.9. Tourism, travel and hospitality

Uttar Pradesh has numerous tourist attractions ranging from ancient temples, ancient forts and monuments, forests and wildlife, pilgrimage centres, and a rich tradition of festivals, art and culture. The state ranks first in terms of the number of domestic tourists and has a share of 18.3 per cent (15.54 crore) of the total number of domestic tourists in 2011.

In terms of the number of foreign tourist visits the state ranks fourth and has a share of 9.7 per cent (18.87 lakh) of the total number of foreign tourists in 2011⁸.

Some of the prominent tourist destinations in the state are Agra, Allahabad, Ayodhya, Ahicchatra, Bithoor, Chitrakoot, Deogarh, Dudhwa National Park, Fatehpur Sikri, Gorakhpur, Jhansi, Kalinjar, Kanpur, Kapilvastu, Kushinagar, Lucknow, Mahoba, Meerut, Sarnath, Sravasti, Varanasi and Vrindavan.

As per Ministry of Tourism, in 2010 the state had 240 classified hotels and 5,924 rooms. In addition, the state has 14 recognised inbound tour operators, 15 travel agents, four tourist transport operators and one domestic tour operator⁹.

The major drivers for growth of the segment include:

- Important pilgrimage sites for different faiths
- Presence of one of the seven wonders of the world – Taj Mahal
- Increasing domestic tourism industry driven by higher disposable income, better connectivity and evolving lifestyle
- Continued demand for international tourism especially to Agra and Varanasi (Kumbh Mela in particular)

⁸ Source: Ministry of tourism

⁹ Source: Ministry of tourism

1.5.10. IT/ITeS

The IT and ITeS sector has gained considerable fillip in the state due to its large population base of youth who want to be a part of the sector.

The state government of Uttar Pradesh has been taking various initiatives in order to use Information Technology as a vehicle of growth. The role of IT in economic development and inclusive growth is being recognised as a key to improving the quality of life for the people of UP.

The development of roadway connectivity between the states of Haryana and Uttar Pradesh has aided in making the northern region of the country into a major IT hub. Around 30 IT/ITeS SEZs have been approved by the government in the Delhi-NCR region.

Major trends impacting the human resource requirement in the industry include:

- Transformation from IT Services to include IT Consulting
- Expected increase in share of projects involving migration
- Continuous demand for skilled workforce
- Increasing demand for infrastructure management Services

The government is in the process of establishing skill development centres on a Public Private Partnership model in and around Lucknow and Agra. These centres are being established in collaboration with the industry as well as educational institutions and Industry associations. Initiatives are also being taken in order to establish a Knowledge Centre Program and to promote tie ups between institutes and the industry.

The demand drivers of the sector include the following:

- Continuous growth in global spending in the IT services sector
- High expected growth in markets beyond the United States and Europe
- High rates of domestic GDP growth and increased spending into the sector locally
- Cost competitiveness of the nation

1.6. Clusters in Uttar Pradesh

As a key strategy for enhancing the productivity and competitiveness of MSMEs, GoI has announced scheme for development of potential clusters in March, 2006. As a part of this initiative, it has promoted many clusters in Uttar Pradesh. District wise list of clusters is given in the table below.

Clusters can greatly assist in the success and development of individual MSME units by providing economies of scale, reduced transaction costs, information spill over, development of market place, adequate supply of raw materials at stable prices, skill development, technical know-how and access to latest technologies, thereby improving the competitiveness of these units. The new Industrial Policy 2013 of Uttar Pradesh has special incentive packages for the development of clusters.

Table 13: Industrial cluster distribution in Uttar Pradesh

District	Location	Product
Agra	Agra	Foundry
Agra	Agra	Leather footwear
Agra	Agra	Mechanical Engineering Equipment
Aligarh	Aligarh	Brass and Gunmetal statues
Aligarh	Aligarh	Locks
Aligarh	Aligarh	Building hardware
Allahabad	Mau	Power loom
Allahabad	Mau Aima	Leather products
Banda	Banda	Power loom
Bulandshahr	Khurja	Ceramics
Firozabad	Firozabad	Glass Products
GB Nagar	Noida	Electronic goods
GB Nagar	Noida	Toys
GB Nagar	Noida	Chemicals
GB Nagar	Noida	Electrical engineering equipment
GB Nagar	Noida	Garments
GB Nagar	Noida	Mechanical Engineering Equipment
GB Nagar	Noida	Plastic products
Ghaziabad	Ghaziabad	Chemicals
Ghaziabad	Ghaziabad	Mechanical Engineering Equipment
Ghaziabad	Ghaziabad	Packaging material
Gorakhpur	Gorakhpur	Power loom
Hathras	Hathras	Sheet work
Jhansi	Jhansi	Power loom
Kannauj	Kannauj	Perfumery and essential oils
Kanpur	Kanpur	Saddler
Kanpur	Kanpur	Cotton hosiery
Kanpur	Kanpur	Leather products

District	Location	Product
Meerut	Meerut	Sports goods
Meerut	Meerut	Scissors
Moradabad	Moradabad	Brassware
Muzaffarnagar	Muzaffarnagar	Rice mills
Saharanpur	Saharanpur	Rice mills
Saharanpur	Saharanpur	Woodwork
Varanasi	Varanasi	Sheet work
Varanasi	Varanasi	Power loom
Varanasi	Varanasi	Agricultural implements
Varanasi	Varanasi	Electric fan

Source: UNIDO

This apart, there are more than 400 artisan clusters in Uttar Pradesh. The development of such clusters in the form of offering market linkages and training in marketing, production management and designing will be key to the existence and livelihood of the artisan clusters. Some of the key clusters in the State are:-

1. Zari Zardori
2. Carpets and Durries
3. Textiles (Handloom)
4. Woodwork
5. Lac ware
6. Ceramics and Pottery
7. Wood work
8. Brass work
9. Hand Embroidery
10. Cane ware

(Details of artisan clusters to follow in annexures)

1.7. Skill gaps

Based on our discussions with key stakeholders in all districts, we have identified skill gaps across all high growth sectors. The district specific skill gaps are mentioned in the respective district profiles. In this section, we are presenting a broad summary of skill gaps across sectors, which are faced more or less across all districts. This section focuses mainly on qualitative skill gaps. The quantitative skill gaps (demand – supply gap) are mentioned in the next section on ‘employment potential’.

Table 14: Key skill gaps – by sector

Sector	Key skill gaps in Uttar Pradesh
Auto and auto components	<p>Manufacturing roles: Shortage of skill is experienced in the operator and supervisor levels in the manufacturing units.</p> <ul style="list-style-type: none"> ▪ Inadequate availability of skilled technicians especially mechanics, electricians etc especially for tier II companies ▪ Inadequate technical knowledge about the equipments and processes ▪ Inadequate awareness of modern production techniques like lean production, Just In Time, etc. ▪ Inadequate awareness of safety and quality standards ▪ Lack of people skills at the supervisor levels ▪ Lack of discipline in work (not taking ownership) ▪ Casual in work, absenteeism, unwillingness to work, etc. are observed <p>Service roles: The majority of the skill gap is experienced in the sales/ customer support roles, and mechanics</p> <ul style="list-style-type: none"> ▪ Inadequate understanding of company’s products as well as the automotive industry. Hence not able to respond to customers queries ▪ Inadequate work ethics ▪ ▪ Limited ability to diagnose the actual problem Tendency to rely on judgements than on specific instruments / tools
Banking, financial services and insurance	<ul style="list-style-type: none"> ▪ Poor knowledge of banking operations and banking products ▪ Poor communication skills ▪ Inadequate knowledge on Banking law and practice ▪ Inadequate understanding of the insurance products ▪ Poor communication skills ▪ Inadequate work ethics
Building, construction and real estate	<ul style="list-style-type: none"> ▪ Key skill gaps and shortage of quality workers are observed at the minimally skilled and semi-skilled levels ▪ Inadequate skill sets available for bar bending, masonry, shuttering, façade building, carpentry etc. ▪ Inadequate project management skills and/or insufficient ability to manage multiple contractor ▪ Inadequate orientation to develop and adhere to safety norms at construction site.

Sector	Key skill gaps in Uttar Pradesh
	<ul style="list-style-type: none"> ▪ Lack of focus on quality coupled with low expertise leading to substandard constructions ▪ Inadequate work ethics ▪ Casual in work, absenteeism, unwillingness to work, etc. are observed ▪ Inadequate job expertise ▪ The project manager may not always know the local language creating barrier of communication. ▪ Lack of basic knowledge of handling machines (for example: crane operators) used in construction
Food processing	<ul style="list-style-type: none"> ▪ Inadequate understanding on quality and safety procedures to be followed ▪ Inadequate awareness of processing standards and quality control aspects leading to increased wastage ▪ Inadequate training in specific machinery or technology in the educational institutions ▪ Inability to follow supervisors' instruction consistently by workers ▪ Casual in work, absenteeism, unwillingness to work, etc. are observed ▪ Inadequate ability to work in multiple departments of the factory as required
Handloom & Handicrafts	<ul style="list-style-type: none"> ▪ Poor knowledge of repair and maintenance of the handlooms and power looms ▪ Inadequate understanding of the current design trends in the market. ▪ Lack of proper client management and marketing skills. ▪ Inadequate business handling skills including production management, inventory management etc.
IT / ITES	<ul style="list-style-type: none"> ▪ Low employability level observed in graduates / diploma holders hired from educational institutions. Thus, most of them have to be re-trained on the job ▪ Inadequate communication skills especially English speaking skills ▪ Lack of understanding of information security and privacy issues ▪ Inadequate knowledge of corporate practices and internal processes ▪ Inadequate domain knowledge – Technical as well as client business ▪ Lack of understanding for delivering complex situations ▪ Lack of client management skills
Leather Goods	<ul style="list-style-type: none"> ▪ Lack of exposure to new technology / advance fully automatic machines and processes due to the absence of adequate number of educational institutions (except FDDI) ▪ Lack of adequately skilled personnel for cutting and stitching,

Sector	Key skill gaps in Uttar Pradesh
	<p>which constitutes 70 per cent of the workforce</p> <ul style="list-style-type: none"> ▪ Lack of awareness of quality and health & safety standards ▪ Inadequate ability to multitask between different types of machines ▪ Inability to meet the operational standards due to lack of trained operators, leading to wastages
Organised retail	<ul style="list-style-type: none"> ▪ There is abundance of youth wanting to work in the sector. However, most of them are untrained and have to be trained on the job on all the skill sets required ▪ Inadequate knowledge of software related to transaction processing at the transaction/bill processor level ▪ Inadequate product specific knowledge. ▪ Inadequate awareness about customer preferences at the store manager level ▪ Inadequate communication skills and interpersonal skills especially while dealing with people of different linguistic ▪ Attrition rates and absenteeism is observed to be very high especially at the shop floor
Textiles and clothing	<ul style="list-style-type: none"> ▪ Inadequate understanding of the current fashion trends in the market especially at the designer levels ▪ Lack of people skills at the supervisor levels ▪ Lack of knowledge of the latest machineries ▪ Inadequate understanding of operations ▪ Lack of co-ordination with the buyer leading to wastages ▪ Inadequate understanding of safety and quality standards
Transport, Storage and Communication	<ul style="list-style-type: none"> ▪ Lack of knowledge of best warehousing practices ▪ Inadequate knowledge about material handling equipments such as stackers, hydraulic or hand pallet trucks, forklift trucks, jib cranes, etc. ▪ Inadequate adoption of IT enabled technology towards operations ▪ Inadequate communication skills ▪ Inadequate practical as well as theoretical knowledge of the major packaging processes ▪ Lack of awareness of health & safety standards especially in the packaging process ▪ Inadequate knowledge of hygiene, safety and first aid ▪ Lack of knowledge of tax regimes, permit rules etc. ▪ Inadequate exposure to handle increasing tonnage and higher capacity trucks
Tourism, travel and hospitality	<p>Travel and tourism</p> <ul style="list-style-type: none"> ▪ Inadequate knowledge of English speaking ▪ Inadequate soft skills and communication skills ▪ Shortage of good quality trained guides ▪ Inadequate knowledge of local attractions and tour planning <p>Hospitality</p>

Sector	Key skill gaps in Uttar Pradesh
	<ul style="list-style-type: none"> ▪ Shortage of managerial staff in most districts. ▪ Insufficient understanding of hotel offerings ▪ Insufficient knowledge on client etiquette except for in bigger cities ▪ Inadequate customer relationship management

Source: IMaCS Analysis

1.8. Employment potential

Based on the entire diagnostic analysis above and our discussions with the key stakeholders in the districts, we have identified sectors which will be the development and employment growth engines in the State in the next ten years and will have skill training requirements. We have forecasted both the incremental demand and supply side of human resources from 2012 to 2022. We have mainly forecasted the numbers for 19 high growth sectors identified by NSDC. In addition, we have identified 'other manufacturing', as a prominent sector for Uttar Pradesh which includes manufacturing of basic metals, fabricated metal products, and other transport equipment like ships, boats, railway locomotives etc.

1.8.1. Demand side numbers

Based on our forecasts, we estimate that between 2012 and 2022, an incremental demand (cumulative for 10 years) for 1.1 crore persons will be generated in the State of Uttar Pradesh. Maximum demand will be generated from sectors such as 'building, construction and real estate', 'organised retail', and 'banking, financial services and insurance'.

District wise demand numbers are available in the respective district profiles.

Table 15: Incremental demand in Uttar Pradesh, 2012 to 2022

Sectors	2012-17	2018-22	2012-22
Building, Construction industry and Real Estate	1,441,424	1,679,592	3,121,016
Unorganised @	547,697	782,084	1,329,781
Transportation, Logistics, Warehousing and Packaging	418,145	494,945	913,090
Education and Skill Development	360,553	522,156	882,709
Healthcare Services	361,561	467,073	828,634
BFSI	295,054	476,431	771,485
IT & ITES	257,448	490,498	747,946
Tourism, Travel, Hospitality & Trade	278,698	421,816	700,514
Organised Retail	104,904	334,451	439,355
Textile and Clothing	149,260	192,174	341,434
Food Processing	82,948	121,205	204,153

Sectors	2012-17	2018-22	2012-22
Agriculture and allied	93,388	93,625	187,013
Other manufacturing*	60,105	91,434	151,539
Media and Entertainment	65,792	82,574	148,366
Auto and Auto component	44,747	69,331	114,078
Other Sectors^	65,035	80,223	145,258
Total	4,626,761	6,399,610	11,026,371

Source: IMAcS Analysis; * Other manufacturing includes manufacturing of basic metals, fabricated metal products and other transport equipment (building of ships and boats, manufacture of railway locomotives and rolling stock, manufacture of air and spacecraft and related machinery, manufacture of military fighting vehicles etc.)

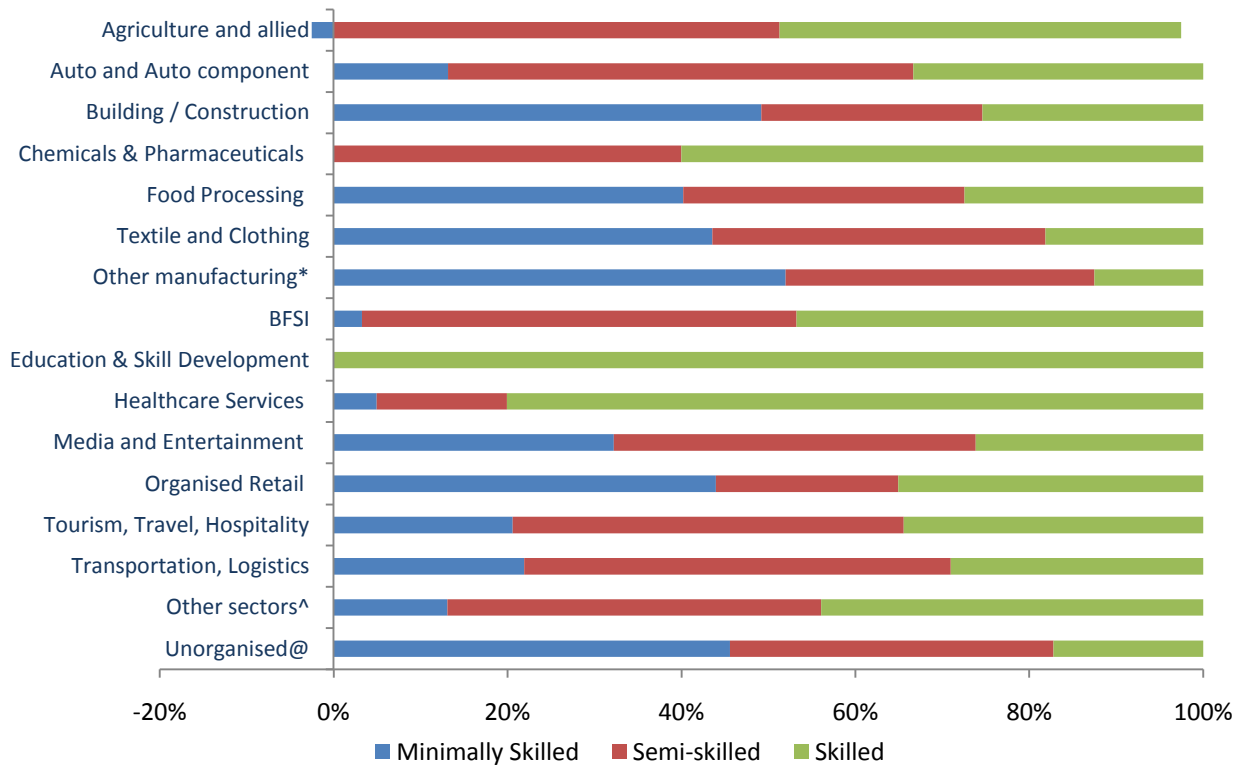
^ Other sectors include chemicals & pharmaceuticals, furniture and furnishings, electronics and IT hardware, legal services and leather and leather products'. These do not have significant employment generation, but have scope for up-skilling.

@ In unorganized sector, we have included domestic workers, handloom and handicrafts, facility management, security guards and beauticians.

Note: Current employment numbers for different sectors sourced from sources such as ASI, NSSO, CSO, Census 2001 and 2011, RBI, IRDA, MHRD, Department of Education, etc. Wherever numbers were not available from Government sources, we relied on industry interactions and our own analysis.

In the next ten years, maximum demand is expected to be for skilled workers at 37 per cent of the total incremental demand. This is expected to be followed by semi-skilled workers at 35 per cent, and minimally skilled workers at 28 per cent.

Figure 12: Skill wise incremental demand in Uttar Pradesh – 2012 to 2022



Source: IMAcS Analysis; * Other manufacturing includes manufacturing of basic metals, fabricated metal products and other transport equipment (building of ships and boats, manufacture of railway locomotives and rolling stock, manufacture of air and spacecraft and related machinery, manufacture of military fighting vehicles etc.)

^ Other sectors include furniture and furnishings, electronics and IT hardware, and leather and leather products'. These do not have significant employment generation, but have scope for up-skilling.

@ In unorganised sector, we have included domestic workers, handloom and handicrafts, facility management, security guards and beauticians.

The incremental demand for minimally skilled workers is concentrated in sectors such as building and construction, followed by the unorganised sector. Demand for semi-skilled workers is concentrated in sectors such as Transportation and Logistics, BFSI, building and construction and IT / ITES as well as in unorganised sector. Demand for skilled workers is expected to be driven by sectors such as healthcare, education and skill development, and BFSI.

Table 16: Skill wise incremental demand in Uttar Pradesh, 2012 to 2022

Incremental Demand	2012-17				2017-2022			
Sectors	Total	Skilled	Semi-Skilled	Minimally skilled	Total	Skilled	Semi-Skilled	Minimally skilled
Primary Sector								
Agriculture & allied activities	93,388	45,395	50,651	(2,658)	93,625	45,510	50,780	(2,665)
Total (I)	93,388	45,395	50,651	(2,658)	93,625	45,510	50,780	(2,665)
Secondary Sector								
Auto and Auto component	44,747	15,008	23,957	5,782	69,331	23,253	37,119	8,959
Building, Construction industry and Real Estate	1,441,424	366,111	366,111	709,202	1,679,592	426,604	426,604	826,384
Chemicals & Pharmaceuticals	7,255	4,363	2,912	(20)	8,311	4,998	3,336	(23)
Electronics and IT hardware	26,756	14,716	12,917	(877)	34,924	19,208	16,860	(1,144)
Food Processing	82,948	22,829	26,977	33,142	121,205	33,358	39,419	48,428
Furniture and Furnishings	1,622	375	602	645	2,310	534	857	919
Leather & leather products	18,242	5,279	6,738	6,225	22,842	6,610	8,438	7,794
Textile and Clothing	149,260	27,234	57,086	64,940	192,174	35,064	73,499	83,611
Other manufacturing	60,105	7,355	21,391	31,359	91,434	11,188	32,541	47,705
Total (II)	1,832,361	463,270	518,692	850,399	2,222,121	560,817	638,672	1,022,632
Tertiary Sector								
BFSI	295,054	138,146	147,527	9,381	476,431	223,068	238,215	15,148
Education and Skill Development	360,553	360,553	-	-	522,156	522,156	-	-
Healthcare Services	361,561	289,249	54,234	18,078	467,073	373,658	70,061	23,354
IT & ITES	257,448	128,724	115,852	12,872	490,498	245,249	220,724	24,525
Media and Entertainment	65,792	17,105	27,303	21,384	82,574	21,468	34,267	26,839
Organised Retail	104,904	36,716	21,991	46,197	334,451	117,058	70,111	147,282
Transportation, Logistics,	418,145	121,323	205,252	91,570	494,945	143,606	242,951	108,388

Warehousing and Packaging								
Tourism, Travel, Hospitality & Trade	278,698	96,049	125,414	57,235	421,816	145,372	189,817	86,627
Unorganised	547,697	94,361	203,900	249,436	782,084	134,742	291,159	356,183
Others	11,160	3,900	3,460	3,800	11,836	4,143	3,669	4,024
Total (III)	2,701,012	1,286,126	904,933	509,953	4,083,864	1,930,520	1,360,974	792,370
Grand Total (I+II+III)	4,626,761	1,794,791	1,474,276	1,357,694	6,399,610	2,536,847	2,050,426	1,812,337
Total Incremental Demand	11,026,371							

Source: IMaCS Analysis; * Other manufacturing includes manufacturing of basic metals, fabricated metal products and other transport equipment (building of ships and boats, manufacture of railway locomotives and rolling stock, manufacture of air and spacecraft and related machinery, manufacture of military fighting vehicles etc.)

^ Other sectors include furniture and furnishings, electronics and IT hardware, and leather and leather products'. These do not have significant employment generation, but have scope for up-skilling.

@ In unorganized sector, we have included domestic workers, handloom and handicrafts, facility management, security guards and beauticians.

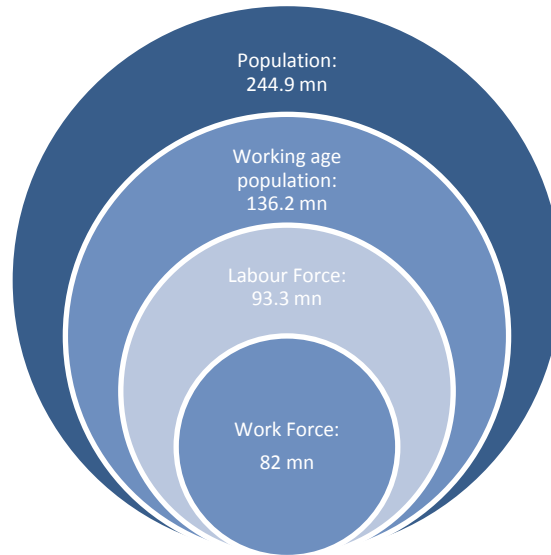
1.8.2. Supply side numbers

As of 2011, Uttar Pradesh has a total population of 199.8 million persons. Of this, labour force is estimated at 67.9 million persons. Each year, people from different educational institutions join the workforce at different skill levels. We have estimated that between 2012 and 2022 (cumulative / incremental), about 14.09 million persons will join labour force and will be available in the job markets looking for jobs. This has been estimated based on the labour force participation rate obtained from NSSO 55th, 61st and 66th rounds and based on the trend which arising out of the same.

Table 17: Incremental supply in Uttar Pradesh, 2012 to 2022

Year	2012	2017	2022
Population	203,526,356	223,231,544	244,983,277
Working Age Population	113,134,743	124,088,319	136,179,513
Projected Labour Force	69,177,579	75,875,273	83,268,577
Projected Work Force	68,151,988	74,750,384	82,034,079
Incremental Manpower Supply 2012-2022	14,090,998		

Figure 13: Projected workforce of Uttar Pradesh - 2022



Source: Census 2001, Census 2011, NSSO 66th Round

Availability of working age population (age group of 15-59) is estimated to grow from 113 million in 2012 to 136 million by 2022. In the period 2012-22, it estimated that incremental manpower supply will be about 14.09. Incremental manpower supply can be further classified into skilled, semiskilled and unskilled as per education qualifications and estimated output of educational and vocational training institutes in the district. Supply of local labour force is split across different skill levels as: 34.9 per cent at minimally skilled, 49.3 per cent at semi-skilled and 15.7 per cent at skilled.

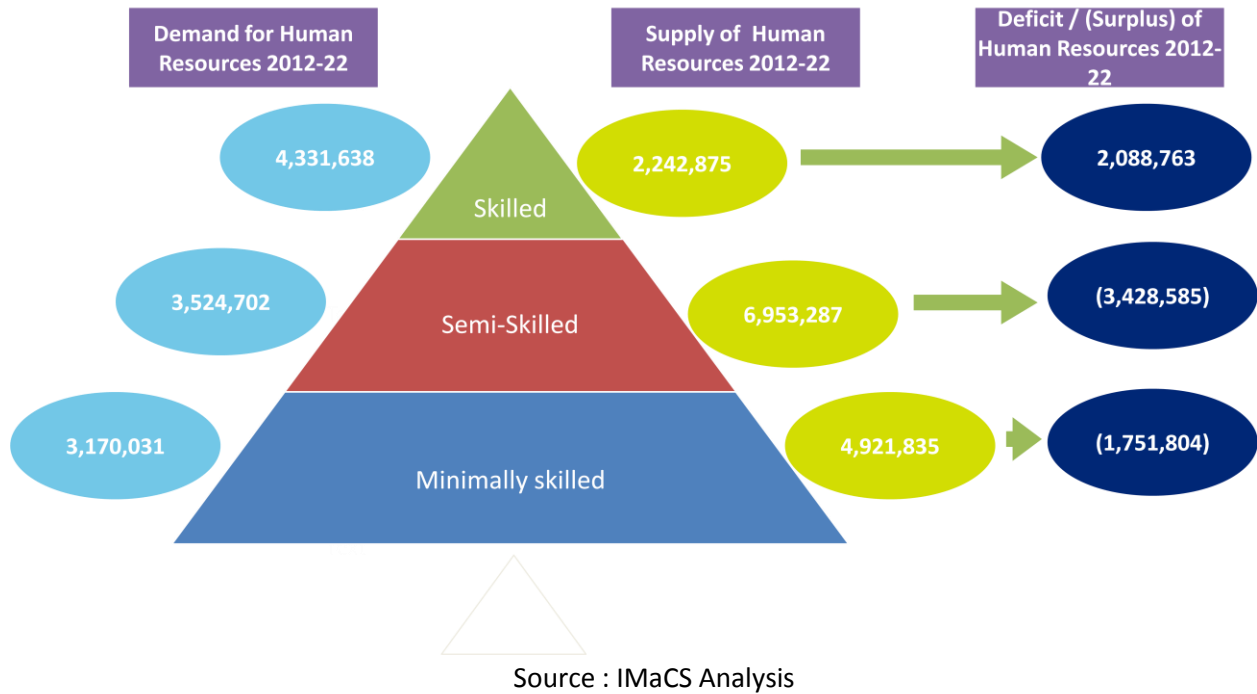
Table 18: Incremental supply by skill level in Uttar Pradesh, 2012 to 2022

Skill levels	Incremental supply, 2012-22
Minimally Skilled	4,921,835
Semi Skilled	6,953,287
Highly Skilled	2,215,875
Total	14,090,998

Source: IMAcS Analysis,

1.8.3. Demand-supply gap

Skill wise incremental demand and supply in Uttar Pradesh – 2012 to 2022



During the period 2012-22, we find that the excess supply of manpower in semi skilled and minimally skilled levels but there is a huge shortage of labour in skilled category. One key factor to note is that the deficit / surplus we see here are purely quantitative in nature. Qualitative skill gaps and the demand for labour actually highlight the need for up-skilling and re-skilling within these categories. Though there is excess supply at semi skilled and minimally skilled level it does not imply the skill requirements of the industry are getting met. It only implies that there is sufficient man power available but to match the skill requirement of the industry they will have to be re-skilled and up-skilled.

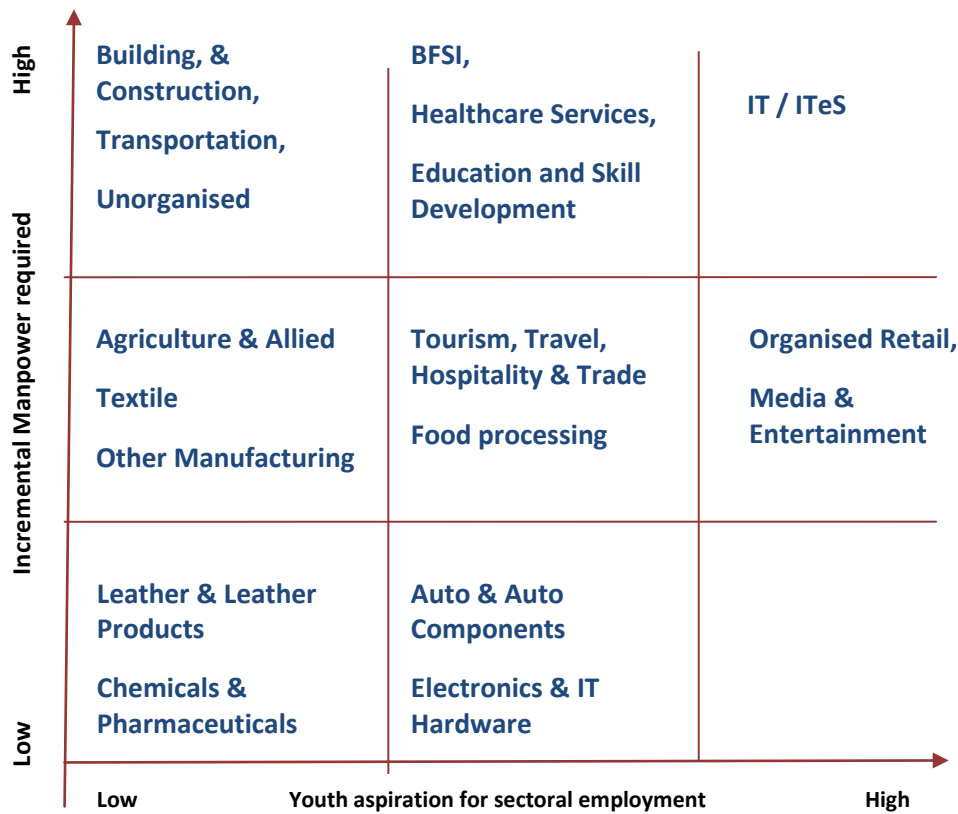
Most of the manpower is required for sectors such as agriculture, small scale manufacturing units, construction and unorganised where mostly minimally skilled workers only are employed. While the minimally skilled category may be one where people are of 10th pass or below, they require specific industry related training (vocational training) to be made employable.

1.9. Youth aspirations

As a part of the study, we held youth group discussions across the State to understand the youth aspirations and to capture whether they are in line with the high growth sectors in the State. The same has been captured in the Figure below. The figure shows that sectors such as IT / ITES, organized retail and Media & Entertainment are the high demand sectors based on the youth aspirations. However, for sectors such as building and construction, transportation etc where job growth potential is high, youth have very low aspirations to work in.

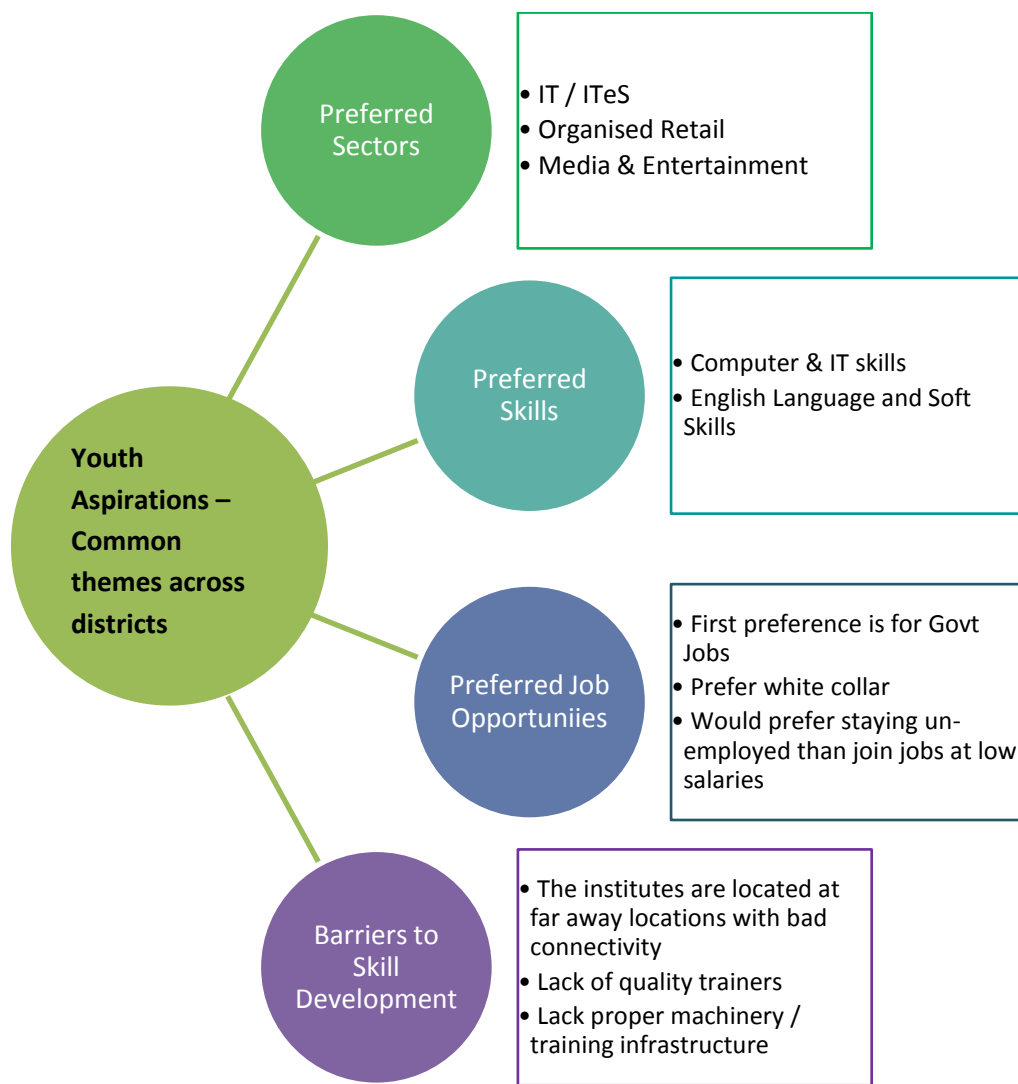
Some of the other preferred sectors by youth are BFSI, healthcare, hospitality and food processing, where the job prospects too are moderate.

Figure 14: Youth aspirations – mismatch between industry demand and aspirations of the youth



While the detailed youth group discussions have been presented in the respective district profiles, we have captured some of the common these in the figure below.

Figure 15: Youth aspirations – common themes across districts



Key points on youth aspirations across districts:

- **Entrepreneurial zeal:** Most students are not interested in becoming entrepreneurs and start their own business or practice. This is primarily because of aversion to taking risk as well as lack of adequate knowledge of the things needed to start of business on their own. The students thus felt that optional courses on entrepreneurship should also be promoted in the training institutes to help those interested in understanding its nuances and how to go about it.
- **Satisfaction with existing education infrastructure:** The preference has been towards government educational institutions especially for ITIs due to the low fee structure, superior infrastructure and high preference among employers. However, except for a few government institutions, a majority of the institutions have inadequate training infrastructure, inadequate resources (building, hostels,

space, funds, faculty, tools & equipment), erratic electricity supply, and lack of sophisticated machinery.

- **Preferred Skills / Additional Training:** Most preferred courses in the ITI are Fitter, Electrician, Machinist, Electronics Mechanic , Stenography and Computer Operator and Programming Assistant (COPA). The students feel that basic knowledge of computers and training in soft skills is highly critical for getting a good job and being successful in their career. Special emphasis is required for training in English Language

- **Preferred Job Opportunities:** Students prefer white-collar jobs as compared to blue collar and manual jobs. In fact, the students prefer to remain unemployed rather than joining jobs with lower salaries. The students have a preference towards government jobs as against private sector ones due to better job security and compensation.

1.10. Recommendations

Uttar Pradesh is the most populous State in India. This presents it with a huge demographic advantage and also a huge challenge in training and up-skilling of the manpower within the state. There are certain key Opportunities and challenges which are very relevant to the state which must first be recognised first:-

Opportunities

- Huge demographic advantage- 16% of India's population in the state. 56% of population in working age.
- Strong base of agriculture. High crop yield and production – also the major employment provider in the state.
- Well endowed with tourism spots and locations – historical, religious and natural.
- Major hub of IT/ITes
- Huge scope for infrastructural growth
- Key state for handicraft clusters
- The State has setup a skill development authority to promote vocational skilling

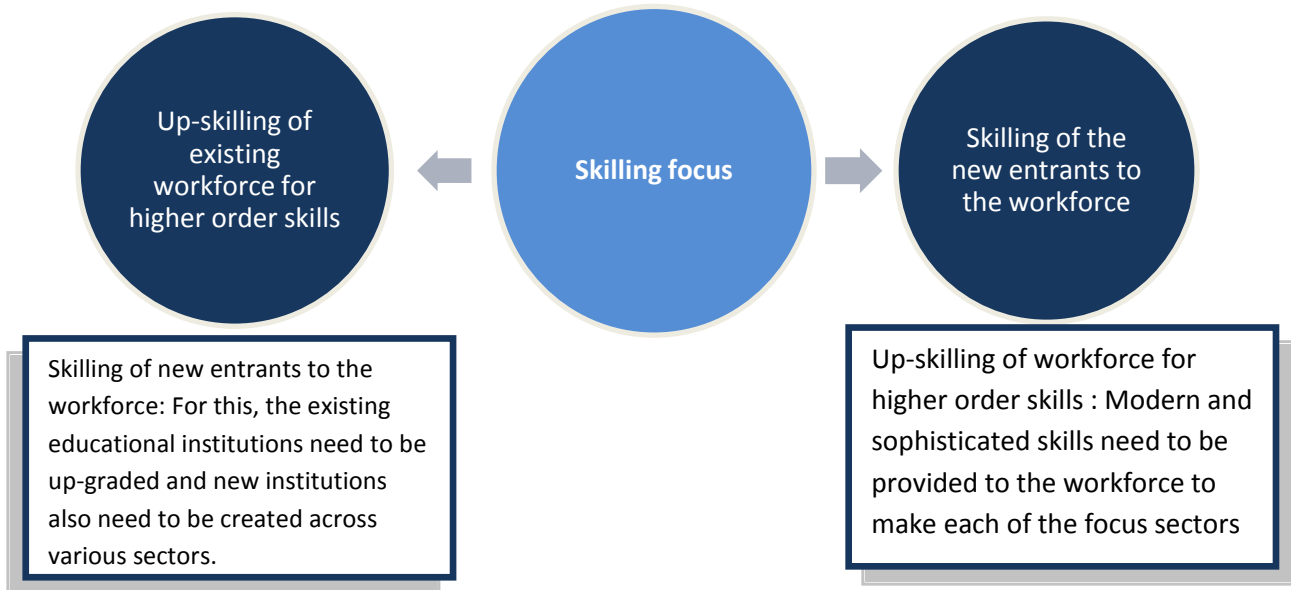
Challenges

- The state has about 34 districts which have been classified amongst the 250 most backward districts
- Industrial / manufacturing growth is primarily centered around Kanpur, Lucknow, Gautam Buddh Nagar, Ghaziabad, Meerut etc only
- Lack of sufficient trainers
- Migration of manpower due to lack of sufficient local jobs

Thus in order to come up with an action plan which capitalise on its opportunities and work on removing the challenges to the state's growth through skill development, the recommendations should focus on the addressing the above

Skilling in the state essentially will focus on two parts :-

Figure 16: Focus of skilling



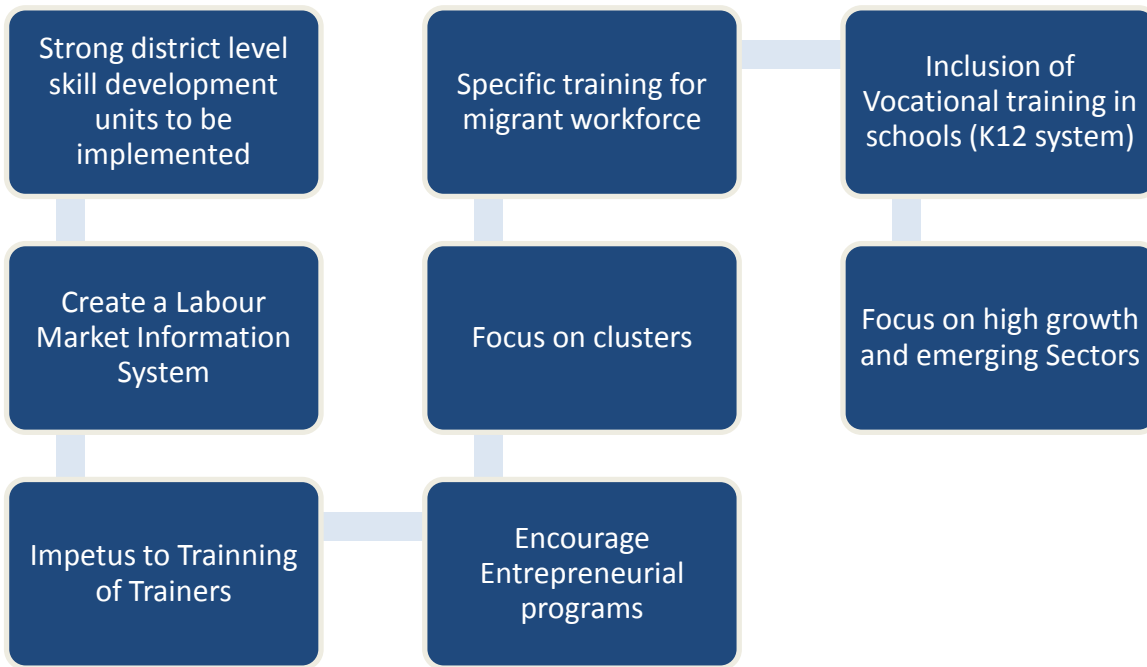
To address the above challenges, all the stakeholders – State Government, industry, training providers and NSDC need to work in conjunction to ensure that the skill gap issues are addressed comprehensively.

1.10.1. Government

Presently, the responsibility of education and skill development in Uttar Pradesh lies with the following Departments: Directorate of Primary Education, Directorate of Higher Education (DirHE), Directorate of Technical Education (DTE), and Directorate of Vocational Education & Training (DVET). In addition, there are skill development programmes organised at the other Department levels as well, including District Industries Centre, Department of Tourism, Department of Agriculture, District Rural Development Agency etc. As discussed earlier in the report, the State Government has also set up its Skill Development Mission for skill development and up-gradation. The mission though is still in its formative stages.

The detailed sector wise and district wise recommendations are presented in the district reports for each of the 75 districts in Uttar Pradesh. In this section, we are only presenting the broad themes which are required.

Figure 17: Broad framework of recommendations for the Government



Broad recommendations for Government

Based on our primary survey, we have found that following steps, if taken, will address the skill gap issues of many sectors:

1. **Strong district level skill development units to be implemented:** The State Skill Development Mission through the office of its Director is in the process of setting up an architecture / institutional mechanism in order to promote skill development in the state and to integrate various schemes of skill development from both the State and Central Governments. This involves setting up of Management units both at the State and District level. While the State units will offer a single window planning and clearance process, the implementation and monitoring of the projects can happen only through the district level management units. It is therefore very important to ensure that the district level management units are built strong. The mechanism in which the same can be achieved includes:-
 - a. District level committees have currently been proposed to be setup under the chairmanship of District Collectors or District Magistrates. The district executive committee includes other key officers of the district such as Project Director (NRLM), District Employment Officer, Assistant labour commissioner, Principal of Nodal ITI & Polytechnic, District minority welfare & social welfare officers, GM-DIC etc. apart from the District Manager of the Skill Development Mission whose office shall be separate from the rest. In order to ensure proper implementation of the programs, the District Employment Officer himself can be made as the District Manager for the Skill Development initiatives as his office offers the right connect to both industry as well as students / job seekers. The district unit can thus be set within the offices of the

Employment Office under a separate skill development cell. This will also ensure faster implementation of the program across all districts.

- b. The targets as set by the skill development mission at the state level must be broken across all districts as well as sectors. These targets will incentivize the district level units to push for skill development at the local / district level in turn contributing to the overall State numbers. A time based review of the performance across all districts will also aide the Skill Development Mission to take corrective action wherever necessary.
 - c. If needed, each district unit should be further strengthened by taluka level officers who will have the responsibility of skill development at the taluka level and will report to the District level Officer with regards to the progress of numbers achieved.
 - d. To supplement skill development mission role, we propose creation of sector skill council coordination committee encompassing the following activities.
 - i. Coordination with Sector Skills Councils and NSDC at National level.
 - ii. Determining skills/competency standards and qualifications.
 - iii. Standardization of affiliation and accreditation process of VTP in line with sector skill council.
 - iv. Participation in affiliation, accreditation, examination and certification.
 - v. Plan and execute Training of Trainers.
 - vi. Promotion of academies of excellence.
 - vii. Establishment of a well structured sector specific Labour Market Information System (LMIS) to assist planning and delivery of training.
2. **Create a Labour Market Information System:** In order to fully understand the skill gaps within the existing manpower and thus to identify the skilling areas, the need is to setup a Labour Market Information System (LMIS) for the state of Uttar Pradesh. However the system requires detailed understanding of data requirement, data collection process, and reliability. At present, the current data collection system requires process reengineering at taluka, district and state to ensure reliability and timely availability of data for decision makers. Typical data requirement for LMIS creation is outlined below:-

Data Requirements for Creating an LMIS	
Demand Side data	Supply Side Data
→ Occupational and qualification structures of economic sectors (organised and, if possible, unorganised economies) at the national and state levels; → Occupational and qualification structures	→ Number of youth in different age groups; <ul style="list-style-type: none"> ○ Enrolments in general education, progression and graduation rates; ○ Graduations from the primary and secondary school and dropouts and

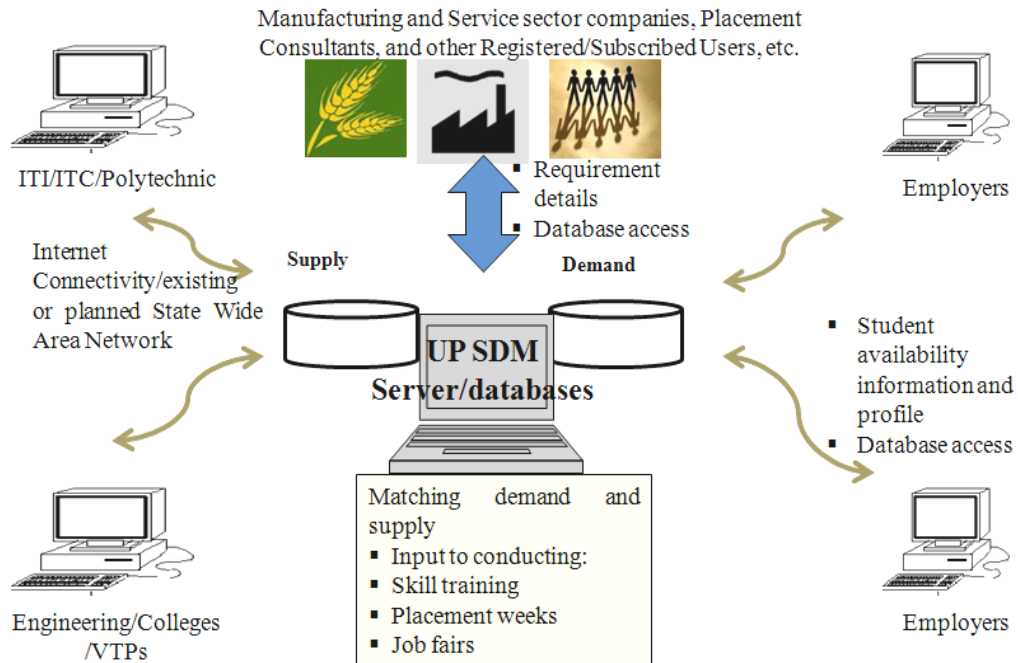
<p>of economic sectors (organised and, if possible, unorganised economies) at the national and state and district levels;</p> <ul style="list-style-type: none"> → Occupational data on the annual demand for semi-skilled, skilled and high-skilled workers, and technicians for overseas employment (i.e.: labour outflow); → Annual local demand for skilled and semi-skilled workers and technicians due to: <ul style="list-style-type: none"> ○ Demographic replacement needs (due to sickness, death, retirements, etc.); ○ Labour turnover when exiting skilled workers are changing their occupational profiles through skills retraining to accept different jobs; → Average demand for skilled and educated workforce for the new jobs created annually (emerging from new investments, company registrations, etc.) in both the organised and unorganised economies; → Other data used to forecast the demand for skills in different economic sectors. 	<p>their shares enrolled in further education including TVET and skills training establishments (public and private institutions including NGOs, ITIs, polytechnics, etc.);</p> <ul style="list-style-type: none"> → TVET and skills training providers (public and private institutions, schools, NGOs and others) including their numbers, location, average annual enrolments and graduates, types and duration of courses trade-wise, and learning outcome-wise; → Formal apprentices enrolments and graduations per year, trade-wise; → Employability of the recent graduates from different programmes, occupational qualification-and trade-wise; → Annual supply of skilled and educated workforce due to massive retrenchments, company closures, etc., trade-wise; → Annual arrival of the skilled and educated workforce returning from overseas, trade-wise. → Rates of unemployment and underemployment of the educated and trained persons, trade-wise where it exists;
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Source: ILO – IMAcS report : Review of the Sources and Availability of Skill Development Data in India

Once the State and District Level Management Units are put in place, the Skill Development Mission must also look to creating a LMIS system for the state which will become a repository of information on industries, job seekers as well as training / educational institutions. The system once setup can assist and support in promotion of skill development initiatives within the state as:-

- a. Assess the skill levels of the work force as well those looking for a job
- b. Map the various sectors / industries operational within the State along with job roles and competencies required.
- c. Provide real time skill gaps across sectors as well as job roles.
- d. Aide in identifying key areas where training programs need to be implemented – both for new skilling as up-skilling of existing manpower.
- e. Provide the industry with a ready database of available job-seekers to choose from.
- f. Help the students in understanding the sectors where jobs are available and the skill sets required to get placed with the organization within the sector.

- g. Provide the training providers and educational institutions with real time data on where jobs are available and what competency, skill sets for which training is needed to be imparted.



3. **Increase focus on Training of Trainers:** One of key factors affecting the process of skill development in the state currently is the lack of availability of trainers. Currently the state has about 16 University Departments of Education and runs B.Ed. courses in both regular as well as distance education mode. In spite of this, both at the School and College educational system, the pupil teacher ratio remains at 80:1 which is considerably lower than the recommended norm for teacher pupil ratio (35:1 for school education and 15:1 for higher education). The demand side projections for the period 2012 to 2022 envisages demand of 8.83 lakh teachers and trainers for schools, colleges and other educational institutes. Also, based on the feedback received from vocational training providers we see that the situation is the same within the vocational skill development space. Training organization currently have to pay salaries equivalent to the corresponding sectors / industries in order to attract experienced professionals from their regular jobs into becoming a trainer. Based on the targets set by the Skill Development Mission of training 44 lakh people through various schemes in the next four years, there would be a need for atleast 60,000 to 80,000 trainers in the vocational training space. Thus the immediate need within the state is to create sufficient infrastructure or training programs to create a pool of quality trainers within the market. This can be achieved through:-

- a. *Setting up of specific teacher training nodal institute:* Setup nodal institute along the lines of National Institute for Technical Teachers Training and Research (NITTTR) as has been setup in Bhopal and Trichy.
 - b. *Train of trainer in line with National Occupational Standards.* On priority, the Govt may consider nominating ITI trainers under this programme in consultation with respective sector skill council
 - c. *Incentivise the senior and experienced staff to become trainers:* The State Government should look at various means by which to incentivize the senior and experienced personnel from the industry who are about to retire or have already retired to join the educational system as teachers. Once trained, these people can be the master trainers through whom further pool of trainers can be created (who may have lesser industry experience).
 - d. *Set norms for Vocational Training Providers for conducting ToT:* The Skill Development Mission can also look at making ToT mandatory for the VTPs registered with the mission under various schemes. Setting targets for the VTPs to conduct a certain number of minimum Training of Trainers also will ensure availability of a steady flow of trainers in the market.
 - e. *Marketing Strategies:* The Skill Development Mission should also consider promotion and marketing strategies in order to attract more people to become trainers.
4. **Encourage Entrepreneurial programs:** 34 of the 75 districts of Uttar Pradesh are classified amongst the (250) most backward districts in the country:-

Backward districts of Uttar Pradesh				
Chitrakoot	Balrampur	Maharajganj	Mainpuri	Pratapgarh
Shravasti	Kaushambi	Basti	Etah	Kushinagar
Sant Kabir Nagar	Sant Ravi Das Nagar	Kannauj	Farrukhabad	Ballia
Mahoba	Siddharthnagar	Chandauli	Mirzapur	Fatehpur
Hamirpur	Etawah	Ambedkar Nagar	Mau	Mahamaya Nagar
Lalitpur	Banda	Ramabai Nagar	Jalaun	
Auraiyya	Kanshiram Nagar	Deoria	Bahraich	

The industrial growth too is concentrated around certain cluster of districts such as Gautam Buddh Nagar, Ghaziabad, Lucknow, Kanpur (Nagar as well as Dehat), Meerut, Allahabad etc. Thus, in order to further boost the economy and growth of the state from across all districts, the need is to promote further entrepreneurship especially across all backward districts. Also, we see that the participation of women in the workforce (as per census 2001) is only 25% implying a huge need to target women within the field of entrepreneurship. The implementation of such courses can be facilitated through the District Rural Development offices as well as through the lead bank in every district which run courses under Rural Self Employment Training Institutes (RSETIs) along with lead banks. Key areas to focus on include:

- a. Servicing of Two wheelers, tractors
- b. Driver (Light Motor Vehicle)
- c. Mobile phone repair
- d. Dress and Apparel designing.
- e. Tourist Guides, Tour Operators, Drivers etc
- f. Photography and Videography
- g. Computer Desktop Publishing

Specific women based programs which can be focused on include:-

- a. Dairy Farming, Poultry, Sheep rearing, bee keeping etc.
- b. Beautician
- c. Apparel and dress making and design.
- d. Food processing – Basic courses in processing of fruits and vegetables

5. **Focus on Clusters:** There are more than 500 clusters in the state, both recognized and natural ones included. Most of these clusters are artisan based in trades which have been carried over through generations within their families. These clusters face various challenges today in terms of
- a. market linkages,
 - b. lack of adequate modern technology for production, testing
 - c. Lack of skills in sales, marketing, production management etc.

Also, they lack the requisite capital to get themselves trained. Thus in order to incentivize them, the need from the State Government is to empanel a cluster development committee within the Skill Development Mission who can work with the Directorate of Clusters at the state level to implement specific market linkages to each of the clusters with help of financial institutions and leading retailers (based on their product categories). The model is already under implementation through NSDC funded partner in Karnataka. This model in turn will benefit the artisans in the cluster monetarily and can then focus subsequently on skill development. For the purpose of training, the State Government may also look at setting up common training centres for a group of a product cluster which will provide skilling in:-

- d. Modern designs
- e. Production techniques
- f. Sales and Marketing
- g. Inventory management
- h. Soft skills etc.

6. **Specific training for migrant workforce:** As of census 2001, the state has the highest number of migrants – about 4.1 million – who went out of the state looking for opportunities. As compared to the 1991 census, this number has shown an increase of about 69 per cent. About 3.1% of the total population migrates out of the state every year (Net Out Migration) as per the NSSO 64th

round. It is well known that Uttar Pradesh is a major exporter of manpower especially to states such as Delhi (NCR) and Maharashtra which have seen tremendous growth over the last few year. Primary surveys conducted in Maharashtra and Karnataka have revealed that a large percentage of the workforce employed in construction is one that has migrated out of Uttar Pradesh. The migration is primarily a result of low demand of manpower within the state forcing people to look for alternatives outside the state. Thus the State Skill Development Mission could also look at training the people within those trades / sectors which will help them get gainful employment outside the state and make them competitive when compared to migrant labour force from other states. These training centres / programs should be setup in the Eastern UP division which sees the maximum of the out migration from the state. Some of the key to focus on include:-

- a. Construction
- b. Organised Retail
- c. Transportation (drivers)
- d. Unorganised sector (domestic workers, housekeeping, security guards)

A small percentage of the migratory workforce also moves to other countries. A substantial portion of this is the migration towards middle-east countries like Saudi Arabia, Oman, UAE, Kuwait, Bahrain etc. These are essentially skilled workers in the trades such as:-

- a. Electrician,
- b. Plumber,
- c. Mechanic,
- d. Fitter etc

7. **Inclusion of Vocational training in schools (K12 system):** The State sees a huge drop out of students before the completion of secondary and higher secondary education. Based on the indicators provided in the statistical abstract of Uttar Pradesh we see that about 24% of the students drop out by the time they reach 10th Standard. About 9 lakh students drop out between 10th and 12th every year and on an average only half of the students who pass out of 12th Standard get into higher education (drop out of about 8 lakh students). Those who drop out join the workforce mostly in the unorganised sector to start with as they do not possess any skills relevant to any job role. In order to address this, the State Government should consider inclusion of Vocational trades at the 9th to 12th standard levels so that the students may acquire necessary skills to become job-ready. The trades which can be focused on include:-

- a. Carpentry
- b. Basic electrician course
- c. Desktop publishing
- d. Specific computing skills – Microsoft Office, Tally etc.

As part of this initiative, the Govt may consider certification of students under the National Qualification Framework

8. **Focus on high growth and emerging Sectors:** There exist certain sectors which are not viable from the perspective of private training providers but are still critical to the growth and livelihood of the people employed in that sector. The social impact of training and up-skilling within such sectors is huge and hence it becomes necessary to incentivize the private training providers further to provide training in the said sectors or the Government itself would have to step in to build the necessary educational infrastructure. Some of the sectors where incentives need to be provided are as follows:

Table 19: High growth sectors where Government incentives are required for private training

Sectors	Districts
Agriculture & allied	All districts
Building & construction	All districts
Handlooms and Handicrafts	All districts
Food processing	Mainly for small scale food processing in rural districts
Healthcare (mainly for Para-medics and nurses)	All districts
Leather and Leather Products	Kanpur, Unnao and Gautam Buddh Nagar
Unorganised sector (domestic workers, beauty culture, security guards, facility management)	All districts

The list is indicative. For details, please refer to the district profiles.

Also, we see that certain trades of importance which are not currently implemented or need upgradation in ITIs in Uttar Pradesh in order to meet the incumbent demand of labour are:-

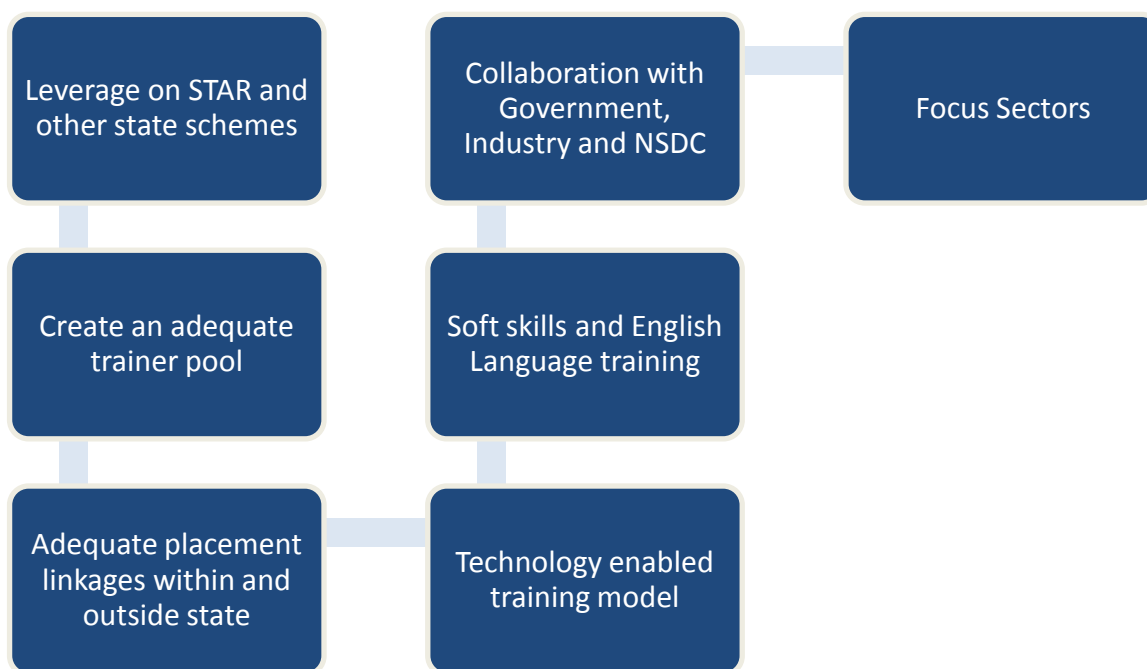
Sectors	Trades
Automotive	Denting, Painting, CO2 Welding
Engineering	Plasma Welding, CNC operations and programming, CAD/CAM
Electronics	LCD, LED, Plasma TV repair, Mobile Service Repair, E-Waste Management, Airconditioner repair
Food Processing	Cold Storage Operations
Construction	High Pressure Welding, Floor and Roof Masonry, Green Building Requirement, Crane Operations
Plumbing	Pipe laying and fitting for public utilities, residential, commercial and industrial building
IT	Infrastructure management, installation, troubleshooting, repair and servicing, Office IT system maintenance, testing etc.

1.10.2. Private training providers

Uttar Pradesh presents many opportunities for private training providers. The State Government has instituted a Skill Development Mission with the objective to promote skill development in the State in a big way. Also, in 2012, vocational courses/training providers have been included in the negative list of service tax to provide greater benefit. This further acts as an incentive for private training providers.

Detailed sector wise and course wise opportunities available in the districts for training providers are mentioned in the district profiles. Here, we are presenting broad contours of the same.

Figure 18: Broad contours of recommendations for private training providers



1. **Leverage on Standard Training Assessment and Reward (STAR) and other state schemes:**
Announced by the Finance Minister in his last budget speech, the National Skill Certification and Monetary Reward Scheme is expected to benefit about a million trainees in its first year. The scheme is branded as STAR and allows subsidisation of training fee for the student / vocational training provider. The scheme is currently being implemented through 9 Sector Skill Councils:-
 - a. Automotive
 - b. BFSI,
 - c. Leather,
 - d. Security,
 - e. Health,
 - f. Telecom,

- g. Gems and Jewellery,
- h. Rubber and
- i. Retail

Also, the State Skill Development mission is looking to integrate various old and new schemes in vocational training under a single window in order to simplify the process for vocational training providers. These schemes offer refund of fees to the VTP provided the training and placement related parameters are met. Thus in order to start with all private vocational training providers must look to capitalise on the schemes available which will in turn help in reducing the fee charged from the candidates and improve mobilisation in this space.

2. **Create an adequate trainer pool:** The state suffers from an acute shortage of trainers. This is seen from the poor pupil teacher ratio in the schools and colleges (ratio of 80) as well as from interactions with the VTPs already working within the State. Thus for all vocational training providers, it is of prime importance to create a pool of trainers as they setup training centres across various districts in the state. The VTPs can also look at courses in the Training of Trainers (ToT) space.
3. **Adequate placement linkages within and outside state:** Through the experience of various vocational training providers from across the country we see that students are willing to undergo a vocational course only if it is linked to some form of a placement guarantee. Hence placement linkages and past placement records of the training provider are major factors for the student to decide if he or she would like to undergo the particular training. With respect to Uttar Pradesh, considering the lack of local job opportunities, it is crucial for the training provider to also have placement linkages with corporates outside the state in regions such as Delhi (NCR), Mumbai, Kolkata etc so that students who are willing to migrate post training can get placed too.
4. **Technology enabled training model:** Uttar Pradesh is the most populous state in India and also the fourth largest state in geographical terms with a spread of 75 districts. While the availability of large young populace presents the training providers with a great opportunity, the delivery of the training across the various districts in the light of challenges such as lack of availability of trainers becomes difficult. Thus a technology based approach like virtual classrooms through a internet broadband will help the training providers reach a critical mass with minimum resources. This also has a major cost advantage which can be passed on to the students in the form of lower fee. The key sectors where such training can be implemented include:-
 - a. IT & ITeS,
 - b. BFSI,
 - c. Organised retail
 - d. Education & Skill Development,
 - e. Tourism and Hospitality etc.

5. **Soft skills and English Language training:** From the Youth Group discussions conducted as well as from industry interactions, we see that this remains a major cause for concern. Thus, all training providers need to introduce English Language Training and soft skills as a compulsory subject in their course curriculum. This holds true for all types of courses and all districts. However, some of the sectors where these skills are a must are:
 - a. Auto & auto components
 - b. BFSI
 - c. Education & skill development
 - d. Food processing (in large organized units)
 - e. Healthcare services
 - f. IT & ITES
 - g. Organised retail, and
 - h. Tourism and hospitality

6. **Collaboration with Government, Industry and NSDC:** For successful implementation of training programs, the VTPS must look to coordinate with various key stakeholders :-
 - a. *Government:* Collaboration with government through participation in various schemes put forward by the Skill Development Mission as well as provide feedback on the training effectiveness and challenges faced during implementation in order to help the Mission perform better and achieve its targets.
 - b. *Industry:* The private VTPs should look to collaborate with the Industry in order to achieve the following:-
 - i. Placement linkage
 - ii. Develop and update trades or courses which are industry and job relevant
 - iii. Partner to fund for training programs through a hire and train model or by charging a placement fee
 - c. *NSDC:* The need to collaborate with NSDC for working with various SSCs across the sectors in which training is implemented.

7. **Focus Sectors:** An indicative sample list of courses along with districts where they need to be implemented is given in the table below. However, note that the list is not exhaustive and is only a representative sample of what is provided in the individual district profiles. For details, please refer to the respective district profiles.

Table 20: Indicative list of training programs for private training providers

Sectors	Courses	Focus districts
Building & construction	Project management, safety management, labour laws, plumbing, painting, welding, wireman, electrician, masonry, carpentry, bar bending, surveying, geology, hydrology, hydraulics, electrical etc.	All districts

Sectors	Courses	Focus districts
Unorganised sector (domestic workers, beauty culture, security guards, facility management, handlooms and Handicrafts)	Beautician, security management, video camera based security management, handloom and power loom machine operation and maintenance, specific handicraft related courses.	All districts with focus on identified cluster areas for handicrafts and handlooms
Transportation, Logistics, Warehousing and Packaging	Driving and maintenance of commercial vehicles, road taxes across various geographies, road safety norms, first aid, material handling, cold storage management, documentation in logistics and warehousing, routing and fleet optimisation, inventory optimisation, 3PL, 4PL and 5PL management etc.	Lucknow, Kanpur, Ghaziabad, Allahabad , Agra, Gorakhpur, Varanasi, Jhansi, Saharanpur, Gautam Buddha Nagar, Meerut , Moradabad and Bareilly
Healthcare Services	Critical care nursing, lab technician, medical equipment maintenance, laboratory operations, analysis and equipments related,	All districts
BFSI	Training on banking and insurance products, personality development training with specific focus on communication skills for sales, basic training for computer operations, financial management and business operations as well as banking softwares	All districts
IT & ITES	Basic programming skills, training on specialized technology platforms, effective communication skills and software testing, BPO voice processing assistant,	Gautam Buddha Nagar, Lucknow and Ghaziabad
Tourism, Travel, Hospitality & Trade	Tourist guide, route and time optimisation across tourist spots, front desk management, cookery, housekeeping, kitchen and restaurant management, customer management, soft skills, English language training,	Allahabad , Faizabad, Mathura, Varanasi, Agra, Chitrakoot, Lucknow, Gorakhpur, Jhansi, Kushinagar, Barabanki, Sant Kabir Nagar, Kheri, Shravasti and Kaushambi
Organised Retail	Communication skills, customer management, counter management, inventory management, merchandising, product specific knowledge etc.	Gautam Buddha Nagar, Ghaziabad, Lucknow, Kanpur, Allahabad and Varanasi
Textile and Clothing	Use of design software (such as Ned graphics, jacqCAD master etc.), sampling the colour effects, higher order skills like jardosi, appliqué and akoba, stitching, finishing, sampling, pattern making, etc.	Gautam Buddha Nagar, Meerut, Fatehpur, Rampur, Ghaziabad, Gorakhpur, Aligarh, Sant Ravidas Nagar (Bhadohi) and Kanpur
Food Processing	Oil extraction (mainly soyabean), Boiler	Budaun, Shahjahanpur,

Sectors	Courses	Focus districts
	attendant (used in mills), Sortex machine operators (for rice mills), Milling machine operation, Product diversification (such as rice bran oil), Preservation and processing of fruits and vegetables into jams, fruit squashes, pickles etc., Dairy technology and micro biologists etc.	Saharanpur, Gautam Buddha Nagar, Bareilly, Ghaziabad, Mathura, Meerut, Sitapur, Moradabad, Aligarh, Bijnore, Bulandshahr, Varanasi, Kanpur, Barabanki, Rampur, Etawah, Gorakhpur, Unnao, Firozabad and Agra
Auto and Auto component	Sales and marketing related, auto servicing, CNC machine operator, assembly fitter etc.	Manufacturing : Gautam Buddha Nagar, Lucknow, Ghaziabad and Meerut. Auto Servicing and sales : All districts
Leather & leather products	Training on various stitching techniques according to FIDIC standards, mixing of various types of chemicals / dyes, packaging and finishing, inventory management, quality control etc.	Kanpur, Unnao and Gautam Buddha Nagar

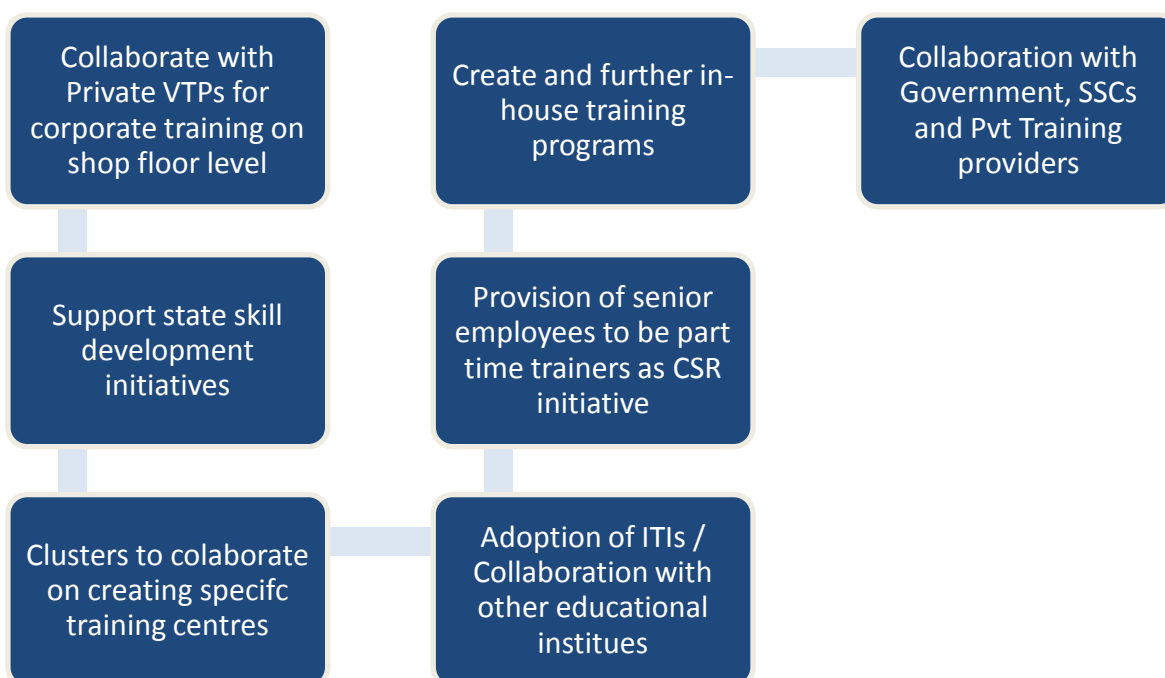
Source: IMACS analysis

1.10.3. Industry

Based on the stakeholders' discussions, we found out that industry's biggest concern pertaining to skill development is the lack of job-ready people. A big percentage of the people passing out from the educational institutions are considered unemployable. Therefore, several large companies have started in house training initiatives, but the same is restricted to management cadre only in most cases. The same, though, is unviable for smaller companies and they believe in the model of 'on-the-job' learning.

In this light, bridging the gap between industry and academic and vocational education system becomes an important area for industry engagement.

Figure 19: Broad contours of recommendations for industry



1. **Collaborate with Private VTPs for corporate training on shop floor level:** Most manufacturing organisation in Uttar Pradesh face the issue of employing unskilled workers at their respective shop floors. This often creates issues for them primarily in loss of quality / production. Thus advantage of employee training and development in the long term is significant for all organisations. While large and medium sized corporates do invest in training and development it is largely restricted to the management cadre. There is a huge need for training of employees at the shop floor level too which could directly lead to significant production increases. For this, the organisation should look to partner with vocational training providers from the relevant sector who will have the necessary training content and equipment in place. Training is needed in:-

- a. Technical skills,
 - b. Behavioural skills,
 - c. Safety Skills and
 - d. Quality management
2. **Support state skill development initiatives:** The State Skill Development mission envisages various initiatives to promote skilling in the vocational education space. One such initiative is where large corporates are invited to open Skill Development Institutes relevant to their own respective sectors. The corporate will be provided the space / location by the State Government while a basic investment will have to be made by the said corporate. Also, the corporate can look to get empanelled as an employer with the various state schemes and students trained through the schemes can be placed across the companies based on the availability. This will help the VTPs and the State Government in assessing the demand for labour across various sectors.
3. **Clusters to collaborate on creating specific training centres:** Uttar Pradesh is home to many industrial and artisan clusters and one of the prime problems faced by the clusters is with relation to skill sets especially in the design and quality testing areas. These cluster units can look to collaborate amongst themselves to create a central location for training and development of their artisans. This can also be done by seeking support from the State Government as well as agencies such as the UNIDO. These training units can also house quality and inspection related equipment as is the case with the Belgaum Foundry cluster in Karnataka which can be shared by the organisations and artisans in the region. The key clusters in Uttar Pradesh include :-
- a. Zari Zardori
 - b. Carpets and Durries
 - c. Textiles (Handloom)
 - d. Woodwork
 - e. Lac ware
 - f. Ceramics and Pottery etc.
4. **Adoption of ITIs / collaboration with other educational institutes:** Adoption of ITIs by big corporates has been in process since 2007 throughout the country. Various state governments too have been actively involved in putting up ITIs for adoption by known corporates of repute in last two to three years. Various reports are seen of ITIs managed by corporates to be better performing than the others. These institutes also see upgradation of machinery to modern equipment and creation of Centres of Excellence. Thus the industry could look to adopting the regional ITIs or look to collaborate with other colleges, polytechnics etc to promote skill development as well as meet their own need for skilled man power.
5. **Provision of senior employees to be part time trainers as CSR initiative:** One of the major concerns in Uttar Pradesh is with respect to availability of adequate number of trainers. We see

that in Uttar Pradesh across schools and colleges the pupil teacher ratio is at 80. This problem exists in the vocational training space too. Thus in order to meet the short and medium term demand of trainers, industry should look to allow its senior employees to become part time trainers with vocational training providers or even nearby ITIs, colleges, polytechnics etc as a part of its CSR initiatives.

6. **Create and further in-house training programs:** While continuing to focus on it on-the-job training mechanism, the industry should also look to create a knowledge database which will help to further create in-house training programs for its employees especially at the shop floor level. The organisations can also look to align their internal training modules to national level certification (like MES/NCVT) so that the employee may get himself / herself assessed and certified post the training. This is more pertinent for industries which are organised and are more formal in nature. Some of such industries in the State include :
 - a. Auto & auto components
 - b. Banking and Financial Services
 - c. Building, construction and real estate
 - d. Food processing (large; organised)
 - e. Healthcare services
 - f. IT / ITES
 - g. Organised retail
 - h. Textiles and clothing (mainly garments), and
 - i. Hospitality

7. **Collaboration with Government, SSCs and Pvt Training providers:** The need is to collaborate with all key stakeholders to the skill development space:-
 - a. *Government:* This could in the form of collaborating towards skill development initiatives of the State Government or through getting empanelled and providing employment to various people undergoing vocational training under the Government's schemes.
 - b. *Sector Skill Councils:* The industry should look to collaborate with the respective SSCs in order to aid them in developing standards for Occupational roles, industry knowledge to be leveraged for curriculum framework development and in assisting the accredited training organisations.
 - c. *Private Training Providers:* Collaboration with the private VTPs is essential from the point of view of providing employment to the trained students or even for up-skilling of their existing manpower.

1.10.4. NSDC

As a part of the study, we have identified sectors wherein NSDC can intervene in the State, either by way of funding the private training institutes or through its Sector Skill Councils (SSCs). The sectors where NSDC can intervene have been divided into high-priority, medium-priority and low-priority, depending on their employment generation potential in the next 10 years. The same has been presented in the table below.

Table 21: Sectors where NSDC intervention is required in Uttar Pradesh

Sector	Key Focus districts
High priority	
Building & construction	All districts
Unorganised sector (domestic workers, beauty culture, security guards, facility management, handlooms and Handicrafts)	Domestic Workers : Gautam Buddh Nagar, Lucknow, Kanpur, Ghaziabad, Agra and Varanasi Others : All districts with focus on identified cluster areas for handicrafts and handlooms
Transportation, Logistics, Warehousing and Packaging	Lucknow, Kanpur, Ghaziabad, Allahabad , Agra, Gorakhpur, Varanasi, Jhansi, Saharanpur, Gautam Buddh Nagar, Meerut , Moradabad and Bareilly
Education and Skill Development	All districts
Healthcare Services	All districts
BFSI	All districts
IT & ITES	Gautam Buddh Nagar, Lucknow and Ghaziabad
Medium priority	
Tourism, Travel, Hospitality & Trade	Allahabad , Faizabad, Mathura, Varanasi, Agra, Chitrakoot, Lucknow, Gorakhpur, Jhansi, Kushinagar, Barabanki, Sant Kabir Nagar, Kheri, Shravasti and Kaushambi
Organised Retail	Gautam Buddh Nagar, Ghaziabad, Lucknow, Kanpur, Allahabad and Varanasi
Textile and Clothing	Gautam Buddha Nagar, Meerut, Fatehpur, Rampur, Ghaziabad, Gorakhpur, Aligarh, Sant Ravidas Nagar (Bhadohi) and Kanpur
Food Processing	Budaun, Shahjahanpur, Saharanpur, Gautam Buddha Nagar, Bareilly, Ghaziabad, Mathura, Meerut, Sitapur, Moradabad, Aligarh, Bijnore, Bulandshahr, Varanasi, Kanpur, Barabanki, Rampur, Etawah, Gorakhpur, Unnao, Firozabad and Agra
Agriculture & allied (including dairy, animal husbandry, poultry etc.)	All districts
Other Manufacturing	Gautam Buddha Nagar, Ghaziabad, Kanpur, Agra, Moradabad, Allahabad , Meerut, Bulandshahr , Muzaffarnagar, Bareilly, Bijnor, Saharanpur, Lucknow, Aligarh, Varanasi, Jyotiba Phule Nagar, Jhansi, Mau, Bara Banki, Firozabad and Mathura

Sector	Key Focus districts
Low priority	
Media and Entertainment	Gautam Buddh Nagar
Auto and Auto component	Manufacturing: Gautam Buddh Nagar, Lucknow, Ghaziabad and Meerut. Auto Servicing and sales : All districts
Electronics and IT hardware	Gautam Buddh Nagar and Ghaziabad
Leather & leather products	Kanpur, Unnao and Gautam Buddh Nagar
Chemicals & Pharmaceuticals	Kanpur, Gautam Buddh Nagar, Allahabad, Bareilly and Budaun

Source: IMaCS Analysis

This report has been prepared by **ICRA Management Consulting Services Limited (IMaCS)**.

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- Ability to research emerging trends in the economy, as well as in specific sectors.
- Insight into different programmes and organisational processes.
- Ability to carry out economic analysis, build quantitative and financial models to project future performance and identify imperatives.
- Ability to identify the various types of risks and suggest appropriate strategies to mitigate the same.

The Education and Skills practice at IMaCS focuses on identifying skill gaps, mapping future skill requirements, and formulating strategies to address them. Our service offerings encompass diagnosis, design and implementation of education and skill development interventions for government and private sector.



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