National Skill Development Corporation

District wise skill gap study for the State of Punjab (2012-17, 2017-22)

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This report was prepared in November 2013

1 Executive Summary

National Skill Development Corporation (NSDC) had mandated KPMG Advisory Services Pvt Ltd to undertake a District-level Skill Gap Study of the state of Punjab, involving various Departments of the Government of Punjab, and Industry Bodies, as key stakeholders. The study focused on identifying district-wise incremental skilling requirements in Punjab during the period 2012-22, for the potential growth sectors in the state. A roadmap for skill development initiatives in the state is proposed, with recommendations for key stakeholders. Extensive district level primary interactions including discussions with industries, vocational training providers and Government officers, were conducted. Focused group discussions were organized to understand youth aspirations towards employment. Global and Indian best practices in skill training have also been studied.

The demographic and social profile of Punjab presents a unique human resource opportunity for economic growth through manpower skilling. As per KPMG estimates, Punjab has a significant demographic dividend in the near term, with a rising working age population. Between 2012 and 2017, an additional 25.7 lakh[1] are expected to enter the working age group population followed by another 23.2 lakh during 2017-22[2] (these are Gross numbers, without netting off retirees). Considering the historical trends in labour participation rates of Punjab, the state would witness a gross addition of 11.3 lakh and 10.2 lakh people to labour force (i.e. portion of the working age population willing to seek employment and work) during 2012-17 and 2017-22 periods respectively. Accommodating for retirement from the existing pool of labour force, Punjab is expected to register a net addition of 4.6 lakh to the labour force during 2012-17, and another 3.6 lakhs during 2017-22.

Period	Demand for Human Resource due to new jobs created (Lakhs)	Gross Addition to Working Age Population-Supply (Lakhs)	Gross Addition to Labour Force – Supply (Lakhs)	Net Addition to Labour Force-Supply (Lakhs)	Gap between Demand & Net Supply (Lakhs)
2012-17	8.2	25.7	11.3	4.6	3.6
2017-22	7.9	23.2	10.2	3.6	4.3

Manpower supply has regional variations along social and gender dimensions in Punjab. District-wise incremental supply estimates indicate significant regional concentration in the leading five districts of Ludhiana, Amritsar, Gurdaspur and Jalandhar accounting for around half of the total supply. Backward regions like Muktsar, Mansa, Faridkot and Fazilka have to be given special focus, considering the seasonal work-related migration, stemming from socio-economic backwardness and lack of sustainable local livelihood/employment opportunities in these areas.

Keeping in view the current position of the state, along with possible economic growth that could be facilitated in various sectors through favorable policies, an estimate of the additional increase in incremental manpower requirement during XII plan (2012-17) and XIII plan (2017-22) periods, would be over 3.6 lacs and 4.3 lacs respectively. In XII plan period, the targets of job opportunities to be created per annum could be set at around 75,000-80,000 on an annualized basis.

Incremental human resource requirements in the state have significant geographical and sectoral variations. Priority sectors from a manpower development perspective include Food Processing, Communication, Construction, BFSI,

[1] *KPMG Analysis*
[2] *KPMG Analysis*

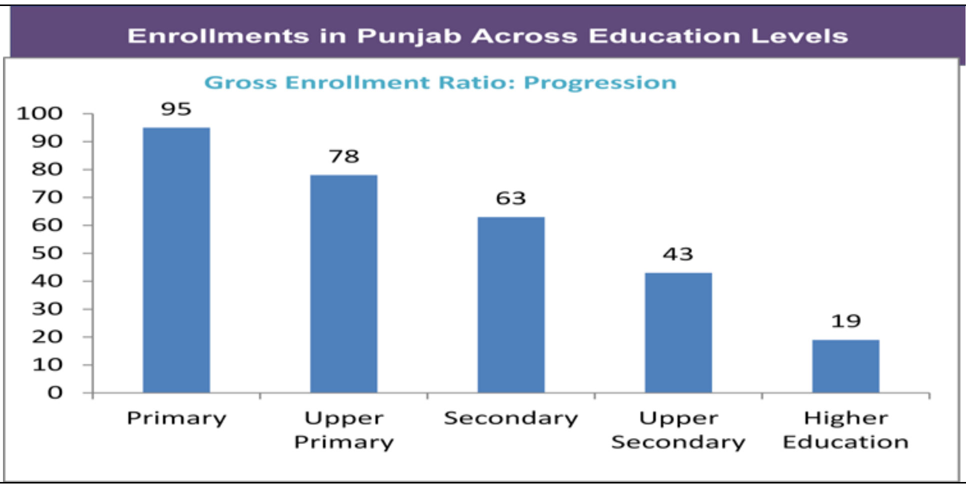
Healthcare and Textiles. Priority districts from a manpower development perspective include Jalandhar, Ludhiana, Amritsar, Ferozepur, Patiala and Sangrur

District	Incremental Manpower Requirement 2012-17	Incremental Manpower Requirement 2017-22	Focus Sectors
Amritsar	84085	67039	Construction, BFSI, Organized Retail
Barnala	18886	22133	Textile & Apparel, Pharmaceutical, Construction
Bathinda	32662	31120	Food Processing, Healthcare, Retail
Faridkot	16674	17268	Food Processing, Construction, Engineering Services
Fatehgarh	15819	19210	Construction, Agriculture Implements Servicing
Ferozepur	48073	43649	Food Processing, Construction, Training & Education
Gurdaspur	69989	64503	Organized Retail, Transportation & Logistics, BFSI
Hoshiarpur	48742	46953	Healthcare, Construction, BFSI
Jalandhar	103645	101426	Engineering Goods, Retail, Transportation & Logistics
Kapurthala	28313	31079	Engineering Goods, Repair Services, Transportation
Ludhiana	155957	156182	Small Auto Parts, Retail, Hospitality
Mansa	13506	15285	Food Processing, Agriculture Implements
Moga	22866	23785	Food & Dairy Processing, Healthcare, Retail
Mohali	31719	33239	Agriculture Implements Servicing, Food Processing
Muktsar	18214	19420	Dairy Processing, Retail, Hospitality
Nawanshahr	39607	34425	Cement & Chemicals, Paper Products, Transportation
Patiala	43824	49423	Food Processing, Small Repair Services
Rupnagar	29261	28609	Tractor Parts, Retail, Hospitality
Sangrur	43913	42069	Construction, Retail
Tarn-taran	43782	41696	Retail, Communication, BFSI

An overview of the current enrollment status across levels of education helps provide an estimate of emerging capacity gaps over the next decade or so. With current primary enrollment ratio in Punjab standing at 95, and middle school at 78, secondary at 63 and upper secondary at 43, the need to bring this untapped workforce into the formal job market is important.

Enrollments in Punjab across Education Levels[3]

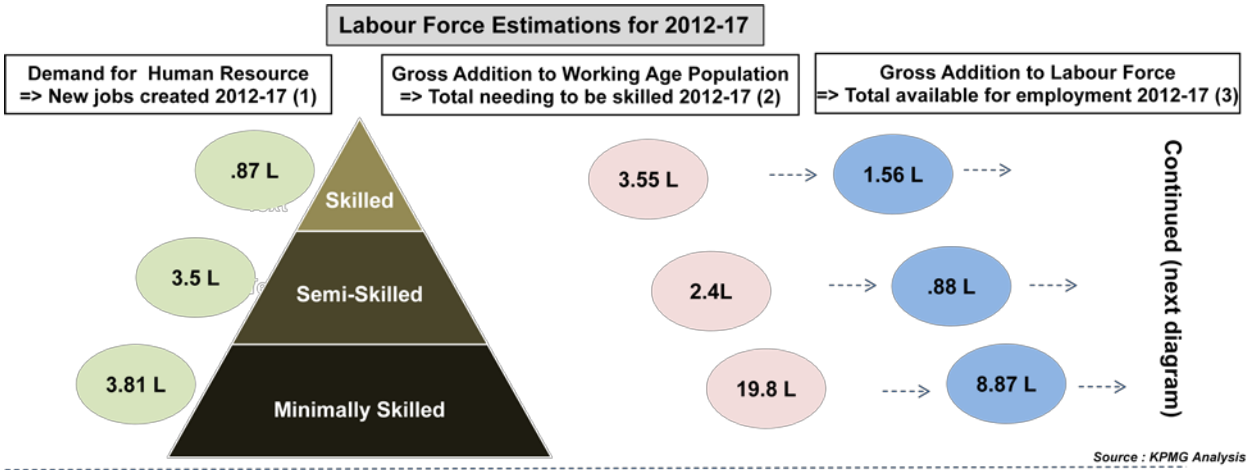
[3] *KPMG Analysis*

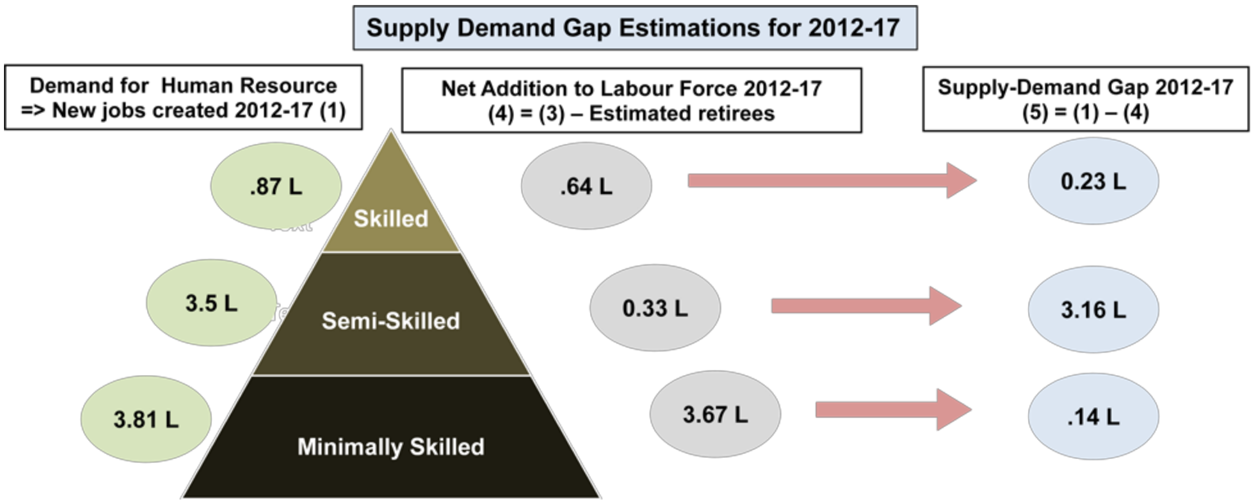


Vocational education has a key role to play in the educational system of Punjab. While dropout rates are witnessed after school education across the state, resulting in low enrollments in higher education, districts like Muktsar, Faridkot and Mansa have considerably high dropouts even at the school level. Interventions in vocational education to bridge the gaps in the educational system (within the schooling stage itself) and provide seamless options for students to pursue vocational education, would be crucial in developing a holistic approach to address the skilling needs of the state. A comparison of vocational education capacities in the state would show that density of vocational infrastructure measured as number of seats available for 1000 people is high in the districts of Gurdaspur, Mohali, Hoshiarpur and Rupnagar. Level of private participation is lower in most of the Punjab districts. Capacity expansion in vocational education and augmentation of private participation is needed through region specific initiatives considering the current level of variations among the districts.

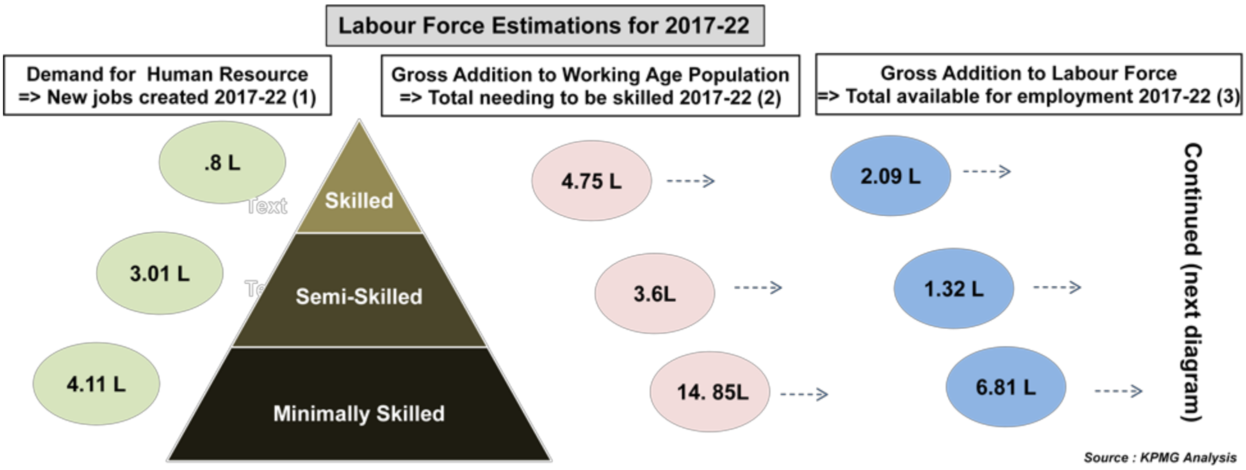
Assessment of existing training infrastructure in comparison to human resource demand over XII Plan period, indicates significant capacity expansion requirement for semi-skilled category through vocational education. Demand-Supply gap estimates indicates a need to improve participation rates in semi-skilled categories along with providing vocational skills to high skilled labour force as well, considering the high level of employment opportunities in semi skilled category within the state. Further, employability of highly skilled graduates is an issue owing to misalignment of courses with industry needs and poor quality of institutes. Issue of low employability of graduates has to be addressed through suitable up-skilling considering local industrial requirements in order to ensure availability of industry ready manpower.

Punjab Human Resource Supply-Demand Gap Estimations for 2012-17

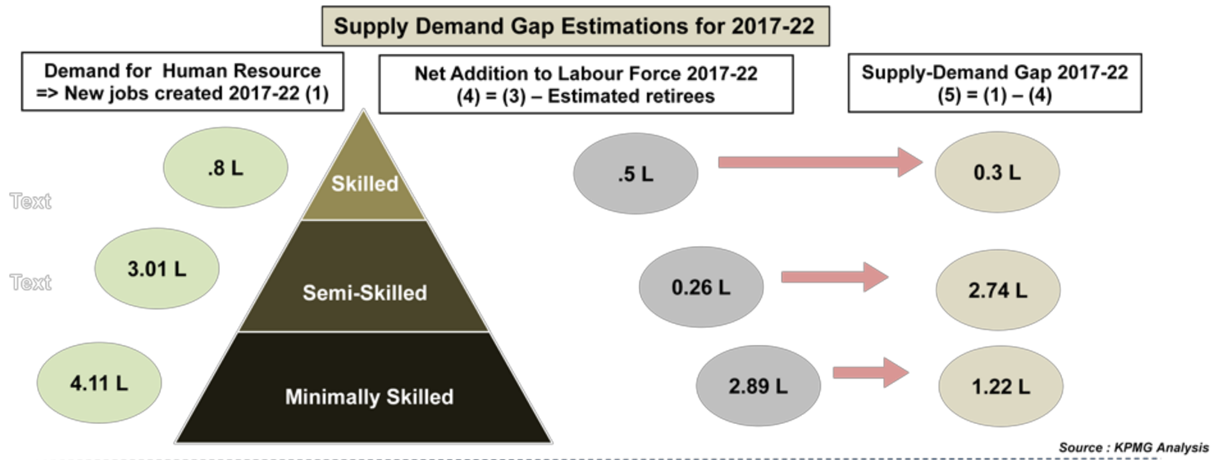




Punjab Human Resource Supply-Demand Gap Estimations for 2017-22



Source : KPMG Analysis



Source : KPMG Analysis

District level variations in Demand-Supply gap indicate the need for geography specific initiatives to address the skilling issues. Skill Category wise Demand-Supply gap estimations for the districts of Punjab are presented in the table below.

District Wise Supply- Demand Gap in Punjab (2012-22)								
	2012-17				2017-22			
Region	Skilled	Semi Skilled	Minimally skilled	Total	Skilled	Semi Skilled	Minimally skilled	Total
Total	23601	316,589	14,688	354,878	30,235	274,698	122293	427,226
AMRISTAR	3,408	35,176	(3,196)	35,387	2,473	23,367	589	26,429
Barnala	508	5,183	327	6,019	1,098	7,543	2,688	11,328
Bhatinda	(744)	11,933	(8,151)	3,038	(277)	9,850	(2,898)	6,675
Faridkot	(343)	3,519	(82)	3,094	33	5,414	534	5,981
Fatehgarh	(620)	2,582	590	2,552	18	4,717	2,954	7,688
Ferozepur	2,011	19,025	(11,504)	9,533	1,807	13,583	(3,423)	11,966
Gurdaspur	1,987	25,146	3,386	30,520	1,960	18,029	12,721	32,710
Hoshiapur	547	14,581	4,462	19,590	931	11,636	10,759	23,326
Jalandhar	5,168	36,308	22,627	64,103	5,310	30,004	33,594	68,908
Kapurthala	137	7,347	6,389	13,873	788	8,471	10,131	19,390
Ludhiana	6,441	57,622	23,266	87,329	7,396	48,937	42,833	99,167
Mansa	(885)	2,976	(5,761)	(3,670)	(359)	4,117	(2,912)	845
Moga	(610)	7,572	(5,524)	1,437	(25)	7,722	(1,691)	6,006
Mohali	1,642	14,918	(4,395)	12,164	2,065	15,541	(1,142)	16,465
Muktsar	(781)	6,081	(6,041)	(741)	(255)	6,439	(2,671)	3,513
Nawanshahr	2,071	15,527	3,687	21,285	1,580	10,255	7,002	18,837
Patiala	(1,234)	9,722	(1,687)	6,801	242	12,444	5,490	18,176
Roopnagar	1,333	10,016	2,333	13,682	1,456	9,414	4,553	15,424
Sangroor	181	17,749	(13,447)	4,484	598	14,399	(6,413)	8,584
Tarn taran	3,383	13,606	7,409	24,398	3,397	12,815	9,596	25,807

*(Indicates excess supply)

Youth aspiration study indicates a clear mismatch between student aspiration and job opportunities available in the state. Sectors such as Textile and Apparel, Transportation and Logistics,Construction and Food Processing need to work on building a positive image, and providing the right working environment/perks, to attract talent.

Interactions with industry in the state have revealed that challenges are often related to quality of the workforce, rather than quantity. Most of the industry personnel opined that quality issues in the state are two-fold - technical knowledge and soft skills/behavioral aspects - with prospective employees lacking in either, or both of them. Manufacturing industries are facing serious issues to employ appropriate manpower, as most skilled graduates prefer to work in services sector than in manufacturing.

Recommendations for stakeholders (Government, NSDC/SSC, Industry and Training Institutes) are aimed at developing a comprehensive approach for the skill development activities in Punjab.

Key recommendations for the Government include:

- Building systematic mechanisms to identify and assist potential school dropouts transition into vocational programs
- Setting up of Anchor Institutes inmore focus Industries and broadening their scope
- Focus on Enhancing Skill Training Capacities in Districts With Low Penetration of Vocational Education
- Technology enabled faculty development model
- Effective monitoring of the current schemes applicable in the State

Key recommendations for the Industry/Industry Bodies include:

- Aligning CSR Goals (especially mandatory 2% CSR requirement) towards skilling, and play an active role in PPP initiatives. Share annual plan of recruitment with government and industry nodal agencies for skilling
- Support training institutes in development/delivery of programs
- Align recruitment policies to ensure hiring certified manpower from Govt/SSC accredited training institutions
- Invest in up-skilling of existing manpower and formulate formal HR policies and mechanisms to encourage employees to train in institutions
- Improve the work conditions to reduce attrition by providing a part of compensation in form of accommodation

Key recommendations for NSDC include:

- Facilitating development of Curriculum and Standards for Focus Sectors/ Vocational Courses in Schools
- Promoting Private Sector Participation in Focus Sectors & Supply Clusters
- Quality standardization through Sector skill councils

Key recommendations for Training Institutes include:

- Focus on high growth/ aspirational sectors where student acquisition is easier –Construction, Communication, BFSI etc
- Create capacities in districts with lower penetration of training infrastructure – Tarm tarn, Jalandhar, Ludhiana. Districts where low penetration of training infra is coupled with high industry growth, are high potential for future growth of skilling
- Explore scheme-based training potential to address the skilling needs of under privileged/BPL population - key schemes with high training potential are SGSY, Construction and Agriculture)
- Emphasize offering accredited programs (SSC certifications) to ensure industry acceptance for certifications
- Leverage existing infrastructure to build optimal delivery models (ITI premises, PSIDC space where offered, industrial space during lean production hours etc)
- Build industry linkages in areas of development and delivery of training programs- placements, curriculum formulation, apprenticeships, faculty training
- Engage credible local networks (SHGs, NGOs, student groups such as Youth Clubs) for student acquisition

District wise skill gap details and further detailed recommendations, are provided in the full report. We suggest that the recommendations of the study should be treated in totality by all the stakeholders, to realize the intended objective of a robust skill development ecosystem in Punjab.

2 Report Structure

The report is structured in the following manner

- **Part I** includes Foreword, Acknowledgements, Study Objectives, Approach and Methodology, Study Limitations and Executive Summary.
- **Part II** concentrates on the profile of Punjab from a socio-economic and human capital perspective and state level recommendation on skill development in Punjab
- **Part III** consists of detailed analysis of all districts of Punjab from a socio-economic and human capital perspective and specific district level recommendations
- **Part IV** consists of Appendix

3 Acknowledgement

We are grateful to the Government of Punjab and its various departments for their contribution towards the successful completion of the study. Our special thanks to Shri B. Purushartha and Shri M P Singh who gave their time for focused and intense discussions.

We acknowledge with gratitude the support provided by the skill Training Institutions, NGOs, Industry Representatives and the youth of the state for their contribution towards the study

We would like to thank all industry partners, training partners for their active participation. The success of the study has been possible through their collaborative efforts.

In addition, we convey our gratitude to all those who have, in some way or other, contributed towards the successful completion of this study.

4 Study Objectives

National Skill Development Corporation (NSDC) has mandated KPMG Advisory Services Pvt Ltd to undertake the District level Skill Gap Study of the state of Punjab.

Study objectives would include a review of the following at an overall state and for all districts:

- Socio-economic profile – demography, economic profile of district by industry, state of education.
- Identify developmental opportunities keeping in mind factor endowments and stakeholder perspectives.
- Identify specific developmental initiatives/projects which have an impact on employment generation.
- Articulate the aspirations of the youth.
- Identify the current and future (2012- to 2022) skills and manpower requirements by industry and estimate the gap that exists.
- Study the existing VT infrastructure booth in the private sector and the government domain.
- 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 organization.
- Create an action plan with indicative timelines.

5 Approach and Methodology

KPMG has adopted a structured methodology to understand the skill ecosystem in Punjab, assess incremental manpower needs, and collate insights, to arrive at recommendations to address the manpower skill gaps in the districts of the state – which in turn aggregate to provide a picture of the manpower skill gaps in the entire state.

Dimensions to assess skill gaps

Skill gaps were assessed under two dimensions, each of which required a different approach

i. *Need for manpower skill development in organized sector*. This involved understanding skill gaps for formal/informal employment in both private and public enterprises among key manufacturing and services sectors in Punjab.

ii. *Need for manpower skill development for livelihood trades:* This involved understanding skill requirements to foster local livelihoods in primary, unorganized secondary and unorganized tertiary sectors in the districts.

Salient features of the study

Socio-economic Profile: Detailed analysis of demographic and socio economic factors such as population, population growth trends, population density, urbanization, overall literacy, female literacy, healthcare indices, school education, higher/vocational education, drop out rates, domestic product, per capita income, labour force participation, worker participation rate, migration, primary, secondary & tertiary sector profiles at a state and district level.

Sectoral Focus: The study focused on analysing manpower skilling requirements from the perspective of state level high growth sectors along with localized sectors that have potential at the district level. Since over two thirds of the population of Punjab is involved in agriculture and agri-allied activities, the study also focused on manpower skilling requirements in these areas. Government policies of related sectors were studied, to understand thrust and growth targets for different sectors in the state, which would translate to priority sectors from the perspective of investment in manpower skilling as well.

Voice of Stakeholders: Detailed interactions were undertaken with various stakeholders, such as youth, private skill training providers, Government departments with skill training mandate and industry players - to understand their perspectives on manpower training and placement.

Manpower Supply-Demand Gap: Manpower supply-demand gap would be the difference between projected workforce participation and industrial manpower requirements, estimated as 2022.

Estimation of Manpower Supply: Based on estimations of population growth rate, working age group population and labour force participation, manpower supply in 2017 and 2022 has been estimated at district and state level.

Assessment of Existing Skill Training Capacity: Existing skill training capacity has been calculated based on sanctioned intake and enrolment in formal skill training institutions – government and private institutions offering Higher Education, Vocational Education (ITI/ ITC) and Diploma programs, at both the state and district levels along with Government sponsored training schemes. A dipstick study was undertaken at the district level to understand the institutional readiness of the skill training institutions.

Computation of Incremental Employment Potential: District level and state level data on categories of investment and employment were analyzed to arrive at the composition of economic activity, and their respective growth rate in each district. The proposed sectoral growth rate for the state of Punjab and its districts, have been estimated based on a triangulation of several factors such as past growth trend, state government's policy impetus to sectors, ,inputs from industry personnel, presence of industrial infrastructure besides a state-comparable analysis.

Labour elasticity estimates have been used to arrive at sector wise employment growth projections at the district and state level. Based on industry inputs and published literature, incremental employment potential has been classified as highly skilled, skilled, semi skilled and un-skilled. Further, critical skills required for the focus sectors have been highlighted, keeping in view the adoption of technology in industries.

Detailed approach for the human resource requirement estimation is given below.

Secondary Sector		
Sub Sectors	**Factors considered for estimation of district wise incremental manpower during 2012-22**	**Key stakeholders**

Large Scale Industries	• Estimated district wise/sector wise investment during 2012-22 in a district from sector wise projected investment estimated based on analysis of
	  • Investment targets from state industries & Commerce department
	  • Achievability of targets from interaction with nodal bodies for identified priority sectors, historical trends (IEM data)
	• Estimated sector wise manpower intensity based on historical trends for investment to employment ratio (IEM data) and inputs from industry bodies.
		Punjab State Industrial and Development Corporation (PSIDC) and nodal bodies/players in identified priority sectors covering SEZs and Industrial clusters including
		Auto and auto components
		• Chemicals
		• Basic Metal Industries
		• Electrical Tele & Electronics
		• Glass, Ceramic & Cement
		• Pharmaceuticals
		• Food processing
		• Textiles
		• Machinery and equipment
		• Non-metallic mineral based products
		• Plastic and rubber products
		• Fabricated metal products

MSMEs(Medium-Small Scale Enterprises)	• Estimated sector wise MSME growth potential in the district from analysis of
	  ◦ Inputs from DIC on potential MSME sectors in the district
	  ◦ Historical trends in sector wise MSME growth from Entrepreneurship Memorandum-II (EM-II)
	  ◦ Qualitative inputs from MSME units.
	• Employment generation capacity in MSME units based on analysis of
	  ◦ EM-II data
	  ◦ Qualitative inputs from MSME units from identified priority clusters
		District Industries Officer(DIC), Promoters of MSME units from key identified sectors including
		• Textile and textile articles
		• Paper Products
		• Metal Processing
		• Engineering Products
		• Chemical and Chemical Products
		• Ore/ Mineral Processing
		• Stainless Steel
		• Any other district specific units

Tertiary Sector		
Sub Sectors	**Factors considered for estimation of district wise incremental manpower during 2012-22**	**Key stakeholders**

IT-ITES	• Estimated district wise IT-ITES output(IT-ITES Exports/Domestic) growth during 2012-22 based on analysis of
	  ◦ Output growth targets from Department of IT
	  ◦ Historic achievement of growth targets,
	  ◦ Interaction with IT-ITES industry bodies and key IT Players in Punjab
	• Estimated Manpower intensity in IT-ITES industry based
	  ◦ Inputs from IT-ITES industry bodies
	  ◦ Historic trends in output linked employment generation potential in IT-ITES Industry
		• Department of Information Technology
		• IT-ITES Industry bodies
		• Key IT-ITES Players in Punjab

Tourism	• Estimated growth in number of tourist visits to major tourist destinations in the district during 2012-22 based on analysis of
	  ◦ Growth targets from Department of Tourism
	  ◦ Historic tourist arrival trends,
	  ◦ Interactions with Tourism Industry Players.
	• Employment generation potential for tourist visits based on Interactions with regional tourism development bodies
		• Department of Tourism, Govt of Punjab

Hospitality	• District wise estimated growth in number of hotel rooms/restaurants during 2012-22, based	• Hotel and Restaurant Associations

	on analysis of • Growth of hospitality sector in the district based on contribution to district GDDP • Inputs from State/Regional Hotel and Restaurant Associations • Key growth drivers for hospitality like trends in per capita income, life style patterns. • Employment potential estimates in hospitality industry	
Healthcare	• District wise estimated growth of healthcare institutions during 2012-22, estimated based on analysis • Universal healthcare access targets(number of PHCs/CHCs/SHCs/ beds /healthcare professionals per 1000 population) • Achievability of targets from proposed healthcare sector allocation and historic spending pattern • Estimated manpower intensity in healthcare institutions based on requirement of healthcare professionals (Number of doctors/nurses/ technician per number of hospital beds)	• Department of healthcare along with nodal agencies for • Primary healthcare • Secondary healthcare • Tertiary healthcare • Private healthcare institutions in key districts.

Education	• Estimated district wise growth of education institutions during 2012-22 based on analysis
	  • Universal and state level penetration targets for educational institutes (Schools/Higher Education Institutions /Vocational Education Institutions)
	  • Achievability of targets from proposed fund allocation towards education
	• Manpower intensity in educational institutions, estimated based on human resource requirement in educational institutions(student to teacher ratio)
		• Department of School Education
		• Department of Secondary Education
		• Department of Higher Education
		• Department of Industrial Training and Vocational Education
		• Department of Technical Education

Logistics	• Projected contribution from logistics sector to the district economy based on analysis of
	  • Historic growth trends in logistics sector to the district economy
	  • Investment into logistics hubs (Railways/Roadways)
	  • Interaction with key Logistics players
	• Employment potential in logistics industry based on analysis of
	  • Current employment patterns in logistics industry
	  • Inputs from key logistics players in Punjab	

Transportation	• Estimated district wise growth in number of commercial vehicles during 2012-22 based on analysis of historic trends in commercial vehicle registrations in the district and interactions with transportation companies • Estimated requirement of manpower per vehicle based on Inputs from transportation companies	• Department of Transportation • Transportation Companies

Retail	• District wise estimated growth in organized/un-organized retail sector
	  • Historic sub sector GDDP growth trends
	  • Penetration of organized retail
	  • Key growth drivers like per capita income trends, spending patterns
	• Employment generation potential estimates
		• Key organized retail players in Punjab

Banking Sector	• Estimated district wise growth in number of bank branches during 2012-22 based on analysis of
	  • Financial inclusion targets
	  • Historic growth trends in deposits/loans
	• Manpower requirements in banking outlets	

Financial Services	• Estimated growth in Non Banking Financial Companies (NBFC) in the district
	  • Projected growth trends in bank deposits/loans
	  • Historic growth trends in NBFC operations
	  • Manpower intensity in NBFCs	

Primary Sector		
Sub Sectors	**Factors considered for estimation of district wise incremental manpower during 2012-22**	**Key Stakeholders**
Agriculture	• Based on analysis of district level crop pattern, irrigation pattern and extent of mechanization training potential in agriculture has been estimated	• Department of Agriculture, • District Agricultural Officers, Agricultural promotion councils in major agro clusters of Punjab

Agriculture Allied Activities	• District wise/category wise estimated growth in Agri-Allied output by 2022 based on analysis of
	  • Growth targets from Nodal Agencies for key Allied activities in Punjab
	  • Historic growth trends, funding allocation from nodal agencies
	• Category wise employment potential in Agri-Allied activities
		• Nodal Agencies for Individual Allied Sectors
		  • Horticultural
		  • Food Crops
		  • Other Cash Crops

Assessment of Manpower Supply-Demand Gap: Supply-demand gap at the district and state level is estimated from the incremental manpower supply and projected employment growth during 2012-17 and 2017-22.

Research Methodology of the Study

The study was carried out through both primary and secondary research methodology, as well as qualitative and quantitative techniques.

Primary Research: Primary research inputs were collected through research techniques such as in-depth discussions, formal interviews, and Focus Group Discussions (FGD). Interview schedules, FGD Guidelines and points for field observations were developed in accordance to the study objectives. Consultation meetings were conducted with the following stakeholders to understand their perspectives on skill development.

Activity	Number of Interviews
Primary Interviews	250
FGDs across Punjab	30
Number of Participating Students	650

State Government Officials: Department of Technical Education, Directorate of Economics and Statistics, Department of Industries & Commerce, Department of SC & BC, Department of Tribal Development, Department of Rural Development, I, Small Scale Industries Department, Department of Healthcare, Department of Transportation, Department of Toursim, Department of School Education, Department of Higher Education.

District Administration Officials: District Collector, Officials from Department of Rural Development , District Planning Office, District Employment Office, District Labor Office, SC/ST Welfare Department Officials and Women and Child Development Department, Sarpanch/Patwari from a sample of villages.

Skill Training Providers: Government ITI Principals and Training Officers, Private ITC Principals and Training Officers, NGOs involved in Skill Training, Financial Services Institutions involved in Skill Training

Skill Training Beneficiaries: Students who are currently pursuing vocational education, and focus groups such as BPL women trained under government programs

Industry Representatives: HR and Operations personnel from key industries and members representing industry associations in the respective districts

Migrant Labor : Dipstick survey in tribal belts and non-tribal belts of Punjab

Focus Group Discussions (FGDs) were conducted with groups of 10-15 students in each district to understand their aspirations in terms of social life, career, expected economic standards of living and work related mobility - and the outcome was correlated to the level of industrialization of the district. The group discussions were carried out in a systematic manner with both skill training beneficiaries and skill training providers. The discussions were designed to be participatory in nature, and evoke inputs from all stakeholders, with due representation from various sections of trades and courses besides gender, both at trainer and trainee level.

Secondary Research: Secondary Data were collected from a number of sources including central, state and district government/administration agencies, especially the Department of Economics and Statistics, Department of Industries - and program specific information from departments with a mandate in skill training, and from studies commissioned by funding agencies, NGOs etc.

6 Growth of Human Capital in Punjab

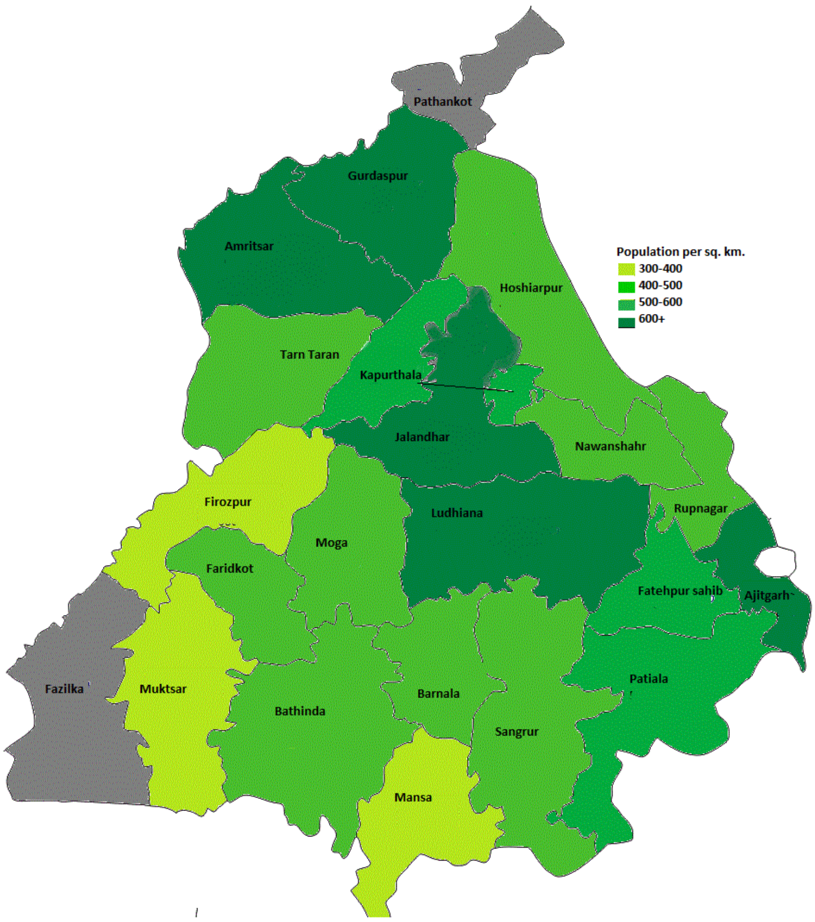
Demography

The northwestern state of Punjab occupies a land area of 50,362 sq. km, contributing to 1.53 percent of India's geographical area. The state is divided into 22 districts with a population of 2.77 crore according to the 2011 census report. It is the 19th largest state in the country in terms of area, but contributes a disproportionately more share in the overall population. The population density, at 550 persons per sq. km., is significantly higher than the national average of 382 persons per sq.km[4].

Punjab has fertile, alluvial soil and a number of major rivers and water bodies. Agriculture and agri-allied industries are the primary sources of employment for a majority of the population.

Punjab has witnessed a decadal growth rate of 13.73 percent in its population. Population density has also increased from 498 persons per sq. km. to 550 persons per sq. km. Population is distributed unevenly amongst the 22 districts. The districts of Ludhiana, Amritsar, Gurdaspur, Jalandar, and Firozpur account for 45.07percent of the total population. Population distribution at a district level is presented in the map below.

Population density by district in Punjab



[4] District Statistical Hanbook 2012, Government of Punjab

Source: Statistical Handbook of Punjab, 2012

High population densities in certain districts indicate opportunities to develop human capital. The level of urbanization, as well, is another important indicator for the growth of human capital. Urban population accounts for only 37.49 percent of the total population as Punjab is a primarily agricultural state. However, the population growth rate for urban districts has been considerable in the past decade, as demonstrated in the table below.

Demographic Trends in Urban Districts of Punjab[5]

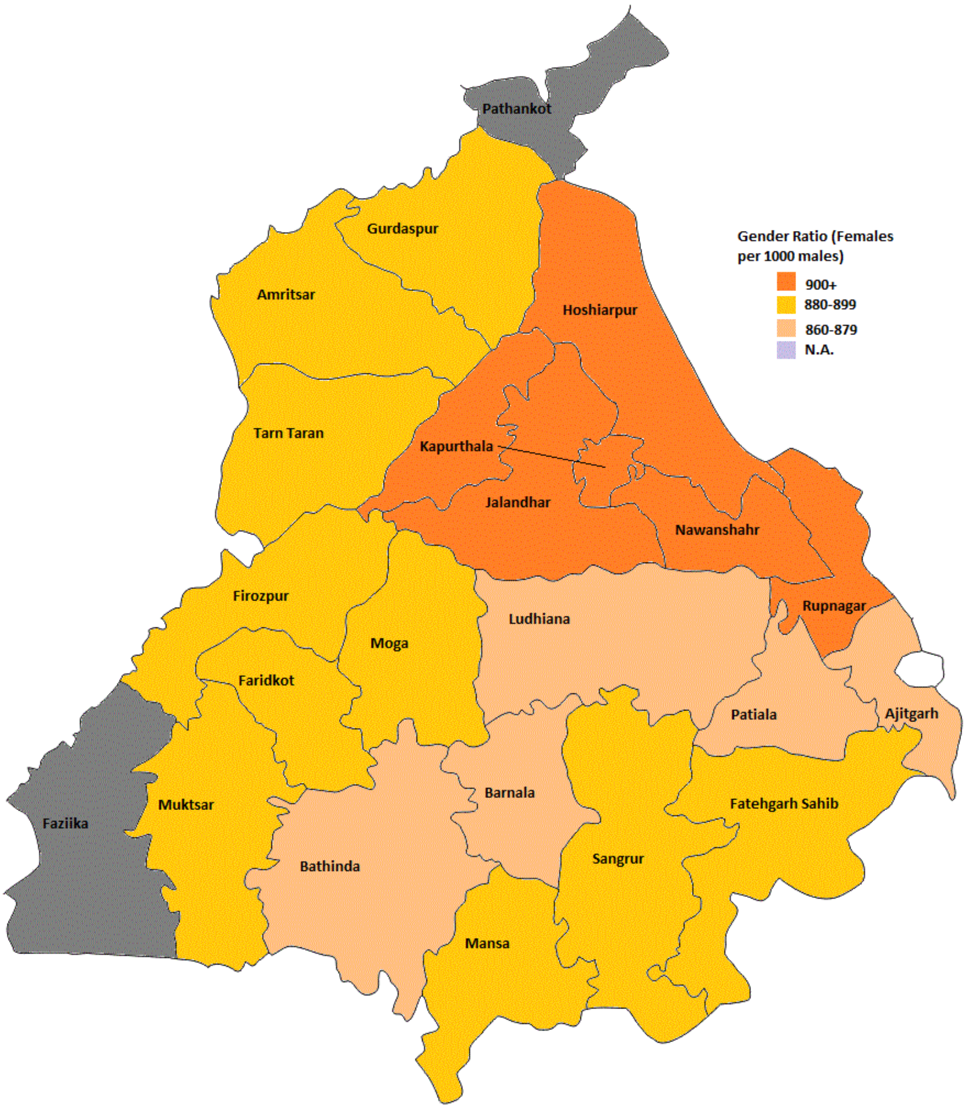
District	Population in Lakhs (2011)	Percentage of Urban Population	Population Growth Rate (2001-11)
S.A.S. Nagar	22.99	55.17%	32.02%
Amritsar	24.90	53.64%	15.48%
Ludhiana	34.87	59.14%	15.00%

Scheduled castes (S.C.) account for 28.85 percent of the total population of Punjab. The districts of Jalandhar, S.B.S Nagar and SriMukatasar Sahib have a large population of scheduled castes. Workers in the S.C. category are employed extensively by the Punjab government in corporations, committees, Panchayat Samities et al, making up 31.5 percent of all those employed. The native population of Punjab unlike the other regions of India (mainly Central and East India) doesn't have a tribal group among its anthropological group

The gender ratio in Punjab stands at 893 females per 1000 males, as per the 2011 census. This is considerably lower than the national average of 940 females per 1000 males. The child gender ratio (0-6 years) is much lower at 846, compared to national average of 901. However, there has been an improvement in gender ratios in the state in the last decade, aided by government initiatives to promote and encourage the acceptance and education of girl children. Schemes like Rakshak Yojana, announced in 2005 by the Health and Family Welfare department award financial incentives to families to educate girl children.

[5] The Statistical Handbook of Punjab, 2012

Gender Ratio by district in Punjab

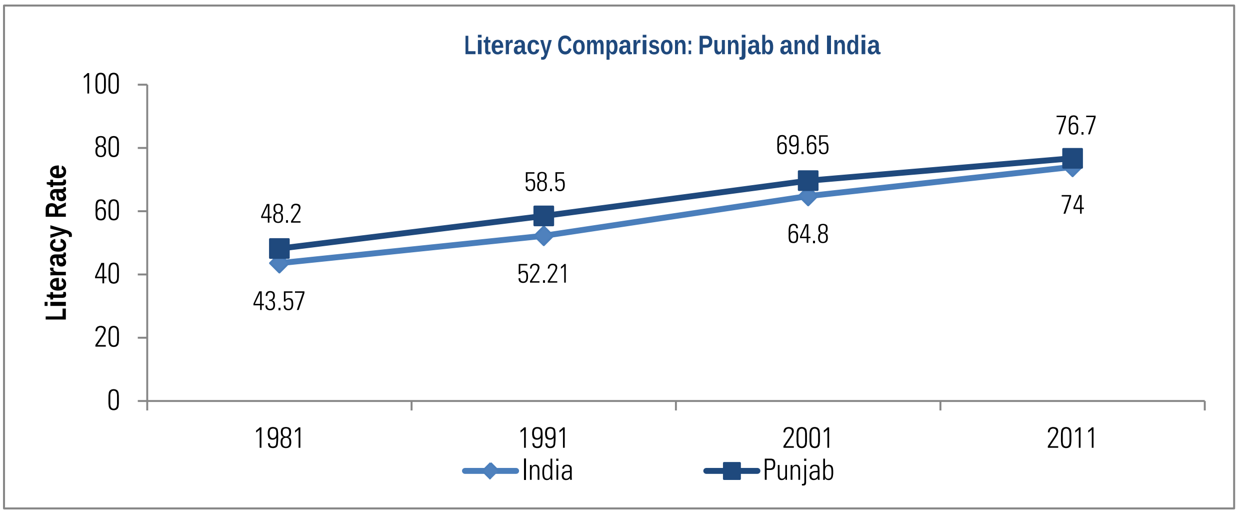


Source: Statistical Handbook of Punjab, 2012

It is seen that the distinct gender ratio patterns are continuous rather than sporadic indicating the similarity of social systems of adjacent districts. It also points that the gender ratio if improved at a singular district level can have a ripple effect and drive improvements in adjacent district as well. Surprisingly, the so called progressive belt around Ludhiana and Mohali have abysmal gender ratios pointing out the deep rooted archaic social practices which need not be driven away just by urbanization.

Literacy

According to 2011 census data, the literacy rate in the state is 76.7 percent as against the national rate of 74.02 percent. The state government has participated in and initiated efforts towards increasing literacy levels in the state through national schemes such as Total Literacy Campaign, Continuing Education campaign and more recently, the farm literacy campaign.

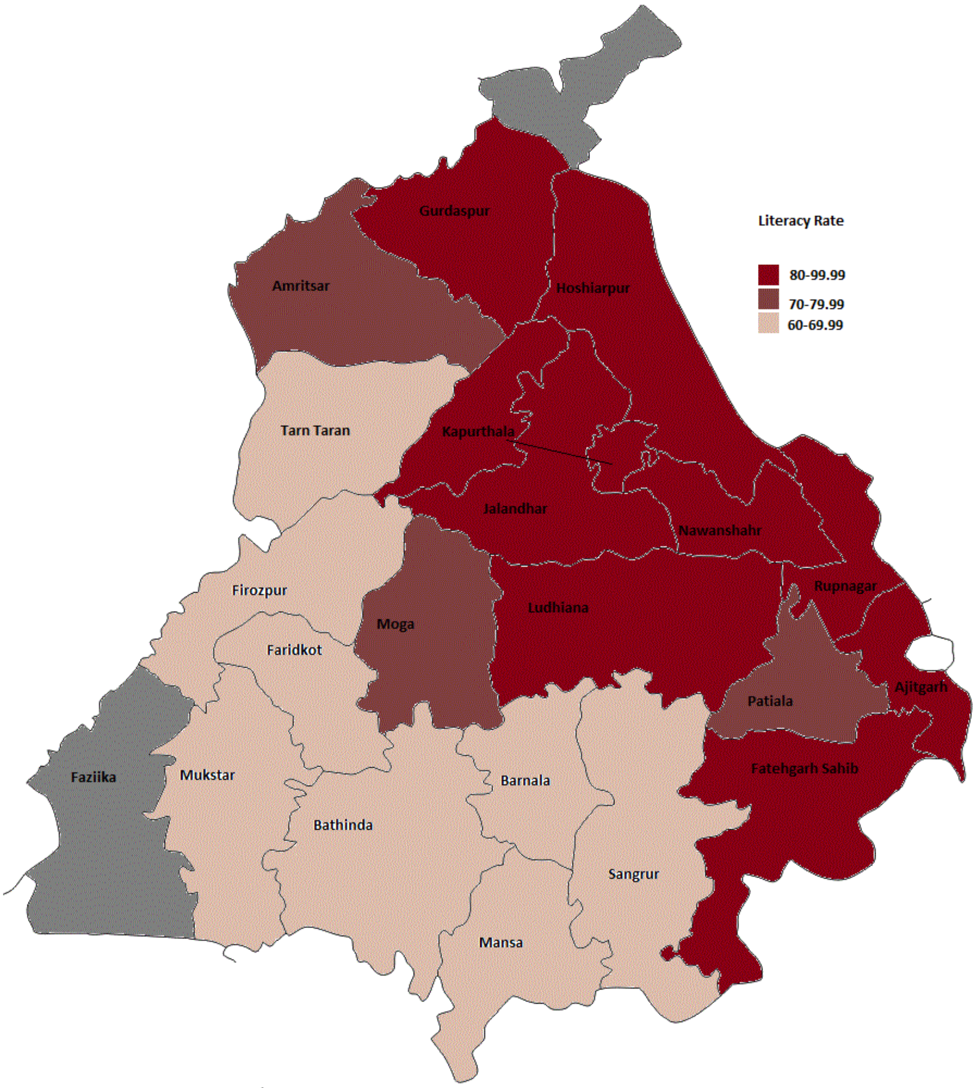


Source: Statistical Handbook of Punjab, 2012

There is a considerable disparity in literacy rates across categories of gender, class and proximity to urban regions. In districts like Gurdaspur and Amritsar, male literacy rates in urban areas is much higher than the state average at 91.54 percent and 87.36 percent respectively. However, literacy rates overall for scheduled castes is at a dismal 56.22%. Women from scheduled account for the lowest literacy rates among all groups at a rate of 48.25%[6].

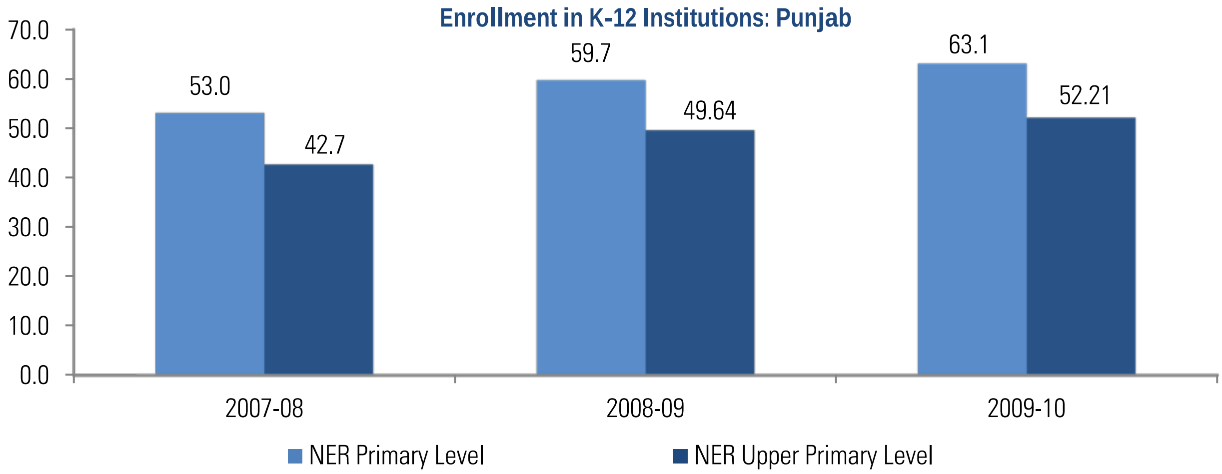
[6] Statistical Handbook of Punjab, 2012.

Literacy Rates by district in Punjab



Source: Statistical Handbook 2012, Government of Punjab

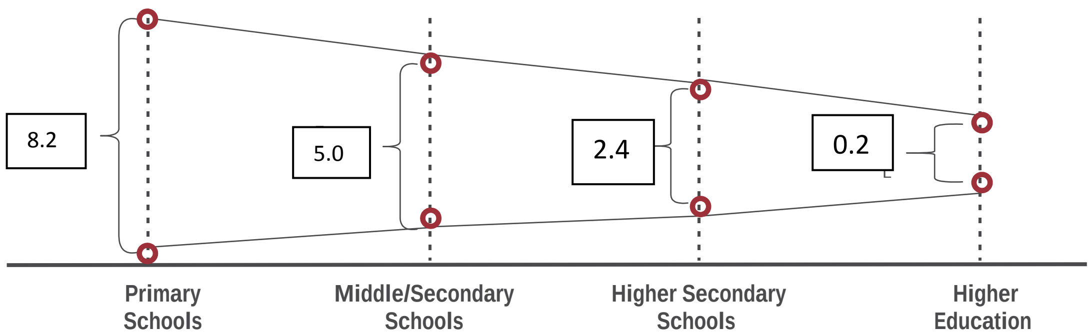
The female literacy rate for the state at 71.3 percent is higher than the national average of 65.46 percent. However, this masks the extent of disparities between districts. Literacy rate for women in rural areas is very low at 55.7 percent in Sri Muktsar Sahib and 59.94 percent in Faridkot. Literacy levels need to be improved by expanding the reach of programs to certain target populaitons. Programs like the Sarva Shiksha Abhiyan and Jan Sampark Abhiyan try to ensure that children in the age group of 6-14 attend school and that the community is engaged in running schools. Figures for net enrollment ratio for this age group are presented below.



Source: Enrollment in K12 Institutions in Punjab, Planning Commission[7]

While the State has progressed towards providing access to different regions and ensuring high enrolment, net enrolment rates are consistently lower than the national average. Punjab also needs to focus on its retention rate across higher levels of education. Dropout rates are high after primary education, resulting in low enrollments in higher education.

Drop-out Rate in Punjab (in lakhs)

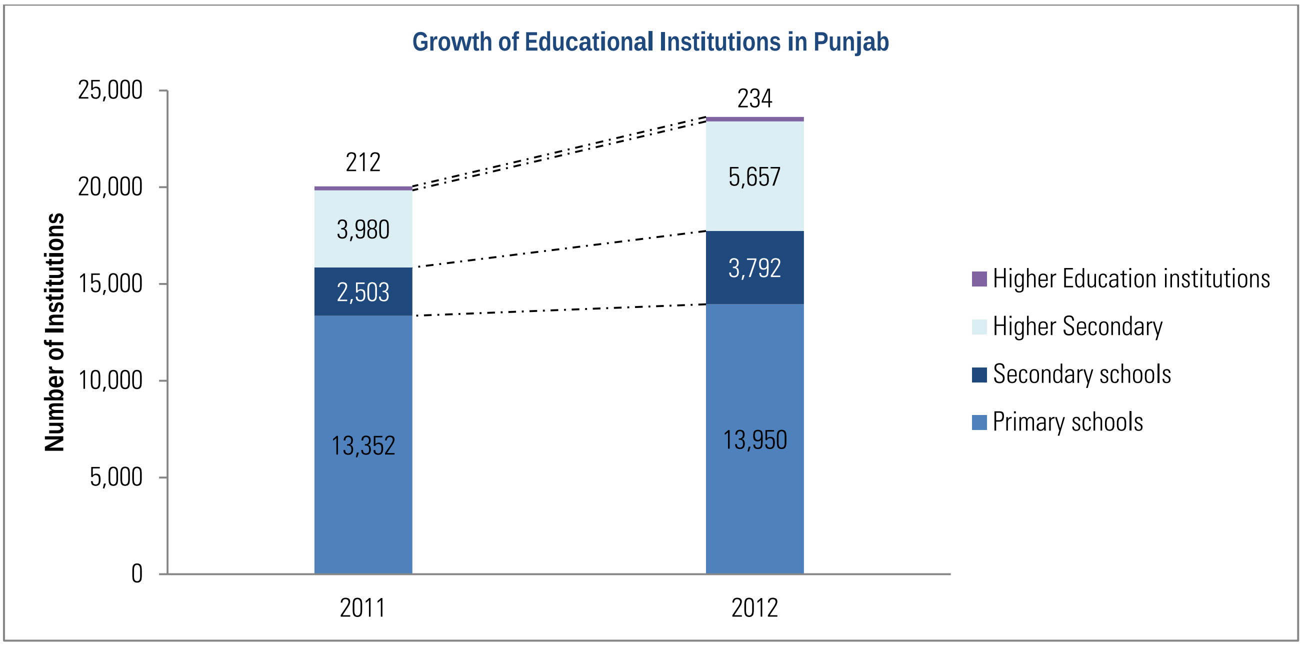


Source:Annual Policy Document, Govt. of Punjab, KPMG Analysis

Successful implementation of universal education programs at the school level has to now be followed by expansion in higher education facilities. Reasons for dropping out vary depending on the gender, class and location of students. Young girls in rural areas, for example, are less likely to pursue their education after the primary level due to a lack of middle schools in the immediate vicinity. Parents are reluctant to allow their daughters to travel long distances. Additionally, students from low income households are pressured to earn an income to support the family. These are problems are structural and require dedicated support from institutions if they are to be solved.

[7] Elementary Education in India 2009-2010 http://planningcommission.nic.in/data/datatable/0904/tab_164.pdf

School drop outs overwhelmingly engage in non-specialized labor in the agricultural sector. Only 16.91 percent are engaged in a trade of some form. Vocational training for these students could raise the livelihood and human capital of these people.[8]



Source: Statistical Handbook 2012, Government t of Punjab

Healthcare

Punjab is ranked 2nd on the Human Development Index, 2010. HDI encompasses many social and economic indicators like poverty, employment health, infrastructure, education and social security. Historically, Punjab has performed better than most other Indian states in terms of access to healthcare facilities and welfare programs. There is a high penetration of primary and community health centers in rural areas. Public hospitals are however found overwhelmingly in urban areas amounting to 67 as opposed to 4 for rural regions. Life expectancy at birth (both male and female) is the highest in the country at 69.4 years[9]. For every major social indicator, Punjab performs better than the national average.

Major health indicators for Punjab are presented below.

Performance of Punjab in comparison to other Indian states on healthcare indicators

(as per SRS data)	Punjab	Haryana	AP	Bihar	Delhi	Kerala	All India
Infant Mortality Rate	30	51	49	52	33	12	50
Crude Birth Rate	16.2	22.7	18.3	28.5	18.1	14.7	22.5
Crude Death Rate	6.8	6.6	7.6	7.0	4.4	6.8	7.3
Total Fertility Rate	2.8	2.5	1.9	3.9	1.9	1.7	2.6

Source: Statistical Handbook Punjab 2012

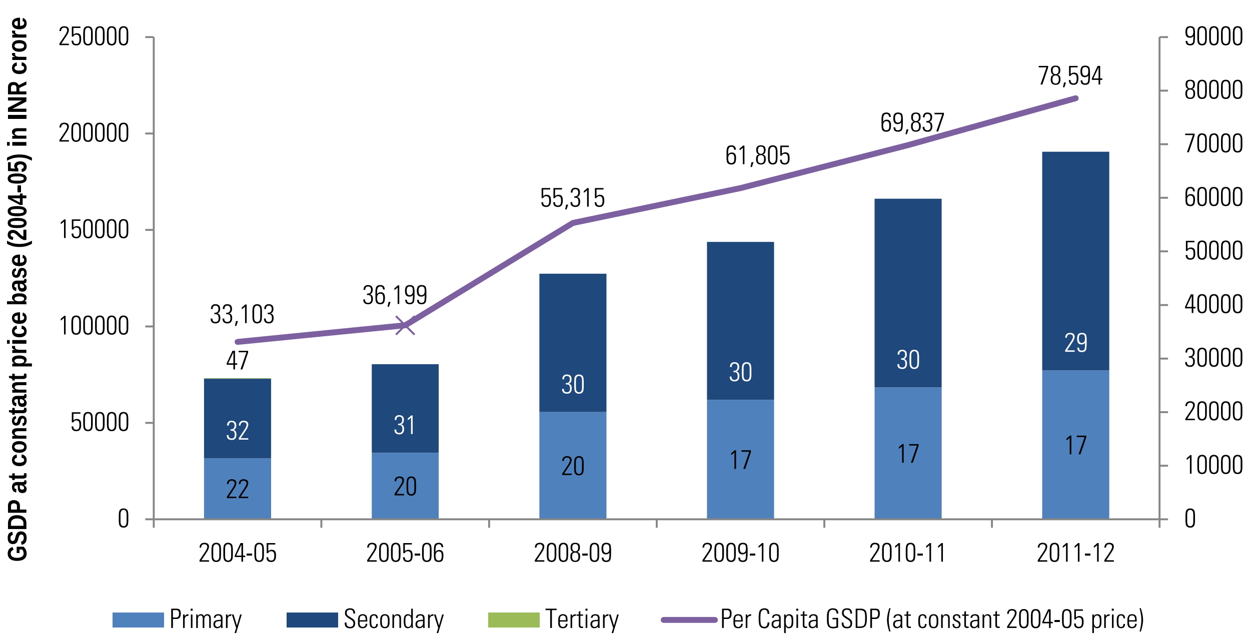
[8] http://pbplanning.gov.in/pdf/basicStat2011in_eng.pdf
[9] Inequality Adjusted Human Development Index for India's States, UNDP, 2011.

6a. State of the Economy

The state economy's has registered a growth rate of 15.01 percent[10] CAGR between 2004 and 2012, while the national GDP grew at 7.8 percent during the same period. Further, there is gradual shift in the economy from primary to secondary and tertiary sectors in the state.

In 2011-12, the primary sector contributed to a little over one-fourth of the total GSDP, while contribution from the secondary sector had remained almost constant at a little less than 27 percent[11] of the total economy between 2009-10 and 2011-12. Tertiary sector has shown the maximum growth amongst the segments with a contribution of 43.7 percent in 2011-12.

Punjab Economic Performance

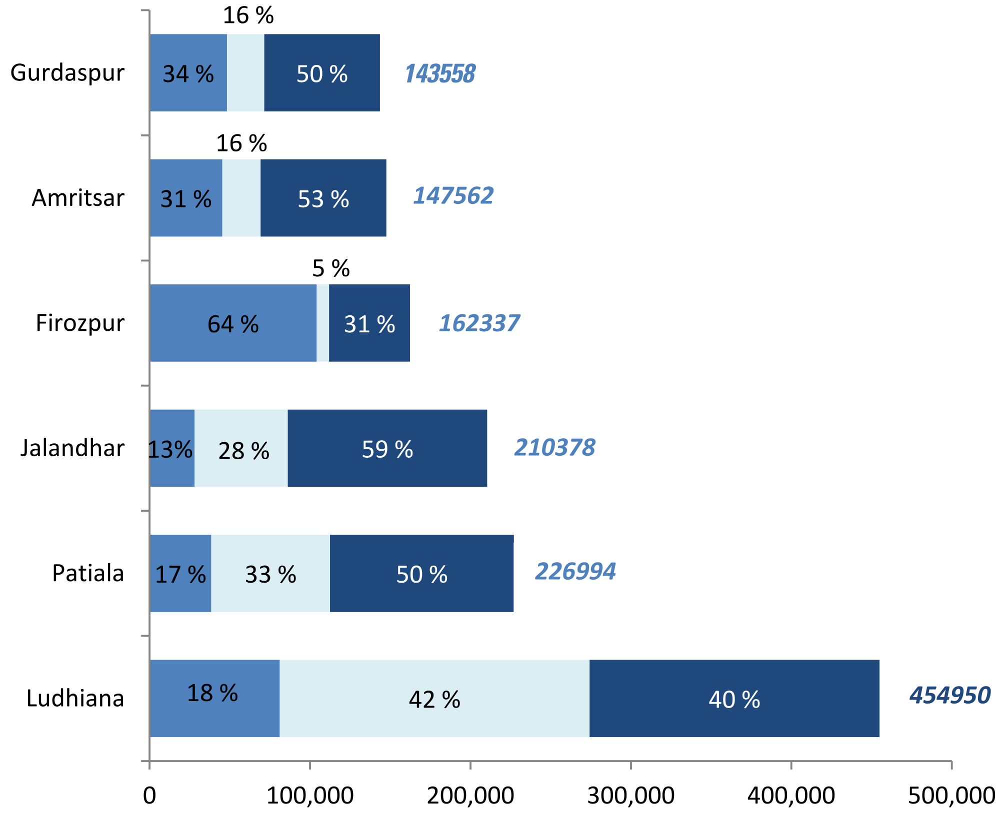


Source: Punjab Economic Survey

While the state per capita income (estimated at constant prices 2004-05 base) has increased from INR 33,103 to INR 78,594 between 2004-05 and 2011-12[12], it is much higher than the national level average of INR 38,005 during 2011-12. Per capita income at current prices has grown at the rate of 13.00 % and 12.04 % per annum for Punjab and All India level respectively during 1999-2000 to 2009-10. Six key districts of Ludhiana, Jalandhar, Gurdaspur, Amritsar, Patiala, Firozpur in Punjab as shown below contribute to about 55% of the total state economy.

[10] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[11] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[12] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf

Economic performance of key districts in Punjab (2011-12 estimates at current prices)



Source: Planning Commission, Statewise District Domestic Product Report

It is interesting to note that the districts having highest GDDP are also the ones that have the lowest contribution of the primary sector to their GDDPs.

7.1 Agriculture

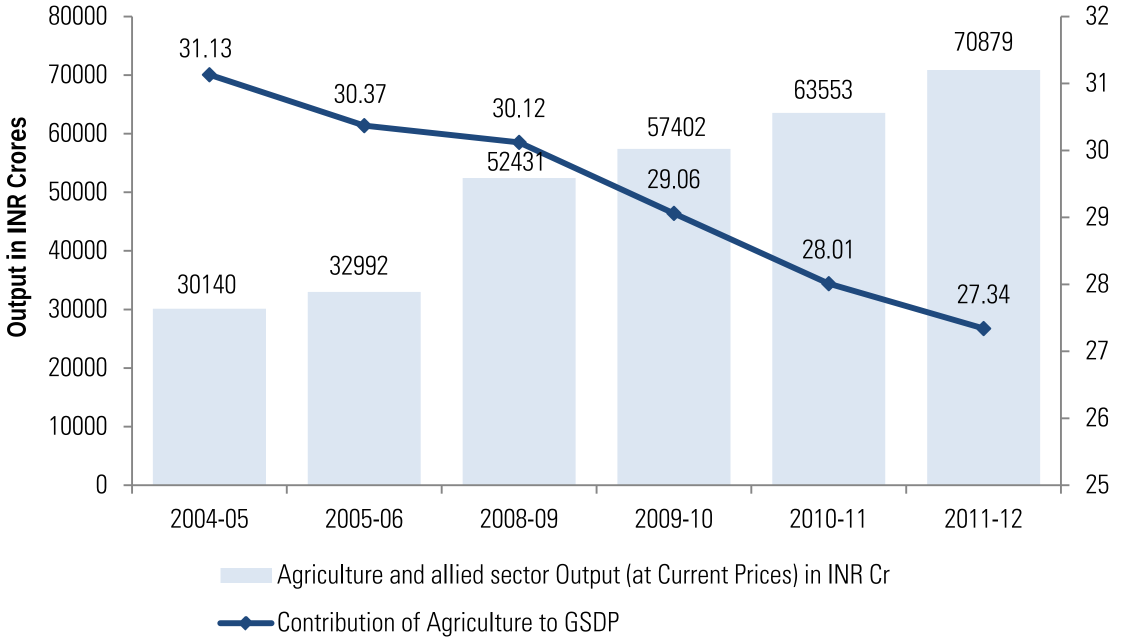
Over the past two decades Punjab's industry has grown rapidly, but agriculture remains one of the most important pillars of the economy. Agriculture is the highest employer in the state with 68 percent[13] of the working population employed in this sector.

Between 2004-05 and 2011-12, agriculture's contribution to the GSDP has come down from 31.13 percent to 27.34 percent (at current prices). During the same period, the share of overall primary sector including livestock, forestry, and allied agricultural activities along with agriculture declined from 30.37 percent in 2005-2006 to 24.12 percent in 2011-2012. On the other hand, over this period, while the share of secondary sector in GSDP decreased from 31.78 per cent to 29.77 per cent; that of tertiary sector increased from 42.27 per cent to 43.75 percent[14].

[13] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf

[14] Gross District Domestic Product-Publication No. 933, Government of Punjab

Growth of Agricultural Output in the State



Source: Punjab Statistical Abstract 2011-12.

Agriculture in Punjab is primarily dependent on irrigation, the percentage of cultivated land irrigated stood at 97.9 per cent in 2010-11. While there are wells and tube wells, majority of irrigation is received from canals, reducing the dependence on ground water for irrigation. The area irrigated by tube wells has also been on the decline with the area irrigated by tube wells reducing from 3074 hectares in 2000-01 to 2954 hectares in 2010-2011.

The average land holding pattern indicates that the average land holding size decreased from 4.07 hectares in 1980-81 to 3.79 hectares in 1995-96. Since then, however, the trend has been constant.

The strategy for increasing agricultural production followed in Punjab was based on putting large cultivated areas under wheat and rice; use of high yielding seeds, water and fertilizers; and efforts to improve input-use efficiency for reducing the cost of production. However, over time, the wheat-rice rotation, now covering over 60 per cent gross of sown area, has created problems of serious consequences, some of which are:

- Both the crops are water-intensive, thus leading to large-scale depletion of groundwater in many areas.
- Both crops are heavy consumers of macro- and micro-nutrients, thus degrading the soil. Due to intensive cultivation, the organic carbon of the soil has come down from 0.5 per cent in 1960 to 0.2 per cent in 1990.
- The wheat-rice rotation adversely affects physical characteristics of the soil as, due to puddling for paddy, an impervious layer is formed in the soil, which does not allow root-penetration to deeper layers, thus restricting nutrient use.
- The wheat-rice rotation consumes heavy doses of fertilizers, pesticides and weedicides, which create ecological problems of environmental pollution, fauna and flora imbalances, and builds up residual toxicity in soil, water and air.

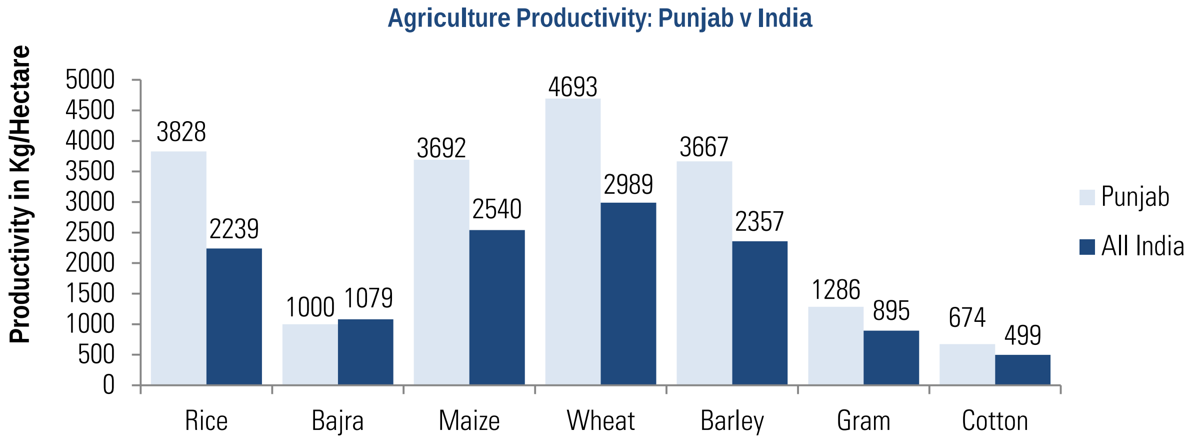
Extensive use of agro-chemicals became an important component for increase in crop production during the initial years of the green revolution, and their use has since continued to increase. This has deprived the soil of natural nutrients, primarily Nitrogen, Phosphorous and Potassium (NPK) and has increased dependency on artificial sources of nutrients with 1918 nutrients tonne fertilizers being used in 2011-12 as opposed to 1768 nutrients tonne used in 2008-09.

Due to the above factors, the state is much ahead of the national average in the productivity of certain key agro produces such as rice, wheat, maize and mustard. Rice and wheat occupy maximum sown area in the kharif and rabi seasons respectively. The yield of sugarcane is however low in Punjab.

Crop	Districts
Bajra	Kapurthala, Amritsar, Mansa
Maize	Gurdaspur, Amritsar, Tarn Taran, Kapurthala, Jallandhar, SBS Nagar, Hoshiarpur, Rupnagar, SAS Nagar, Ludhiana, Patiala
Wheat	All districts except Fazilka
Barley	Ludhiana, Firozpur, Muktsar Sahib, Bathinda, Mansa, Sangrur, Barnala, Patiala
Gram	Hoshiarpur, SAS Nagar, Firozpur, Muktsar Sahib, Bathinda, Mansa, Sangrur, Barnala
Mash	SAS Nagar, Amritsar, Gurdaspur, Hoshiarpur
Arhar	Amritsar, Tarn Taran, Ludhiana, Jallandhar, Hoshiarpur, Rupnagar, SAS Nagar, Moga, Sangrur, Barnala
Moong	Gurdaspur, Tarn Taran, Ludhiana, Firozpur, Faridkot, Muktsar Sahib, Moga, Bathinda, Mansa, Sangrur, Barnala
Massar	Gurdaspur, Hoshiarpur, SAS Nagar, Firozpur
Cotton	Firozpur, Muktsar Sahib, Bathinda, Mansa, Sangrur, Barnala
Sugarcane	Gurdaspur, Amritsar, Tarn Taran, Kapurthala, Jallandhar, SBS Nagar, Ludhiana, Hoshiarpur, Rupnagar, SAS Nagar, Firozpur, Sangrur, Patiala, Fatehgarh Sahib
Potato	All Districts except Pathankot and Fazilka
Onion	All Districts except Muktsar Sahib and Barnala

Source: Punjab Agri-Policy Document

Comparison of Agricultural Productivity



Source: Punjab Statistical Abstract 2011-12

Despite decreasing relative contribution to the overall economy, the employment and occupational dependence of the state on agriculture remains very high. Of the total work force in the state, around 60 percent are dependent on agriculture and allied activities and this is higher than the national average of 58 percent employment dependence on agriculture. Further analysis of the Economic Census of Punjab indicated that the majority of the economic establishments were non-agriculture based. As compared to Economic Census, 1998, the agricultural establishments had recorded positive growth, indicating increasing interest in undertaking commercial/trading based activities based on agriculture.
The analysis of the macro-economic scenario from an agriculture sector perspective indicates a need to diversify the skill set of the current population involved in the primary sector, to ensure a sustained livelihood mechanism. Agri-allied sectors such as horticulture, dairy farming, and fisheries, complement traditional agricultural activity in increasing the earning potential of those involved in agriculture. Therefore, the existing workforce in agriculture needs to be trained for such allied activities.

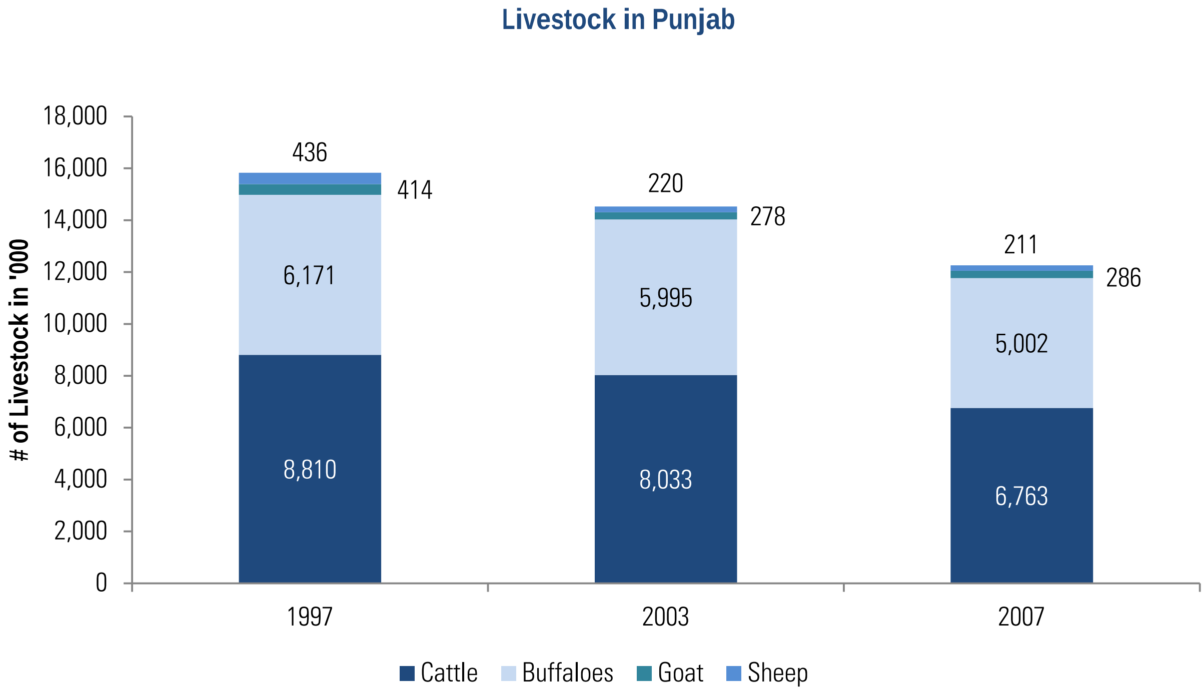
Animal husbandry and livestock is an integral part of agri allied sector. Animal husbandry, especially cattle and goats and sheep, poultry and piggery, have been providing rural livelihood opportunities.
In addition to these, apiculture and sericulture have also seen an increasing participation from the population. The contribution of the sector to the state GSDP has decreased from 10.56 per cent in 2006-07 to 9.20 per cent in 2011-12. The annual milk production of the state has increased from 89,08,000 tonnes in 2005-2006 to 95,51,000 tonnes in 2011-2012. Poultry farming has also seen a constant increase with the number of poultry in the state being 18,899,700 in 2007 as opposed to 11,456,800 in 1997.

Livestock Growth clusters in Punjab[15]

Activity	Districts
Poultry	Gurdaspur, Jallandhar, SAS Nagar, Ludhiana, Sangrur, Barnala
Dairy	Gurdaspur, Amritsar, Jallandhar, Hoshiarpur, Ludhiana, Bathinda, Sangrur, Patiala
Goatery	Ferozepur, Muktsar Sahib, Bathinda, Sangrur
Piggery	Moga, Bathinda, Sangrur, Patiala, Fatehgarh Sahib

[15] District Agriculture Plan, Department of Agriculture

Sheep Rearing	Ferozepur, Muktsar Sahib, Bathinda



Source: Livestock Census of 1997, 2003 and 2007

Fisheries are an agri allied activity which supplements livelihood income, besides serving as food and nutritional support for the family. Inland fish production in the state is necessitated due to the land-locked situation of Punjab. A trend, in fact, has already been set in favour of diversification to fish farming. Farmers are engaged in intensive fish culture in ponds and tanks on modern scientific lines through composite fish culture of fast growing species. There is great potential for pisciculture in the state. Fisheries' resources of Punjab comprise 868 km of river, 11,200 km of canal, 5,804 hectare of small water reservoirs and lakes. In addition, there are 7,185 village ponds covering an area of 4,730 hectare, which are suitable, or can be made suitable, for fish culture after some renovation and water-supply arrangements.

Horticulture The diversity of physiograhic, climatic and soil characteristics of Punjab allows successful cultivation of a variety of fruits, vegetables and flowers. There was a three-fold increase in the area under fruit production during 1981-82 to 1995-96, but in 1999-2000 there was a considerable decline in the area under fruits. Though the total area under fruit cultivation has almost doubled from 34,209 hectares in 2000-01 to 67,554 hectares in 2011-12, but it is still less than the levels of 1990-91. The annual production of fruits has gone up from 4.80 lakh tonnes in 2000-01 to 13.73 lakh tonnes in 2010-2011.

Vegetable cultivation in the state has been on the increase since the last decade and the area under vegetables is more than two lakh hectare, out of which three-fourths of the land is under potato and onion cultivation. Hybrid crops have given higher yields and higher returns to the farmers particularly when marketed in the cities.

The popularity of the cultivation of red chillies has increased in recent years as dry chillies give good returns. The production of some of the vegetables is so high that often the market crashes and the cultivators suffer heavy losses because of the glut. Such crops as tomato, potato and cauliflower are subject to gluts in different areas and as a result the farmers even do not harvest the crops. This clearly demonstrates that the potential of vegetable cultivation is high in the state. Vegetable production has seen an increase from 23.37 lakh tonnes in 2000-01 to 36.45 lakh tonnes in 2010-11.

The agriculture and allied activities output in the state has regional variations, depending on the land area under cultivation, nature of soil, irrigation facilities and scope for allied activities in the districts. A comprehensive view of information related to crops and allied activities for districts contributing significantly to overall state Agri and Allied sector output is presented in the table below.

Key Activities in Districts with High Agri and Allied Sector Output			
Districts	**Contribution of District to Overall State Primary Sector Output**	**Major Crops**	**Agri- Allied Activities**
Firozpur	13.3 %	Cotton, Wheat, Paddy, Bajra, millet, grams	Animal Husbandry, Forestry, Fishery, Bee Keeping, Vermi Composting, Mushroom growing
Ludhiana	10.4 %	Wheat, Paddy, Sugarcane, Oilseeds, Maize	Animal Husbandry, Horticulture, Bee Keeping and Mushroom Cultivation, Organic farming
Bathinda	7.3 %	Cotton, rice , wheat, rapeseed and mustard	Horticulture, Dairy Development, Bee Keeping, Mushroom and Vermi Composting, Fishery, Social Forestry
Sangrur	6.8 %	Paddy, cotton, moong	Animal Husbandry, Horticulture, Fishery
Gurdaspur	6.2 %	Rice, Wheat, sesamum, cotton, barley	Horticulture, Animal Husbandry, Fishery,
Muktsar	6.0 %	Paddy, Wheat, Mustard, Cotton, Rapeseed	Horticulture, Animal Husbandry,

Source: Central Research Institute for Dryland Agriculture

Flowers: Cultivation of flowers has attracted the attention of farmers and it is gradually increasing because of high demand in domestic and international markets. Key flowers grown in the state are gladiate, chrysanthemum, carnation, marigold and rose.

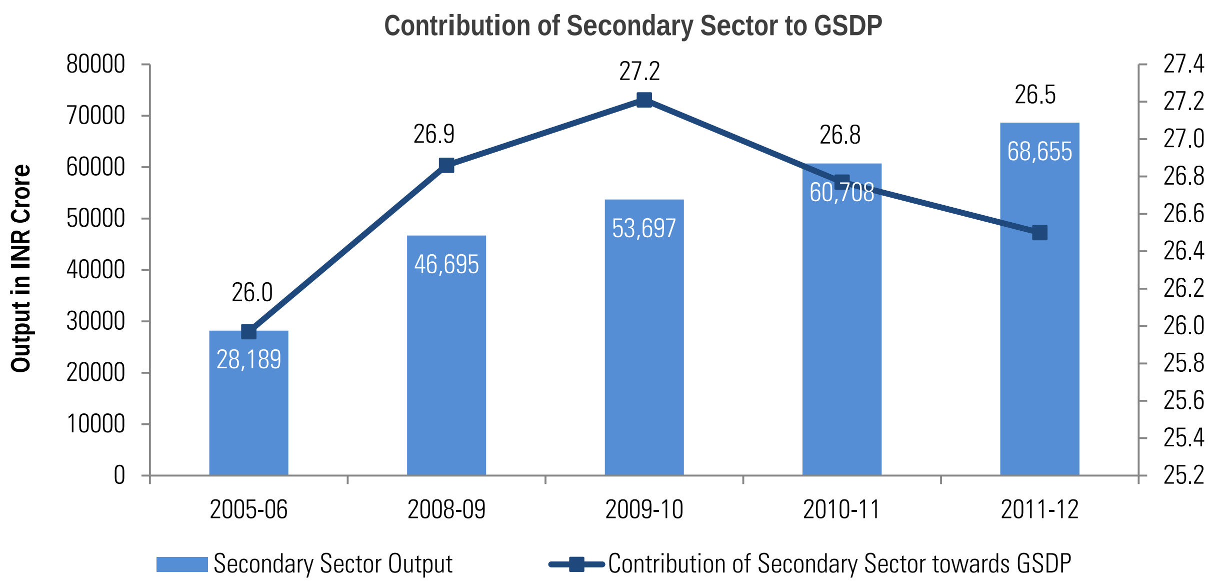
Mushroom cultivation: There are three button mushroom spawn producing laboratories functioning at Patiala, Jalandhar and Hoshiarpur. These centres besides supplying the spawn also train the farmers for growing mushroom and provide suitable readymade compost at subsidized rates. During 1998-99, about 1000 tonne of button mushrooms were produced in the state. During 1980-81 to 1990-91, mushroom cultivation had become popular in the state and a maximum of 35,000 tonne of mushroom per year were being produced. Subsequently the production declined because of lack of market and processing facilities for making soups and other value added products. Oyster mushroom and paddy straw mushroom cultivation can make this enterprise round the year activity. This venture, given marketing, processing and pricing support can flourish to the advantage of small farmers.

Aromatic plants: The cultivation of aromatic plants, such as mentha, lemon grass and others, has been taken up by some farmers on an experimental basis. About 40,500 hectare area was under mentha during 1998-99. Oil-extraction plants have been set up where the harvested mentha is consumed. Growers get adequate return from this crop. Similar arrangements can be made for other aromatic crops in the state, which could encourage diversification.

Sericulture: There are 16 government sericulture farms in Punjab. Over two lakh mulberry plants have been planted and distributed in the kandi areas. This activity is confined mostly to the kandi areas and the sub-mountain regions, where plantations of mulberry are available. Absence of silk-weaving factories and collection centres are limiting the progress of this enterprise. Though it is a cottage industry which can give employment to women and small farmers in particular, it has not yet received due attention.

Secondary Sector

Punjab is not heavily endowed with rich mineral deposits and other natural resources, as compared to other states of the country. However, there exists several other growth opportunities in the manufacturing sector. The secondary sector in the state grew at a compounded growth rate of 15.99 percent[16] between 2005-06 and 2011-12, though its contribution to state GDP remained almost constant at around 29 percent[17] during the same period.



Source: Department of Economic and Statistical Analysis, Punjab

In order to achieve the state's economic agenda of attracting industrial investment as well as the social agenda of generating employment opportunities, the state government is undertaking several initiatives towards these objectives.

16 http://www.nabard.org/departments/pdf/status%20of%20microfinance%202011-12%20full%20book2.pdf
17 http://www.nabard.org/departments/pdf/status%20of%20microfinance%202011-12%20full%20book2.pdf

The state's Industrial Policy 2013[18], has several features that promote investment in the state. The Industrial Policy aims to promote inclusive economic growth and private sector investment through PPP mode; it also focuses on skill development for increasing the employability of youth in Punjab. The Industrial policy also lists out a comprehensive strategy to meet its economic goals; it advocates the setting up of a grievance redressal mechanism for the industry, it also lays special focus on the development of the SME through cluster development. The incentive policy termed as 'Earn Your Incentive' aims to incentivize industries on VAT, stamp duty, property tax, purchase tax and market fees etc. The Policy also lays down single window clearances for businesses to facilitate ease of doing business.

As of 2012, the state had a total investment (including domestic and foreign investments) of INR 1.3 lakh crores compared to INR 75 lakh crores of proposed investment.

The state has established an Industrial Growth Center in Bathinda and Pathankot. The state also has Export Park at Ludhiana and the Punjab Small Industry and Export Corporation Limited is the focal point of all industrial activity in Punjab. These specialized areas target growth sectors like auto motive industries, steel processing, textile, food processing, heavy engineering, agro products etc. Punjab has 611 large industrial units and another 199000 MSME units. The state government has MSME investment worth of INR 18.55 lakh crores, generating employment for more than 11.18 lakh people.

Punjab's exports have also seen phenomenal rise over the last few years. The state exports reached to INR 10.7 thousand crores[19] in the year 2007-08 which is up from INR 3600 crores in the year 1996-97.

For the growth of the SME sector, the state has envisioned setting up Centres for Competitiveness in its Industrial Policy. These centers will assist small industry in acquiring latest technology; it will also perform advisory services in the agri and biotechnology sector. The state has also taken up programs like patent registration, cluster development, branding, market development and special incentives to SSIs in the form of various plans.

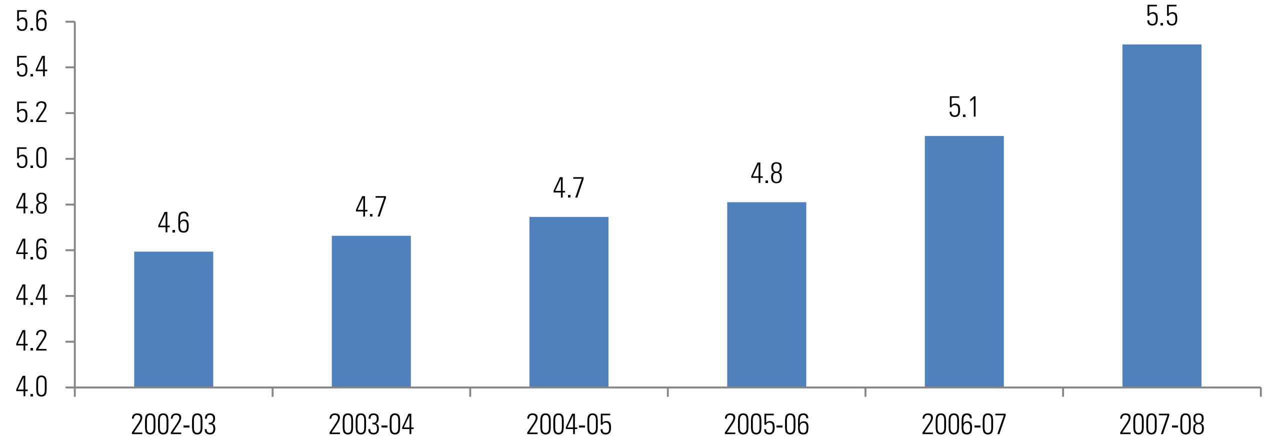
The state owned Punjab State Power Corporation Limited has 3900 MW of installed generation capacity, comprising of state level thermal and hydro generation projects, apart from drawing from the national grid.
As of 2010-11, the state had 1,633 kilometers of national highways and 1,393 kilometers[20] of state highways with total road length of 45,178 kms. However, the state's roadway average of 89.71 km per 100 sq km, which is at par with the national average of 90 km per100 sq km[38], indicates overall average road connectivity. However, main cities as well as industrial districts are well connected through railway services. Overall, the state is well connected in terms of railways, it has a total of 2134 km of railways in the year 2010-11 which is 3.31 % of all rail routes in the country (this number is above the average considering the fact that Punjab occupies only 1.53 percent of India's area and accounts for only 2.29 percent of India's population)[21].

Due to several favorable government initiatives, there has been perceivable growth in the secondary sector.
Industrial growth, in terms of investment, has been predominantly propelled by large-medium scale industries, whereas small scale industries have played a significant role in contributing to employment generation in the state.

[18] http://Punjab.gov.in/misc/industry-policy-2011.pdf
19 http://www.indianexpress.com/news/Punjab-exports-touch-rs-48530-cr-mark/1038018/
[20] http://Punjab.gov.in/business/economic_infrastructure.asp
[21] http://indianrailways.gov.in/railwayboard/uploads/directorate/stat_econ/yearbook10-11/Track_bridges.pdf

The State Government has also approved 12 Special Economic Zones.

Small Scale Industries Employment in Punjab (in Lakhs)



Source: Micro, Small and Medium Enterprises Development Institute

While the state is steady on its path of industrialization, the industrialization is still restricted to certain pockets in the region - with many other areas being untouched by any significant industrial activity. Given the declining attractiveness of agriculture from a sustainable employment perspective, headway needs to be made by increasing investment in MSME segments to generate manifold employment opportunities; else it would be difficult to accommodate workforce displacement from primary sector.

Agro-products, chemicals and chemical products consumer goods, drugs and pharmaceuticals, mines and minerals, manufacturing and textiles sectors are some of the key sectors that are attracting major investments into Punjab. Food processing is one of the key sectors in the state with agri and agri-allied activities contributing to over 25 percent[22] to the GSDP. Covering four crop zones and two agro climatic zones[23], the state has a diversified farming environment with gross cropped area of 7.9 mn[24] hectares.

Punjab is one of the few states that have huge marketable surplus of wheat and rice. Punjab contributes to 42 percent and 29 percent[25] respectively of total wheat and rice in the central pool. This surplus is marketed by Punjab State Agricultural Marketing Board. Punjab also has a surplus of other crops, which can be utilized by the food processing industries in the state. Food parks have been established in many regions. These provide tremendous opportunity for the growth of the sector in the coming decade, especially in the following food processing categories

Food Processing Opportunities in the State	
Produce	**Processed Food and Other Opportunities**
Cereals and Pulses	Maize - Dairy feed, Cornflakes, Starch, Oil Wheat - Packaged Atta, Maida, Porridge (Dalia), Suji, Pasta

[22] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[23] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[24] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[25] Punjab State Agricultural Marketing Board

	Soyabean - Soya Milk, Soya Protein, Extruded foods, Soya flour Rice - Rice Bran, Puffed Rice, Flaked Rice, Bran Oil
Vegetables	Potato - Flour, Chips Onion - Dehydrated Flakes Green Peas - Dehydrated Peas, Frozen Peas Tomato - Puree, Ketchup, Sauces, Concentrate
Spices	Chilly, Ginger, Garlic, Coriander - Powder, Oleoresin, Paste
Fruits	Mango, Orange – Juice, Pickles, Jams, Squash
Meat	Meat and Meat products, Modernization of abattoirs
Fisheries	Fish wafers, Sausages, Soup, Cutlets, Fish feed, Fish balls

Source: Central Research Institute for Dryland Agriculture

As of now Punjab has two Agri Export Zones covering regions around Ludhiana, Bathinda, Jalandhar and Patiala. This program is part of a central Government initiative to incentivize exports with each major state focusing on a particular agriculture commodity. The Government of Punjab had identified potato as the ideal product given the already strong contract farming system in place among the progressive farmers.

Features of the Agri Export Zone Policy

Revamp the entire value chain from farm to fork to drive value addition Focus on modern pre-harvest and post-harvest technologies to increase yields and volumes
Special focus on Quality Control and mapping in order to meet the stringent export norms
Generate incremental add-on employment in complementary services like warehousing, logistics, packaging, examination, inspections, field visits etc

Minerals Mining and Processing: Punjab is not naturally well endowed in terms of minerals; consequently the mining and quarrying sector is not a major contributor to the state GSDP. Of the few minerals that are found in the state, sulfur and quartz are prominent.

Cement: Punjab produces 1.54 million tonnes[26] of cement each year; Ultratech Cements Limited has put up a cement grinding plant in Bathinda with an investment of more than USD 40 mn[27] with a capacity of more than 1.75 million tonnes. Punjab also has industry associations in the form of national Council for Cement and Building Materials.

Manufacturing of Engineering/Electrical Goods: Key manufacturing regions in the state like Ludhiana, Patiala and Jalandhar have traditionally been a hub for engineering & electronic component manufacturing units. Large public sector undertakings are also present in the state. State's thrust to provide fiscal and non fiscal incentives to the sector has fuelled growth in other regions like Bathinda. There are more than 17000 registered working factories that manufacture goods in Punjab[28].

[26] http://www.cmaindia.org/portal/index/index.aspx
[27] http://www.cmaindia.org/portal/index/index.aspx
[28] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf

Textiles: Textiles is one of the key sectors in Punjab, with the state being the fourth largest cotton producing state in India. Punjab produced 655 million [29] kg of cotton in 2011-12, which is equivalent to more than 25 % of total cotton produced in country. The state has a rich tradition of weaving, and has more than 136 mills[30] generating exports. There are over 1359 looms in the state. Several leading players such as Aditya Birla Grasim, Mafatlal, Vardhman Group, SKumars, etc are present in the state. However, the textile industry has shown a marked decline in the past three years. The state is promoting the sector through development of textile infrastructure such as the following:

- Textile Park at Barnala.
- Subsidies to handloom industries.

Cluster based approach is being increasingly recognized as a sustainable, cost effective and inclusive strategy to ensure manufacturing competitiveness of the local industry. For e.g. Textile Park at Barnala

Handicrafts: Punjab has tremendous potential for handicraft activities ranging from stone carvings to pottery, embroidery, weaving and painting. While the traditional handicrafts are practiced mainly in rural parts of Punjab, modern handicrafts are popular in urban regions like. List of key handicraft activities in Punjab are presented in the table.

Handicrafts Activity	Potential Region
Pottery	Most of rural Punjab
Upholstery, Embroidery, Woolen	Amritsar
Leather Applique Work	Hoshiarpur
Brass Work	Maler Kotla

Source: Planning Commission, Punjab Development Report

Bio Technology: Bio Technology is one of the emerging sectors in Punjab. The state has envisaged becoming a leader in the field through a sector specific policy of 2003, and has constituted a nodal agency to oversee the growth of the sector. The state provides impetus to the sector through incentives ranging from capital subsidy to training assistance and preferential allotment of land. Key infrastructure already present in the state includes Knowledge City, Mohali, Bio Technology Park. Agricultural research on hybrid varieties and clinical trials are amongst the key activities undertaken in the state, major agricultural research institutions are PAU Punjab Agricultural University, Ludhiana, Punjab National Dairy Research Institute.

Chemical and Pharmaceuticals: Chemical and Chemical products are one of the major industries in Punjab. The state has more than 241[31] working factories producing chemicals and chemical products. The Industrial and Investment Policy of 2013 lists the Pharma sector as one of the key investment areas, the state government has also introduced procedural reforms in connection with grant and renewal of manufacturing licenses to remove bottle necks. There is a pharma cluster is present in Punjab.

Key industrial activity in both large scale industries segment and small scale segment for major industrial districts of Punjab

Snapshot of key Industrial Districts in Punjab			
District	**District's contribution to overall state manufacturing**	**Potential Sectors for large scale industrial**	**Key MSME Activities**

[29] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[30] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[31] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf

	output (in %)	growth	
Ludhiana	29.73	Food, Auto, Textile, IT,	Agro based, embroidery, leather, metal, engineering parts
Patiala	11.40	Auto, footwear, machinery	Agro based, rubber, metal, plastic, wood based, engineering units, electrical goods
Jalandhar	8.96	Auto industry, electronics, food processing, mineral processing, pharmaceuticals, metal based	Agro based, embroidery, wood based, leather based, metal based, engineering parts
SAS Nagar	6.76	Textile, metal, food processing	Agro based, wood based, chemical based, metal based and engineering goods
Sangrur	5.81	Food processing, books, leather, metal, auto and dairy	Agro based, textile, rubber, chemical products

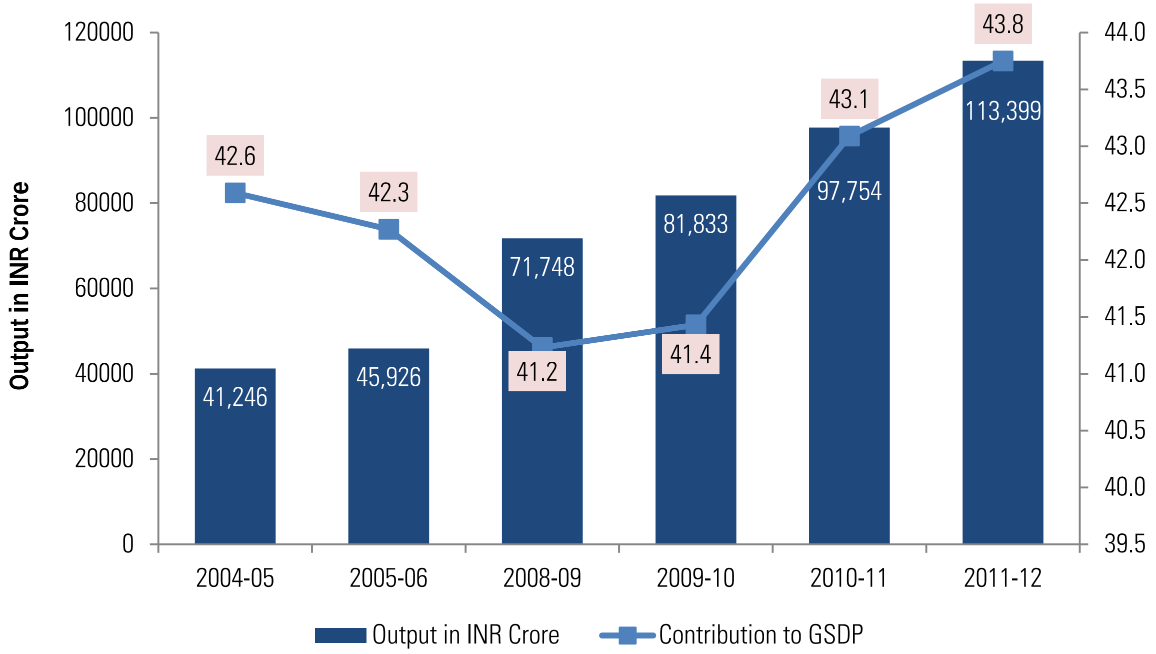
Source: Development Commissioner Ministry of Micro, Small and Medium Enterprises

5.3 Tertiary Sector

The tertiary sector is the largest contributor to the state economy, contributing 43.8 percent[32] to GSDP in 2011-12, and is growing at a CAGR of 15.54 percent[33].

[32] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf
[33] http://esaPunjab.gov.in/Data/StateStatisticalAbstract/StatisticalAbstract(2011-12).pdf

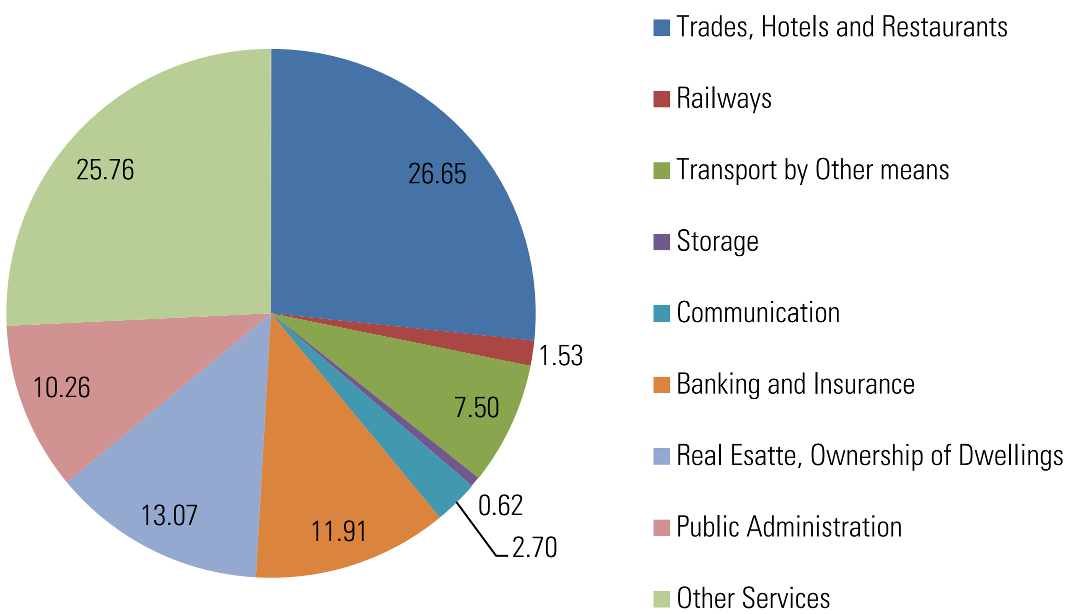
Contribution of tertiary sector towards GSDP



Source: Economic Survey of Punjab

The key components of tertiary sector include Hospitality sector, Real Estate, Ownerships of Dwellings, Business Services, business services, Transport, Public Administration, Banking and Insurance.

Contribution of Tertiary Sector in Punjab (2011-12)



Source: Punjab Statistical Abstract 2011-12

The state government, over the past decade, has undertaken several initiatives towards transforming Punjab into an IT driven economy. The state had drafted the IT Policy way back in 2009. With increasing focus on adoption of IT in every sphere of public service activity, the sector is expected to continue contributing significantly to the economy.

IT/ITES: An investor friendly attractive policy was developed for IT, ITES and Electronics Industry which was notified on 26th April 2003. This was aimed at attracting investments in Punjab in the area of IT, ITES, Communication and Bio-informatics, in particular and industry, in general through infrastructure creation and facilitation.
The electronics township spanning a massive 365 acres industrial complex, with 75 additional acres of land under development for setting up an IT Park, is the electronic nerve centre of north India and has become the largest conglomerate of telecommunications industry in the country.
Companies like Punjab Communications Ltd., JCT Electronics, Semi-Conductor Complex Ltd., Godrej GE, Telephone Cables Punjab Ltd., Electronics Systems Punjab Ltd., Quark, Reliance, Tata Group and Infosys etc. have been set up in the Complex. These companies are engaged in diverse fields like VLSI, Telecommunication Equipment, UHF & Microwave Transmission Equipment, Multiplexing Equipment, Digital Exchanges, High-end Software Development, UPS Systems, amongst others. Office Space have also been constructed and leased to parties interested in immediate commencement of production activities.

Financial Services: Banking and financial services are another key sector in the tertiary category in the state. There are, in total, 4231 branches in the state with 1399 rural branches, 1350 semi urban branches and 1482 urban branches. Punjab National Bank has the largest network in the state with 627 branches. From a microfinance perspective, total number of SHGs linked by the banks in the state as on 31 March 2007 was of the order of 10,000. Apart from this, many small loans under the priority and non-priority sector have been extended by the banks. However, comparing the performance of state (63% linkage banking) against national average of 80% linkage, between 2005 and 2007, indicates that Punjab, despite being a recipient of several donor driven projects having a significant microfinance component, progress on linkage front has been slow.

Tourism and Hospitality: The state ranks twelfth in the number of domestic tourist arrivals and fifteenth in the number of foreign tourist arrivals in India. Authentic data for contribution of tourism to the GSDP is not available. However, it is estimated that the net share of tourism in the state GDP was 1.63% during 2001-2002. Pilgrim tourism has been the main driver for the tourists in the state. The state houses a number of holy shrines of the Sikh religion. In addition to this, Fatehgarh Sahib, Anandpur Sahib, Bakala(Amritsar) and Batala(Gurdaspur) attract a number of pilgrims every year. The state has seven Wildlife parks, zoos and wetlands. Tourism spots like Khajuraho, Bhimbaitka and Sanchi have been recognized as world heritage centers. Tiger Safari and Deer Park in Ludhiana and Chhatbirh zoo are major wildlife destinations. In addition to this, amusement parks in Morinda, Ludhiana, Jallandhar and Chandigarh attract a lot of domestic tourists. Heritage sites in Patiala and Bathinda also continue to be tourist hot-spots. Punjab, with an annual tourism influx of around 16.6 million (both domestic and foreign) generates benefits equivalent to Rs. 637 crores annually.

Category of Activity	Tourist Locations
Heritage Sites	Amritsar, Patiala, Ludhiana, Bathinda, Gurdaspur, Mohali
Wildlife Parks, Lakes, rivers and Hill Stations	Amritsar, Faridkot, Sangrur, Kapurthala, Patiala

Metros and Major Tourism Centre	Chandigarh, Amritsar, Patiala, Ludhiana
Eco Tourism	Ferozepur, Kapurthala, Muktasar, Ropar
Farm Tourism	Most of the districts in Punjab have large farms, this type of tourism is nascent but has huge potential
Sports Tourism	SAS Nagar, Faridkot, Patiala
Cultural Tourism	Faridkot, Patiala, Ropar, Kapurthala, Amritsar

Source: Tourism Survey for the State Of Punjab

Trade and Retail: With rapidly increasing per capita income the state has bright prospects for organized retail. Major cities like Mohali and Amritsar have seen the development of many organized mall spaces. Trade and retail business accounted for around one fourth of the GSDP in the year 2011-12.Ludhiana, Chandigarh and Amritsar have the highest number of malls.

Transport and Logistics: Major cities in Punjab are strategically located in close proximity to the National Capital Region, which gives them an easy access to the Indira Gandhi International Airport. There are 12 National Highways in Punjab totaling to 1,633 km of roadways[34]. Apart from this, the state also has more than 30 state Highways measuring 2,494 km in length. Punjab, having a great agrarian base, offers significant opportunity for warehousing and transportation. PSWC runs warehouses for the storage of agriculture products and minors forest produce offered by individuals, co-operative societies and other institutions. The strategic location of the state makes it an obvious choice to become a prominent warehousing hub. The Punjab state Warehousing Corporation has a total capacity of 58.73 lakh MT[35] which is one of the highest for the country (larger than much bigger states like Maharashtra, Tamil Nadu and Rajasthan etc).

Healthcare: A planning Commission report[36] estimates that Punjab will be spending Rs. 953 per capita on health in the year 2019-20, which is lower than the amount prescribed. The figure is less than the normative figure of Rs. 1,500. The average life expectancy of Punjab at 68.5 years, is higher than the rest of India at 62 years.

Tertiary sector: Its contribution to the GSDP stood at more than 43 % for the year 2011-12, and it is expected that this sector will keep on growing in Punjab. Punjab's tertiary sector has observed greater growth than the rest of India. However, the fact remains that this growth is concentrated to only few districts, the top five contributors to the service sector account for more than 54 percent of the total service sector output in the state. While cities like Ludhiana and Jalandhar are leaders even at the national level, others like Ropar and Mansa are lagging behind. The penetration of organized retail is huge in districts like Patiala and Amritsar. Trade, Hotels and Restaurants, Real Estate, Transport, Financial Services and Public Administration are some of the largest sub sectors in the state.

District	Contribution to the State Tertiary Sector
Ludhiana	17.21
Jalandhar	11.83
Patiala	10.90
Amritsar	7.46

34 http://www.nhai.org/statewise1.asp
35 http://hwc.nic.in/storage_capacity.html
36 http://planningcommission.nic.in/reports/genrep/rep_uhc0812.pdf

Gurdaspur	6.87

Source: Planning Commission reports on District Domestic Products

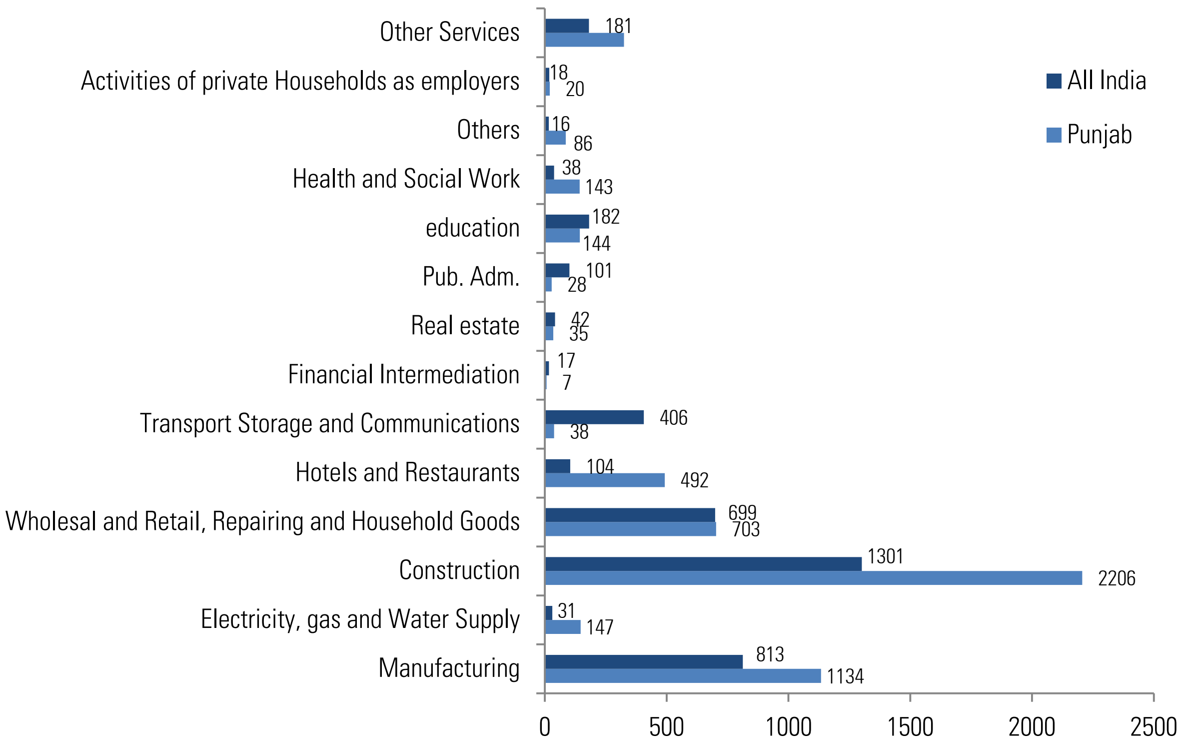
Sector	Policy Thrust	Main Growth Region(s)
IT-ITES	Preferential allotment of land, uninterrupted power supply, sales tax concession, relaxation of floor area regulation, clearances and support	Mohali
Tourism	Financial assistance to mega and small projects, exemption from electricity duty for a fixed time period	Amritsar
Food Processing	Providing Subsidies, exemption from demand charges on electricity, exemption from excise duty for products made of fruits, Interest free loans	Fazilka
Petro Chemicals	Development of Petro Chemical Infrastructure in the state	Bathinda
Biotechnology	Development of infrastructure and converging high level technologies for increased benefit and growth	Mohali, Ludhiana
Warehousing and Logistics	Punjab state Warehousing Corporation (MPWLC) is appointed as the nodal agency for the development of logistics sector	SAS Nagar, Patiala

Source: Acts, Rules, Schemes and Services, Government of Punjab

7 Labour Force Distribution in the State

As per the NSSO 66th Round Employment Survey, Worker Participation Ratio (WPR) per 1000 persons in the 15-59 age group based on current daily status is 503 compared to 509 for an all India level[37]. The Labour Force Participation Rate (LFPR) per thousand persons in the 15-59 age groups based on current daily status for Rural and Urban Punjab is 512 in comparison the National averages are 541 and 509 for rural and urban areas respectively[38]. The parity in rural and urban figures of LFPR shows that dependence on agriculture for employment is lower in Punjab, than most other states of the country. The development of the service sector combined with high economic growth in Punjab has created more Urban Jobs in industrial centres like Ludhiana and Amritsar. Punjab attracts one of the highest investments for any state in India. Subsequently, Punjab has a low unemployment in the age group 15-59 (based on current daily status) of 26 against the national average of 31. As of 2008, Punjab has 43.54 percent[39] of its working population employed in the Agriculture sector. This figure has in fact come down from 53.4 percent in 1991 and is much lower than the national average of 59.36 percent. Around 35 percent of the working population is employed in the Secondary sector, which is higher than the national average of 21.44 percent. The corresponding fractions for the tertiary sector are 22 percent and 19 percent for Punjab and India respectively. The distribution of workers in the primary and secondary sectors is as depicted in the chart[40].

Comparison of workers working in the secondary and tertiary sectors (per ten thousand)



Source: Punjab Development Report, Planning Commission

[37] Migration in India NSSO 64th Round
[38] Migration in India NSSO 64th Round
[39] Punjab Statistical Abstract, 2011-12
[40] Migration in India NSSO 64th Round

It is evident that the most secondary and tertiary sectors have more workers per ten thousand, than the national average with the manufacturing sector performing particularly well.

8 Labor Force Supply (2017 & 2022)

Punjab Labour force and Workforce for 2012, 2017 and 2022, are estimated considering the LFPR, WPR from NSSO 66th Round Employment Survey and applying it over the estimated population in the 15-59 age group for these periods. Overall labour force and workforce would change because of the change in working age group population (15-59 age group). Projected labour force and workforce for the overall state are presented in the table.

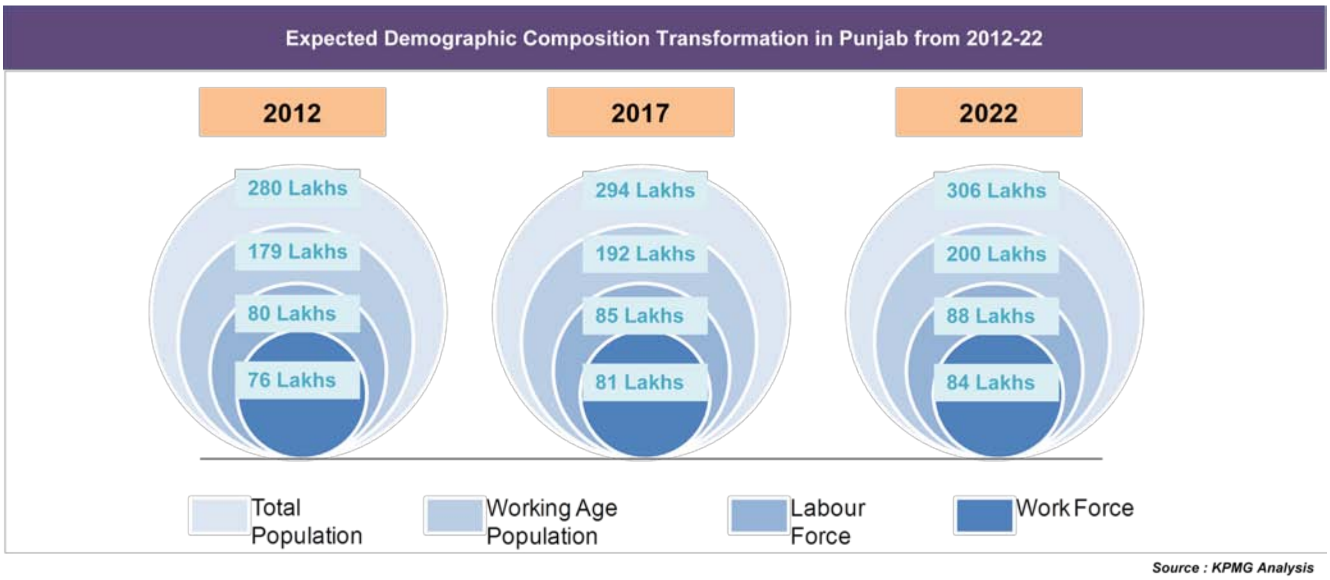
Punjab Work Force Estimations

Year	Population (Lakh)	Working Age Population	Labour Force (Lakh)	Work Force (Lakh)	Incremental Supply (2012-17)	Incremental Supply (2017-22)
2012	280	179	80	76	**5 Lakh (Work Force)**	**3 Lakh (Work Force)**
2017	292	194	85	81		
2022	306	200	88	84		

Source: KPMG Estimates, Registrar General and Census Commissioner (2006); Population Projection for India and States 2001-26; National Commission on Population, Govt .of India

Availability of working age population measured from 15-59 year age group is estimated to grow from 179 lakhs in 2012 to 200 lakhs by 2022. While the period between 2012 and 2017 is estimated to witness an addition of 15 lakhs to the working age group, further addition is expected to drop to 6 lakhs during 2017-22. Labour force measured from the population employed, is expected to increase from 80 lakhs in 2012 to 88 lakhs by 2022, adding around 4 lakh people to the labour force during XII and XIII plan periods each . In order to sustain current levels of worker participation rates, there is a need to create additional jobs in the state at an average rate of around 8 lakhs per annum during the XII plan period. To realize the additional employment opportunities over the next decade, incremental labour force has to be equipped with specific skills suiting the needs of industry creating the employment.

Demographics Transformation in Punjab



- **Labour Force:** Number of people employed or seeking employment in Punjab
- **Work Force:** Number of people employed in Punjab
- **Working Age Population:** Number of People in the 15-59 age Group

Source: KPMG Analysis, Registrar General and Census Commissioner (2006); Population Projection for India and States 2001-26; National Commission on Population, Govt .of India

Estimated workforce composition in 2017 & 2022

District wise Labour force and Workforce for 2012, 2017 and 2022 are estimated considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis. Projected district wise labour force and workforce are presented in the table.

Districts	Estimated Population (2017)	Estimated Working Age Population (2017)	Labour Force (2017)	Work Force (2017)	Incremental Supply during 2012-17 (2017)
Punjab	**29,399,842**	**19,345,096**	**8,511,842**	**8,086,250**	**464,721**
Gurdaspur	2,439,735	1,605,346	652,905	620,260	35,647
Amritsar	2,643,343	1,739,320	721,651	685,568	39,400
Tarn Taran	1,188,623	782,114	314,170	298,462	17,153
Kapurthala	867,712	570,955	245,420	233,149	13,399
Jalandhar	2,315,285	1,523,457	629,299	597,834	34,358
SBS Nagar	651,963	428,992	245,132	232,876	13,383
Hoshiarpur	1,679,666	1,105,220	477,684	453,800	26,080
Rupnagar	725,173	477,164	229,672	218,188	12,539
SAS Nagar	1,046,503	688,599	272,820	259,179	14,895

Ludhiana	3,701,354	2,435,491	1,065,394	1,012,124	58,167
Firozpur	2,150,881	1,415,280	602,026	571,924	32,869
Faridkot	655,832	431,538	217,071	206,218	11,851
Muktsar Sahib	957,951	630,332	286,852	272,509	15,661
Moga	1,053,021	692,888	333,455	316,782	18,206
Bathinda	1,473,863	969,802	464,062	440,859	25,336
Mansa	815,862	536,837	260,514	247,488	14,223
Sangrur	1,755,664	1,155,227	555,866	528,073	30,349
Barnala	632,789	416,375	198,815	188,875	10,855
Patiala	2,008,097	1,321,328	547,876	520,482	29,912
Fatehgarh Sahib	636,525	418,833	191,159	181,601	10,437

Source: KPMG Analysis, Registrar General and Census Commissioner (2006); Population Projection for India and States 2001-26; National Commission on Population, Govt .of India

Districts	Estimated Population (2022)	Estimated Working Age Population (2022)	Labour Force (2022)	Work Force (2022)	Incremental Supply during 2017-22
Punjab	**30,570,951**	**20,176,828**	**8,877,804**	**8,433,914**	**365,962**
Gurdaspur					28,071

	2,536,919	1,674,367	680,976	646,927	
Amritsar	2,748,638	1,814,101	752,678	715,044	31,027
Tarn Taran	1,235,970	815,740	327,678	311,294	13,508
Kapurthala	902,277	595,503	255,972	243,173	10,552
Jalandhar	2,407,511	1,588,958	656,355	623,537	27,056
SBS Nagar	677,934	447,436	255,672	242,888	10,539
Hoshiarpur	1,746,574	1,152,739	498,221	473,310	20,538
Rupnagar	754,059	497,679	239,546	227,569	9,875
SAS Nagar	1,088,189	718,205	284,550	270,322	11,730
Ludhiana	3,848,793	2,540,203	1,111,200	1,055,640	45,806
Firozpur	2,236,559	1,476,129	627,909	596,514	25,884
Faridkot	681,957	450,091	226,404	215,084	9,333
Muktsar Sahib	996,110	657,432	299,185	284,225	12,333
Moga	1,094,967	722,678	347,792	330,402	14,337
Bathinda	1,532,572	1,011,498	484,014	459,813	19,952
Mansa	848,361	559,918	271,715	258,129	11,201
Sangrur					23,899

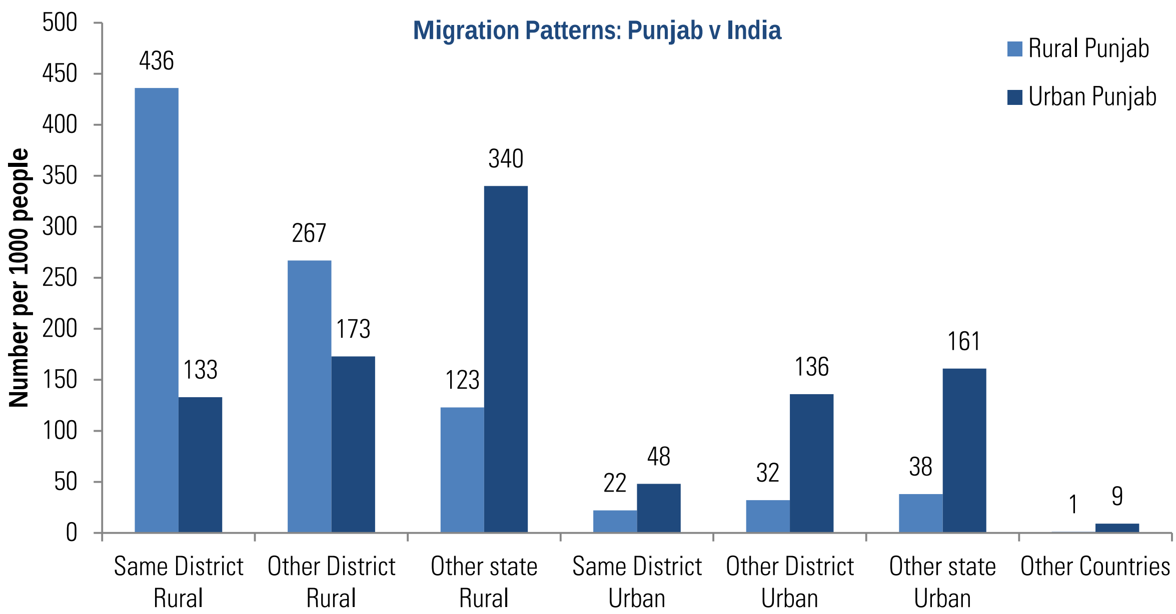
	1,825,599	1,204,895	579,766	550,777	
Barnala	657,996	434,277	207,363	196,995	8,548
Patiala	2,088,087	1,378,138	571,432	542,860	23,556
Fatehgarh Sahib	661,880	436,841	199,378	189,409	8,219

Source: KPMG Analysis, Registrar General and Census Commissioner (2006); Population Projection for India and States 2001-26; National Commission on Population, Govt .of India

9 Migration Situation in the State

Migration in Punjab is moderate in comparison to the scenario at all India level, with only 17 out of 1000 households reporting migration activity in 2000-01 as against 19 at India level. Punjab has a significantly higher migration in urban areas in comparison to rural areas, which is similar to the trend observed at a national level. Punjab is another state with interesting migration profile. Though the total number of migrants from outside the state and outside the country are 0.81 million and 0.02 million respectively, there is significant out-migration from the state (0.5 million). The number of male out migrants is less than female out-migrants. As a result, the net migrant in to Punjab is only 0.33 million, the gender ratio stacked highly in favour of males (313 females per 1000 females). States from where sizeable number of in-migrants came to Punjab are: Uttar Pradesh (0.24 million); Punjab (0.11 million) and Bihar (0.14 million). Male in-migrants from Uttar Pradesh and Bihar cited 'Work/Employment' as the main reason for migration (72.1% and 82.2% respectively).

The female migration rate is far lower than male migration rate, in both rural and urban areas. In Punjab Rural, nearly 2.15 per cent of the females are migrants while the male migration rate is only 3.63 per cent, and in Punjab Urban, the male migration rate is nearly 7 per cent compared to female migration rate of 5.6 per cent.[41] Based on interactions with migrants, it can be inferred that seeking better livelihood and employment opportunities has been the key driver for migration amongst male population in Punjab, and marriage and household has been the key driver for female population in the state. Around 65.7 percent of the male migrant population migrates for employment related reasons and 1.3 percent migrate for education related reasons while 42.3 percent of the female migrant population migrates due to marriage reasons.

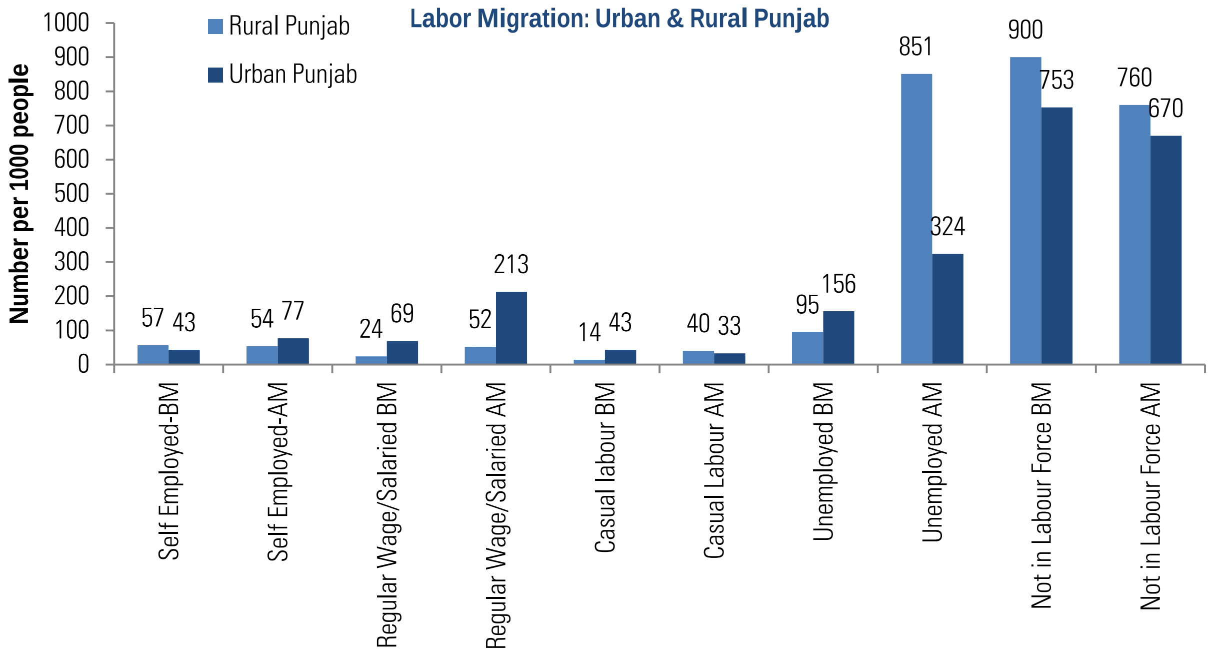


Source: Migration in India, NSSO 64th Round

[41] Migration in India NSSO 64th Round

Analysing the pattern of migration in the state, __% of the migration in rural Punjab happens within nearby villages in the same district. Interactions with rural migrants revealed that most of them were unwilling to part from their families and villages for a long period of time. Further, there are a substantial number of livelihood activities that the migrant population gets to engage in, within a 50-100 km radius – which the movement to a distant urban cluster in a different district might not guarantee, given the associated cost factors. Migration from urban to rural areas is predominantly due to female migration associated with marriage reasons.

Migration offers better economic prospects for individuals in the state as there is significant increase in number of people engaged in economic activities post migration. Non-work related aspects form the prominent reason for migration.



Source: Migration in India, NSSO 64th Round

10 Incremental Manpower Requirements

Incremental manpower requirement in Punjab has been estimated based on several parameters such as investments trends, national level benchmarks on industrial growth across sectors, state manufacturing policy targets, performance of state against economy targets, national level inclusion targets for certain sectors, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Punjab. Based on the analysis of current state of workforce distribution and potential employment opportunities in various sectors incremental manpower requirement in key primary, secondary and tertiary segments is estimated for the periods 2012-17 and 2017-22. Further, manpower requirement is classified into skilled, semi skilled and minimally skilled categories considering the present level of employment in these categories for respective sectors and analysis of expected developments in the industry that would lead to significant realignment of the categories. Detailed approach for manpower estimations is presented in the appendix and specific factors for estimation are discussed below.

Primary Sector:

Considering the increasing level of farm mechanization and sharing agricultural land usage, period between 2012 and 2022 would witness a net out flux of workforce from the agricultural activities. Agricultural workforce displacement is expected to be significant in marginal workers category. A significant portion of the workforce would engage in agri-allied activities depending on the availability of allied resources and migrational constraints. Incremental manpower requirement for the agri- allied activities is estimated considering the following parameters

- Current level of employment in agricultural activities(farmers, agricultural labourers)
- Estimated displacement factors for agricultural workforce based on Planning Commission Projections for 2012-17 and 2017-22 periods and analysis of level of mechanization and allied factors in Punjab
- Employment potential in agri-allied activities in the state considering the level of involvement in the respective activities and regional conditions

Manufacturing Sector:

Manpower requirement in secondary sector is driven by investments and output growth. Various factors including analysis of manufacturing, sub sector policies, investment trends, availability of resources, are considered for the incremental manpower estimation in different subsectors of manufacturing in the state. Human resource requirement projections for manufacturing sub sectors in the state are estimated considering the following parameters

- Manufacturing growth targets for Punjab for 2012-17 and 2017-22
- Identifying key growth sub segments within Punjab based on study of existing industrial base, primary interactions
- Estimation of growth targets for Punjab based on analysis of investment trends, state comparable analysis, available infrastructure and the expected policy thrust on key manufacturing segments identified
- Labor elasticity factors in the potential sectors

Tertiary Sector:

Employment growth in some of the services sector is driven by Government thrust in terms of budgetary allocations to achieve inclusion targets in education, healthcare and banking while the other segments including hospitality and tourism, financial intermediation, communication, retail would depend on the level of economic activity in the region resulting in high or low spending capacity of population. Also segments like IT-ITES, transportation& logistics are driven by investments into infrastructure and manpower. Hence human resource requirement projections for services sub sectors would have specific approaches depending on the growth drivers for the segments in the district. Detailed methodology for estimation of manpower in services sub segments is presented in the appendix.

Based on the analysis of socio economic conditions, investment scenario and availability resources incremental manpower requirement has been estimated for the following sectors.

Primary Sector

- Agriculture & Allied Activities(Horticulture, Sericulture, Animal Husbandry and Fisheries)

Secondary Sector

- Textile and Apparel
- Manufacturing of Engineering Goods(Including Auto & Auto Components)
- Chemical & Chemical Products(Including Petro Chemicals)
- Drugs & Pharmaceuticals
- Agro & Food Processing
- Electrical and Electronics
- Mineral Processing & Fabrication
- Construction Material(Cement, Ceramics)
- Rubber & Plastics
- Paper & Paper Products
- Infrastructure(Construction)

Tertiary Sector

- IT-ITES
- Transportation & Logistics(including port based logistics)
- Banking & Financial Services
- Organized Retail
- Hospitality & Tourism
- Healthcare
- Education & Training

Manpower growth in the districts of Punjab is driven by secondary and tertiary sectors. Incremental manpower requirement in the state is dependent on the setting up of new industries, or on expansion of existing industries along with the trend of workforce migration.

Skilled workers category denotes those skills acquired through professional degrees (study duration greater than 5 years after Std X), Semi Skilled Category denotes skills acquired through vocational training (study duration greater than 3 years after Std X) and minimally skilled category requires basic understanding of job which require minimal or no formal training. Details of sector wise skill requirements during 2012-22 are presented in the table[42].

[42] *KPMG Analysis*

	2012-17			2017-22		
Sector	Skilled	Semi Skilled	Minimally skilled	Skilled	Semi Skilled	Minimally skilled
Agriculture & Allied Activities	0	0	-59748	0	0	-62255
Pharma & Medicinal Products	83	331	414	105	419	524
Rubber and plastics products	272	1089	1362	290	1159	1449
Food Processing & Beverages	3165	13012	18990	3752	15426	22513
Fabricated metal products	2522	10089	12611	2211	8845	11056
Paper & Paper Products	180	719	898	178	711	889
Chemical & Chemical Products	847	3387	4233	778	3113	3891
Construction Based Material	335	1338	1673	448	1793	2241
Mineral Processing	126	504	630	129	514	643
Manufacturing of Engineering Products	1033	4133	5166	956	3824	4779
Textiles	2971	11884	14856	4168	16671	20839
Manufacturing of Electrical Products	332	1328	2822	347	1386	2946
Construction	14323	28646	243490	16431	32861	279321
Healthcare	1693	67712	0	1674	66946	0
Transportations and Logistics	1389	20377	24545	1490	21857	26328
Retail	13244	13244	105952	11622	11622	92974
Hospitality	492	738	3688	439	658	3292

Communication	15119	45358	0	15147	45440	0
Banking and Financial Services	19472	58416	0	18911	56734	0
Education and Training	10120	67726	0	1651	11052	0
Total	87717	350029	433752	80726	301032	411431

Source: KPMG Analysis

Further, state has significant regional variations in incremental manpower requirements with the districts of Amritsar, Ludhiana, Jalandhar, Hoshiarpur and Bathinda expected to drive the employment growth during 2012-22. On the other hand Faridkot, Ferozepur, Fazilka, Muktasar and Mansa would have low potential to absorb trained youth indicating that these regions could become training ground for skilled manpower to be placed in industrial clusters of Ludhiana and Jalandhar. Details of district wise incremental manpower break up along with key sectors accounting for the major employment share are presented in the table[43].

District	Incremental Manpower Requirement 2012-17	Incremental Manpower Requirement 2017-22	Focus Sectors
Amritsar	84085	67039	Construction, BFSI, Organized Retail
Barnala	18886	22133	Textile & Apparel, Pharmaceutical, Construction
Bathinda	32662	31120	Food Processing, Healthcare, Retail
Faridkot	16674	17268	Food Processing, Construction, Engineering Services
Fatehgarh	15819	19210	Construction, Agriculture Implements Servicing
Ferozepur	48073	43649	Food Processing, Construction, Training & Education
Gurdaspur	69989	64503	Organized Retail, Transportation & Logistics, BFSI
Hoshiarpur	48742	46953	Healthcare, Construction, BFSI
Jalandhar	103645	101426	Engineering Goods, Retail, Transportation & Logistics
Kapurthala	28313	31079	Engineering Goods, Repair Services, Transportation
Ludhiana	155957	156182	Small Auto Parts, Retail, Hospitality
Mansa	13506	15285	Food Processing, Agriculture Implements

[43] *KPMG Analysis*

Moga	22866	23785	Food & Dairy Processing, Healthcare, Retail
Mohali	31719	33239	Agriculture Implements Servicing, Food Processing
Muktsar	18214	19420	Dairy Processing, Retail, Hospitality
Nawanshahr	39607	34425	Cement & Chemicals, Paper Products, Transportation
Patiala	43824	49423	Food Processing, Small Repair Services
Rupnagar	29261	28609	Tractor Parts, Retail, Hospitality
Sangrur	43913	42069	Construction, Retail
Tarn-taran	43782	41696	Retail, Communication, BFSI

Source: KPMG Analysis

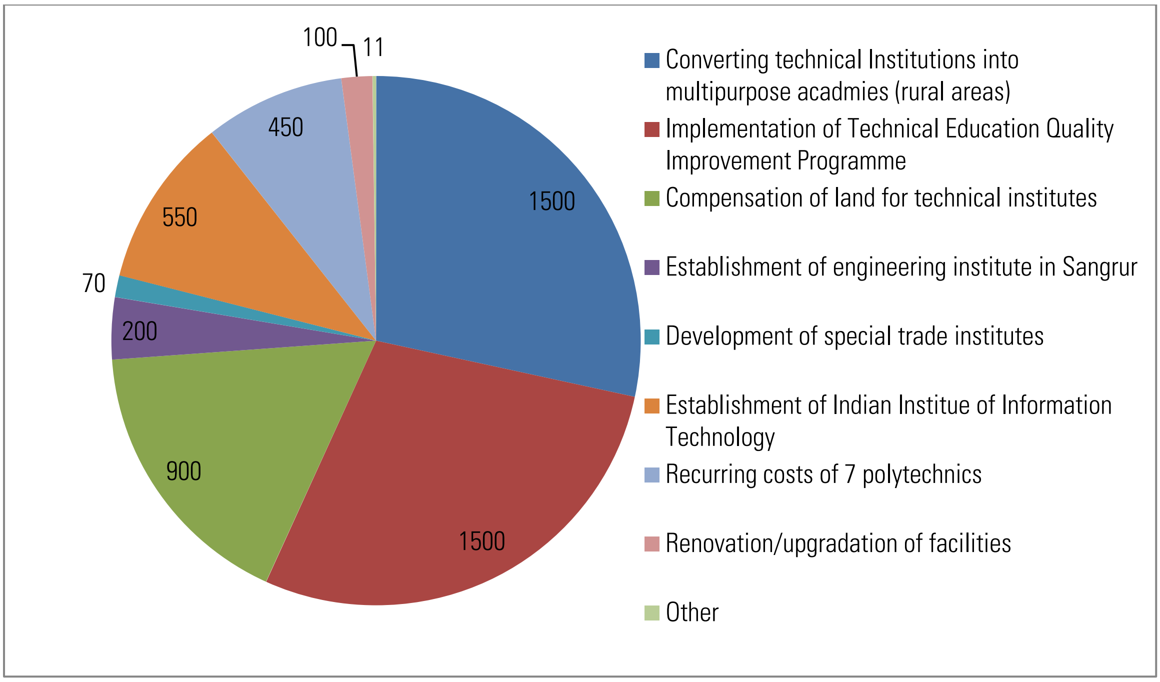
11 Human Resource Development Scenario in Punjab

Government Initiatives towards Skill Development

Punjab has invested in encouraging skill development and technical education in the state, making it one of the priorities of the 12th five year plan (2012-2017). The government of Punjab has been working towards expanding vocational and technical training, under the direction of the department of technical education and industrial training. The objective of the department is to oversee degree and diploma level institutions in the state to hasten the pace of skill development. Courses and training are revised in consultation with the Confederation of Indian industries.

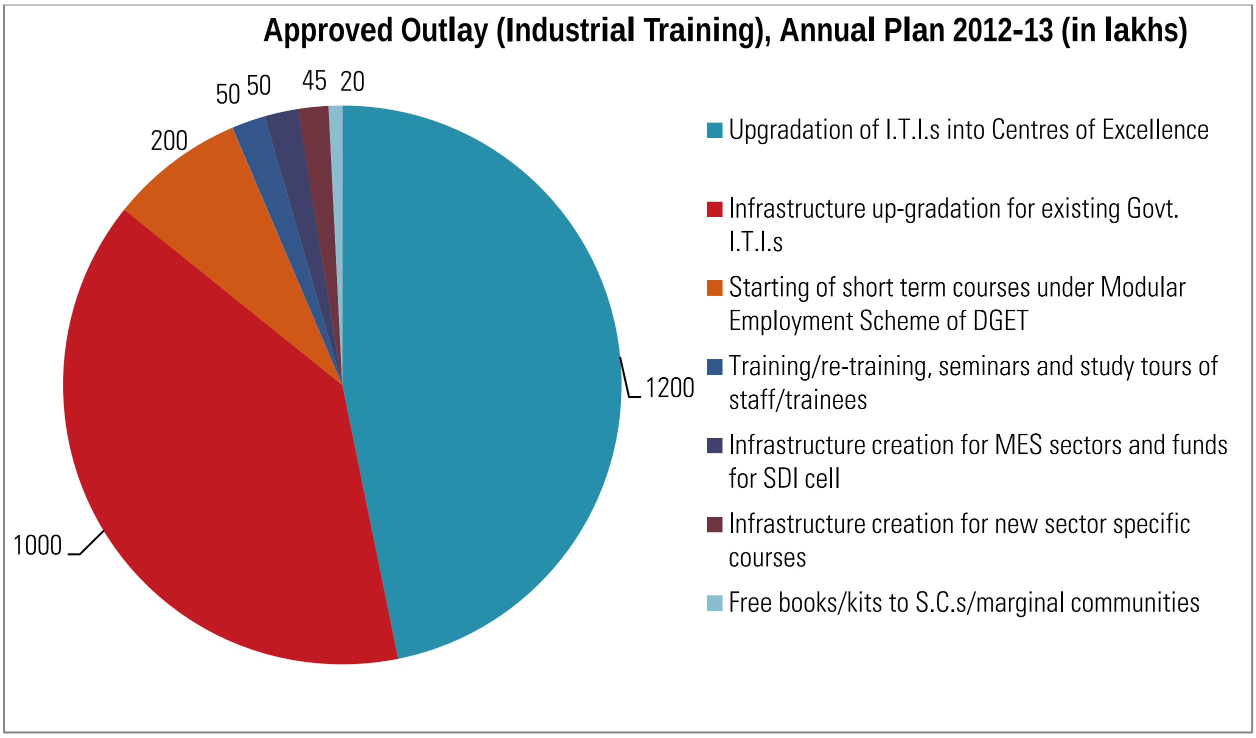
The state government, as of 2010, has a capacity to train 300,000 persons annually. The Punjab government aims to skill 15 million people by 2022, keeping pace with the government of India's plans to skill 500 million people by 2022[44]. The expenditure for technical education and skill development as outlined by the Annual Plan 2012-13 is given below, amounting to a total of 5281 lakhs.

Approved Outlay (Technical Education), Annual Plan 2012-13 (in lakhs)



Source: Punjab Annual Policy Document (2012-13)

[44] Punjab State Skill Development Policy, 2010



Source: Punjab Annual Policy Document (2012-13)

Skill Training through Formal Institutions

Punjab has a number of educational institutions, both private and public, that impart specialized skill training. There are 5 government aided engineering colleges, 96 self-financed engineering colleges, 34 pharmacy institutes, 124 management institutes and 94 self financed polytechnic colleges. There are 112 government affiliated ITIs and 259 private ITIs[45]. Under the NABARD (National Bank for Agriculture and Development) project, an outlay of Rs.81.76 crores has been approved to upgrade 2 engineering colleges, 3 Government Polytechnics and one ITI at Sultanpur, Lodhi.

[45] http://pbplanning.gov.in/pdf/WRITEUP_AP_2012_13_30_3_12_.pdf

Course	2010-11	
	# of Institutions	Intake
BE/Architecture[46]	111	43828
Management	138	12990
MCA	62	4560
Pharmacy	37	3335
Polytechnic(Vocational)	58	13,630
ITI/ ITC	371	N.A.
Medical Colleges (MBBS)	8[47]	1967

Source: Statistical Handbook of Punjab, 2012

Skill Training through Government Endowments

Skill development is one of the national priorities for the Government of India. In the Central Government, around 20 Ministries are closely involved with skill development initiatives either through setting up own skill training capacity (done by Ministry of Labour and Employment, Ministry of Higher Education etc) or by providing per-trainee costs of training for specific target populations (done by Ministry of Housing and Urban Poverty Alleviation, Ministry of Rural Development, Ministry of Minority Affairs etc).

Ministry under Central Govt.	Training Scheme Details	Training Capacity Estimates(2012-17)
Building and Other Construction Workers' Welfare Cess	Skill Training for Construction Activity based on the availability of Construction Cess with the State Government, of which around 50% can be deployed in manpower training initiatives	4.458
Ministry of Agriculture	Skill Training for agri and allied sectors based on national targets of the sector and state's employment share in the agriculture and allied activities	578,138
Ministry of Labour	the state is expected to receive funds based on national targets set for Modular Employability Scheme under Skill Development Initiative Scheme,	152,338

[46] All India Council for Technical Education website and Annual Report 2011-12
[47] Statistical Abstract Punjab, 2012

	proportionate to it contribution to secondary sector activities	
Ministry of Communication and IT	Scheme wise national targets for software export industry including setting up of DOEACC Centres/RIELIT and upgradation of existing centres, Special Manpower Development Programme in the area of VLSI Design and related software (SMDP-II); Estimations are based on national targets	187,500
Ministry of MSME	National MSME manpower development targets apportioned to state based on state's employment share in MSME segment	19,577
Ministry of HUPA	Physical training targets from an estimated allocation of INR 38.86 crores towards skill training component STEP-UP under Swarna Jayanthi Shahari Rozgar Yojana	55,158
Ministry of Textiles	Manpower training targets under Integrated Skill Development Scheme for Textiles and Apparel Sector including Jute and Handicrafts, apportioned based on state's contribution to textile sector	14,550
Ministry of Higher Education	Manpower training targets apportioned based on state's population in higher education age group	60,688
Ministry of Health and Family Welfare	Scheme training targets for ASHA Training, Personnel trained on IMNCI, Doctors trained on LSAS, Doctors trained on EMoC, ANMs/SNs/LHVs trained as SBA and Navjat Shishu Suraksha Karyakram (NSSK); apportioned based on state's share of national population	9,300
Ministry of Women and Child Development	Training targets under Women Empowerment Scheme apportioned based on female population in the state	8,800
Ministry of Road Transport and Highways	Training targets under "Refresher training to drivers" apportioned based on state's share in national highway length	529,642
Ministry of Social Justice and Empowerment	Training targets apportioned based on state's share of Scheduled Caste population	16,879
Ministry of Food Processing	Training targets apportioned based on state's share of contribution to food processing sector	4,458
Ministry of Chemicals and Fertilizers	Training targets apportioned based on state's share of employment in manufacturing segment	10,849
Ministry of Tourism	Estimated funding of INR 1.54 Cr towards flagship" Hunar se Rozgar"	7,373

	scheme, based on the state's contribution to tourism industry	

Source: KPMG Analysis

11a Estimated Training Capacity Gap in Punjab

Industry wise manpower skills are classified as skilled, semi skilled and minimally skilled depending on the nature and duration of training and existing training/higher education capacities are categorized to match the three levels. Assessment of existing training infrastructure in comparison to human resource demand over XII Plan period indicates significant capacity expansion requirement for semi-skilled category through vocational education in Punjab with a surplus pool of un-skilled and highly skilled workforce. Vast scope of employment in un-organized sector for un-skilled workers and limitations of the study in terms of sectoral coverage attribute to the surplus manpower in this category.

Excess supply in these categories would indicate relatively low employment opportunities in this category within the state. Rapid growth in especially in the services sector is likely to result in huge influx of migrant workers from outside especially in the minimally skilled space. Further, employability of highly skilled graduates is an issue owing to misalignment of courses with industry needs and poor quality of institutes. Issue of low employability of graduates has to be addressed through suitable upskilling considering local industrial requirements in order to ensure availability of industry ready manpower.

Skill Category	Incremental Demand 2012-17	Net Addition to Labor Force 2012-17	Source of Supply Human Resource	Deficit 2012-17
Skilled	0.87 Lakh	0.64 Lakh	From higher education institutes	**0.23 Lakh**
Semi Skilled	3.50 Lakh	0.36 Lakh	From Vocational Training Institutes	**3.14 Lakh**
Minimally skilled	3.81 Lakh	3.64 Lakh	School drop-outs without any access to formal skill training	**0.17 Lakh**

Source: KPMG Analysis

Skill Category	Incremental Demand 2017-22	Net Addition to Labor Force 2012-17	Source of Supply Human Resource	Deficit 2017-22
Skilled	0.80 Lakh	0.50 Lakh	From higher education institutes	**0.30 Lakh**
Semi Skilled	3.01 Lakh	0.28 Lakh	From Vocational Training Institutes	**2.73 Lakh**
Minimally skilled	4.11 Lakh	2.87 Lakh	School drop-outs without any access to formal skill training	**1.24 lakh**

12 Youth Aspirations in Punjab

Having estimated the skill requirements from an industry perspective, it is imperative to understand the career aspirations of the youth and their expectations from the other stakeholders relevant to skill development as this could be a crucial input to framing future skill gap mitigation policy measures

Preference for Employment Vs Entrepreneurship:

- Several factors such as entry level salaries, work environment, job location, and socio-cultural factors, seem to influence youth preferences towards employment. While most of the youth aspire to eventual self employment, they take a completely pragmatic view of the ground realities and understand the need for a medium term industrial job to further polish their skills
- Youth in industrially backward districts like Fazilka, Faridkot, Mansa, Sangrur etc are more inclined to self employment either aided by acquaintances or family members already working in the field. The low absorption capacity of labor by industries in these areas drive the trends towards self employment in Punjab

Migration:

- Migration is linked to socio-regional-economic constraints in Punjab and is a very common phenomenon with Punjabis forming a large chunk of the Indian diaspora abroad. The major attractive foreign markets are Canada, Australia, Germany and UK where the Punjabi youth work as skilled machine operators, high skilled farmers, service operators (like cab drivers, hotel staff etc).
- Persistingly low entry level salaries across industries are the key factor driving migration in Punjab. Families which look to leapfrog in the social ladder have to send one member outside to quicken their growth in the social strata. Proximity to Delhi having human resource placement agencies and also illegal touts further aids this trend of migration. Youth from Industrially backward districts saw external migration or local self employment as the only sustainable means of livelihood

Choice of Education and Training Stream:

- Economic background of an individual is one of the key factors influencing the program chosen for study. Along with economic background awareness level about the programs typically acquired through family members/seniors is another major influencing parameter
- Students from weaker sections of the society, both economically and socially, prefer vocational courses over higher education programs. Vocational streams are considered as streenuos especially in mechanical sector which is not preferred by girls considering the nature of employment involved in these sectors

Significant influence by peers and family in career decisions:

- Students in ITIs in Punjab exhibited characteristics portraying the *"Peer Effect"* with certain courses (like welder, motor mechanic etc) always having excess demand and courses like Agriculture Machinery, Fruit & Vegetable Processing finding absolutely no takers
- Even as the ITI and the district administration (like the District Employment Office) make efforts to popularize the courses, the youth feel that some more work in terms of guaranteeing employment and ready acceptance by the industry is required to make students take up new courses

Preference for government jobs over private:

- Youth seem to show higher inclination for jobs in Govt. as the craze for these jobs still persist in lower strata of society. There is still a social prestige associated with a white collar desk job in Punjab which leads to youth aspiring for the Governent jobs
- The situation is still worse as far as PSU or Govt. manufacturing jobs are considered with the Punjabi students failing to the clear the recruitment exams. The Rail Coach Factory in Kapurthala having a majority of the new recruits from the South (Kerala and Tamil Nadu) clearly shows the aspiration-reality gap. The Youth feel that the students from the South having better training in English have an edge when it comes to the PSU jobs as the entrance exams are in English

Awareness of career opportunities high in industrialized districts:

- As expected, the awareness of career opportunities seems to be correlated to the level of economic progress of the district. Higher awareness levels were observed in students from the economically developed districts like Ludhiana, Jalandhar, Amritsar and Mohali compared to those from backward districts like Fazilka, Faridkot and Mansa
- The Youth are also not content with job fairs being held only in industrially developed areas and maintain that the cost of conveyance itself is a major deterrent to attend the fairs. The youth feel that there is really no need for a fair in developed districts and that companies should specifically reach out to only industrially backward districts through fairs for their labor pool and just recruit from the open market in industrial districts

Preference for white collar jobs: Youth from vocational/higher education have expressed strong aspiration for white collar jobs over blue collar jobs. ITI students from streams that would cater to shop floor, preference for normal working conditions is high diue to health and safety reasons.

Sectoral Preference for Employment:

Based on interactions with youth on a sample study across the districts of Punjab, sectors taken for manpower estimations were classified as high, medium and low aspiration categories based on their preference to work. Regional considerations along with work place environment and salaries have significant influence on preferences for sectors. Summary of sector-wise preferences from youth across the state are presented in the table[48].

Sector	Aspiration To work	Sample Characteristics
Primary Sector		
Cultivation	Low	Farming communities/ Minimally skilled Youth
Allied Activities	Medium	Farming communities/ Minimally skilled Youth
Secondary Sector		
Agro & Food Processing	Medium	Vocational Training Students
Textile & Apparel	Low	Vocational Training Students
Wooden Products & Furniture	Low	Vocational Training Students
Paper & Paper Products	Medium	Vocational Training Students

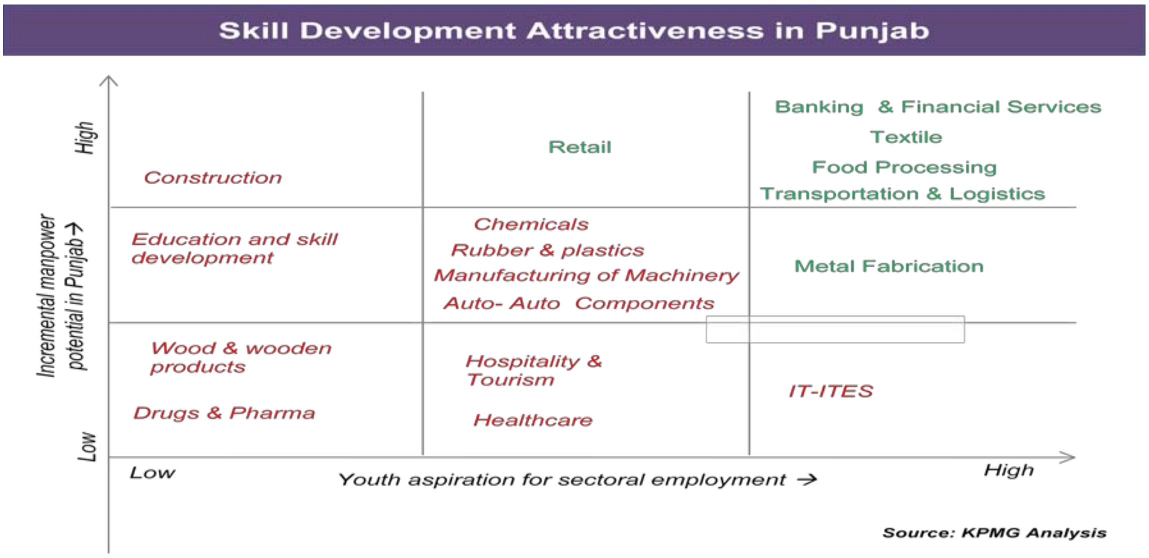
[48] *FGDs in Punjab, KPMG Analysis*

Chemical & Chemical Products	Medium	Vocational Training Students
Rubber & Plastics	Low	Vocational Training Students
Mineral Processing & Fabrication	Low	Vocational Training Students
Electrical & Electronics	High	Vocational Training Students
Manufacturing of Engineering Goods	High	Vocational Training Students
Manufacturing of Construction Material	Low	Vocational Training Students
Drugs and Pharmaceuticals	Medium	General Youth
Construction	Medium	General Youth
Energy	High	General Youth
Services Sector	Medium	General Youth
Trade, Retail	Low	General Youth
Transportation & Logistics	Medium	General Youth
IT-ITES	High	General Youth
Hospitality & Tourism	Medium	General Youth
Banking & Financial Services	High	General Youth
Healthcare	High	General Youth
Education & Training	Medium	General Youth

Skill Development Attractiveness Matrix for the State:

Skill Development matrix based on incremental employment potential in a sector mapped against preferences of skilled youth for a career in the respective sectors provides opportunities for implementing sectir level skill development initiatives. Stakeholders in skill development & training need to consider the youth aspirations while drafting policies/strategies. Skill Development Matrix for the state is presented below.

Skill Development Matrix for Punjab [49]



Sector	Priority	Key Districts	Key Skills Shortage
Food Processing	High	Sangrur, Ferozepur, Patiala, Ludhiana, Moga	Food Preservation, Bakers and Confectioners, Cold Storage Management, Food Machinery Servicing
Textiles	High	Ludhiana, Barnala	Design, Merchandising, Supervisor & other Service Oriented Skills
Construction	High	Jalandhar, Ludhiana, Amritsar, Gurdaspur, Patiala	Heavy Machine Operators, Brick Layers, Designer, Decorators & other service oriented trades
BFSI	High	Amritsar, Mohali, Patiala, Jalandhar, Tarn-tarn	Insurance underwriting, Claims Management, Business Correspondents, Field Personnel
Transportation & Logistics	High	Amritsar, Mohali, Patiala, Jalandhar, Gurdaspur	Maintenance Engineers, Instrumentation, Advanced Equipment Technicians, Crane & Machine Operators, Radio Officer , Skilled Fireman
Retail	High	Amritsar, Mohali, Ludhiana, Jalandhar, Gurdaspur	Store management, Stock planning, Merchandiser, Buyer, Stock Keeper

Source: Primary Stakeholder Interviews, KPMG Analysis

[49] *KPMG Analysis*

13 Institutional Challenges in Skill Development

Government of Punjab has attempted many measures to promote skill development in the state. While the objectives of skill development initiatives are sound, implementation of the initiatives is fraught with challenges.

The government has been in the forefront of implementing several Central and State funded skill training initiatives like the pilot project launched in 2012 under the National Vocational Education Qualification. However there is a need to create a mechanism to ensure the effectiveness of skill development programs. This would improve the achievement of learning outcomes and employability in the open market of students.

As the curriculum has not been revised since the 1960s, when it was conceived, industries have found it hard to employ candidates from district ITIs as there is a mismatch in expectations. Currently, there is no formal mechanism to periodically review and revise the curriculum based on industry requirements. Traditional engineering trades, though popular amongst students, are decreasing in their relevance to industry, due to increased automation and technology deployment - e.g.: Welding, Turner, Fitting etc.

There is no formal involvement of local industry bodies in the selection of programs in almost all districts. Industry visits are academic in nature without any push towards learning, networking, gathering information about specific employers and career opportunities.

With regard to faculty and management of institutions, there needs to be an upgradation of facilities and infrastructure support. While funding may not be an issue for most government ITIS, maintenance of equipments is viewed as a liability by faculty. This in turn affects training schedule. Contract faculties have a lack of motivation (stemming from low salaries) even though they comprise about 20-25% of the faculty numbers. There is also a faculty shortage in districts like Fazilka & Muktsar owing to the low industrial & training base and non-willingness of faculty from other areas to migrate. Also, the training offered to teachers is not effective and even the frequency at which it is imparted is very low

In terms of student training, there seems to be a general disillusionment with the objective of the apprenticeship programs. Apprentices are not seen as serious candidates for employment and rarely do these programs lead to placements. Most students receive very low stipends of about INR 2000 per month which is not sufficient to sustain student interest and motivation. Lack of industry support further demotivates students who are a part of these courses.

In terms of placements, ITIs in Punjab must be more proactive in ensuring employment opportunities for students. There is a problem of branding with ITIs, where the perception is very poor. Placements for those students in short term courses are not guaranteed, as these students are not taken seriously by employers. The situation is further worsened by the fact that students are not willing to migrate outside the district at low entry level wages of INR 4,000 to INR 5,000 per month.

There is also a lack of knowledge on career development. Trainees have limited access to career guidance sessions at schools and ITIs to help them with long term career planning. ITIs are also viewed as a path for students who have no other choice. Sometimes this results in the enrolment of students who are not serious about their course.

14 Institutional Recommendations for Skill Development in the State

1. Systematic mechanisms to identify and assist potential school dropouts transition into vocational programs

Scheme Objectives:

- In Punjab, currently less than one-fifth of students move on to Higher Education. Students likely to opt out of school education, should be proactively identified and brought into the fold of the vocational education system in order to tap the emerging demographic dividend
- Integrate vocational courses in school curriculum to equip students with industry relevant skills, as well as skills for starting businesses and self-employment. This will also ensure reduction in dropout rates
- Establish Systems for Integrated Learning with Industry through Multi Level (4 Levels) learning structure, where Level 1 and 2 trainings are provided in school, and supplemented by Level 3 and 4 trainings in industry

Implementation:

- Class 9^{th} To 12^{th} should be the focus, considering low transition levels from secondary to higher secondary (43%)
- Districts with high capacity gaps in secondary and higher secondary systems- Fazilka, Ferozepur, Sangrur, Nawanshar, Mansa & Sangrur should be given more focus
- Focus on sectors that are high preference as well as high growth sectors of Punjab (Food Processing, Banking & Financial Services, Hospitality & Tourism, Organized Retail & Transportation & Logistics)
- Upon successful completion of Level 1 and Level 2, candidates can join industry for Level 3 and Level 4 learning within the industry, or opt for self employment opportunities

Scheme Enablers:

- Vocational modules for schools need to be standardized to ensure uniform learning outcomes for Level 1 and 2 courses in schools. Local Industry collaborations can be established for Level 3 and Level 4 trainings to students
- Considering the shortage of faculty for vocational education, the School Education Department can fund/create systems for Training Trainers for vocational modules In Schools, through the it is and industry
- Support for Entrepreneurship of trained candidates through tie-ups with Financial Institution(Banks, NBFCs)

2. Develop a state Skill Development Mission as a focal agency for skilling

- Define the strategic road-map for skill-development in the state for the next decade (2012-17, 2017-22), in close consultation with other key departments, and central skill development agencies such as the NSDC, considering the district level skill gap projections. Strategic roadmap would outline the skill development agenda for the state:

  - Vocational training capacity building (sector/district level)
  - Fund allocation plans
  - Proposed systems to monitor the effectiveness of various training initiatives
  - Schemes/ structures to garner private participation in the state

- Decentralize implementation and monitoring of skill development initiatives through dedicated SDM chapters at sector level (For focus sectors- Transportation & Logistics, Food Processing, Banking & Financial Services, Retail, Healthcare and Hospitality & Tourism) and district level. Suggested representations:
  - Anchor Institutes, SSCs, training institutes, industry bodies and key industries for sector level SDM chapters
  - Local industries, training institutes, representatives of Government departments for district level SDM chapters
- Leverage on SSC certificated courses and standards that are being developed centrally, especially in the high aspiration/ high potential focus sectors (mentioned above), and facilitate adoption in the state

3. Focus on Enhancing Skill Training Capacities in Districts With Low Penetration of Vocational Education

- Focus on districts with low penetration of vocational education(seat capacity per population) - Gurdaspur,Sangrur, Barnala, Muktsar , Jalandha & Mohali for capacity expansion through public investments/ special schemes to promote private participation through PPP
- Revalidate the existing PPP schemes considering the challenges in implementation of existing under
  - Industries Department (CED)
  - Labour & Employment Department
  - Other Departments focused on specific industry sectors (Textile, IT-ITES etc.,)
- Fast-track the NSDC/SSC affiliated partners to setup training in these districts using subsidized govt. infrastructure by waiving off detailed due-diligence, as NSDC partners are pre-approved through rigorous due diligence

4. Setting up Anchor Institutes in more focus industries and broadening their scope

Considering the high potential / aspirational value for sectors of Transportation & Logistics, Retail, Healthcare, Banking & Financial Services, Hospitality & Tourism, new anchor institutes can be setup for research and faculty training. They can champion adoption of SSC standards & curriculum, and localize it as required (for ex: local Punjabi language)

5. Setting up of Training Institutes for Faculty on PPP mode

- The poor quality of training imparted is seen to affect training imparted across institutes. This poor delivery has adverse implications on skill acquisition and therefore on employability of students.
- Existing capacity of in the form of Central Training Institutes (CTI) and the National Institute for Technical Teachers' Training and Research (NITTTR) are seen to be inadequate.
- This can be addressed by setting of training institute for faculty on PPP mode.

Objective:

- Quality Technical and non technical training of Vocational Education for potential candidates
- Short term training programs for existing faculty – consisting of both technical and non technical modules
- Development of standardized tests for certification of faculty

Implementation:

- Establish Teachers' Training Institutes in PPP mode in collaboration with SSCs for standardization of training in sectors such as textiles, Construction, and Food Processing etc
- Partnership with large training providers (private and government) to ensure that the curriculum is suited to their needs, and placements for the trainers on completion of the course
- Development of a standardized testing mechanism for the certification of trainers, akin to those for teachers in the formal education system
- Inclusion of soft skills and the use of technology in the classroom environment to facilitate learning
- Short term refresher courses for those already employed as teachers

6. Encourage Branding of Skill Development in the State

- Vocational Education remains a low preference amongst parents and students. The poor perception has resulted in students and parents not expecting any serious outcomes from these courses
    - State and local government should promote vocational education as acceptable alternative to formal education
    - Close coordination with SSCs which are working with Trans National Occupational Standards to increase greater acceptance of training/skilling in case of migration
    - Work with NSDC to popularize and create awareness about the star scheme in the state by engaging with poster campaigns, promotion drive, etc.

Implementation:

- Campaigns and career counseling to promote dignity of labour and employability through skill training can be held on regular basis

- Career counseling, with information on skill development can be provided at school level itself. There should be high focus on these counseling session in schools observing high drop out rates

14.1 Recommendations for Industry

1. Focus on Vocational Education as key initiative under CSR

- Large private players in the state can support vocational training institute as part of its CSR activities (especially mandatory 2% CSR requirement) in the district
    - Donate used infrastructure at subsidized costs to academic institutions
    - Upgradation of existing infrastructure of the institutes
    - Excess production capacity/equipments can be shared with institutes during lean production hours/shifts
    - Support Training of Trainers (TOT) allowing skilled employees to be trainers for fixed no. of hours, for ITI faculty
    - Encourage apprenticeships and internships of vocational & ITI students
    - Support in providing level 3 and level 4 training for students with level 1 and level 2 certifications at schools (Refer to recommendations on vocational programs in schools)

2. Support SSC Activities in Punjab

- All key players in the state should actively support SSC's activities in Punjab
    - Share annual plan of recruitment with government and industry nodal agencies for skilling
    - Support training institutes in development/delivery of programs
    - Participation in development of curriculum for specific trades not available in ITIs/VTPs right now
    - Align recruitment policies to ensure hiring certified manpower from Govt/SSC accredited training institutions
    - Invest in up-skilling of existing manpower and formulate formal HR policies and mechanisms to encourage employees to train in institutions

14.1.2 Recommendations for NSDC

1. Developing Curriculum and Standards for Focus Sectors/ Vocational Courses in Schools

- SSCs can facilitate development of standardized curriculum that can be designed into four levels (as per practice in some developed countries), where the first two levels are adopted at 9th -12th levels of school education, and the next two levels are provided in industry. The districts of Punjab where the Higher Education transition is low (Pathankot, Muktsar Sahib, Fatehgarh, Mansa and Sangrur), are of particular focus for implementation of the first two levels of courses within schools

- SSCs in co-ordination with DTE-Punjab to develop certification standards for high growth/aspirational value sectors of the state – Transportation & Logistics, Textiles & Garments, Food Processing, Metal Fabrication, Retail, Healthcare, Banking & Financial Services, Hospitality and Tourism.

2. Promoting Private Sector Participation in Focus Sectors & Supply Clusters

NSDC Encouraging NSDC Partners to enhance training capacities in the state by focusing on

- High growth sectors of the state - Transportation & Logistics, Textiles & Garments, Food Processing, Banking & Financial Services, Tourism & Hospitality, Healthcare and Retail

- Districts with lower penetration of training infrastructure coupled with high industry growth - Ludhiana, Jalandhar, Mohali, Amritsar, Gurdaspur & Patiala

14.1.3 Recommendations for Training Organizations

1. Focus on high growth/ aspirational value sectors where student acquisition is easier -Transportation & Logistics, Textiles & Garments, Banking & Financial Services, Healthcare, Food Processing, Construction, Tourism & Hospitality and Retail

2. Create capacities in districts with lower penetration of training infrastructure - Barnala, Sangrur, Ludhiana, Jalandhar, Muktsar & Mohali. Districts where low penetration of training infra is coupled with high industry growth, are high potential for future growth of skilling

3. Explore scheme-based training potential to address the skilling needs of under privileges/BPL population - key schemes with high training potential are SJSRY, MES, SGSY & Maharaja Ranjit Singh Skill Devlopment Allowance Scheme

4. Emphasize on offering accredited programs (SSC certifications) to ensure industry acceptance for certifications

5. Leverage existing infrastructure to build optimal delivery models (ITI premises, District DIC space where offered, industrial space during lean production hours etc)

6. Build industry linkages in areas of development and delivery of training programs- placements, curriculum formulation, apprenticeships, faculty training

7. Engage credible local networks (SHGs, NGOs, student groups such as Nehru Yuva Kendra groups) for student acquisition

15 District Wise Skill Gap Assessment

15.1 Skill Gap Assessment of Barnala District

15.1.1 Administration Profile

Barnala is bordered by Ludhiana and Moga to the North, Bathinda to the West, Sangrur to the East and Mansa to the South.

The area of district is 1410 sq km, which accounts for 2.79 percent of the total share of state area[50]. Administratively, the district has been divided into two sub divisions (Barnala and Tapa); three sub tehsils (Dhanaula, Mehal Kalan) and three blocks (Barnala, Sehna and Mehal Kalan).

15.1.2 Social Profile

Demographics

Barnala has a population of 5.96 lakhs as per the 2011 Census, with 68.3 percent share of that being rural population[51]. Population density of the district standing at 419 persons per sq.km is lower than state average of 550[52] persons per sq.km.

While the child gender ratio has increased from 792 females per 1000 males in 2001 to 847 females per 1000 males in 2011, there has been a decrease in the adult (0-6 age group) gender ratio from 907 females per 1000 males in 2001, to 846 females per 1000 males in 2011[53].

Reserved categories population in the district is significant, occupying a share of 30.08[54] percent of total population which is slightly higher than the state average of 28.85 percent.

Literacy

The district has a low literacy rate of 68.9 percent in comparison to state average of 76.07 percent[55]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 62.09 percent. Low school infrastructure at levels of primary and middle and secondary is a key concern for the district shown by the below benchmarking of Barnala's School infrastructure with that of the state in terms of population served per school. The district however has shown a better performance at the secondary level[56]

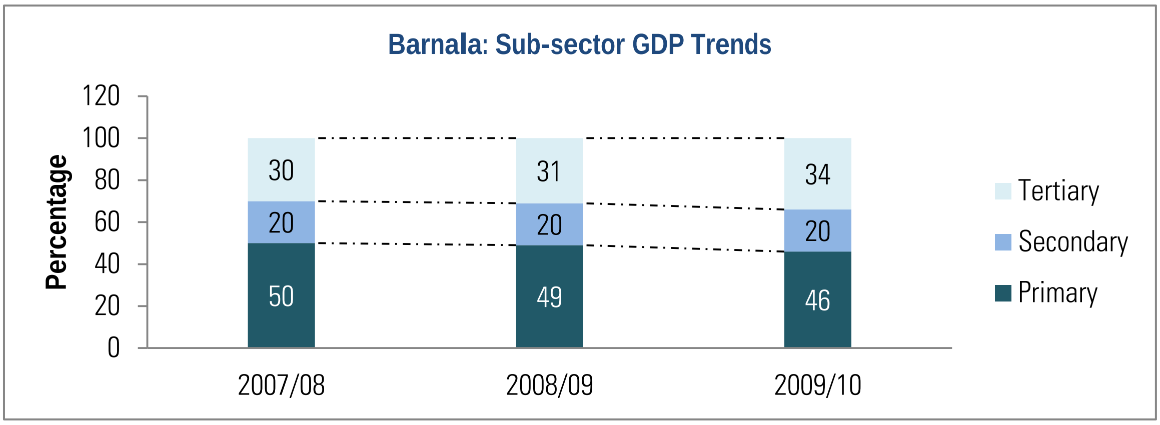
Region	Primary Level	Middle Level	Secondary Level
Barnala	2834	4150	5870
Punjab	1527	3570	6840

[50]Punjab State Statistical Abstract 2011-12
[51]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[52]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[53]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[54]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[55]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[56] Source: Statistical Handbook of Punjab, 2012

15.1.3 District Economy

Contribution of Barnala to overall state economy is lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 62,894 in comparison to state average of INR 78,594 in 2009-10(At current prices). While the contribution of services sector is highest among sub-sectors in the district, dependency on agriculture is high in terms of number of people engaged, considering the low productivity in these activities.

Sub-Sector wise GDDP trends in Barnala



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors

Barnala like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 48.21 % of the working population was employed in agriculture; this fraction is much higher than the state average of 39 %. In the year 2004-05, Agriculture contributed a major portion of the district GDP. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Barnala	6715	6215	10205	13960	3285
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Agriculture is one of the major employers and contributors to the Barnala economy. The main Kharif crops grown in Barnala are Rice and Cotton with rice occupying most of the cultivated area (standing at 14000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 112000 hectares). The Horticultural crops grown are Ber, Guava, Peach and Grapes. The vegetable crops grown are Potatoes, Chilly and Cauliflower. The net sown area is 124500 hectares and the gross sown area amounts to 249000 hectares which makes the cropping intensity to be 200%. All of the sown area is irrigated (100 %) it is higher than the state average of 97.9 %. 485000 tonnes of rice and 554000 tons of wheat are produced each year in Barnala. The district is prone to frequent heat waves, pests and diseases which turn out to be detrimental to the crops. Barnala also witnesses occasional Hailstorm, frost and cold waves. High yielding varieties of seeds are mostly used by the farmers in Barnala.

Fishing is an important allied activity in Barnala; it has fish stocked in an area of 266 hectares.

Barnala also has 3 Milk plants/Chilling centers out of the total 65 in the state.

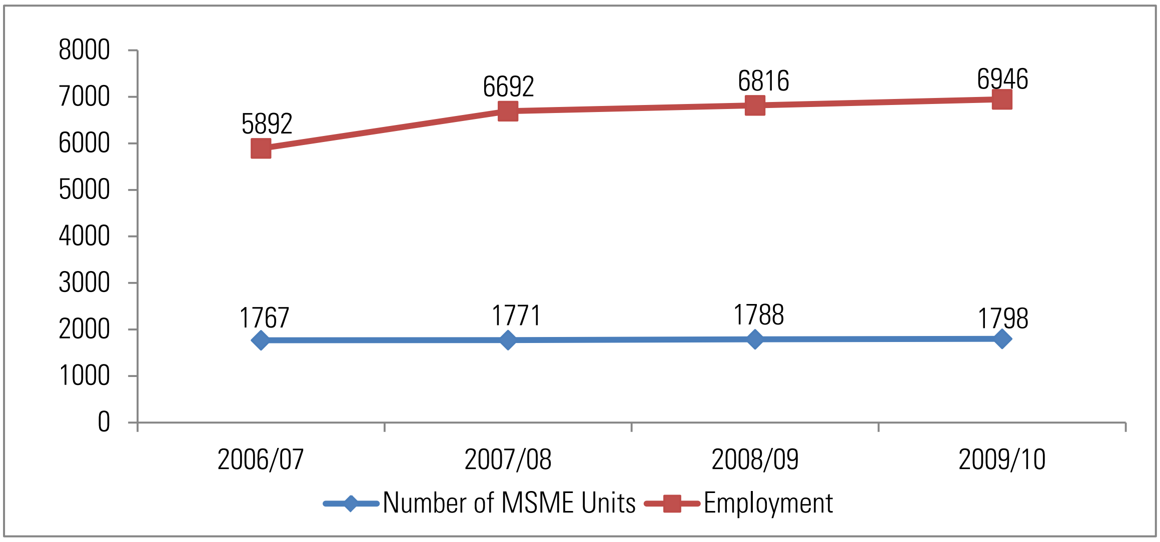
Animal Husbandry also enjoys huge presence in the agricultural communities of Barnala. It has a total of 181.3 thousand graded buffaloes and 19.5 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 8 thousand and 5 thousand respectively is also high in Barnala.

Industry

Barnala is primarily an agrarian district with limited industrial growth. There is limited focal point or industrial infrastructure developed by the authorities and hence there is an urgent need for the stakeholders to create relevant focused industrial eco-system. The limited large scale investment in the district is in sectors like chemicals, paper, pharmaceuticals etc providing employment to 9763 people with the investment totalling to around INR 561 Crore. As per 2011 provisoinal data, there are 1798 registered MSE units in the district employing around 6946 workers on a daily basis.

Between 2006-07 and 2009-10, Medium-Small Scale Industries segment has witnessed growth of only around 30 generating additional employment of around 1000 numbers during the period.

Employment growth trends in MSME segment



Source:: MSME District Sector Report

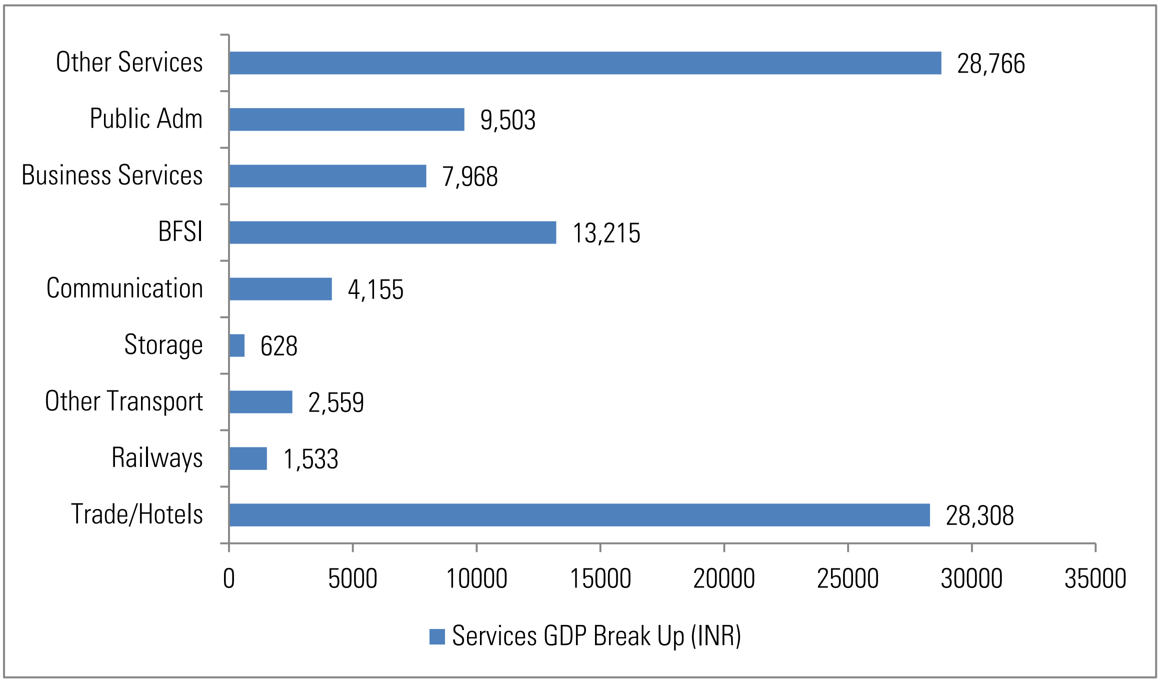
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Barnala district.

Existing Clusters	Clusters Identified for Promotion
No noticeable industrial cluster of a critical size with disparate specialized pockets seen in areas like chemicals, paper	Potential for developing a textile cluster with significant female employment

Services Sector

Service sector contributed to 34% percent[57] of GDDP in the year 2009-10. Sector has grown at a cumulative rate of 9 percent in the period between 2001-02 and 2006-07. Banking and insurance are the key services activities in Barnala.

Sub-sector wise contribution of services income (2009-10)



Source: Statistical Handbook of Punjab, 2012

Penetration of healthcare facilities measured in terms of population served per bed, at 800 per bed is near the state average of 760 per bed. District has 11 PHCs and 4 CHCs along with 39 Sub centers with limited private participation[58]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade.

Details of healthcare infrastructure in the district

Category	Number of Institutions
Allopathic Hospitals	1
Ayurvedic Institutions	12
Homeopathic Institutions	3

[57]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[58]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Primary Health Centers (PHCs)	11
Community Health Centers (CHCs)	4
Dispensaries	39
Total	**70**

Source: Statistical Handbook of Punjab, 2012

Barnala has low penetration of banking and financial services measured as a percentage of GDDP at 3.21 percent in comparison to state average of 4.98 percent as per 2009-10 estimates. Barnala being primarily an agriculture and small industry based economy sees presence of mainly public sector banks and small cooperative banks with no presence of new age private and foreign banks.

15.1.4 Workforce Distribution in the district

Current Employment Scenario in Barnala

Main worker participation rate of 35.14% in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.66% is below the state average of 4.66%. Overall percentage of non workers at 49.1% is lower than the state averageof 55%. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Barnala	35.14 %	4.14 %	49.1 %	20.7 %	28.4 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.1.5Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Barnala is a lowresource human resource growth district adding about 19,000 personnel to the manpower during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Barnala	657,996	434,277	207,363	196,995	19,403
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.1.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Barnala has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Barnala.

According to the estimates, in the next 5 years, Barnala is expected to witness an incremental manpower requirement of over 29 thousand [59] which is expected to normalize to 25 thousand [60] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	119371	0	0	124945	0	0	123317
Pharma & Medicinal Products	166	664	830	249	995	1243	354	1414	1768
Rubber and plastics products	44	176	220	50	198	248	56	224	280
Food Processing	171	667	971	250	972	1416	349	1355	1975
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	47	188	235	59	238	297	71	284	355
Paper & Paper Products	180	721	901	203	813	1016	229	916	1145
Chemical & Chemical Products	10	38	48	13	52	65	17	67	83
Construction Based Material	23	92	116	28	111	138	34	135	168

[59] KPMG Estimates on Incremental Manpower Requirement
[60] KPMG Estimates on Incremental Manpower Requirement

Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	71	284	355	79	314	393	87	348	434
Textiles	685	2740	3425	836	3341	4176	1056	4221	5277
Manufacturing of Electrical Products	15	60	76	17	68	85	19	77	96
Construction	1056	2113	17956	1610	3221	27375	2246	4492	38180
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	300	1200	0	453	1810	0	788	3152	0
Transportations and Logistics	102	1624	1933	136	2153	2562	171	2721	3237
Retail	2450	2450	19602	3049	3049	24389	3581	3581	28646
Hospitality	123	185	926	153	230	1151	180	270	1352
Communication	1781	5344	0	2194	6581	0	2607	7820	0
Banking and Financial Services	1794	5382	0	2353	7060	0	2896	8689	0
Education and Training	931	6267	0	773	5201	0	801	5390	0

Source: KPMG Analysis

15.1.7.1 Details of vocational education infrastructure in Barnala

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	**Govt ITI**	**Private ITI**	**NSDC Partner**	**Total**	
Punjab	27415	19058	1479	47952	1.7
Barnala	294	270	168	732	1.2

Source: DTE Punjab

15.1.7.2 List of Common courses offered by the Government and Private ITIs

Govt. ITI		Private ITI	
Carpenter	Cutting & Sewing	Health Sanitary Inspector	Dress Making
Electrician	Electronics	Wireman	Secretarial Practice
Fitter	Embroidery/ Needle Work	Hair & Skin Care	Wireman
Mechanic Electronics	Hair & Skin Care	Health Sanitary Inspector	IT&ESM
Mechanic Motor Vehicle	Stenography Punjabi	Secretarial Prac.	Electrican
Stenography Punjabi	Cutting & Sewing	Architectural Asst.	COPA
Welder (Gas & Electric)	Electronics	Art & Craft TT	Electrician

Source: Department of Industrial training and Vocational Education, Punjab

15.1.8 Students Interaction outcomes-Youth Aspirations

Students in Barnala showed higher preference towards Government jobs over private ones owing to higher job security salary & most importantly status. Students were also open to migrate to the other districts or states with female generally preferring to work within the district. Most students felt that the Polytechnics students are given more preference compared to the ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment.

15.1.9 Skill Mapping and developmental concerns

Barnala is one of the less industrialized districts of Punjab. With the secondary sector contributing to over 41% of the total district GDP, there exists a trade and sector level skill shortages in some industries. Trade level skill shortages were noticed across skills like Welders, Fitters. Sector level skill deficits are noticed across service areas like organized retail, transportation and construction services.The industries in Barnala do not prefer hiring native labour due to high attrition, lack of professional conduct and increased preference towards administrative jobs.

15.1.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Barnala district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Construction Services o Textiles with focus on value added fabric o Food Procesing with focus on SHGs • Forging public private partnerships with leading private sector firms in Barnala to create an inclusive ecosystem for skill development. • Set up camps or mini skill centers on the lines of Youth Clubs or Yuva Kendras in schools to bring a paradigm shift in perception of youth for vocational training. This could be materialized by creating a scholarship fund for high achieving students interested in taking up skill related courses.
District Administration	• Ensure women participation in skill development as the industries like Trident have created a good initial eco-system for skilling women • Centre of Excellence based on textile can be set up in the ITI as the district is an important textile hub • Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode by linking the trainers & trainees to local co-operative banks or RRBs (Regional Rural Banks) • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses as the current target oriented approach is benefitting only a certain section of the targeted beneficiaries (people looking to up skill themselves)

	• Creating an infrastructure for Skill development of teachers (such as a tool room,) within the district and make periodic training mandatory for all the trainers. Optionally, the same could be started at the State level. • Role of the Employment exchange in the district could be expanded to cover registration, training, certification and placements to ensure successful access to the job market for the youth in Barnala • Focus on training in agricultural products and processing especially in Cotton as it could prove to be a significant raw material input for the the textile industry in the state
Industry	• Industry may undertake vocational training as a part of their CSR activity. • Jobs required to be performed in an industry should be assessed on National occupation standards which should remain same across the country. This will allow a student to work in any part of the country. • Industry bodies in the district can offer support and facilitation services through policy advocacy, Industry intervention and International collaboration so that the youth can acquire skills to meaningfully participate in and contribute in the economy. • Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • Follow the two pronged approach to start training centers within their own campus and training on specific sector skills and then recruiting the same candidates.
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry & also friends & fraternity could be called to deliver specific modules. • Private players should also develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open a definite revenue stream for these players with decreased costs

15.2 Skill Gap Assessment of Rupnagar District

15.2.1 Administrative Profile

Rupnagar is bordered by Hoshiarpur in the North, SBS Nagar in the South West, SAS Nagar in the South and Himachal Pradesh in the east.

The area of district is 1369 sq km, which accounts for 2.71 percent of the total share of state area[61]. Administratively, the district has been divided into four sub divisions (Rupnagar, Anandpur Sahib, Charnkaur Sahib, Nanga); two sub tehsils (Nupur Bedi and Morinda) and five blocks (Rupnagar, Morinda, Nupur Bedi, Anandpur Sahib and Charnkaur Sahib).

15.2.2 Social Profile

15.2.2.1 Demographics

Rupnagar has a population of 6.83 lakhs as per the 2011 Census, of which 73.98 percent are rural[62]. Population density of the district, at 488 persons per sq.km, is much lower than state average of 893[63] persons per sq.km.

The child gender ratio has increased from 799 females per 866 males in 2001 to 872 females per 1000 males in 2011. However, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 889 females per 1000 males in 2001, to 913 females per 1000 males in 2011[64]. Reserved categories population in the district is significant, occupying a share of 25.36[65] percent of total population which is slightly less than 28.85% for Punjab as a whole.

15.2.2.2 Literacy

The district has a decent literacy rate of 83.3 percent in comparison to state average of 76.07 percent[66]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 77.2 percent in line with trends in other districts. School infrastructure at all levels of schooling (primary and middle and secondary) is better than the state average as shown by the table below. The high literacy rate could well be driven by the increased accessibility offered by more number of schools.

Number of Schools per Thousand School Going Children in Rupnagar benchmarked against that of Punjab

Region	Primary Level	Middle Level	Secondary Level
Rupnagar	1101	2831	5795
Punjab	1527	3570	6840

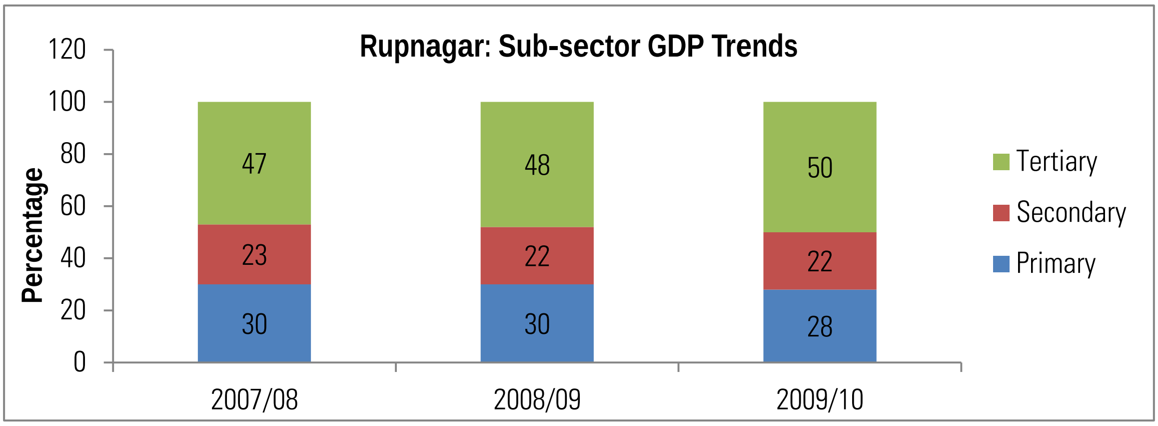
Source: Statistical Handbook of Punjab, 2012

[61] Punjab State Statistical Abstract 2011-12
[62] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[63] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[64] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[65] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[66] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

15.2.3 District Economy

Contribution of Rupnagar to the overall state economy is slightly lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 41,680 in comparison to state average of INR 42,752 in 2009-10(At current prices). The contribution of the tertiary sector (50 percent) is the highest among sub-sectors in the district. Dependency on the primary sector at 28 percent is also not far behind, indicating the district's robust agricultural base as well.

Sub-Sector wise GDDP trends in Rupnagar are presented in the chart



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors Rupnagar like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 37.69 percent of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country, the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (22.35 percent) of the district GDP compared to 31.12 percent for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Rupnagar	13247	9126	8514	4112	365
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Source: Statistical Handbook Punjab, 2012

Agriculture is one of the major employers and contributors to the Rupnagar economy. The main Kharif crops grown in Rupnagar are Paddy, Maize and Sugarcane. Among the Rabi crops Wheat, Taramira and Mustard are grown with land use skewed heavily in favor of wheat. The Horticultural crops grown in this area are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 79,000 hectares and the gross sown area amounts to 1,43,000 hectares which makes the cropping intensity to be 181percent. Most of the sown area is irrigated (88.6 percent) the rest is rain fed and it is lesser than the state average of 97.9 percent.

59,000 tonnes of maize and 2,12,000 tons of wheat are produced each year in Rupnagar. The district not is prone to any major contingencies which turn out to be detrimental to the crops. High yielding varieties of seeds are mostly used by farmers in Rupnagar.

Fishing is an important allied activity in Rupnagar; it has fish stocked in an area of 441 hectares. It has receipts from Fisheries amounting to Rs. 22, 12,000.

Rupnagar also has 1 Milk plant out of the total 65 in the state, indicating low share in milk production Animal Husbandry also enjoys huge presence in the agricultural communities of Rupnagar. It has a total of 134.8 thousand graded buffaloes and 27.5 thousand cross bred cattle most of them are females. The number of Goat at 6 thousand is also high in Rupnagar.

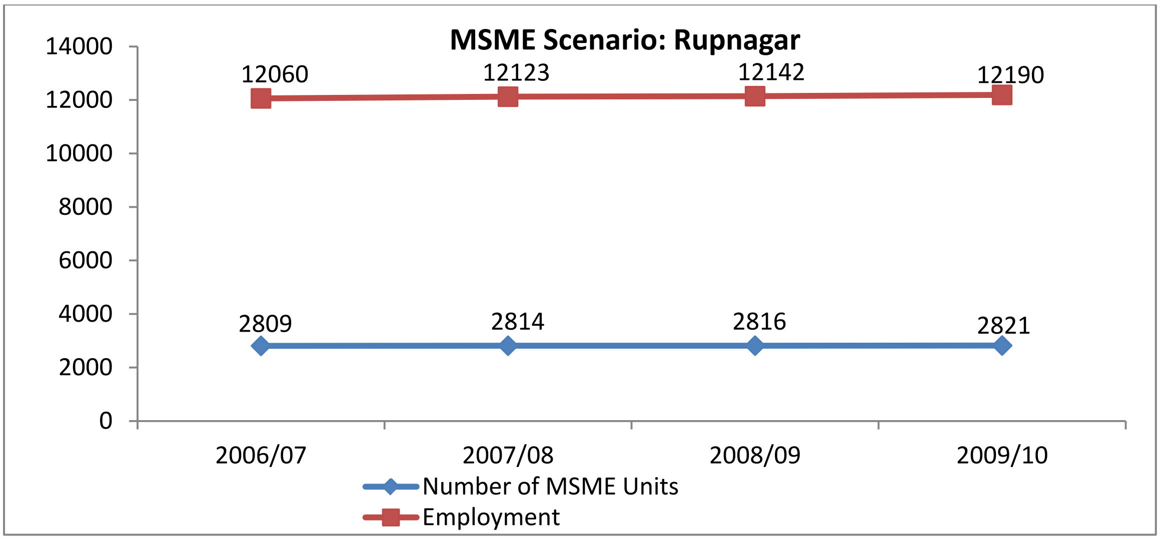
15.2.2.4 Industry

Rupnagar is a key economic hub in the district of Punjab, with presence of numerous medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had six large scale units generating employment in excess of 2,000 with a cumulative turnover of more than INR 2,100 crore. National Fertilizers Ltd. and Punjab Alkali and Chemicals are major large industrial entities in the district

Presence of large scale units have resulted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. Apart from its competencies in hard sectors like chemicals, fertilizers, mosaic tiles and cement and concreate, the district also has one cluster devoted to stone and rock crushing.

Between 2001-02 and 2009-10, the MSE segment has witnessed incremental addition of more than 400 units generating additional employment of more than 4,000 during the period.

Growth trends in MSME segment.



Source: Statistical Handbook of Punjab, 2012

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Rupnagar district.

Existing Clusters	Clusters Identified for Promotion
1. Fertilizers and Chemicals 2. Cement and Concrete 3. Stone Crushing Units 4. Boiler Production	Cement, Concrete and also huge opportunity available in the informal food sector

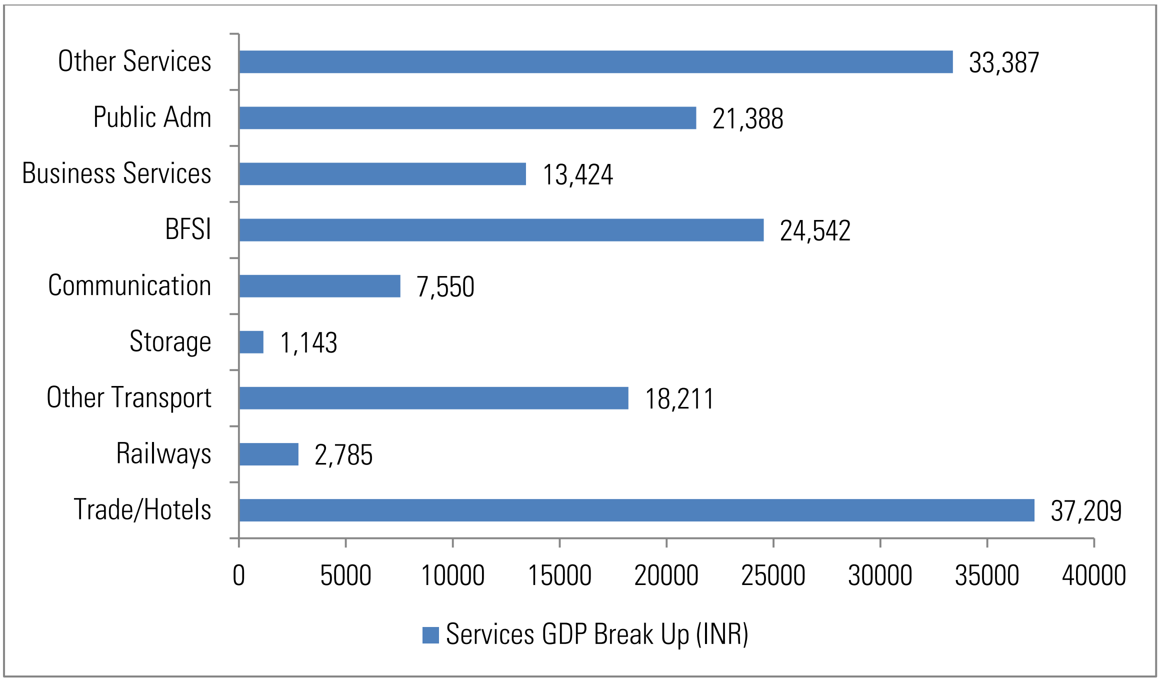
Source: DIC, Primary Inputs

15.2.4 Services Sector

Service sector contributed to 50 % percent[67] of GDDP in the year 2009-10, higher than the state average of 41percent for Punjab. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Rupnagar.

Sub-sector wise contribution of services income (2009-10)

[67] http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: Source: Statistical Handbook of Punjab, 2012

Penetration of healthcare facilities measured in terms of population served per bed, at 765 per bed is near the stateaverage of 760 per bed. District has 4 PHCs and 13 CHCs along with 55 Sub centers with limited private participation[68]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade.

Details of healthcare infrastructure in the district

Category	Number of Institutions
Allopathic Hospitals	4
Ayurvedic Institutions	26
Homeopathic Institutions	7
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	13
Dispensaries	55
Total	**109**

Source: District MSME Report

[68]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Rupnagar has decent penetration of banking and financial services measured as a percentage of GDDP at 7.9 percent in comparison to state average of 7.74 percent, as per the 2009-10 estimates. According to the 2004-05 base year prices, robust industrial and services base growth can be expected. Rupnagar being primarily a progressive agriculture and services based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.2.5 Workforce Distribution in the district

15.2.2.5 Current Employment Scenario in Rupnagar

Main worker participation rate of 32.14% in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.07 % is below the state average of 4.66 %. Overall percentage of non workers 55.8 % is slightly higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Rupnagar	32.16 %	4.07 %	55.8 %	23.5 %	32.3 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: District Statistical Handbook

14.1.2 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Rupnagar is a low human resource growth district adding net manpower of about 22, 000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Rupnagar	754,059	497,679	239,546	227,569	22,414
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.2.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Rupnagar has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Rupnagar.

According to the estimates, in the next 5 years, Rupnagar is expected to witness an incremental manpower requirement of over 29 thousand [69] which is expected to normalize to 28 thousand [70] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	173455	0	0	181555	0	0	179189
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	46	183	229	52	206	258	58	232	291
Food Processing	99	383	559	144	559	814	200	780	1136
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	146	584	730	184	738	922	221	883	1103
Paper & Paper Products	38	151	189	43	170	213	48	192	240
Chemical & Chemical Products	137	548	685	186	744	930	240	961	1202
Construction Based Material	136	545	681	163	652	815	199	795	994

[69] KPMG Estimates on Incremental Manpower Requirement
[70] KPMG Estimates on Incremental Manpower Requirement

Mineral Processing	1	3	4	1	3	4	1	3	4
Manufacturing of Engineering Products	248	992	1240	274	1097	1371	303	1212	1515
Textiles	106	425	532	130	518	648	164	655	819
Manufacturing of Electrical Products	35	141	177	40	159	199	45	180	224
Construction	1982	3963	33688	3021	6042	51360	4214	8427	71632
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	500	2000	0	801	3205	0	1477	5907	0
Transportations and Logistics	216	3423	4072	286	4537	5398	361	5733	6821
Retail	2450	2450	19602	3049	3049	24389	3581	3581	28646
Hospitality	123	185	926	153	230	1151	180	270	1352
Communication	3038	9114	0	3741	11224	0	4445	13336	0
Banking and Financial Services	2647	7941	0	3472	10415	0	4273	12819	0
Education and Training	972	6540	0	1368	9208	0	1496	10074	0

Source: KPMG Analysis

15.2.7.1 Details of vocational education infrastructure in Rupnagar

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Rupnagar	1696	376	65	2137	3.1

Source: Department of Industrial training and Vocational Education, Punjab

15.2.7.2 List of the Main Trades/Courses offered by I.T.Is at Rupnagar[71]

Govt. ITI		Private ITI	
Carpenter	Mechanic Electronics	MMV	Wireless Machanic-cum-Operator
COPA	Mech Ref & AC	CSE&TTC	Machine Tool Maintenance
Draftsman Civil	Mechanic Motor Vehicle	Art & Craft TT	Cutting & Sewing
Electrician	Mechanic Tractor	A&C TTC	Embroidery & Needle Work
Fitter	Plumber		
IT & ESM	Stenography Punjabi		
Mach. Instrument	Turner		

15.2.8 Youth Interaction outcomes

Students in Rupnagar showed higher preference towards government job over private owing to higher job security and salary. Students were also open to migration to the other districts or states. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is also reflected in the salaries offered. The industry in Rupnagar confirmed that salaries offered to the students from Polytechnics are almost 25-30% higher than what is being offered to an ITI student. Students of the districts appeared to have low awareness in terms of career prospects. COE-IT students had low awareness about the career opportunities and were willing to work anywhere they would find a job with their multi-skilled broad based training. Most youth preferred salaried jobs over self employment.

15.2.9 Skill mapping and developmental concerns

[71] DTE Punjab

Rupnagar is not a very industrialized district and is mainly dominated by the cement & chemical industry. There is scope for creation of decentralized training infrastructure to train the numerous personnel involved in the informal and the unorganized sector. Food Processing and Servicing and Repair of Agriculture machinery can be given focus under the short term training schemes.

15.2.10 District specific recommendations

Considering the above mentioned factors, the proposed action plan for stakeholders in skill development in Rupnagar district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Tourism o Retail o Cement o Chemical & Paper Products o Food Processing • Forging public private partnerships with leading public /private sector firms like Ambuja Cements in Rupnagar to create an inclusive ecosystem for skill development in Food processing. • Creating a scholarship fund to be disbursed through the District Employment Office for high achieving students interested in taking up skill related courses
District Administration	• Ensure women participation in the burgeoning services skill development, as majority of the skilled jobs in the district are manufacturing based • Centre of Excellence scheme which has received specific funding from the World Bank should be promoted appropriately in the district • Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode either through industrial scholarships or via co-operative societies • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level. • Focus on training in agriculture products and processing especially in potatoes as the district has a good output and a ready snack consumption market
Industry	• Industries should undertake vocational training as a part of their CSR activity with a definite policy announced at the beginning of the year • Increase desirability of jobs through improved work environment which can offset the constraints of low wages • Participate in “Train the Trainer” programs to improve the quality of training delivery, the benefits of which will ultimately feed into the industry • Industry can collaborate with skill development institutes for updating the course content and creating appropriate institutional linkages for placements • Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training

Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way to maximise placement opportunities. Experts in form of guest lecturers from the industry could be called to deliver very specifc trade modules customized to local demand • Update machinery and provide manuals in workshops for practical classes & also link up with NGOs & Clubs in the district in sourcing candidates for the courses • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students opening up another revenue stream for these players

15.3 Skill Gap Assessment of Fatehgarh Sahib District

15.3.1 Administrative Profile

District Fatehgarh Sahib is surrounded by districts of Ludhiana and Ropar in the north, Patiala in the south, Ropar and Patiala in the east, Ludhiana and Sangrur in the West.

15.3.2 Social Profile

Demographics

Fatehgarh has a population of 5.99 lakhs as per the 2011 Census with 69.13 percent share of that being rural population[72]. This is slightly more than the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 508 persons per sq.km., is much lower than state average of 893[73] persons per sq.km.

While the child gender ratio has increased from 766 females per 1000 males in 2001 to 843 females per 1000 males in 2011, there has only been a marginal decrease in the adult (0-6 age group) gender ratio from 854 females per 1000 males in 2001, to 871 females per 1000 males in 2011[74].

Reserved categories population in the district is quite significant, occupying a share of 30.67[75] percent of total population in line with the 28.85% figure for Punjab as a whole.

Literacy

The district has a more than a decent literacy rate of 80.3 percent in comparison to state average of 76.7 percent[76]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 75.5 percent in line with trends in other districts. Also, the shortage of school infrastructure at all levels of primary and middle and secondary is a key concern for the district as shown by the below benchmarking of Fatehgarh's School infrastructure with that of the state in terms of population served per school. The district's performance at the secondary level is better even over-performing the state average figure.

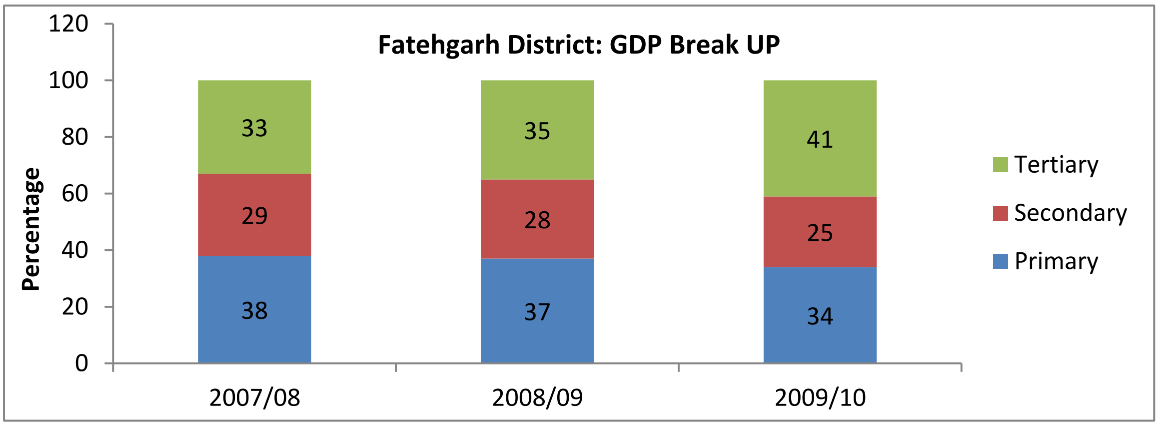
Region	Primary Level	Middle Level	Secondary Level
Fatehgarh	2834	4150	5870
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.3.3 District Economy

Contribution of Fatehgarh to overall state economy is much higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 54,385 in comparison to state average of INR 42,752 in 2009-10(At current prices). As expected, the contribution of the tertiary sector (41 %) is the highest among sub-sectors in the district. Dependency on the primary sector (at 34 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Fatehgarh are presented in the chart.

[72] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[73] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[74] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[75] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[76] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors

Fatehgarh Sahib like many other districts in the country is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 33.94 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, agriculture contributed a major portion (36.18 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state. The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Fatehgarh Sahib	2379	3799	7126	7623	1546
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Agriculture is one of the major employers and contributors to the Fatehgarh Sahib economy. The main Kharif crops grown in Fatehgarh Sahib are Rice, Maize and Sun Flower with rice occupying most of the cultivated area (standing at 85000 hectares). Among the Rabi crops Wheat and Oilseed are grown with land use skewed heavily in favor of wheat (at 84000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 102000 hectares and the gross sown area amounts to 191100 hectares which makes the cropping intensity to be 187%. All of the sown area is irrigated (100 %) which is greater than the state average of 97.9 %. 361000 tonnes of rice and 369000 tons of wheat are produced each year in Fatehgarh Sahib.

The district is prone to frequent heat waves and crop diseases which turn out to be detrimental to the crops. Fatehgarh Sahib also witnesses occasional hailstorm, cold waves and frost. High yielding varieties of seeds are mostly used by farmers in Fatehgarh Sahib.

Fishing is an important allied activity in Fatehgarh Sahib; it has fish stocked in an area of 457 hectares.

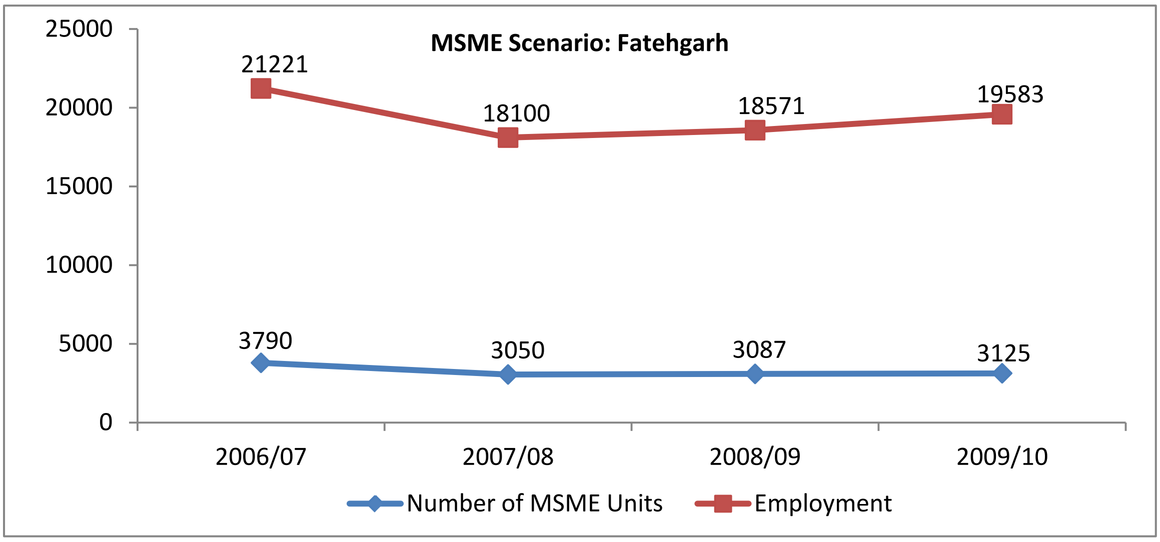
Fatehgarh Sahib also has 4 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Fatehgarh Sahib. It has a total of 146.2 thousand graded buffaloes and 38 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 6 thousand and 1 thousand respectively is also high in Fatehgarh Sahib.

Industry

Fatehgarh district although not heavily industrialized does have some presence of medium and lare units. In the year 2009-10, the district had 12 large scale units generating employment in excess of 1,750 with a cumulative turnover of more than INR 750 crore. Punjab Agri Vents, Kandhari Beverages are some of the few large industrial entities in the district. Four mega projects pertaining to stell rolls, rail coaches, sugar and concast billets have been sanctioned recently.

Presence of these medium and large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units can be expected to happen in the near future which can lead to more vendorization/supplier network. The district has one cluster devoted to manufacture of Truck Body parts. Apart from this, the district also sees significant economic activity includign exports in the frozen foods and vegetables segment. Between 2001-02 and 2009-10, the MSE segment has witnessed a decrease of around 900 MSE as defunct units were gradually deregistered subsequently leading to a decline of around 1700 jobs in the district.



Source: District MSME Profile

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Fatehgarh district.

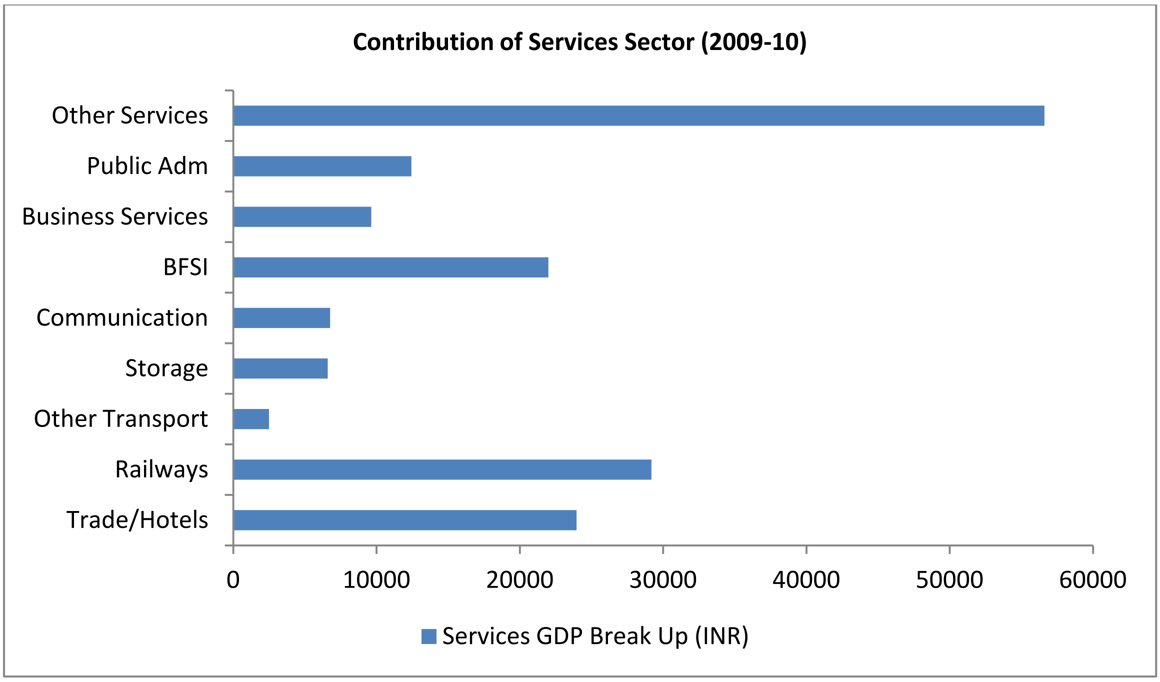
Existing Clusters	Clusters Identified for Promotion
1. Frozen Foods 2. Frozen Vegetables and Beverages 3. Truck Body Parts	Frozen foods & Metal Fabrication

Source: District MSME Report. 2011

Services Sector

Service sector contributed to 41 % percent[77] of GDDP in the year 2009-10 in line with the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants and Railways are the key services activities in Fatehgarh. Sub-sector wise contribution of services income is presented in the chart.

[77]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: Statistical Handbook of Punjab, 2012

Penetration of healthcare facilities measured in terms of population served per bed, at 751 per bed is less than the state average of 760 per bed. District has 4 PHCs and 13 CHCs along with 77 Sub centers with limited private participation[78].

Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	**Number of Institutions**
Allopathic Hospitals	3
Ayurvedic Institutions	10
Homeopathic Institutions	1
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	13
Dispensaries	41
Total	**72**

Fatehgarh has more than decent penetration of banking and financial services measured as a percentage of GDDP at 7.96 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its dependence on the primary sector. Fatehgarh being primarily an agriculture and

[78] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

allied sectors based economy sees presence of mainly public sector banks and small cooperative banks with limited presence of new age private and foreign banks.

15.3.4 Current Employment Scenario in Fatehgarh

Main worker participation rate of 30.35 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.02 % is below the state average of 4.66 %. Overall percentage of non workers 55.3 % is slightly higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Fatehgarh Sahib	30.35 %	4.02 %	55.3 %	21.8 %	33.5 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Punjab Statistical Handbook 2012

15.3.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Fatehgarh is a low human resource growth district adding net manpower of about 18,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Fatehgarh Sahib	661,880	436,841	199,378	189,409	18,656
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.3.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Fatehgarh Sahib has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Fatehgarh Sahib.

According to the estimates, in the next 5 years, Fatehgarh Sahib is expected to witness an incremental manpower requirement of over 15 thousand [79] which is expected to increase to 25 thousand [80] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	64816	0	0	63971	0	0	63137
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	6	23	29	6	26	32	7	29	36
Food Processing	123	477	696	179	696	1014	250	971	1415
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	66	264	330	83	333	416	100	398	498
Paper & Paper Products	6	23	29	7	26	33	7	29	37
Chemical & Chemical Products	31	124	155	42	168	210	54	217	271
Construction Based Material	18	74	93	22	89	111	27	108	135
Mineral Processing	78	311	389	79	317	397	81	324	405
Manufacturing of Engineering	162	647	809	179	715	894	198	791	989

[79] KPMG Estimates on Incremental Manpower Requirement
[80] KPMG Estimates on Incremental Manpower Requirement

Products									
Textiles	9	38	47	11	46	57	14	58	72
Manufacturing of Electrical Products	5	22	27	6	24	30	7	27	34
Construction	2018	4036	34305	3076	6153	52299	4291	8582	72942
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	466	1863	0	807	3226	0
Transportations and Logistics	68	1084	1289	90	1437	1709	114	1815	2160
Retail	902	902	7220	1123	1123	8983	1319	1319	10551
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1396	4187	0	1718	5155	0	2042	6126	0
Banking and Financial Services	1199	3598	0	1573	4719	0	1936	5808	0
Education and Training	932	6273	0	772	5196	0	796	5356	0

Source: KPMG Analysis

15.3.7.1 Details of vocational education infrastructure in Fatehgarh Sahib

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Fatehgarh	504	380	0	884	1.5

Source: DTE Punjab

15.3.7.2 List of the Main Trades/Courses offered by I.T.I.s at Fatehgarh Sahib

Govt. ITI	Private ITI
Carpenter	Insurance Agent
COPA	Data Entry Operator
Cutting & Sewing	Fashion Technology
Electronics	CS&E TTC
Embroidery & N Work	A&C TTC
Surveyor	
Stenography Punjabi	

Source: Department of Industrial training and Vocational Education, Punjab

15.3.8 Students Interaction outcomes-Youth Aspirations

Students in the ITI were noted to be coming from a middle class background with a family income between INR7,000 to 14,000 per month. Most students were willing to migrate for job opportunities. However, some students from the women ITI preferred to work only in Fatehgarh due to social constraints. Students perceive polytechnic to be a better option as the ITI was only their backup choice. This is due to the better salaries given to the Polytechnic students. All students expected a salaries exceeding INR 10,000 and a Government job was seen as their first preference. Students do not want to work in the private sector because entry level salaries are low which is not commensurate with the amount of work assigned to them.

15.3.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, it was felt that the Government ITI at Bassi Pathana taluk is the only major source of manpower in the neighbouring industries as majority of the private ITIs were only catering to soft courses more tuned to services like beauty, hair dressing and skin care with less focus on training in manufacturing and infrastructure. The district administration also highlighted the problems of the unsustainabilty of low wages being paid to ITI graduates and felt that this is driving the youth towards working in the unorganized service industry instead of the organized manufacturing industry.

15.3.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Fatehgarh district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Cereal Processing o Fruit and vegetable processing o Metal Fabrication o Other Service related trades • Forging public private partnerships with leading private sector firms such as Ambuja in Rupnagar to create an inclusive ecosystem for skill development • Create infrastructure with financial & manpower resources to monitor the existing skill initiatives in the district • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training and provide scholarship fund for high achieving students interested in taking up skill related courses • The key small scale industries in the district are Repair and Servicing, Fabrication Units, Agro & Food based. In absence of formally certified skills, these labours tend to earn lower wages in this surplus labor district • Targeted training interventions could be developed to up skill and certify those engaged in these areas
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program by associating a lead bank with an ITI • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses which has received specific State Government funding • Community learning initiative for women in the backward tehsils could be initiated with focus on adding value to their traditional livelihood trades • Minimum apprentice wages should be increased to make the training programs more attractive and on par with contract laborers • Evaluate rural skill development schemes in sectors such as "Construction" & Asset" creation in alignment with MGNREGA
Industry	• Providing shop floor training to the candidates rather than unskilled provisional work during the schedule of training curriculum and paying apprentices the minimum statutory wages for that period • Collaborate with skill development institutes to update course content tweaked to

	local demand • Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training
Private Skill training providers	• Focus on placement driven training for youth rather than a broad level learning experience in the identified Skill gaps in the district. • Evaluate and update the course content as per industry requirements with focus on placement opportunities

15.4 Skill Gap Assessment of Bathinda District

15.4.1 Administrative Profile

For administrative purposes, the district of Bathinda forms a part of the Firozpur Division, Firozpur. The district comprises four tahsils, viz. Bathinda (including sub-tahsils Badhlada and Sardulgarh), Rampura Phul, and Talwandi Sabo, all of which have been made subdivisons. In 1971, Bathinda was upgraded to a subdivision. Mansa was a subdivision when the district was formed in 1948. Rampura Phul and Talwandi Sabo were made subdivisions in 1971 and 1979, respectively.

For administrative point of view, the district has been divided into 6 sub division, 3 tehsils , 8 blocks . There are 681 Gram panchayats , 581 inhabited villages and 04 uninhabited villages . Number of census towns in Bathinda distrcit are 13[81].

15.4.2 Social Profile

Demographics

Bathinda has a population of 13.88 lakhs as per the 2011 Census with 64 percent share of that being rural population[82]. This is less than the average rural population of 68.2% for Punjab as a whole.The Population density of the district, standing at 414 persons per sq.km, is much lower than state average of 893[83] persons per sq.km.

While the child gender ratio has increased from 785 females per 1000 males in 2001 to 854 females per 1000 males in 2011, there has only been a marginal decrease in the adult (0-6 age group) gender ratio from 870 females per 1000 males in 2001, to 865 females per 1000 males in 2011[84].

Reserved categories population in the district is quite significant, occupying a share of 29.97[85] percent of total population in line with the 28.85% figure for Punjab as a whole.

Literacy

The district has an underperforming literacy rate of 69.6 percent in comparison to state average of 76.07 percent[86]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 62.9 percent in line with trends in other districts. Also, the shortage of school infrastructure at all levels of primary, middle and secondary is a key concern for the district as shown by the below benchmarking of Bathinda's School infrastructure with that of the state in terms of population served per school.

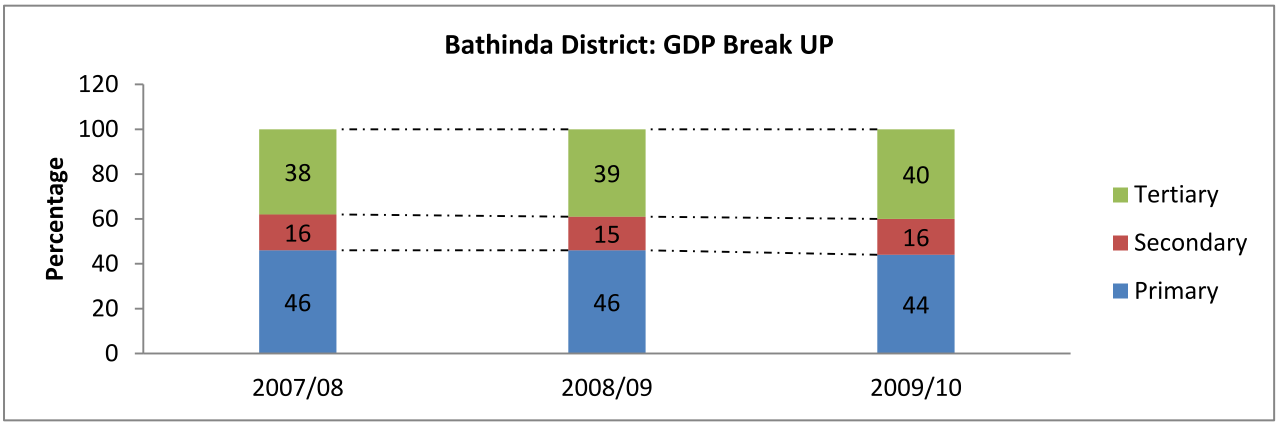
Region	Primary Level	Middle Level	Secondary Level
Bathinda	2400	3666	5969
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

[81] District MSME Industry Profile, Bathinda
[82] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[83] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[84] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[85] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[86] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

15.4.3 District Economy

Contribution of Bathinda to overall state economy is lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 37,526 in comparison to state average of INR 42,752 in 2009-10(At current prices). The contribution of the primary sector (44 %) is the highest among sub-sectors in the district. Dependency on the tertiary sector (at 40 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Bathinda are presented in the chart.



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors

Bathinda like many other districts in the country is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 51.29 % of the working population was employed in agriculture this is much larger a fraction when compared to the state average of 39 %. In the year 2004-05, agriculture contributed a major portion (41.34 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Bathinda	7632	8262	16332	20930	6790
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Agriculture is one of the major employers and contributors to the Bathinda economy. The main Kharif crops grown in Bathinda are Rice and Cotton with Cotton occupying most of the cultivated area (standing at 165000 hectares) followed by Rice (86000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 245000 hectares). The Horticultural crops grown are Citrus Fruits, Kinnow, Grapes, Ber, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Cucurbits, Chilly, Onions and other seasonal Vegetables.

The net sown area is 297000 hectares and the gross sown area amounts to 555000 hectares which makes the cropping intensity to be 187%. Most of the sown area is irrigated (99.7 %) and the rest is rain fed. This figure is higher than the state average of 97.9 %. 58000 tonnes of citrus fruits and 10000 tons of Guava are produced each year in Bathinda.

The district is prone to frequent attacks by pests, diseases and heat waves which turn out to be detrimental to the crops. Bathinda also witnesses occasional Hailstorm, frost and cold waves. High yielding varieties of seeds are mostly used by farmers in Bathinda.

Fishing is an important allied activity in Bathinda; it has fish stocked in an area of 863 hectares. It has receipts from Fisheries amounting to Rs. 23,000.

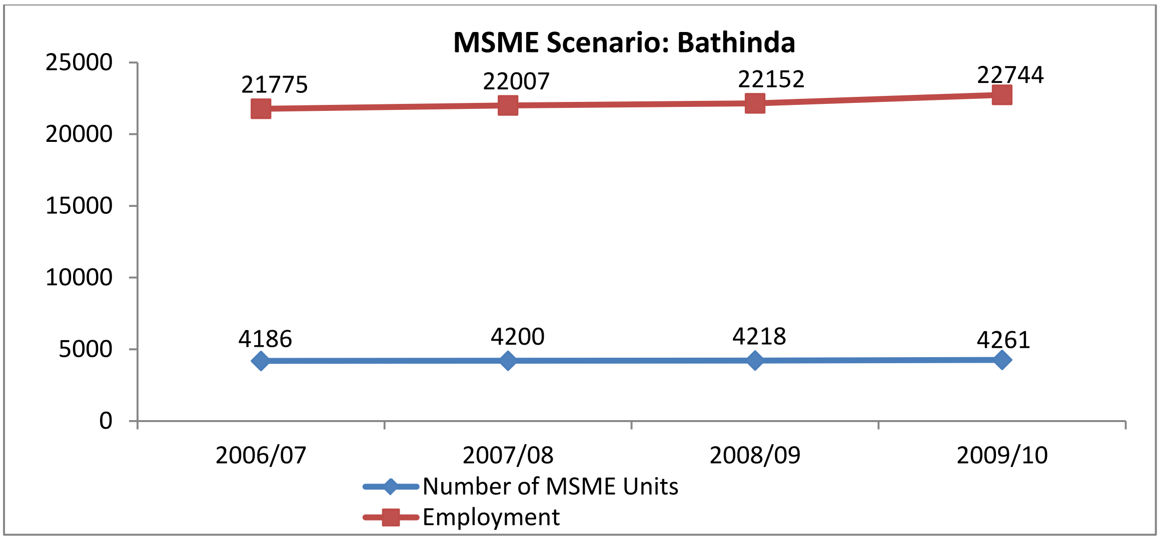
Bathinda also has 3 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Bathinda. It has a total of 269.9 thousand graded buffaloes and 54.4 thousand cross bred cattle most of them are females. The number of goat and sheep at 40 thousand and 30 thousand respectively is also high in Bathinda.

Industry

Bathinda is a key regional economic hub in the district of Punjab with presence of medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had 12 large scale units generating employment in excess of 6,800 with a cumulative turnover of more than INR 1,500 crore. Ambuja Cements, Ultra Tech Cements and National Fertilizers are some of the key industrial entities in the district.

Presence of these medium and large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units can be expected to happen in the near future which can lead to more vendorization/supplier network. The district as such has no dedicated single industry foxused cluster. The key indistrial sectors operating in the district are Yarn Production and Milk and Milk Product Production. One cluster devoted to Agriculture Implements Manufacture and trade expected to come up soon. Between 2001-02 and 2009-10, the MSE segment has witnessed a small increase of 200 units generating additional incremental employment of around 2300.



Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Bathinda district.

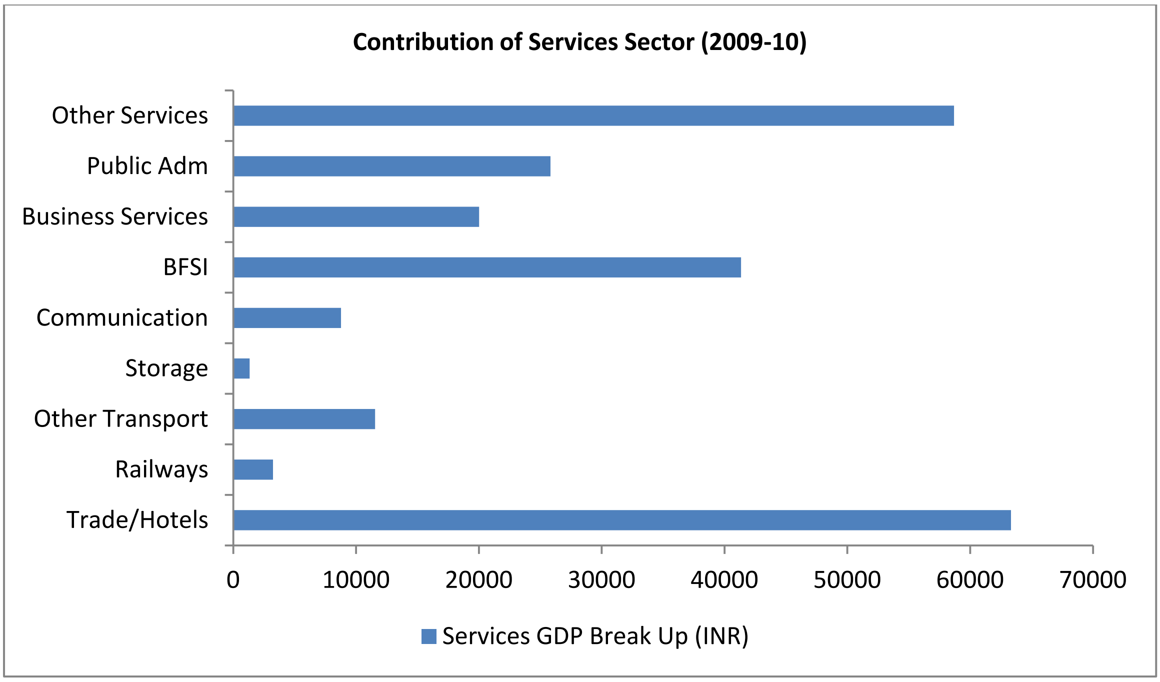
Existing Clusters	Clusters Identified for Promotion
1. Yarn Products 2. Milk and Milk based Products	Milk Products, Transportation & Cotton based Textiles

Source: District MSME Report. 2011

Services Sector

Service sector contributed to 40 % percent[87] of GDDP in the year 2009-10 in line with the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Bathinda. Sub-sector wise contribution of services income is presented in the chart.

[87]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: Statistical Handbook of Punjab, 2012

Penetration of healthcare facilities measured in terms of population served per bed, at 762 per bed is near the state average of 760 per bed. District has 9 PHCs and 20 CHCs along with 77 Sub centers with limited private participation[88]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	4
Ayurvedic Institutions	27
Homeopathic Institutions	7
Primary Health Centers (PHCs)	9
Community Health Centers (CHCs)	20
Dispensaries	77
Total	**144**

Source: Statistical Handbook of Punjab, 2012

Bathinda has more than decent penetration of banking and financial services measured as a percentage of GDDP at 7.96 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its dependence on the primary sector. Bathinda being primarily an agriculture and allied sectors based economy sees presence of mainly public sector banks and small cooperative banks with limited presence of new age private and foreign banks

[88]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

15.4.5 Workforce Distribution in the district

Current Employment Scenario in Bathinda

Main worker participation rate of 29.44 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 6.61 % is above the state average of 4.66 %. Overall percentage of non workers at 49.2 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Bathinda	29.44 %	6.61 %	49.2 %	20.4 %	28.7 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Punjab Statistical Handbook 2012

Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Bathinda is a medium to high human resource growth district adding manpower of about about 45,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Bathinda	1,532,572	1,011,498	484,014	459,813	45,288
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.4.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Bathinda has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Bathinda

According to the estimates, in the next 5 years, Bathinda is expected to witness an incremental manpower requirement of over 32 thousand [89] which is expected to normalize to 31 thousand [90] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	247095	0	0	243875	0	0	240697
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	61	244	306	69	276	344	78	311	388
Food Processing	358	1392	2028	522	2029	2956	728	2830	4123
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	96	384	481	121	486	607	145	581	726
Paper & Paper Products	17	68	85	19	77	96	22	86	108
Chemical & Chemical Products	85	340	425	115	462	577	149	597	746
Construction Based Material	61	246	307	73	294	367	90	358	448
Mineral Processing	214	856	1070	218	873	1091	223	891	1113
Manufacturing of Engineering Products	350	1400	1750	387	1548	1934	428	1711	2138
Textiles	55	219	274	67	267	333	84	337	421

[89] KPMG Estimates on Incremental Manpower Requirement
[90] KPMG Estimates on Incremental Manpower Requirement

Manufacturing of Electrical Products	83	332	415	93	374	467	105	422	527
Construction	2852	5705	48489	4348	8697	73925	6065	12130	103103
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1103	4414	0	1947	7788	0
Transportations and Logistics	116	1841	2191	154	2441	2904	194	3084	3669
Retail	1958	1958	15667	2437	2437	19493	2862	2862	22896
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1823	5468	0	2244	6733	0	2667	8001	0
Banking and Financial Services	2459	7376	0	3225	9675	0	3969	11907	0
Education and Training	1330	8951	0	1828	12308	0	1919	12917	0

Source: KPMG Analysis

15.4.7.1 Details of vocational education infrastructure

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Bathinda	834	1412	32	2278	1.6

Source: DTE Punjab

15.4.7.2 List of the Main Trades/Courses offered by I.T.I.s at Bathinda

Govt. ITI		Private ITI	
Attendent Opretor	Draftsman Mechanical	Lab. Attendent	Stenography Punjabi
Carpenter	Electrician	Machinist Composite	TCPC
Consumer Electronics	Electronics	Machinist Grinder	Turner
COPA	Embroidery & N Work	Mechanic Motor Vehicle	Welder (Gas & Electric)
CS&E TTC	Fitter	Ref. & AC	Wireless Operator
Cutting & Sewing	Instrument Mechanic	Mechanic Tractor	Wireman
Draftsman Civil	IT & ESM	Steno English	Electronics

Source: Department of Industrial training and Vocational Education, Punjab

15.4.8 Youth Interaction outcomes

Students in the district showed higher preference towards government jobs over private owing to higher job security and salary. Students were also open to migration to the other districts or states; however they appeared to be satisfied with self employment finding jobs within the district of Bathinda. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment & preferred self employment over conventional industrial jobs. The aspired salary range for the students is in between INR 8,000 to INR 11,000.

15.4.9 Skill Mapping and developmental concerns

Bathinda is the most industrialized district of Southern Punjab contributin to almost a third of the regions GDP and its share is growing at a high rate of 9.6%. There exists a trade and sector level skill shortages in some industries. Trade level skill shortages were noticed across skills like Cutting and tailoring, electricians, fitters and Diesel mechanics. Sector level skill deficits are noticed in the areas like Chemical testers and mixers, Press operators, Boiler attendant's etc. The industries in Bathinda prefer hiring native labour due to easy availability & ease of sourcing

15.4.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Bathinda district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Boiler Turbine Operator o Food processing o Textiles o Focus should also be to train skilled manpower in new ways of Welding such as MIG, TIG and Arc welding. Current ITI's have a main focus on Gas welding and a limited focus on MIG/TIG • Forging public private partnerships with leading private sector firms in Bathinda to create an inclusive ecosystem for skill development. • Set up camps in schools to bring a improve perception of vocational training amongst local youth. This could be materialized by creating a scholarship fund for high achieving students interested in taking up skill related courses. • Setting up a Food Processing skill council to define and standardize job roles.
District Administration	• The students find the fee for COE courses to be high and there are affordability issues around the same. • There is a need to create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program. The loan can even be classified under the priority sector lending which can enable the banks to achieve their lending targets as well.This could be done by associating a lead bank with each ITI in the district. • There is low awareness about MES scheme amongst school dropouts in the district. Currently, MES schemes only tend to attract existing ITI students in the district and not the early school leavers. • PRO should campaign to promote MES courses amongst early school leavers at both the school and village level • Focus on training in agricultural products and processing especially in Horticulture produce through the Punjab Agricultural University-Ludhiana. This may be achieved by providing startup subsidies on input costs.

15.5 Skill Gap Assessment of Faridkot District

15.5.1 Administrative Profile

The district comprises 163 inhabited and 190 Gram Panchayats spread over in three tahsils viz. Faridkot, Kot Kapura, Jaitu. Besides there is one sub tahsils namely Sadik and two block Faridkot & Kot Kapura.

15.5.2 Social Profile

Demographics

Faridkot has a population of 6.18 lakhs as per the 2011 Census with 64.8 percent share of that being rural[91]. This is slightly less than the average rural population of 68.2% for Punjab as a whole.The population density of the district standing at 424 persons per sq.km is much lower than state average of 893[92] persons per sq.km.

While the child gender ratio has increased from 812 females per 1000 males in 2001 to 851 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 883 females per 1000 males in 2001, to 889 females per 1000 males in 2011[93]. Reserved categories population in the district is quite significant, occupying a share of 36.17[94] percent of total population which is more than 28.85% for Punjab as a whole.

Literacy

The district has a decent literacy rate of 70.6 percent in comparison to state average of 76.07 percent[95]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 64.8 percent in line with trends in other districts. Also, low school infrastructure at middle and secondary levels is a key concern for the district although the schooling infrastructure at the primary level is much improved as shown by the below benchmarking of Faridkot's School infrastructure with that of the state in terms of population served per school.

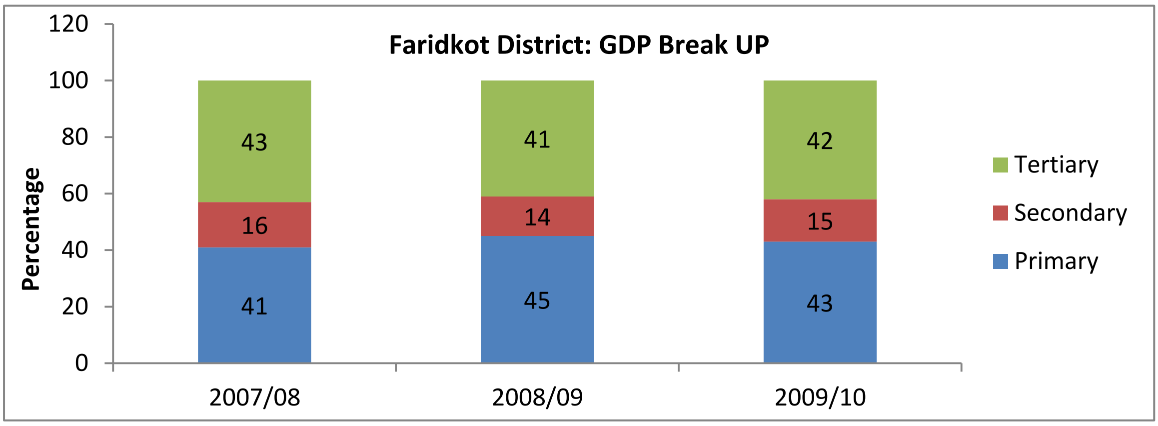
Region	Primary Level	Middle Level	Secondary Level
Faridkot	1213	4557	10108
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.5.3 District Economy

Contribution of Faridkot to overall state economy is slightly less than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 40,089 in comparison to state average of INR 42,752 in 2009-10(At current prices) . The contribution of the primary sector (43 %) being the highest among sub-sectors in the district. Dependency on the tertiary sector (at 42 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Faridkot are presented in the chart.

[91] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[92] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[93] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[94] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[95] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors

Faridkot like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 46.28 % of the working population was employed in agriculture; this fraction is much greater than that of other parts of the state as evident by the overall state average of only 39 %. In the year 2004-05, Agriculture contributed a major portion (38.95 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Faridkot	3811	4700	9727	11271	1871
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Agriculture is one of the major employers and contributors to the Faridkot economy. The main Kharif crops grown in Faridkot are Rice, Cotton and Moong with rice occupying most of the cultivated area (standing at 95000 hectares). Among the Rabi crops Wheat is grown with land use skewed heavily in favor of wheat (at 118000 hectares). The Horticultural crops grown are Kinnow, Guava, Ber, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 128000 hectares and the gross sown area amounts to 252000 hectares which makes the cropping intensity to be 197%. Most of the sown area is irrigated (99.2 %) and the rest is rain fed. This figure is greater than the state average of 97.9 %. 41400000 tonnes of rice and 55000000 tons of wheat are produced each year in Faridkot.

The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Faridkot also witnesses occasional floods and droughts. High yielding varieties of seeds are mostly used by the farmers in Faridkot.

Fishing is an important allied activity in Faridkot; it has fish stocked in an area of 442 hectares.

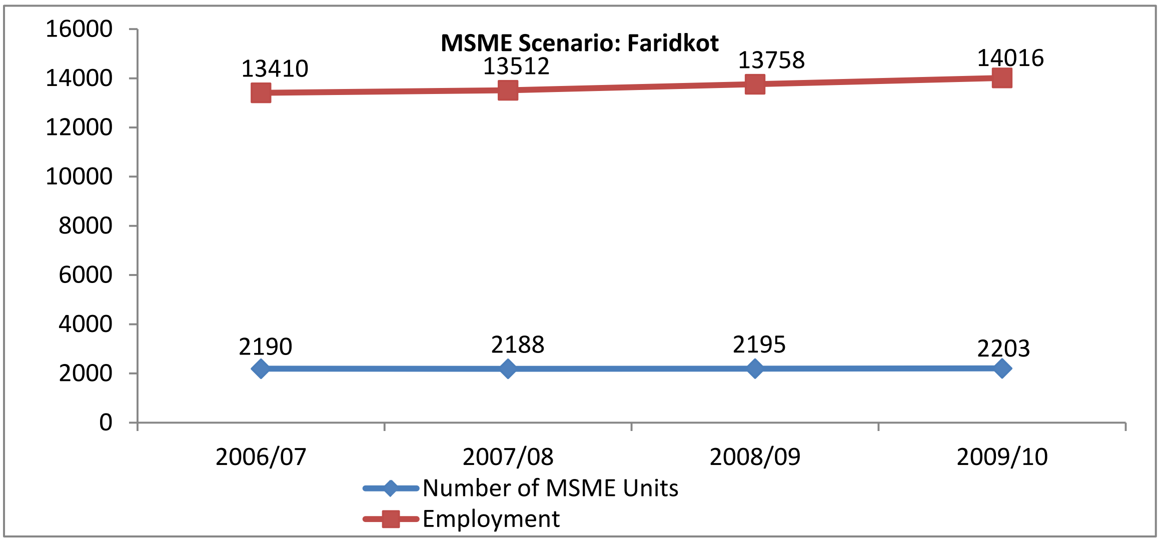
Faridkot also has 3 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Faridkot. It has a total of 123.1 thousand graded buffaloes and 31.5 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 11 thousand and 4 thousand respectively is also high in Faridkot.

Industry

Faridkot is primarily an agrarian and a regional trade district with limited industrial growth.Moreover, the district's small size and population have limited its industrial growth. There is no focal point or industrial infrastructure developed by the authorities and hence there is an urgent need for the stakeholders to create relevant focused industrial eco-system.

Between 2007-08 and 2009-10, the MSE segment has witnessed good incremental addition of 10 units generating additional employment of more than 500 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Profile

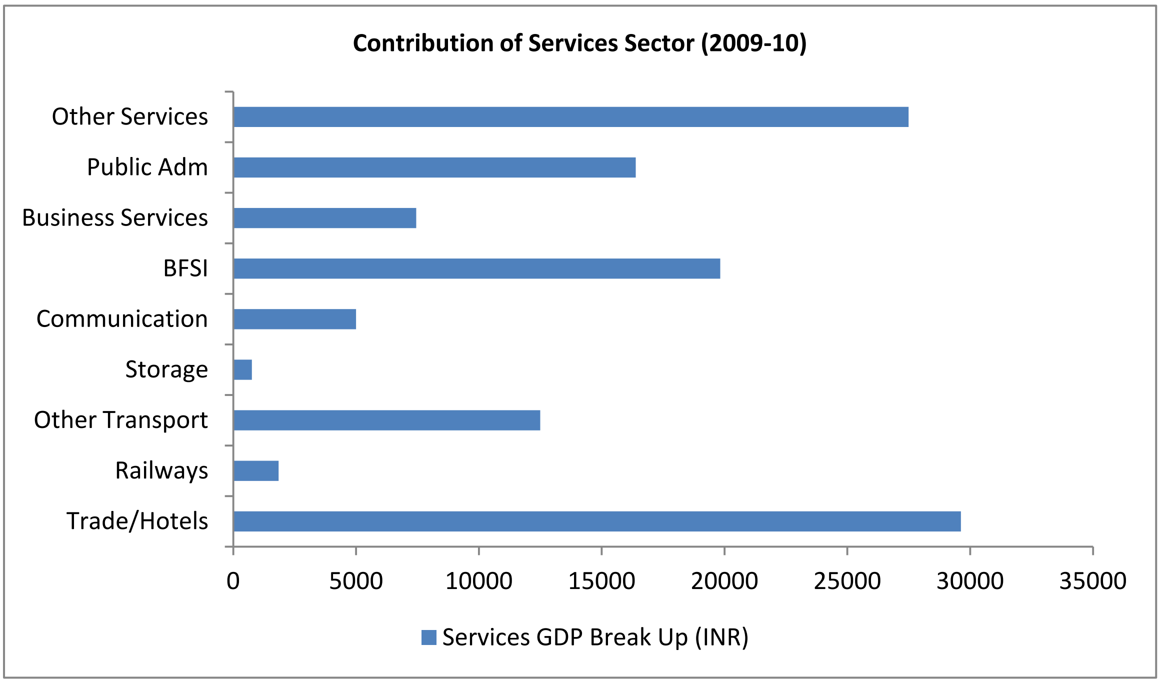
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Faridkot district.

Existing Clusters	Clusters Identified for Promotion
1. Diesel Engine Parts 2. Processed Agro Produce 3. Foundry 4. General Engineering	Processed Agro Produce on a SHG Network

Source: District MSME Report. 2011

Services Sector

Service sector contributed to 42 % percent[96] of GDDP in the year 2009-10 just slightly more than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Faridkot. Sub-sector wise contribution of services income is presented in the chart.



Source: Planning Commssion State Report

Penetration of healthcare facilities measured in terms of population served per bed, at 753 per bed is less than the state average of 760 per bed. District has 3 PHCs and 8 CHCs along with 20 Sub centers with limited private participation[97]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions

[96] http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[97] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Allopathic Hospitals	3
Ayurvedic Institutions	9
Homeopathic Institutions	3
Primary Health Centers (PHCs)	3
Community Health Centers (CHCs)	8
Dispensaries	20
Total	**46**

Faridkot has excellent penetration of banking and financial services measured as a percentage of GDDP at 7.61 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its even dependence on all the three core economy sectors. But the district being small in terms of population has smaller number of banks compared to other districts

15.5.4 Workforce Distribution in the district

Current Employment Scenario in Faridkot

Main worker participation rate of 29.43 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.51 % is lower the state average of 4.66 %. Overall percentage of non workers at 55.2 % is slightly higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Faridkot	29.43 %	4.51 %	55.2 %	22.0 %	33.2 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Punjab Statistical Handbook 2012

15.5.6 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Faridkot is a low human resource growth district adding manpower of about 21,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Faridkot	681,957	450,091	226,404	215,084	21,184
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.5.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Faridkot has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Faridkot.

According to the estimates, in the next 5 years, Faridkot is expected to witness an incremental manpower requirement of over 16 thousand [98] which is expected to increase to 17 thousand [99] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	96715	0	0	95455	0	0	94211
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	18	70	88	20	79	99	22	89	111
Food Processing	377	1465	2134	549	2135	3111	766	2978	4339
Beverages	0	0	0	0	0	0	0	0	0
Fabricated	37	146	183	46	185	231	55	221	277

[98] KPMG Estimates on Incremental Manpower Requirement
[99] KPMG Estimates on Incremental Manpower Requirement

metal products									
Paper & Paper Products	30	119	149	33	134	167	38	151	189
Chemical & Chemical Products	34	136	170	46	185	231	60	239	298
Construction Based Material	55	221	276	66	264	330	81	322	403
Mineral Processing	37	149	187	38	152	190	39	155	194
Manufacturing of Engineering Products	96	382	478	106	423	528	117	467	584
Textiles	55	221	276	67	269	336	85	340	425
Manufacturing of Electrical Products	16	63	79	18	71	89	20	80	100
Construction	1379	2759	23449	2103	4206	35749	2933	5866	49859
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	481	1926	0	836	3343	0
Transportations and Logistics	148	2345	2790	196	3109	3699	247	3928	4673
Retail	916	916	7328	1140	1140	9118	1339	1339	10709
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1077	3231	0	1326	3979	0	1576	4728	0
Banking and Financial Services	1107	3322	0	1452	4357	0	1788	5363	0
Education and Training	941	6335	0	798	5370	0	824	5549	0

Source: KPMG Analysis

15.5.7.1 Details of vocational education infrastructure in Faridkot

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	**Govt ITI**	**Private ITI**	**NSDC Partner**	**Total**	
Punjab	27415	19058	1479	47952	1.7
Faridkot	900	552	0	1452	2.3

Source: DTE Punjab

15.5.7.2 List of the Main Trades/Courses offered by I.T.I.s at Faridkot

Govt. ITI		Private ITI
Carpenter	Machinist Composite	A & C TTC
Cutting & Sewing	Mechanic Motor Vehicle	CS&E TTC
Draftsman Civil	Mechanic Tractor	Plumber
Electrician	Stenography Punjabi	Stenography Punjab
Fitter	Turner	Turner
IT & ESM	Welder (Gas & Electric)	Hair & Skin Care
Farm Mech.	Wireman	Embroidery & Needle Work

Source: Department of Industrial training and Vocational Education, Punjab

15.5.8 Students Interaction outcomes-Youth Aspirations

Students in the ITI were noted to be coming from a middle class background with a family income between INR 10,000 to 10,000 per month. Most students were open to migrate for job opportunities. However, some women students preferred to work only in Faridkot due to personal reasons. Students perceive polytechnic to be a better option as the ITI was only their backup choice. This is due to the better salaries given to the Polytechnic students. All students expected a salary in the range of INR 8,000 to 12,000 and a government job was seen as their first preference. Students do not want to work in the private sector because entry level salaries are low which doe s not commensurate with the amount of work assigned to them.

15.5.9 Skill mapping and developmental concerns

Faridkot is not a very industrialized district. There are no large scale industries in the district with the the presence of medium scale industries also at a minimum. However, there are a number of Small scale industries, mainly in the food processing sectors. People from the district often migrate to border districts like Bathinda which provide better opportunities to work in the manufacturing sector. Agriculture isa key livelihood for most people in Faridkot and they rely on a mix of traditional and modern means of farming.

15.5.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Faridkot district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Engineerng Services with focus on Agriculture Implements o Agriculture Sector with focus on Rice and Wheat processing o Services like Beauty Care & Transportation o Diesel Engines Repair and Service • Forging public private partnerships with leading private sector firms such as NTPC & HPCL in Bathinda to create an inclusive ecosystem for skill development • Create infrastructure to monitor the existing skill initiatives in the district • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training and provide scholarship fund for high achieving students interested in taking up skill related courses • The key small scale industries in the district are Repair and Servicing, Engineering Units focused on Agri-implements, Agro Based, and wood / wooden based furniture. In absence of formally certified skills, these labours tend to earn lower wages. • Targeted training interventions could be developed to up skill and certify those engaged in these areas
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program by associating a lead bank with an ITI • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. • Community learning initiative for women in the backward areas could be initiated. • Minimum apprentice wages should be increased to make the trainings more attractive • Strengthen the" train the trainer" program by creating a "tool room" in the district. • Evaluate rural skill development schemes in sectors such as "construction & asset creation" in alignment with MGNREGA
Industry	• Providing shop floor training during the schedule of training curriculum and paying apprentices for that period • Collaborate with skill development institutes to update course content. • Support the institutional management committee under the PPP scheme to make it

	more effective and ensure adequate placements and effective training. • Pay the apprentices a reasonable stipend to keep them motivated.
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. • Evaluate and update the course content as per industry requirements with focus on placement opportunities

15.6 Skill Gap Assessment of Ferozepur District

15.6.1 Administrative Profile

The District comprises there tehsils/subdivisions, viz. Firozpur in the middle, Zira on the east, Fazilka on the south-west. All important places in the District are connected by rail or road.

Almost 11 km from the Hussainiwala border on the west and 121 km from Ludhiana in the east lies the City of Firozpur, the headquarters of the District administration. By road, it is 116 km from Amritsar, 130 km from Jalandhar, 122 km from Ludhiana, 103 km from Bathinda (via Kot Kapura), and 86 km from Fazilka. The city lies on the Firozpur Cantonment—Ludhiana Branch Line of the Northern Railway.

15.6.2 Social Profile

Demographics

Firozpur has a population of 20.26 lakhs as per the 2011 Census with 72.75 percent share being rural population[100]. This is more than the average rural population of 68.2% for Punjab as a whole. The Population density of the district standing at 380 persons per sq.km is much lower than state average of 893[101] persons per sq.km.

While the child gender ratio has increased from 822 females per 1000 males in 2001 to 846 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 885 females per 1000 males in 2001, to 893 females per 1000 males in 2011[102].

Reserved categories population in the district is not very significant, occupying a share of 22.82[103] percent of total population less than 28.85% for Punjab as a whole.

Literacy

The district has an underperforming literacy rate of 69.8 percent in comparison to state average of 76.07 percent[104]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 62.2 percent in line with trends in other districts.

Also, the school infrastructure at levels of middle and secondary is slightly better than the state average, inadequate schooling infrastructure at the primary level is a key concern for the district as shown by the below benchmarking of Firozpur's School infrastructure with that of the state in terms of population served per school.

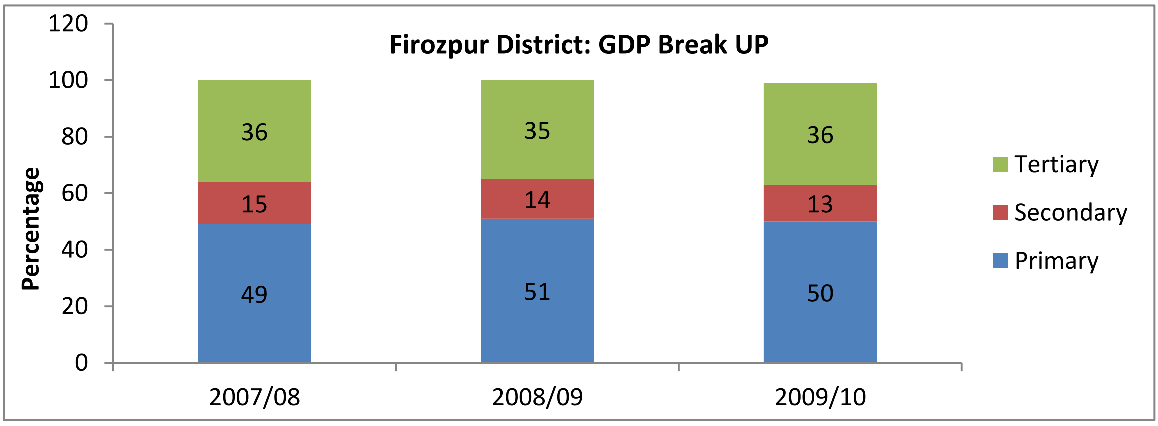
Region	Primary Level	Middle Level	Secondary Level
Firozpur	1756	3338	5328
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

[100] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[101] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[102] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[103] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[104] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

15.6.3 District Economy

Contribution of Firozpur to overall state economy is higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 36,032 in comparison to state average of INR 42,752 in 2009-10(At current prices) indicating the district's push towards the primary sector. This is further reiterated by the contribution of the primary sector (50 %) being the highest among sub-sectors in the district. Dependency on the tertiary sector (at 36 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Firozpur are presented in the chart.



Source: Statistical Handbook of Punjab, 2012

Agriculture and Allied sectors

Firozpur like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 56.35 % of the working population was employed in agriculture; this fraction is much greater than that of other parts of the state as evident from the state average of only 39%. In the year 2004-05, Agriculture contributed a major portion (46.25 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Firozpur	4120	9305	22523	30286	12634
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab, 2012

Agriculture is one of the major employers and contributors to the Firozpur economy. The main Kharif crops grown in Firozpur are Rice, Cotton and Moong with Rice occupying most of the cultivated area (standing at 260000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 395000 hectares). The Horticultural crops grown are Kinnow, Guava, Ber, Peach, Orange and Malta. The vegetable crops grown are Potatoes and other seasonal Vegetables.

The net sown area is 475000 hectares and the gross sown area amounts to 876000 hectares which makes the cropping intensity to be 184%. Most of the sown area is irrigated (99.4 %) and the rest is rain fed. This is greater than the state average of 97.9 %. 11000000 tonnes of rice and 15733000 tons of wheat are produced each year in Firozpur. The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Firozpur also witnesses occasional floods and droughts. High yielding varieties of seeds are mostly used by farmers in Firozpur.

Fishing is an important allied activity in Firozpur; it has fish stocked in an area of 714 hectares. It has receipts from Fisheries amounting to Rs. 60, 84,000.

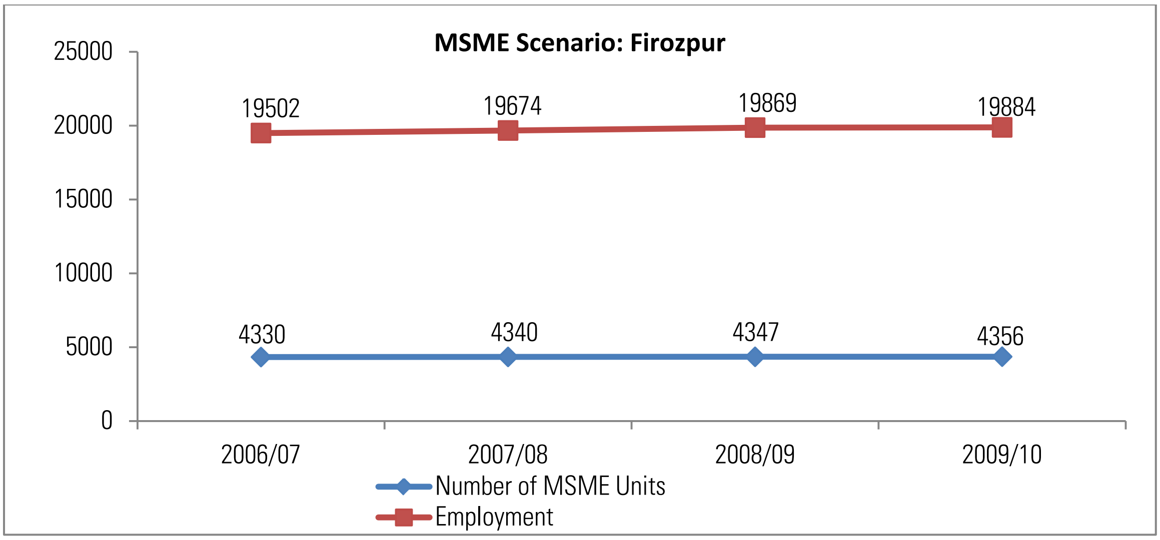
Firozpur also has 1 Milk plant out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Firozpur. It has a total of 375.7 thousand graded buffaloes and 120.1s thousand cross bred cattle most of them are females. The number of Goat and Sheep at 33 thousand and 54 thousand respectively is also high in Firozpur.

Industry

Firozpur is a key regional economic hub in the stateof Punjab with presence of medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had 11 large scale units generating employment in excess of 1,500 with a cumulative turnover of more than INR 1,100 crore. Narula Foods, Fazilka Coop Sugar Mills and Punjab Agro Juices are few of the important large industrial entities in the district

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district also has one cluster devoted to Horticulture Product processing and one devoted to Rice Shellers which is expected given the distrct's excellent agricultural base. Between 2001-02 and 2009-10, the MSE segment has witnessed a decrease in the number of MSE units with defunct units gradually being deregistered. In spite of this, the MSE system has managed to create an additional 300 jobs over the last 3 years.



Source: District MSME Report

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Firozpur district.

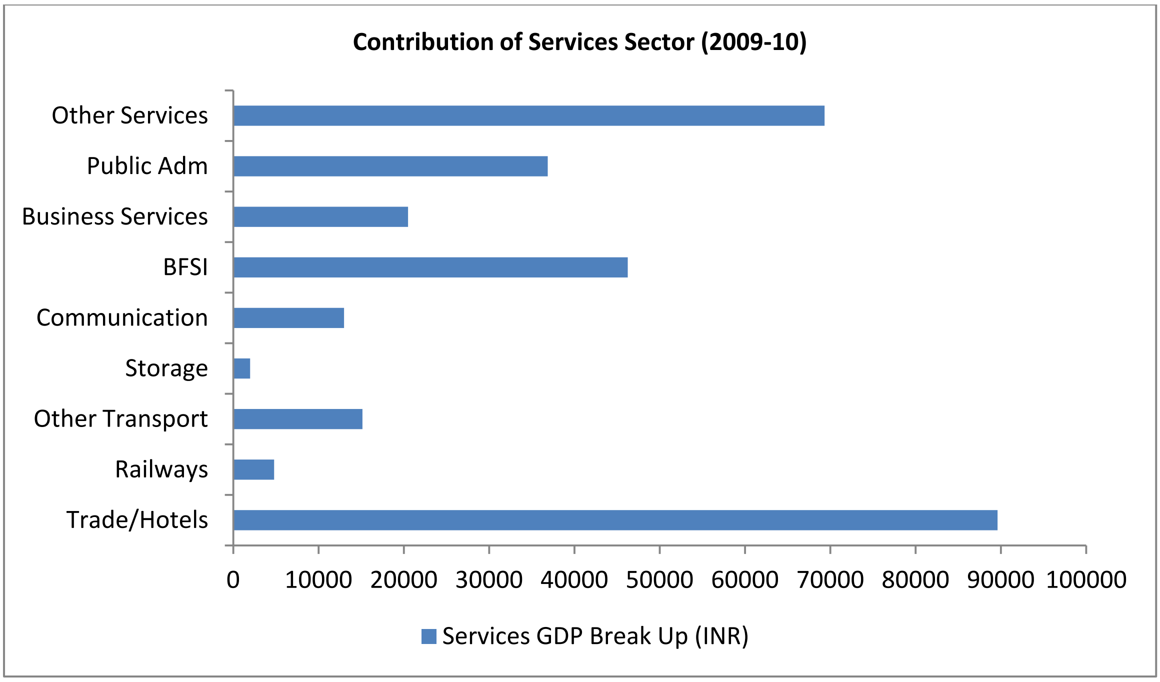
Existing Clusters	Clusters Identified for Promotion
Rice Shellers Food and Beverages Processing	Processed Food Products

Source: DIC, District Level Primary Inputs

Services Sector

Service sector contributed to 36 % percent[105] of GDDP in the year 2009-10 less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Firozpur. Sub-sector wise contribution of services income is presented in the chart.

[105]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: Planning Commssion State Report

Penetration of healthcare facilities measured in terms of population served per bed, at 758 per bed is near the state average of 760 per bed. District has 8 PHCs and 34 CHCs along with 85 Sub centers with limited private participation[106]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	4
Ayurvedic Institutions	38
Homeopathic Institutions	8
Primary Health Centers (PHCs)	8
Community Health Centers (CHCs)	34
Dispensaries	85
Total	**177**

Source: Statistical Handbook of Punjab, 2012

Firozpur has limited penetration of banking and financial services measured as a percentage of GDDP at 6.26 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its dependence on the primary sector. Firozpur being primarily an agriculture and allied sectors based economy sees presence of mainly public sector banks and small cooperative banks with limited presence of new age private and foreign banks

[106]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Source: District MSME Report. 2011

15.6.4 Workforce Distribution in the district

Current Employment Scenario in Firozpur

Main worker participation rate of 26.44 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 5.56 % is lower the state average of 4.66 %. Overall percentage of non workers at 54.1 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Firozpur	26.44 %	5.56 %	54.1 %	21.4 %	32.8%
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Punjab Statistical Handbook 2012

15.6.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Firozpur is a high human resource growth district adding manpower of about 58,000 more than 3 lakh during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Firozpur	2,236,559	1,476,129	627,909	596,514	58,753
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.6.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Ferozepur has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Ferozepur.

According to the estimates, in the next 5 years, Ferozepur is expected to witness an incremental manpower requirement of over 48 thousand [107] which is expected to normalize to 43 thousand [108] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skille d**	**Semi skilled**	**Unskille d**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	321614	0	0	317423	0	0	313287
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	5	19	24	5	21	26	6	24	30
Food Processing	716	2786	4059	1044	4061	5918	1457	5666	8255
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	198	794	993	251	1003	1254	300	1200	1500
Paper & Paper Products	18	73	92	21	83	103	23	93	116
Chemical & Chemical Products	28	111	139	38	151	188	49	195	243
Construction Based Material	30	119	149	36	143	178	43	174	217

[107] KPMG Estimates on Incremental Manpower Requirement
[108] KPMG Estimates on Incremental Manpower Requirement

Mineral Processing	217	869	1086	221	886	1107	226	904	1130
Manufacturing of Engineering Products	21	84	104	23	92	116	26	102	128
Textiles	30	121	151	37	147	184	47	186	233
Manufacturing of Electrical Products	10	39	49	11	44	55	12	49	62
Construction	3993	7987	67885	6088	12176	103495	8491	16982	144345
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1603	6410	0	2816	11266	0
Transportations and Logistics	169	2678	3186	224	3550	4224	282	4485	5337
Retail	2771	2771	22165	3447	3447	27578	4049	4049	32392
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	2697	8091	0	3321	9963	0	3946	11838	0
Banking and Financial Services	2868	8603	0	3761	11284	0	4629	13887	0
Education and Training	1651	11117	0	2655	17875	0	2776	18688	0

Source: KPMG Analysis

15.6.7.1 Details of vocational education infrastructure at Ferozepur

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Firozpur	1804	1504	0	3308	1.6

Source: DTE Punjab

15.6.7.2 List of the Main Trades/Courses offered by I.T.I.s at Firozpur

Govt. ITI		Private ITI	
Carpenter	Electronics	COPA	CSE TTC
Consumer Electronics	Fitter	Electrician	Architect Assistant
COPA	Machinist Composite	Wireman	Health Sanitary Inspector
Draftsman Civil	Mechanic Diesel	Dress Making	Art & Craft TT
Draftsman Mechanical	Mechanic Ref. & AC	Plumber	Cutting & Sewing TT
Polution Control	Mechanic Tractor	Cutting & Sewing	ITE&SM
Electrician	Motor Mech	Embroidery & Needle work	Fashion Tech

Source: Department of Industrial training and Vocational Education, Punjab

15.6.8 Youth Interaction outcomes

Students in the district showed higher preference towards government jobs over private owing to higher job security and salary. Most students were also open to migration to the other districts or states. However, a few students who had their own service shopswith acquaintances for family members preferred to remain within the districts. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have good awareness in terms of career prospects. Most youth were seen to prefer self employment over salaried private sector job

15.6.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, district administration and other stakeholders involved in skilling, it was felt that the district due to its proximity to the Pakistan border has been able to attract only limited industrial investment and this has had a debilitating effect on the job availability for skilled personnel in the district. Majority of the demand is from the informal sector which is able to absorb graduates from lines like Carpentry, Electrician, Plumber etc. Students graduating in more specialized courses like Crane and Machine Operators, Brick Layers, Equipment Technicians etc generally need to migrate to more industrialized districts for employment. This is expected to continue in the medium term given the geographical constraints of the district.

15.6.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Ferozepur district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Construction o Retail o Hospitality o Food Processing • Creating a scholarship fund for high achieving students interested in taking up skill related courses by investing funds through the district level VTPs • Promoting vocational education at the grass root level through policy advocacy, school camps and encouraging students to take up NVEQF programs in schools
District Administration	• Ensure women participation in skill development, as majority of the women in the district are Non-workers • Centre of Excellence scheme should be promoted appropriately in the district to ensure higher fulfillment rates. The scheme must also be promoted amongst the companies that come to recruit from ITI Firozpur through seminars & info-sessions • The district administration with support from the Industry may start a Centre of excellence program based on Food Processing • Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode by tying with RRBs, co-operatives or through roll-on interest free funding • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level. • Focus on training in Agriculture products and processing especially in Cereals as the district has good output
Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • The industry may offer Apprentices work related to the trades they have learnt

	during their time in the ITI's and making their learning effective which may encourage students to take up contractual jobs as well inspie of constraints of low wages • Increase desirability of jobs through improved work environment compensating for decreased & stagnating wages • Industry may promote women in the district by ensuring an adequate mix of male and female workers; especially in service related trades • Participate in "train the trainer" programs to improve the quality of training delivery with the benefits feeding into reduced cost of training • Industry can collaborate with skill development institutes for updating the course content and creating linkages for placements
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry could be called to deliver modules • Update machinery and provide manuals in workshops for practical classes. • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.7 Skill Gap Assessment of Gurdaspur District

15.7.1 Administrative Profile

For administrative purpose, the district has been divided into 3 Tehsils namely Gurdaspur, Batala & Dera Baba Nanak and 8 sub-tehsils namely Kahuwan, Kalanaur, Dinanagar, Naushehra Majha Singh, Dhariwal, Shiri Hargobindpur, Quadian & Fatehgarh Churrian. And 11 blocks namely Kalanaur, Fatehgarh Churrian, Batala, Shiri Hargobindpur, Dinanagar, Kuhnuwan, Dhariwal, Gurdaspur, Quadian, Dera Baba Nank & Dorangla. As per information available from Economic & Statistical Organisation, Punjab, there are 1539 inhabited villages in the district.

15.7.2 Social Profile

Demographics

Gurdaspur has a population of 22.26 lakhs as per the 2011 Census with 71.5 percent share being rural population[109]. This is more than the average rural population of 68.2% for Punjab as a whole. The Population density of the district standing at 649 persons per sq.km is lower than the state average of 893[110] persons per sq.km.

While the child gender ratio has increased from 789 females per 1000 males in 2001 to 846 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 890 females per 1000 males in 2001, to 895 females per 1000 males in 2011[111].

Reserved categories population in the district is not very significant, occupying a share of 24.75[112] percent of total population less than 28.85% for Punjab as a whole.

Literacy

The district has a higher literacy rate of 81.1 percent in comparison to state average of 76.07 percent[113]. Further, gender disparity in education attainment levels is prominent with a lower female literacy rate of 75.7 percent. Low school infrastructure at levels of middle and secondary is a key concern for the district shown by the below benchmarking of Gurdaspur's School infrastructure with that of the state in terms of population served per school. The district however has shown a better performance at the primary level.

Region	Primary Level	Middle Level	Secondary Level
Gurdaspur	1,234	3,534	7,967
Punjab	1,527	3,570	6,840

15.7.3 District Economy

Contribution of Gurdaspur to overall state economy is lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 33,429 in comparison to state average of INR 42,752 in 2009-10 (At base

[109]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[110]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[111]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[112]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[113]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

year prices). While the contribution of services sector is highest among sub-sectors in the district, the share of Agriculture & allied activities contributing to the overall GDP pie has marginally increased indicating the progress made on the rural economy front. Sub-Sector wise GDDP trends in Gurdaspur are presented in the chart.

Agriculture & Allied Sectors

Gurdaspur like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 34.54 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (28.66 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Gurdaspur	15465	20491	30072	18961	2194
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab, 2012

Agriculture is one of the major employers and contributors to the Gurdaspur economy. The main Kharif crops grown in Gurdaspur are Rice, Maize and Sesamum with rice occupying most of the cultivated area (standing at 201000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 231000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables. The net sown area is 287000 hectares and the gross sown area amounts to 506000 hectares which makes the cropping intensity to be 176%. Most of the sown area is irrigated (87.6 %) the rest is rain fed it is lesser than the state average of 97.9 %. 663000 tonnes of rice and 927000 tons of wheat are produced each year in Gurdaspur. The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Gurdaspur also witnesses occasional floods and droughts. High yielding varieties of seeds are mostly used.

Fishing is an important allied activity in Gurdaspur; it has fish stocked in an area of 703 hectares. It has receipts from Fisheries amounting to Rs. 6, 97,000.

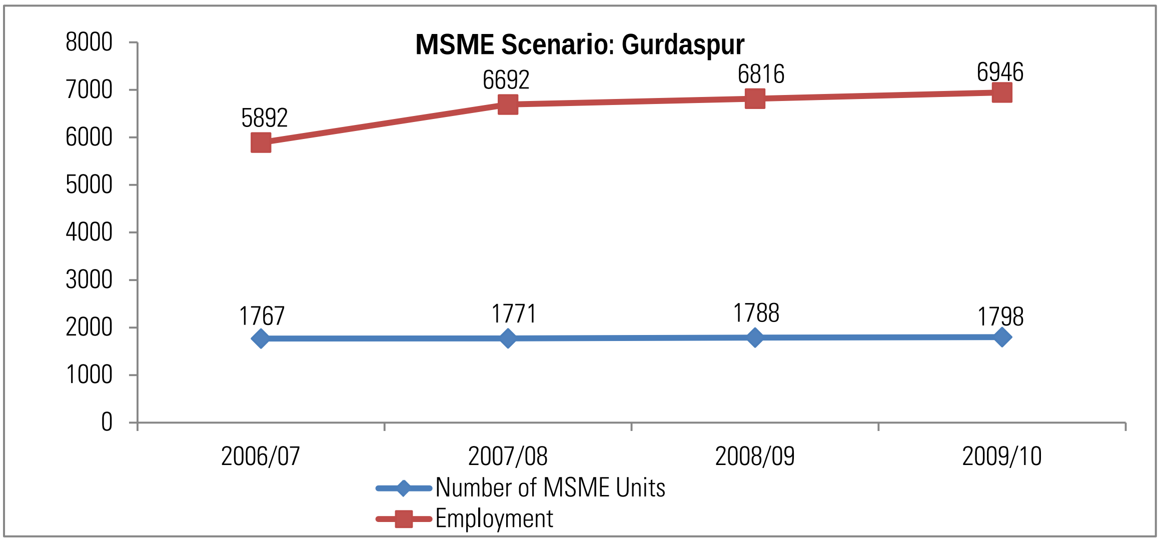
Gurdaspur also has 2 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Gurdaspur. It has a total of 268.4 thousand graded buffaloes and 116.2 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 11 thousand and 4 thousand respectively is also high in Gurdaspur.

Industry

Gurdaspur has a robust industrial base with a mix of SMEs and large enterprises. Majority of the investment in the district has been in sectors like sugar products, rice products etc through a strong mill infrastructure. Apart from this, the district also has two specilized clusters focusing on foundry and machine tools. According to the 2011 provisoinal data, there are 7804 registered MSE units in the district employing around 55,541 workers on a daily basis.

Between 2000-01 and 2009-10, Medium-Small Scale Industries segment has witnessed growth of only around 300 additional units generating an additional employment of only around 3,200 numbers during the period. This reflects an increasingly stagnating industrial growth scenario with an imperative to diversify and drive growth. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Gurdaspur district.

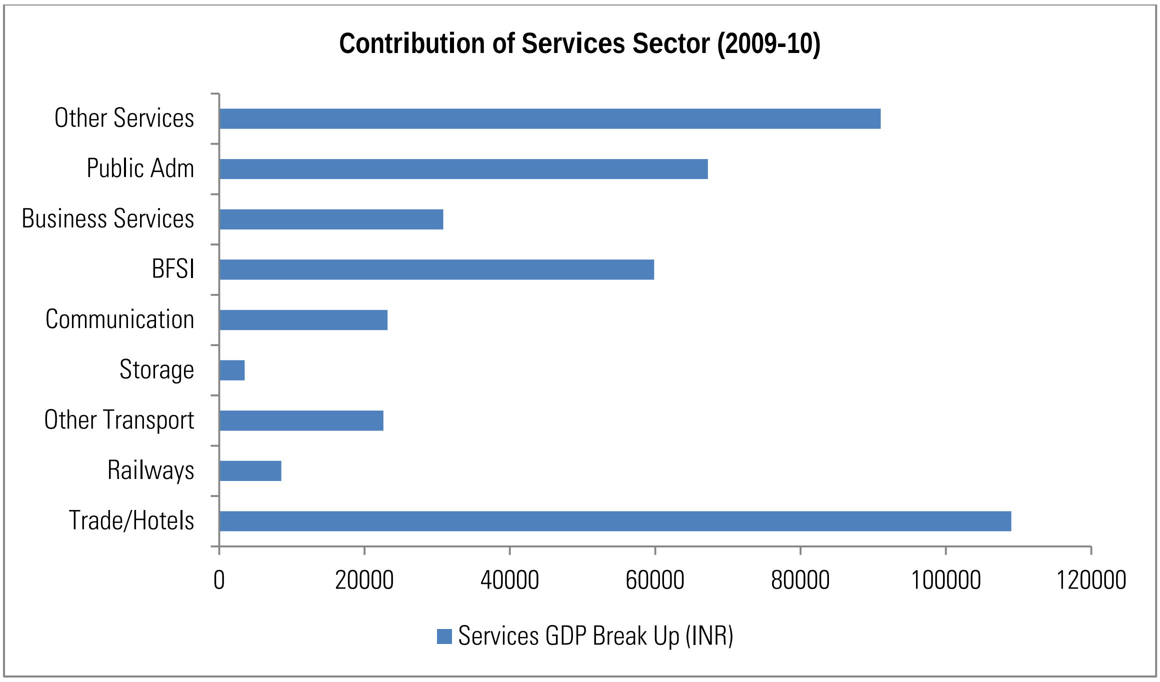
Existing Clusters	Clusters Identified for Promotion
1. Food and Beverages • Biscuit and Bakery Products • Confectionery Items • Packaging and Ancillary Materials 2. Industrial Machinery and Implements 3. Engineering Workshop Products and Building Hardware	Bakery & Confectionery Items, Agricultural Implements

Source: District MSME Report, KPMG Analysis

Services Sector

Service sector contributed to a massive 46% percent[114] of GDDP in the year 2009-10. Sector has grown at a cumulative rate of 11 percent in the period between 2001-02 and 2006-07. Trade, Hotels and Restaurants and Public Administration are major contributors to the services economy indicating a major bureaucratic presence. Sub-sector wise contribution of services income is presented in the chart.

[114]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: Planning Commission StateReport

Penetration of healthcare facilities measured in terms of population served per bed, at x per bed is near the state average of 760 per bed. District has 40 PHCs and 15 CHCs along with 120 Sub centers with limited private participation[115]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	**Number of Institutions**
Allopathic Hospitals	6
Ayurvedic Institutions	52
Homeopathic Institutions	6
Primary Health Centers (PHCs)	40
Community Health Centers (CHCs)	15
Dispensaries	120
Total	**239**

Source: Statistical Handbook Punjab 2012

Gurdaspur has low penetration of banking and financial services measured as a percentage of GDDP at 7.29 percent in comparison to state average of 4.98 percent as per 2009-10 estimates. Gurdaspur being primarily a tertiary driven economy with a robust primary and secondary activities see a multitude of banks present ranging from public sector banks, small cooperative banks to new age private banks.

[115]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

15.7.4 Current Employment Scenario in Gurdaspur

Main worker participation rate of 24.72 % in the district is below the state average number of 28.28 percent. Marginal worker participation at 5.75 % is higher the state average of 4.66 %. Overall percentage of non workers at 61.1 % is higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Gurdaspur	24.72 %	5.75 %	61.0 %	23.6 %	37.5 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

15.7.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Gurdaspur is a high human resource growth district adding manpower of around 63,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Gurdaspur	2,536,919	1,674,367	680,976	646,927	63,718
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.7.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Gurdaspur has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Gurdaspur.

According to the estimates, in the next 5 years, Gurdaspur is expected to witness an incremental manpower requirement of over 69 thousand [116] which is expected to normalize to 64 thousand [117] during 2017-22.

[116] KPMG Estimates on Incremental Manpower Requirement
[117] KPMG Estimates on Incremental Manpower Requirement

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	192131	0	0	189628	0	0	187157
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	99	394	493	111	445	556	125	501	627
Food Processing	441	1715	2498	643	2500	3642	897	3487	5081
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	551	2203	2754	696	2784	3480	832	3330	4162
Paper & Paper Products	27	109	137	31	123	154	35	139	174
Chemical & Chemical Products	58	230	288	78	312	391	101	404	505
Construction Based Material	95	381	476	114	455	569	139	555	694
Mineral Processing	1290	5160	6450	1315	5261	6577	1342	5369	6711
Manufacturing of Engineering Products	846	3384	4229	935	3740	4675	1034	4135	5168
Textiles	24	94	118	29	115	144	36	145	182
Manufacturing of Electrical Products	92	369	462	104	416	520	117	469	587
Construction	8012	16024	136206	12215	24430	207653	17036	34073	289615

IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1771	7084	0	3046	12183	0
Transportations and Logistics	259	4120	4901	344	5461	6497	435	6900	8209
Retail	3371	3371	26967	4194	4194	33552	4926	4926	39408
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	4793	14380	0	5903	17708	0	7014	21041	0
Banking and Financial Services	3348	10045	0	4392	13175	0	5405	16215	0
Education and Training	1789	12040	0	2935	19755	0	3005	20230	0

Source: KPMG Analysis

15.7.7.1 Details of vocational education infrastructure at Gurdaspur

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Gurdaspur	3746	2012	386	6144	2.7

Source: DTE Punjab

15.7.7.2 List of the Main Trades/Courses offered by I.T.I.s at Gurdaspur

Govt. ITI		Private ITI	
Draftsman Civil	Mechanic Electronics	Health & Sanitary Inspector	Ref & AC
Draftsman Mechanical	Mechanic Motor Vehicle	Art & Craft TT	Electrician
Electrician	Ref. & AC	CS&E TTC	Cutting & Sewing T.T.
Fitter	Mechanic Tractor	Dental Lab. Tech.	Fitter
IT & ESM	Steno English	Computar Hardware	Emb. & N. Work
Machinist Grinder	Stenography Punjabi	Health Sanitary Inspector	Carpainter
Mechanic Diesel	Turner	Sanitary Hardware	Diesel Mech.

Source: Department of Industrial training and Vocational Education, Punjab

15.7.8 Students Interaction outcomes-Youth Aspirations

Students in the district showed higher preference towards self employment in their own servicing shops or micro industries owned by family or acquaintances. Local students showed no interest in migrating to any other district primarily due to the low wages which, they felt could not be sustainable. Most students believe that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects.

15.7.9 Skill mapping and developmental concerns

Gurdaspur district being one of the better industrialized districts has seen good offtake of the labor available. Also, the growing services industry in the district like Retail, Hospitality etc driven by the NRI money and the rising rural incomes from Agriculture provides an opportunity for graduates from the service sector focused streams to enter the workforce. Specific Skill Gaps were witnessed in these streams and the new capacity creation in the district can look at tapping this deamand. Increase for demand for skills like Sales Agent, Merchandize Personnel, Assistants and Sales Executive are expected to accompany Gurdaspur's growing service economy.

15.7.10 District specific recommendations

Recommendations for skill development in the district are made considering the following points related to the skill ecosystem in district.Considering these factors, the proposed action plan for stakeholders in skill development in Gurdaspur district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Food processing o Textiles o Services like Retail, Transport & Hospitality o Horticulture • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training. This could be materialized by creating a scholarship fund for high achieving students interested in taking up skill related courses. • Promote the vocational education as an alternate to traditional farming. This is because farming is no longer seen as a viable route to acquiring status by today's youth
District Administration	• Make an effective use of the Public relation officer to promote Vocational education • Department of Agriculture may organize training camps on use of machinery to promote value addition in agri-produce for local consumption • District administration must provide loans to the students who wish to pursue Public or private vocational training courses by linking up with relevant financial intermediaries
Industry	• Industry from the district may consider supporting the students from Gurdaspur by sourcing candidates for their operations elsewhere in the state or outside the state
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets to maximize placement opportunites • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.8 Skill Gap Assessment of Hoshiarpur District

15.8.1 Administrative Profile

For administrative purpose, the district has been divided into 4 Tehsils namely Hoshairpur, Dasuya, Mukerian & Garh Shankar and 10 blocks namely Hoshiarpir-I, Hoshairpur-II, Bhunga, Tanda, Dasuya, Mukerian, Talwara, Hajipur, Mahilpur & Garh Shankar. As per information available from Economic & Statistical Organisation, Punjab, there are 1387 inhabited villages in the district.

15.8.2 Social Profile

Demographics

Hoshiarpur has a population of 15.82 lakhs as per the 2011 Census with 78.85 percent share of that being rural population[118]. This is way above the average rural population of 68.2% for Punjab as a whole while the Population density of the district standing at 466 persons per sq.km is much lower than state average of 893[119] persons per sq.km. While the child gender ratio has increased from 812 females per 1000 males in 2001 to 859 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 935 females per 1000 males in 2001, to 962 females per 1000 males in 2011[120]. Reserved categories population in the district is significant, occupying a share of 34.82[121] percent of total population which is more than 28.85% for Punjab as a whole.

Literacy

The district has a high literacy rate of 85.4 percent in comparison to state average of 76.07 percent[122]. However, gender disparity in education attainment levels is prominent with a low female literacy rate of 80.81 percent in line with trends in other districts. Also, the school infrastructure at all levels schooling (primary and middle and secondary) is remarkably improved as shown by the below benchmarking of Hoshiarpur's School infrastructure with that of the state in terms of population served per school. The high literacy rate could well have been driven by the increased accessibility offered by the schooling infrastructure to the population

Region	Primary Level	Middle Level	Secondary Level
Hoshiarpur	1271	2513	5270
Punjab	1527	3570	6840

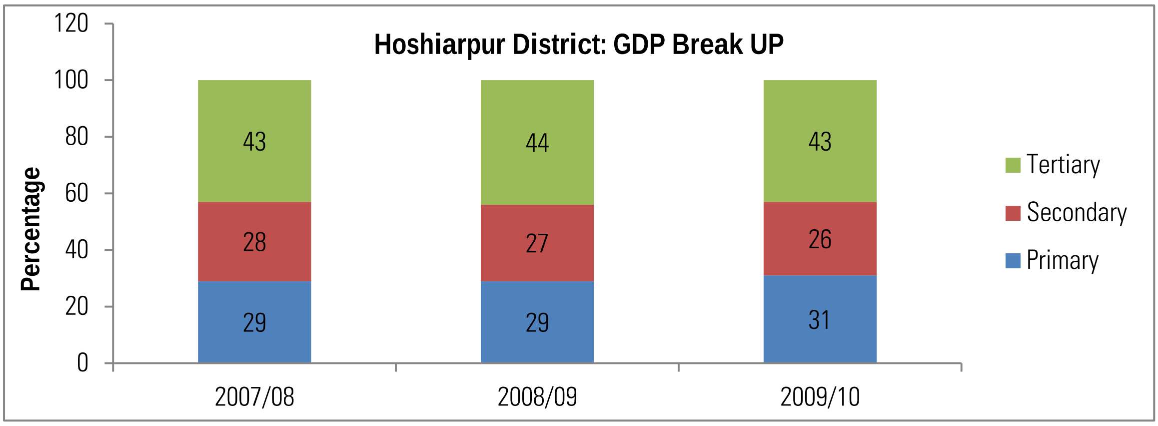
Source: Statistical Handbook of Punjab, 2012

15.8.3 District Economy

Contribution of Hoshiarpur to overall state economy is slightly lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 40,911 in comparison to state average of INR 42,752 in 2009-10(At current prices). The contribution of the tertiary sector (43 %) is the highest among sub-sectors in the district indicating the

[118] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[119] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[120] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[121] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[122] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

district's importance as a regional trading hub. Dependency on the primary sector (at 29 %) is also nominal indicating the district's robust agricultural base as well. Sub-Sector wise GDDP trends in Hoshiarpur are presented in the chart



Source: District Domestic Product (2004/05 to 09/10), Publication Number 93

Agriculture and allied sectors

Hoshiarpur like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk (higher than the state average) of the working population. According to the census of 2001, 40.68 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (27.71 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Hoshiarpur	21360	18208	21151	13115	1939
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

Agriculture is one of the major employers and contributors to the Hoshiarpur economy. The main Kharif crops grown in Hoshiarpur are Paddy, Maize and Sugarcane with Maize occupying most of the cultivated area (standing at 58700 hectares) followed by Paddy (44800 hectares), followed by Sugarcane (21100 hectares). Among the Rabi crops Wheat, taramira, fodder and Mustard are grown with land use skewed heavily in favor of wheat (at 182700 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear and Litchi. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables. The net sown area is 201000 hectares and the gross sown area amounts to 365000 hectares which makes the cropping intensity to be 182%. Most of the sown area is irrigated (92.5 %) the rest is rain fed it is lesser than the state average of 97.9 %. 172000 tonnes of Maize and 514000 tons of wheat are produced each year in Hoshiarpur. There are no major agricultural contingencies present in Hoshiarpur.

Fishing is an important allied activity in Hoshiarpur; it has fish stocked in an area of 566 hectares. It has receipts from Fisheries amounting to Rs. 108, 42,000 which is the highest for any district in the state.

Hoshiarpur also has 1 Milk plants out of the total 65 in the state.

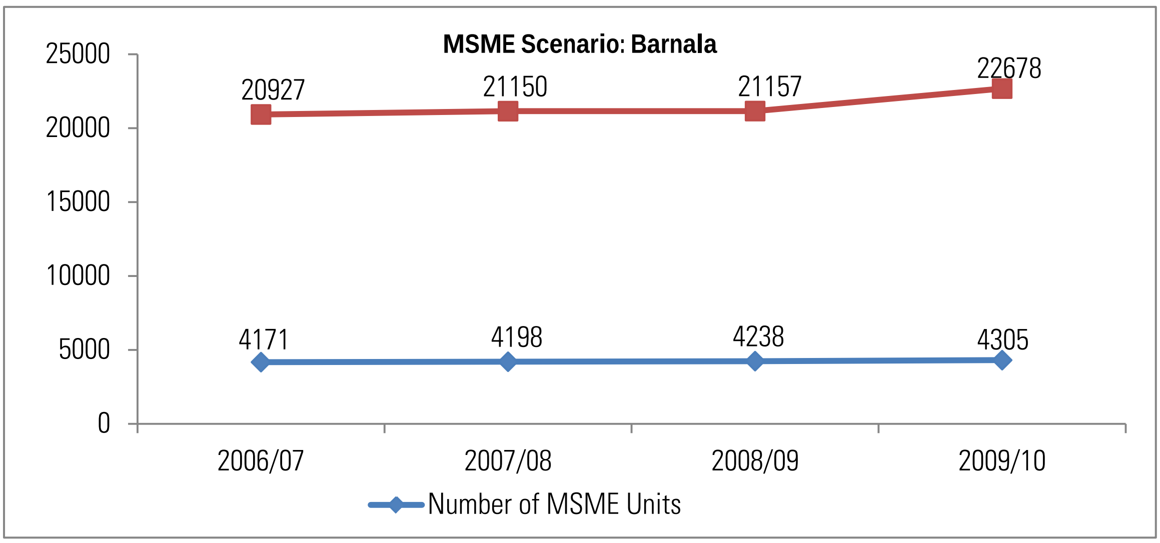
Animal Husbandry also enjoys huge presence in the agricultural communities of Hoshiarpur. It has a total of 232.9 thousand graded buffaloes and 100.5 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 15.3 thousand and 1 thousand respectively is also high in Hoshiarpur.

15.4.1.1 Industry

Hoshiarpur is a key economic hub in the district of Punjab with presence of numerous medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had 24 medium and large scale units generating employment in excess of 15,000 with a cumulative turnover of around INR 2, 000 crore. Realiance Industries Limited, Hindustan Petroleum Corporation Limited and Usha Martin are the major large industrial entities in the district. The district also has numerous other spinning mills and trcator and auto parts units

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district also has clusters devoted to the production of auto and tractor parts

Between 2007-08 and 2009-10, the MSE segment has witnessed good incremental addition of 150 units generating additional employment of more than 1600 during the period. Employment growth trends in MSME segment are presented in the chart.



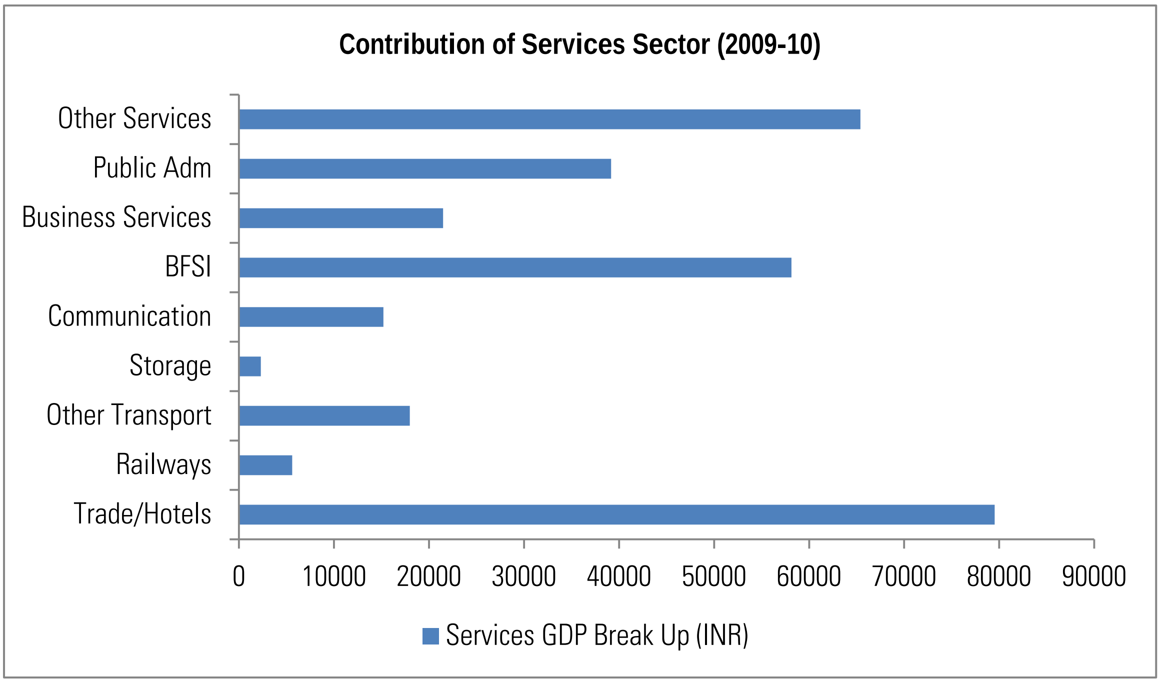
Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Hoshiarpur district.

Existing Clusters	Clusters Identified for Promotion
Tractor and Auto parts	Agriculture Implements
Pressure Cooker Parts	Tractor & Auto Parts
Sewing threads and Handicrafts	
Agriculture Implements	

Services Sector

Service sector contributed to 43 % percent[123] of GDDP in the year 2009-10 just slightly more than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Hoshiarpur. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 766 per bed is near the state average of 760 per bed. District has 9 PHCs and 32 CHCs along with 93 Sub centers with limited private participation[124]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions

[123]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[124]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Allopathic Hospitals	9
Ayurvedic Institutions	44
Homeopathic Institutions	7
Primary Health Centers (PHCs)	9
Community Health Centers (CHCs)	32
Dispensaries	93
Total	**194**

Source: District Profile, MSME Report, 2011

Hoshiarpur has good penetration of banking and financial services measured as a percentage of GDDP at 8.58 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. Hoshiarpur being primarily a progressive agriculture and services based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks.

15.8.4 Current Employment Scenario in Hoshiarpur

Main worker participation rate of 26.23 % in the district is below the state average number of 28.28 percent. Marginal worker participation at 6.21 % is higher the state average of 4.66 %. Overall percentage of non workers at 61.1 % is higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Hoshiarpur	26.23 %	6.21%	61.1 %	23.9 %	37.3 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.8.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Hoshiarpur is a high human resource growth district adding manpower of around 46,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)

Hoshiarpur	1,746,574	1,152,739	498,221	473,310	46,618
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.8.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Hoshiarpur has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Hoshiarpur.

According to the estimates, in the next 5 years, Hoshiarpur is expected to witness an incremental manpower requirement of over 48 thousand [125] which is expected to normalize to 46 thousand [126] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	171388	0	0	169155	0	0	166950
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	86	345	431	97	389	486	110	438	548
Food Processing	234	912	1329	342	1329	1937	477	1854	2702
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	303	1211	1514	382	1530	1913	457	1830	2287
Paper & Paper Products	48	193	241	54	217	272	61	245	306

[125] KPMG Estimates on Incremental Manpower Requirement
[126] KPMG Estimates on Incremental Manpower Requirement

Chemical & Chemical Products	141	565	706	192	767	959	248	992	1240
Construction Based Material	117	466	583	139	558	697	170	680	850
Mineral Processing	220	880	1100	224	897	1122	229	916	1145
Manufacturing of Engineering Products	50	200	250	55	221	276	61	244	305
Textiles	8	32	41	10	39	49	12	50	62
Manufacturing of Electrical Products	32	127	159	36	143	179	40	161	202
Construction	6020	12040	102335	9177	18355	156016	12800	25600	217597
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1208	4830	0	2060	8240	0
Transportations and Logistics	186	2954	3514	247	3915	4658	312	4947	5886
Retail	2459	2459	19674	3060	3060	24479	3594	3594	28752
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	3154	9461	0	3883	11650	0	4614	13843	0
Banking and Financial Services	3367	10101	0	4416	13248	0	5435	16306	0
Education and Training	1427	9610	0	2001	13469	0	2033	13688	0

Source: KPMG Analysis

15.8.7.1 Details of vocational education infrastructure at Hoshiarpur

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Hoshiarpur	2301	1292	448	4041	2.6

Source: DTE Punjab

15.8.7.2 List of the Main Trades/Courses offered by I.T.I.s at Hoshiarpur

Govt. ITI		Private ITI	
Carpenter	Machinist Grinder	Cutting and Tailoring	CSE&TTC
Draftsman Civil	Mechanic Diesel	Dress Making	R& AC
Electrician	Mechanic Instrument	Emb. & N. Work	Electrician
Fitter	Mechanic Motor Vehicle	Stenography English	COPA
Forger & Heat Treater	Ref. & AC	COPA	Plumber
IT & ESM	Mechanic Tractor	Electrician	Cutting & Sewing
Machinist Composite	Plumber	Fitter	Embroidery

Source: Directorate ofTechnical Education, Punjab

15.8.8 Youth Interaction outcomes

Youth in district showed higher preference for salaried job over entrepreneurship. The latter was preferred by ITI students having prior work experience. The female ITI students were clearly biased towards salaried jobs and significant share aspired to self employment in soft professions like tailoring, beauty care & skin care. Therefore, the district sees lot of VTPs catering to this market.

Students were also open to migration to the other districts of Punjab, since there are limited opportunities for employment within the district. Students admit that there is a lack of career guidance and they are not aware of possible employers who could recruit them after their course. However, most of them believe that they would be able to earn a minimum of INR 10,000 monthly after doing the vocational training from ITI. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered.

15.8.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments and other stakeholders, it was felt that the demand supply mismatch in the district was skewed when it comes to the core sector drivers like Auto parts, Tractor parts, Agriculture Implements etc. Specific skills like Machine Tools, Operators, and Mechanical Technicians etc were seen to be in shortage inspite of the ITIs focusing on these sectors. The convergence of closely related sectors in the district leads to demand for huge numbers of specific skills and stakeholders need to keep this in mind whie creating additional training capacity in the district.

15.8.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Hoshiarpur district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Set up camps in schools to bring a paradigm shift in perception of youth for vocational training especially in the context of overseas employment • Creating a scholarship fund for high achieving students interested in taking up skill related courses. • Tying up with NGO's to train the locals in catering to the burgeoning services industry like organized retail workers, drivers & tour operators
District Administration	• Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode. • Focus on training in agricultural products and processing especially in Cereals and Potatoes. • The district administration may tie up with companies like Pepsico and ITC to encourage contract farming & subsequent value addition within the district
Industry	• Industry may undertake vocational training as a part of their CSR activity with clearly outlined policies with the results validated by the statutory auditor • The industry may support the locals by buying their surplus agricultural produce • Create infrastructure to support value addition in agriculture products in the form of cold storage, packaging facilities etc. These initiatives have multiplier effect in terms f employment generation
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district

15.9 Skill Gap Assessment of Kapurthala District

15.9.1 Administrative Profile

For administrative purpose, the District of Kapurthala is divided into four Tehsils, two Sub-Tehsils, Five Blocks, and Four Assembly Constituencies

15.9.2 Social Profile

Demographics

Kapurthala has a population of 8.17 lakhs as per the 2011 Census with 65.1 percent share of that being rural population[127]. This is slightly less than the average rural population of 68.2% for Punjab as a whole. The population density of the district standing at 501 persons per sq.km is much lower than state average of 893[128] persons per sq.km.

While the child gender ratio has increased from 785 females per 1000 males in 2001 to 872 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 887 females per 1000 males in 2001, to 912 females per 1000 males in 2011[129].

Reserved categories population in the district is significant, occupying a share of 29.92[130] percent of total population which is more than 28.85% for Punjab as a whole.

Literacy

The district has a decent literacy rate of 80.2 percent in comparison to state average of 76.07 percent[131]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 75.4 percent in line with trends in other districts. Also, low school infrastructure at all levels schooling (primary and middle and secondary) is a key concern for the district shown by the below benchmarking of Kapurthala's School infrastructure with that of the state in terms of population served per school. The high literacy rate with a below state average number of schools could stretch the schooling infrastructure.

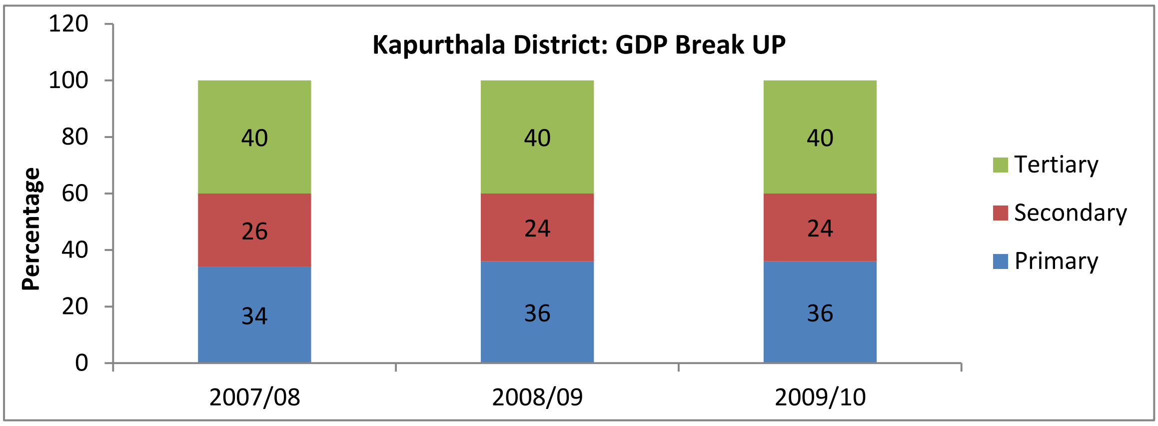
Region	Primary Level	Middle Level	Secondary Level
Kapurthala	1789	4038	7036
Punjab	1527	3570	6840

[127] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[128] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[129] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[130] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[131] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

Source: Statistical Handbook of Punjab, 2012

15.9.3 District Economy

Contribution of Kapurthala to overall state economy is higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 46,655 in comparison to state average of INR 42,752 in 2009-10(At current prices) indicating the districts identity as a regional economic center. This is further reiterated by the contribution of the tertiary sector (40 %) being the highest among sub-sectors in the district. Dependency on the primary sector (at 36 %) is also not far behind indicating the district's robust agricultural base as well. Sub-Sector wise GDDP trends in Kapurthala are presented in the chart.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 93

Agriculture and allied sectors

Kapurthala like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 35.84 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (33.73 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Kapurthala	4820	6717	10147	8441	2584
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Agriculture is one of the major employers and contributors to the Kapurthala economy. The main Kharif crops grown in Kapurthala are Rice, Maize and Sesamum with rice occupying most of the cultivated area (standing at 114000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 111000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 134000 hectares and the gross sown area amounts to 275000 hectares which makes the cropping intensity to be 205%. All of the sown area is irrigated (100 %) and it is higher than the state average of 97.9 %. 428000 tonnes of rice and 472000 tons of wheat are produced each year in Kapurthala.

The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Kapurthala also witnesses occasional floods and droughts. High yielding varieties of seeds are mostly used by farmers in Kapurthala.

Fishing is an important allied activity in Kapurthala; it has fish stocked in an area of 539 hectares. It has receipts from Fisheries amounting to Rs. 27, 15,000.

Kapurthala also has 2 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Kapurthala. It has a total of 119.5 thousand graded buffaloes and 51.7 thousand cross bred cattle most of them are females. The number of Goat at 4 thousand respectively is also high in Kapurthala.

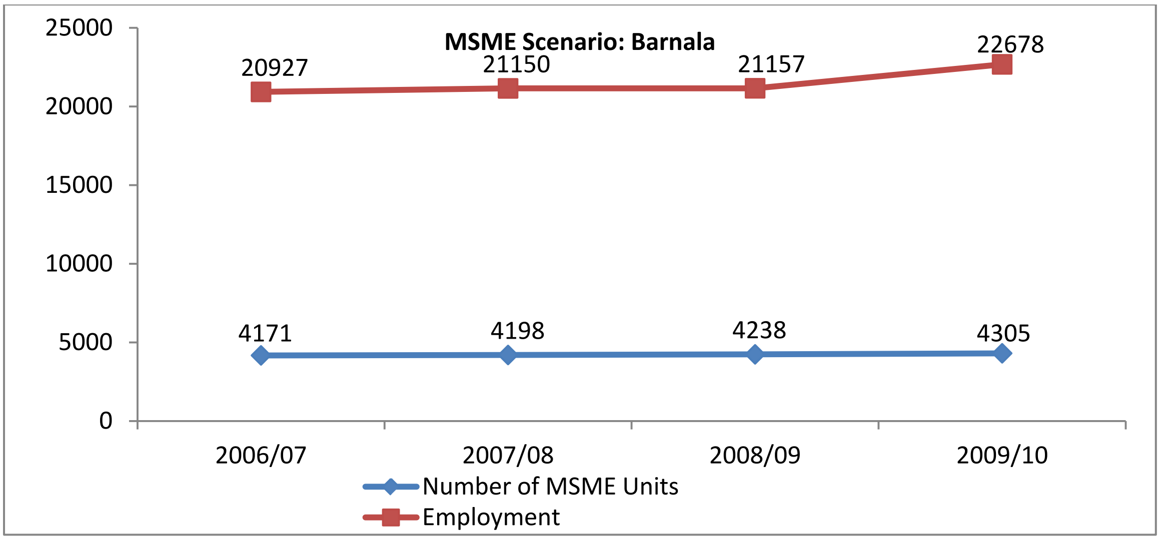
Source: Statistical Handbook of Punjab, 2012

Industry

Kapurthala is a key economic hub in the district of Punjab with presence of numerous medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had five large scale units generating employment in excess of 17,000 with a cumulative turnover of more than INR 30, 000 crore. Rail Coach Factory is the major employer with other large scale employers being primarily mills processing agro-produce.

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district also has one cluster devoted to Foundry and General Engineering given the region’s strong growing Industrial base.

Between 2007-08 and 2009-10, the MSE segment has witnessed good incremental addition of 100 units generating additional employment of more than 2500 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

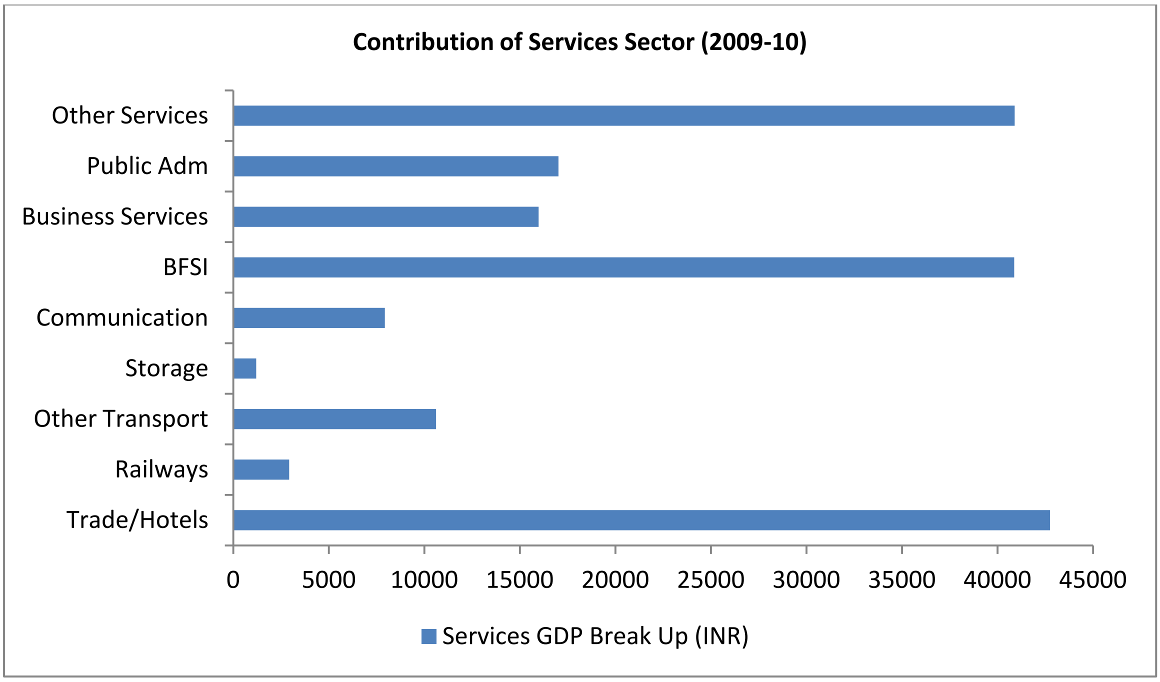
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Kapurthala district.

Existing Clusters	Clusters Identified for Promotion
1. Diesel Engine Parts 2. Processed Agro Produce 3. Foundry 4. General Engineering	Agro Produce, Engineering sub-systems

Services Sector

Service sector contributed to 40 % percent[132] of GDDP in the year 2009-10 just slightly less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Kapurthala. Sub-sector wise contribution of services income is presented in the chart.

[132]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 755 per bed is near the state average of 760 per bed. District has 4 PHCs and 13 CHCs along with 55 Sub centers with limited private participation[133]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	4
Ayurvedic Institutions	26
Homeopathic Institutions	7
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	13
Dispensaries	55
Total	**109**

Source: District Profile, MSME Report, 2011

Kapurthala has excellent penetration of banking and financial services measured as a percentage of GDDP at 10.17 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. Kapurthala being primarily a progressive agriculture and services based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

[133] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

15.9.4 Current Employment Scenario in Kapurthala

Main worker participation rate of 28.28 % in the district is in line with the state average number of 28.28 percent. Marginal worker participation at 3.85 % is lower the state average of 4.66 %. Overall percentage of non workers at 60.1 % is higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Kapurthala	28.28 %	3.85 %	60.1 %	23.1 %	37.1 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.9.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Kapurthala is a low human resource growth district adding manpower of 23,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Kapurthala	902,277	595,503	255,972	243,173	23,951
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.9.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Kapurthala has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Kapurthala.

According to the estimates, in the next 5 years, Kapurthala is expected to witness an incremental manpower requirement of over 28 thousand [134] which is expected to increase to 31 thousand [135] during 2017-22.

[134] KPMG Estimates on Incremental Manpower Requirement

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	73968	0	0	73004	0	0	72053
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	51	202	253	57	228	285	64	257	321
Food Processing	234	910	1326	341	1327	1933	476	1851	2696
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	152	607	759	192	767	958	229	917	1146
Paper & Paper Products	15	60	75	17	68	85	19	76	95
Chemical & Chemical Products	33	130	163	44	177	221	57	229	286
Construction Based Material	24	95	119	28	114	142	35	139	174
Mineral Processing	190	760	950	194	775	969	198	791	988
Manufacturing of Engineering Products	649	2597	3246	718	2871	3589	793	3174	3967
Textiles	41	164	205	50	199	249	63	252	315
Manufacturing of Electrical	1167	4667	5834	1316	5262	6578	1484	5933	7417

[135] KPMG Estimates on Incremental Manpower Requirement

Products									
Construction	3687	7374	62675	5621	11242	95552	7839	15679	133267
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	628	2510	0	1076	4304	0
Transportations and Logistics	107	1695	2017	142	2247	2674	179	2839	3378
Retail	1322	1322	10577	1645	1645	13160	1932	1932	15457
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1649	4947	0	2031	6092	0	2413	7239	0
Banking and Financial Services	2417	7252	0	3171	9512	0	3902	11707	0
Education and Training	1042	7013	0	1040	7000	0	1062	7148	0

Source: KPMG Analysis

15.9.7.1 Details of vocational education infrastructure at Kapurthala

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Kapurthala	1132	160	36	1328	1.6

Source: DTE Punjab

15.9.7.2 List of the Main Trades/Courses offered by I.T.I.s at Kapurthala

Govt. ITI		Private ITI
Carpenter	Ref. &AC	Health Sanitary Inspector
Cutting & Sewing	Turner	Dental Lab. Technician
Embroidery & N Work	Welder (Gas & Electric)	Library & Informatrion Science
Fitter	Foundryman	Art & Craft TT
Machinist Composite	PPO	Health Sanitary Inspector
		Dental Lab. Technician
		Library & Informatrion Science

Source: Directorate ofTechnical Education, Punjab

15.9.8 Students Interaction outcomes-Youth Aspirations

Students in the district come from a lower middle class background with their household income being in the range of INR 8000 to 15,000 per month. Most students were open to migration for good jobs considering that people from South India generally grab a maor share of PSU jobs on offer due to better English language skills. However, they noted that the pay should be commensurate with their expenses to ensure sustainability. Students with an in-plant training experience confirmed that they are made to do laborious work and they did not see any value addition. Students were well aware of the job opportunities available after an ITI certificate. The salary expectations range from INR 8000 per month to 18,000 per month and students preferred a government job over a private one for job security and increased status

15.9.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has varying levels of skill gaps. The primary concern being highlighted was the lack of training in English which lead to personnel from South India being recruited to the prestigious Rail Coach Factory in Kapurthala. It was also felt that there is a pressing need to educate the youth in soft skills as well to increase the potential for employability. In terms of skill, it was noticed that the present infrastructure in the ITIs catering to the mechanical and electrical streams were not enough in view of the increased hiring by the vendor network which has developed around the RCF. Hence, stakeholders have to keep this in mind while creating incremental capacity in the district

15.9.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Kapurthala district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Construction Services o Engineering Products Manufacturing o Fashion designing o Food processing with focus on Value added Rice Products • Creating a scholarship fund for high achieving students interested in taking up skill related courses. • Promoting vocational education at the grass root level through policy advocacy, school camps and encouraging students to take up NVEQF programs in schools
District Administration	• Ensure women participation in skill development, as majority of the women in the district are Non-workers. • Centre of Excellence scheme should be promoted appropriately in the district to ensure higher fulfillment rates. The scheme must also be promoted amongst the companies that come to recruit from ITI Kapurthala • Create an enabling environment such as an option of taking a loan for the students who wish to pursue self employment after graduation; this could be specifically tailored for the SDI scheme • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level.
Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • The industry may offer Apprentices work related to the trades they have learnt during their time in the ITI's and make their learning's as effective during their time as an Apprentice. • Increase desirability of jobs through improved work environment considering that

	Kapurthala has a good eco-system of Industrial PSUs with standard labor conditions • Industry may promote women in the district by ensuring an adequate mix of male and female workers especially in the service related or auxiliary trades • Participate in "train the trainer" programs to improve the quality of training delivery • Industry can collaborate with skill development institutes for updating the course content and creating linkages for placements. • Industry can support Vocational education through scholarship funds for the needy but meritorious students
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry could be called to deliver specific modules which can increase chances of overseas employment • Update machinery and provide manuals in workshops for practical classes • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.10 Skill Gap Assessment of Mansa District

15.10.1 Administrative Profile

The Mansa District comprised of 244 villages (238 inhabited and 6 uninhabited) with 244 gram Panchayat spread over three tahsils viz. Mansa, Budhlada and Sardulgarh. There were 5 towns viz. Mansa, Budhlada, Bareta, Bhikhi and Sardulgarh in the district.

15.10.2 Social Profile

Demographics

Mansa has a population of 7.68 lakhs as per the 2011 Census with 78.74 percent share of that being rural population[136]. This is more than the average rural population of 68.2% for Punjab as a whole.The population density of the district, standing at 350 persons per sq.km, is much lower than state average of 893[137] persons per sq.km.

While the child gender ratio has increased from 782 females per 1000 males in 2001 to 831 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 879 females per 1000 males in 2001, to 880 females per 1000 males in 2011[138].

Reserved categories population in the district is quite significant, occupying a share of 31.84[139] percent of total population which is slightly more than 28.85% for Punjab as a whole.

Literacy

The district has an abysmal literacy rate of 62.8 percent in comparison to state average of 76.07 percent[140]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 56.4 percent in line with trends in other districts. Also, low school infrastructure at the primary and secondary levels is a key concern for the district although the schooling infrastructure at the secondary level is much improved as shown by the below benchmarking of Mansa's School infrastructure with that of the state in terms of population served per school.

Region	Primary Level	Middle Level	Secondary Level
Mansa	2589	3776	5756
Punjab	1527	3570	6840

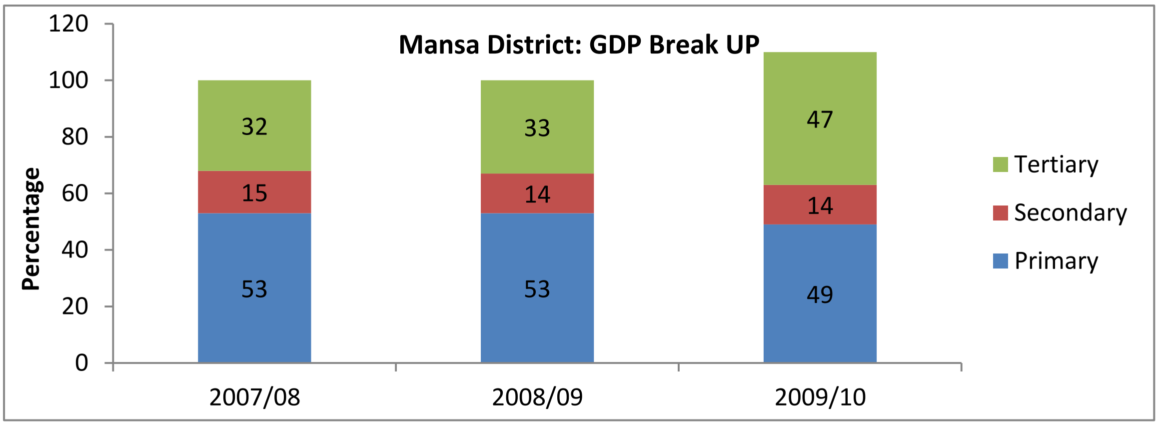
Source: Statistical Handbook of Punjab, 2012

15.10.3 District Economy

Contribution of Mansa to overall state economy is lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 36,729 in comparison to state average of INR 42,752 in 2009-10 (at current prices). The contribution of the primary sector (49 %) is the highest among sub-sectors in the district. Dependency on the tertiary

136 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
137 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
138 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
139 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
140 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

sector (at 47 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Mansa are presented in the chart.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Mansa like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 58.85 % of the working population was employed in agriculture; this fraction is much higher than that of other parts of the state as evident from the overall state average of only 39 %. In the year 2004-05, Agriculture contributed a major portion (50.56 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Mansa	4049	5548	13825	15159	3793
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab, 2012

Agriculture is one of the major employers and contributors to the Mansa economy. The main Kharif crops grown in Mansa are Rice, Cotton and Moong with Cotton occupying most of the cultivated area (standing at 90000 hectares). Among the Rabi crops Wheat, Barley, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 169000 hectares). The Horticultural crops grown are Citrus, Guava and Grapes. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables. The net sown area is 190000 hectares and the gross sown area amounts to 369000 hectares which makes the cropping intensity to be 194%. Most of the sown area is irrigated (98.9 %) the rest is rain fed, it is higher than the state average of 97.9 %. 296000 tonnes of rice and 791000 tons of wheat are produced each year in Mansa. The district is prone to frequent heat waves and crop diseases which turn out to be detrimental to the crops. Mansa also witnesses occasional Hailstorms, cold waves and frost. High yielding varieties of seeds are mostly used by farmers in Mansa.

Fishing is an important allied activity in Mansa; it has fish stocked in an area of 662 hectares. It has receipts from Fisheries amounting to Rs. 85,000.

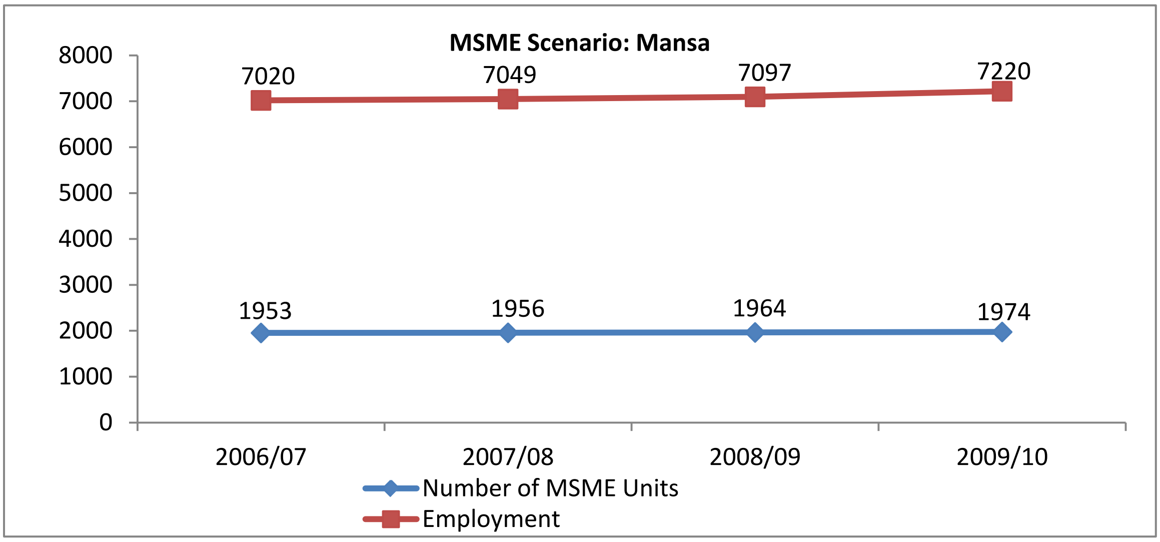
Animal Husbandry also enjoys huge presence in the agricultural communities of Mansa. It has a total of 230 thousand graded buffaloes and 18.4 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 18 thousand and 19 thousand respectively is also high in Mansa.

Source: Statistical Handbook of Punjab, 2012

15.10.1.1 Industry

Mansa is primarily an agrarian and a regional trade district with limited industrial growth.Moreover, the district's small size and population have limited its industrial growth. There is no focal point or industrial infrastructure developed by the authorities and hence there is an urgent need for the stakeholders to create relevant focused industrial eco-system. A couple of clusters devoted to manufacture of Agriculture Implements and Wheat Cutters are expected to be operational soon.

Between 2000-01 and 2009-10, the MSE segment has witnessed good incremental addition of 62 units generating additional employment of more than 800 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

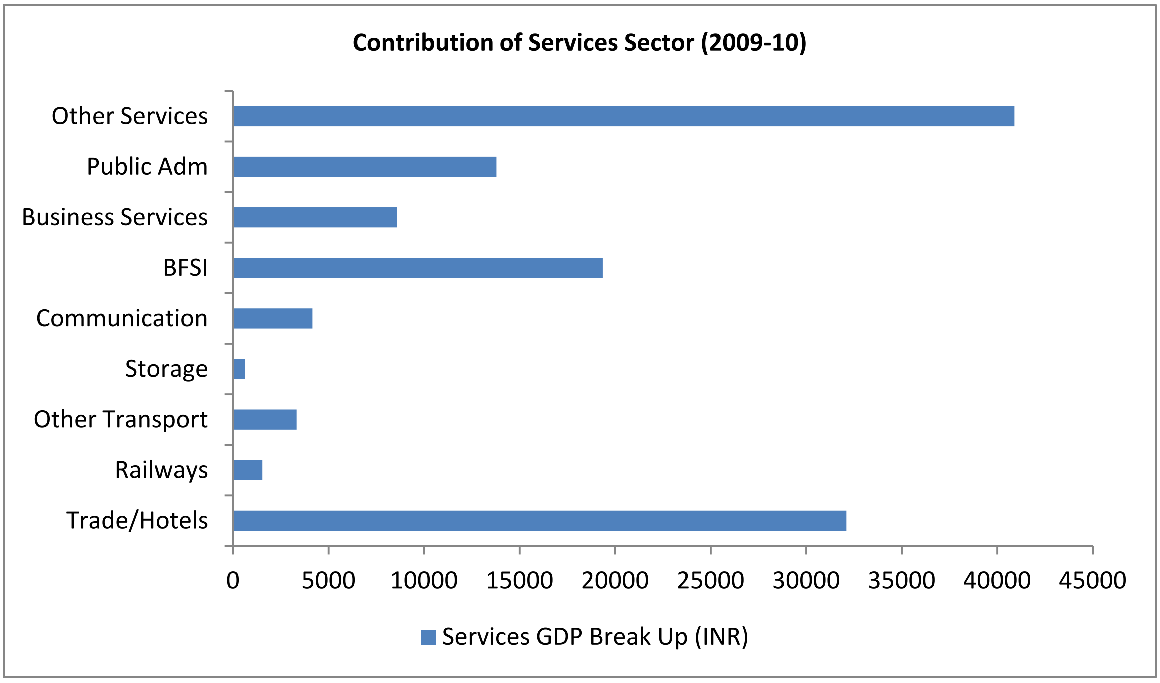
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Mansa district.

Existing Clusters	Clusters Identified for Promotion
1. Agricultural Implements 2. Wheat Cutter/Processor	Agriculture Implements

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 32 % percent[141] of GDDP in the year 2009-10 which is less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Mansa. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 748 per bed is less than the state average of 760 per bed. District has 5 PHCs and 22 CHCs along with 53 Sub centers with limited private participation[142]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	2
Ayurvedic Institutions	12

[141]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[142]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Homeopathic Institutions	2
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	14
Dispensaries	38
Total	**72**

Source: District Profile, MSME Report, 2011

Mansa has very limited penetration of banking and financial services measured as a percentage of GDDP at 6.57 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is mainly due to the limited size and population of the district coupled with the overdependence on agriculture and unorganized trade. The district being small in terms of population has smaller number of banks compared to other districts as well.

15.10.4 Current Employment Scenario in Mansa

Main worker participation rate of 29.61 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 7.01 % is higher the state average of 4.66 %. Overall percentage of non workers at 53.0 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Mansa	29.61 %	7.01 %	53.0 %	21.8 %	31.2 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.10.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Mansa is a low human resource growth district adding manpower of around 25,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Mansa	848,361	559,918	271,715	258,129	25,424

Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.10.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Mansa has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Mansa.

According to the estimates, in the next 5 years, Mansa is expected to witness an incremental manpower requirement of over 13 thousand [143] which is expected to normalize to 15 thousand [144] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	159557	0	0	155425	0	0	155425
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	5	20	26	6	26	32	6	26	32
Food Processing	113	441	642	230	896	1306	230	896	1306
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	6	23	29	9	34	43	9	34	43
Paper & Paper Products	0	0	0	0	0	0	0	0	0
Chemical & Chemical	9	34	43	15	60	75	15	60	75

[143] KPMG Estimates on Incremental Manpower Requirement
[144] KPMG Estimates on Incremental Manpower Requirement

Products									
Construction Based Material	11	46	57	17	67	83	17	67	83
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	40	160	199	49	195	244	49	195	244
Textiles	65	260	325	100	401	501	100	401	501
Manufacturing of Electrical Products	0	1	1	0	1	1	0	1	1
Construction	1567	3133	26633	3331	6662	56630	3331	6662	56630
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1036	4142	0	1036	4142	0
Transportations and Logistics	37	584	695	62	979	1164	62	979	1164
Retail	993	993	7942	1451	1451	11606	1451	1451	11606
Hospitality	99	148	740	144	216	1081	144	216	1081
Communication	855	2566	0	1251	3754	0	1251	3754	0
Banking and Financial Services	1031	3093	0	1665	4994	0	1665	4994	0
Education and Training	1017	6847	0	1021	6876	0	1021	6876	0

Source: KPMG Analysis

15.10.7.1 Details of vocational education infrastructure at Mansa

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Mansa	748	444	17	1209	1.6

Source: District MSME Report

15.10.7.2 List of the Main Trades/Courses offered by I.T.I.s at Mansa

Govt. ITI		Private ITI	
Consumer Electronics		COPA	Electician
COPA		Computer Handware	Fashion Technology
Cutting & Sweing		Health Sanitary Inspector	Wireman
Embroidery & N Work		Electrician	A&C TTC
Steno Punjabi			

Source: Directorate ofTechnical Education, Punjab

15.10.8 Students Interaction outcomes-Youth Aspirations

Students in the district showed higher preference towards government job over private owing to higher job security and salary. Students were also open to migration to the other districts or states; however they appeared to be confident of finding some avenue of self employment within the rural belt of Southern Punjab. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment over a salaried job.

15.10.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Mansa district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders

NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Milk & Milk Products o Cold Storage Operations o Transportation & Communication o Food Processing with focus on Confectionery • Forging public private partnerships with leading private sector firms in Bathinda to create an inclusive ecosystem for skill development. • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training.
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program; the scheme can receive the status of the bank's PSL (Priority Sector Lending) target • Associate lead banks with the ITI to fund student for Self employment initiatives. • District Commissioner in consultation with the labor commissioner may fix rates for the Apprentices in the district keeping the sustainability of the trainees • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Department of agriculture may promote Dairy Farming and provide training to the rural women folk for milking & upkeep of cattle • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level • Role of the Employment exchange in the district should be expanded to cover registration, training, certification and placements to ensure successful access to the job market for the youth in Mansa
Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • Follow the two pronged approach to start training centers within their own campus and training on specific sector skills and then recruiting the same candidates. • Rewarding the students appropriately who come for In-plant trainings. • Providing regular feedbacks to the students and their teachers in the ITI
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players with reduced costs due to the facilities management model

15.11 Skill Gap Assessment of District Moga

15.11.1 Administrative Profile

For administrative purpose, the district has been divided into 4 Tehsils namely Moga, Dharamkot, Nihalpurwala and Baghapurana. There are 2 Sub Tehsils namely Badhni Kalan and Kot Ishekhan and 5 blocks namely Moga-I, Moga –2, Nihal Singh wala, Kot Ishekhan & Baghapurana. There are 323 inhabited villages and 337 Gram panchayats.

14.1.3 Social Profile

Demographics

Moga has a population of 9.92 lakhs as per the 2011 Census with 77.75 percent share of that being rural population[145]. This is more than the average rural population of 68.2% for Punjab as a whole. The Population density of the district standing at 444 persons per sq.km is much lower than state average of 893[146] persons per sq.km.

While the child gender ratio has increased from 818 females per 1000 males in 2001 to 863 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 887 females per 1000 males in 2001, to 883 females per 1000 males in 2011[147].

Reserved categories population in the district is quite significant, occupying a share of 31.84[148] percent of total population which is slightly more than 28.85% for Punjab as a whole.

Literacy

The district has a decent literacy rate of 71.6 percent in comparison to state average of 76.07 percent[149]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 67.4 percent in line with trends in other districts. Also, low school infrastructure at the primary and secondary levels is a key concern for the district although the schooling infrastructure at the middle level is much improved as shown by the below benchmarking of Moga's School infrastructure with that of the state in terms of population served per school.

Region	Primary Level	Middle Level	Secondary Level
Moga	2310	2161	6581
Punjab	1527	3570	6840

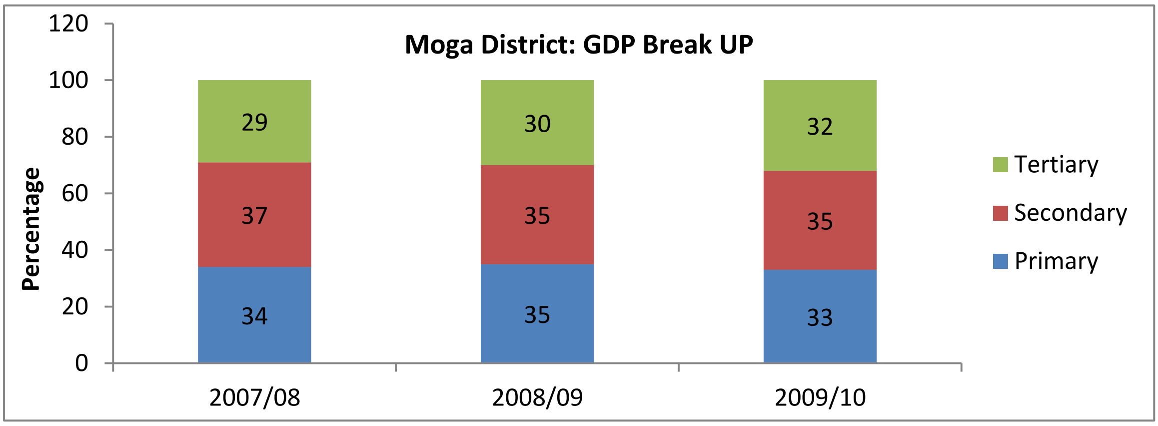
Source: Statistical Handbook of Punjab, 2012

15.11.3 District Economy

Contribution of Moga to overall state economy is in line with the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 42,754 in comparison to state average of INR 42,752 in 2009-10(At current prices) .

[145] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[146] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[147] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[148] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[149] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

The district is one of the few in Punjab to have a more or less even distribution of its GDP among the primary (33%), secondary (35%) and tertiary (32%) sectors.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Moga like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 51.94 % of the working population was employed in agriculture; this fraction is much higher than that of other parts of the state as evident from the state average of only 39 %. In the year 2004-05, agriculture contributed a major portion (35.13 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The relatively larger number on the higher side of land holdings indicates highly mechanized and intensive farming

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Moga	6270	7916	18651	17876	2629
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab 2012

Agriculture is one of the major employers and contributors to the Moga economy. The main Kharif crops grown in Moga are Rice and Cotton with rice occupying most of the cultivated area (standing at 174000 hectares). Among the Rabi crops Wheat, Barley Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 177000 hectares). The Horticultural crops grown are Kinnow, Guava, Peach and Ber. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 149000 hectares and the gross sown area amounts to 334000 hectares which makes the cropping intensity to be 224%. Allof the sown area is irrigated (100 %) it is higher than the state average of 97.9 %. 80040000 tonnes of rice and 873000 tons of wheat are produced each year in Moga.

The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Moga also witnesses occasional floods, Hailstorms and droughts. High yielding varieties of seeds are mostly used by farmers in Moga.

Fishing is an important allied activity in Moga; it has fish stocked in an area of 496 hectares.

Moga also has 5 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Moga. It has a total of 235.8 thousand graded buffaloes and 65.5 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 11 thousand and 5 thousand respectively is also high in Moga.

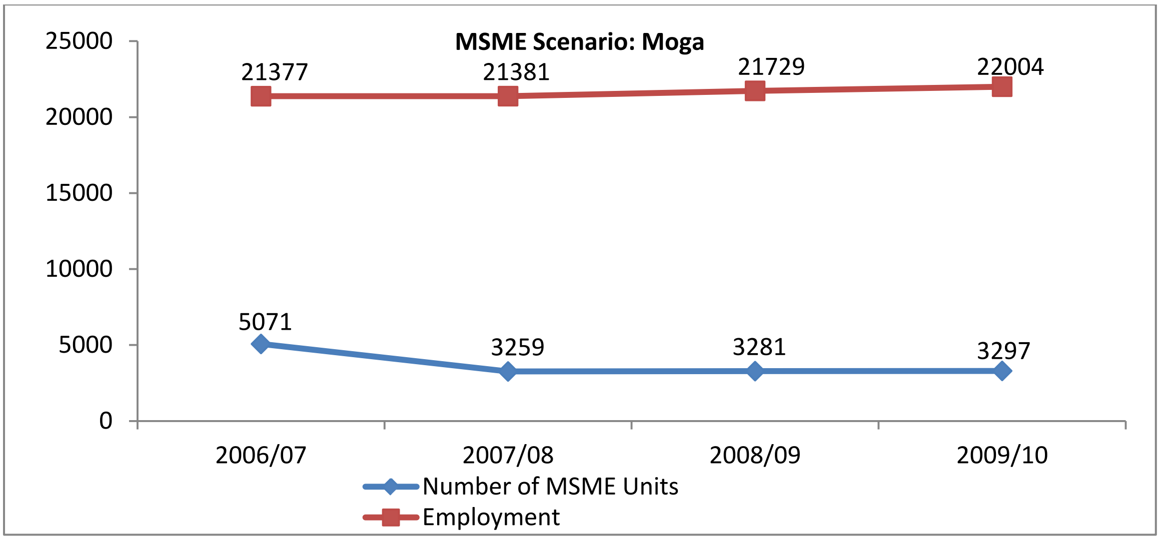
Source: Statistical Handbook of Punjab, 2012

14.1.3.1 Industry

Moga is one the few districts with an evenly balanced GDP split between the 3 core sectors. The district sees presence of numerous medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had five large scale units generating employment in excess of 21,000 with a cumulative turnover of more than INR 1,500 crore. Nestle India, Paras Spices and Abohar Power are key industrial entities in the district.

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district also has one cluster devoted to Milk and Milk prodcuts complementing the district’s identity as a food and beverage hub.

Between 2007-08 and 2009-10, the MSE segment has witnessed decrease of around 1800 units as defunct units were gradually deregistered. In spite of this, the MSE segment managed to create additional employment of more than 600 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Moga district.

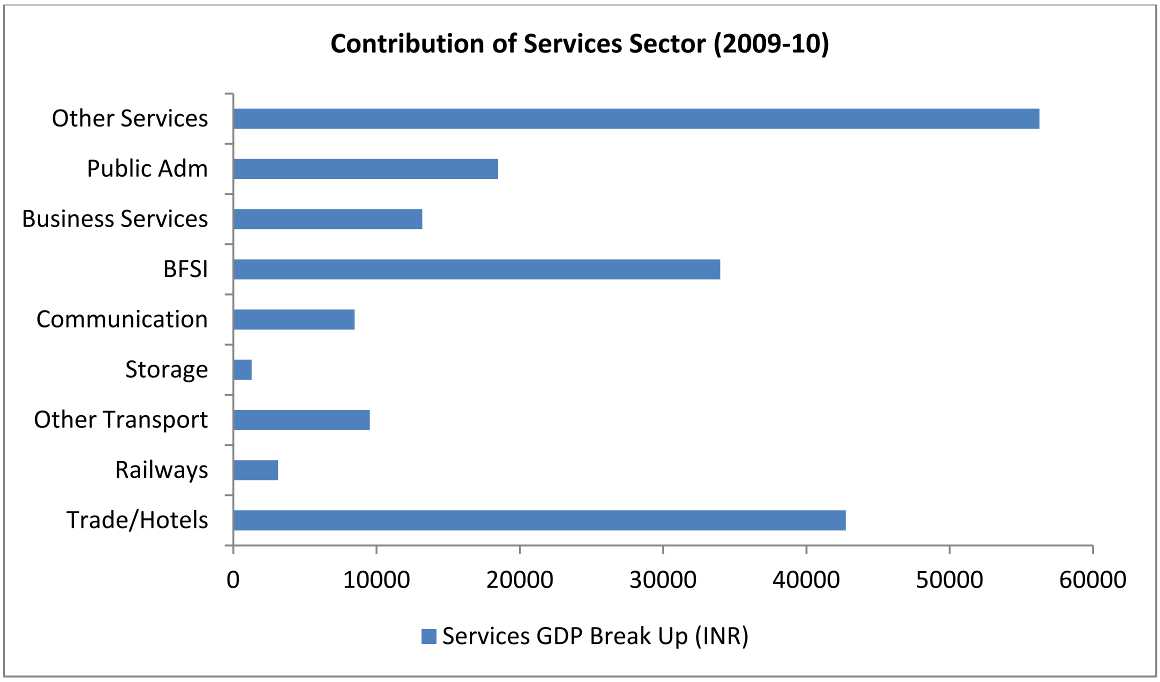
Existing Clusters	Clusters Identified for Promotion
1. Milk and Milk Products 2. Agriculture Implements	Milk Products

Source: District MSME Report, 2011

14.1.3.2 Services Sector

Service sector contributed to 32 % percent[150] of GDDP in the year 2009-10 which is less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Moga. Sub-sector wise contribution of services income is presented in the chart.

[150]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 742 per bed is below the state average of 760 per bed. District has 5 PHCs and 22 CHCs along with 53 Sub centers with limited private participation[151]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	1
Ayurvedic Institutions	7
Homeopathic Institutions	1
Primary Health Centers (PHCs)	5
Community Health Centers (CHCs)	22
Dispensaries	53
Total	**89**

Source: District Profile, MSME Report, 2011

Moga has limited penetration of banking and financial services measured as a percentage of GDDP at 6.24 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its even dependence on all the three core economy sectors. But the district being small in terms of population has smaller number of banks compared to other districts

[151]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

15.11.4 Current Employment Scenario in Moga

Main worker participation rate of 30.50 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 5.66 % is higher the state average of 4.66 %. Overall percentage of non workers at 54.0 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Moga	30.50 %	5.66 %	54.0 %	22.0 %	32.0 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.11.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Moga is a medium human resource growth district adding manpower of around 32,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Moga	1,094,967	722,678	347,792	330,402	32,543
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.11.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Moga has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Moga.

According to the estimates, in the next 5 years, Moga is expected to witness an incremental manpower requirement of over 22 thousand [152] which is expected to increase to 23 thousand [153] during 2017-22.

[152] KPMG Estimates on Incremental Manpower Requirement

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	185717	0	0	183296	0	0	180908
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	44	175	219	49	197	246	56	222	278
Food Processing	616	2396	3491	898	3493	5090	1253	4873	7100
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	52	209	261	66	264	330	79	316	394
Paper & Paper Products	7	28	36	8	32	40	9	36	45
Chemical & Chemical Products	39	154	193	52	210	262	68	271	339
Construction Based Material	52	208	261	62	249	312	76	304	380
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	318	1273	1591	352	1407	1759	389	1555	1944
Textiles	20	81	101	25	99	123	31	124	156
Manufacturing of Electrical	13	53	67	15	60	75	17	68	85

[153] KPMG Estimates on Incremental Manpower Requirement

Products									
Construction	1822	3644	30975	2778	5556	47223	3874	7749	65862
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	769	3077	0	1330	5319	0
Transportations and Logistics	88	1401	1667	117	1857	2210	148	2346	2792
Retail	1322	1322	10577	1645	1645	13160	1932	1932	15457
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1745	5235	0	2149	6446	0	2553	7659	0
Banking and Financial Services	2046	6137	0	2683	8049	0	3302	9906	0
Education and Training	1130	7605	0	1275	8580	0	1312	8830	0

Source: KPMG Analysis

15.11.7.1 Details of vocational education infrastructure at Moga

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Moga	964	728	0	1692	1.7

Source: DTE Punjab

15.11.7.2 List of the Main Trades/Courses offered by I.T.I.s at Moga

Govt. ITI		Private ITI	
Carpenter	IT & ESM	COPA	A&C TTC
Cutting & Sewing	Machinist Composite	Electrician	Art & Craft TT
Draftsman Civil	Mech Aggricultural Machinery	Welder	CSE&TTC
Electrician	Mechanic Diesel	Elctrician	A&C TTC
Embroidery & N Work	Mechanic Motor Vehicle	Ref & A.C.	Health Sanitary Inspector
Fitter	Mechanic Ref. & AC	COPA	Dental Lab.
Instrument Mechanic	Mechanic Tractor		

Source: Directorate ofTechnical Education, Punjab

15.11.8 Students Interaction outcomes-Youth Aspirations

Students in the district showed an equal preference towards private and the government job, with a higher percentage of students wanting the job in the same trade in which they were pursuing the course. Students were also open to migration to the other districts as the industry presence in Moga is mainly limited to food & dairy based industries. Higher preference was noticed towards polytechnics as some students from COE switch to Polytechnics after covering the basic modules. Students of the districts appeared to have good awareness in terms of career prospects and were aware of the possible companies that could give them employment. The youth were seen to prefer salaried job over self employment.

15.11.9 District skill requirements

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has a vast potential in the Dairy and Food sectorl given the eco-system type development which has taken place here. Nestle has a major processing facility in the district catering to its North Indian markets which has lead to high numbers of ancilliary job creation. Key skill deficits were seen across Transportation & Logistics in the service sector and the mechanical streams in the manufacturing sector. Stakeholders also feel that, given the robust unorganized sector present in the district in industries like dairy and food driven by the rich agricultural base, it is imperative to offer short term customized training programs to this target group.

15.11.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Moga district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Dairy and Dairy Products o Food Processing o Construction o Transportation & Logistics • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training.
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program. • Associate lead banks with the ITI to fund student for Self employment initiatives. • District Commissioner may fix rates for the Apprentices in the district. • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level. • Role of the Employment Office in the district should be expanded to a one stop shop labor sourcing center from a mere data keeping agency
Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • Rewarding the students appropriately who come for In-plant trainings. • Providing regular feedbacks to the students and their teachers in the ITI
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.12 Skill Gap Assessment of District Muktsar Sahib

15.12.1 Administrative Profile

From an administrative point of view, the district has been divided into 3 sub division / Tehsil, 4 Sub tehsils, 4 blocks. There are 263 Gram panchayats, 234 inhabited villages.

15.12.2 Social Profile

Demographics

Muktsar has a population of 9.02 lakhs as per the 2011 Census with 72 percent share of that being rural population[154]. This is slightly more than the average rural population of 68.2% for Punjab as a whole. The Population density of the district standing at 348 persons per sq.km is much lower than state average of 893[155] persons per sq.km.

While the child gender ratio has increased from 811 females per 1000 males in 2001 to 830 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 891 females per 1000 males in 2001, to 895 females per 1000 males in 2011[156].
Reserved categories population in the district is quite significant, occupying a share of 37.75[157] percent of total population much more than 28.85% for Punjab as a whole.

Literacy

The district has an underperforming literacy rate of 66.8 percent in comparison to state average of 76.07 percent[158]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 60 percent in line with trends in other districts. Also, the school infrastructure at all levels of primary, middle and secondary is a key concern for the district as shown by the below benchmarking of Muktsar's School infrastructure with that of the state in terms of population served per school.

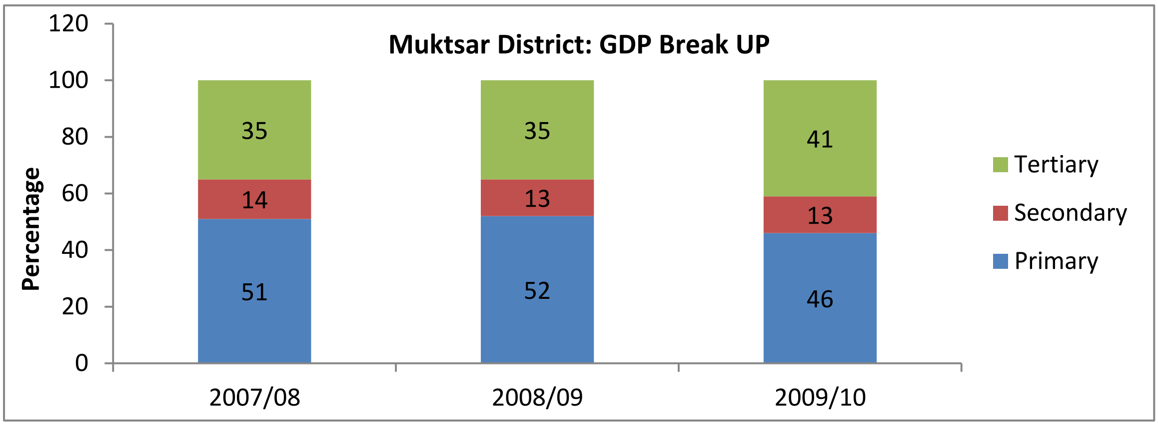
Region	Primary Level	Middle Level	Secondary Level
Muktsar	2238	4757	10055
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.12.3 District Economy

Contribution of Muktsar to overall state economy is higher than the expected share on population pro-rata basis - as evident from lower per Capita Income of INR 40,694 in comparison to state average of INR 42,752 in 2009-10(At current prices). The contribution of the primary sector (46 %) is the highest among sub-sectors in the district. Dependency on the tertiary sector (at 41 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Muktsar are presented in the chart

154 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
155 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
156 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
157 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
158 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Muktsar like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 58.63 % of the working population was employed in agriculture; this fraction is much greater than that of other parts of the state as evident by the overall state average to be only 39 %. In the year 2004-05, agriculture contributed a major portion (45.98 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Muktsar	883	2418	7234	13378	7268
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: District Statistical Handbook, 2012

Agriculture is one of the major employers and contributors to the Muktsar economy. The main Kharif crops grown in Muktsar are Rice and Cotton with Cotton occupying most of the cultivated area (standing at 124000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 202000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Litchi Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 224000 hectares and the gross sown area amounts to 449000 hectares which makes the cropping intensity to be 175%. Most of the sown area is irrigated (99.6 %) the rest is rain fed, it is greater than the state average of 97.9 %. 402000 tonnes of rice, 758000 tons of cotton and 927000 tons of wheat are produced each year in Muktsar. The district is prone to frequent heat waves, pests, diseases and water logging which turn out to be detrimental to the crops.

Muktsar also witnesses occasional hailstorm, frost and cold waves. High yielding varieties of seeds are mostly used by farmers in Muktsar.

Fishing is an important allied activity in Muktsar; it has fish stocked in an area of 538 hectares.

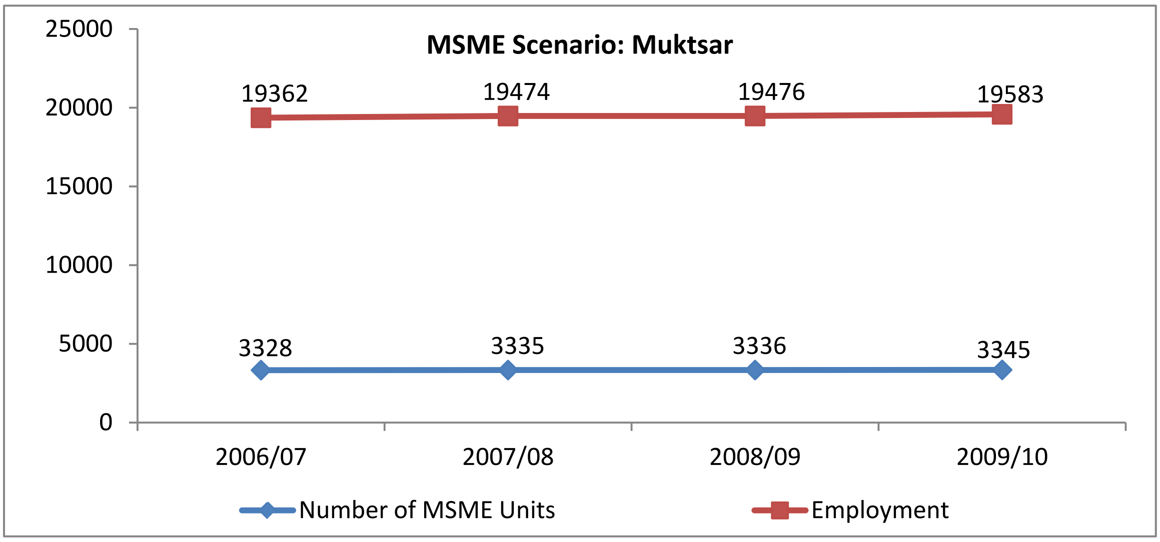
Animal Husbandry also enjoys huge presence in the agricultural communities of Muktsar. It has a total of 144.3 thousand graded buffaloes and 62.2 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 27 thousand and 22 thousand respectively is also high in Muktsar.

Source: Statistical Handbook of Punjab, 2012

Industry

Muktsar district although not heavily industrialized does have some presence of medium and lare units. In the year 2009-10, the district had 4 large scale units generating employment in excess of 1,300 with a cumulative turnover of more than INR 500 crore. Setia Paper Mills and Setia Synthetic Mills are few of the important large industrial entities in the district.

Presence of these medium and large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units can be expected to happen in the near future which can lead to more vendorization/supplier network. The district has one cluster devoted to Agriculture Implements Manufacture and trade expected to come up soon. Basmati Rice Milling and Processing, Cotton Yarn production and paper products production are some of the key industrial sectors operating in the district. Between 2001-02 and 2009-10, the MSE segment has witnessed a small increase of 150 MSE including defunct units gradually being deregistered. In spite of this, the MSE system has managed to create an additional 100 jobs over the last 3 years.



Source: District MSME Report, 2011

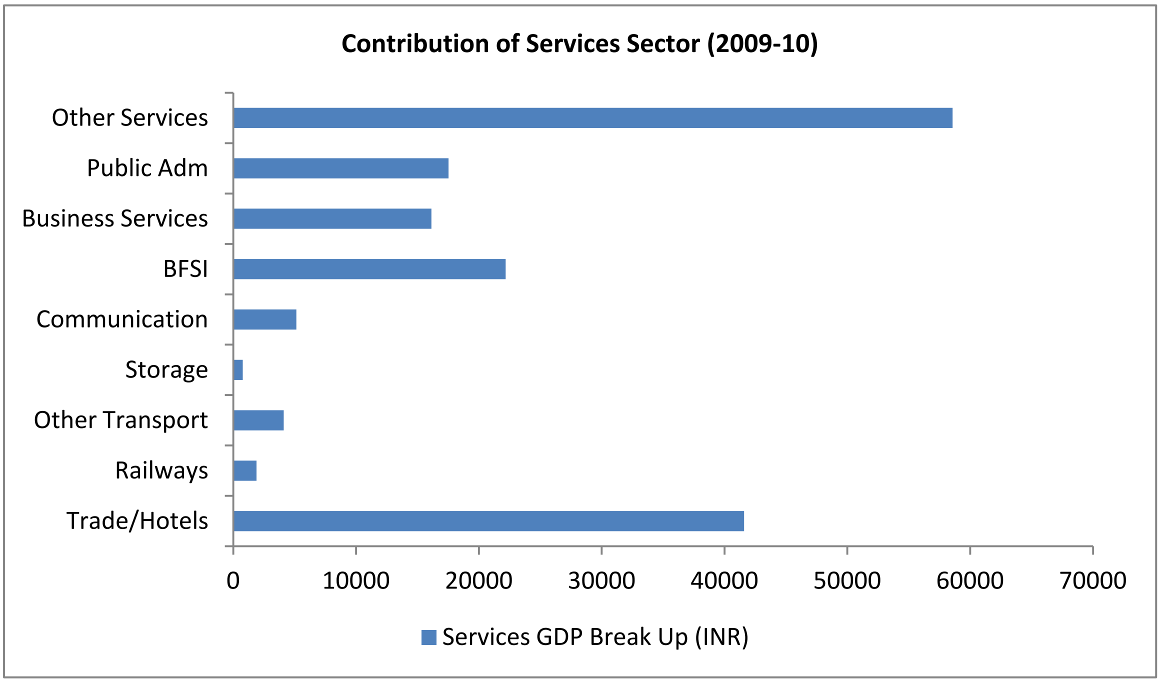
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Muktsar district.

Existing Clusters	Clusters Identified for Promotion
1. Agriculture Implements 2. Paper and Paper Products 3. Cotton Yarn 4. Rice Milling/Processing	Agriculture Implements Paper and Paper Products

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 41 % percent[159] of GDDP in the year 2009-10 in line with the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Muktsar. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at x per bed is near the state average of 760 per bed. District has 5 PHCs and 17 CHCs along with 46 Sub centers with limited private participation[160]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

[159] http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[160] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Category	Number of Institutions
Allopathic Hospitals	3
Ayurvedic Institutions	11
Homeopathic Institutions	2
Primary Health Centers (PHCs)	5
Community Health Centers (CHCs)	17
Dispensaries	46
Total	**84**

Source: District Profile, MSME Report, 2011

Muktsar has limited penetration of banking and financial services measured as a percentage of GDDP at 6.26 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its dependence on the primary sector. Muktsar being primarily an agriculture and allied sectors based economy sees presence of mainly public sector banks and small cooperative banks with limited presence of new age private and foreign banks

15.12.4 Current Employment Scenario in Muktsar Sahib

Main worker participation rate of 29.31 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.98 % is higher the state average of 4.66 %. Overall percentage of non workers at 51.8 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Muktsar Sahib	29.31 %	4.98 %	51.8 %	20.5 %	31.3 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.12.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Muktsar is a medium human resource growth district adding manpower of around 28,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Muktsar	996,110	657,432	299,185	284,225	27,994
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.12.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Muktsar Sahib has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Muktsar.

According to the estimates, in the next 5 years, Muktsar Sahib is expected to witness an incremental manpower requirement of over 18 thousand [161] which is expected to increase to 19 thousand [162] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skille d	Semi skilled	Unskille d	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	180598	0	0	178245	0	0	175922
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	14	56	70	16	63	78	18	71	88
Food Processing	382	1486	2164	557	2166	3155	777	3021	4402
Beverages	0	0	0	0	0	0	0	0	0
Fabricated	37	148	186	47	188	234	56	224	280

[161] KPMG Estimates on Incremental Manpower Requirement
[162] KPMG Estimates on Incremental Manpower Requirement

metal products									
Paper & Paper Products	6	22	28	6	25	31	7	28	35
Chemical & Chemical Products	36	144	180	49	196	245	63	253	316
Construction Based Material	43	170	213	51	204	255	62	249	311
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	234	936	1170	259	1035	1293	286	1144	1430
Textiles	2	8	10	2	9	12	3	12	15
Manufacturing of Electrical Products	8	34	42	9	38	47	11	43	53
Construction	1669	3338	28370	2544	5089	43253	3548	7097	60324
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	714	2855	0	1255	5018	0
Transportations and Logistics	40	633	753	53	839	999	67	1060	1262
Retail	1286	1286	10288	1600	1600	12801	1879	1879	15035
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1053	3160	0	1297	3892	0	1541	4624	0
Banking and Financial Services	1245	3734	0	1633	4898	0	2009	6028	0
Education and Training	1085	7301	0	1183	7962	0	1237	8324	0

Source: KPMG Analysis

15.12.7.1 Details of vocational education infrastructure at Muktsar Sahib

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Muktsar Sahib	726	996	0	1722	1.9

Source: DTE Punjab

15.12.7.2 List of the Main Trades/Courses offered by I.T.I.s at Muktsar Sahib

Govt. ITI		Private ITI	
COPA	Embroidery & N Work	Stenography English	Art & Craft TT
Electronics	Mechanic Tractor	Dress Making	COPA
Cutting & Sewing	Turner	Secretarial Practice	Welder
Steno Punjabi	Electrician	Health Senitry	Plumber
Consumer Electronics	CS&E TTC	Art & Craft TT	Painter
		A&C TTC	Electrian

Source: Directorate ofTechnical Education, Punjab

15.12.8 Students Interaction outcomes-Youth Aspirations

Students in the ITI were noted to be coming from a middle class background with a family income between INR 15,000 to 20,000 per month. Most students were open to migrate for job opportunities. However, some students from the women ITI preferred to work only in Muktsar due to personal reasons. Students perceive polytechnic to be a better option as the ITI was only their backup choice. This is due to the better salaries given to the Polytechnic students. All students expected a salary in the range of INR 8,000 to 12,000 and a government job was seen as their first preference. Students do not want to work in the private sector because entry level salaries are low which doe s not commensurate with the amount of work assigned to them.

15.12.9 Skill mapping and developmental concerns

Muktsar is not a very industrialized district. There is only one large scale industry manufacturing paper and a couple of medium enterprises making paper and paper products. However, there are a number of Small scale industries, mainly in the food processing sectors. People from the district often migrate to border districts like Bathinda which provide better opportunities to work in the manufacturing sector. Agriculture isa key livelihood for most people in Muktsar and they rely on a mix of traditiona and modern means of farming.

15.12.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Muktsar district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Engineerng Services with focus on Agriculture Implements o Agriculture Sector with focus on Basmati Rice Processing o Services like Beauty Care & Transportation o Paper Products with focus on Writng & Printing Paper (WPP) • Forging public private partnerships with leading private sector firms such as NTPC in Bathinda to create an inclusive ecosystem for skill development • Create infrastructure to monitor the existing skill initiatives in the district • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training and provide scholarship fund for high achieving students interested in taking up skill related courses • The key small scale industries in the district are Repair and Servicing, Engineering Units focused on Agri-implements, Agro Based, and wood / wooden based furniture. In absence of formally certified skills, these labours tend to earn lower wages. • Targeted training interventions could be developed to up skill and certify those engaged in these areas
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program by associating a lead bank with an ITI • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. • Community learning initiative for women in the backward areas could be initiated. • Minimum apprentice wages should be increased to make the trainings more attractive • Strengthen the" train the trainer" program by creating a "tool room" in the district. • Evaluate rural skill development schemes in sectors such as "construction & asset creation" in alignment with MGNREGA
Industry	• Providing shop floor training during the schedule of training curriculum and paying apprentices for that period • Collaborate with skill development institutes to update course content. • Support the institutional management committee under the PPP scheme to make it

	more effective and ensure adequate placements and effective training. • Pay the apprentices a reasonable stipend to keep them motivated.
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. • Evaluate and update the course content as per industry requirements with focus on placement opportunities

15.13 Skill Gap Assessment of District Patiala

15.13.1 Administrative Profile

For administrative purposes, the district of Patiala has been divided into 5 Tehsils namely Patiala, Rajpura, Nabha, Samana and Patran. There are 3 Sub Tehsils and 8 blocks. There are 924 inhabited villages, 981 panchayats and 11 towns in the district.

15.13.2 Social Profile

Demographics

Patiala has a population of 18.92 lakhs as per the 2011 Census with 59.73 percent share of that being rural population[163]. This is significantly below the average rural population of 68.2% for Punjab as a whole. The population density of the district standing at 596 persons per sq.km is much lower than state average of 893[164] persons per sq.km.

While the child gender ratio has increased from 776 females per 1000 males in 2001 to 835 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 875 females per 1000 males in 2001, to 888 females per 1000 males in 2011[165].

Reserved categories population in the district is not very significant, occupying a share of 23.07[166] percent of total population which is less than the 28.85 % figure for Punjab as a whole.

Literacy

The district has a decent literacy rate of 76.3 percent in comparison to state average of 70.5 percent[167]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 67.4 percent in line with trends in other districts. Also, low school infrastructure at the primary level is a key concern for the district although the schooling infrastructure at the middle and the secondary levels is more improved as shown by the below benchmarking of Patiala's School infrastructure with that of the state in terms of population served per school.

Region	Primary Level	Middle Level	Secondary Level
Patiala	2018	3646	6649
Punjab	1527	3570	6840

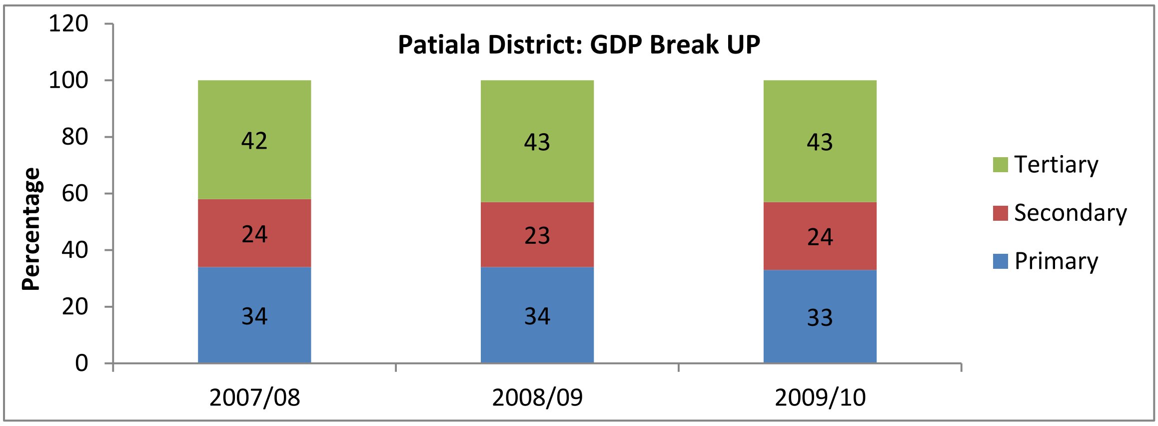
Source: Statistical Handbook of Punjab, 2012

15.12.3 District Economy

Contribution of Patiala to overall state economy is slightly less than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 41,687 in comparison to state average of INR 42,752 in 2009-10(At current

[163] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[164] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[165] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[166] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[167] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html

prices) . Tertiary sector contributes the maximum to the state GDP profile at 43% indicating the district's importance as a key trading hub. The contribution of the primary sector is also not far behind at 33 percent highlighting the presence of a decent agricultural base as well. Sub-Sector wise GDDP trends in Patiala are presented in the chart



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Patiala like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 39.51 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (30.46 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Patiala	7597	11045	19827	19714	4199
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: District Statistical Handbook 2012

Agriculture is one of the major employers and contributors to the Patiala economy. The main Kharif crops grown in Patiala are Paddy, Maize and Sugarcane with Paddy occupying most of the cultivated area (standing at 240200 hectares). Among the Rabi crops Wheat, Barley, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 235000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 270600 hectares and the gross sown area amounts to 535500 hectares which makes the cropping intensity to be 198%. Almost all of the sown area is irrigated (99.9 %) the rest is rain fed, it is higher than the state average of 97.9 %. 1009000 tonnes of Paddy and 1137000 tons of wheat are produced each year in Patiala.

The district is prone to frequent heat waves and crop disease outbreak which turn out to be detrimental to the crops. Patiala also witnesses occasional hailstorms, cold waves, flood and frost. High yielding varieties of seeds are mostly used by farmers in Patiala.

Fishing is an important allied activity in Patiala; it has fish stocked in an area of 657 hectares. It has receipts from Fisheries amounting to Rs. 1, 45,000.

Patiala also has 5 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Patiala. It has a total of 316.1 thousand graded buffaloes and 62.3 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 14 thousand and 14 tshousand respectively is also high in Patiala.

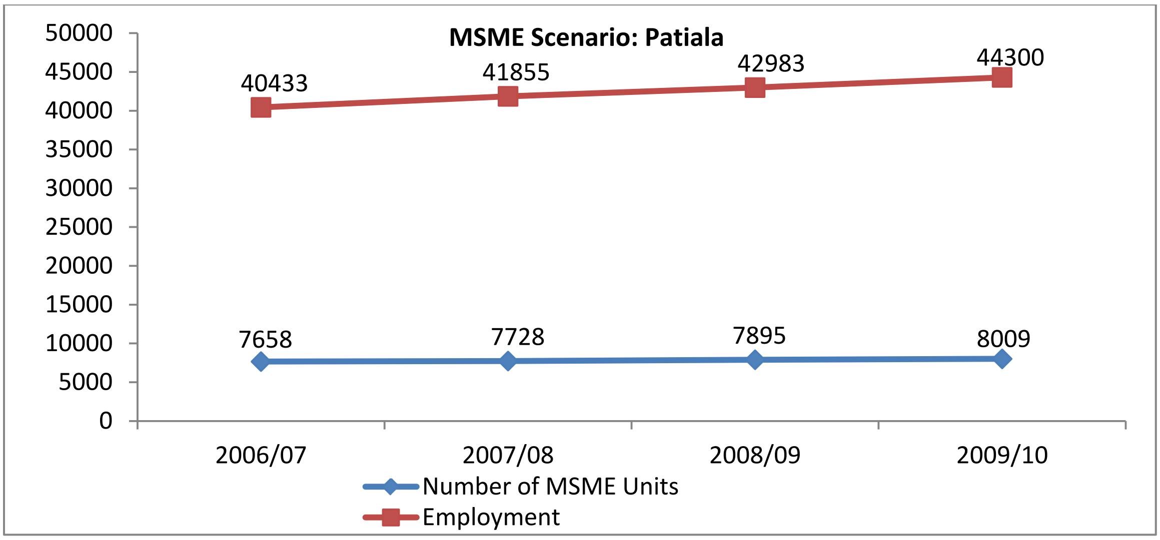
Source: Statistical Handbook of Punjab, 2012

Industry

Patiala is a key regional economic hub in the district of Punjab with presence of medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had 31 large scale units generating employment in excess of 12,000 with a cumulative turnover of more than INR 7,700 crore. Diesel Locomotive Works-Indian Railways, Hindustan Unilever Ltd and Patiala Distellíries are few of the important large industrial entities in the district.

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district also has one cluster devoted to Cutting Tools and one devoted to Combine and Combine Parts Products. The district is one of the most advanced industrialized in the state with the presence of many entities dealing with Agricultural Implements, Automobile Parts, Milk Products and Yarns among others.

Between 2000-01 and 2009-10, the MSE segment has witnessed an increase of around 1000 units creating an additional employment of more than 10,000 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Patiala district.

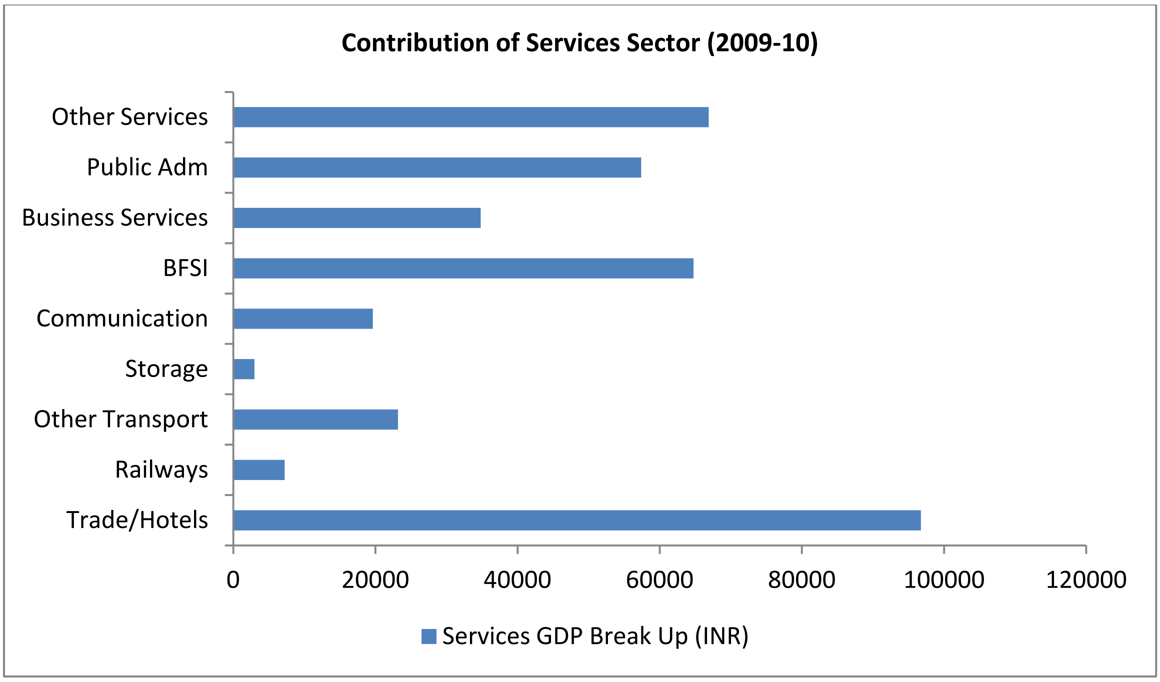
Existing Clusters	Clusters Identified for Promotion
1. Cutting Tools 2. Agriculture Implements 3. Engineering Goods 4. Milk Products	***2.*** Milk Products 3. Agriculture Implements

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 43 % percent[168] of GDDP in the year 2009-10 which is slightly more than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Patiala. Sub-sector wise contribution of services income is presented in the chart.

[168]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 764 per bed is near the state average of 760 per bed. District has 10 PHCs and 28 CHCs along with 72 Sub centers with limited private participation[169]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	8
Ayurvedic Institutions	32
Homeopathic Institutions	7
Primary Health Centers (PHCs)	10
Community Health Centers (CHCs)	28
Dispensaries	72
Total	**157**

Source: District Profile, MSME Report, 2011

Patiala has excellent penetration of banking and financial services measured as a percentage of GDDP at 8.02 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices.

[169]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

The district's economy more driven by the secondary and the tertiary sectors has created the growth of a gamut of banks ranging from public sector banks to cooperative banks to new age private banks.

15.13.4 Current Employment Scenario in Patiala

Main worker participation rate of 27.43 % in the district is below the state average number of 28.28 percent. Marginal worker participation at 4.36 % is lower than the state average of 4.66 %. Overall percentage of non workers at 51.8 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Patiala	27.43 %	4.36 %	54.5 %	21.5 %	33.0 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook Punjab

15.12.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Patiala is a high human resource growth district adding manpower of 53,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Patiala	30,570,951	20,176,828	8,877,804	8,433,914	830,683
Punjab	2,088,087	1,378,138	571,432	542,860	53,468

Source: KPMG Analysis

15.13.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Patiala has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Patiala.

According to the estimates, in the next 5 years, Patiala is expected to witness an incremental manpower requirement of over 43 thousand [170] which is expected to increase to 49 thousand [171] during 2017-22.

[170] KPMG Estimates on Incremental Manpower Requirement
[171] KPMG Estimates on Incremental Manpower Requirement

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	431692	0	0	426067	0	0	420514
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	217	866	1083	244	977	1221	275	1102	1377
Food Processing	601	2337	3406	876	3407	4964	1222	4753	6926
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	453	1810	2263	572	2288	2860	684	2736	3420
Paper & Paper Products	159	637	796	180	718	898	202	810	1012
Chemical & Chemical Products	301	1204	1506	409	1636	2045	529	2115	2643
Construction Based Material	157	628	785	188	751	939	229	916	1145
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	247	988	1235	273	1092	1365	302	1207	1509
Textiles	86	346	432	105	421	527	133	532	666
Manufacturing of Electrical Products	146	582	728	164	656	820	185	740	925

Construction	5808	11615	98730	8854	17709	150520	12349	24698	209931
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	525	2100	0	901	3605	0
Transportations and Logistics	279	4437	5279	370	5881	6997	468	7431	8841
Retail	1151	1151	9206	1432	1432	11454	1682	1682	13453
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	4229	12687	0	5208	15623	0	6188	18564	0
Banking and Financial Services	3911	11733	0	5130	15389	0	6313	18940	0
Education and Training	975	6566	0	870	5857	0	889	5986	0

Source: KPMG Analysis

15.13.7.1 Details of vocational education infrastructure at Patiala

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Patiala	2244	1304	78	3626	1.9

Source: DTE Punjab

15.13.7.2 List of the Main Trades/Courses offered by I.T.I.s at Patiala

Govt. ITI		Private ITI	
Carpenter	Fitter	Mechanic Motor Vehicle	CS&E TTC
COPA	Instrument Mech.	Medical Electronics	Cutting & Sewing
Desk Top Publishing	IT & ESM	Painter General	Emb & N Work
Draftsman Civil	Machinist Composite	Plumber	Fruit & Vegetable
Draftsman Mechanical	Machinist Grinder	Polution Controll	Hair & Skin Care
Electrician	Mech. Ref. & A.C.	Punjabi Steno	TCPC
Electronics	Mech Aggricultural Machinery	Steno English	Stenography Punjabi

Source: Directorate ofTechnical Education, Punjab

15.13.8 Students Interaction outcomes-Youth Aspirations

Students in Patiala showed higher preference towards self employment over private owing to increased opportunities provided by the services trade. Students were also open to migration to the other districts or states with the exception of few girl students who wanted to work within the district. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment.

15.13.9 Skill Mapping and developmental concerns

Patiala is one of the better industrialized districts of Southern Punjab. The secondary sector contributes to over 41% of the total district GDP. There exists a trade and sector level skill shortages in some industries. Trade level skill shortages were noticed across skills like Food Specialists and Quality Analysts. Sector level skill deficits are noticed in the areas like Transportation & Logistics, Auto Parts and Agriculure Implements servicing. The industries in Patiala prefer hiring native labour due to high attrition, lack of professional conduct and mainly the unsustainability of low wages for the outside candidates

15.13.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Patiala district would indicate the following priority areas

<table>
<tr><th>Stakeholder</th><th>Action Points for Stakeholders</th></tr>
<tr><td>NSDC</td><td>Focus on increasing participation from national/regional private skill training providers with focus on the following sectors
Low Value Automobile Parts
Agricultural Implements
Frozen Food Production
Milk Products
Forging public private partnerships with leading private sector firms in Mohali and Ludhiana to create an inclusive ecosystem for skill development.
Set up camps in schools to bring a paradigm shift in perception of youth for vocational training. This could be materialized by creating a scholarship fund for high achieving students interested in taking up skill related courses.</td></tr>
<tr><td>District Administration</td><td>Ensure women participation in skill development, as majority of the women (more than 60%) in the district are Non-workers.
Centre of Excellence in Logistics can be set up in the ITI as it is a hub of the Transportation & Logistic industry
Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode.
Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves)
Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level.
Employment exchange in the district could be privatized. The arrangement shall cover registration, training, certification and placements to ensure successful access to the job market for the youth in Solan.
Focus on training in agricultural products and processing especially in Milk & Frozen foods due to increased remuneration possible</td></tr>
<tr><td>Industry</td><td>Industry may undertake vocational training as a part of their CSR activity.
Jobs required to be performed in an industry should be assessed on National occupation standards which should remain same across the country. This will allow a student to work in any part of the country & enable easier skill based mobility of labor</td></tr>
</table>

	- Industry bodies in the district can offer support and facilitation services through policy advocacy, Industry intervention and International collaboration so that the youth can acquire skills to meaningfully participate in and contribute to the economy - Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. - Follow the two pronged approach to start training centers within their own campus and training on specific sector skills and then recruiting the same candidates.
Private Skill training providers	- Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry could be called to deliver modules. - Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.14 Skill Gap Assessment of District Sangrur

15.14.1 Administrative Profile

From an administrative point of view, Sangrur district has been divided into 6 Tehsils /sub division, 8 Sub- Tehsil & 10 blocks. There are 585 Gram panchayats, 581 inhabited villages and 04 uninhabited. Number of census town are 13.

15.14.2 Social Profile

Demographics

Sangrur has a population of 16.54 lakhs as per the 2011 Census with 68.76 percent share of that being rural population[172]. This is in line with the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 449 persons per sq.km, is much lower than state average of 893[173] persons per sq.km.

While the child gender ratio has increased from 784 females per 1000 males in 2001 to 835 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 870 females per 1000 males in 2001, to 883 females per 1000 males in 2011[174]. Reserved categories population in the district is quite significant, occupying a share of 26.67[175] percent in line with the figure of 28.85% for Punjab as a whole.

Literacy

The district has an underperforming literacy rate of 68.9 percent in comparison to state average of 76.07 percent[176]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 62.9 percent in line with trends in other districts.

Also, the school infrastructure at all levels of primary, middle and secondary is a key concern for the district as shown by the below benchmarking of Sangrur's School infrastructure with that of the state in terms of population served per school, although the schooling infrastructure levels at the secondary level is slightly better than the state average.

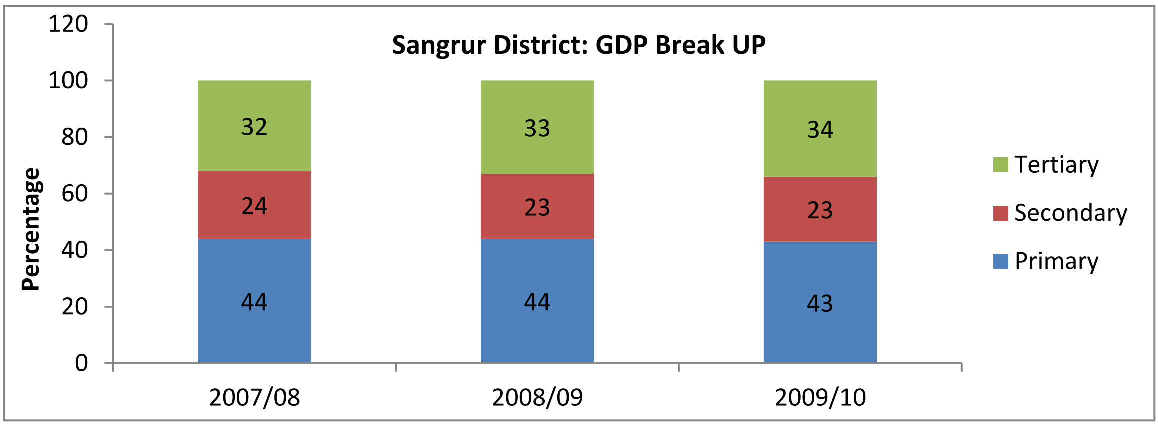
Region	Primary Level	Middle Level	Secondary Level
Sangrur	2717	4034	6309
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.14.3 District Economy

Contribution of Sangrur to overall state economy is higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 43,170 in comparison to state average of INR 42,752 in 2009-10(At current prices). The contribution of the primary sector (43 %) is the highest among sub-sectors in the district. Dependency on the tertiary sector (at 34 %) is also not far behind indicating the district's robust trade base as well. Sub-Sector wise GDDP trends in Sangrur are presented in the chart

[172] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[173] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[174] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[175] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[176] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Sangrur like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 45.97 % of the working population was employed in agriculture; this fraction is much larger than that of other parts of the state as evident from the state average which is only 39 %. In the year 2004-05, agriculture contributed a major portion (42.93 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Sangrur	9016	15907	34050	34246	7662
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab

Agriculture is one of the major employers and contributors to the Sangrur economy. The main Kharif crops grown in Sangrur are Paddy, Cotton and Moong with Paddy occupying most of the cultivated area (standing at 267000 hectares). Among the Rabi crops Wheat, Barley, Gram and Mustard are grown with land use skewed heavily in favor of wheat (at 286000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Ber Orange and Malta.

The net sown area is 311000 hectares and the gross sown area amounts to 620000 hectares which makes the cropping intensity to be 198%. All of the sown area is irrigated (100 %) it ishigher than the state average of 97.9 %. 10458000 tonnes of Paddy and 15130000 tons of wheat are produced each year in Sangrur. The district is prone to frequent heat waves and the crops frequently get infested by pests and diseases which turn out to be detrimental to the crops.

Sangrur also witnesses occasional hailstorm, cold wave and frost. High yielding varieties of seeds are mostly used by farmers in Sangrur.

Fishing is an important allied activity in Sangrur; it has fish stocked in an area of 739 hectares. It has receipts from Fisheries amounting to Rs. 87,000.

Sangrur also has 8 Milk plants/Chilling centers out of the total 65 in the state.

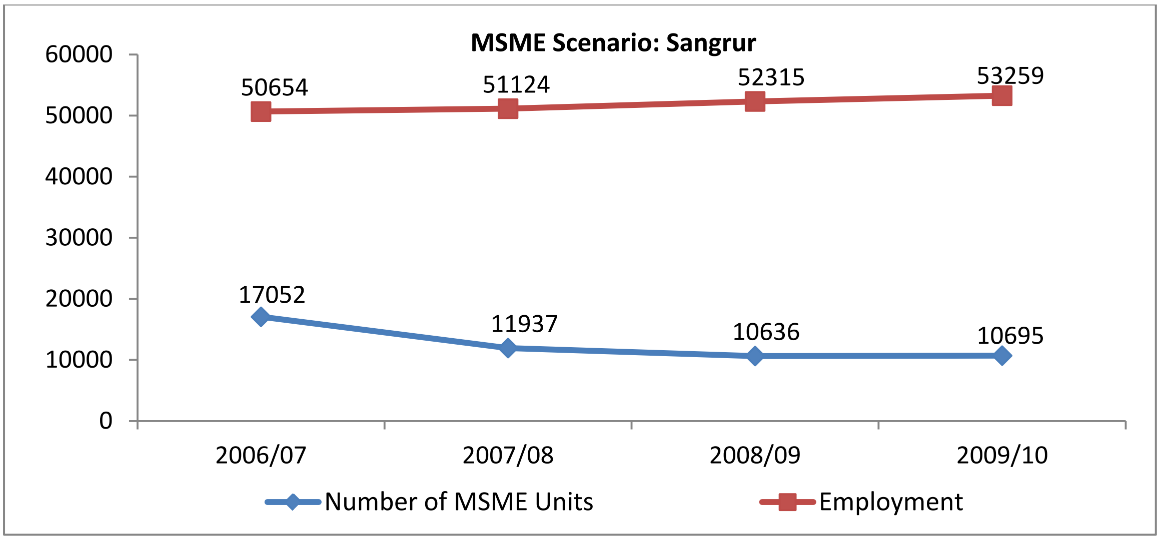
Animal Husbandry also enjoys huge presence in the agricultural communities of Sangrur. It has a total of 441.7 thousand graded buffaloes and 49.6 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 21 thousand and 15 thousand respectively is also high in Sangrur.

Source: Statistical Handbook of Punjab, 2012

Industry

Sangrur is a key regional economic hub in the district of Punjab with presence of medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had 23 medium and large scale units generating employment in excess of 10,500 with a cumulative turnover of more than INR 3,800 crore. Pepsico Foods, KRBL Ltd, IOL Chemicals and Pharmaceuticals are some of the key industrial entities in the district.

Presence of these medium and large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units can be expected to happen in the near future which can lead to more vendorization/supplier network. The district has one cluster devoted to Agriculture Implements Manufacture currently. Milk and Milk Products Production, Hand Tools Manufactrue and Terry Kota Products are some of the key industrial sectors operating in the district. Between 2005-06 and 2009-10, the MSE segment has witnessed a decrease of 7000 units as defunct units were gradually deregistered. In spite of this, the MSE system has managed to create an additional 4000 jobs over the last 3 years.



Source: District MSME Report, 2011

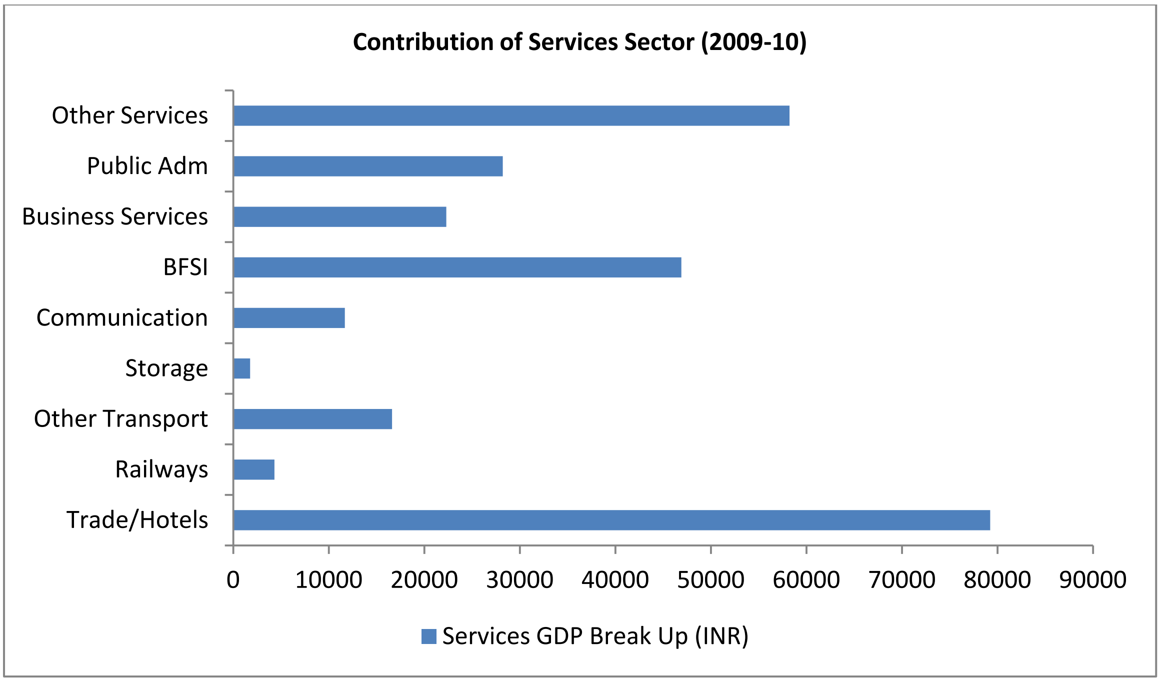
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Sangrur district.

Existing Clusters	Clusters Identified for Promotion
1. Agriculture Implements 2. Milk and Milk Products 3. Hand Tools Manufacture 4. Terry Kota Products	1. Agriculture Implements 2. Hand Tools Manufacture

Services Sector

Service sector contributed to 34 % percent[177] of GDDP in the year 2009-10 less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Sangrur. Sub-sector wise contribution of services income is presented in the chart.

[177]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at x per bed is near the state average of 760 per bed. District has 6 PHCs and 32 CHCs along with 80 Sub centers with limited private participation[178]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	6
Ayurvedic Institutions	31
Homeopathic Institutions	6
Primary Health Centers (PHCs)	6
Community Health Centers (CHCs)	32
Dispensaries	80
Total	**161**

Source: District Profile, MSME Report, 2011

Sangrur has limited penetration of banking and financial services measured as a percentage of GDDP at 6.37 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its dependence on the primary sector. Sangrur being primarily an agriculture and allied sectors

[178]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

based economy sees presence of mainly public sector banks and small cooperative banks with limited presence of new age private and foreign banks.

15.14.4 Current Employment Scenario in Sangrur

Main worker participation rate of 38.81 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.12 % is lower than the state average of 4.66 %. Overall percentage of non workers at 52.7 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Sangrur	38.81 %	4.12 %	52.7 %	22.2 %	30.5 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.14.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Sangrur is a high human resource growth district adding manpower of around 54,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Sangrur	1,825,599	1,204,895	579,766	550,777	54,248
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.14.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Sangrur has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Sangrur.

According to the estimates, in the next 5 years, Sangrur is expected to witness an incremental manpower requirement of over 43 thousand [179] which is expected to normalize to 42 thousand [180] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skille d**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	506438	0	0	499838.4	0	0	493325
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	163	654	817	184	737	921	208	831	1039
Food Processing	813	3160	4604	1185	4607	6712	1652	6426	9363
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	322	1287	1609	407	1627	2033	486	1945	2432
Paper & Paper Products	113	450	563	127	507	634	143	572	715
Chemical & Chemical Products	195	782	977	265	1062	1327	343	1372	1715
Construction Based Material	75	300	376	90	359	449	110	438	548
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	478	1912	2390	528	2114	2642	584	2337	2921

[179] KPMG Estimates on Incremental Manpower Requirement
[180] KPMG Estimates on Incremental Manpower Requirement

Textiles	273	1093	1366	333	1332	1665	421	1683	2104
Manufacturing of Electrical Products	44	177	221	50	199	249	56	225	281
Construction	3454	6909	58725	5266	10533	89529	7345	14690	124867
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1289	5158	0	2239	8957	0
Transportations and Logistics	197	3124	3716	261	4141	4926	329	5232	6224
Retail	1277	1277	10216	1589	1589	12711	1866	1866	14930
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	3224	9673	0	3971	11912	0	4718	14154	0
Banking and Financial Services	3322	9966	0	4357	13072	0	5363	16088	0
Education and Training	1464	9853	0	2137	14383	0	2208	14866	0

Source: KPMG Analysis

15.14.7.1 Details of vocational education infrastructure at Sangrur

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Sangrur	1092	1672	28	2792	1.7

Source: DTE Punjab

15.14.7.2 List of the Main Trades/Courses offered by I.T.I.s at Patiala

Govt. ITI		Private ITI	
Cutting & Sewing	Machinist Composite	COPA	Health Sanitry Inspector
Carpenter	Machinist Grinder	Dress Making	Wireman
Electrician	Mech Aggricultural Machinery	Secretarial Practice	Hair & Skin Care
Embroidery & N Work	Mechanic Motor Vehicle	Wireman	Health Sanity Inspector
Fitter	Mechanic Radio & TV	IT&ESM	Secretarial Prac.
COPA	Mechanic Tractor	Electrican	Architectural Asst.
ITE&SM	Pump Mechanic	COPA	Art & Craft TT

Source: Directorate ofTechnical Education, Punjab

15.14.8 Youth Interaction outcomes

Students in Sangrur showed higher preference towards government job over private owing to higher job security and salary. Students were also open to migration to the other districts or states. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is also reflected in the salaries offered. The industry in Sangrur confirmed that salaries offered to the students from Polytechnics are almost 10-20% higher than what is being offered in an ITI in spite of only a modest increae in skill sets. Students of the districts appeared to have low awareness in terms of career prospects. SDI students had good awareness about the career opportunities and were willing to work anywhere they would find a job with their new certification. Most youth preferred salaried job over self employment.

15.14.9 Skill mapping and developmental concerns

Sangrur is one of the key industrialized districts of Southern Punjab and is mainly dominated by the Food processing, Agriculture Implements and Hand tools. The major large scale industry (Pepsi Foods) is in the food processing sector. However, there are a number of Small scale and Khadi & village industries. People from the district often migrate to Bathinda and Ludhiana to work in the manufacturing sector. There is demand for very specific skills withing the food sector compared to generalized mechanical/electrical skills

15.14.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Sangrur district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Agriculture Implements Assembling & Servicing o Food Processing o Textile with focus on Yarn o Wooden Furnitures & Fixtures o Food Processing • Forging public private partnerships with leading co-operatives firms like Verka in Amritsar to create an inclusive ecosystem for skill development in Food processing • Creating a scholarship fund for high achieving students interested in taking up skill related courses
District Administration	• Ensure women participation in skill development, as majority of the women in the district are Non-workers. • Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode. • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level.
Industry	• Industries should undertake vocational training as a part of their CSR activity • Increase desirability of jobs through improved work environment • Participate in "train the trainer" programs to improve the quality of training delivery • Industry can collaborate with skill development institutes for updating the course content and creating linkages for placements • Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training
Private Skill training	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry

providers	could be called to deliver modules. • Update machinery and provide manuals in workshops for practical classes. • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.15 Skill Gap Assessment of District SAS Nagar

15.15.1 Administrative Profile

For administrative purpose, the district of Mohali has been divided into 3 Tehsils namely Mohali SAS Nagar, Kharar & Dera Bassi and 3 blocks namely Kharar, Majri & Dera Bassi. As per information available from Economic & Statistical Organization, Punjab, There are 597 inhabitated villages in the district.

15.15.2 Social Profile

Demographics

SAS Nagar has a population of 16.54 lakhs as per the 2011 Census with 68.76 percent share of that being rural population[181]. This is in line with the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 449 persons per sq.km, is much lower than state average of 893[182] persons per sq.km. While the child gender ratio has increased from 784 females per 1000 males in 2001 to 835 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 870 females per 1000 males in 2001, to 883 females per 1000 males in 2011[183]. Reserved categories population in the district is quite significant, occupying a share of 26.67[184] percent in line with the figure of 28.85% for Punjab as a whole.

Literacy

The district has an excellent literacy rate of 84.9 percent in comparison to state average of 76.07 percent[185]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 80 percent in line with trends in other districts. Also, the school infrastructure at all levels of primary, middle and secondary is much better than the state average as shown by the below benchmarking of SAS Nagar's School infrastructure with that of the state in terms of population served per school.

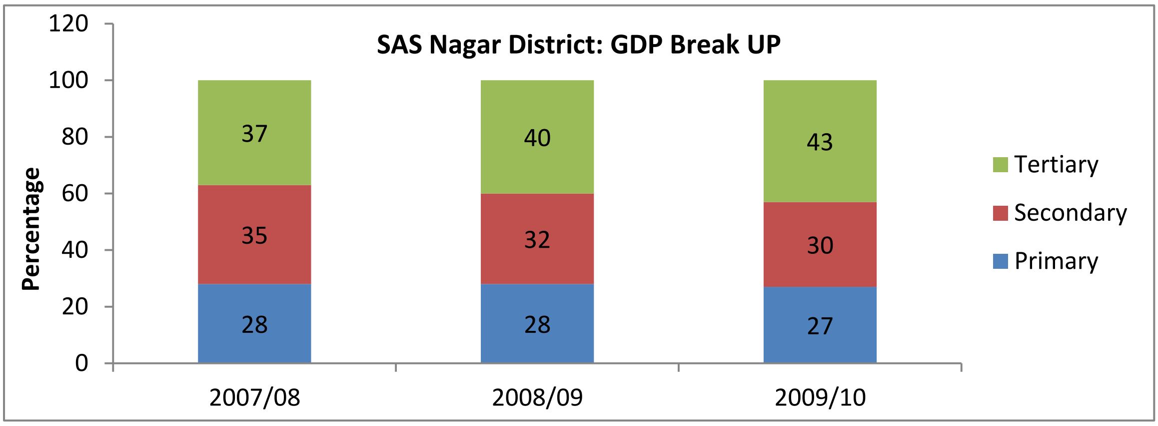
Region	Primary Level	Middle Level	Secondary Level
SAS Nagar	1003	2086	5346
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.15.3 District Economy

Contribution of SAS Nagar to overall state economy is much higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 50,639 in comparison to state average of INR 42,752 in 2009-10(At current prices) indicating the district's push towards the tertiary sector. This is further reiterated by the contribution of the tertiary sector (43 %) being the highest among sub-sectors in the district. Dependency on the secondary (30%) and primary (27%) is also not far behind indicating the district's robust indstrial and agricultiral base as well. Sub-Sector wise GDDP trends in SAS Nagar are presented in the chart.

[181] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[182] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[183] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[184] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[185] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

SAS Nagar unlike other districts in Punjab has lesser dependence due to its robust services base. In spite of this, Agriculture employs a significant chunk of the working population. According to the census of 2001, 26.7 % of the working population was employed in agriculture; this fraction is lowerr than that of other parts of the state as evident from the state average which is only 39 %. In the year 2004-05, agriculture contributed in excess of 30% of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
SAS Nagar	3987	4301	5044	3710	596
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab 2012

Agriculture is one of the major contributors to the SAS Nagar economy, especially as a raw material base. The main Kharif crops grown in SAS Nagar are Paddy, Cotton and Moong. Among the Rabi crops Wheat, Barley, Gram and Mustard are grown with land use skewed heavily in favor of wheat (at greater than 200,000 hectares). Common Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Ber Orange and Malta.

The district is prone to frequent heat waves and the crops frequently get infested by pests and diseases which turn out to be detrimental to the crops. SAS Nagar also witnesses occasional hailstorm, cold wave and frost. High yielding varieties of seeds are mostly used by farmers in SAS Nagar.

Fishing is an important allied activity in SAS Nagar; it has fish stocked in an area of 341 hectares. It has receipts from Fisheries amounting to Rs. 23, 000.

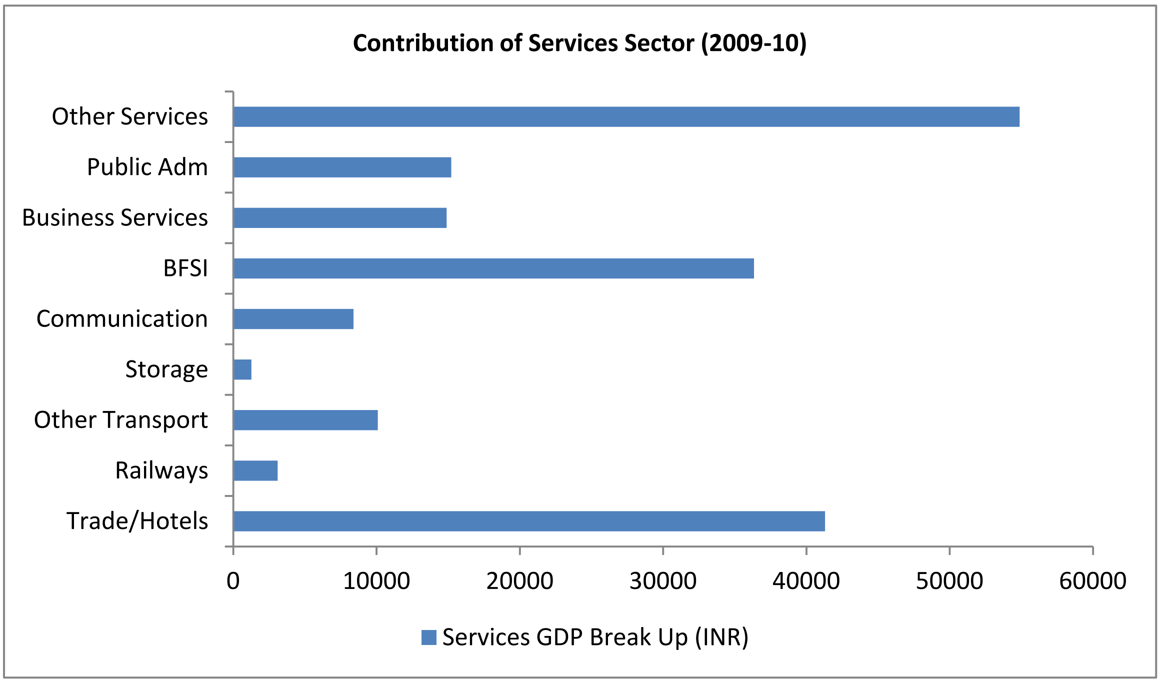
SAS Nagar also has 5 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of SAS Nagar. It has a total of 147 thousand graded buffaloes and 49.6 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 6 thousand and 6.3 thousand respectively is also high in SAS Nagar, given its lesser dependence on Agriculture.

Source: Statistical Handbook of Punjab, 2012

Industry

Service sector contributed to 43 % percent[186] of GDDP in the year 2009-10 slightly more than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in SAS Nagar. Sub-sector wise contribution of services income is presented in the chart.



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in SAS Nagar district.

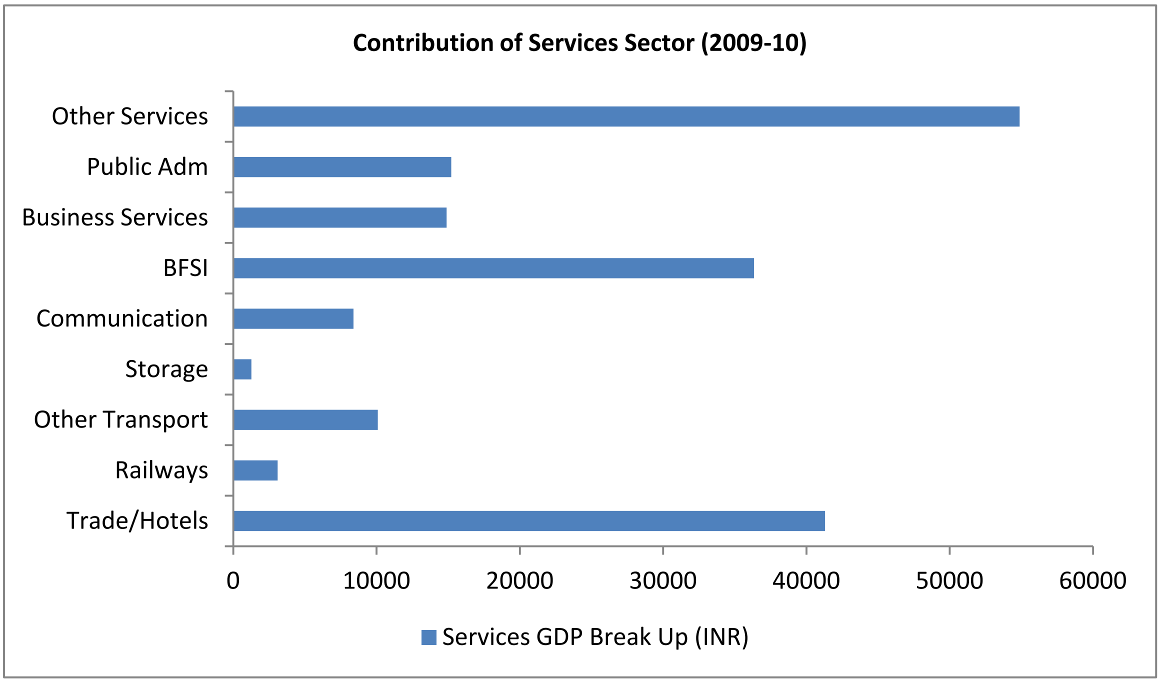
[186]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm

Existing Clusters	Clusters Identified for Promotion
1. Auto Precision Parts **2.** Tractor and Agriculture Implements **3.** Paper and Textile Product	Tractor and Agriculture Implements

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 43 % percent[187] of GDDP in the year 2009-10 slightly more than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in SAS Nagar. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 780 per bed is much more than the state average of 760 per bed. District has 8 PHCs and 34 CHCs along with 85 Sub centers with limited private participation[188]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	3
Ayurvedic Institutions	25

[187]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[188]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Homeopathic Institutions	10
Primary Health Centers (PHCs)	5
Community Health Centers (CHCs)	13
Dispensaries	51
Total	**107**

Source: District Profile, MSME Report, 2011

SAS Nagar has excellent penetration of banking and financial services measured as a percentage of GDDP at 8.67 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its economy driven by the secondary and tertiary sectors. Hence, SAS Nagar sees presence of all kinds of banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.15.4 Current Employment Scenario in SAS Nagar

Main worker participation rate of 25.07 % in the district is below the state average number of 28.28 percent. Marginal worker participation at 2.31 % is lower than the state average of 4.66 %. Overall percentage of non workers at 43.4 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
SAS Nagar	25.07 %	2.31%	43.4 %	17.6 %	25.8 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.15.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

SAS Nagar is a low to medium human resource growth district adding manpower of around 26,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
SAS Nagar	1,088,189	718,205	284,550	270,322	26,625

Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.15.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of SAS Nagar has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in SAS Nagar.

According to the estimates, in the next 5 years, SAS Nagar is expected to witness an incremental manpower requirement of over 31 thousand [189] which is expected to increase to 33 thousand [190] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	324215	0	0	319990	0	0	315820
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	128	510	638	144	575	719	162	648	811
Food Processing	134	521	759	195	759	1106	272	1059	1543
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	642	2566	3208	811	3243	4054	970	3879	4848
Paper & Paper Products	77	308	385	87	347	434	98	391	489
Chemical & Chemical	226	904	1130	307	1228	1535	397	1587	1984

[189] KPMG Estimates on Incremental Manpower Requirement
[190] KPMG Estimates on Incremental Manpower Requirement

Products									
Construction Based Material	113	454	568	136	543	679	166	662	828
Mineral Processing	304	1216	1520	310	1240	1549	316	1265	1581
Manufacturing of Engineering Products	367	1467	1833	405	1621	2027	448	1792	2240
Textiles	92	366	458	112	446	558	141	564	705
Manufacturing of Electrical Products	250	1000	1250	282	1128	1409	318	1271	1589
Construction	1827	3654	31056	2785	5570	47347	3884	7769	66034
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	867	3467	0	1697	6789	0
Transportations and Logistics	227	3610	4295	301	4785	5693	381	6046	7193
Retail	1427	1427	11418	1776	1776	14207	2086	2086	16687
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	3282	9845	0	4041	12124	0	4802	14406	0
Banking and Financial Services	4754	14263	0	6236	18708	0	7675	23025	0
Education and Training	1131	7613	0	1436	9669	0	1665	11208	0

Source: KPMG Analysis

15.15.7.1 Details of vocational education infrastructure at SAS Nagar

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	**Govt ITI**	**Private ITI**	**NSDC Partner**	**Total**	
Punjab	27415	19058	1479	47952	1.7
SAS Nagar	952	2000	0	2952	3.0

Source: DTE Punjab

15.15.7.2 List of the Main Trades/Courses offered by I.T.I.s at SAS Nagar

Govt. ITI		Private ITI	
Computer & Data Prepration.	Mechanic Electronics	Carpenter	A&C TTC
COPA	Secretarial Practice	Cutting & Sewing	Dental Lab Technician
Cutting & Sewing	Stenography Punjabi	Draftsman Mechanical	Health Senitry
Draftsman Civil	Mechanic Electronics	Electrician	Dental Lab Technician
Electronics	Floriculture & Land Scaping	Embroidery & N Work	Fashion Tech
Emb. & N. Work	Health Sanitary Inspector	Fitter	Health Sanitary
IT & ESM	Dental Lab. Tech	Foundryman	Physiothrapy

Source: Directorate ofTechnical Education, Punjab

15.15.8 Youth Interaction outcomes

Students in the district showed higher preference towards government job over private owing to higher job security and salary and also due to the environment of growing up in the state capital. Most students were also open to migration to the other districts or states. However, a few students who had their own service shops & preferred to remain within the district. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have good awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment.

15.15.9 Skill mapping and developmental concerns

SAS Nagar is one of the key industrialized districts of Punjab. There are multiple medium scale industries manufacturing Auto Parts, Tractor Parts and Agriculture Implements. The district being the administrative headquarters of the state also sees a robust service sector encompassing retail, healthcare and transportation. Agriculture is the way of life for many people in the outskirts of SAS nagar and they rely on mechanized means of farming. The district lacks certain skills related to the mechanical stream which are needed in sectors like automobile and tractor as the present ITI infrastructure catering to these skills is limited. The district however has an excess supply of personnel catering to the services sector like beauty, skiln care, tailor, driver etc as the majority of the training institutes in the private sector have created incremental capacity in these soft service area sectors.

15.15.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in SAS Nagar district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Tractor & Tractor Parts o Auto Parts o Low Volume Specialty Steel o Chemical Products with focus on pesticides o Textile Products • Creating a scholarship fund for high achieving students interested in taking up skill related courses • Promoting vocational education at the grass root level through policy advocacy, school camps and encouraging students to take up NVEQF programs in schools
District Administration	• Ensure women participation in skill development, as majority of the women in the district are Non-workers. • Centre of Excellence scheme should be promoted appropriately in the district to ensure higher fulfillment rates. The scheme must also be promoted amongst the companies that come to recruit from ITI Mohali through seminars. • The district administration with support from the Industry may start a Centre of excellence program in Tractor & tractor parts • Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode. • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level. • Focus on training in Paper Products as the district has a good output of raw material as well as a good processing eco-system

Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • The industry may offer Apprentices work related to the trades they have learnt during their time in the ITI's and make their learning's as effective during their time as an Apprentice. • Increase desirability of jobs through improved work environment. • Industry may promote women in the district by ensuring an adequate mix of male and female workers. • Participate in "train the trainer" programs to improve the quality of training delivery • Industry can collaborate with skill development institutes for updating the course content and creating linkages for placements. • Industry can support Vocational education through scholarship funds for the needy but meritorious students
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement. Experts in form of guest lecturers from the industry could be called to deliver modules. • Update machinery and provide manuals in workshops for practical classes. • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players

15.16 Skill Gap Assessment of District SBS Nagar

15.16.1 Administrative Profile

For administrative purpose, the district of SBS nagar has been divided into 3 Tehsils namely Nwanshahr, Balachaur & Banga. And 5 blocks namely Aur, Banga, Nawanshahr, Balachaur & Saioya. As per information available from Economic & Statistical Organisation, Punjab, there are 465 inhabited villages in the district.

15.16.2 Social Profile

Demographics

SBS Nagar has a population of 6.14 lakhs as per the 2011 Census with 79.5 percent share of that being rural population[191]. This is more than the average rural population of 68.2% for Punjab as a whole while the Population density of the district standing at 479 persons per sq.km is much lower than state average of 893[192] persons per sq.km. While the child gender ratio has increased from 808 females per 1000 males in 2001 to 879 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 914 females per 1000 males in 2001, to 954 females per 1000 males in 2011[193]. Reserved categories population in the district is significant, occupying a share of 40.46[194] percent of total population which is way above the 28.85 percent for Punjab as a whole.

Literacy

The district has a decent literacy rate of 80.3 percent in comparison to state average of 76.07 percent[195]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 74.3 percent in line with trends in other districts. Also, the school infrastructure presemt at all levels schooling (primary and middle and secondary) is excellent for the district shown by the below benchmarking of SBS Nagar's School infrastructure with that of the state in terms of population served per school. The high literacy rate could well be driven by the superior schooling infrastructure in terms of per capita availability of schools.

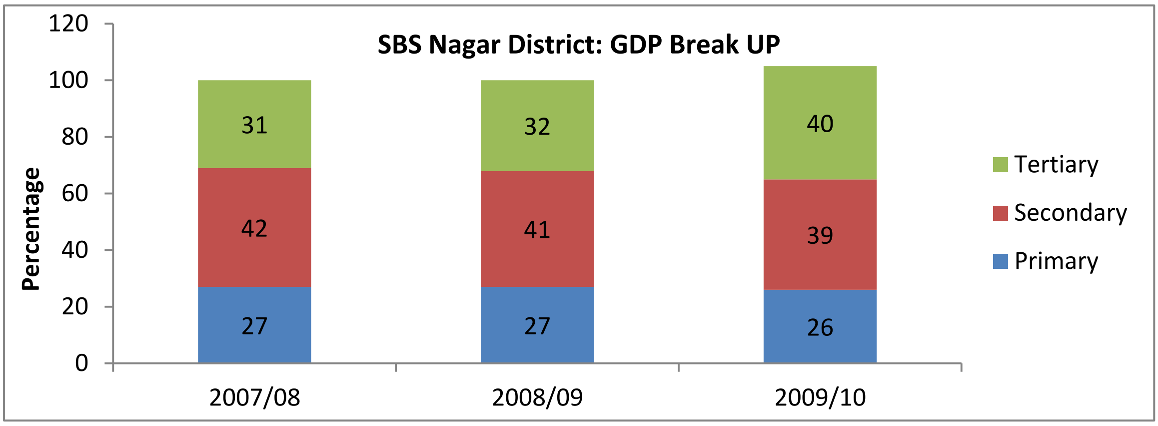
Region	Primary Level	Middle Level	Secondary Level
SBS Nagar	1271	2484	4968
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.16.3 District Economy

Contribution of SBS Nagar to overall state economy is higher than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 61,371 in comparison to state average of INR 42,752 in 2009-10(At current prices). This is further reiterated by the minimal contribution of the primary sector (26 %) being the highest among sub-sectors in the district. Dependency on the secondary sector (at 39 %) and the tertiary sector (35%) is also not far behind indicating the district's robust agricultural base as well. Sub-Sector wise GDDP trends in SBS Nagar are presented in the chart

[191]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[192]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[193]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[194]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[195]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

S. B. S. Nagar like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 32.51 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (27.52 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
S. B. S. Nagar	4245	6636	8830	6262	1061
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook Punjab, 2012

Agriculture is one of the major employers and contributors to the S. B. S. Nagar economy. The main Kharif crops grown in S. B. S. Nagar are Rice, Paddy, Maize and Sugarcane with Maize occupying most of the cultivated area. Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat. The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach and litchi. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

\The net sown area is 95000 hectares and the gross sown area amounts to 184000 hectares which makes the cropping intensity to be 194%. Most of the sown area is irrigated (90.7 %) the rest is rain fed it is lesser than the state average of 97.9 %. 171000 tonnes of rice and 303000 tons of wheat are produced each year in S. B. S. Nagar.

The district is not prone to any major contingencies which turn out to be detrimental to the crops. High yielding varieties of seeds are mostly used by farmers in S. B. S. Nagar.

Fishing is an important allied activity in S. B. S. Nagar; it has fish stocked in an area of 310 hectares..

Animal Husbandry also enjoys huge presence in the agricultural communities of S. B. S. Nagar. It has a total of 131 thousand graded buffaloes and 38.3 thousand cross bred cattle most of them are females. The number of Goat at 5 thousand is also high in S. B. S. Nagar.

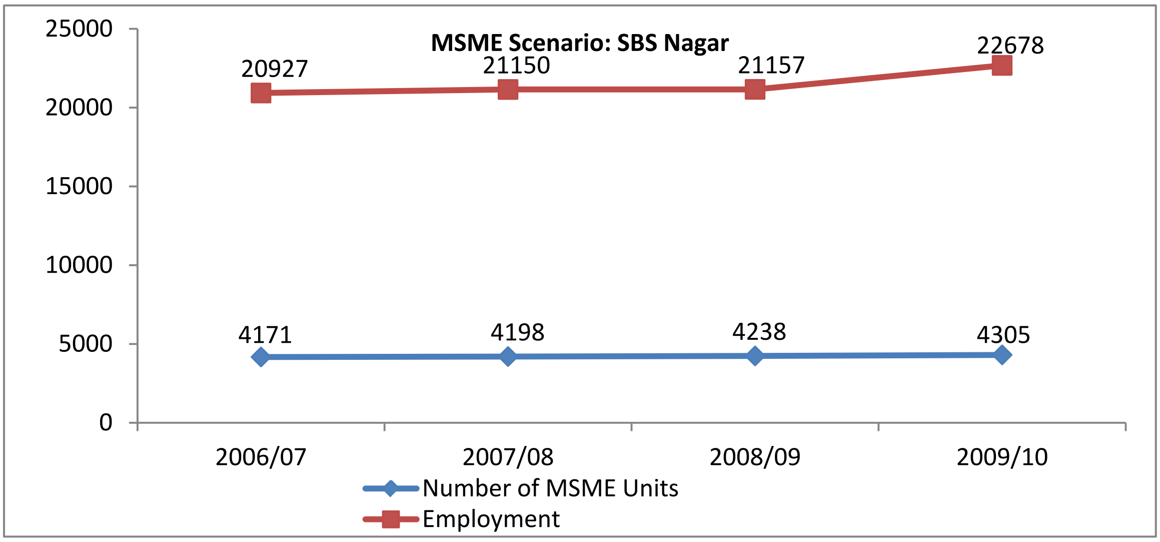
Source: Statistical Handbook of Punjab, 2012

15.13.1.1 Industry

SBS Nagar is a key economic hub in the district of Punjab with presence of numerous medium and large scale industries and a supporting network of numerous micro and small industries. In the year 2009-10, the district had seven large scale units generating employment in excess of 5,000 with a cumulative turnover of more than INR 2,700 crore. DCM Engineering, Swaraj Mazda and Ranbaxy laboratories are important large industrial entities in the district

Presence of large scale units have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The district as such has no major specially focused Industrial cluster.

Between 2007-08 and 2009-10, the MSE segment has witnessed good incremental addition of around 50 units generating additional employment of around 500 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

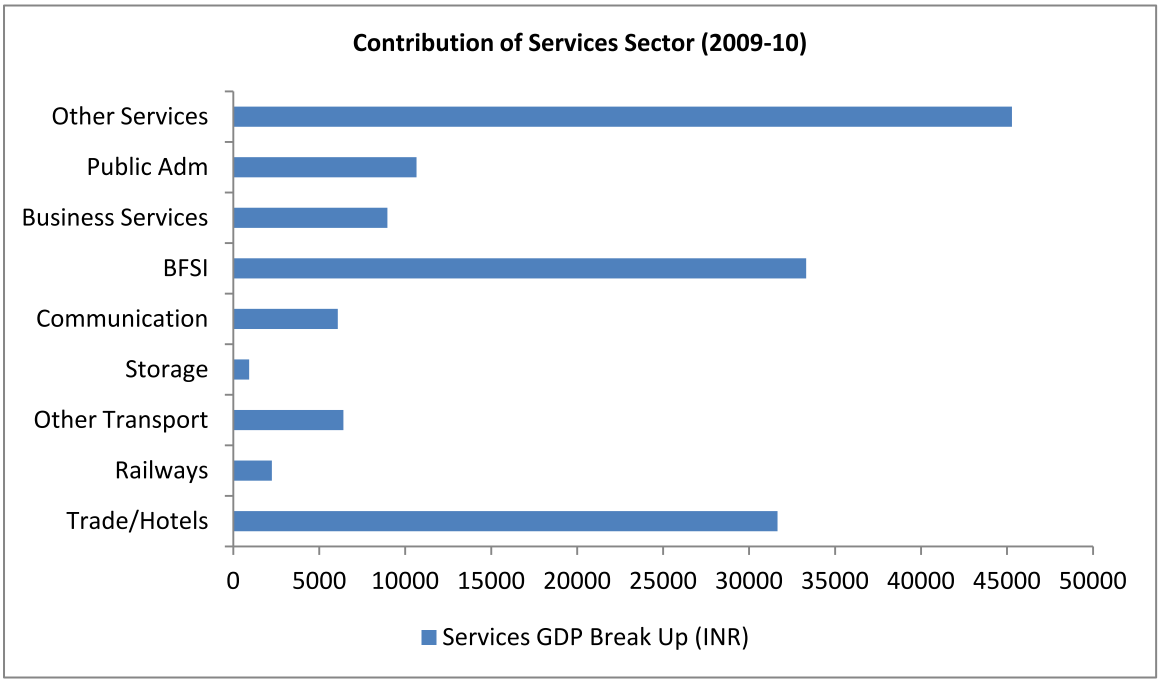
Based on discussions with District Industries Center, following potential MSME growth clusters are identified in SBS Nagar district.

Existing Clusters (Minor)	Clusters Identified for Promotion
1. Leather Finishings 2. Plastic Films 3. Bulk Drugs and Empty Gelatine Capsules 4. Paper and Paper Products	Paper and Paper products

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 35 % percent[196] of GDDP in the year 2009-10 just slightly less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in SBS Nagar. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 767 per bed is near the state average of 760 per bed. District has 4 PHCs and 17 CHCs along with 49 Sub centers with limited private participation[197]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions

[196] http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[197] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Allopathic Hospitals	4
Ayurvedic Institutions	24
Homeopathic Institutions	3
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	17
Dispensaries	49
Total	**109**

Source: District Profile, MSME Report, 2011

SBS Nagar has excellent penetration of banking and financial services measured as a percentage of GDDP at 8.47 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. SBS Nagar being primarily a progressive agriculture and industry based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.16.4 Current Employment Scenario in SBS Nagar

Main worker participation rate of 38.81 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 4.12 % is lower than the state average of 4.66 %. Overall percentage of non workers at 52.7 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
SBS Nagar	38.81 %	4.12 %	52.7 %	22.2 %	30.5 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.16.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

SBS Nagar is a low human resource growth district adding manpower of around 23,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)

SBS Nagar	677,934	447,436	255,672	242,888	23,922
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.16.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of SBS Nagar has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in SBS Nagar.

According to the estimates, in the next 5 years, SBS Nagar is expected to witness an incremental manpower requirement of over 39 thousand [198] which is expected to normalize to 34 thousand [199] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	291311	0	0	287514	0	0	283768
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	0	0	0	0	0	0	0	0	0
Food Processing	57	222	323	83	323	471	116	451	657
Beverages	4	15	19	5	22	27	8	30	38
Fabricated metal products	14	54	68	17	69	86	21	82	103
Paper & Paper Products	8	31	39	9	35	44	10	40	50

[198] KPMG Estimates on Incremental Manpower Requirement
[199] KPMG Estimates on Incremental Manpower Requirement

Chemical & Chemical Products	2	7	9	2	9	12	3	12	15
Construction Based Material	17	70	88	21	84	105	26	102	128
Mineral Processing	0	0	0	0	0	0	0	0	0
Manufacturing of Engineering Products	22	89	111	25	98	123	27	109	136
Textiles	2	8	10	2	10	12	3	12	15
Manufacturing of Electrical Products	8	30	38	9	34	43	10	39	48
Construction	4002	8004	68029	6101	12202	103715	8509	17018	144652
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1515	6059	0	2690	10759	0
Transportations and Logistics	56	886	1054	74	1175	1398	93	1484	1766
Retail	2992	2992	23934	3722	3722	29779	4372	4372	34977
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	1253	3758	0	1543	4628	0	1833	5499	0
Banking and Financial Services	1929	5788	0	2531	7592	0	3114	9343	0
Education and Training	1583	10660	0	2510	16896	0	2650	17839	0

Source: KPMG Analysis

15.16.7.1 Details of vocational education infrastructure at SBS Nagar

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	**Govt ITI**	**Private ITI**	**NSDC Partner**	**Total**	
Punjab	27415	19058	1479	47952	1.7
SBS Nagar	620	176	16	812	1.3

Source: DTE Punjab

15.16.7.2 List of the Main Trades/Courses offered by I.T.I.s at SBS Nagar

Govt. ITI		Private ITI	
Carpenter	Mechanic Tractor	Cutting & Sewing	Cutting & Sewing
Cutting & Sewing	Stenography Punjabi	Art & Craft TT	Electronics
Electrician	Turner	Electrician	Embroidery & N Work
Embroidery & N Work	Welder (Gas & Electric)	Cutting & Sewing	Fitter
Fitter	Wireman	Mechanic Tractor	Mech Ref. & AC
Machinist Composite	Mechanic Motor Vehicle	Turner	Punjabi Steno

Source: Directorate ofTechnical Education, Punjab

15.16.8 Students Interaction outcomes-Youth Aspirations

Students in the district showed higher preference towards self employment in their own service shops. Local students showed no interest in migration to any other district primarily due to unsustainable wages they expected. They did not have any particular preference towards the government or the private sector. Most students believe that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects.

15.16.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has a vast potential in niche sectors like Paper and Paer products and Bulk Drug manufacturing. It was felt that the training institutes need to introduce courses on GMP (Good Manufactruing Practices) and on Quality Control as these niche industries are now operating on manpower from other regions. As far as the service sectors are concerned, there questions raised on the viability on the operating model of the private training institutes focusing only on the asset-light courses and not catering to the real need in the manufacturing sector. Specific skills sets were not highlighted as the stakeholders felt that the proximity to of the district to Ludhiana and Mohali renders it as part of a larger region rather than a separate isolate district

15.16.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in SBS Nagarr district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Engineering Workshops with focus on Agricultural Implements o Food Processing with focus on Rice & Sugar o Transportation o Bulk Drugs & Empty Gelatine Capsules • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training. This could be materialized by creating a scholarship fund for high achieving students interested in taking up skill related courses. • Promote the vocational education as an alternate to farming considering that today's youth are not willing to take up the profession due to the perceived low status
District Administration	• Make an effective use of the Public relation officer to promote Vocational education. • Department of Agriculture may organize training camps on Rice & Mill Operations • District administration must provide loans to the students who wish to pursue Public or private vocational training courses. • The administration may improve the overall district infrastructure & create an enabling environment such that industries from Mohali can recruit candidates from ITI Nawanshahr
Industry	• Industries from Mohali may consider supporting the students of Nawanshar by making visits for placements or as guest lecturers to ensure better dissemination of information to the students
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement • Private players may develop curriculum for training students on soft skills. Further, they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream

	for these players.

15.17 Skill Gap Assessment of District Ludhiana

15.17.1 Administrative Profile

The district of Ludhiana is divided into seven tahsil, viz. Ludhiana East, Ludhiana West, Samrala, Jagraon, Khanna, Payel, Raikot and seven Sub-tahsil Kum Kalan, Dehlon, Mullanpur Dakha, Sahnewal, Sidhwan Bet, Machhiwara and 12 Blocks namely Ludhiana-I, Ludhiana-II, Samrala, Sudhar, Machhiwara, Pakhowal, Dehlon, Sedhwan Bet, Jagroan, doraha, Khanna, Raikot for administrative purposes.

15.17.2 Social Profile

Demographics

Ludhiana has a population of 34.88 lakhs as per the 2011 Census with 40.86 percent share being the rural population[200]. This is much less than the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 975 persons per sq.km, is much higher than state average of 893[201] persons per sq.km. While the child gender ratio has increased from 717 females per 1000 males in 2001 to 865 females per 1000 males in 2011, there has only been a marginal increase in the adult gender ratio from 824 females per 1000 males in 2001, to 869 females per 1000 males in 2011[202]. Reserved categories population in the district is significant, occupying a share of 40.86[203] percent of total population which is way above the 28.85 percent for Punjab as a whole.

Literacy

The district has a decent literacy rate of 80.3 percent in comparison to state average of 76.07 percent[204]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 74.3 percent in line with trends in other districts. Also, the school infrastructure presemt at level of primary is excellent for the district shown by the below benchmarking of Ludhiana's School infrastructure with that of the state in terms of population served per school. The high literacy rate could well be driven by the superior schooling infrastructure in terms of per capita availability of schools.

Region	Primary Level	Middle Level	Secondary Level
Ludhiana	1756	3338	5328
Punjab	1527	3570	6840

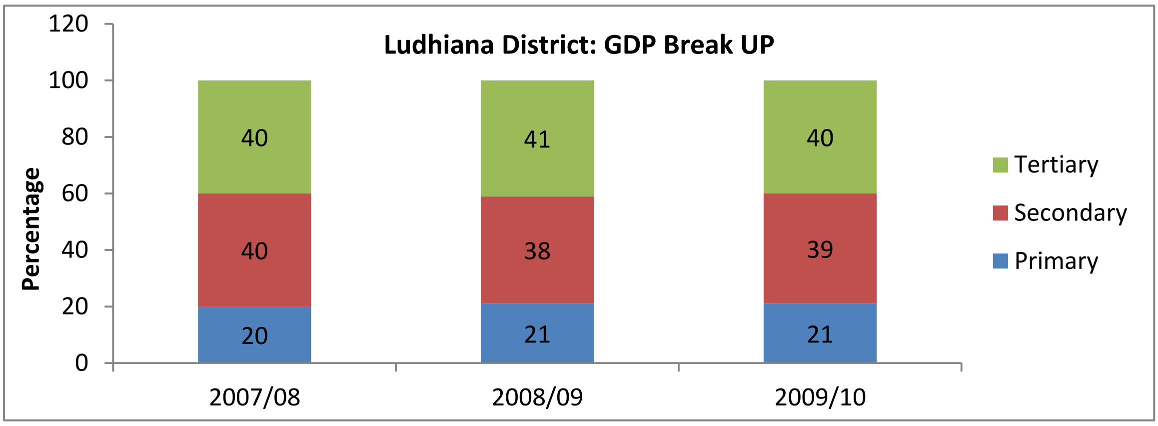
Source: Statistical Handbook of Punjab, 2012

15.16.3 District Economy

Ludhiana is a key district in Punjab with the highest share of contribution to the total state economy[205]. The district economy has witnessed a higher cumulative growth of 12.81 percent[206]during 2004-05 and 2009-10 in comparison to the

200 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
201 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
202 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
203 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
204 http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
205 District domestic product(2004-05 to 2009-10)Economic Adviser , Government of Punjab
206 District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab

state growth of 12.69 percent[207] in the same period. Secondary and Tertiary sector plays a pivotal role in the district economy and constitute to 81.02 percent[208] of the total GDDP of the district, indicating the importance of services and industries in the district. Ludhiana, being an industrial hub has a good per capita income of INR 82817 as compared to the state average of INR 69594. Per Capita Income of Ludhiana has registered a cumulative growth of 10.75 percent[209] during 2005-10. Sub-Sector wise GDDP growth trends of Ludhiana are presented in the table.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Ludhiana like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 20.23 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (19.41 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Ludhiana	9819	14076	22619	21068	4806
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Source: Statistical Handbook of Punjab, 2012

[207] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab
[208] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab
[209] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab

Agriculture is one of the major employers and contributors to the Ludhiana economy. The main Kharif crops grown in Ludhiana are Rice, Maize, Arhar and Moong with rice occupying most of the cultivated area (standing at 254000 hectares). Among the Rabi crops Wheat, Barley Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 269000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Grapes, Pear, Peach, Ber, Orange and Malta. The vegetable crops grown are Potatoes and other seasonal Vegetables. The net sown area is 306000 hectares and the gross sown area amounts to 595000 hectares which makes the cropping intensity to be 194%. All of the sown area is irrigated (100%) it is higher than the state average of 97.9 %. 1135000 tonnes of rice and 1137000 tons of wheat are produced each year in Ludhiana. The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Ludhiana also witnesses occasional floods, frost, Hailstorm and droughts. High yielding varieties of seeds are mostly used by farmers in Ludhiana.

Fishing is an important allied activity in Ludhiana; it has fish stocked in an area of 833 hectares which is one of the highest for the state. It has receipts from Fisheries amounting to Rs. 17, 05,000.

Ludhiana also has 13 Milk plants/Chilling centers out of the total 65 in the state. Ludhiana is one of the major milk and milk products producing districts in the Country.

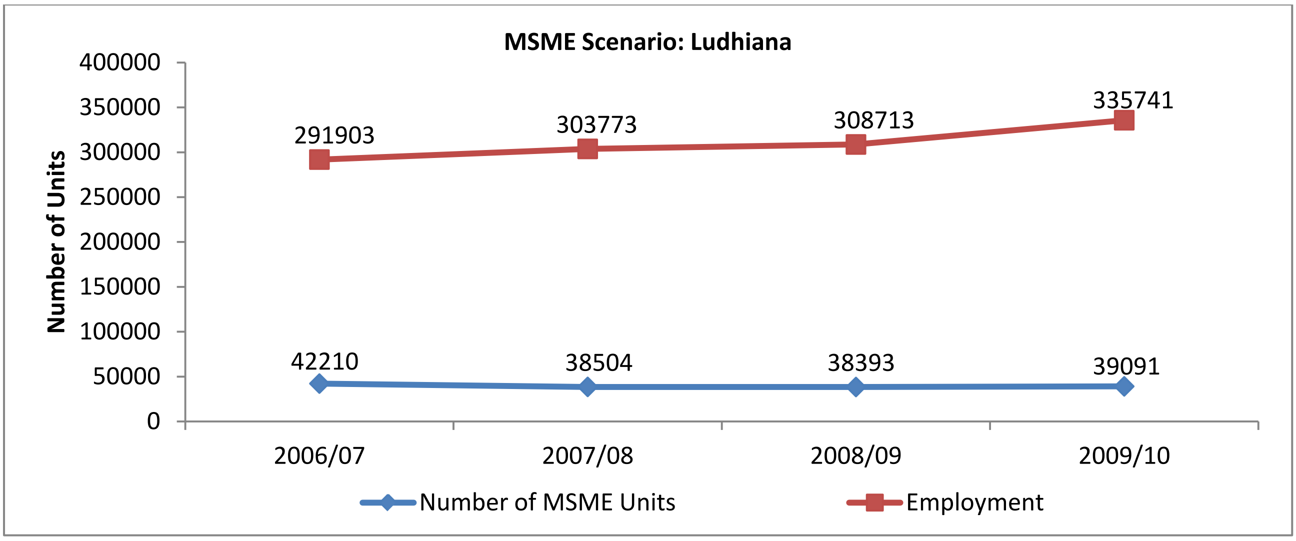
Animal Husbandry also enjoys huge presence in the agricultural communities of Ludhiana. It has a total of 500.2 thousand graded buffaloes and 116 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 15.5 thousand and 5 thousand respectively is also high in Ludhiana.

Industry

Ludhiana is considered as one of the commercial hubs of Northern India.The dominant sector is the small-scale industrial sector, which produces industrial goods, machine parts, auto parts, household appliances, hosiery, apparel, and garments. Ludhiana is Asia's largest hub for bicycle manufacturing and produces more than 50% of India's bicycle consumption of more than 10 million each year[210]. Ludhiana produces 60% of India's tractor parts[211] and a large portion of auto and two-wheeler parts. Many parts used in German cars like BMW and Mercedes are exclusively produced in Ludhiana to satisfy the world requirement. It is one of the largest manufacturers of sewing machines. Hand tools and precision industrial equipment is another speciality. The apparel industry Ludhiana is famous all over India for its woolen sweaters and cotton t-shirts; most of the top Indian woolen apparel brands like Octave, Monte Carlo & Miss Grace are based in Ludhiana.

Ludhiana is known for Manufacturing Agricultural Implements and its Spare parts like Rotavator, Till Seed Drill, Combine Harvestors and doing continuous R&D in same sector.

[210] **"***Entrepreneurship in India's small-scale industries*." Richard P. Taub, Doris L. Taub
[211] **"** *Entrepreneurship in India's small-scale industries*." Richard P. Taub, Doris L. Taub



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Ludhiana district.

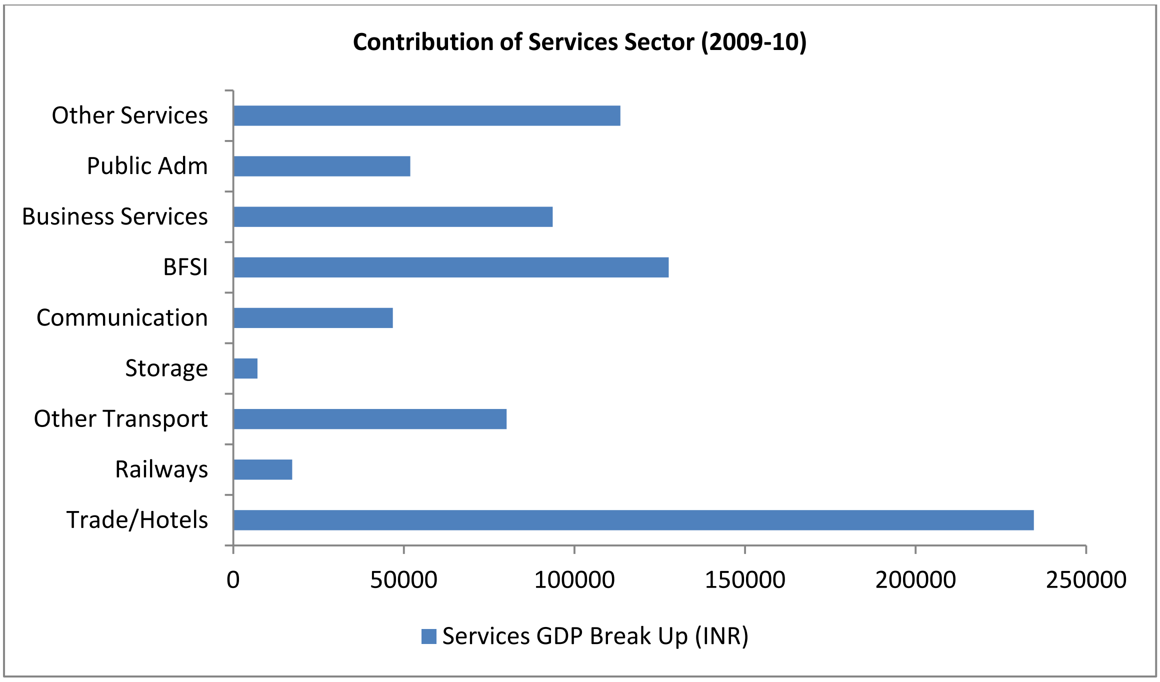
Existing Clusters	Clusters Identified for Promotion
Auto & Tractor Parts Hand & Machine Tools Foundry Bicycle & Engineering Parts Printing & Packaging	Bicycle & Engineering Parts Engineering Goods

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 40 % percent[212] of GDDP in the year 2009-10 just slightly less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Ludhiana. Sub-sector wise contribution of services income is presented in the chart.

[212]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 781 per bed is more than the state average of 760 per bed. District has 4 PHCs and 17 CHCs along with 49 Sub centers with limited private participation[213]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	4
Ayurvedic Institutions	24
Homeopathic Institutions	3
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	17
Dispensaries	49
Total	**109**

Source: District Profile, MSME Report, 2011

Ludhiana has low penetration of banking and financial services measured as a percentage of GDDP at 6.68% percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. Ludhiana being primarily a progressive agriculture and

[213]http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

industry based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.17.4 Current Employment Scenario in Ludhiana

Main worker participation rate of 29.86 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 3.10 % is lower than the state average of 4.66 %. Overall percentage of non workers at 54.0 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Ludhiana	29.86 %	3.10 %	54.0 %	21.2 %	32.8 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.17.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Ludhiana is a high human resource growth district adding more than a lakh of potential manpower during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Ludhiana	3,848,793	2,540,203	1,111,200	1,055,640	103,973
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.17.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Ludhiana has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Ludhiana.

According to the estimates, in the next 5 years, Ludhiana is expected to witness an incremental manpower requirement of over 155 thousand [214] which is expected to increase to 156 thousand [215] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	179626	0	0	177285	0	0	174975
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	536	2144	2681	604	2418	3022	682	2726	3408
Food Processing	779	3031	4416	1136	4418	6437	1585	6163	8980
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	2511	10042	12553	3172	12690	15862	3794	15178	18972
Paper & Paper Products	359	1435	1794	404	1618	2022	456	1824	2280
Chemical & Chemical Products	412	1650	2062	560	2241	2801	724	2896	3620
Construction Based Material	347	1388	1735	415	1660	2075	506	2025	2531
Mineral Processing	1800	7200	9000	1835	7342	9177	1873	7491	9364
Manufacturing of Engineering Products	2885	11541	14426	3189	12757	15946	3525	14102	17628

[214] KPMG Estimates on Incremental Manpower Requirement
[215] KPMG Estimates on Incremental Manpower Requirement

Textiles	10804	43196	54000	13172	52665	65837	16644	66549	83194
Manufacturing of Electrical Products	174	698	872	197	787	983	222	887	1109
Construction	11060	22121	188025	16862	33725	286655	23517	47036	399799
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	2747	10986	0	4811	19243	0
Transportations and Logistics	640	10161	12089	848	13470	16025	1072	17018	20247
Retail	7256	7256	58049	9028	9028	72224	10604	10604	84831
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	8773	26320	0	10804	32411	0	12837	38512	0
Banking and Financial Services	6133	18398	0	8044	24131	0	9900	29699	0
Education and Training	2388	16075	0	4551	30636	0	4742	31925	0

Source: KPMG Analysis

15.17.7.1 Details of vocational education infrastructure at Ludhiana

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Ludhiana	2528	384	11	2923	0.8

Source: DTE Punjab

15.17.7.2 List of the Main Trades/Courses offered by I.T.I.s at Ludhiana

Govt. ITI		Private ITI	
Draftsman Civil	Mechanic Ref. & AC	COPA	Steward
Draftsman Mechanical	PPO	IT&ESM	Old Age Care
Electronics	Steno English	Health Sanitary Inspector	Cabin Room Attd.
Electrician	Stenography Punjabi	Feshion Tech	Dental Lab Technican
Fitter	Turner	Electrician	Stenography
Machinist Composite	Welder (Gas & Electric)	Cutting & Sewing	Health Sanitary Inspector
Mechanic Motor Vehicle	Wireman	Health Sanitary Inspector	A&C TTC

Source: Directorate ofTechnical Education, Punjab

15.17.8 Youth Interaction outcomes

Youth in district showed higher preference for salaried job over entrepreneurship. The latter was preferred by ITI students having prior work experience. The female ITI students were clearly biased towards salaried jobs and significant share aspired to be a teachers. Therefore, there was a keen interest to take up a course in craftsmen training institute, which is mandatory for this profession.

Students were not keen on migrating to the other districts of Punjab given the sufficient local employment potential. Students admit that there is a lack of career guidance and they are not aware of possible employers who could recruit them after their course. However, most of them believe that they would be able to earn a minimum of INR 10,000 monthly after doing the vocational training from ITI. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered.

15.17.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has a vast potential in a wide range of Engineering from foundry, Auto parts to Bicycle parts manufacturing. The district being one of the major indust.ial clusters not only in India but also Asia sees demand for specific skills which far exceed the supply. Trades related to Electrical, Mechanical and Design sees some shortages but is made good by labor migrating from other districts. Stakeholders have to keep the high demand that will always emanate from industrial clusters like Ludhiana and Jalandhar and plan additional capacity accordingly as the scale of the need is completely differenent in these districts,

15.17.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Ludhiana district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Set up camps in schools to bring a paradigm shift in perception of youth for vocational training • Creating a scholarship fund for high achieving students interested in taking up skill related courses • Tying up with NGO's to train the locals in Engineering Services which gives an opportunity for secondary trade
District Administration	• Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode • Focus on training in Low Value Engineering services like Hand tools & Forging along with repair of electrical goods • The district administration may tie up with companies like L&T or BHEL to assist the industry in building up an Engineering Eco-system
Industry	• Industry may undertake vocational training as a part of their CSR activity. • The industry may support the locals by buying their medicinal produce. • Create an infrastructure in the "project affected areas" and offer education and jobs to the locals
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district.

15.18 Skill Gap Assessment of District Tarn-Taran

15.18.1 Administrative Profile

For administrative purpose, the district of Tarntarn is divided into three Tehsils, seven Sub-Tehsils, Eight Blocks, four Assembly Constituencies & One Lok Sabha constituency.

15.18.2 Social Profile

Demographics

Tarn-Taran has a population of 11.2 lakhs as per the 2011 Census with 87.3 percent share of that being rural population[216]. This is significantly more than the average rural population of 68.2% for Punjab as a whole. The population density of the district, at 464 persons per sq.km, is much lower than state average of 893[217] persons per sq.km.

While the child gender ratio has increased from 784 females per 1000 males in 2001 to 819 females per 1000 males in 2011, there has only been a marginal increase in the adult (0-6 age group) gender ratio from 887 females per 1000 males in 2001, to 898 females per 1000 males in 2011[218].

Reserved categories population in the district is significant, occupying a share of 30.08[219] percent of total population which is more than 28.85% for Punjab as a whole.

Literacy

The district has a low literacy rate of 69.4 percent in comparison to state average of 76.07 percent[220]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 62.9 percent. Low school infrastructure at all levels schooling (primary and middle and secondary) is a key concern for the district shown by the below benchmarking of Tarn-Taran's School infrastructure with that of the state in terms of population served per school.

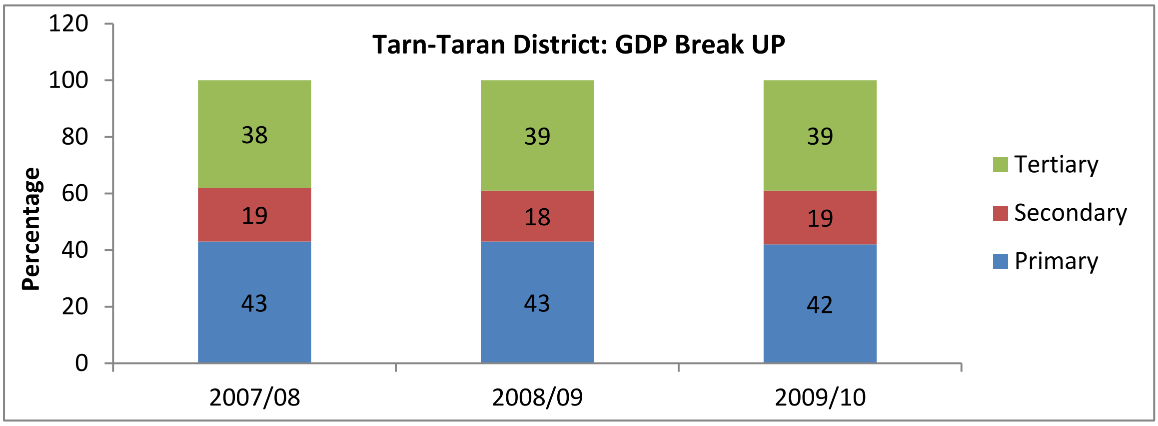
Region	Primary Level	Middle Level	Secondary Level
Tarn-Taran	1633	4373	8033
Punjab	1527	3570	6840

Source: Statistical Handbook of Punjab, 2012

15.18.3 District Economy

Contribution of Tarn-Taran to overall state economy is lower than the expected share on population pro-rata basis - as evident from lower Per Capita Income of INR 37,772 in comparison to state average of INR 42,752 in 2009-10(At current prices). While the contribution of the primary sector (42%) is highest among sub-sectors in the district, dependency on the tertiary sector (services at 39%) is also not far behind. Sub-Sector wise GDDP trends in Tarn-Taran are presented in the chart

[216]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[217]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[218]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[219]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[220]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Tarn Taran like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 55.69 % of the working population was employed in agriculture; this fraction is much greater than that of other parts of the state as evident from the state average of just 39 %. In the year 2004-05, agriculture contributed a major portion of the district GDP. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Tarn Taran	6103	13039	24090	16551	1984
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

Agriculture is one of the major employers and contributors to the Tarn Taran economy. The main Kharif crops grown in Tarn Taran are Rice, Maize and Moong with Rice occupying most of the cultivated area (standing at 169000 hectares). Among the Rabi crops Wheat, Barley Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 186000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables.

The net sown area is 218000 hectares and the gross sown area amounts to 397000 hectares which makes the cropping intensity to be 182%. All of the sown area is irrigated (100 %) it is greater than the state average of 97.9 %. 525000 tonnes of rice and 856000 tons of wheat are produced each year in Tarn Taran.

The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Tarn Taran also witnesses occasional crop diseases and droughts. High yielding varieties of seeds are mostly used by farmers in Tarn Taran.

Fishing is an important allied activity in Tarn Taran; it has fish stocked in an area of 395 hectares.

Tarn Taran also has 1 Milk plant out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Tarn Taran. It has a total of 276.6 thousand graded buffaloes and 69.6 thousand cross bred cattle most of them are females. The number of Goat and Sheep at 15 thousand and 12 thousand respectively is also high in Tarn Taran.

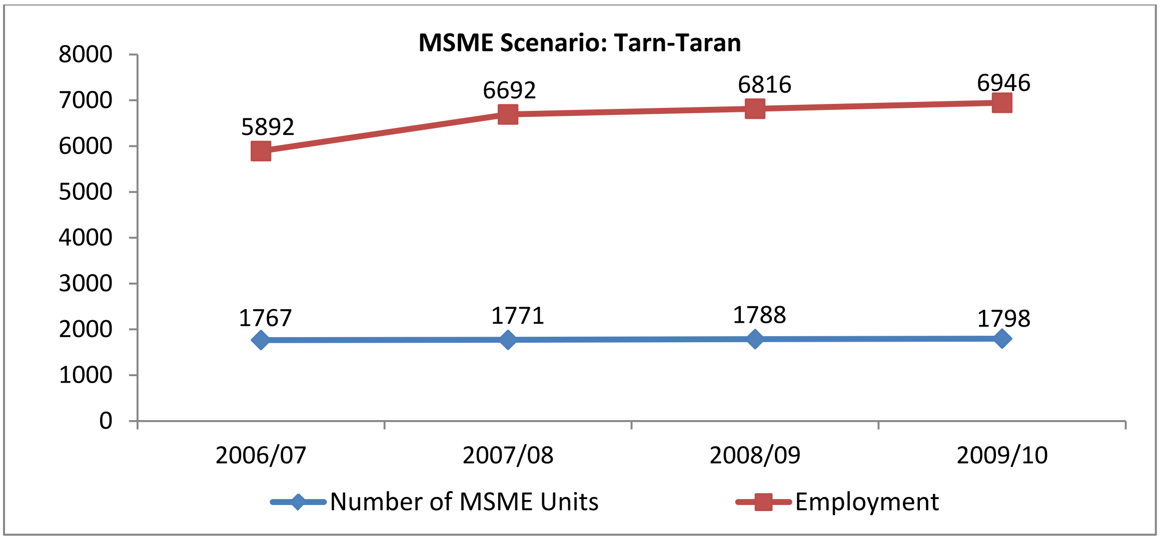
Source: Statistical Handbook of Punjab, 2012

Industry

Tarn-Taran although being a new district recently carved out of Amritsar (2006) has seen considerable investment activity. The total investments by the MSME sector in the year 2009-10 was aroind INR 49 Crore generating incremental employment of around 1880 provided by 181 MSE units. Textile manufacturing and food product processing have been the sectoral backbone for the district’s industrial development.

Presence of large scale units nearby like Bharat Heavy Electricals Ltd. and Capital Overseas have reslted in a significant vendor network catering to the bigger players. More investments in the large scale units are expected to happen in the near future which can lead to more vendorization/supplier network. The Tan-tarn district also has one cluster devoted to rice processing given the region’s strond paddy growing agricultural base.

Between 2006-07 and 2009-10, Medium-Small Scale Industries segment has witnessed good incremental addition of 235 units generating additional employment of around 2300 during the period. Employment growth trends in MSME segment are presented in the chart.



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Tarn-Taran district.

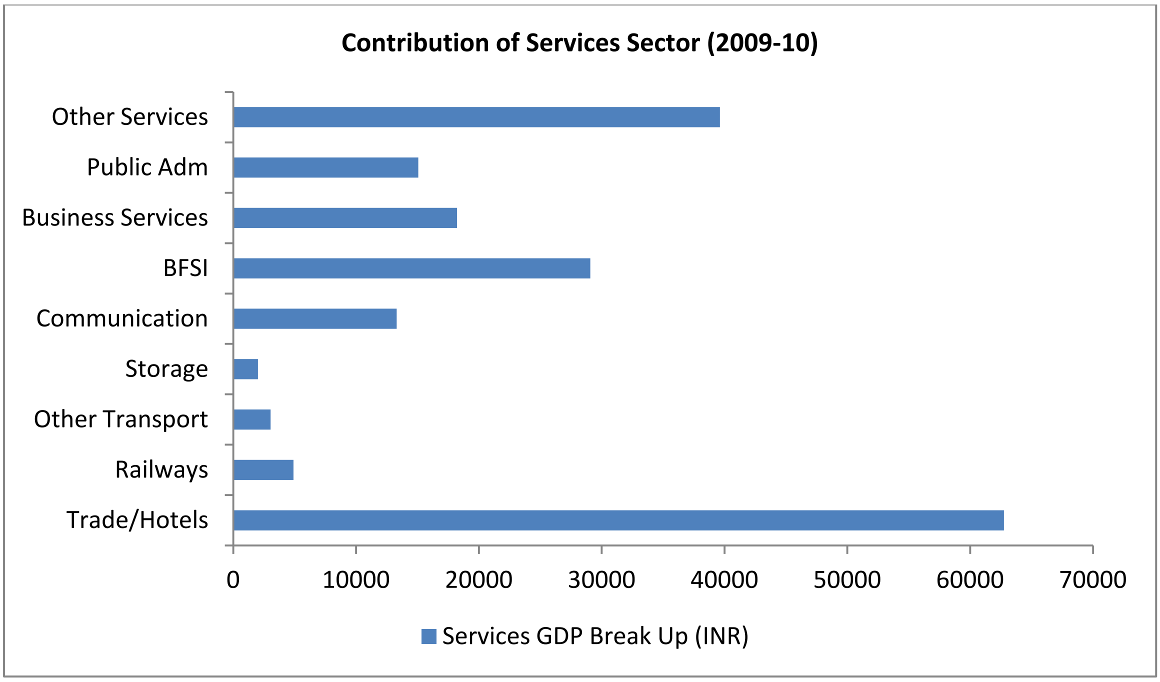
Existing Clusters	Clusters Identified for Promotion
1. Food and Beverages 2. Ready-made Garments 3. Rubber, Plastic, Wooden, Paper products 4. Small size Engineering Products	Engineering Products Food and Beverages

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 39% percent[221] of GDDP in the year 2009-10 which is slightly less than the figure of 41% for Punjab as a whole. Banking and insurance are the key services activities in Tarn-Taran. Sub-sector wise contribution of services income is presented in the chart.

[221]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 740 per bed is much below the state average of 760 per bed. District has 9 PHCs and 19 CHCs along with 59 Sub centers with limited private participation[222]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions
Allopathic Hospitals	2
Ayurvedic Institutions	22
Homeopathic Institutions	4
Primary Health Centers (PHCs)	9
Community Health Centers (CHCs)	19
Dispensaries	59
Total	**115**

Source: District Profile, MSME Report, 2011

Tarn-Taran has good penetration of banking and financial services measured as a percentage of GDDP at 6.38% percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices. Tarn-Taran being primarily an agriculture and small and medium industry based economy sees presence of mainly public sector banks and small cooperative banks with some presence of new age private and foreign banks

[222] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

15.18.4 Current Employment Scenario in Tarn tarn

Main worker participation rate of 24.92 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 6.22 % is above the state average of 4.66 %. Overall percentage of non workers at 52.7 % is lower than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Tarn-tarn	24.92 %	6.22 %	52.7 %	21.0 %	31.7 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.18.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Tarn-tarn is a medium human resource growth district adding manpower of around 30,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Tarm tarn	1,235,970	815,740	327,678	311,294	30,661
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.18.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Tarn-taran has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Tarn-taran.

According to the estimates, in the next 5 years, Tarn-taran is expected to witness an incremental manpower requirement of over 43 thousand [223] which is expected to normalize to 41 thousand [224] during 2017-22.

[223] KPMG Estimates on Incremental Manpower Requirement
[224] KPMG Estimates on Incremental Manpower Requirement

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	125768	0	0	124130	0	0	122512
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	0	1	1	0	1	1	0	1	1
Food Processing	47	184	268	69	269	391	96	375	546
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	10	42	53	13	53	66	16	63	79
Paper & Paper Products	3	13	16	4	14	18	4	16	20
Chemical & Chemical Products	3	12	16	4	17	21	5	22	27
Construction Based Material	15	60	75	18	71	89	22	87	109
Mineral Processing	24	96	120	24	98	122	25	100	125
Manufacturing of Engineering Products	9	35	43	10	38	48	11	43	53
Textiles	25	99	124	30	120	151	38	152	190
Manufacturing of Electrical Products	7	26	33	7	29	37	8	33	41

Construction	2174	4348	36958	3314	6629	56345	4622	9245	78584
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	896	3582	0	1609	6438	0
Transportations and Logistics	92	1460	1737	122	1936	2303	154	2446	2910
Retail	7979	7979	63834	9928	9928	79423	11661	11661	93286
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	5206	15617	0	6410	19231	0	7617	22851	0
Banking and Financial Services	3805	11415	0	4991	14972	0	6142	18427	0
Education and Training	1194	8038	0	1484	9990	0	1585	10669	0

Source: KPMG Analysis

15.18.7.1 Details of vocational education infrastructure at Tarn tarn

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Tarn tarn	1032	84	0	1116	1.0

Source: DTE Punjab

15.18.7.2 List of the Main Trades/Courses offered by I.T.I.s at Tarn tarn

Govt. ITI		Private ITI	
Draftsman Civil	Consumer Electronics	Dress making	Electrician
Dress Making	Electrician	COPA	Welder
Electronics	Fitter	Cutting & Sewing	Health Sanitary Inspector
Embroidery & N Work	Steno Punjabi	Hair & Sikn Care	Dental lab.Tech.
Cutting & Sewing	Mechanic Tractor	CS&E TTC	Art & Craft TT
Secretarial Practice	Motor Mech	COPA	Embroidery
	Steno English		

Source: Directorate ofTechnical Education, Punjab

15.18.8 Students Interaction outcomes-Youth Aspirations

Students in the district showed higher preference towards government job over private owing to higher job security and salary. Students were also open to migration to the other districts or states; however they appeared to be confident of finding jobs within the western belt of Amritsar. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered. Students of the districts appeared to have high awareness in terms of career prospects. Most youth were seen to prefer salaried job over self employment.

15.18.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has a vast potential in the Agri and allied sectors especially in terms of supply of raw materials and assembly of agricultural machinery. The common feedback received from the stakeholders converged towards the need for I.T.I.s to develop short term courses to support the unorganized sector in areas like pesticide spraying training, tractor repair, farm machinery servicing etc. Also, the district's proximity to Amritsar provides the labor force opportunities to work in the services sector of Amritsar driven by the district's Tourism Industry. Stakeholders should focus on these two niche areas while creating incremental training capacities.

15.18.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Tarn tarn district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Focus on increasing participation from national/regional private skill training providers with focus on the following sectors o Food processing o Cold Storage Management Facilities o Training for joining the Army o Tourism o Repair & Servicing of Auto parts and Consumer Durables • Forging public private partnerships with leading private sector firms in Amritsar to create an inclusive ecosystem for skill development. • Set up camps in schools to bring a paradigm shift in perception of youth for vocational training
District Administration	• Create an enabling environment such as an option of taking a loan, in the same way one can, if he chooses to pursue a degree program. • Associate lead banks with the ITI to fund student for Self employment initiatives; possibility of roping in financial intermediaries based out of Amritsar • District Commissioner in consulation with the laborofficer may fix rates for the Apprentices in the district • Make effective use of Public relation officer's to promote campaigning for admitting school dropouts in MES courses. The current target oriented approach is benefitting only a certain strata of the beneficiaries (people looking to up skill themselves) • Department of agriculture may promote Tea cultivation and provide trainings to the rural youth for leaves picking amongst others • Creating an infrastructure for Skill development of teachers (such as a tool room) within the district and make trainings mandatory for all the trainers. Optionally, the same could be started at the State level. • Employment exchange in the district could be privatized. The arrangement shall cover registration, training, certification and placements to ensure successful access to the job market for the youth in Tarntarn
Industry	• Support the institutional management committee under the PPP scheme to make it more effective and ensure adequate placements and effective training. • Follow the two pronged approach to start training centers within their own campus and training on specific sector skills and then recruiting the same candidates. • Rewarding the students appropriately who come for In-plant trainings. • Providing regular feedbacks to the students and their teachers in the ITI
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district. Curriculum should be designed and aligned in such a way that the student gets an option for placement • Private players may develop curriculum for training students on soft skills. Further,

	they may forge partnerships with existing government ITI's and focus of soft skill training to students as well as teachers. This would open another revenue stream for these players.

15.19 Skill Gap Assessment of District Jalandhar

15.19.1 Administrative Profile

For administrative purposes, Jalandhar District consist of 5 tahsils/subdivisions namely Jalandhar I (Sub-Tehsil Adampur), Jalandhar II (Sub-Tehsil Kartarpur, Bhogpur), Nakodar, Phillaur & Shakot. Besides, there are 4 sub-tehsils (Adampur, Bhogpur, Kartarpur, and Goryan Nurmahal), The district is divided into 12 development blocks, viz, Jalandhar East, Jalandhar West, Bhogpur, Adampur, Nawashahr, Banga, Aur, Nakodar, Shahkot, Phillaur, Nurmahal and Rurka Kalan. According to 1991 Census, the district had 1,256 villages, (uninhabited 17 and inhabited 1,239).

15.19.2 Social Profile

Demographics

Jalandhar has a population of 21.81 lakhs as per the 2011 Census with 46.82 percent share being the rural population[225]. This is much less than the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 831 persons per sq.km, is slightly less than the state average of 893[226] persons per sq.km. While the child gender ratio has increased from 806 females per 1000 males in 2001 to 874 females per 1000 males in 2011, there has only been a marginal increase in the adult gender ratio from 887 females per 1000 males in 2001, to 913 females per 1000 males in 2011[227]. Reserved categories population in the district is significant, occupying a share of 37.69[228] percent of total population which is way above the 28.85 percent for Punjab as a whole.

Literacy

The district has a decent literacy rate of 80.1 percent in comparison to state average of 76.07 percent[229]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 75.4 percent in line with trends in other districts. Also, the school infrastructure present at level of primary is excellent for the district shown by the below benchmarking of Jalandhar's School infrastructure with that of the state in terms of population served per school. The high literacy rate could well be driven by the superior schooling infrastructure in terms of per capita availability of schools at all 3 levels of primary, middle and secondary.

Region	Primary Level	Middle Level	Secondary Level
Jalandhar	1271	2484	4968
Punjab	1527	3570	6840

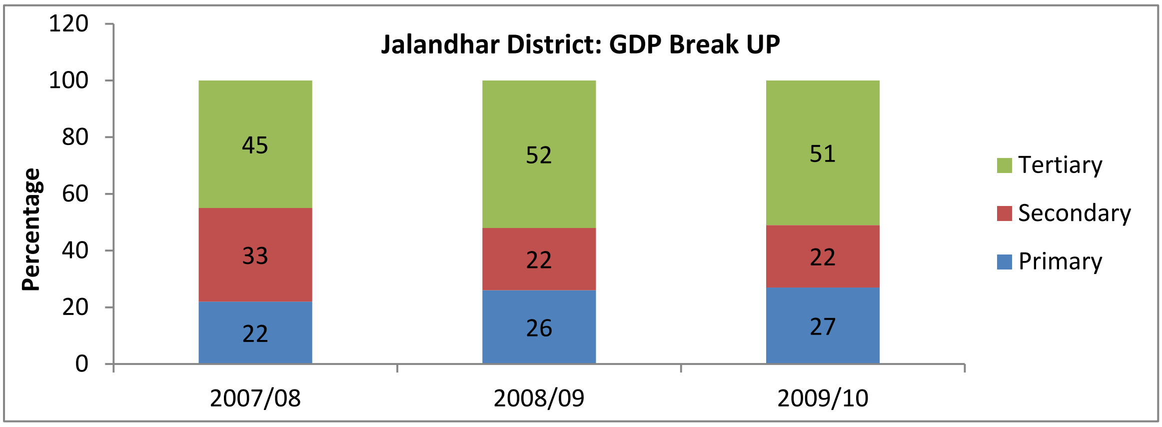
Source: Statistical Handbook of Punjab, 2012

15.19.3 District Economy

Jalandhar is a key district in Punjab with the seond highest share of contribution to the total state economy[230]. The share of services contribution to the district economy has witnessed an increase from 45% in 2007-08 to 51% in 2009-10

[225] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[226] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[227] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[228] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[229] http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[230] District domestic product(2004-05 to 2009-10)Economic Adviser , Government of Punjab

percent[231] during 2004-05 and 2009-10.Secondary and Tertiary sector plays a pivotal role in the district economy and constitute to 73 percent[232] of the total GDDP of the district, indicating the importance of services and industries in the district. Jalandhar, being an industrial hub has a good per capita income of INR 46,462 as compared to the state average of INR 42,275. Sub-Sector wise GDDP growth trends of Jalandhar are presented in the table.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Jalandhar like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001, 24.97 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a large portion (20.59 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Jalandhar	3912	7041	14108	14379	4332
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

[231] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab
[232] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab

Agriculture is one of the main employers and contributors to the Jalandhar economy. The main Kharif crops grown in Jalandhar are paddy, Maize and Sugarcane with Paddy occupying most of the cultivated area (standing at 161600 hectares). Among the Rabi crops Wheat and Mustard are grown with land use skewed heavily in favor of wheat (at 170400 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear and Peach. The vegetable crops grown are Potatoes, chilly, peas and tomatoes. The net sown area is 237600 hectares and the gross sown area amounts to 422400 hectares which makes the cropping intensity to be 178%. All the sown area is irrigated (100 %). 563600 tonnes of rice and 726200 tons of wheat are produced each year in Jalandhar. The district is prone to frequent heat waves which turn out to be detrimental to the crops. Jalandhar also witnesses occasional floods, cold waves, frost and droughts. High yielding varieties of seeds are mostly used.

Fishing is an important allied activity in Jalandhar; it has fish stocked in an area of 701 hectares. It has receipts from Fisheries amounting to Rs. 634,000.

Jalandhar also has 3 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Jalandhar. It has a total of 247.2 thousand graded buffaloes and 40.9 thousand cross bred cattle most of them are females. The number of Goats at 14 thousand is also very high.

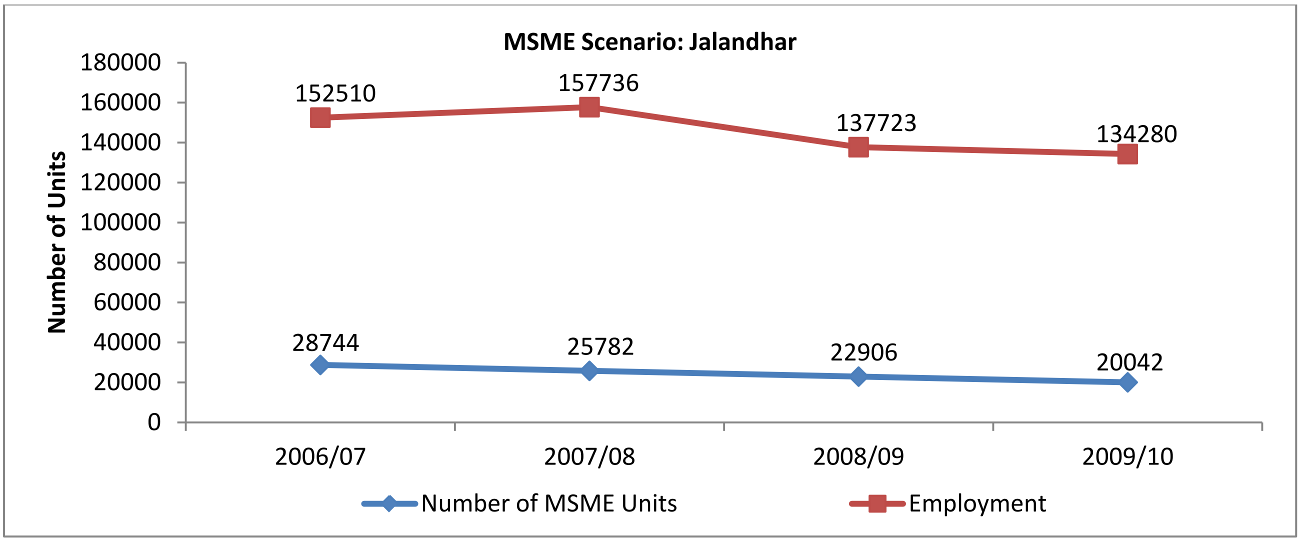
Industry

Jalandhar is considered as one of the commercial hubs of Punjab. The dominant sector is the small and the medium scale industrial sector, which produces machine parts, auto parts and sports goods. Jalandhar is one of Asia's largest hub for Sports Goods manufacturing which is mainly done by skilled artisans rather than by machines. Jalandhar has a robust eco-system of medium enterprises with very little presence of large scale industries. This shows how the industrialization process has decentralized to the SME level.

Some of the major Medium Scale enterprises in the district are

A. Krishna Engineering Works
B. Satluj Motor Works
C. Dhillon Cool Drinks
D. Bhogpur Sugar Mills
E. Markfed Canaries

The MSME trends show a decrease in the net number of enterprises. But, it has to be see in the context that the period also saw the DIC deregistering defunct units. The net addition of MSEs discounting the defunct units would be positive for the district



Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Jalandhar district.

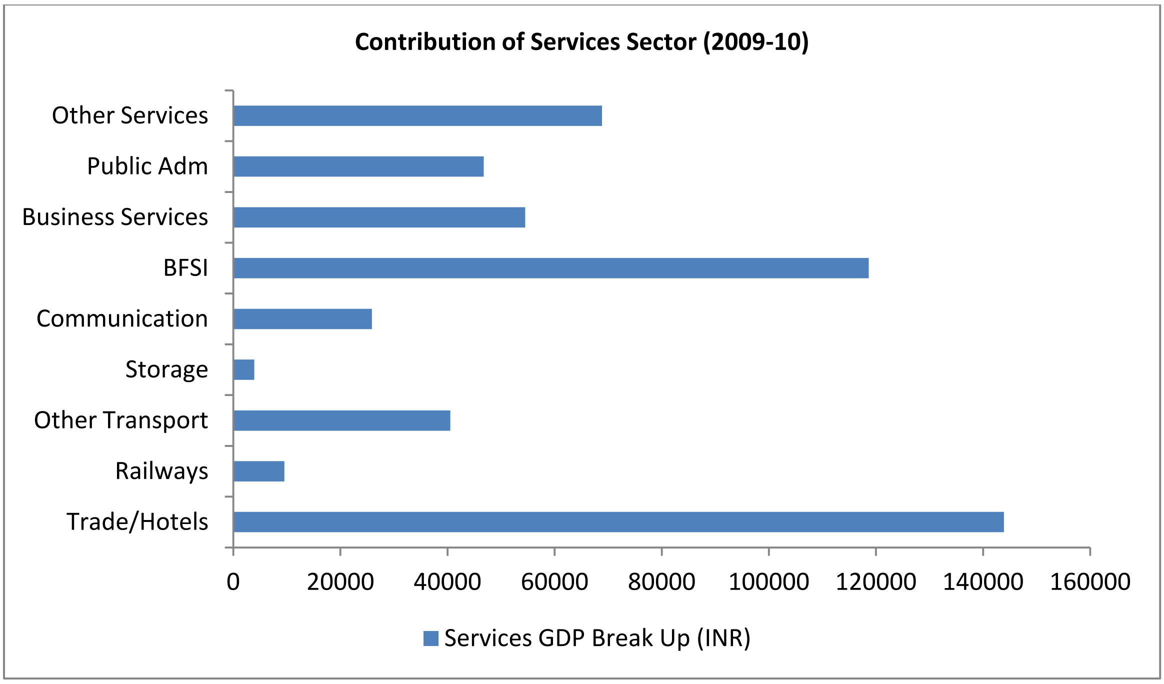
Existing Clusters	Clusters Identified for Promotion
Auto & Tractor Parts Hand & Machine Tools Sports Goods	Hand and Machine Tools Sports Goods

Source: District MSME Report, 2011

Services Sector

Service sector contributed to 51 % percent[233] of GDDP in the year 2009-10 just slightly less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Jalandhar. Sub-sector wise contribution of services income is presented in the chart.

[233]http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 776 per bed is more than the state average of 760 per bed. District has 4 PHCs and 11 CHCs along with 110 Sub centers with limited private participation[234]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	**Number of Institutions**
Allopathic Hospitals	6
Ayurvedic Institutions	32
Homeopathic Institutions	8
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	11
Dispensaries	110
Total	**169**

Source: District Profile, MSME Report, 2011

Jalandhar has a very high penetration of banking and financial services measured as a percentage of GDDP at more than 11% percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. Jalandhar being primarily a progressive

[234] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

agriculture and industry based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.19.4 Current Employment Scenario in Jalandhar

Main worker participation rate of 27.47 % in the district is above the state average number of 28.28 percent. Marginal worker participation at 3.55 % is below the state average of 4.66 %. Overall percentage of non workers at 58.9 % is higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Jalandhar	27.47 %	3.55 %	58.9 %	22.1 %	36.9 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.19.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Jalandhar is a high human resource growth district adding manpower of around 61,000 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Jalandhar	2,407,511	1,588,958	656,355	623,537	61,414
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.19.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Jalandhar has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Jalandhar.

According to the estimates, in the next 5 years, Jalandhar is expected to witness an incremental manpower requirement of over 100 thousand [235] which is expected to remain at 100 thousand [236] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**	**Skilled**	**Semi skilled**	**Unskilled**
Agriculture & Allied Activities	0	0	137181	0	0	135393.7	0	0	133629
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	384	1534	1918	433	1730	2163	488	1951	2439
Food Processing	491	1908	2780	715	2781	4052	998	3880	5653
Beverages	0	0	0	0	0	0	0	0	0
Fabricated metal products	3385	13538	16923	4277	17108	21385	5115	20461	25577
Paper & Paper Products	150	598	748	169	674	843	190	760	950
Chemical & Chemical Products	303	1211	1514	411	1645	2056	531	2126	2657
Construction Based Material	357	1428	1786	427	1708	2136	521	2083	2604
Mineral Processing	1700	6800	8500	1733.294	6933.754	8667.048	1768.678	7075.305	8843.983
Manufacturing of Engineering Products	1286	5143	6428	1421	5685	7106	1571	6284	7855

[235] KPMG Estimates on Incremental Manpower Requirement
[236] KPMG Estimates on Incremental Manpower Requirement

Textiles	658	2629	3287	802	3205	4007	1013	4050	5063
Manufacturing of Electrical Products	313	1254	1567	353	1414	1767	398	1594	1992
Construction	11145	22291	189472	16992	33984	288862	23698	47398	402877
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1693	6772	0	2929	11717	0
Transportations and Logistics	463	7348	8742	613	9740	11588	775	12306	14640
Retail	4449	4449	35594	5536	5536	44287	6502	6502	52017
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	5436	16309	0	6694	20083	0	7955	23864	0
Banking and Financial Services	6519	19556	0	8550	25651	0	10523	31570	0
Education and Training	1729	11642	0	2805	18884	0	2889	19450	0

Source: KPMG Analysis

15.19.7.1 Details of vocational education infrastructure at Jalandhar

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	Govt ITI	Private ITI	NSDC Partner	Total	
Punjab	27415	19058	1479	47952	1.7
Jalandhar	1154	1052	110	2316	1.1

Source: DTE Punjab

15.19.7.2 List of the Main Trades/Courses offered by I.T.I.s at Jalandhar

Govt. ITI		Private ITI	
CS&E TTC	Auto Electrician	Tool & die Maker	Mechanic Diesel
Cutting & Sewing	Carpenter	COPA	Secretarial Practice
Embroidery & N Work	Cutting & Sewing	Motor Mechanic	Architectural Assistaniship
Fruit & Vegetable	Draftsman Civil	Draftsman (Civil)	Secretarial Practice
Hair & Skin Care	Draftsman Mechanical	Tractor Mech	Health Sanitary Inspector
IT & ESM	Electrician	Electrician	Cruch Management
Stenography Punjabi	Fitter	COPA	Fashion Tech.

Source: Directorate ofTechnical Education, Punjab

15.19.8 Youth Interaction outcomes

Youth in district showed higher preference for salaried job over entrepreneurship. The latter was preferred by ITI students having prior work experience. The female ITI students were clearly biased towards salaried jobs and significant share aspired to be a teachers. Therefore, there was a keen interest to take up a course in craftsmen training institute, which is mandatory for this profession.

Students were not keen on migrating to the other districts of Punjab given the sufficient local employment potential. Students admit that there is a lack of career guidance and they are not aware of possible employers who could recruit them after their course. However, most of them believe that they would be able to earn a minimum of INR 10,000 monthly after doing the vocational training from ITI. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered.

15.19.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district has a vast potential in generic sectors like Hand and Machine tools and also niche sectors like Sports Goods. In fact, the district along with Meerut is one of the hubs of cricket equipment manufacture in the country. The stakeholders felt that there is huge scope for up-skilling carpenters, painters etc who work in the unorganized sector through MES courses and other short term programs.

15.19.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Jalandhar district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Set up camps in schools to bring a paradigm shift in perception of youth for vocational training • Creating a scholarship fund for high achieving students interested in taking up skill related courses • Tying up with NGO's to train the locals in Engineering Services which gives an opportunity for secondary trade • Initiate an eco-system for training in Sports Goods Manufacture, specially targeted at the informal sector
District Administration	• Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode • Focus on training in Low Value Engineering services like Hand tools & Forging along with repair of electrical goods • The district administration may tie up with companies in similar clusters like Coimbatore and Baroda to assist the industry in building up an Engineering Eco-system
Industry	• Industry may undertake vocational training as a part of their CSR activity. • The industry may support the locals by buying their medicinal produce. • Create an infrastructure in the "project affected areas" and offer education and jobs to the locals
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district.

15.20 Skill Gap Assessment of District Amritsar

15.20.1 Administrative Profile

For administrative purposes, District of Amritsar is divided into Four Tehsils, Five Sub-Tehsils, Nine Blocks, Eleven Assembly Constituencies & One Lok Sabha constituency. Recently, a separate district of Tarn-tarn was carved out of Amritsar

15.20.2 Social Profile

Demographics

Amritsar has a population of 24.9 lakhs as per the 2011 Census with 46.36 percent share being the rural population[237]. This is much less than the average rural population of 68.2% for Punjab as a whole. The population density of the district, standing at 932 persons per sq.km, is much higher than state average of 893[238] persons per sq.km. While the child gender ratio has increased from 792 females per 1000 males in 2001 to 824 females per 1000 males in 2011, there has only been a marginal increase in the adult gender ratio from 871 females per 1000 males in 2001, to 884 females per 1000 males in 2011[239]. Reserved categories population in the district is significant, occupying a share of 27.34[240] percent of total population which is slightly above the 28.85 percent for Punjab as a whole.

Literacy

The district has a decent literacy rate of 81.1 percent in comparison to state average of 76.07 percent[241]. Further, gender disparity in education attainment levels is prominent with a low female literacy rate of 75.7 percent in line with trends in other districts. Also, the school infrastructure present at all levels of primary, middle and secondary is clearly inadequate as seen by the benchmarking of Amritsar's school infrastructure against that of Punjab in terms of population served per school.

Region	Primary Level	Middle Level	Secondary Level
Amritsar	1633	4373	8033
Punjab	1527	3570	6840

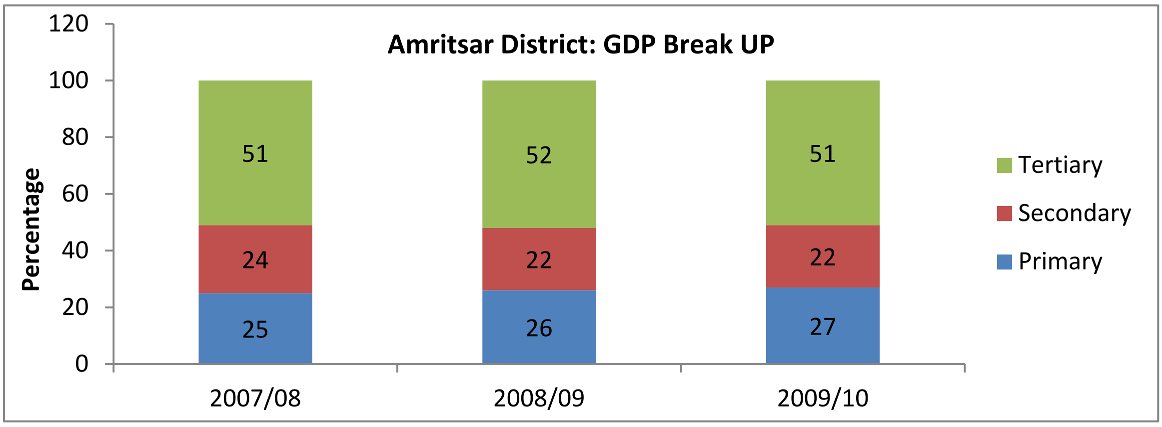
Source: Statistical Handbook of Punjab, 2012

15.20.3 District Economy

Amritsar is a key district in Punjab with the third highest share of contribution to the total state economy[242]. The district economy has witnessed a higher cumulative growth of more than 13 percent[243]during 2004-05 and 2009-10 in comparison to the state growth of 12.69 percent[244] in the same period. Secondary and Tertiary sector plays a pivotal role in the district

[237]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[238]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[239]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[240]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[241]http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html
[242] District domestic product(2004-05 to 2009-10)Economic Adviser , Government of Punjab
[243] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab
[244] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab

economy and constitute 73 percent[245] of the total GDDP of the district, indicating the importance of services and industries in the district. Amritsar, being a tourism hub sees the contribution of tertiary sector to the GDP at more than 50%. The district has a good per capita income of INR 35,414 as compared to the state average of INR 42,752. Sub-Sector wise GDDP growth trends of Amritsar are presented in the table.



Source: District Domestic Product (2004/05 to 09/10), Publication Number 933

Agriculture and allied sectors

Amritsar like many other districts in the country as well as the state is primarily an agrarian economy. Agriculture employs a huge chunk of the working population. According to the census of 2001 30.55 % of the working population was employed in agriculture, although this fraction is much lesser than that of other parts of the country the absolute number is still large. In the year 2004-05, Agriculture contributed a major portion (29.74 %) of the district GDP compared to 31.12 % for the state. The composition of the land holding in the district is shown below benchmarked against the same for the overall state.

The larger number on the higher side of land holdings indicates highly mechanized and intensive farming.

Region	Below 1 Hectares (marginal)	1-2 Hectares (Small)	2-4 Hectares (Semi Medium)	4-10 Hectares (Medium)	Larger than 10 Hectares (large)
Amritsar	9184	16835	26248	15708	1901
Punjab	1,34,762	1,83,062	3,19,933	2,95,749	70,960

[245] District domestic product(2004-05 to 2009-10)Economic Adviser, Government of Punjab

Agriculture is one of the major employers and contributors to the Amritsar economy. The main Kharif crops grown in Amritsar are Rice, Maize, Arhar and Moong with rice occupying most of the cultivated area (standing at 183000 hectares). Among the Rabi crops Wheat, Rapeseed and Mustard are grown with land use skewed heavily in favor of wheat (at 187000 hectares). The Horticultural crops grown are Kinnow, Mangoes, Guava, Pear, Peach, Orange and Malta. The vegetable crops grown are Potatoes, Onions and other seasonal Vegetables. The nest sown area is 218000 hectares and the gross sown area amounts to 422000 hectares which makes the cropping intensity to be 194%. All the sown area is irrigated (100 %). 532000 tonnes of rice and 757000 tons of wheat are produced each year in Amritsar. The district is prone to frequent heat and cold waves which turn out to be detrimental to the crops. Amritsar also witnesses occasional floods and droughts. High yielding varieties of seeds are mostly used.

Fishing is an important allied activity in Amritsar; it has fish stocked in an area of 625 hectares. It has one of the highest receipts from Fisheries among all districts of the state amounting to Rs. 31, 14,000.

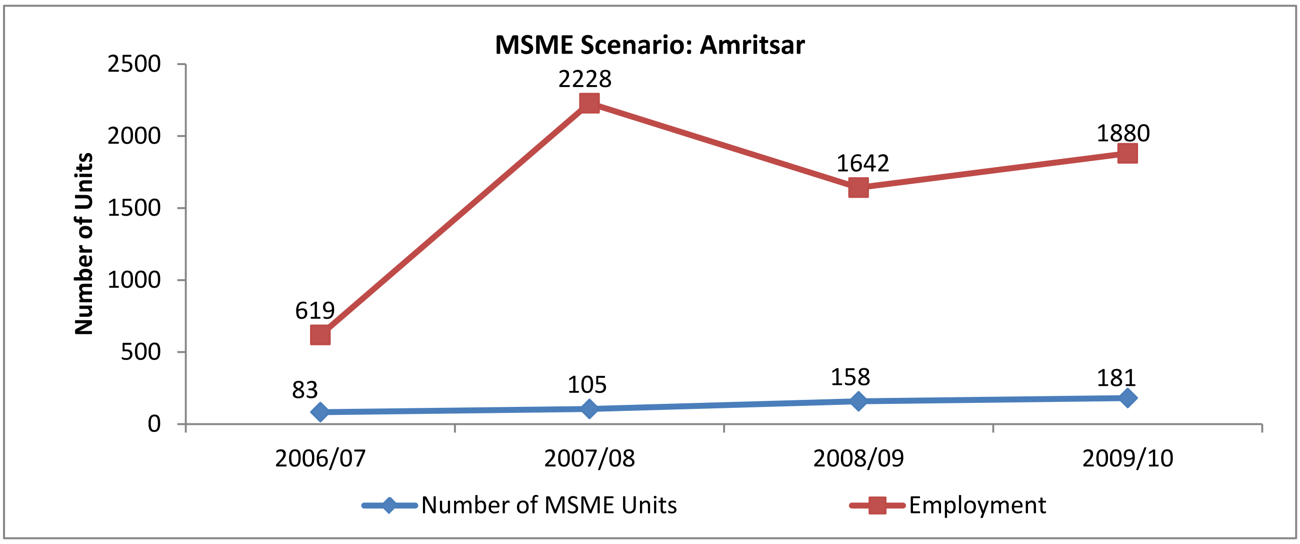
Amritsar also has 9 Milk plants/Chilling centers out of the total 65 in the state.

Animal Husbandry also enjoys huge presence in the agricultural communities of Amritsar. It has a total of 287.6 thousand graded buffaloes and 80,000 cross bred cattle most of them are females.

Source: Statistical Handbook of Punjab, 2012

15.13.1.2 Industry

The Amritsar is industrial hub from the very beginning, but the industrial activities suffers, first in 1947 at the time of partition and it comes on the border with Pakistan, and secondly at the time of militancy in 1980s, but with the entrepreneurship spirit of the local industrialist take it to its glory. There are many Medium and Large Units established with the pass of time procuring the services of local Micro & Small Scale Units.
There are many Large Large Scale/ Units located in the district procuring the services of local Micro & Small Scale Units. The more investment in large sector shall provide more opportunities for Vendorisation in MSE sector. Moreover Amritsar is the Hub of Textiles industry, where many units are interdependable on each other for various processes, like, Spinning, dyeing, finishing, Printing etc provides opportunities for Vendorisation.



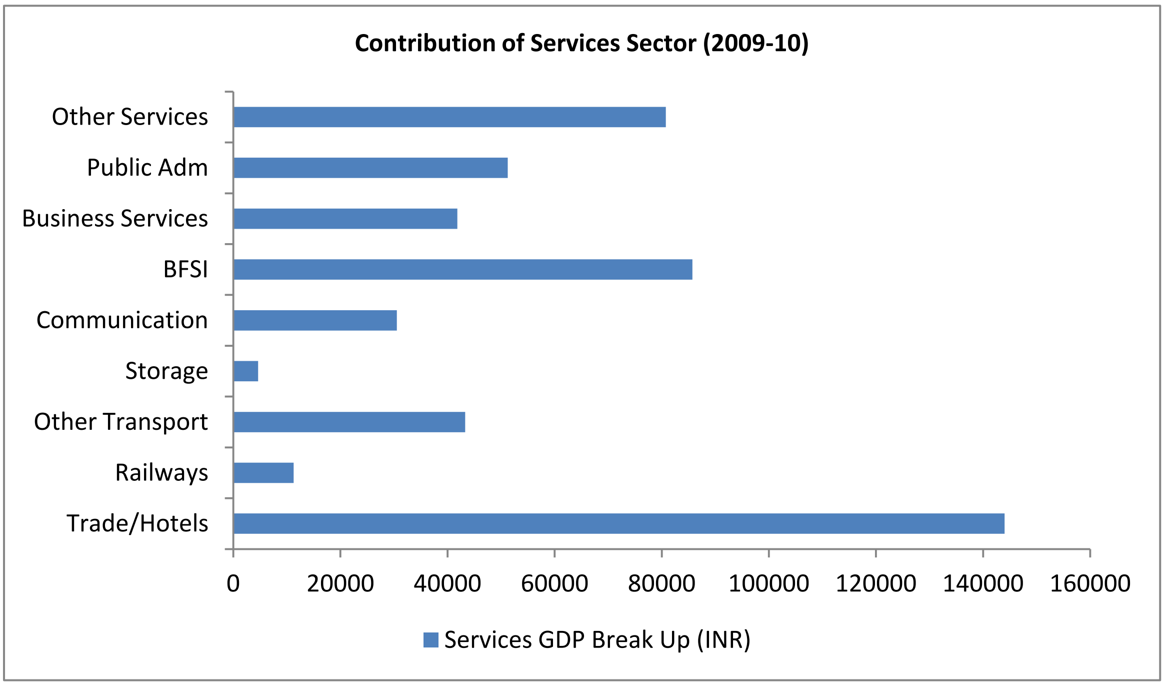
Source: District MSME Report, 2011

Based on discussions with District Industries Center, following potential MSME growth clusters are identified in Amritsar district.

Existing Clusters	Clusters Identified for Promotion
Rice Mill Textile General Engineering Agriculture Machinery Servicing Printing & Packaging	Agriculture Machinery Servicing General Engineering

Services Sector

Service sector contributed to 40 % percent[246] of GDDP in the year 2009-10 just slightly less than the figure of 41% for Punjab as a whole. Banking and insurance and Trade/Hotels/Restaurants are the key services activities in Amritsar. Sub-sector wise contribution of services income is presented in the chart.



Source: District Domestic Product, Punjab, 2004/05 to 2009/10, Publication Number 933

Penetration of healthcare facilities measured in terms of population served per bed, at 781 per bed is more than the state average of 760 per bed. District has 4 PHCs and 36 CHCs along with 101 Sub centers with limited private participation[247]. Considering limited availability of healthcare facilities within the district, the district is expected to witness significant Government healthcare expenditure over the next decade. Details of healthcare infrastructure in the district are provided in the table.

Category	Number of Institutions

[246] http://planningcommission.nic.in/plans/stateplan/index.php?state=ssphdbody.htm
[247] http://nrhm-mis.nic.in/UI/RHS/RHS%202011/District-wise%20Health%20Centres.pdf

Allopathic Hospitals	10
Ayurvedic Institutions	22
Homeopathic Institutions	3
Primary Health Centers (PHCs)	4
Community Health Centers (CHCs)	36
Dispensaries	101
Total	**176**

Source: District Profile, MSME Report, 2011

Amritsar has low penetration of banking and financial services measured as a percentage of GDDP at 9.35 percent in comparison to state average of 7.74 percent as per the 2009-10 estimates and according to the 2004-05 base year prices which is expected given its robust industrial and services base. Amritsar being primarily a progressive agriculture and industry based economy sees presence of all banks ranging from public sector banks and small cooperative banks to new age private and foreign banks

15.20.4 Current Employment Scenario in Amritsar

Main worker participation rate of 26.46 % in the district is below the state average number of 28.28 percent. Marginal worker participation at 4.19 % is below the state average of 4.66 %. Overall percentage of non workers at 55.9 % is higher than the state averageof 55 %. Female work participation in the district is low in comparison to male work participation, in line with the state level trend.

Region	Main Worker Participation	Marginal Worker Participation	Overall Non-Workers	Male Non-Workers	Female Non-Workers
Amritsar	26.46 %	4.19 %	55.9 %	21.9 %	34.1 %
Punjab	28.28 %	4.66 %	55.0 %	21.7 %	33.2 %

Source: Statistical Handbook of Punjab, 2012

15.20.5 Estimation of supply of manpower in the District

District wise skill incremental supply estimates were arrived considering the district level participation rates based on census 2001 data along with LFPR, WPR from NSSO 66th Round Employment Survey, by apportioning participation rates on a pro rata basis.

Amritsar is a high human resource growth district adding manpower of around 70,427 during 2012-22. The employment opportunities within the district for this growing working population have to be addressed through suitable training.

Region	Estimated Population (2022)	Working Age Population (2022)	Labor Force (2022)	Work Force (2022)	Incremental Supply(2012-22)
Amritsar	2,748,638	1,814,101	752,678	715,044	70,427
Punjab	30,570,951	20,176,828	8,877,804	8,433,914	830,683

Source: KPMG Analysis

15.20.6 Incremental Manpower Requirement in the District

Incremental manpower requirement in the district of Amritsar has been estimated based on several parameters such as investments into various sectors in the district for the past 10 years, national level benchmarks on industrial growth across sectors, national inclusion targets for sectors such as banking and healthcare, employment generation potential of various sectors based on labor elasticity and market based insights from discussions with industries in Amritsar.

According to the estimates, in the next 5 years, Amritsar is expected to witness an incremental manpower requirement of over 155 thousand [248] which is expected to increase to 156 thousand [249] during 2017-22.

Sector wise skill level requirements during 2012-22

Subsectors	2012			2017			2022		
	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled	Skilled	Semi skilled	Unskilled
Agriculture & Allied Activities	0	0	581474	0	0	573896	0	0	566418
Pharma & Medicinal Products	0	0	0	0	0	0	0	0	0
Rubber and plastics products	233	932	1165	263	1050	1313	296	1184	1481
Food Processing	420	1631	2377	612	2378	3465	853	3318	4834
Beverages	0	0	0	0	0	0	0	0	0
Fabricated	640	2560	3201	809	3235	4044	967	3870	4837

[248] KPMG Estimates on Incremental Manpower Requirement
[249] KPMG Estimates on Incremental Manpower Requirement

metal products									
Paper & Paper Products	173	691	864	195	779	974	220	878	1098
Chemical & Chemical Products	409	1635	2044	555	2221	2776	718	2870	3588
Construction Based Material	71	286	358	86	342	428	104	417	521
Mineral Processing	338	1352	1690	344	1378	1723	351	1406	1758
Manufacturing of Engineering Products	1598	6392	7990	1766	7066	8832	1953	7811	9763
Textiles	591	2363	2954	721	2881	3602	911	3641	4551
Manufacturing of Electrical Products	204	817	1022	230	921	1152	260	1039	1299
Construction	6387	12774	108579	9737	19475	165536	13581	27162	230874
IT&ITES	0	0	0	0	0	0	0	0	0
Healthcare	260	1040	0	1965	7860	0	3447	13788	0
Transportations and Logistics	487	7734	9202	646	10252	12198	816	12953	15411
Retail	4454	4454	35631	5541	5541	44332	6509	6509	52070
Hospitality	99	148	740	123	184	920	144	216	1081
Communication	8872	26617	0	10925	32776	0	12982	38946	0
Banking and Financial Services	6582	19747	0	8633	25900	0	10626	31877	0
Education and Training	1885	12692	0	3256	21919	0	3398	22874	0

Source: KPMG Analysis

15.20.7.1 Details of vocational education infrastructure at Amritsar

	Sanctioned Capacity				Density(Seats per Thousand Population)
District	**Govt ITI**	**Private ITI**	**NSDC Partner**	**Total**	
Punjab	27415	19058	1479	47952	1.7
Amritsar	1856	2260	84	4200	1.7

Source: DTE Punjab

15.20.7.2 List of the Main Trades/Courses offered by I.T.I.s at Amritsar

Govt. ITI		Private ITI	
Cutting & Sewing	PPO	Draftsman (Civil)	Electrician
Electrician	Steno English	Embroidery and Needle Work	Welder
Electronics	Steno Punjabi	Dress Making	Health Sanitary Inspector
Machinist Composite	Turner	Punjabi Stenography	Dental lab.Tech.
Aggricultural Machinery	Welder (Gas & Electric)	Mechanic Electronics	Art & Craft TT
Mechanic Motor Vehicle	Wireman	Steno graphy Punjabi	Dress Making
Turner	Moulder	Draftsman (Civil)	Embroidery

Source: Directorate ofTechnical Education, Punjab

15.20.8 Youth Interaction outcomes

Youth in district showed higher preference for salaried job over entrepreneurship. The latter was preferred by ITI students having prior work experience. The female ITI students were clearly biased towards salaried jobs and significant share aspired to be a teachers. Therefore, there was a keen interest to take up a course in craftsmen training institute, which is mandatory for this profession.

Students were not keen on migrating to the other districts of Punjab given the sufficient local employment potential. Students admit that there is a lack of career guidance and they are not aware of possible employers who could recruit them after their course. However, most of them believe that they would be able to earn a minimum of INR 10,000 monthly after doing the vocational training from ITI. Most students felt that Polytechnics students are given higher preference than ITI students by the industry and the same is reflected in the salaries offered.

15.20.9 Skill mapping and developmental concerns

Based on the interactions with the local industries, government departments, local population and technical institutes it was observed that the district already is doing well in terms of tourism driven sectors like transportation, hospitality and trade. But, given the increasing growth, stakeholders felt that the present infrastructure of the training institutes may not be enough. In manufacturing, the district like most others in Punjab has a robust base in Agriculture Implements manufacture and repair. Stakeholders like most other districts felt that short term training programs are required for the farmers and small entrepreneurs

15.20.10 District specific recommendations

Considering these factors, the proposed action plan for stakeholders in skill development in Amritsar district would indicate the following priority areas

Stakeholder	Action Points for Stakeholders
NSDC	• Set up camps in schools to bring a paradigm shift in perception of youth for vocational training • Creating a scholarship fund for high achieving students interested in taking up skill related courses • Tying up with NGO's to train the locals in Engineering Services which gives an opportunity for secondary trade
District Administration	• Create an enabling environment such as an option of taking a loan for the students who wish to pursue vocational education through public or private mode • Focus on training in Tourism related sectors like Hospitality, Transportation and Trade • The district administration may help facilitate tie up of SMEs in the district with companies like Swaraj and John Deere to develop competencies in the field of Agriculture Machinery
Industry	• Industry may undertake vocational training as a part of their CSR activity. • The industry may support the locals by buying their medicinal produce. • Create an infrastructure in the "project affected areas" and offer education and jobs to the locals
Private Skill training providers	• Focus on placement driven training for youth in the identified Skill gaps in the district.

16 Glossary

Abbreviation	Explanation of abbreviated terms
HSIIDC	Punjab State Industrial Infrastructure Development Corporation
BDO	Block Development Officer
BRGF	Backward Region Grant Fund
Build. Const. Real Est.	Building, Construction, Real Estate
CAGR	Compound Annual Growth Rate
Capex	Capital Expenditure
CEO	Chief Executive Officer
CII	Confederation of Indian Industry
CMIE	Centre for Monitoring Indian Economy
CoE	Centre for Excellence
COPA	Computer Operator and Programming Assistant
CSC	Common Service Centre
DAO	District Agriculture Office
DIC	Department of Industries and Commerce
DRDA	District Rural Development Agency
DUDA	District Urban Development Agency
FGD	Focus Group Discussion
FMCG	Fast Moving Consumer Goods
FY	Financial Year
GDDP	Gross District Domestic Product
GDP	Gross Domestic Product
GoH	Government of Punjab
GSDP	Gross State Domestic Product
HDI	Human Development Index
HR	Human Resource
HUPA	Housing and Urban Poverty Alleviation
ICT	Information and Communication Technologies
IFFCO	Indian Farmers Fertilizer Cooperative Limited

IOC	Indian Oil Corporation
IT	Information Technology
ITC	Industrial Training Centre
ITeS	Information Technology Enabled Services
ITI	Industrial Training Institute
Kg	Kilogram
Km	Kilometre
L&T	Larsen and Toubro
LPG	Liquified Petroleum Gas
M. Tech	Mater of Technology
MBA	Master of Business Administration
MBBS	Bachelor of Medicine Bachelor of Surgery
MCA	Master of Computer Application
mfp	Minor forest produce
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
mm	Milimetre
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprises
MT	Metric Tonnes
MW	Mega Watt
NAC	National Academy of Construction
NGO	Non Government Organization
NH	National Highway
no.	Number
NSDC	National Skill Development Corporation
NSS	National Service Scheme
NTFP	Non Timber Forest Products
OBC	Other Backward Castes
p.m.	per month
PHC	Public Health Centre
PPP	Public Private Partnership

PVC	PolyVinyl Chloride
RKVY	Rastriya Krishi Vikas Yojana
RSETI	Rural self employment training institute
RTE	Right to Education
RYK	Rajiv Yuva Kiranalu
SC	Scheduled Caste
SC	Scheduled Caste
SEZ	Special Economic Zone
SHG	Self Help Group
SJSY	Swarn Jayanti Swarojgar Yojna
SME	Small and Medium Enterprises
sq	Square
SSI	Small Scale Industry
ST	Scheduled Tribe
ST	Scheduled Tribe
TV	Television
VT	Vocational Training
VTP	Vocational Training Provider

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