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National  
Skill Development  
Corporation

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## Executive Summary

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



## 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 Gujarat, involving various Departments of the Government of Gujarat, and Industry Bodies, as key stakeholders. The study focused on identifying district-wise incremental skilling requirements in Gujarat 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 Gujarat presents a unique human resource opportunity for economic growth through manpower skilling. As per KPMG estimates, Gujarat has a significant demographic dividend in the near term, with a rising working age population. Between 2012 and 2017, an additional 60.51 lakh<sup>1</sup> are expected to enter the working age group population followed by another 56.67 lakh during 2017-22<sup>2</sup> (these are Gross numbers, without netting off retirees). Considering the historical trends in labour participation rates of Gujarat, the state would witness a gross addition of 35.15 lakh and 32.90 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, Gujarat is expected to register a net addition of 20.41 lakh to the labour force during 2012-17, and another 15.83 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	30.95	60.51	35.15	20.41	10.54
2017-22	26.34	56.67	32.90	15.83	10.51

Manpower supply has regional variations along social and gender dimensions in Gujarat. District-wise incremental supply estimates indicate significant regional concentration in the leading six districts of Ahmedabad, Surat, Vadodara, Rajkot, Banas Kantha, Bhavnagar and Junagadh, accounting for nearly half of the total supply. Tribal regions like The Dangs, Narmada, Dohad, Navsar and Valsad 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. Role of women in capacity building – especially in improving labour participation rates - cannot be undermined, with a high proportion of rural female engaged in agri-allied activities in the rural districts of Dahod (91.01 percent rural population), Tapi (90.21 per cent rural population) and Narmada (89.56 percent rural population). Considerations of industry towards employing female workforce in manufacturing enterprises, specifically in medium-small scale category, should be addressed through suitable

<sup>1</sup> KPMG Analysis

<sup>2</sup> KPMG Analysis

awareness creation and policy initiatives that can help improve labour participation rates of women and help Gujarat bridge its human resource demand-supply gap in future. Further, there is a need to emphasize special focus on skilling and empowering of women in districts like Surat with a low proportion of female population.

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 million and 2.63 million respectively. In XII plan period, the targets of job opportunities to be created per annum, could be set at around six lakhs 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 Textiles and Apparel, Chemical and Chemical Products, Auto and Auto Components, Engineering Goods, Port based industries, Banking and Financial Services, Transportation and Logistics, Retail and IT/ITES. Priority districts from a manpower development perspective include Ahmedabad, Vadodara, Surat, Kutch, Rajkot, Jamnagar, Gandhinagar and Bharuch.

District	Incremental Manpower Requirement 2012-17	Incremental Manpower Requirement 2017-22	Focus Sectors
Ahmedabad	403,268	344,929	Textiles and Apparel, chemicals & chemical products, Drugs and Pharmaceuticals, Agro and Food Processing, Automobiles, Engineering, Electronics, IT-ITES, Hospitality, Banking & Financial Services
Surat	379,442	328,062	Textiles & Apparels, Gems & Jewelry, Chemicals & Petrochemicals, Ports and IT- ITES
Vadodara	261,543	223,794	Chemicals & Petrochemicals, Pharmaceuticals, Biotechnology
Rajkot	200,565	173,261	Engineering & electronics, Textiles & apparel, Chemicals, Infrastructure
Kutch	154,526	131,970	Minerals, Port based industries, Marine Chemicals, Engineering, Infrastructure Projects, Chemicals, Ceramics and Textiles
Valasad	134,276	114,841	Chemicals, textiles, horticulture and paper industry
Bhavnagar	133,884	113,537	Diamond cutting & polishing, cement & gypsum, inorganic salt-based and marine chemicals, shipbuilding, ship-repairs, oxygen, foundry, re-rolling, ceramics, fabrication and food processing industries
Gandhinagar	125,415	104,313	Food Processing, Electronics, Textiles, IT -ITES
Bharuch	122,874	105,740	Chemicals, Petrochemicals & Pharmaceuticals, Engineering, Ports & Ship building, Textiles
Kheda	109,427	92,949	Agriculture, Mineral-based industries, Plastics, Engineering and IT-ITES
Mehsana	108,073	92,158	Cultivation, Engineering Industry and Food processing

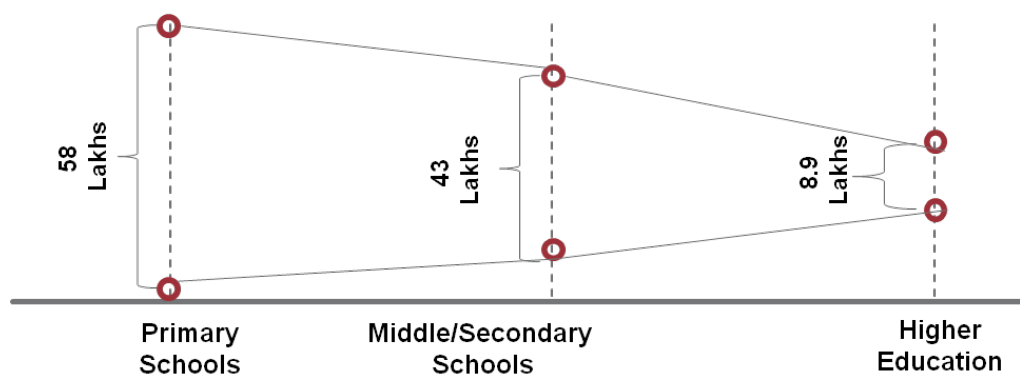
Banas Kantha	103,264	88,783	Food Processing, Tourism, Mineral Based Industries, Construction material
Junagadh	102,474	89,401	Mineral based cement industry, Fish processing industry, Agriculture based industry, Power sector
Jamnagar	99,648	85,788	Brass Parts, Petroleum and Petrochemicals, Salt and Ports
Sabar Kantha	94,737	81,790	Agriculture, ceramics, chemicals and milk processing
Panchmahal	85,765	74,370	Tourism, minerals, engineering & automobiles, irrigation projects, dairy farming
Anand	76,021	64,703	Food & Agriculture, Engineering & Auto parts, Chemicals, Port & Ship Building, Minerals, Cement
Surendranagar	71,283	60,950	Textiles, chemicals, and Ceramics
Dahod	64,919	56,323	Food products, rubber and plastic products, and mineral based industries
Navsari	61,337	52,061	Food processing, textiles, drugs & pharmaceuticals
Amreli	56,666	48,645	Engineering Goods, Port and Ship building, Mineral Processing and Cement
Patan	46,027	39,067	food processing, paper and pulp and cotton-based industry
Porbandar	28,898	23,643	Port and Ship Building, Cement industry, Mineral-based Industries
Tapi	28,162	24,077	Agro-based industries, Textiles
Narmada	26,332	22,020	Textiles, food & agriculture and chemicals
The Dangs	17,610	15,218	Agri- Allied Activities, wood & wooden products, food processing

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 enrollments (5 years) in Gujarat standing at 58 lakhs, there is a need to increase higher education capacity, to accommodate this population as they graduate from school, in line with the GER targets (set at 30% by the end of 12th plan period 2012-17, pan-India). Even on conservative estimates, Gujarat will need to nearly double higher education capacity by 2017, to achieve this.

Our estimates also indicate that the human resource demand-supply gap will be quite high in the semi-skilled category, and a portion of those with higher education degrees, would also get absorbed in this category of jobs. Hence vocational education needs to be provided to them as well.

### Enrollments in Gujarat across Education Levels<sup>3</sup>

<sup>3</sup> KPMG Analysis



Vocational education has a key role to play in the educational system of Gujarat, which has a relatively low capacity in higher education. While significant drop out rates are witnessed after school education across the state, resulting in low enrollments in higher education, districts of The Dangs, Narmada and Tapi 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 Navsari, Bharuch, Sabar Kantha, Gandhinagar and low in Porbandar, Surat and Bhavnagar. Level of private participation is low in The Dangs, Navsari, Porbandar and Jamnagar 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.

**Gujarat Human Resource Supply-Demand Gap Estimations for 2012-17**

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**Gujarat Human Resource Supply-Demand Gap Estimations for 2017-22**

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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 Gujarat are presented in the table below.

District Wise Supply- Demand Gap in Gujarat (2012-22)								
Region	2012-17				2017-22			
	Skilled	Semi Skilled	Minimally skilled	Total	Skilled	Semi Skilled	Minimally skilled	Total
<b>Gujarat</b>	<b>(1,637)</b>	<b>939,383</b>	<b>116,890</b>	<b>915,489</b>	<b>(58,092)</b>	<b>651,365</b>	<b>457,174</b>	<b>1,067,007</b>
Kachchh	1,326	46,100	48,944	(42,733)	159	35,366	51,289	86,813
Banaskantha	(11,355)	14,068	(4,332)	(1,620)	(11,883)	5,133	14,094	7,350
Patan	(2,896)	9,002	(11,270)	(5,168)	(3,955)	4,337	(1,064)	(685)
Mehsana	(2,179)	29,969	713	28,505	(4,499)	20,438	17,465	30,379
Sabarkantha	(5,973)	19,336	(8,942)	4,416	(6,665)	12,358	5,972	11,664
Gandhinagar	13,215	55,324	3,643	72,175	8,775	41,340	12,861	62,980
Ahmadabad	4,134	139,893	66,247	210,268	(2,250)	105,400	91,935	195,078
Surendranagar	(2,834)	17,243	(5,317)	9,089	(4,307)	10,729	6,240	12,663
Rajkot	792	64,624	15,601	81,018	(2,509)	49,060	33,892	80,440
Jamnagar	133	28,472	481	29,083	(1,683)	20,918	11,759	30,996
Porbandar	1,267	11,576	(4,617)	8,224	(57)	7,654	(6)	7,590
Junagadh	(5,777)	22,715	(10,811)	6,127	(8,707)	(11,297)	9,375	14,568
Amreli	(2,225)	14,117	(12,924)	(1,034)	(3,816)	8,686	(1,025)	3,846
Bhavnagar	(332)	41,645	1,848	43,161	(3,765)	27,723	19,139	43,094
Anand	(3,610)	16,009	(11,734)	658	(5,505)	8,751	2,950	6,192
Kheda	(4,462)	28,316	(1,653)	22,199	(6,279)	19,037	16,015	25,223
PanchMahal	(6,614)	15,347	(16,840)	(8,109)	(7,379)	8,708	151	1,474
Dohad	(7,713)	8,767	(14,398)	(13,345)	(6,874)	4,179	(1,754)	(4,448)
Vadodara								



	8,650	94,358	12,656	115,664	3,542	72,254	34,736	110,530
Narmada	238	7,741	(6,554)	1,427	(550)	5,050	(1,819)	2,681
Bharuch	3,791	40,887	23,383	68,062	1,114	31,324	32,788	63,183
The Dangs	1,910	7,493	(724)	8,678	1,748	5,951	585	8,285
Navsari	(2,818)	16,674	(4,885)	8,972	(4,941)	10,175	6,168	11,404
Valsad	864	44,916	26,047	71,826	1,043	35,984	29,330	66,351
Surat	12,523	132,032	55,495	200,046	550	98,239	89,986	188,772
Tapi	172	6,451	(8,654)	(2,036)	(520)	4,222	(3,070)	634

\*(Indicates excess supply)

The state has significant scheme training opportunities through Government schemes. During the five year period 2012-17 major schemes have a potential to train nearly 19 lakh people with SJSRY, SDI-MES and Agricultural training program accounting for a major share of this. Details of scheme/department wise training targets are presented in the table.

Key Schemes with Training Mandate	Estimated Potential Training Capacity in Gujarat (2012-17)
SJSRY	375,000
SDI-MES	300,000
M/O Agriculture	250,000
SGSY	200,000
Using Construction Cess	190,000
ISDS – Textiles	125,000
Others	115,000
D/O IT	110,000
ART - M/o Tribal Affairs	50,000
SCA under TSP - M/o Tribal Affairs	30,000
Hunar Se Rozgar	25,000
CSR Funds from Central PSUs	25,000
Credit Scheme	105,000

Youth aspiration study indicates a clear mismatch between student aspiration and job opportunities available in the state. Sectors such as retail, construction, agri-allied activities, textile and transportation and logistics need to work on building a positive image, and providing the right working environment/perks, to attract talent.

Increasing entrepreneurial activity in the state of Gujarat has to be matched with appropriately skilled managerial and technical workforce. 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 Gujarat.

Key recommendations for the Government include:

- Building systematic mechanisms to identify and assist potential school dropouts transition into vocational programs
- Developing the Gujarat Skill Development Mission in line with its charter, as a focal agency for skilling
- Focus on Enhancing Skill Training Capacities in Districts With Low Penetration of Vocational Education
- Setting up Anchor Institutes in more focus industries and broadening their scope

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

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

Key recommendations for Training Institutes include:

- Focus on high growth/ aspirational sectors where student acquisition is easier -Transportation & Logistics, IT-ITES, Banking & Financial Services, Healthcare, Auto & Auto Components, Tourism & Hospitality and Retail
- Create capacities in districts with lower penetration of training infrastructure - Kutch, Vadodara, Patan, Jamnagar, Anand, Valsad, Banas Kantha, Rajkot, Ahmedabad, Narmada, Bhavnagar, Surat & Porbandar. 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 SJSRY, MES, SGSY, Textile Department and Construction Cess
- Emphasize offering accredited programs (SSC certifications) to ensure industry acceptance for certifications
- Leverage existing infrastructure to build optimal delivery models (ITI premises, GIDC 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 UDISHA groups) 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 toto by all the stakeholders, to realize the intended objective of a robust skill development ecosystem in Gujarat.

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