

**SURVEY & ASSESSMENT OF
MANPOWER DEMAND & SUPPLY
FOR INDUSTRIES &
SERVICE SECTORS
IN GUJARAT**

PART – II REPORT

For The Districts :

Vadodara

Bharuch

Surat

Navsari

Valsad

Submitted to:

The Directorate of Employment & Training

Govt. of Gujarat

Gandhinagar

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VADODARA DISTRICT ANALYSIS BASED ON SAMPLE SURVEY

PROFILE OF VADODARA DISTRICT

Location and Administration

Vadodara district is one of the developed districts of Gujarat State. The district has a total geographical area of 7549 sq.km. accounting for about 3.85% geographical area of the state. It is located in the middle of Gujarat and lies between 21.4° & 22.49° north latitude and 72.51° & 74.17° west longitude. The district is surrounded on north by Panchmahal district, on south by Bharuch district, on east by Jambuwa district of Madhya Pradesh State and on the west by Anand district and on north side it has Mahisagar river while on the south side it has Narmada river. Vadodara district consists of 12 talukas, which are; Karjan, Chhota Udepur, Jetpur Pavi, Quant, Dabhoi, Naswadi, Padra, Vadodara, Vaghodia, Savli, Sankheda and Sinor.

Demographic Characteristics

The population of Vadodara district, as per 2001 Census, was 36.41 lakh. The density of population is 482 people per sq.km. Compared to the State average of 268 in 2001, urban population constitutes 45.20% of the total population. About 5.01% of the total population is Scheduled Castes and 26.56% is Scheduled Tribes. The literacy level was 70.76% in the year 2001. There were 18.97 lakh males and 17.44 lakh females in the total population.

Vadodara district can be conveniently divided into three regions geographically, topographically and economically as well as from the resources point of view. These three regions are as under:

(i) Eastern Region

This region is partly covered with forest and also has mountain ranges. This region includes Chhota Udepur, Naswadi, Quant, Jetpur Pavi talukas and pocket areas of Sankheda taluka. Economically and socially these talukas are backward compared to other talukas. It is inhabited by Scheduled Tribes and is declared as Tribal Area.

(ii) Western Region

This region consists of parts of Vadodara and Padra talukas. Industrial cluster area of Padra is now developing very fast. These two talukas are having good agricultural potential.

(iii) Central Region

The central portion of the district covers Vadodara, Dabhoi, Sinor, Karjan and Savli talukas which are more industrially developed in comparison to other talukas. The region conducive to cotton and tur crop cultivation.

Climate and Rainfall

The district has extreme climate and wide variation in temperature during summer and winter. The average minimum and maximum temperature ranges between 8.0° C & 45.0° C. Average rainfall in the year 2002 was 835 mm.

River System

The main river of the district is Vishwamitri which originates from Pavagadh Aravalli Ranges. Other rivers are Jambua, Surya, Dhadhar, Orsang, Ujari, Hiran, Zev, Madhumati and Kaveri. These rivers are flowing through the district except Mahisagar and Narmada, rest of the rivers are seasonal. The major irrigation project viz. Sardar Sarovar Dam has been constructed on Narmada river.

Infrastructure

Vadodara district has got a well developed infrastructure which is conducive for the growth of both industries as well as agriculture. The district has a better literacy rate at 70.76%. Vadodara city is very well connected by rail, road and air transport system with rest of the country and other parts of the state. The district has a very good network of all weather roads. 83 km of National Highway and 1266 km of State Highway passes through the district. There are 1013 km of major district roads (MDRs) and 725 km of other district roads (ODRs) apart from 2166 km of rural roads in the district. The total length of railway in the district is 483 km, of which 98 km is broad guage line and 385 km is meter guage.

Industry

Vadodara is one of the industrially developed districts in the state of Gujarat having large, medium and small industries of various types. A large number of industries related to textile, chemicals, machinery, metal products, pharmaceuticals, engineering, plastic, electrical appliances, electronics etc. are located in the district. Well developed infrastructures, prudent industrial policy of the state government and peaceful industrial atmosphere have been vital factors which have contributed to the industrial growth in the district. However, the industrial development is restricted to the surrounding areas of the metropolitan city of Vadodara and certain big towns of the district only. Chhota Udepur, Jetpur Pavi, Naswadi, Sankheda and Quant are the industrially backward talukas of the district. The state government, under new industrial policy, identified certain areas of backward talukas of the district in special category for its development by providing attractive incentives to the investors. Due to this many industrial units have come up on Vadodara-Miyagam-Karjan Road, Vadodara-Savli Road and Vadodara-Dabhoi Road. There are 11 GIDC industrial estates in the district; over and above, there are 3 government industrial estates and 15 private industrial estates in the district.

Methodology of Assessment

For the selection of sample industries, listing of all MOUs of Vibrant Gujarat Global Investors' Summit 2005 and 2007 with Summit of Information Technology, Urban Development and Tourism Industries was done on the basis of sector-wise list collected from Industries Commissionerate, Gandhinagar and respective nodal departments as well as District Industry Centre, Vadodara. Thus, in all 53 entrepreneurs were selected for in depth study. The details regarding sectors, number of entrepreneurs etc are given in the following table 5.1. The data from entrepreneurs were collected through structured questionnaires.

Table 5.1 Sector-wise number of MOUs

Sr. No.	Sector	Sample size (No. of MOUs) Visited	Remarks
1.	Biotechnology	4	(1) 4 not responding due to being out of district (2) 3 not responding due to being out of Gujarat/abroad; and (3) 3 Due to
2.	Chemicals & Petrochemicals	5	
3.	Engineering, Auto Engineering and Ceramic	4	
4.	Agro food and parks	2	

5.	Oil and Gas	1	being multidistrict and responsible person not available.
6.	Information Technology	1	
7.	Others	3	
	Total	20	
8.	Presently functioning (Existing)	30	Medium & large scale units

Sample Selection for Presently Functioning Large & Medium Scale Industries

For the selection of sample industries Random Sampling Technique was adopted. Selection of sample industries was done randomly on the basis of sector-wise list of medium and large scale units collected from District Industry Center (Vadodara), Chamber of Commerce and Industries (Vadodara) and GIDC (Gandhinagar). From medium and large scale units 30 entrepreneurs were selected by random sampling method. 30 entrepreneurs were selected for in depth study.

Accordingly, 25 enterprises (MOUs) were visited but due to wrong addresses 5 units could not be contacted as per the entrepreneurs' list provided by IC. The remaining 4 entrepreneurs on personal visits informed that they required time and they will send information within a few days and there was no response from them later. The survey methodology was visiting of industries personally, meeting the responsible person; explaining regarding the survey with a request for cooperation in providing the information. As the data were not readily available at most of the units or the responsible person was not available at the time of the visit of the survey team a second or even at times a third visit was most essential to collect the data from maximum number of units.

Reference Period

In order to have proper assessment of human resources development employment generation of the project at present i.e. reference year 2007-08 and future i.e. next five years (2013) were taken. In medium and large scale industries presently functioning units were selected on the basis of the secondary data provided by DIC and Chamber of Commerce and Industries, Vadodara and GIDC, Gandhinagar. The field work was carried out during the month of March 2008.

Observation on the Sample Survey Data

As per the terms of reference, 30 MOUs and 30 medium and large scale units signed in 2005 and 2007 were to be visited for manpower demand survey assessment. Accordingly, 27 MOUs and 30 present industries/units were visited, but due to wrong address, contact persons being out of state/district, time constraint, others were not available. The entrepreneurs were interviewed in field units (factory sites) or offices to get information as per the proforma when the personal visit was made for the survey. In most of sites the industries (units) were functioning (Non-MOUs) well. Details regarding the total no. of employees, no. of skilled workers, no. of graduates employed in the units, anticipated manpower requirement in future i.e. next five years (2013), post graduates, degree/diploma holders, ITI trade and other graduates, lack of knowledge, lack of skills etc. Yet some quantitative data, semi quantitative and qualitative assessments on other aspects could be drawn from the interaction with the concerned entrepreneurs and the same are included in the survey results of this report.

Table 5.2 Sector-wise Profiles of MOUs signed in 2005 & 2007 and Manpower Requirement

Sr. No.	Sector	No. of Projects			Manpower Requirement		
		2005	2007	Total	2005	2007	Total
1.	Biotechnology	0	8	8	-	4075	4075
2.	Agro & Food processing	1	5	6	-	-	-
3.	Chemical/Petrochemical	-	5	5	-	830	830
4.	Automobile engg.	1	3	4	-	60000	60000
5.	Roads & Railways	1	-	1	-	500	500
6.	Information Technology	-	1	1	-	1900	1900
7.	Ports	-	1	1	-	4000	4000
8.	Health Care	-	1	1	-	342	342
9.	Education	-	1	1	-	-	-
10.	Pharmaceuticals	-	1	1	-	50	50
11.	SEZ	-	1	1	-	-	-
	Total:	3	27	30	-	71697	71697

* Including multidistrict projects.

Source: Industries Commissionerate, GOG, Gandhinagar.

Summary and Field Observations of the District

- 30 projects are proposed to be established in the district;
- Largest investment is proposed in the biotechnology sector (8 projects);
- The biotech park is located in Savli, which is also the proposed location for several agro & food processing projects;
- The district is well connected with National Highway No.8 connecting it to Ahmedabad and Mumbai as well as the Vadodara-Savi highway;
- Vadodara is also connected with Ahmedabad and Mumbai by a broad gauge railway line and also Savli by a narrow gauge railway line;
- The nearest port is Dahej and Vadodara has its own domestic airport;

Manpower Requirement in Vadodara District from MOU 2005 and 2007

- With 30 projects, the district has a total manpower requirement of 71,697 technical, managerial and unskilled workers.
- Largest investment is in the sector of chemicals and petrochemicals (19).

Presently Vadodara district has

- 33 ITIs offering courses in the fields of engineering, IT and chemicals;
- 9 technical institutes with an intake of over 2700 students every year;
- 4 pharmacy colleges which churn out 210 students yearly;
- 2 medical colleges with 330 graduates every year;
- 2 dental colleges with 140 graduates every year;
- 1 IT college with 30 post graduates every year;
- 1 hotel management institute offering various courses including tourism & hotel management, hospitality management and food cooking.

Employment Generation in Industries after MOUs Signed in 2005 & 2007

At present there are 9,827 persons employed and in future there will be 13,726 persons employed at various levels in the 50 (20+30) industries surveyed out of 438 (30+408) industries. This means that average total employed (skilled and unskilled) staff & workers is 196.54 and 274.52 persons per unit. The number of units expected in Vadodara district is 438 units (30+408) (MOUs & medium and large scale units) and hence the total requirement of

skilled and unskilled persons works out to 86,084 for the base year (2007-08) and 12,024 numbers for the fifth year (2013) respectively. An additional 93,520 small scale industries workers in the base year and in future 1,30,928 small scale factory workers will be required; the anticipated demand works out to 1,79,604 for present and 2,51,168 for future.

There will be indirect employment generation in various activities like goods transport, dhabas, pan shops, various contract works, travel service, workshops for automobile repairs, steel fabrication, engineering works, machinery works, machinery parts, material supply business and many other activities due to industrial growth in the district. Taking the figures of indirect employment at 20% of the total of the above figures, the growth in the indirect employment can be expected around 35,920 for the base year and 50,234 for the future. Hence the overall employment generation in Vadodara district due to the industrial growth can be anticipated around 2,15,525 employees at present and 3,03,402 employees in future.

Details of 20 units surveyed are presented in table 5.3 on the basis of this sample survey conducted. The manpower requirement of 50 units which includes even those units that are in the pipeline has been derived as under.

Table 5.3 Anticipated Requirement of Manpower after MOUs Signed In 2005 and 2007 of Vadodara District

Level of Education	Qualification	Present Requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	5	18
	M.Sc.	14	32
	M.Tech.	2	9
Sub-total:		21	59
Degree	Electrical	5	18
	Civil	2	7
	I & C	1	29
	Mechanical	9	37
	Electronics	3	65
	Computer	-	59
	IT	3	75
	Ceramics	1	2
	Chemical	18	32
	Automobile Engg.	2	3
	Environmental Engg.	2	3
	Food Processing Technology	-	4
	Production Engg.	7	17
	Industrial Engg.	3	4
	Others	16	28
Sub-total:		73	283
Diploma	Electrical	14	36
	Civil	3	4
	I & C	4	46
	Mechanical	16	51
	Electronics	5	81

	Computer	3	74
	Ceramics	1	5
	Chemical	28	42
	Automobile Engg.	2	3
	Fabrication technology	8	21
	IT	4	98
	Textile technology	-	2
	Others	27	45
Sub-total:		115	508

ITI Trade	Turner	44	100
	Fitter	33	80
	Wireman	23	93
	Welder	18	53
	Electrician	21	85
	Mechanic (Motor vehicles)	4	28
	Mechanic (Electronics)	3	46
	Mechanic (Instruments)	22	28
	Machinist	36	133
	Chemical Plant Operator	10	33
	Pump Mechanic	7	25
	Fireman	1	28
	Lift Mechanic	-	10
	Lab Assistant	31	74
	Painter	6	28
	Plumber	23	61
	Mechanic (Tractor/Diesel)	16	49
	Networking Technicians	-	24
	Motor Rewinding	3	26
	Stenographer	27	74
	Mechatronics	4	37
	Basic Sheetmetal Fabricn.	4	18
	Basic Turning / Grinding	5	15
Weaving/Loom Operator	-	2	
Others	22	59	
Sub-total:		368	1209
Graduates/ Others	B.Sc. / B.A. etc.	54	136
	B.Com. / M.Com.	30	180
	BCA	3	29
	Undergraduates	31	140
	Gardener/Peon/Packing staff	150	317
	Security	71	169
Sub-total:		339	971
TOTAL:	Unskilled	834	2143
	Skilled	916	3030
	TOTAL	1750	5173

Details of 30 medium and large scale units surveyed are presented in Table 5.4. On the basis of this sample survey conducted, the manpower requirement of 408 units which includes even those units that are in the pipeline has been derived as under.

*Table 5.4 Anticipated Requirement of Manpower
Of Medium and Large Scale Industries*

Level of Education	Qualification	Present requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	25	25
	M.Sc.	35	39
	M.Tech.	13	14
Sub-total:		73	78
Degree	Electrical	31	31
	I & C	15	15
	Mechanical	62	63
	Electronics	9	11
	Computer	10	10
	I T	4	4
	Ceramics	2	2
	Chemical	51	52
	Metallurgy	4	4
	Textile Technology	4	4
	Automobile Engg.	3	3
	Environmental Engg.	5	5
	Food Processing Tech.	2	2
	Production Engg.	20	20
	Industrial Engg.	5	5
Others	37	41	
Sub-total:		265	271
Diploma	Electrical	71	72
	Civil	2	2
	I & C	29	29
	Mechanical	127	127
	Electronics	14	14
	Computer	13	13
	IT	5	5
	Ceramics	1	1
	Chemical	99	101
	Automobile Engg.	2	2
	Textile Technology	4	4
	Fabrication technology	20	20
	Dress Designing	1	1
	Others	59	64
Sub-total:		447	64
ITI Trade	Turner	246	261
	Fitter	170	217

	Wireman	72	117
	Welder	53	88
	Electrician	71	112
	Mechanic (Motor vehicles)	13	22
	Mechanic (Electronics)	15	23
	Mechanic (Instruments)	90	125
	Machinist	159	205
	Chemical Plant Operator	64	100
	Pump Mechanic	24	40
	Fireman	4	6
	Lab Assistant	96	141
	Painter	27	41
	Plumber	70	105
	Mechanic (Tractor/Diesel)	84	115
	Embroidery	2	3
	Networking Technicians	10	13
	Motor Rewinding	31	44
	Stenographer	55	98
	Mechatronics	12	18
	Basic CNC	18	30
	Basic Sheetmetal Fabricn.	10	13
	Basic Turning / Grinding	34	49
	Weaving Loom Operators	4	6
	Others	67	114
	Sub-total:	1508	2153
Graduates/ Others	B.Sc. / B.A. etc.	249	253
	B.Com. / M.Com.	153	155
	BCA	20	21
	Undergraduates	75	171
	Gardener/Peon/Packing staff	478	602
	Security	286	360
	Sub-total:	1261	1557
TOTAL:	Unskilled	4523	4045
	Skilled	3554	4508
	TOTAL (skilled + unskilled)	8077	8553
GRAND TOTAL	Table 5.3	1750	5173
	Table 5.4	8077	8553
	TOTAL (Skilled & Unskilled manpower)	9827	13726

Addressing the Manpower Requirement in Industries

Coming Up in Vadodara District

Datamation Research Analyst (DRA), New Delhi has carried out a sample survey of 20 MOUs signed (with entrepreneurs) and 30 units of medium and large scale industries (total 50) in Vadodara district and on the basis of that they have made a future forecast (for next five years) i.e. year 2013 of manpower requirement for 30 MOUs and 408 units of medium and large scale (total 438 units). According to this survey the requirement of manpower in the ITI trades is

anticipated to be around 16434 for the base year (2007-08) and 29451 for future (2013). The table 5.4 presented above gives a picture of the anticipated manpower requirement. The table 5.5 presented below gives a picture of the anticipated manpower requirement for present and future seats available in the ITIs, Grants in Aid, ITC, Self Finance Institutions in Vadodara district and skill gaps.

Table 5.5 ITI Trade-wise no. of Manpower Requirement, no. of Seats Available and Skill Gaps in Vadodara District

Trade	Base year (2007-08)			Next 5 yrs (2013)		Year-wise breakup of projection				
	Man-power Requirement	Seats available in ITI / SF etc.	Skill Gap (2-3)	Projected Requirement	Skill Gap (5-3)	2008-09	2009-10	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10	11
Turner	2540	176	2364	3162	2986	450	500	575	675	786
Fitter	1778	864	914	2601	1737	300	325	350	375	387
Wireman	832	592	240	1840	1248	175	200	225	300	348
Welder	622	348	274	771	423	60	70	90	100	103
Electrician	805	432	373	1235	803	115	130	170	190	198
Mech. (instumnt)	981	880	101	1340	460	60	70	95	105	130
Machinist	1708	72	1636	2961	2889	450	500	575	680	684
Chem. Plant Op.	648	16	632	1165	1149	150	175	215	275	334
Lab Asst.	1112	80	1032	1883	1803	300	325	350	400	428
Plumber	814	16	798	1454	1438	200	250	275	350	413
Mech. Tractor	876	192	648	1436	1244	175	200	225	300	344
Basic CNC	158	-	158	263	263	30	35	50	55	93
Basic Turning/ Grinding	342	24	318	560	536	60	70	105	115	186
Others	3218	2988	230	8780	5792	900	1000	1150	1350	1392
Total:	16434	6680	9754	29451	22771	3395	3850	4450	5270	5826

Table 5.6 Details of Seats Available and Proposed Increase in Seats in Various ITIs of Vadodara District

Sr. No.	Name of Institute	Seats Available	Proposed increase (Base year 2007-08)
1.	ITI, Tarsali	1788	400
2.	ITI, GITW, Gorwa	720	250

3.	ITI, Dashrath	640	300
4.	ITI, Naswadi	212	150
5.	ITI, Chhota Udepur	140	200
6.	ITI, Sankheda	224	225
7.	ITI, Padra	168	250
8.	ITI, Jabugam	224	250
9.	ITI, Vaghodia	88	250
10.	ITI, Savli	272	250
11.	GIA, ITC, Akrahim, Vadodara	197	225
12.	GIA, ITC, Kavant	56	150
13.	GIA, ITC, Vaghodia	32	230
14.	GIA, ITC, Miyagam Karjan	96	200
15.	GIA, ITC, Dabhoi	128	240
16.	GIA, ITC, Kayavarohan	168	250
17.	GIA, ITC, Mobha Road, Vakal	96	240
18.	GIA, ITC, Raktapitta, Vadodara	40	240
19.	SFI, ITC, IS Centre, Vadodara	288	200
20.	SFI, TY Club, C Trust, Vadodara	65	200
21.	SFI, TY Club, C Trust, Vadodara	56	200
22.	SFI, TY Club, C Trust, Vadodara	52	200
23.	SFI, IHRF, Vadodara	97	200
24.	SFI, PHTC, Bhayali	64	200
25.	SFI, Shri Chimanbhai, Udyognagar	88	200
26.	SFI, VSL, Vadodara	150	150
27.	SFI, MS Patel, ET, Vadodara	48	110
28.	SFI, DE & CT, Vadodara	20	150
29.	SFI, Jindal Hotel Ltd., Vadodara	50	129
30.	SFI, Shri SE & CT, Vadodara	10	50
31.	SFI, Shri SE & CT, Vadodara	20	80
32.	SFI, Smt. SUET, Vadodara	20	80
33.	SFI, SNT, Vadodara	16	120
34.	SFI, Shri AMKK, Vadodara	16	120
35.	SFI, AILSG, Ajwa	50	120
120	SFI, IFS&DM, Gotri	50	120
37.	SFI, GMT&C, Dathpura	64	115
38.	SFI, VJSSM, Khatambha	56	115
39.	SFI, Shri KMM. Motakurana	64	115
40.	SFI, Shri BS & SM Patel, ITC, Sadhi	32	115
41.	SFI, MDSC & SET, ITC, Karjan	20	110
42.	2 new SFIs (expected)	-	400
43.	4 new ITI of PPP model (expected)	-	1800
	Total:	6680	9754

Note: As per personal discussions at the time of field survey.

Strategies to Address Future Manpower Requirement in Vadodara District

1. Majority of the projects proposed are to be established in Vadodara, Savli, and Padra talukas and cluster pocket areas;
2. Majority of the projects are based on biotechnology, bio-parks, agro food processing, chemicals & petrochemicals, automobile engineering, IT and pharmaceuticals;

3. It is proposed to invite offers from private organizations to start self finance institutions in Vadodara district, particularly in important trades like turner, fitter, wireman, welder, electrician, machinist, lab assistant and chemical plant operators. 2200 new seats will be introduced with new SFIs;
4. Additional short term courses are required to meet the industrial manpower requirement. There is a shortage of biotechnology, technical and managerial, tourism and hotel management, hospitality management and food cooking;
5. There is a need of strengthening or upgrading chosen industrial training institutes into centres of excellence (CoE). Four ITIs are to be developed under PPP model schemes for skilled manpower requirement of the district.

GENERAL FIELD OBSERVATIONS, SUMMARY AND SUGGESTIONS

In addition to the analysis based on the field data and entrepreneurs' opinions given in the report, a few general observations, suggestions and summary are given below:

1. Looking at the potential of Gujarat vocational education demand market, the industries across sectors are reeling under huge crunch of non availability of desired workforce even as educational institutes are churning out freshers each year. Lack of required communication skills and aptitude accounts for most of the candidates being rejected by employers. For bridging employers & employable gap, it is suggested that ITIs be developed to provide such type of short courses like soft skill communication and languages training, English craft, retail craft, career craft, word craft and ID craft (instructional design craft).
2. Need of management courses: There is a need for managing crash courses in various sectors like ports, power, oil and gas, shipping and logistics which are facing severe shortage of skilled managers with knowledge of these industries. These are critical sectors which are essential for the Gujarat growth story to continue. Since these courses are industry specific there is a dearth of appropriate faculty. Therefore there is need for courses that prepare a student with the help of industries' sponsorship which is a kind of bonus along with promise of employment.

34.	Motor vehicle mechanic	-	48	-	-	32	32	-	32	-	32	176
35.	Dress making	-	32	-	-	-	-	-	-	-	-	32
36.	CoE Chemical (Advance)	-	-	96	-	-	-	-	-	-	-	96
37.	Mechanic – Diesel	-	-	48	-	32	32	-	32	-	-	144
38.	Instrument Mech. (Chemical)	-	-	32	-	-	-	-	-	-	-	32
39.	Cutting / Sewing	-	-	-	32	-	-	-	-	-	32	64
40.	Tractor Mechanic	-	-	-	-	-	-	-	-	-	16	16
41.	DTP Operator	-	-	-	-	-	-	-	-	-	-	-
42.	Book Binding	-	-	-	-	-	-	-	-	-	-	-
43.	Embroidery Needle works	-	-	-	-	-	-	-	-	-	-	-
44.	RFM	-	-	-	-	-	-	-	-	-	-	-
45.	AOCM	-	-	-	-	-	-	-	-	-	-	-
46.	Plumber	-	-	-	-	-	-	-	-	-	-	-
47.	Auto Elec. Mechanic	-	-	-	-	-	-	-	-	-	-	-
48.	Lift Maintenance Mechanic	-	-	-	-	-	-	-	-	-	-	-
49.	Computer teaching	-	-	-	-	-	-	-	-	-	-	-
50.	Network technician	-	-	-	-	-	-	-	-	-	-	-
51.	Tel. - mobile phone repairing	-	-	-	-	-	-	-	-	-	-	-
52.	Medical Lab. Technology	-	-	-	-	-	-	-	-	-	-	-
53.	Old age Care	-	-	-	-	-	-	-	-	-	-	-
54.	Insurance Agent	-	-	-	-	-	-	-	-	-	-	-
55.	Hair & Skin Care	-	-	-	-	-	-	-	-	-	-	-
56.	Fireman	-	-	-	-	-	-	-	-	-	-	-
57.	Food & Beverages	-	-	-	-	-	-	-	-	-	-	-
58.	Food production	-	-	-	-	-	-	-	-	-	-	-
59.	Preparatory School Mangmnt.	-	-	-	-	-	-	-	-	-	-	-
60.	Safety/Security Course	-	-	-	-	-	-	-	-	-	-	-
	Total:	1788	720	640	212	140	224	168	224	88	272	4476

36.	CoE Chemical (Advance)	-	-	-	-	-	-	-	-	-
37.	Mechanic – Diesel	32	-	-	-	-	-	-	-	32
38.	Instrument Mech. (Chemical)	-	-	-	-	-	-	-	-	-
39.	Cutting / Sewing	-	16	-	-	-	-	-	10	26
40.	Tractor Mechanic	-	-	-	-	-	-	-	-	20
41.	DTP Operator	-	20	-	-	-	-	-	-	-
42.	Book Binding	-	-	-	-	-	-	-	10	10
43.	Embroidery Needle works	-	-	-	-	-	-	-	10	10
44.	RFM	-	-	-	-	-	-	-	-	-
45.	AOCM	-	-	-	-	-	-	-	-	-
46.	Plumber	-	-	-	-	-	-	-	-	-
47.	Auto Elec. Mechanic	-	-	-	-	-	-	-	-	-
48.	Lift Maintenance Mechanic	-	-	-	-	-	-	-	-	-
49.	Computer teaching	-	-	-	-	-	-	-	-	-
50.	Network technician	-	-	-	-	-	-	-	-	-
51.	Tel. - mobile phone repairing	-	-	-	-	-	-	-	-	-
52.	Medical Lab. Technology	-	-	-	-	-	-	-	-	-
53.	Old age Care	-	-	-	-	-	-	-	-	-
54.	Insurance Agent	-	-	-	-	-	-	-	-	-
55.	Hair & Skin Care	-	-	-	-	-	-	-	-	-
56.	Fireman	-	-	-	-	-	-	-	-	-
57.	Food & Beverages	-	-	-	-	-	-	-	-	-
58.	Food production	-	-	-	-	-	-	-	-	-
59.	Preparatory School Mangmnt.	-	-	-	-	-	-	-	-	-
60.	Safety/Security Course	-	-	-	-	-	-	-	-	-
	Total:	197	56	32	96	128	168	96	40	808

31.	Chem Plant Op	-	-	-	-	-	-	-	-	-	-	-	-	-
32.	Chem Plan Mech	-	-	-	-	-	-	-	-	-	-	-	-	-
33.	E-Commerce	-	-	-	-	-	-	-	-	-	-	-	-	-
34.	Motor mech	-	-	-	-	-	-	-	32	-	-	-	-	-
35.	Dress making	-	-	-	-	-	16	-	-	-	-	-	-	-
36.	CoE Chem (Adv)	-	-	-	-	-	-	-	-	-	-	-	-	-
37.	Mechanic – Diesel	-	-	-	-	-	-	-	-	-	-	-	-	-
38.	Instru Mech. (Chem)	-	-	-	-	-	-	-	-	-	-	-	-	-
39.	Cutting/ Sewing	-	-	-	-	-	-	-	-	20	-	-	-	-
40.	Tractor Mech	-	-	-	-	-	-	-	-	-	-	-	-	-
41.	DTP Op	-	-	16	20	-	-	-	-	-	-	-	-	-
42.	Book Binding	-	-	-	-	-	-	-	-	-	-	-	-	-
43.	Embroidery	-	-	-	-	-	16	-	-	-	-	-	-	-
44.	RFM	32	-	-	-	-	-	-	-	-	-	-	-	-
45.	AOCM	32	-	-	-	-	-	-	-	-	-	-	-	-
46.	Plumber	16	-	-	-	-	-	-	-	-	-	-	-	-
47.	Auto Elec. Mech	16	-	-	-	-	-	-	16	-	-	-	-	-
48.	Lift Mechanic	16	-	-	-	-	-	-	-	-	-	-	-	-
49.	Comp teaching	-	-	20	-	-	-	-	-	-	-	-	-	-
50.	Network tech	-	-	-	16	-	-	-	-	-	-	-	-	-
51.	Tel/mobile repair	-	-	-	16	-	-	-	-	-	-	-	-	-
52.	Med Lab. Tech	-	-	-	-	40	-	-	-	-	-	10	-	-
53.	Old age Care	-	-	-	-	32	-	-	-	-	-	-	-	-
54.	Insurance Agent	-	-	-	-	25	-	-	-	-	-	-	-	-
55.	Hair Skin Care	-	-	-	-	-	16	-	-	-	-	-	-	-
56.	Fireman	-	-	-	-	-	-	150	-	-	-	-	-	-
57.	Food & Beverages	-	-	-	-	-	-	-	-	-	25	-	-	-
58.	Food production	-	-	-	-	-	-	-	-	-	25	-	-	-
59.	School Mangmnt.	-	-	-	-	-	-	-	-	-	-	-	-	-
60.	Security Course	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total:	288	65	56	52	97	64	88	150	48	20	50	10	20

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33.	E-Commerce	-	-	-	-	-	-	20	-	-	-	20	48	68
34.	Motor mech	-	-	-	-	-	-	16	-	-	-	48	176	224
35.	Dress making	-	-	-	-	-	-	-	-	-	-	16	32	48
36.	CoE Chem (Adv)	-	-	-	-	-	-	-	-	-	-	-	96	96
37.	Mechanic – Diesel	-	-	-	-	-	-	-	-	-	-	-	176	176
38.	Instru Mech. (Chem)	-	-	-	-	-	-	-	-	-	-	-	32	32
39.	Cutting / Sewing	-	-	-	-	-	-	-	16	-	-	36	58	94
40.	Tractor Mech	-	-	-	-	-	-	-	-	-	-	-	16	16
41.	DTP Op	-	-	-	-	-	-	-	-	-	-	36	20	56
42.	Book Binding	-	-	-	-	-	-	-	-	-	-	-	10	10
43.	Embroidery	-	-	-	-	-	-	-	-	-	-	16	10	26
44.	RFM	-	-	-	-	-	-	-	-	-	-	32	-	32
45.	AOCM	-	-	-	-	-	-	-	-	-	-	32	-	32
46.	Plumber	-	-	-	-	-	-	-	-	-	-	16	-	16
47.	Auto Elec. Mech	-	-	-	-	-	-	-	-	-	-	32	-	32
48.	Lift Mechanic	-	-	-	-	-	-	-	-	-	-	16	-	16
49.	Comp teaching	-	-	-	-	-	-	-	-	-	-	20	-	20
50.	Network tech	-	-	-	-	-	-	-	-	-	-	16	-	16
51.	Tel/mobile repair	-	-	-	-	-	-	-	-	-	-	16	-	16
52.	Med Lab. Tech	20	-	-	-	-	-	-	-	-	-	70	-	70
53.	Old age Care	-	-	-	-	-	-	-	-	-	-	32	-	32
54.	Insurance Agent	-	-	-	-	-	-	-	-	-	-	25	-	25
55.	Hair Skin Care	-	-	-	-	-	-	-	-	-	-	16	-	-
56.	Fireman	-	-	-	-	50	-	-	-	-	-	200	-	200
57.	Food & Beverages	-	-	-	-	-	-	-	-	-	-	25	-	25
58.	Food production	-	-	-	-	-	-	-	-	-	-	25	-	25
59.	School Mangmnt.	-	16	16	-	-	-	-	-	16	-	48	-	48
60.	Security Course	-	-	-	50	-	-	-	-	-	-	50	-	50
	Total:	20	16	16	50	50	64	56	64	32	20	1396	5284	6680

Source: Directorate of Employment and Training, GOG, Gandhinagar.

Vibrant Gujarat Investors' Summit 2005 & 2007 MOUs – Vadodara District
List of the Industries Selected for Field Survey

1. Akruti-Nirma TCG Group
2. MD Bio, Vadodara
3. Intex Biotech Pvt. Ltd., Vadodara
4. BDR Pharmaceuticals, Vadodara
5. GSFC Melamine, Vadodara
6. GSFC, Biodegradable Polymers
7. GSFC Methanol
8. Kiri Dyes and Chemicals Ltd.
9. Bodal Chemicals Ltd.
10. Shaily Engin - Plastics
11. Suzlon Group Industries
12. L & T Ltd.
13. Urja Mandir Agro Park Co. Gen Pvt. Ltd.
14. Greenfield Hydroponics (Canada)
15. Grishma Global Technologies
16. Patel & Kothari Industrial Park Pvt. Ltd.
17. Late Ramsingh Chhajurmal, Vadodara
18. Nipiam Infotech Pvt. Ltd.
19. Apicore LLC
20. Adani Group

Presently Functioning Medium & Large Scale Industries in Vadodara District
List of the Industries Selected for Field Survey

21. Adya Oil and Chemicals Ltd.
22. Ambalal Sarabhai Enterprise Ltd.
23. Peniciline India Ltd.
24. Aptek Computers Pvt. Ltd.
25. Asea Brown Boveri Ltd.
26. Ashok Organic Industries
27. Baroda District Coop. Milk Production Union Ltd.
28. Bharat Starch Industries Ltd.
29. Chemstar Organic Pvt. Ltd.
30. Deepak Nitrate Ltd.
31. Durga Scientific Ltd.
32. Excel Bearing Pvt. Ltd.
33. Fortune Infotech Ltd.
34. GE Plastics (India) Ltd.
35. Grashim Industries Ltd.
36. Gujarat Metall Cost Industries
37. Gujarat Narmada Kneatware Ltd.
38. Himalaya Machinery Pvt Ltd.
39. Hindustan Packaging Industries Ltd.
40. Indian Dyestuff Industries Ltd.
41. Jayant Agro Organic Ltd.
42. L&T Nero Ltd. IEM, Ranoli
43. Nirma Ltd.
44. Modern Petrofils
45. Narmada Oil Refinery Ltd.
46. Pan Drugs Ltd.
47. Bubamin Pharmaceuticals Co. Ltd.
48. Star Steel Private Ltd.
49. Sterling Gelatin (Biotech Division)
50. Torrent Gujarat Biotech Ltd.

BHARUCH DISTRICT ANALYSIS BASED ON SAMPLE SURVEY

PROFILE OF BHARUCH DISTRICT

Location and Administration

Bharuch district is bounded by Vadodara district in the north, Surat district in the south, Narmada district in the east and the entire border of western part is having potential aquaculture area of Gulf of Cambay in Arabian Sea. The district is also potential agriculture zone of South Gujarat.

Bharuch district can be conveniently divided into three regions geographically, topographically and economically as well as from the resources point of view. The intra-regional differences have considerable bearing on the strategy of planning and on the formation of development programme. These three regions are as under:

(i) Eastern Region

This portion of the district comprises of Zagadia and Valia talukas. The region is partly covered with forests and also has a mountain range. It is inhabited by Scheduled Tribes and is declared as tribal area. Zagadia and Valia talukas are having good agricultural potentiality.

(ii) Western Region

The region known as “Bara Vibhag” consists of Jambusar, Vagra and Amod talukas. This region has 85 km coastal line at the Gulf of Cambay Industrial Area of Dahej and is now developing very fast.

(iii) Central Region

The Central Region of the district covers Ankleshwar and Bharuch talukas which are industrially developed in comparison to other talukas. The industrial area of Dahej is also developing very fast. The oil fields of Ankleshwar and Gandhar have put Gujarat on the oil map of India. The black soils of this region are very fertile and conducive to cotton, tur and banana crop cultivation.

From the administration point of view the district is divided into 8 talukas, of which 2 are tribal dominated. The district has an area of 5247 sq.km. and according to 2001 census it is inhabited by 13,70,104 persons. Thus, the density of the population in the district is 261 per sq.km. Rural population is 74.25% of the total population of the district. SC and ST population forms 5.05% and 34.06% of the total population respectively. In two tribal talukas viz. Zagadia and Valia, 70.44% of the total population belongs to Scheduled Tribes.

Occupation Distribution

The district has a working population of 5.70 lakh, of which 55.12% is engaged in agriculture and allied activities and 44.48% is engaged in industries, trades and others. This indicates the relative significance of the agriculture sector amongst all the sectors of the district economy, a

development of which holds the key for achieving faster growth of the district in general and improvement of the socio-economic status of the majority of the district in particular.

Water Resources

Rivers Narmada, Dhadhar, Karjan and Kaveri are perennial sources of water. Besides these rivers, Buva, Bhukhi Khadi, Amalkhadi, Nahier and Vankhadi are flowing streams through the district and in some of these streams water flows throughout the year.

Climate and Rainfall

The climate of the district is generally warm and dry hot. Summer commences in the month of March and extends upto May. The south west monsoon brings rain during June to September which is followed by brisk winter from November to February. The average rainfall in the district varies from 300 mm to 1100 mm.

INFRASTRUCTURE

Industries

Bharuch district is progressing well towards industrial development. At present there are 137 large and medium size industrial units and 9940 small scale units in the district. Many large scale and multinational units are coming up around Zagadia, Vagra and Dahej. Ankleshwar Industrial Estate is the biggest industrial estate of Asia. 16 industrial estates are developed by GIDC at Ankleshwar, Panoli, Bharuch, Palej, Jambusar, Zagadia, Valia, Vilayat and Dahej for the fast industrialization in the district. One cooperative industrial estate is also developed in Bharuch. These estates have provided good opportunity for employment to the people.

Transport and Communication

Roads and Railways

The transport and communication facilities are a prerequisite for development of commercial activities in a region. These facilities in Bharuch district have shown a very impressive improvement over the past decade. The total road length in the district has increased. The district has the benefits of both broad gauge and narrow gauge railway lines.

There is one major port viz. Dahej in the district. Construction material and chemical fertilizers are the main items imported and exported at this port. 93 branches of commercial banks, 45 district cooperative banks, 8 land development banks and 22 regional rural banks are contributing to an overall economic development of the district.

Methodology of Assessment

For the selection of sample industries listing of all MOUs of Vibrant Gujarat Global Investors' Summit 2005 and 2007 with Summit of Information Technology, Urban Development and Tourism Industries was done on the basis of sector-wise list collected from Industries Commissionerate, Gandhinagar and respective nodal departments as well as the District Industry Centre, Bharuch. Thus, in all 53 entrepreneurs were selected for indepth study. The details regarding sectors, number of entrepreneurs etc. are given in the following table 5.1. The data from entrepreneurs were collected through structured questionnaires.

Table 5.1 Sector-wise number of MOUs

Sr. No.	Sector	Sample size (No. of MOUs)	Remarks
----------------	---------------	----------------------------------	----------------

		Visited	
1.	Chemicals & Petrochemicals	11	(1) 7 not responding due to being out of district (2) 12 not responding due to being out of Gujarat/abroad; and (3) 7 Due to being multidistrict and responsible person not available.
2.	SEZs	8	
3.	Automobile Engineering	3	
4.	Oil and Gas	2	
5.	Port	1	
6.	Power	1	
7.	Paper industries	1	
	Total	27	
8.	Presently functioning (Existing)	30	Medium & large scale units

Sample Selection for Presently Functioning Large & Medium Scale Industries

For the selection of sample industries Random Sampling Technique was adopted. Selection of sample industries was done randomly on the basis of sector-wise list of medium and large scale units collected from District Industry Centre Bharuch), Chamber of Commerce and Industries (Bharuch) and GIDC (Gandhinagar). From medium and large scale units 30 entrepreneurs were selected by random sampling method for indepth study.

Accordingly, 40 enterprises (MOUs) were visited but due to wrong addresses 5 units could not be contacted as per the entrepreneurs' list provided by IC. The remaining 4 entrepreneurs on personal visits informed that they required time and they will send information within a few days and there was no response from them later. The survey methodology was visiting of industries personally, meeting the responsible person; explaining regarding the survey with a request for cooperation in providing the information. As the data were not readily available at most of the units or the responsible person was not available at the time of the visit of the survey team a second or even at times a third visit was most essential to collect the data from maximum number of units.

Reference Period

In order to have proper assessment of human resources development employment generation of the project at present i.e. reference year 2007-08 and future i.e. next five years (2013) were taken. In medium and large scale industries presently functioning units were selected on the basis of the secondary data provided by DIC and Chamber of Commerce and Industries, Bharuch and GIDC, Gandhinagar. The field work was carried out during the month of March 2008.

Observation on the Sample Survey Data

As per the terms of reference, 27 MOUs and 30 medium and large scale units signed in 2005 and 2007 were to be visited for manpower demand survey assessment. Accordingly, 27 MOUs and 30 present industries/units were visited, but due to wrong address, contact persons being out of state/district, others being not available. The entrepreneurs were interviewed in field units (factory sites) or offices to get information as per the proforma when the personal visit was made for the survey. In most of sites the industries (units) were functioning (Non-MOUs) well. Details regarding the total no. of employees, no. of skilled workers, no. of graduates employed in the units, anticipated manpower requirement in future i.e. next five years (2013), post graduates, degree/diploma holders, ITI trade and other graduates, lack of knowledge, lack of skills etc. were collected. Some quantitative data, semi quantitative and qualitative

assessments on other aspects could be drawn from the interaction with the concerned entrepreneurs and the same are included in the survey results of this report.

Table 5.2 Sector-wise Profiles of MOUs signed in 2005 & 2007 and Manpower Requirement

Sr. No.	Sector	No. of Projects			Manpower Requirement		
		2005	2007	Total	2005	2007	Total
1.	Chemical/Petrochemical	3	16	19	425	4356	4781
2.	SEZs	-	8	8	-	305256	305256
3.	Port	4	1	5	920	400	1320
4.	Automobile engineering	2	3	5	-	715	715
5.	Agro & Food Processing	1	3	4	-	500	500
6.	Textile and Apparels	-	3	3	-	2600	2600
7.	Power	1	1	2	-	1000	1000
8.	Roads and Railways	1	1	2	-	-	-
9.	Oil and Gas	-	1	1	-	25	25
10.	Civil Aviation	-	1	1	-	100	100
11.	Paper Industries	-	1	1	-	800	800
12.	Pharmaceuticals	-	1	1	-	1015	1015
13.	Other sectors	1	-	1	-	-	-
	Total:	13	40	53	1345	316769	318112

* Including multidistrict projects.

Source: Industries Commissionerate, GOG, Gandhinagar.

Summary and Field Observations of the District

7. 53 projects are expected to be set up in the district.
8. The largest number of projects has been witnessed in the chemical and petrochemical sectors (19).
9. The district is well connected via National Highway No.8 that connects Ahmedabad and Mumbai via Bharuch.
10. A broad gauge railway line also connects Bharuch to several cities in Gujarat and also to Mumbai.
11. The nearest port is Dahej and the nearest airports are Ahmedabad (175 km) and Vadodara (69 km).

Manpower Requirement in Bharuch District from MOU 2005 and 2007

3. With 53 projects, the district has total manpower requirement of 3,18,112 technical, managerial and unskilled workers.
4. Largest investment is in the sector of chemicals and petrochemicals (19).

Presently Bharuch district has

- 14 ITIs with an approximate intake of 1050, offering courses in the field of engineering (including textile engineering), IT and chemicals;
- 4 technical institutes with an intake of over 1200 students;
- One college offering MCA to 60 students per year;
- One medical college with 50 seats;
- There is a need for technical manpower including pharmacy, chemistry and hotel management.

Employment Generation in Industries after MOUs Signed in 2005 & 2007

At present there are 8,113 persons employed and in future there will be 13,439 persons employed at various levels in the 57 (27+30) industries surveyed out of 190 (53+137) industries. This means that average total employed (skilled and unskilled) staff & workers is 142.33 and 235.77 persons per unit. The number of units expected in Bharuch district is 190 units (53+137) (MOUs & medium and large scale units) and hence the total requirement of skilled and unskilled persons works out to 23,043 for the base year (2007-08) and 44,796 numbers for the fifth year (2013) respectively. An additional 93,860 small scale industries workers in the base year and in future 1,03,246 small scale industries workers will be required; the anticipated demand works out to 1,20,903 for present and 1,48,042 for future.

There will be indirect employment generation in various activities like goods transport, dhabas, pan shops, various contract works, travel service, workshops for automobile repairs, steel fabrication, engineering works, machinery works, machinery parts, material supply business and many other activities due to industrial growth in the district. Taking the figures of indirect employment at 20% of the total of the above figures, the growth in the indirect employment can be expected around 24,180 for the base year and 29,608 for the future. Hence the overall employment generation in Bharuch district due to the industrial growth can be anticipated around 1,45,083 employees at present and 1,77,650 employees in future.

Details of 27 units surveyed are presented in table 5.3 on the basis of this sample survey conducted. The manpower requirement of 53 units which includes even those units that are in the pipeline has been derived as under.

Table 5.3 Anticipated Requirement of Manpower after MOUs Signed In 2005 and 2007 of Bharuch District

Level of Education	Qualification	Present Requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	3	22
	M.Sc.	3	23
	M.Tech.	1	2
Sub-total:		7	47
Degree	Electrical	5	27
	Civil	3	10
	I & C	2	8
	Mechanical	8	47
	Electronics	-	2
	Computer	-	-
	IT	-	-
	Textile technology	-	-
	Chemical	11	40
	Automobile Engg.	1	3
	Environmental Engg.	1	5
	Food Processing Technology	-	-
	Production Engg.	2	11

	Industrial Engg.	1	4
	Others	1	11
Sub-total:		35	168
Diploma	Electrical	16	60
	Civil	5	15
	I & C	4	16
	Mechanical	24	99
	Electronics	-	1
	Computer	-	2
	Textile technology	-	-
	Chemical	24	84
	Automobile Engg.	1	8
	Fabrication technology	2	13
	IT	-	-
	Mining	3	3
	Others	2	15
Sub-total:		81	299

ITI Trade	Turner	56	165
	Fitter	39	116
	Wireman	18	61
	Welder	15	47
	Electrician	15	55
	Mechanic (AC/Fridge)	-	4
	Mechanic (Motor vehicles)	2	6
	Mechanic (Electronics)	-	-
	Mechanic (Instruments)	20	58
	Machinist	39	108
	Chemical Plant Operator	14	47
	Pump Mechanic	9	27
	Lab Assistant	24	79
	Painter	9	23
	Plumber	21	59
	Mechanic (Tractor/Diesel)	22	52
	Networking Technicians	-	-
	Motor Rewinding	6	16
	Stenographer	27	98
	Mechatronics	-	2
	Basic CNC	-	8
	Basic Sheetmetal Fabricn.	8	26
	Basic Turning / Grinding	6	21
	Embroidery	-	-
	E-commerce	-	-
	Weaving/Loom Operator	-	-
	Others	11	48
Sub-total:		361	1149
Graduates/ Others	B.Sc. / B.A. etc.	43	132
	B.Com. / M.Com.	20	63

	BCA	-	-
	Undergraduates	27	82
	Gardener/Peon/Packing staff	77	273
	Security	35	154
Sub-total:		202	704
TOTAL:	Unskilled	641	2185
	Skilled	868	2367
	TOTAL	1327	4552

Details of 30 medium and large scale units surveyed are presented in Table 5.4 of this report. On the basis of this sample survey conducted, the manpower requirement of 137 units which includes even those units that are in the pipeline has been derived as under.

*Table 5.4 Anticipated Requirement of Manpower
Of Medium and Large Scale Industries*

Level of Education	Qualification	Present requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	7	7
	M.Sc.	56	65
	M.Tech.	8	10
Sub-total:		71	82
Degree	Electrical	36	36
	Civil	36	36
	I & C	1	1
	Mechanical	41	45
	Electronics	16	19
	Computer	10	12
	IT	-	-
	Chemical	45	55
	Metallurgy	3	4
	Textile Technology	6	8
	Automobile Engg.	1	1
	Environmental Engg.	24	27
	Production Engg.	4	5
	Industrial Engg.	30	50
Others	-	-	
Sub-total:		227	273

Diploma	Electrical	46	58
	Civil	6	8
	I & C	1	1

	Mechanical	48	55
	Electronics	14	16
	Computer	12	13
	IT	1	2
	Ceramics	4	5
	Chemical	49	59
	Automobile Engg.	1	2
	Textile Technology	6	8
	Fabrication technology	9	13
	Dress Designing	-	-
	Others	49	73
	Sub-total:	247	313
ITI Trade	Turner	184	259
	Fitter	157	212
	Wireman	92	148
	Welder	112	162
	Electrician	65	100
	Mechanic (AC/Fridge)	14	18
	Mechanic (Motor vehicles)	7	9
	Mechanic (Electronics)	11	18
	Sewing / Dress making	-	-
	Mechanic (Instruments)	31	39
	Machinist	68	92
	Chemical Plant Operator	55	82
	Pump Mechanic	30	46
	Fireman	9	14
	Lift Mechanic	2	3
	Lab Assistant	94	126
	Painter	74	108
	Plumber	92	138
	Mechanic (Tractor/Diesel)	26	36
	Embroidery	2	4
	Networking Technicians	2	3
	Motor Rewinding	6	7
	Stenographer	250	322
	Mechatronics	16	27
	E-commerce	12	20
	Basic CNC	2	2
	Basic Sheetmetal Fabricn.	12	15
	Basic Turning / Grinding	21	31
	Weaving Loom Operators	10	10
	Others	121	179
	Sub-total:	1575	2229

Graduates/ Others	B.Sc. / B.A. etc.	234	285
	B.Com. / M.Com.	52	81
	BCA	13	18
	Undergraduates	319	397
	Gardener/Peon/Packing staff	593	710
	Security	268	369
Sub-total:		1455	1848
TOTAL:	Unskilled	3211	4142
	Skilled	3575	4745
	TOTAL (skilled + unskilled)	6786	8887
GRAND TOTAL	Table 5.3	1327	4552
	Table 5.4	6786	8887
	TOTAL (Skilled & Unskilled manpower)	8113	13439

Addressing the Manpower Requirement in Industries Coming Up in Bharuch District

Datamation Research Analyst (DRA), New Delhi has carried out a sample survey of 27 MOUs signed (with entrepreneurs) and 30 units of medium and large scale industries (total 57) in Bharuch district and on the basis of that they have made a forecast (for next five years) i.e. year 2013 of manpower requirement for 53 MOUs and 137 units of medium and large scale (total 190 units). According to this survey the requirement of manpower in the ITI trades is anticipated to be around 6,452 for the base year (2007-08) and 10,879 for future (2013). The table 5.4 presented above gives a picture of the anticipated manpower requirement. The table 5.5 presented below gives a picture of the anticipated manpower requirement for present and future seats available in the ITIs, Grants in Aid, ITC, Self Finance Institutions in Bharuch district and skill gaps.

Table 5.5 ITI Trade-wise no. of Manpower Requirement,
no. of Seats Available and Skill Gaps in Bharuch District

Trade	Base year (2007-08)			Next 5 yrs (2013)		Year-wise breakup of projection				
	Man- power Require- ment	Seats availabl e in ITI / SF etc.	Skill Gap (2-3)	Projec- ted Requir e ment	Skill Gap (5-3)	2008 -09	2009 -10	2010 -11	2011- 12	2012 -13
1	2	3	4	5	6	7	8	9	10	11
Turner	613	168	445	1413	1245	200	225	250	275	295
Fitter	523	512	11	1093	581	75	100	125	135	146
Wireman	307	512	-205	697	185	20	30	40	45	50
Welder	373	216	157	697	481	50	75	100	125	131
Electricia n	217	320	-103	517	197	25	35	40	45	52
Mech(ins t)	170	176	-6	323	147	15	20	30	40	42

Machinis t	357	148	209	667	519	70	85	110	125	129
Chem. Plant Operator s	200	96	104	430	334	34	45	65	85	105
Mech.pu mp.auto	129	220	-91	243	23	5	5	5	5	3
Lab. Assistant	393	160	233	683	523	72	85	115	120	131
Painter	277	-	277	437	437	50	70	90	110	117
Plumber	377	64	313	657	593	75	105	130	135	148
Steno.	923	16	907	1400	1384	210	240	260	280	394
Mech. Tractor	160	224	-64	260	36	5	5	5	10	11
Mecha- Tronics	54	-	54	97	97	20	20	20	20	17
Basic Turning/ Grinding	90	24	66	173	149	15	20	30	40	44
Basic sheet Metal	67	-	67	137	137	15	18	25	35	44
Others	1222	1116	-106	955	-161	-	-	-	-	-
Total:	6452	3972	2480	10879	6907	956	1183	1430	1630	1708

Table 5.6 Details of Seats Available and Proposed Increase in Seats in Various ITIs of Bharuch District

Sr. No.	Name of Institute	Seats Available	Proposed increase (Base year 2007-08)
1.	ITI, Ankleshwar	2432	210
2.	ITI, Bharuch	180	150
3.	ITI, Valiya	412	125
4.	ITI, Zagadia	224	110
5.	GIA, ITC, Tankariya	80	110
6.	GIA, ITC, Jambusar	104	100
7.	GIA, ITC, Vagra	48	100
8.	GIA, ITC, Gadkhol	108	100
9.	GIA, ITC, Sarbhan	80	100
10.	SFI, AIM, Dehgam	180	110
11.	SFI, MC Trust, Sukaltirth	32	72
12.	SFI, VN Glass, Chavaj	32	72
13.	SFI, PCC, IS Kendra, Bharuch	60	121
14.	2 new SFIs (expected)	-	200
15.	4 new ITI of PPP model (Expected)	-	800
	Total:	3972	2480

Note: As per personal discussions at the time of field survey.

Strategies to Address Future Manpower Requirement in Bharuch District

6. Majority of the projects proposed are to be established in Dahej, Ankleshwar, Bharuch, Panoli estate, Zagadia, Jambusar, Vagra and Valia areas;
7. Majority of the projects are based on chemical & petrochemical, automobile engineering, ports, SEZs, agro food processing, textile & apparels and power;
8. It is proposed to invite offers from private organizations (like Cadila Laboratories, Lupin Laboratories, Godrej Guardian, Sunpharma, GNFC, Videocon, Essar Narmada Camatur etc.) to start self finance institutes in Bharuch industrial area, particularly in important trades like turner, fitter, welder, machinist, chemical plant operator, lab assistant, plumber and stenographer etc. New seats will be introduced through new SF ITIs and PPP model ITIs;
9. Additional short term courses are required to meet the industrial manpower requirement. There is a shortage of masonry workers for construction activities and trained security guards;
10. Skills Development Centres (SDC) should be established at all GIDC's Industrial Estates and SEZs;

GENERAL FIELD OBSERVATIONS, SUMMARY AND SUGGESTIONS

In addition to the analysis based on the field data and entrepreneurs' opinions given in the report, a few general observations, suggestions and summary are given below:

Scope for Job Opportunities

3. Bharuch is one among the top districts having maximum number of people employed in chemical industry, GIDC, Ankleshwar. It is Asia's first chemical industrial zone in Gujarat. GIDC Ankleshwar alone provides employment opportunity to over 13664 persons.
4. Other industrial areas coming up in Bharuch district are Zagadia estate, Panoli estate and Dahej SEZs having 246 medium and large scale units. New parks, estates and SEZs will generate employment for 9239 persons
5. Chemical industries are coming up in the industrial areas of Panoli, Ankleshwar, Zagadia and Dahej SEZ areas.
6. Ceramic and glass industries are coming up in the area of Jambusar and Valia talukas.
7. Agro based and food processing industries area coming up in Zagadia taluka. It is banana growing area and banana is exported from Bharuch.
8. There is a need for hotel management and catering college in SEZ industrial area. For instance, Bharuch has a high number of chemical and petrochemical projects. Further, the district does not have any college/academic institution in the area of pharmacy and hotel management.
9. There is a need for technical manpower in the areas of pharmacy, chemistry and hotel management.
10. As in other states, Gujarat also witnesses inter-district movement of workforce. However, an important motive of the new projects is to provide employment to the local populace.
11. Technical, managerial and unskilled manpower requirement for Bharuch district is also the highest. Therefore, there is a need for suitable short courses for skilled labour for generation of employment.

37.	2-wheeler repairer (TASP)	16	-	20	-	36	-	-	-	-	-	-	-	-	-	-	-	36	
38.	Steno/Computer Operator (English)	16	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16	
39.	Machinist	36	-	-	-	36	-	-	-	-	-	-	-	-	-	-	-	36	
40.	Plastic processing Operator	16	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16	
41.	Diesel mechanic (TASP)	144	-	32	-	176	-	-	16	-	-	16	32	-	-	-	32	224	
42.	Draughtsman (mech.)	64	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	64	
43.	Draughtsman (civil) (TASP)	16	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16	
44.	Instrument mechanic (TASP)	48	-	-	-	48	-	-	-	-	-	-	-	-	-	-	-	48	
45.	Computer Operator/ Programming (TASP)	40	40	40	-	120	-	-	-	-	-	-	-	-	-	-	-	120	
46.	Machinist (TASP)	24	-	24	-	48	-	-	-	-	-	-	-	-	-	-	-	48	
47.	Welder	36	-	-	-	36	-	-	-	-	-	-	-	-	-	-	-	36	
48.	Wireman (TASP)	64	-	64	-	128	-	-	-	-	-	-	-	-	-	-	-	128	
49.	Lab Assistant (Chem. Plant)	64	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	64	
50.	IT/Electronic system maintenance	40	-	-	-	40	-	-	16	-	-	16	-	-	-	20	20	76	
51.	Mechanic – Auto electric/electronics	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	16	16
52.	Mech. Technology glass industry	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	32	32	

Source: Directorate of Employment and Training, GOG, Gandhinagar.

Vibrant Gujarat Investors' Summit 2005 & 2007 MOUs – Bharuch District
List of the Industries Selected for Field Survey

51. Godrej Industries Pvt. Ltd.
52. Hevbach Colour Pvt. Ltd.
53. Aarti Industries Ltd.
54. Gujarat Narmadavalley Fertilizer Corporation
55. Narmada Chematur
56. Sajjan Industries Lt;d., Dahej
57. Sulfaclunt Specialities Ltd.
58. Tagros Chemicals
59. Universal Chemicals, Dahej
60. Parikh Enterprise Pvt. Ltd.
61. Meghmani Organic Ltd.
62. Dahej SEZ Ltd.
63. Zagadia GIDC, Shilpgram, Zagadia
64. JB Chemicals & Pharmaceuticals
65. Jubilant Infrastructure Ltd. (Chemical)
66. Jubilant Infrastructure Ltd. (Pharma)
67. Jayant Oil and Derivatives
68. Sterling Biotech
69. Sanghi Industries Ltd.
70. Dahej SEZ Ltd.
71. Gujarat Borosil Ltd.
72. Birla Cellulose
73. AIA Engineering Pvt. Ltd.
74. John Energy Ltd.
75. Gujarat Gas Company Ltd.
76. Riye Ramani, UK
77. Pragati Paper Industries Ltd.

Presently Functioning Medium & Large Scale Industries in Bharuch District
List of the Industries Selected for Field Survey

78. Jhaveri Polymers Ltd.
79. NTPC
80. Phillips Carbon Black Ltd.
81. Abbot Laboratory (I) Ltd.
82. Adi Rasayan Ltd.
83. Ambeshwar Paper Mills Ltd.
84. Anil Chemicals & Industries Ltd.
85. Ashok Organic Industries Ltd.
86. Asian Paints (India) Ltd.
87. Cadila Pharmaceuticals Ltd.
88. Deepak Synthetics Pvt. Ltd.
89. Ficom Organic Ltd.
90. Glaxo India Ltd.
91. Gujarat Insecticides Ltd.
92. Gujarat Organics Ltd.
93. Kachins Textile Ltd.
94. Kanoria Chemicals & Industries
95. Luna Chemical Industries Pvt Ltd.
96. Lupin Laboratories Ltd.
97. Pesticides India
98. Rallis India
99. United Phosphorous Ltd.
100. Welspun Gujarat State Rohron Ltd.
101. Gujarat Glass Ltd.
102. Ajanta Paper & General Product
103. Gujarat Borosil Ltd.
104. Rami Metals Ltd.
105. Shriram Alkali & Chemicals
106. Sitaram Paper Mills Ltd.
107. Godrej Soaps Ltd.

SURAT DISTRICT ANALYSIS BASED ON SAMPLE SURVEY

PROFILE OF SURAT DISTRICT

Location and Administration

Surat district with a total geographical area of 7761 km accounts for about 4% of the total geographical area of the State. Surat district is located between 21° & 21.23° north latitude and 72.38° & 74.23° east longitude south of Gujarat. The border district is bounded by Maharashtra state in the east with Nasik and Nandurbar, Bharuch district of Gujarat to the north and Navsari in the south. The Arabian Sea lies on the western side of Surat on the south. It has a coastal line of about 80 km. The district is divided into 14 talukas. They are, Choryasi, Olpad, Kamrej, Mangrol, Umarpada, Mandvi, Songadh, Uchchhal, Nizar, Vyara, Valod, Bardoli, Mahuva and Palsana. There are a total of 1187 villages in the district. In these 93 villages are uninhabited. The density of population shows that the district is very thickly populated. The overall density in the district is 653 persons per sq.km. and the overall sex ratio in the district is 835 females per 1000 males. The overall literacy rate in the district is nearly 75%. The sex-wise breakup shows that the female literacy rate is 66.71% which is considerably less than the male literacy rate (81.87%).

Population of Surat

As per the 2001 census the Scheduled Caste (SC) population of Surat district is nearly 4.36% and Scheduled Tribe (ST) population is 28.19%. Thus, the combined population of SC and ST is sizeable as they form a little more than 32.55% of the total population of the district.

Climate

Climate of Surat district falls under dry sub-humid, receiving highest rainfall in Gujarat averaging 1000-1200 mm per year. The number of rainy days varied from between 39 and 91 during the period 1990 to 2005. Maximum temperature varied between 34° C and 41° C and minimum temperature between 10° C and 18° C during the same period.

Water Resources

Surat district is well endowed with water resources, both surface and groundwater. In addition, this district receives the highest rainfall in Gujarat state averaging over 1200 mm per year from the southwest monsoons – well distributed over the kharif season. The district has Tapi river which is perennial flowing from east to west.

Soil Resources

Surat district can be conveniently divided into three regions, Geographically, Topographically and Economically as well as from the resources point of view. The inter-regional differences have considerable bearing on the strategy of planning and on the formation of development programmes. These regions are as under:

(i) Eastern Region

This portion of the district comprises of Mangrol, Mandvi, Mahuva, Songadh, Uchchhal, Nizar, Vyara and Umarpada talukas. The region is partly covered with forests and also has a mountain range called Saputara. This region inhabited by ST population and it is declared as Tribal Area. The eastern region is also having good agricultural potentiality.

(ii) Western Region

This region known as “Kharo Pat” consists of Olpad and Choryasi talukas. This region has 80 km coastal line at the Gulf of Cambay. Industrial area of Hajira is now developing very fast.

(iii) Central Region

The central portion of the district covers Kamrej, Palsana and Bardoli and partly Choryasi talukas which are industrially developed area. Hajira is also developing very fast. The black soil of this region is very fertile and is conducive to cotton, sugarcane, banana, vegetables, floriculture and major horticulture crop cultivation.

Industries

Surat district is progressing well towards industrial development. At present there are 450 large and medium size industrial units and 28865 small scale units in the district. Many large and multinational companies are coming up around Hajira, Sachin, Pandesara, Mangrol, Kamrej, Palsana and Bardoli. 11 industrial estates are developed by GIDC at Sachin, Hajira, Bardoli, Olpad, Pandesara, Katargam etc. for the fast industrialization in the district. Two to three industrial parks (garment parks, zari parks, SEZs etc) are also developed in Surat. These estates have provided good opportunity for employment to the people.

Methodology of Assessment

For the selection of sample industries, listing of all MOUs of Vibrant Gujarat Global Investors’ Summit 2005 and 2007 with Summit of Information Technology, Urban Development and Tourism Industries was done on the basis of sector-wise list collected from Industries Commissionerate, Gandhinagar and respective nodal departments as well as the District Industry Centre, Surat. Thus, in all 64 entrepreneurs were selected for indepth study. The details regarding sectors, number of entrepreneurs etc. are given in the following table 5.1. The data from entrepreneurs were collected through structured questionnaires.

Table 5.1 Sector-wise number of MOUs

Sr. No.	Sector	Sample size (No. of MOUs) Visited	Remarks
1.	Agro & Food Processing	16	(1) 5 not responding due to being out of district (2) 10 not responding due to being out of Gujarat/abroad; and (3) 18 Due to being multidistrict and responsible person not available.
2.	Auto engineering	2	
3.	Power	1	
4.	Textiles and Apparels	5	
5.	Chemicals & Petrochemicals	1	
6.	Oil and Gas	2	
7.	Ports	2	
8.	SEZs	1	
9.	Tourism	1	
	Total	31	
10.	Presently functioning (Existing)	30	Medium & large scale units

Sample Selection for Presently Functioning Large & Medium Scale Industries

For the selection of sample industries Random Sampling Technique was adopted. Selection of sample industries was done randomly on the basis of sector-wise list of medium and large scale units collected from District Industry Centre (Surat), Chamber of Commerce and Industries (Surat) and GIDC (Gandhinagar). From medium and large scale units 30 entrepreneurs were selected by random sampling method. 30 entrepreneurs were selected for indepth study.

Accordingly, 42 enterprises (MOUs) were visited but due to wrong addresses 4 units could not be contacted as per the entrepreneurs' list provided by IC. The remaining 7 entrepreneurs on personal visits informed that they required time and they will send information within a few days and there was no response from them later. The survey methodology was visiting of industries personally, meeting the responsible person; explaining regarding the survey with a request for cooperation in providing the information. As the data were not readily available at most of the units or the responsible person was not available at the time of the visit of the survey team a second or even at times a third visit was most essential to collect the data from maximum number of units.

Reference Period

In order to have proper assessment of human resources development employment generation of the project at present i.e. reference year 2007-08 and future i.e. next five years (2013) were taken. In medium and large scale industries presently functioning units were selected on the basis of the secondary data provided by DIC and Chamber of Commerce and Industries, Surat and GIDC, Gandhinagar. The field work was carried out during the month of March 2008.

Observation on the Sample Survey Data

As per the terms of reference, 31 MOUs and 30 medium and large scale units signed in 2005 and 2007 were to be visited for manpower demand survey assessment. Accordingly, 31 MOUs and 30 present industries/units were visited, but due to wrong address, contact persons being out of state/district, and others being not available. The entrepreneurs were interviewed in field units (factory sites) or offices to get information as per the proforma when the personal visit was made for the survey. In most of sites the industries (units) were functioning (Non-MOUs) well. Details regarding the total no. of employees, no. of skilled workers, no. of graduates employed in the units, anticipated manpower requirement in future i.e. next five years (2013), post graduates, degree/diploma holders, ITI trade and other graduates, lack of knowledge, lack of skills etc. Yet some quantitative data, semi quantitative and qualitative assessments on other aspects could be drawn from the interaction with the concerned entrepreneurs and the same are included in the survey results of this report.

Table 5.2 Sector-wise Profiles of MOUs signed in 2005 & 2007 and Manpower Requirement

Sr. No.	Sector	No. of Projects			Manpower Requirement		
		2005	2007	Total	2005	2007	Total
1.	Agro & Food Processing	4	16	20	414	1200	1614
2.	Power	8	2	10	-	340	340
3.	Textile and Apparels	3	4	7	120	18450	18570
4.	Ports	3	3	6	1500	500	2000
5.	Tourism	-	5	5	-	2150	2150
6.	Oil and Gas	3	-	3	140	-	140
7.	Chemical/Petrochemical	1	1	2	300	750	1050
8.	Automobile engineering	2	-	2	3000	-	3000

9.	SEZs	-	1	1	-	10000	10000
10.	Urban Development	-	1	1	-	-	-
11.	Health Care	-	1	1	-	400	400
12.	Paper Industries	-	1	1	-	600	600
13.	Education	-	1	1	-	-	-
14.	Roads and Railways	1	-	1	-	-	-
15.	Other sectors	3	-	3	-	-	-
	Total:	28	36	64*	5474	34490	39964

* Including multidistrict projects.

Source: Industries Commissionerate, GOG, Gandhinagar.

Summary and Field Observations of the District

12. A total number of 64 projects are proposed to be established in Surat district.
13. With 20 projects, the Agro & Food Processing sector has witnessed largest investment in the district.
14. Important national highways (NH8 and NH6) connect the district to Ahmedabad and Mumbai and to other cities such as Anand and Vadodara.
15. A broad gauge railway line also connects Surat to Ahmedabad and Mumbai.
16. The nearest ports are Dahej and Hajira, which are also well connected by road and rail networks.
17. Surat has a domestic airport.

Manpower Requirement in Surat District from MOU 2005 and 2007

5. With 64 projects, the district has total manpower requirement of 39,964 technical, managerial and unskilled workers.
6. The sector of Textile and Apparels has witnessed largest investment (7 parks) and has the largest manpower requirement of 18,570.
7. Presently; Surat district has;
 - 30 ITI offering courses in engineering and IT;
 - 10 technical institutions with an intake of more than 3,500;
 - 2 medical colleges with 220 medical graduates very year;
 - 4 IT colleges and institutions churning out 150 students every year;
 - 4 pharmacy colleges with an intake of 210;

Employment Generation in Industries after MOUs Signed in 2005 & 2007

At present there are 13,268 persons employed and in future there will be 19,150 persons employed at various levels in the 61 (31+30) industries surveyed out of 514 (64+450) industries. This means that average total employed (skilled and unskilled) staff & workers is 217.50 and 313.94 persons per unit. The number of units expected in Surat district is 514 units (64+450) (MOUs & medium and large scale units) and hence the total requirement of skilled and unskilled persons works out to 1,11,795 for the base year (2007-08) and 1,61,365 numbers for the fifth year (2013) respectively. At present, an additional 1,98,559 workers (small scale & cottage industry units including textiles, dyeing & printing, diamond cutting, zari works, ancillary engineering etc) in the base year and in future 2,58,126 workers will be required; the anticipated total demand works out to 3,10,354 for present and 4,19,491 for future.

There will be indirect employment generation in various activities like goods transport, dhabas, pan shops, various contract works, travel service, workshops for automobile repairs, steel

fabrication, engineering works, machinery works, machinery parts, material supply business and many other activities due to industrial growth in the district. Taking the figures of indirect employment at 20% of the total of the above figures, the growth in the indirect employment can be expected around 22,359 for base year and 32,273 for the future. Hence the overall employment generation in Surat district due to the industrial growth can be anticipated around 3,32,731 employees at present and 4,51,764 employees in future.

Details of 61 units surveyed are presented in table 5.3 to 5.4. On the basis of this sample survey conducted, the manpower requirement of 64 units which includes even those units that are in the pipeline has been derived as under.

Table 5.3 Anticipated Requirement of Manpower after MOUs Signed In 2005 and 2007 of Surat District

Level of Education	Qualification	Present Requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	8	11
	M.Sc.	18	26
	M.Tech.	7	15
Sub-total:		34	52
Degree	Electrical	16	24
	Civil	13	24
	I & C	5	9
	Mechanical	27	34
	Electronics	16	26
	Computer	10	17
	I T	4	9
	Textile technology	17	29
	Chemical	3	3
	Automobile Engg.	10	15
	Environmental Engg.	11	18
	Food Processing Technology	-	10
	Production Engg.	19	33
	Industrial Engg.	16	28
	Others	25	52
Sub-total:		193	340
Diploma	Electrical	53	88
	Civil	38	65
	I & C	10	16
	Mechanical	52	84
	Electronics	20	35
	Computer	16	27
	Textile technology	28	41
	Chemical	6	6
	Automobile Engg.	8	13
	Fabrication technology	6	15

	IT	3	5
	Dress Designing	-	4
	Others	38	77
Sub-total:		278	477
ITI Trade	Turner	129	192
	Fitter	115	178
	Wireman	99	161
	Welder	85	144
	Electrician	103	164
	Mechanic (AC/Fridge)	23	43
	Mechanic (Motor vehicles)	24	39
	Mechanic (Electronics)	10	22
	Mechanic (Instruments)	25	41
	Machinist	91	152
	Chemical Plant Operator	2	4
	Pump Mechanic	14	27
	Lab Assistant	7	19
	Painter	27	50
	Plumber	39	198
	Mechanic (Tractor/Diesel)	35	48
	Networking Technicians	-	4
	Motor Rewinding	6	7
	Stenographer	97	188
	Mechatronics	20	30
	Basic CNC	10	10
	Basic Sheetmetal Fabricn.	20	28
	Basic Turning / Grinding	14	20
	Embroidery	2	12
	E-commerce	-	2
Weaving/Loom Operator	15	41	
Others	70	131	
Sub-total:		1052	1619
Graduates/ Others	B.Sc. / B.A. etc.	118	178
	B.Com. / M.Com.	89	145
	BCA	5	12
	Undergraduates	253	444
	Gardener/Peon/Packing staff	634	930
	Security	205	437
Sub-total:		1370	2122
TOTAL:	Unskilled	3294	5359
	Skilled	2966	4780
	TOTAL	6260	10299

Details of 30 medium and large scale units surveyed are presented in Table 5.4 of this report. On the basis of this sample survey conducted, the manpower requirement of 450 units which includes even those units that are in the pipeline has been derived as under.

Table 5.4 Anticipated Requirement of Manpower
Of Medium and Large Scale Industries

Level of Education	Qualification	Present requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	23	18
	M.Sc.	14	12
	M.Tech.	4	4
Sub-total:		41	34
Degree	Electrical	16	18
	Mechanical	36	43
	Electronics	1	2
	Computer	10	16
	IT	1	2
	Chemical	21	27
	Metallurgy	2	3
	Textile Technology	71	94
	Environmental Engg.	5	8
	Production Engg.	8	11
	Industrial Engg.	3	4
	Others	31	41
Sub-total:		218	284
Diploma	Electrical	64	73
	Civil	-	1
	Mechanical	85	81
	Electronics	1	2
	Computer	7	9
	Chemical	33	40
	Textile Technology	121	154
	Fabrication technology	6	9
	Dress Designing	4	9
	Others	75	95
Sub-total:		386	476
ITI Trade	Turner	202	260
	Fitter	141	186
	Wireman	64	97
	Welder	22	38
	Electrician	105	148
	Mechanic (AC/Fridge)	9	17
	Mechanic (Motor vehicles)	7	11
	Mechanic (Electronics)	5	6
	Sewing / Dress making	12	25
	Mechanic (Instruments)	83	114
	Machinist	183	223
	Chemical Plant Operator	13	20
	Pump Mechanic	4	5

	Fireman	7	11
	Lift Mechanic	3	6
	Lab Assistant	30	40
	Painter	64	86
	Plumber	28	45
	Mechanic (Tractor/Diesel)	34	44
	Embroidery	40	57
	Networking Technicians	5	7
	Stenographer	66	86
	Mechatronics	2	4
	Basic CNC	4	6
	Basic Sheetmetal Fabricn.	5	7
	Basic Turning / Grinding	5	7
	E-commerce	3	5
	Weaving Loom Operators	88	123
	Others	93	143
	Sub-total:	1320	1854
Graduates/ Others	B.Sc. / B.A. etc.	268	309
	B.Com. / M.Com.	200	242
	BCA	22	32
	Undergraduates	163	187
	Gardener/Peon/Packing staff	524	620
	Security	229	299
	Sub-total:	1407	1714
TOTAL:	Unskilled	3660	4509
	Skilled	3341	4342
	TOTAL (skilled + unskilled)	7008	8851
GRAND TOTAL	Table 5.3	6260	10299
	Table 5.4	7008	8851
	TOTAL (Skilled & Unskilled manpower)	13268	19150

Addressing the Manpower Requirement in Industries Coming Up in Surat District

Datamation Research Analyst (DRA), New Delhi has carried out a sample survey of 31 MOUs signed (with entrepreneurs) and 30 units of medium and large scale industries (total 61) in Surat district and on the basis of that they have made a forecast (for next five years) i.e. year 2013 of manpower requirement for 64 MOUs and 450 units of medium and large scale (total 514 units). According to this survey the requirement of manpower in the ITI trades is anticipated to be around 19,987 for the base year (2007-08) and 29,264 for future (2013). The tables 5.3 and 5.4 presented above gives a picture of the anticipated manpower requirement. The table 5.5 presented below gives a picture of the anticipated manpower requirement for present and future seats available in the ITIs, Grants in Aid, ITC, Self Finance Institutions in Surat district and skill gaps.

Table 5.5 ITI Trade-wise no. of Manpower Requirement, no. of Seats Available and Skill Gaps in Surat District

Trade	Base year (2007-08)			Next 5 yrs (2013)		Year-wise breakup of projection				
	Man-power Requirement	Seats available in ITI / SF etc.	Skill Gap (2-3)	Projected Requirement	Skill Gap (5-3)	2008-09	2009-10	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10	11
Turner	2789	180	2609	3808	3628	550	650	750	800	878
Fitter	2157	768	1389	3067	2299	350	400	450	500	599
Wireman	1373	896	477	2173	1277	200	225	250	300	302
Welder	901	300	601	1534	1234	200	220	240	260	314
Electrician	1753	528	1225	2629	2101	360	350	450	500	501
Machinist	2309	60	2249	3160	3100	450	550	650	700	750
Painter	766	16	750	1146	1130	150	200	225	250	305
Plumber	581	80	501	2448	2368	350	400	450	525	643
Mech.tractor/diesel	581	32	549	775	743	100	125	150	175	193
Steno.	1373	144	1229	2308	2160	300	350	450	500	560
Weaving operator	867	-	867	1382	1382	200	225	250	300	407
Embroidery	354	-	354	581	581	75	100	115	130	161
Lab. Assistant	312	-	312	497	497	50	75	100	125	147
Instrument mechanic	910	128	782	1306	1178	150	200	225	260	343
Chem. & other Plant Operators	126	90	36	202	112	20	20	25	25	22
Others	2835	3899	-1064	2248	-1651	-	-	-	-	-
Total:	19987	7121	12866	29264	22139	3445	4090	4780	5350	6125

Table 5.6 Details of Seats Available and Proposed Increase in Seats in Various ITIs of Surat District

Sr. No.	Name of Institute	Seats Available	Proposed increase (Base year 2007-08)
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1.	ITI, Surat	2552	3500
2.	ITI, Sachin	272	300
3.	ITI, Umarpada	508	650
4.	ITI, Ukai	236	400
5.	ITI, Mandvi	184	300
6.	ITI, Vyara	288	400
7.	ITI, Valod	340	500
8.	ITI, Bardoli	240	300
9.	ITI, Nizar	136	200
10.	ITI, Zankhvav	200	310
11.	ITI, Palsana	220	400
12.	ITI, Uchchhal	160	200
13.	ITI, Karchaliya	172	200
14.	ITI, Olpad	336	400
15.	GIA, ITC, Navyug	176	200
16.	GIA, ITC, Kamrej	264	300
17.	GIA, ITC, Disable	20	36
18.	GIA, ITC, Hajira	128	200
19.	GIA, ITC, Vimal Poddor	136	200
20.	GIA, ITC, Mangrol	48	100
21.	GIA, ITC, Dumas	64	200
22.	SFI, SSVM Edu. Socy., Surat	836	1000
23.	SFI, SIY Socy., Nanpura	84	100
24.	SFI, HE Trust, Jehangirpura	20	30
25.	SFI, NE&C Trust, Mahidharpura	32	40
26.	SFI, SCAC Trust, Surat	24	30
27.	SFI, SE Trust, Kim	25	30
28.	SFI, VCT, PT College, Surat	66	75
29.	SFI, TTC, Songadh	32	40
30.	SFI, Shri VM Mandal, Mahuva	10	25
31.	SFI, KIM Trust, Mangrol	52	60
32.	SFI, ASM Mandal, Vyara	20	35
33.	SFI, Sugar Indus. Trust, Sayan	40	55
34.	4 new SFIs (Expected)	-	600
35.	4 new SFIs of PPP model (Expected)	-	1200
	Total:	7121	12866

As per personal discussions at the time of field survey.

Strategies to Address Future Manpower Requirement in Surat District

11. Majority of the projects proposed are to be established in Surat, Sachin, Pandesara, Hajira, Kamrej, Olpad, Palsana and Bardoli areas.
12. Majority of the projects are based on agro & food processing, textile & apparels, engineering, ports and oil & gas industries.
13. It is proposed to invite offers from private organizations like Reliance Industries, KRIBHCO, L&T, ONGC, Essar Steel, NTPC, Reliance Petrochemicals, GAIL and SAIL India to start self finance institutes of PPP models in Surat district, particularly in important trades like turner, fitter, wireman, welder and others suitable to private organizations. 1500 new seats will be introduced through new SF ITIs and PPP model ITIs.

14. Additional short term courses are required to meet the industrial manpower requirement. There is a shortage of masonry workers for construction activities, security guards, diamond cutting/polishing/grading and textile technology.
15. Skills Development Centres (SDC) should be established at all GIDC's Industrial Estates and SEZs and apparel parks in the district where industries will develop strategies for ITI trades as per their own requirements. This issue has been discussed in this report separately.
16. The Department of Employment and Training should coordinate with private industries for need based courses like diamond industries, SEZs and textile technology & apparel parks etc.

GENERAL FIELD OBSERVATIONS, SUMMARY AND SUGGESTIONS

In addition to the analysis based on the field data and entrepreneurs' opinions given in the report, a few general observations, suggestions and summary are given below:

Resources Management and Generated Employment in Surat

12. Gujarat is one among the top states having maximum number of people employed in Special Economic Zones (SEZs) notified under the SEZ Act 2005. The 16 notified SEZs across the state apart from the three pre-existing ones generated direct or indirect employment to about 15,000 people and construction activities are going on by Reliance Multi Product and Adani Power SEZs apart from Zydus Cadila Pharma SEZ which is nearly completed. Therefore it is suggested to coordinate and link with the above mentioned SEZs for development of employment generation and need based courses development for private organizations.
13. Surat has abundant natural resources and manpower with an industrial culture. The entrepreneurship of Surat is best known to Gujarat and has demonstrated its metal by setting examples in the field of diamond cutting, gems and jewellery, power looms, textile industries, chemical and petrochemicals, agro based industries, electronics industries, plastic industries, ancillary industries, texturing industries, processing, ancillary engineering, colours and chemicals, induction furnace and rerolling mill industries, detergents etc. So it is suggested that there is a need of vocational training courses on diamond, gems and jewellery, power loom, textile technology, garment & apparel parks, micro-irrigation system, mechanics, technicians, security guards, assistants, plastic processing technicians etc. are other areas which required further support through appropriate short term courses.

23.	Computer Aided design- Autocad 2000	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
24.	Steno/Comp. Operator English	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
25.	Electronics Mechanic (TASP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.	Electronics Mechanic	80	-	-	32	-	32	-	-	-	-	-	-	-	-	-	144
27.	Dress making	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
28.	IT & Electronic mech.	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
29.	Radio/TV Mechanic	32	-	-	-	-	16	-	-	-	-	-	-	-	-	32	80
30.	Armature/ Motor Rewinding	96	-	32	32	32	32	32	32	16	16	32	32	32	16	432	
31.	Steno/Comp. Operator Gujarati	16	-	-	-	32	32	-	16	-	-	-	-	-	16	112	
32.	Painter – General	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
33.	Mechanic – Tractor	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
34.	Web Design	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
35.	Multimedia Tech./ DTP	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
36.	Attendant/Operator (Chem. Plant)	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
37.	Machinist	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
38.	Refrigeration/AC Mechanic	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96
39.	Surveyor	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
40.	Mechanic/Maintenance (Chemical plant)	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
41.	Cutting & Sewing	-	-	-	32	-	16	32	-	16	-	32	32	-	-	-	160
42.	Welder cum Fabricator	-	-	-	12	-	12	-	-	-	-	-	-	-	-	-	24
43.	Motor vehi. Mechanic	-	-	-	-	-	-	-	32	-	-	-	32	16	32	-	112
44.	Marine Engineering Technician	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	16

5.	Auto repair (2-wheeler)	-	-	-	-	-	-	-	-
6.	Fitter	48	32	-	32	-	-	32	144
7.	Turner	-	-	-	-	-	-	-	-
8.	Computer Operator/ Programming Asst.	-	40	10	-	40	-	-	90
9.	CoE Apparel (Adv)	-	-	-	-	-	-	-	-
10.	Welder	-	-	-	-	-	-	-	-
11.	Mechanic (diesel)	-	-	-	-	-	-	-	-
12.	Draughtsman (Mech.)	-	-	-	-	-	-	-	-
13.	Plumber	-	-	-	-	-	-	-	-
14.	Carpenter	-	-	-	-	-	-	-	-
15.	CoE Apparel (BBBT)	-	-	-	-	-	-	-	-
16.	Machinist- Grinder	-	-	-	-	-	-	-	-
17.	Instrument mechanic (Chemical plant)	-	-	-	-	-	-	-	-
18.	Instrument mechanic (TASP)	-	-	-	-	-	-	-	-
19.	Wireman	48	32	-	32	32	16	-	160
20.	Electrician	-	32	-	32	32	-	32	128
21.	Instrument Mechanic	-	-	-	-	-	-	-	-
22.	Draughtsman (Civil)	48	32	-	-	-	-	-	80
23.	Computer Aided design- Autocad 2000	-	-	-	-	-	-	-	-
24.	Steno/Comp. Operator English	-	-	-	-	-	-	-	-
25.	Electronics Mechanic (TASP)	-	-	-	-	-	-	-	-
26.	Electronics Mechanic	-	-	-	-	-	16	-	16
27.	Dress making	-	-	-	-	-	-	-	-
28.	IT & Electronic mech.	-	-	-	-	-	-	-	-
29.	Radio/TV Mechanic	-	32	-	-	-	-	-	32
30.	Armature/ Motor Rewinding	-	16	-	-	32	-	-	48
31.	Steno/Comp. Operator Gujarati	-	-	-	-	-	-	-	-
32.	Painter – General	-	-	-	-	-	-	-	-
33.	Mechanic – Tractor	-	-	-	-	-	-	-	-

34.	Web Design	-	-	-	-	-	-	-	-
35.	Multimedia Tech./ DTP	-	-	-	-	-	-	-	-
36.	Attendant/Operator (Chem. Plant)	-	-	-	-	-	-	-	-
37.	Machinist	-	-	-	-	-	-	-	-
38.	Refrigeration/AC Mechanic	-	32	-	-	-	-	-	32
39.	Surveyor	32	-	-	-	-	-	-	32
40.	Mechanic/Maintenance (Chemical plant)	-	-	-	-	-	-	-	-
41.	Cutting & Sewing	-	16	-	-	-	16	-	32
42.	Welder cum Fabricator	-	-	-	-	-	-	-	-
43.	Motor vehi. Mechanic	-	-	-	-	-	-	-	-
44.	Marine Engineering Technician	-	-	-	-	-	-	-	-
45.	Sanitary/Hardware fitting	-	-	-	-	-	-	-	-
46.	General Mechanic	-	-	-	-	-	-	-	-
47.	Data Entry Operator	-	-	-	-	-	-	-	-
48.	Hair & Skin Care	-	-	-	-	-	-	-	-
49.	Driver cum Mechanic	-	-	-	-	-	-	-	-
50.	Garments Making (men & women)	-	-	-	-	-	-	-	-
51.	Domestic housekeeping	-	-	-	-	-	-	-	-
52.	E-commerce	-	-	-	-	-	-	-	-
53.	Computer aided dress design/dress making	-	-	-	-	-	-	-	-
54.	DTP Operator	-	-	10	-	-	-	-	10
55.	IT (ESM)	-	-	-	-	-	-	-	-
56.	Preparatory School Management Asst.	-	-	-	-	-	-	-	-
57.	Diamond Grading	-	-	-	-	-	-	-	-
58.	Software Programmer	-	-	-	-	-	-	-	-
59.	Medical Lab. Technician	-	-	-	-	-	-	-	-
60.	Dental Lab. Technician	-	-	-	-	-	-	-	-
	Total:	176	264	20	128	136	48	64	836

(iii) Self Finance Institutes

Sr. No.	Trade	Sufi-bag	Nan-pura	Jahan-Gir-pura	Mahi-Dhar-pura	SCACT Ran-der	Kim	VCTM Pre PTC	TTCH Son-gadh	Sri VM Ana-val	KIMT Mang-rol	ASMMH Vyara	Sugar Sayan	Total SFI	Total ITI	Grand Total
1.	Vehicle Mechanic	-	-	-	-	-	-	-	-	-	-	-	-	-	48	80
2.	Plastic Processing Oper.	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
3.	Offset Printer	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
4.	CoE Fabricn. (BBBT)	-	-	-	-	-	-	-	-	-	-	-	-	-	96	96
5.	Auto repair (2-wheeler)	-	-	-	-	-	-	-	-	-	-	-	-	-	120	120
6.	Fitter	-	-	-	-	-	-	-	-	-	-	-	32	32	592	768
7.	Turner	-	-	-	-	-	-	-	-	-	-	-	-	-	180	180
8.	Comp. Operator/ Prgmr.	20	20	-	-	-	20	-	10	20	20	40	40	190	480	760
9.	CoE Apparel (Adv)	-	-	-	-	-	-	-	-	-	-	-	-	-	96	96
10.	Welder	-	-	-	-	-	-	-	-	-	-	-	-	-	300	300
11.	Mechanic (diesel)	-	-	-	-	-	-	-	-	-	-	-	-	-	288	288
12.	Draughtsman (Mech.)	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
13.	Plumber	-	-	-	-	-	-	-	-	-	-	-	-	-	80	80
14.	Carpenter	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
15.	CoE Apparel (BBBT)	-	-	-	-	-	-	-	-	-	-	-	-	-	192	192
16.	Machinist- Grinder	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24
17.	Inst. Mech. (Chem. plant)	-	-	-	-	-	-	-	-	-	-	-	-	-	48	48
18.	Instrument mech. (TASP)	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
19.	Wireman	-	-	-	-	-	-	-	-	16	-	-	32	48	688	896

39.	Surveyor	-	-	-	-	-	-	-	-	-	-	-	-	-	32	64
40.	Mech.. (Chem. plant)	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
41.	Cutting & Sewing	-	-	-	-	-	-	-	-	16	-	-	-	16	160	208
42.	Welder cum Fabricator	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24
43.	Motor vehi. Mechanic	-	-	-	-	-	-	-	-	-	-	-	-	-	112	112
44.	Marine Engg Technician	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
45.	Sanitary/Hardware fitting	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
46.	General Mechanic	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
47.	Data Entry Operator	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
48.	Hair & Skin Care	-	-	-	-	-	-	-	-	-	-	-	-	-	48	48
49.	Driver cum Mechanic	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
50.	Garments Making (men & women)	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
51.	Domestic housekeeping	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
52.	E-commerce	-	-	-	-	-	-	-	-	-	-	-	-	-	72	72
53.	Computer aided dress design/dress making	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32
54.	DTP Operator	32	-	-	-	-	-	-	-	-	-	-	-	32	-	42
55.	IT (ESM)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56.	Preparatory School Management Asst.	-	-	32	-	-	16	32	-	-	-	-	-	80	-	80
57.	Diamond Grading	-	-	-	24	-	-	-	-	-	-	-	-	24	-	24
58.	Software	-	-	-	-	25	-	-	-	-	-	-	-	25	-	25

	Programmer															
59.	Medical Lab. Technician	-	-	-	-	-	10	-	-	-	-	-	-	10	-	-
60.	Dental Lab. Technician	-	-	-	-	-	20	-	-	-	-	-	-	20	-	-
	Total:	84	20	32	24	25	66	32	10	52	20	40	136	541	5744	7121

Source: Directorate of Employment and Training, GOG, Gandhinagar.

Annexure V.1

Vibrant Gujarat Investors' Summit 2005 & 2007 MOUs – Surat District
List of the Industries Selected for Field Survey

108. ACE Roil Export, Surat
109. Farm Fresh, Surat
110. Universal Floritech, Surat
111. Jahvi Flora, Surat
112. Shri Jivanbhai C Patel
113. Shri Dharmeshkumar R Patel
114. Shri Ramanbhai G Patel
115. Shri Rajendra H Bhakta
116. Shri Kirtikumar R Mehta
117. Shri Vijaybhai M Patel
118. Smt. Shantuben I Meghat
119. Shri Shantilal R Patel
120. Shri Dhavalkumar S Parmar
121. Shri Tejvas M Naik
122. YES Bank Ltd., APMC Surat
123. Vitale Nandan Bioscience Pvt. Ltd.
124. Essar Steel Ltd.
125. Larsen & Toubro Ltd.
126. Torrent Power Gen Ltd.
127. Safari Export Pvt. Ltd.
128. Gujarat Eco Textile Park Ltd.
129. Reaful Overseas Pvt. Ltd.
130. Shri Durga Syntex Pvt. Ltd.
131. Surat Super Yarn Park Ltd.
132. J K Papers Ltd.
133. Shell Hajira Gas Pvt. Ltd.
134. Gujarat Gas Co. Ltd.
135. Hajira Port Pvt. Ltd.
136. Essar Group
137. Essar SEZ Hajira Ltd.
138. Hotel Grand Bhagvati

Annexure V.1 (contd.)

Presently Functioning Medium & Large Scale Industries in Surat District
List of the Industries Selected for Field Survey

139. Prakash Plastopac Pvt. Ltd.
140. ACME Care Action Pvt. Ltd.
141. Ashok Export Ltd.
142. Ashish Dyeing Printing Mills Pvt. Ltd.
143. Ashoka International

144. Avichal Weavers Pvt. Ltd.
145. Baid Synthetics Pvt. Ltd.
146. Bhadiyadra Gems Ltd.
147. Chingo Silk Mills
148. Donear Industries Ltd.
149. Esspee Dress Materials Pvt. Ltd.
150. G-Tex Exporter IEM
151. Gordhen Silk Mills Ltd.
152. Goyal Synthetics Pvt. Ltd.
153. Hajira Papers Pvt. Ltd.
154. Hajira Plate Ltd.
155. J K Papers Ltd.
156. Kiran Exports
157. Lakshmi Diamonds Pvt. Ltd.
158. Mamadev Silk Ltd., IEM
159. Natural Glass & Allied Industries Ltd.
160. P Rajesh & Co.
161. Praful Industries Ltd.
162. Reliance Industries Ltd. – IEM
163. Roshani Creation Pvt. Ltd.
164. Shilpa Dyeing & Printing Mills Pvt. Ltd.
165. Shri Siddhi Vinayak Shree Pvt. Ltd.
166. Such Fashion Industries Pvt. Ltd.
167. Sunrise Dyeing & Printing Mills Pvt. Ltd.
168. Swastic Polyprinting Pvt. Ltd.

NAVSARI DISTRICT ANALYSIS BASED ON SAMPLE SURVEY

PROFILE OF NAVSARI DISTRICT

Location and Administration

Navsari district, with a total geographical area of 2196 sq.km., accounts for about 1.12 percent of the total geographical area of the State. The district lies in the extreme south of Gujarat at about 125 km north of Mumbai and approximately 260 km south of the state capital Gandhinagar. The government of Gujarat in 1997 divided old Valsad district into two districts viz. Valsad and Navsari. The newly formed Navsari district comprises of five talukas namely Navsari, Jalalpore, Gandevi, Chikhli and Vansda.

Demographic Characteristics

The population of Valsad district, as per 2001 census was 12.29 lakh. The density of population was 556 people per sq.km. compared to the state average 268 in 2001. Urban population constitutes 23.73% of the total population. About 3.21% of the total population is Scheduled Castes and 48.35% are Scheduled Tribes. The literacy level was 75.99% in the year 2001. Navsari district can be conveniently divided into three regions geographically, topographically and economically as well as from the resources point of view. These three regions are as follows:

(i) Eastern Region: This region is partly covered with forest and it also has a mountain range in parts of Chikhli and Vansda talukas;

(ii) Western Region: This region has 53 km coastal line of Arabian Sea;

(iii) Central Region: The central part of the district covers Navsari, Gandevi (partly), Jalalpore and Chikhli (partly) talukas. They are industrially developed in comparison to other talukas. The black soil of this region is very fertile and conducive to sugarcane and horticultural crops.

Climate

Climate of Navsari district falls under dry sub humid category, receiving good rainfall in Gujarat averaging 1500 to 2000 mm per year. The minimum and maximum temperatures are 10° C and 40° C.

Water Resources

Navsari district is well endowed with water resources, both surface and groundwater. In addition to this, the district receives good rainfall (averaging 1600 mm per year) from the south west monsoon, well distributed over the kharif season.

River System

The district has five rivers, Mindhola, Purna, Kaveri, Kharera and Ambica flowing from east to west. River Ambica is perennial.

Forestry

The forest land spreading over 28613 ha play a vital role in the economy of the district. The maximum density of forest is found in nearby Dangs and Valsad districts, and Vandsa & Chikhli talukas of Navsari district. Main forest products are teakwood, firewood, charcoal and other timbers, while minor forest products include bamboo, grass, mahuwa flowers, gum and varieties of medicinal herbs.

Industry

Navsari is progressing well towards industrial development. The district is having large, medium and small scale industries of various types. A large number of industries related to textile industry, diamond cutting, auto & engineering, chemical and plastics, cosmetics and readymade garments, agro food processing, paper and sugarcane industry etc. are located in the district. Well developed infrastructures, prudent industrial policy of the state government and a peaceful industrial atmosphere have been the vital factors which have contributed to the industrial growth in the district. The state government, under the new industrial policy, identified certain areas of backward talukas of the district and put them in special category for development by providing attractive incentives to the investors. This has resulted in many industrial units coming up in Vandsa, Chikhli, Jalalpore and Gandevi talukas.

Transport and Communication

The transport and communication facilities are a prerequisite for development of commercial activities in a region. These facilities in Navsari district have shown a very impressive improvement over the past decade. There are four minor ports in the district, viz. Vasi Borasi, Bilimora, Ojal and Dholai (under development). Wood and construction material will be the main items imported at these ports. The credit delivery system is quite developed in Navsari district. The district has 114 branches of commercial banks, 11 branches of Valsad District Cooperative Central Bank, 4 Gujarat State Land Development Bank and 22 branches of Regional Rural Banks contributing to an overall economic development of the district.

Methodology of Assessment

For the selection of sample industries, listing of all MOUs of Vibrant Gujarat Global Investors' Summit 2005 and 2007 with Summit of Information Technology, Urban Development and Tourism Industries was done on the basis of sector-wise list collected from Industries Commissionerate, Gandhinagar and respective nodal departments as well as District Industry Centre, Navsari. Thus, in all 10 entrepreneurs were selected for indepth study. The details regarding sectors, numbers of entrepreneurs etc are given in the following table 5.1. The data from entrepreneurs were collected through structured questionnaires.

Table 5.1 Sector-wise number of MOUs

Sr. No.	Sector	Sample size (No. of MOUs) Visited	Remarks
1.	Agro & Food Processing	8	(1) One not responding due to being out of district (2) and one due to being responsible person not available.
	Total	8	
10.	Presently functioning (Existing)	16	Medium & large scale units

Sample Selection for Presently Functioning Large & Medium Scale Industries

For the selection of sample industries Random Sampling Technique was adopted. Selection of sample industries was done randomly on the basis of sector-wise list of medium and large scale units collected from District Industry Centre (Navsari), Chamber of Commerce and Industries (Navsari) and GIDC (Gandhinagar). From medium and large scale units 16 entrepreneurs were selected by random sampling method 24 (8+16) entrepreneurs were selected for indepth study.

Accordingly, 10 enterprises (MOUs) were visited but 2 units could not be contacted as per the entrepreneurs' list provided by IC. The survey methodology was visiting of industries personally, meeting the responsible person; explaining regarding the survey with a request for cooperation in providing the information. As the data were not readily available at most of the units or the responsible person was not available at the time of the visit of the survey team a second or even at times a third visit was most essential to collect the data from maximum number of units.

Reference Period

In order to have proper assessment of human resources development employment generation of the project at present i.e. reference year 2007-08 and future i.e. next five years (2013). In medium and large scale industries presently functioning units were selected on the basis of the secondary data provided by DIC and Chamber of Commerce and Industries, Navsari and GIDC, Gandhinagar. The field work was carried out during the month of March 2008.

Observation on the Sample Survey Data

As per the terms of reference, 8 MOUs signed in 2005 and 2007 and 16 existing medium and large scale units were to be visited for manpower demand survey assessment. Accordingly, 8 MOUs and 16 present industries/units were visited, but contact persons being out of state/district, others were not available. The entrepreneurs were interviewed in field units (factory sites) or offices to get information as per the proforma when the personal visit was made for the survey. In most of sites the industries (units) were functioning (Non-MOUs) well. Details regarding the total no. of employees, no. of skilled workers, no. of graduates employed in the units, anticipated manpower requirement in future i.e. next five years (2013), post graduates, degree/diploma holders, ITI trade and other graduates, lack of knowledge, lack of skills etc. were collected. Some quantitative data, semi quantitative and qualitative assessments on other aspects could be drawn from the interaction with the concerned entrepreneurs and the same are included in the survey results of this report.

Table 5.2 Sector-wise Profiles of MOUs signed in 2005 & 2007 and Manpower Requirement

Sr. No.	Sector	No. of Projects			Manpower Requirement		
		2005	2007	Total	2005	2007	Total
1.	Agro & Food Processing	7	1	8	268	-	268
2.	Tourism	1	-	1	-	-	-
3.	Ports	1	-	1	-	-	-
	Total:	9	1	10	268	-	268

Source: Industries Commissionerate, GOG, Gandhinagar.

Summary and Field Observations of the District

18. The total number of upcoming projects in Navsari district is 10.
19. The sector having maximum projects in the district is agro & food processing with 8 units and this sector has witnessed the largest investment in the district.
20. Important national highways (NH8 and NH6) connect the district with Ahmedabad, Mumbai and other cities such as Anand and Vadodara.
21. Broad gauge railway line connects Navsari to several cities in Gujarat and also to Mumbai and Ahmedabad.
22. The nearest port is Hajira which is also well connected by road and rail networks
23. The nearest airport is Surat.

Manpower Requirement in Navsari District from MOU 2005 and 2007

8. With 10 projects, the district has a total manpower requirement of 268 technical, managerial and unskilled workers.
9. With 8 projects the agro food processing sector has witnessed the Largest investment.

Presently Navsari district has

- 13 ITIs offering courses in the field of engineering and IT;
- 1 technical institute with an intake of more than 200 students;
- One agriculture college with a capacity of 100 students per year;
- One forestry & horticulture collect with an intake of 25 students;

Employment Generation in Industries after MOUs Signed in 2005 & 2007

At present there are 4,201 persons employed and in future there will be 5,470 persons employed at various levels in the 24 (8+16) industries surveyed out of 40 (10+30) industries. This means that average total employed (skilled and unskilled) staff & workers is 175 and 228 persons per unit. The number of units expected in Navsari district is 40 units (10+30) (MOUs & medium and large scale units) and hence the total requirement of skilled and unskilled persons works out to 7,002 for the base year (2007-08) and 9,117 numbers for the fifth year (2013) respectively. An additional 34,538 small scale industries workers in the base year and in future 41,445 small scale industries workers will be required; the anticipated demand works out to 41,540 for present and 50,562 for future.

There will be indirect employment generation in various activities like goods transport, dhabas, pan shops, various contract works, travel service, workshops for automobile repairs, steel fabrication, engineering works, machinery works, machinery parts, material supply business and many other activities due to industrial growth in the district. Taking the figures of indirect employment at 20% of the total of the above figures, the growth in the indirect employment can be expected around 8,003 for the base year and 10,112 for the future. Hence the overall employment generation in Navsari district due to the industrial growth can be anticipated around 60,674 employees at present and 49,848 employees in future.

Details of 8 units surveyed are presented in table 5.3 on the basis of this sample survey conducted. The manpower requirement of 10 units which includes even those units that are in the pipeline has been derived as under.

Table 5.3 Anticipated Requirement of Manpower after MOUs Signed In 2005 and 2007 of Navsari District

Level of	Qualification	Present	Future
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Education		Requirement Base year (2007-08)	Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	1	2
	M.Sc.	13	13
	M.Tech.	1	1
Sub-total:		15	16
	Mechanical	1	3
	Food Processing Technology	-	2
	Production Engg.	-	1
	Others	1	1
Sub-total:		2	7
Diploma	Electrical	7	11
	Mechanical	12	18
	Chemical	11	13
	Others	1	1
Sub-total:		31	43
ITI Trade	Turner	14	24
	Fitter	13	19
	Wireman	4	11
	Welder	7	10
	Electrician	8	14
	Mechanic (AC/Fridge)	5	10
	Mechanic (Motor vehicles)	4	6
	Mechanic (Instruments)	4	12
	Machinist	15	18
	Chemical Plant Operator	12	13
	Pump Mechanic	7	9
	Lab Assistant	19	33
	Plumber	14	14
	Mechanic (Tractor/Diesel)	16	17
	Motor Rewinding	4	4
	Stenographer	7	13
	Others	14	27
Sub-total:		177	254
Graduates/ Others	B.Sc. / B.A. etc.	29	29
	B.Com. / M.Com.	17	17
	BCA		
	Undergraduates	8	44
	Gardener/Peon/Packing staff	74	93
	Security	30	50
Sub-total:		178	233
TOTAL:	Unskilled	1008	1358
	Skilled	403	553
	TOTAL	1411	1911

Details of 16 medium and large scale units surveyed are presented in Table 5.4. On the basis of this sample survey conducted, the manpower requirement of 30 units which includes even those units that are in the pipeline has been derived as under.

*Table 5.4 Anticipated Requirement of Manpower
Of Medium and Large Scale Industries*

Level of Education	Qualification	Present requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	8	8
	M.Sc.	12	13
	M.Tech.	4	4
Sub-total:		24	25
Degree	Electrical	9	9
	I & C	2	2
	Mechanical	20	20
	Ceramics	2	3
	Chemical	4	4
	Metallurgy	2	2
	Textile Technology	9	10
	Food Processing Tech.	2	2
	Production Engg.	6	6
	Others	5	5
Sub-total:		61	63
Diploma	Electrical	35	37
	I & C	6	6
	Mechanical	46	48
	Ceramics	4	6
	Chemical	8	8
	Textile Technology	16	17
	Fabrication technology	9	10
	Others	8	8
Sub-total:		132	140
ITI Trade	Turner	66	77
	Fitter	44	53
	Wireman	38	50
	Welder	32	44
	Electrician	56	80
	Mechanic (AC/Fridge)	10	20
	Mechanic (Motor vehicles)	15	30
	Mechanic (Electronics)	15	20
	Sewing / Dress making	20	40
	Mechanic (Instruments)	50	60
	Machinist	55	60
	Chemical Plant Operator	15	25
	Pump Mechanic	14	18

	Fireman	4	8
	Lift Mechanic	4	8
	Lab Assistant	25	40
	Painter	10	15
	Plumber	25	30
	Mechanic (Tractor/Diesel)	28	33
	Embroidery	15	20
	Networking Technicians	5	8
	Motor Rewinding	10	14
	Stenographer	20	30
	Mechatronics	16	20
	E-commerce		
	Basic CNC		
	Basic Sheetmetal Fabricn.	11	11
	Basic Turning / Grinding	8	9
	Weaving Loom Operators	14	26
	Others	30	50
Sub-total:		636	886
Graduates/ Others	B.Sc. / B.A. etc.	74	84
	B.Com. / M.Com.	48	53
	BCA	-	3
	Undergraduates	26	36
	Gardener/Peon/Packing staff	179	217
	Security	87	123
Sub-total:		414	516
TOTAL:	Unskilled	2027	2608
	Skilled	1267	1630
	TOTAL (skilled + unskilled)	3294	4238
GRAND TOTAL	Table 5.3	907	1232
	Table 5.4	3294	4238
	TOTAL (Skilled & Unskilled manpower)	4201	5470

Addressing the Manpower Requirement in Industries

Coming Up in Navsari District

Datamation Research Analyst (DRA), New Delhi has carried out a sample survey of 8 MOUs signed (with entrepreneurs) and 16 units of existing medium and large scale industries (total 24) in Navsari district and on the basis of that they have made a forecast (for next five years) i.e. year 2013 of manpower requirement for 10 MOUs and 30 units of medium and large scale (total 40 units). According to this survey the requirement of manpower in the ITI trades is anticipated to be around 1,355 for the base year (2007-08) and 1,900 for future (2013). The table 5.4 presented above gives a picture of the anticipated manpower requirement. The table 5.5 presented below gives a picture of the anticipated manpower requirement for present and future seats available in the ITIs, Grants in Aid, ITC, Self Finance Institutions in Navsari district and skill gaps.

Table 5.5 ITI Trade-wise no. of Manpower Requirement,

no. of Seats Available and Skill Gaps in Navsari District

Trade	Base year (2007-08)			Next 5 yrs (2013)		Year-wise breakup of projection *				
	Man-power Requirement	Seats available in ITI / SF etc.	Skill Gap (2-3)	Projected Requirement	Skill Gap (5-3)	2008-09	2009-10	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10	11
Turner	133	96	37	168	72	15	15	15	15	12
Fitter	95	474	-379	120	-354					
Wireman	70	352	-282	101	-251					
Welder	65	260	-195	90	-170					
Electrician	107	240	-133	157	-83					
Mech. instrument	290	816	-526	405	-411					
Machinist	117	96	21	130	34	6	6	6	6	10
Chem. Plant Operator	50	96	-46	72	-24					
Lab. Assistant	73	32	41	122	90	20	20	20	20	10
Plumber	70	-	70	74	74	14	14	14	14	18
Motor rewinding	23	192	-169	30	-162					
Steno.	45	80	-35	72	-8					
Basic metal fabricn.	19	-	19	19	19	5	5	5	4	
Basic turning grinding	14	-	14	14	14	3	3	3	3	2
Others	193	1490	-1297	324	-1166					
Total:	1355	4224	-2869	1900	-2324	63	63	63	62	52

* Present intake capacity of ITIs is underutilized. Hence no increase is proposed.

Table 5.6 Details of Seats Available and Proposed Increase in Seats in Various ITIs of Navsari District

Sr. No.	Name of Institute	Seats Available	Proposed increase (Base year 2007-08) *
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1.	ITI, Navsari	88	
2.	ITI, Ganesh Sisodar	256	
3.	ITI, Bilimora	2384	
4.	ITI, Gandevi	224	
5.	ITI, Chikhli	236	
6.	ITI, Agasi	288	
7.	ITI, Vansda	220	
8.	ITI, Khergam	184	
9.	GIA, Gandhidhar, Kachhali	10	
10.	GIA, Dhamdachha	92	
11.	GIA, Vesma, Navsari	64	
12.	GIA, Chikhli	128	
13.	SFI, Gandevi	50	
	Total:	4224	

Note: As per personal discussions at the time of field survey.

* Present intake capacity of ITIs is underutilized. Hence no increase is proposed.

Strategies to Address Future Manpower Requirement in Navsari District

17. Majority of the projects proposed are to be established in Navsari, Jalalpore and Gandevi areas;
18. Majority of the projects are based on agro food processing floriculture, rose plantation, green house systems, gerbera and plantation of jethropa for bio diesel;
19. Additional short term courses are required to meet the industrial manpower requirement. There is a shortage of *Bagban* workers (garden experts) for field work in floriculture gardens.
20. The Department of Employment & Training should coordinate with Agri. University, Navsari for agro based industries and modernize the curricula and courses for such training. The enterprises should plan agro based industry parks for future growth of requirement of manpower.
21. For export purposes it is required to improve the quality of products and productivity.

GENERAL FIELD OBSERVATIONS, SUMMARY AND SUGGESTIONS

In addition to the analysis based on the field data and entrepreneurs' opinions given in the report, a few general observations, suggestions and summary are given below:

Agro-based Industries

Agro based and food processing industry is one of the thrust areas of South Gujarat.

Large Scale Employment Opportunities

14. Development of business will generate employment opportunities for the local youth.
15. Areas like textile industry can create employment opportunities at district level.
16. Readymade garments industry has a good scope to generate employment opportunities.
17. The employment opportunities in Navsari district are mainly in the non-engineering trades such as diamond cutting/polishing, gem and jewellery and readymade garments, etc.

Table 5.7 Trade-wise Seats Available in ITIs/GIAs/ITCs of Navsari District

Sr. No.	Trade	ITI									GAI				SFI	Grand Total	
		Navsari	Ganesh Sisodar	Bili-mora	Gan-devi	Chikhli	Agasi	Vansda	Khet-gam	ITI Total	Kachholi	Than-dasa	Resma	Chikhli	GAI Total		Gan-devi
1.	Mech. Diesel (TASP)	-	32	16	-	-	32	-	-	80	-	-	-	-	-	-	80
2.	CoE Chem (BBBT)	-	-	96	-	-	-	-	-	96	-	-	-	-	-	-	96
3.	Turner	-	-	96	-	-	-	-	-	96	-	-	-	-	-	-	96
4.	2-wheeler mech.	-	-	118	-	-	-	-	-	48	-	-	-	-	-	-	48
5.	Software Prog.	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
6.	E-commerce	-	-	48	-	-	-	-	-	48	-	-	-	-	-	25	73
7.	Arm/motor Rewinding	-	32	32	32	-	32	32	32	192	-	-	-	-	-	-	192
8.	Wireman (TASP)	-	32	16	-	-	-	-	-	48	-	32	-	-	-	32	80
9.	Wireman	-	-	176	32	32	32	32	32	336	-	-	-	16	16	-	352
10.	Chem. Plant mech.	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
11.	Electrician (TASP)	-	-	16	-	-	-	32	-	48	-	-	-	-	-	-	48
12.	Dress Making	-	-	64	-	-	-	-	-	64	-	-	-	-	-	-	64
13.	Machinist/grinder	-	-	24	-	-	-	-	-	24	-	-	-	-	-	-	24
14.	Motor vehi. Mech.	-	32	96	-	32	32	16	-	208	-	-	-	-	-	-	208
15.	Electrician	-	-	128	-	-	32	-	-	160	-	-	-	32	32	-	192
16.	Welder	-	32	120	24	24	24	24	-	248	-	12	-	-	12	-	260
17.	Chem. Plant op.	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
18.	Fitter (TASP)	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-	16
19.	Hair & Skin Care	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-	16
20.	Electronic mech.	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
21.	Machinist	-	-	72	-	-	-	-	-	72	-	-	-	-	-	-	72

22.	Fitter	-	32	208	64	32	32	32	32	442	-	-	32	-	32	-	474
23.	Instr. Mech. (TASP)	-	32	16	-	-	-	-	-	48	-	-	-	-	-	-	48
24.	Comp. Operator (female)	-	-	40	-	-	-	-	-	40	-	-	-	-	-	-	40
25.	Comp. Operator Programming	40	40	80	40	20	40	20	40	320	-	-	-	-	-	-	320
26.	Dress making	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-	16
27.	CoE Chem. Adv.	-	-	96	-	-	-	-	-	96	-	-	-	-	-	-	96
28.	Instrumt. Mechanic	-	-	128	-	-	-	-	-	128	-	-	-	-	-	-	128
29.	Draughtsman Civil	-	-	80	-	-	-	-	-	80	-	16	32	32	80	-	160
30.	Surveyors	-	-	32	-	-	-	-	-	32	-	-	-	16	16	-	48
31.	Plastic processing	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
32.	Electronic Mechanic (TASP)	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-	16
33.	Draughtsman Mechanic	-	-	32	-	-	-	-	-	32	-	32	-	32	64	-	96
34.	Welder (TASP)	-	-	24	-	-	-	-	-	24	-	-	-	-	-	-	24
35.	Refrigerator/ AC Mechanic	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
36.	Tractor Mechanic	-	-	48	-	-	-	-	-	48	-	-	-	-	-	-	48
37.	Carpenter	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-	16
38.	Mechanic Diesel	-	-	80	-	32	-	-	-	112	-	-	-	-	-	-	112
39.	IT/Elec. Maintenance	-	-	40	-	-	-	-	-	40	-	-	-	-	-	-	40
40.	Radio/TV Mechanic	-	-	32	-	-	-	-	-	32	-	-	-	-	-	-	32
41.	Electronic	-	-	32	-	-	-	-	-	32	-	-	-	-	-	-	32

	mechanics (Female)																
42.	Cutting & Sewing	-	-	-	32	32	32	32	32	160	-	-	-	-	-	-	160
43.	Lab. Assistant- Chem.	-	-	-	-	32	-	-	-	32	-	-	-	-	-	-	32
44.	Steno English	16	-	-	-	-	-	-	-	16	-	-	-	-	-	-	16
45.	Steno Gujarati	32	-	-	-	-	-	-	32	64	-	-	-	-	-	-	64
46.	DTP operator	-	-	-	-	-	-	-	-	-	10	-	-	-	10	-	10
47.	Web Designing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25
	Total:	88	256	2384	224	236	288	220	220	3880	10	92	64	128	294	50	4224

Source: Directorate of Employment and Training, GOG, Gandhinagar.

List of the Industries Selected for Field Survey

(A) Vibrant Gujarat Investors' Summit 2005 & 2007 MOUs – Navsari District

169. Maxo (I) Farmachem Pvt. Ltd.
170. Best Roses Biotech Pvt. Ltd.
171. Harsh Flora
172. Bharat Agritech
173. Mahul Flora, Navsari
174. Payal Flora
175. Shri Harshadbhai L Naik, Ichchhapore
176. Aditya Aeromatic & Bio Energies Pvt. Ltd.

(B) Presently Functioning Medium & Large Scale Industries in Navsari District

177. Best Roses Biotech Pvt. Ltd.
178. Bhukhanwala Ceramic Pvt. Ltd.
179. Bhukhanwala Tools Pvt. Ltd.
180. Cebon Apparel Pvt. Ltd.
181. Gem Star Company
182. Gutic Biosciences Limited
183. Mafatlal Burlington Industries Ltd.
184. Navsari Oil Products Ltd.
185. NSP Straw & Paper Products Pvt. Ltd.
186. Parmes Diamonds Exports Pvt. Ltd.
187. Peamtee Fine Wires (I) Pvt. Ltd.
188. Sahakari Khand Udyog Mandali Ltd.
189. Shri Maroli Vibhag Khand Udyog Sahakari Mandli
190. Tata Metals & Strips Ltd.
191. Navsari Cotton & Silk Mills Ltd.
192. Tata Iron & Steel Co. Ltd.

VALSAD DISTRICT ANALYSIS BASED ON SAMPLE SURVEY

PROFILE OF VALSAD DISTRICT

Location and Administration

Valsad district, having a total geographical area of 2939 sq.km., accounts for about 1.50 percent of the total geographical area of the State. The district lies in extreme south of Gujarat at about 90 km north of Mumbai city and approximately 290 km south of the State capital Gandhinagar. The Government of Gujarat in 1997 divided old Valsad district into two districts, viz. Valsad and Navsari. The newly formed Valsad district comprises of five talukas viz. Valsad, Pardi, Umargam, Dharampur and Kaprada. Kaprada is newly formed taluka due to bifurcation of old Dharampur taluka.

Demographic Characteristics

The population of Valsad district as per 2001 census was 1411 lakh. The density of population is 423 persons per sq.km. compared to the State average of 268 in 2001. Urban population constitutes 27% of the total population. About 2.6% of the total population is Scheduled Castes and 54.8% is Scheduled Tribes. The literacy level was 54.27 in the year 1991.

NATURAL RESOURCES

Soil Resources

About 65% of the area is under deep black, shallow black and alluvial soils except for the east, south and west borders. The entire area of the district belongs to these soil groups and in general the soils are fertile. In the coastal alluvial plain the soils are salt affected and are saline-sodic in nature.

Climate

Climate of Valsad district falls under dry sub-humid receiving the highest rainfall in Gujarat averaging 2000 mm per year. The number of rainy days varied between 39 and 91 during the period 1990-2005. Maximum temperature varied between 34° C and 41° C and minimum temperature between 9° C and 16° C during the same period.

Water Resources

Valsad district is well endowed with water resources – both surface and groundwater. In addition to this, the district receives the highest rainfall in Gujarat State (average 2000 mm per year) from the south-west monsoon well distributed over the kharif season.

River Systems

The district has five rivers; Ambica, Auranga, Purna, Mindhola and Damanganga flowing from east to west – the first three rivers are ephemeral.

Forestry

The vast forest land spreading over 87,648 ha plays a vital role in the economy of the district. The maximum density of forests is found in Dharampur, Kaprada and Umargam talukas. Main

forest products are teakwood, firewood, charcoal and other timber while minor forest products include bamboo, grass, mahuwa flowers, tendu leaves, gum and varieties of medicinal herbs.

Fisheries

With about 50 km stretch of coast, 40 sq.km. of brackish water area and 150 sq.km. area under fresh water, Valsad district possesses enormous potential for marine as well as inland fisheries. Total fish catch has increased from 70,000 MT in 1996-97 to 79,065 MT in 2005-06 in marine fisheries.

Industries

Valsad district has 118 medium and large scale industrial units and 10,546 small scale units having a total investment of Rs.629 crore (L&M) and Rs.348 crore (SSI) respectively in the year 2003. The number of persons employed by these industrial units are 33,491 (L&M) and 57,499 (SSI). The new industrial policy of the state provides capital investment subsidy, sales tax benefits, incentive to employment oriented industries, incentive for pioneer and prestigious units and special incentives for setting up 100% export oriented units to accelerate the industrial growth. Valsad, Dharampur and Kaprada talukas are declared Special Backward Areas and they have become attractive locations for entrepreneurs. There are 8 industrial estates of Gujarat Industrial Development Corporation ((GIDC) which provide a total 2093 industrial sheds.

Transport and Communication

Road and Rail

The transport and communication facilities are prerequisites for development of commerce in a region. These facilities in Valsad district have shown a very impressive improvement over the past decade. The total length of roads in the district has increased from 2440 km in 1980-81 to 3732 km in 2005-06. The district has the benefit of broad gauge railway line of 72 km. There are 5 major ports in the district, viz. Umargam, Maroli, Kolak, Valsad and Umarsadi. Wood and construction material are the main items imported at these ports. There are 81 branches of commercial banks, 20 branches of District Cooperative Central Banks and 12 regional rural banks (RRBs) contributing to an overall economic development of the district. Bank of Baroda is the Lead Bank.

Methodology of Assessment

For the selection of sample industries, listing of all MOUs of Vibrant Gujarat Global Investors' Summit 2005 and 2007 with Summit of Information Technology, Urban Development and Tourism Industries was done on the basis of sector-wise list collected from Industries Commissionerate, Gandhinagar and respective nodal departments as well as District Industry Centre, Valsad. Thus, in all 30 entrepreneurs were selected for indepth study. The details regarding sectors, numbers of entrepreneurs etc are given in the following table 5.1. The data from entrepreneurs were collected through structured questionnaires.

Table 5.1 Sector-wise number of MOUs

Sr. No.	Sector	Sample size (No. of MOUs) Visited	Remarks
1.	Agro & Food Processing	2	(1) 1 not responding due

2.	Paper industries	2	to being out of district (2) 2 not responding due to being out of Gujarat/abroad; and (3) 2 Due to being multidistrict and responsible person not available.
3.	Automobile Engineering	2	
4.	Textile technology	1	
5.	Chemicals & Petrochemicals	1	
6.	SEZ	1	
7.	Ports	1	
	Total	10	
10.	Presently functioning (Existing)	30	Medium & large scale units

Sample Selection for Presently Functioning Large & Medium Scale Industries

For the selection of sample industries Random Sampling Technique was adopted. Selection of sample industries was done randomly on the basis of sector-wise list of medium and large scale units collected from District Industry Centre (Valsad), Chamber of Commerce and Industries (Valsad) and GIDC (Gandhinagar). From medium and large scale units 30 entrepreneurs were selected by random sampling method. 30 entrepreneurs were selected for indepth study.

Accordingly, 40 enterprises (MOUs+non-MOUs) were visited but due to wrong addresses 5 units could not be contacted as per the entrepreneurs' list provided by IC. The remaining 5 entrepreneurs on personal visits informed that they required time and they will send information within a few days and there was no response from them later. The survey methodology was visiting of industries personally, meeting the responsible person; explaining regarding the survey with a request for cooperation in providing the information. As the data were not readily available at most of the units or the responsible person was not available at the time of the visit of the survey team a second or even at times a third visit was most essential to collect the data from maximum number of units.

Reference Period

In order to have proper assessment of human resources development employment generation of the project at present i.e. reference year 2007-08 and future i.e. next five years (2013). In medium and large scale industries presently functioning units were selected on the basis of the secondary data provided by DIC and Chamber of Commerce and Industries, Valsad and GIDC, Gandhinagar. The field work was carried out during the month of March 2008.

Observation on the Sample Survey Data

As per the terms of reference, 15 MOUs signed in 2005 and 2007 and 30 existing medium and large scale units were to be visited for manpower demand survey assessment. Accordingly, 15 MOUs and 30 present industries/units were visited, but due to wrong address, contact persons being out of state/district, five entrepreneurs were not available. The entrepreneurs were interviewed in field units (factory sites) or offices to get information as per the proforma when the personal visit was made for the survey. In most of sites the industries (units) were functioning (Non-MOUs) well. Details regarding the total no. of employees, no. of skilled workers, no. of graduates employed in the units, anticipated manpower requirement in future i.e. next five years (2013), post graduates, degree/diploma holders, ITI trade and other graduates, lack of knowledge, lack of skills etc were collected. Some quantitative data, semi quantitative and qualitative assessments on other aspects could be drawn from the interaction with the concerned entrepreneurs and the same are included in the survey results of this report.

Table 5.2 Sector-wise Profiles of MOUs signed in 2005 & 2007 and Manpower Requirement

Sr. No.	Sector	No. of Projects			Manpower Requirement		
		2005	2007	Total	2005	2007	Total
1.	Agro & Food Processing	1	3	4	-	1130	1130
2.	Paper industries	-	3	3	-	1163	1163
3.	Automobile engineering	-	2	2	-	9500	9500
4.	Chemical/ Petrochemical	-	2	2	-	213	213
5.	Tourism	1	-	1	-	-	-
6.	SEZs	-	1	1	-	10000	10000
7.	Textile and Apparels	-	1	1	-	222	222
8.	Health Care	-	1	1	-	-	-
	Total:	2	13	15	-	22228	22228

* Including multidistrict projects.

Source: Industries Commissionerate, GOG, Gandhinagar.

Summary and Field Observations of the District

24. There are a total of 15 projects expected to be established in Valsad district.
25. The highest number of projects is in the sector of agro and food processing.
26. In terms of accessibility, the district is well connected with an important broad gauge railway line connecting with several cities of Gujarat and also Mumbai and Ahmedabad.
27. The district is well connected with NH No.8 that connects Ahmedabad & Mumbai via Valsad.
28. The nearest port is Hajira and the nearest airports are Surat (50 km) and Mumbai (90 km).

Manpower Requirement in Valsad District from MOU 2005 and 2007

10. With 15 projects, the district has a total manpower requirement of 22,228 technical, managerial and unskilled workers.
11. Largest investment is in the sector of SEZ projects.

Presently Valsad district has

- 10 ITIs with an approximate intake of 2296, offering courses in the field of engineering (including textile engineering), IT and chemicals;
- 1 technical institute with an intake of over 360 students;
- 1 college offering MBA to 60 students per year;
- There is need for technical manpower including pharmacy, chemistry, agriculture and hotel management.

Employment Generation in Industries after MOUs Signed in 2005 & 2007

At present there are 6,240 persons employed and in future there will be 9,016 persons employed at various levels in the 40 (10+30) industries surveyed out of 305 (15+290) industries. This means that average total employed (skilled and unskilled) staff & workers is 156 and 225.4 persons per unit. The number of units expected in Valsad district is 305 units (15+290) (MOUs & medium and large scale units) and hence the total requirement of skilled and unskilled persons works out to 47,580 for the base year (2007-08) and 68,747 numbers for the fifth year (2013) respectively. An additional 58,641 small scale industries workers in the base year and in future 64,505 small scale industries workers will be required; the anticipated demand works out to 1,06,221 for present and 1,33,252 for future.

There will be indirect employment generation in various activities like goods transport, dhabas, pan shops, various contract works, travel service, workshops for automobile repairs, steel fabrication, engineering works, machinery works, machinery parts, material supply business, retail business and many other activities due to industrial growth in the district. Taking the figures of indirect employment at 20% of the total of the above figures, the growth in the indirect employment can be expected around 21,244 for the base year and 26,650 for the future. Hence the overall employment generation in Valsad district due to the industrial growth can be anticipated around 1,27,465 employees at present and 1,59,902 employees in future.

Details of 10 units surveyed are presented in table 5.3 on the basis of this sample survey conducted. The manpower requirement of 40 units which includes even those units that are in the pipeline has been derived as under.

Table 5.3 Anticipated Requirement of Manpower after MOUs Signed In 2005 and 2007 of Valsad District

Level of Education	Qualification	Present Requirement Base year (2007-08)	Future Requirement (next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	-	11
	M.Sc.	5	11
	M.Tech.	1	4
Sub-total:		6	26
Degree	Electrical	4	11
	Civil	1	5
	I & C	1	1
	Mechanical	5	23
	Ceramics	-	2
	Chemical	4	9
	Metallurgy	-	3
	Textile technology	1	3
	Environmental Engg.	-	2
	Food Processing Technology	1	3
	Production Engg.	5	9
	Industrial Engg.	-	1
	Others	-	12
Sub-total:		21	84
Diploma	Electrical	8	26
	Civil	-	3
	I & C	1	8
	Mechanical	9	31
	Electronics	2	6
	Textile technology	2	5
	Chemical	6	14
	Automobile Engg.	-	2
	Fabrication technology	-	6
Others	2	20	

Sub-total:		30	131
ITI Trade	Turner	17	53
	Fitter	10	36
	Wireman	5	14
	Welder	5	9
	Electrician	7	22
	Mechanic (AC/Fridge)	4	8
	Mechanic (Motor vehicles)	2	5
	Mechanic (Electronics)	4	8
	Mechanic (Instruments)	9	29
	Machinist	12	46
	Chemical Plant Operator	2	4
	Sewing & Dress Making	2	4
	Pump Mechanic	1	4
	Lab Assistant	7	20
	Painter	-	2
	Plumber	5	10
	Mechanic (Tractor/Diesel)	7	23
	Radio/TV Mechanic	-	2
	Motor Rewinding	1	6
	Stenographer	6	17
Mechatronics	-	6	
Basic Sheetmetal Fabricn.	-	9	
Basic Turning / Grinding	-	5	
E-commerce	2	2	
Others	5	13	
Sub-total:		113	363
Graduates/ Others	B.Sc. / B.A. etc.	22	80
	B.Com. / M.Com.	12	51
	BCA	-	8
	Undergraduates	17	37
	Gardener/Peon/Packing staff	58	165
	Security	32	100
Sub-total:		141	441
TOTAL:	Unskilled	415	1190
	Skilled	311	1049
	TOTAL	726	2239

Details of 30 medium and large scale units surveyed are presented in Table 5.4. On the basis of this sample survey conducted, the manpower requirement of 290 units which includes even those units that are in the pipeline has been derived as under.

Table 5.4 Anticipated Requirement of Manpower
Of Medium and Large Scale Industries

Level of Education	Qualification	Present requirement	Future Requirement
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		Base year (2007-08)	(next 5 years) (2013)
Post Graduates/ Professionals	MBA/CA/CWA	16	16
	M.Sc.	42	44
	M.Tech.	2	2
Sub-total:		60	62
Degree	Electrical	37	37
	Mechanical	62	63
	Electronics	4	4
	Computer	2	2
	Ceramics	1	1
	Chemical	52	56
	Metallurgy	4	4
	Textile Technology	4	4
	Food Processing	4	4
	Environmental Engg.	3	3
	Production Engg.	25	25
	Industrial Engg.	4	4
	Others	12	13
Sub-total:		214	220
Diploma	Electrical	85	85
	Civil		
	I & C	9	9
	Mechanical	122	124
	Electronics	24	25
	Ceramics	3	3
	Chemical	79	86
	Automobile Engg.	1	1
	Textile Technology	7	8
	Fabrication technology	29	32
	Dress Designing	2	2
	Others	21	23
	Sub-total:		382
ITI Trade	Turner	114	138
	Fitter	88	114
	Wireman	56	79
	Welder	32	51
	Electrician	65	86
	Mechanic (AC/Fridge)	17	20
	Mechanic (Motor vehicles)	9	10
	Mechanic (Electronics)	6	8
	Sewing / Dress making	6	7
	Mechanic (Instruments)	69	92
	Machinist	102	116
	Chemical Plant Operator	34	48
	Pump Mechanic	12	15
	Lab Assistant	48	59
	Painter	14	17

	Plumber	49	66
	Mechanic (Tractor/Diesel)	59	75
	Embroidery	4	6
	Networking Technicians	8	10
	Motor Rewinding	12	15
	Stenographer	1	74
	Mechatronics	4	6
	E-commerce	6	9
	Basic Sheetmetal Fabricn.	11	14
	Basic Turning / Grinding	5	9
	Weaving Loom Operators	6	7
	Others	26	52
Sub-total:		909	1195
Graduates/ Others	B.Sc. / B.A. etc.	222	229
	B.Com. / M.Com.	140	151
	BCA	9	15
	Undergraduates	53	137
	Gardener/Peon/Packing staff	414	536
	Security	249	312
Sub-total:		1087	1388
TOTAL:	Unskilled	2871	3505
	Skilled	2643	3272
	TOTAL (skilled + unskilled)	5514	6777
GRAND TOTAL	Table 5.3	726	2239
	Table 5.4	5514	6777
	TOTAL (Skilled & Unskilled manpower)	6240	9016

Addressing the Manpower Requirement in Industries Coming Up in Valsad District

Datamation Research Analyst (DRA), New Delhi has carried out a sample survey of 10 MOUs signed (with entrepreneurs) and 30 units of medium and large scale industries (total 40) in Valsad district and on the basis of that they have made a forecast (for next five years) i.e. year 2013 of manpower requirement for 15 MOUs and 290 units of medium and large scale industries (total 305 units). According to this survey the requirement of manpower in the ITI trades is anticipated to be around 9,150 for the base year (2007-08) and 13,351 for future (2013). The table 5.4 presented above gives a picture of the anticipated manpower requirement. The table 5.5 presented below gives a picture of the anticipated manpower requirement for present and future seats available in the ITIs, Grants in Aid, ITC, Self Finance Institutions in Valsad district and skill gaps.

*Table 5.5 ITI Trade-wise no. of Manpower Requirement,
no. of Seats Available and Skill Gaps in Valsad District*

Trade	Base year (2007-08)			Next 5 yrs (2013)		Year-wise breakup of projection				
	Man-	Seats	Skill	Projec-	Skill	2008	2009	2010	2011-	2012

	power Require- ment	availabl e in ITI / SF etc.	Gap (2-3)	ted Requir e ment	Gap (5-3)	-09	-10	-11	12	-13
1	2	3	4	5	6	7	8	9	10	11
Turner	999	-	999	1456	1456	200	250	275	350	381
Fitter	747	144	603	1143	999	120	150	190	245	294
Wireman	465	208	257	709	501	60	70	105	110	156
Welder	282	108	174	457	349	50	55	70	75	99
Electrician	549	128	421	823	695	85	95	140	145	230
Mech. instrume nt	1517	596	921	2280	1684	300	300	320	375	389
Machinis t	869	-	869	1235	1235	175	200	225	290	345
Sewing/ Dress making	61	48	13	84	36	6	6	6	8	10
Chem. Plant Operator	198	16	182	396	380	45	55	80	90	110
Lab. Assistant	419	16	403	602	586	70	80	110	120	206
Plumber	411	48	363	625	577	70	80	110	120	197
Others	2638	984	1654	3541	2557	356	400	576	600	632
Total:	9150	2296	6854	13351	11055	1536	1741	2246	2383	3149

Table 5.6 Details of Seats Available and Proposed Increase in Seats in Various ITIs of Valsad District

Sr. No.	Name of Institute	Seats Available	Proposed increase (Base year 2007-08)
1.	ITI, Pardi	732	935
2.	ITI, Valsad	84	384
3.	ITI, Dharampur	336	436
4.	ITI, Kaprada	508	658
5.	ITI, Bhilad	220	420
6.	SFI, GIDC, Vapi	76	276
7.	SFI, ET&T, Trg. Centre, Valsad	45	245
8.	SFI, DBE Trust, Valsad	105	355
9.	SFC, SKE Trust, Dharampur	40	290
10.	SFI, Vanvasi Kalyan Kendra, D'pur	155	355
14.	6 new SFIs (expected)	-	900
15.	5 new ITI of PPP model (Expected)	-	1600
	Total:		

Note: As per personal discussions at the time of field survey.

Strategies to Address Future Manpower Requirement in Valsad District

22. Majority of the projects proposed are to be established in Pardi, Umargam, Valsad and Dharampur areas;
23. Majority of the projects are based on paper & printing, textile and apparels, industrial parks and agro based industries;
24. It is proposed to invite offers from private organizations to start self finance institutes in Valsad district;
25. Additional short term courses are required to meet the industrial manpower requirement;
26. Skills Development Centres (SDC) should be established at all GIDC's Industrial Estates and SEZs like GIDC, Vapi, Umargam, Surigam, Pardi and Gudlav and industrial estate parks in the district where industries will develop strategies for training as per their own requirements. This will provide opportunity for local manpower development in accordance with requirement of the industries. Thus the objective of the SDC is to provide employment to the local population by building them up into high quality skilled workers on a cost effective basis.

GENERAL FIELD OBSERVATIONS, SUMMARY AND SUGGESTIONS

In addition to the analysis based on the field data and entrepreneurs' opinions given in the report, a few general observations, suggestions and summary are given below:

Job Opportunities

18. The small and large scale existing industries in Valsad district are textile, chemical, colour & dyeing, pesticides, ceramics, plastic industry, pulp & paper industry, pharmaceuticals, diamond cutting etc. New medium and large scale industries coming up are chemical, paper & printing, textile, pharmaceuticals, industrial parks, agro based industry, etc. Therefore there is a good scope for job opportunities and generation of employment. There is a need to create facilities for short term courses suitable for industrial standards to get job in above mentioned industries.
19. There is scope for new courses and better job opportunities for tribal youth of Valsad district in which two talukas viz. Dharampur and Kaprada are tribal areas. At present the tribal youth face lack of communication skills and self confidence. The ITIs will develop short term courses for them. The courses will also help them in personality development and to get jobs in industrial sectors. It is essential to make tribal youth aware of the industry and relevance of the courses.

Table 5.7 Trade-wise Seats Available in ITIs/GIAs/ITCs of Valsad District

Sr. No.	Trade	Pardi	Val-sad	Dharam-pur	Kap-rada	Bhilad	ITI Total	Vapi	Samru-ddhi	Avabhai DBET	SKE D'pur	VKMD D'pur	SFI Total	Grand total
1.	Plastic Process. Operator	32	-	-	-	-	32	-	-	-	-	-	-	32
2.	CoE Chemical (BBBT)	93	-	-	-	-	93	-	-	-	-	-	-	93
3.	2-wheeler repairer	20	-	16	-	-	36	-	-	-	-	-	-	36
4.	Electronics Mech. (TASP)	16	-	-	32	-	48	-	-	-	-	-	-	48
5.	Lab. Asst. (Chem. Plant)	16	-	-	-	-	16	-	-	-	-	-	-	16
6.	Wireman (TASP)	96	-	32	32	32	192	16	-	-	-	-	16	208
7.	Mechanic – Diesel	32	-	64	32	32	160	-	-	-	-	-	-	160
8.	IT/Elec. System Mainten.	20	-	-	-	-	20	-	-	-	-	-	-	20
9.	Fitter (TASP)	32	-	32	32	32	128	16	-	-	-	-	16	144
10.	Chem.Plant Mech.(TASP)	16	-	-	-	-	16	-	-	-	-	-	-	16
11.	Armature/Motor rewinding (TASP)	32	-	32	32	32	128	-	-	-	-	-	-	128
12.	CoE Chemical (Advance)	96	-	-	-	-	96	-	-	-	-	-	-	96
13.	Computer Operator/ Programme (TASP)	40	20	72	20	20	172	-	-	20	-	40	60	232
14.	Electronics Mech. Female	16	-	-	-	-	16	-	-	-	-	-	-	16
15.	Instrument Mech (TASP)	48	-	-	-	-	48	-	-	-	-	-	-	48
16.	Welder (TASP)	12	-	24	36	24	96	12	-	-	-	-	12	108
17.	Chem. Plan Operator	16	-	-	-	-	16	-	-	-	-	-	-	16
18.	Steno. / Computer	16	64	-	64	-	144	-	-	-	-	-	-	144

	Operator (Gujarati) female													
19.	Electrician	48	-	32	16	16	112	16	-	-	-	-	16	128
20.	Mech. Diesel (TASP)	32	-	-	-	-	32	-	-	-	-	-	-	32
21.	Plumber	-	-	16	32	-	48	-	-	-	-	-	-	48
22.	Radio/TV Mechanic	-	-	16	-	-	16	-	-	-	-	-	-	16
23.	Motor vehicle mechanic	-	-	-	-	32	32	-	-	-	-	-	-	32
24.	Cutting / Sewing	-	-	-	-	-	-	-	-	-	-	-	-	-
25.	Electric Appliance repairs	-	-	-	32	-	32	-	-	-	-	-	-	32
26.	Driver cum Mechanic	-	-	-	-	32	32	-	-	-	-	-	-	32
27.	CoE Electrical (BBBT)	-	-	-	96	-	96	-	-	-	-	-	-	96
28.	Data entry operator	-	-	-	32	-	32	-	20	20	-	40	80	112
29.	Garment Making	-	-	-	32	-	32	16	-	-	-	-	16	48
30.	Software programming	-	-	-	-	-	-	-	25	-	-	50	75	75
31.	E-commerce	-	-	-	-	-	-	-	-	25	-	-	25	25
32.	Computer Teacher	-	-	-	-	-	-	-	-	20	-	-	20	20
33.	Communication/ Spoken English	-	-	-	-	-	-	-	-	20	-	-	20	20
34.	Health & Sanitary Inspector	-	-	-	-	-	-	-	-	-	20	-	20	20
35.	Hospitality/house keeping	-	-	-	-	-	-	-	-	-	20	-	20	20
36.	Insurance agents	-	-	-	-	-	-	-	-	-	-	25	25	25
	Total:	732	84	336	508	220	1880	76	45	105	40	155	416	2296

Source: Directorate of Employment and Training, GOG, Gandhinagar.

Vibrant Gujarat Investors' Summit 2005 & 2007 MOUs – Valsad District
List of the Industries Selected for Field Survey

193. Swastik Intermediate Pvt. Ltd.
194. Vadilal Industries Ltd.
195. Daman Ganga Industrial Park
196. Ohm Industrial Infrastructure
197. Condour Industries Pvt. Ltd.
198. Shri Ajit Pulp and Papers
199. P R SEZs Pvt. Ltd.
200. Atul Ltd., Valsad
201. Raymond Ltd.
202. Adani Exports / NG Group / Goulf Omkar

Presently Functioning Medium & Large Scale Industries in Valsad District
List of the Industries Selected for Field Survey

203. Arti Industries Ltd.
204. Aryan Paper Mills Ltd.
205. Gayatri Shakti Paper Mills Ltd.
206. N R Papers Boures Ltd.
207. Ideal Dye Chemical Industries
208. Raj Rajendra Synthetics Pvt. Ltd.
209. Uniflex Cable Ltd.
210. Usha Garment Manufacturers Pvt. Ltd.
211. Amul Rasayan Ltd.
212. Sabero Organic Gujarat Ltd.
213. Atul Ltd.
214. Best Paper Mills Pvt. Ltd.
215. Manglam Drugs Organic Ltd.
216. Phathelo Colour & Chemical India ltd.
217. Rashaikh Paper Mills Ltd.
218. Tipco Industrial Ltd.
219. Atul Ltd., Valsad (second unit)
220. Bilag Industries Pvt. Ltd.
221. Alok Industries Ltd.
222. Atul Ltd. (3rd unit)
223. Glofam Costpin Industries Ltd.
224. Ramco Paper & Board Industries Ltd.
225. Shap Paper Mills Ltd.
226. Welspun India Ltd.
227. Vadilal Industry Ltd.
228. G M Knitting Industries Ltd.
229. Uniflex Cable Ltd.
230. Daman Ganga Papers Ltd.
231. India Gelatin & Chemicals
232. Arti Industries Ltd.