

# **Human Resource and Skill Requirements in the Unorganised Sector**

Study on mapping of human resource skill gaps in India till

2022

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## **1. Introduction**

The unorganised sector is a critical part of the Indian economy. Prior to understanding the human resource and skill requirements in the unorganised sector, it is required to put in perspective the usage of the terms '*unorganised sector*' and '*unorganised employment*'.

- *Unorganised/Informal sector*: The unorganised sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers.
- *Unorganised/Informal employment*: Unorganised workers consist of those working in the unorganised enterprises or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment/ social security benefits provided by the employers.

It is critical to note that unorganised/informal employment is characterised by lack of social sector benefits. It is also important to note that though employment might take place in a formal/organised sector, the '*nature*' of employment could still be '*informal/unorganised*'.

The total employment in the unorganised sector is expected to be about 420 million (92%) out of a total workforce of 450 million in 2008. The extent of informal employment is estimated to be at about 92%-93% between 2008 and 2012.

As is obvious, this not only indicates the importance of informal sectors but also indicates the importance of informal employment, and the need for skill building therein.

The National Commission for Enterprises in the Unorganised Sector (NCEUS) has extensively profiled the unorganised sector and unorganised employment in its report, '*The Challenge of Employment in India – An Informal Economy Perspective*' (April, 2009).

## 1.1. Unorganised/Informal Employment

The following table presents the trend in informal and formal employment in informal and formal sectors.

*Table 1: Employment<sup>1</sup> in the formal and informal sector (in million and %)*

Sector	Informal/Unorganised worker		Formal/Organised worker		Total	
	<b>1999-00</b>					
Informal/Unorganised sector	393.7	99.50%	1.8	0.50%	341.5	100%
Formal/Organised sector	23.1	42.10%	31.8	57.9%	54.9	100%
Total	362.8	91.5%	33.6	8.5%	396.4	100%
	<b>2007-08 (E)</b>					
Informal/Unorganised sector	388.5	99.60%	1.5	0.40%	390.0	100%
Formal/Organised sector	27.0	45.0%	33.0	55.0%	60.0	100%
Total	415.0	92%	34.5	8%	450	100%

Source: NCEUS, 2009

Within this unorganised sector, 40% are employed by enterprises/companies, while about 60% are self-employed<sup>2</sup>. Male workers constitute about 60% of the informal employment in manufacturing and services sector, while female workers constitute about 40%.

As of 2007, about 427 million persons were employed in various sectors, with agriculture accounting for about 50%-55% of the employment.

*Table 2: Employment in Agriculture, Industry, and Services*

Year	Employment (in million)			
	Agriculture	Industry	Services	Total
<b>2004-05</b>	213.0	78.1	110.0	401.1
<b>2007-08 (E)</b>	228.0	92.0	130.0	450.0

Source: NCEUS, 2009

<sup>1</sup> Employment as computed by Modified Current Weekly Status (MCWS) by NCEUS

<sup>2</sup> "Skill Formation and Employment Assurance in the Unorganised Sector", a report by the National Commission For Enterprises In The Unorganised Sector (NCEUS)

At the same time, about 92% to 93% of the employment is expected to be in informal/unorganised in nature

**Table 3: Formal and Informal Employment**

Year	Employment (in million)			% share		
	Formal	Informal	Total	Formal	Informal	Total
2004-05	32.79	368.35	401.13	8.17%	91.83%	100%
2006-07	33.87	393.06	426.93	7.93%	92.07%	100%
2007-08 (E)	About 30-35	About 415-420	About 450	About 8%	About 92%	100%

Source: NCEUS, 2009

## 1.2. Sectors with significant Informal Employment

The following are sectors with significant informal/unorganised employment in various sectors (apart from agriculture, which in itself comprises 50%-55% of informal/unorganised employment) across the manufacturing and services sector:

**Table 4: Sectors and areas of occupation in the Informal/Unorganised Sector**

Sector	Job titles
<b>Manufacturing Sector</b>	
Wearing Apparel; Dressing and Dyeing of Fur	Stitchers, tailors, sewing machine operators, dress makers, sewers, upholsterers
Leather and leather goods	Stitchers, tanners in tanneries, cutters
Tobacco Products	Tobacco and beedi makers
Food Products and Beverages	Operators, packers, sorters, cleaners, inspection
Textiles	Stitchers, tailors, sewing machine operators
Furniture; Manufacturing	Carpenters and wood workers
Other Non-Metallic Mineral Products	Machine operators, workers, helpers
Fabricated Metal Products, Except Machinery and Equipment	Welders, Electricians, Fitters, Machinists
Chemicals and Chemical Products	Machine operators, workers, helpers
Construction	Workers, Masons, Carpenters, Plumbers, Electricians, stone cutters
<b>Services Sector</b>	



Sector	Job titles
Hotels and Restaurants	Cooks, stewards, waiters
Transport, Storage, and Communication	Drivers, helpers, loaders, workers
Other community, social, and personal services	Domestic workers, cleaners, beauticians, security guards, hair dressers, and other related areas
Retail	Show owners (kirana), assistants, salesmen

Source: NSSO, and IMaCS analysis

Out of the above sectors and other manufacturing and service sectors, the following table presents the current and projected employment in sectors with significant informal employment<sup>3</sup>. The table specifically highlights the proportion of informal employment in these sectors.

**Table 5: Current and projected employment in select informal sectors between 2008 and 2022 (in '000s)**

Sector	2008	2022	Incremental Employment (2008-2022)	Proportion in Informal Employment	Incremental human resource requirement in Informal Employment (2008-2022)	Annual requirement in Informal Employment
Textiles (Spinning, Fabric Processing, Garmenting)	13,100	29,900	16,800	85%	14,280	1,020
Electronics and IT Hardware (including servicing/repair)	906	4,129	3,223	35%	1,128	81
Leather	2,500	7,139	4,639	85%	3,943	282
Organised Retail	283	17,623	17,340	80%	13,872	991
Gems and Jewellery (including Jewellery Retail)	3,335	7,943	4,608	75%	3,456	247
Building, Construction, and Real Estate	35,968	83,270	47,302	70%	33,111	2,365
BFSI	4,250	8,500	4,250	65%	2,763	197
Furniture and	1,455	4,873	3,418	80%	2,734	195

<sup>3</sup> Among sectors identified for the study

Sector	2008	2022	Incremental Employment (2008-2022)	Proportion in Informal Employment	Incremental human resource requirement in Informal Employment (2008-2022)	Annual requirement in Informal Employment
Furnishings						
Auto and Auto Components (servicing, repair, driving, etc.)	13,000	48,000	35,000	54%	18,900	1,350
Tourism and Hospitality	3,530	7,172	3,642	65%	2,367	169
Food Processing	8,531	17,808	9,277	80%	7,422	530
Construction Materials and Building Hardware	1,140	2,497	1,357	40%	543	39
Chemicals and Pharmaceuticals	1,668	3,546	1,878	25%	470	34
Transportation, Logistics, and Warehousing	7,374	25,101	17,727	40%	7,091	506
<b>Total</b>	<b>97,040</b>	<b>267,501</b>	<b>170,461</b>	<b>66%</b>	<b>112,080</b>	<b>8,006</b>

Source: IMACS analysis

### 1.3. Characteristics of Employment and Nature of Enterprises

#### 1.3.1. Characteristics of Employment – Self-Employment

The manufacturing sector has about 14.6 million Own Account Enterprises and comprises of about 23 to 25 million workers who are self-employed. The services sector has about 16 million persons in Own Account Enterprises and thereby self-employed<sup>4</sup>. If agriculture is also included as a ‘sector’, then self-employed persons constitute about 60% of the informal/unorganised employment.

<sup>4</sup> NSSO Rounds 57 and 62.

### 1.3.2. Nature of Enterprises<sup>5</sup>

The following table presents key statistics pertaining to the nature of enterprises in across *select* manufacturing sectors<sup>6</sup>.

**Table 6: Nature of Enterprises – Manufacturing Sector**

Parameter	Information <sup>7</sup>
Number of enterprises	17 million
Own Account Enterprises	14.6 million
Establishments	2.4 million
Number of workers	36-37 million
Annual Emoluments	Varies between Rs. 17,000 to Rs. 46,000; Average at Rs. 26,000 to Rs. 27,000
Value of Fixed Assets	Rs. 58,000; 70% comprised of land and building, and 30% comprised of plant and machinery
Outstanding loans	Rs. 12,500
Sources of loans	Central and state level institutions – 48.9%; Other institutional agencies – 6.8%; Money Lenders – 8.7%; Business partner – 3.4%; Supplier/contractor – 1.9%; Friends and relatives – 7.6%; Others – 22.7%
Annual interest payable as % of loan outstanding	15%

Source: NSSO 62<sup>nd</sup> Round

The following table present the emoluments across select manufacturing sectors.

**Table 7: Average annual emoluments in the Manufacturing sector (Rs.)**

Sector	Average annual emoluments (Rs.)
Cotton ginning, cleaning and baling	24,035
Manufacture of Food Products and Beverages	17,814
Manufacture of Tobacco Products	38,171

<sup>5</sup> Based on information available on NSSO round 62 on manufacturing sector and NSSO round 57 on the service sector

<sup>6</sup> Limited to NIC 14 to 37 – sectors specifically mentioned in this report from NSSO

<sup>7</sup> Limited to NIC 14 to 37 – sectors specifically mentioned in this report from NSSO

Sector	Average annual emoluments (Rs.)
Manufacture of Textiles	23,817
Manufacture of Wearing Apparel; Dressing and Dyeing of Fur	23,362
Tanning and Dressing of Leather; Manufacture of Luggage, Handbags,	23,217
Manufacture of Wood and Products of Wood and Cork	24,690
Manufacture of Paper and Paper Products	24,985
Publishing, Printing and Reproduction of Recorded Media	33,891
Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel	27,164
Manufacture of Chemicals and Chemical Products	21,277
Manufacture of Rubber and Plastics Products	31,982
Manufacture of Other Non-Metallic Mineral Products	24,475
Manufacture of Basic Metals	40,501
Manufacture of Fabricated Metal Products, Except Machinery and Equipment	46,541
Manufacture of Machinery and Equipment Not Elsewhere Classified.	46,690
Manufacture of Office, Accounting and Computing Machinery	42,136
Manufacture of Electrical Machinery and Apparatus Not Elsewhere Classified.	32,525
Manufacture of Radio, Television and Communication Equipment and Apparatus	33,963
Manufacture of Medical, Precision and Optical Instruments, Watches and Clocks	39,169
Manufacture of Motor Vehicles, Trailers and Semi-Trailers	32,858
Manufacture of Other Transport Equipment	29,006
Manufacture of Furniture; Manufacturing Not Elsewhere Classified.	27,423
Recycling	24,540
<b>Average</b>	<b>26,682</b>

Source: NSSO 62<sup>nd</sup> Round

The following table presents key statistics pertaining to the nature of enterprises in across *select* service sectors<sup>8</sup>.

**Table 8: Nature of Enterprises – Service Sector**

Parameter	Information <sup>9</sup>
Number of enterprises	15 million
% of Own Account Enterprises	83.5%
% of Establishments	16.5%
No. of workers	26 million
% of Enterprises which are ‘Proprietorship’	97%
Location	Within household premises – 27.3%; Outside of household but with fixed location – 40.3%; Outside household but without fixed location – 32.4%
% of enterprises furnishing books of accounts	2.1%
% of enterprises registered under/with any Act / Authority:	38.7%
Enterprises stagnant in the last 3 years	53.7%

Source: NSSO 57<sup>th</sup> Round

#### 1.4. Employment in the Unorganised Manufacturing sector

There are about 17 million enterprises in the unorganised manufacturing sector, across industries such as apparel products, tobacco, food products, textiles, fabricated metal products, chemical products, others.

**Table 9: Enterprises in the Unorganised Manufacturing Sector**

Manufacturing sector	Enterprises (number)	%
Wearing Apparel; Dressing and Dyeing of Fur	3,213,869	19%
Tobacco Products	2,818,150	17%
Food Products and Beverages	2,602,807	15%
Textiles	2,567,813	15%
Wood and of Products of Wood and Cork, Except Furniture; Articles	2,138,270	13%

<sup>8</sup> Limited to NIC activity categories H, I, K, M, O – sectors specifically mentioned in this report from NSSO - hotels – H1; restaurants – H2; Storage and warehouse - I1; mechanized road transport – I2; other transport and related activities - I3; communication - I4; real estate, renting and business activities – K; education – M; health and social work – N; other community social and personal service activities – O.

<sup>9</sup> Limited to NIC activity categories H, I, K, M, O – sectors specifically mentioned in this report from NSSO

<b>Manufacturing sector</b>	<b>Enterprises (number)</b>	<b>%</b>
of Straw and Plaiting Materials		
Furniture; Manufacturing	1,152,007	7%
Other Non-Metallic Mineral Products	641,819	4%
Fabricated Metal Products, Except Machinery and Equipment	619,875	4%
Chemicals and Chemical Products	418,210	2%
Others	898,004	5%
<b>Total</b>	<b>17,070,824</b>	<b>100%</b>

Source: NSSO 62<sup>nd</sup> Round, July 2005-June 2006, Unorganised Manufacturing Sector In India  
- Employment, Assets and Borrowings, January 2008

About 36 million persons are engaged in the unorganised manufacturing sector. The proportion of this employment is shown in the following figure.

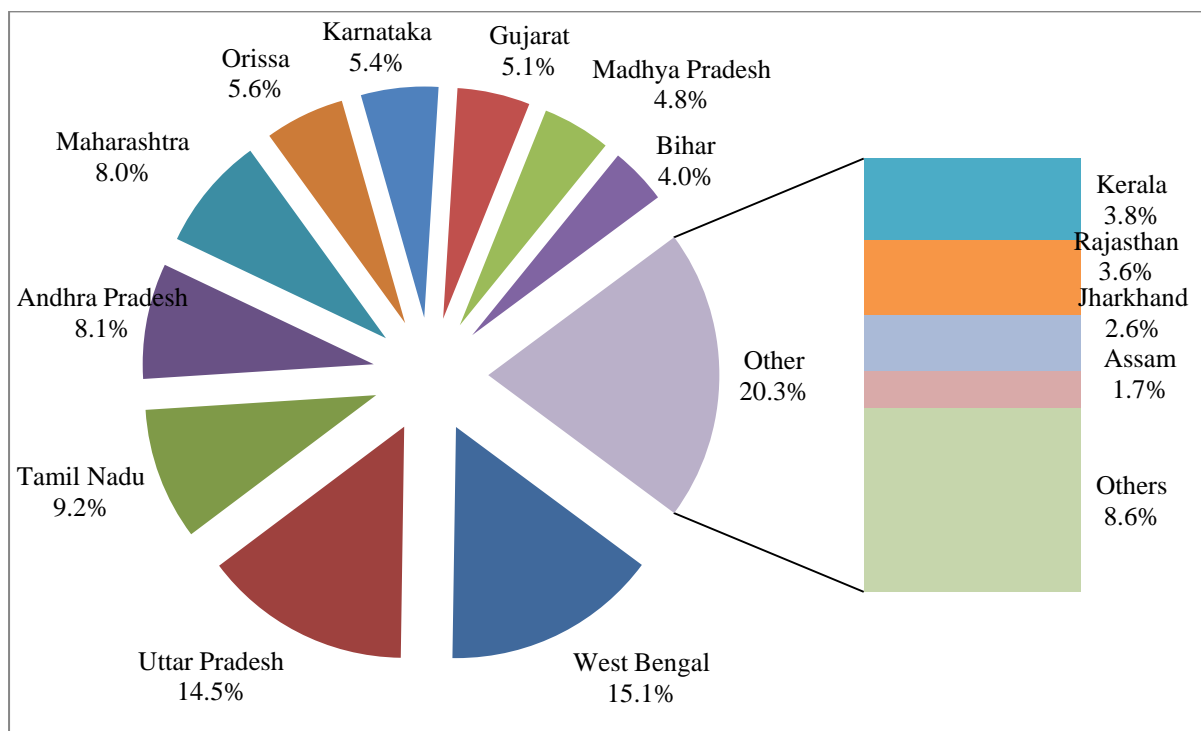
*Table 10: Employment in the Unorganised Manufacturing sector*

<b>Manufacturing Sector</b>	<b>Employment (number)</b>	<b>%</b>
Food Products and Beverages	6,345,768	17%
Textiles	6,342,544	17%
Wearing Apparel; Dressing and Dyeing of Fur	4,929,831	14%
Tobacco Products	4,198,516	12%
Wood and of Products of Wood and Cork, Except Furniture; Articles of Straw and Plaiting Materials	4,059,074	11%
Furniture; Manufacturing	2,905,333	8%
Other Non-Metallic Mineral Products	2,336,108	6%
Fabricated Metal Products, Except Machinery and Equipment	1,658,219	5%
Chemicals and Chemical Products	863,984	2%
Machinery and Equipment	580,315	2%
Others	2,223,106	6%
<b>Total</b>	<b>36,442,798</b>	<b>100%</b>

Source: NSSO 62<sup>nd</sup> Round, July 2005-June 2006, Unorganised Manufacturing Sector In India  
- Employment, Assets and Borrowings, January 2008

The proportion of employment in the unorganised manufacturing sector across various states in India is shown in the following figure.

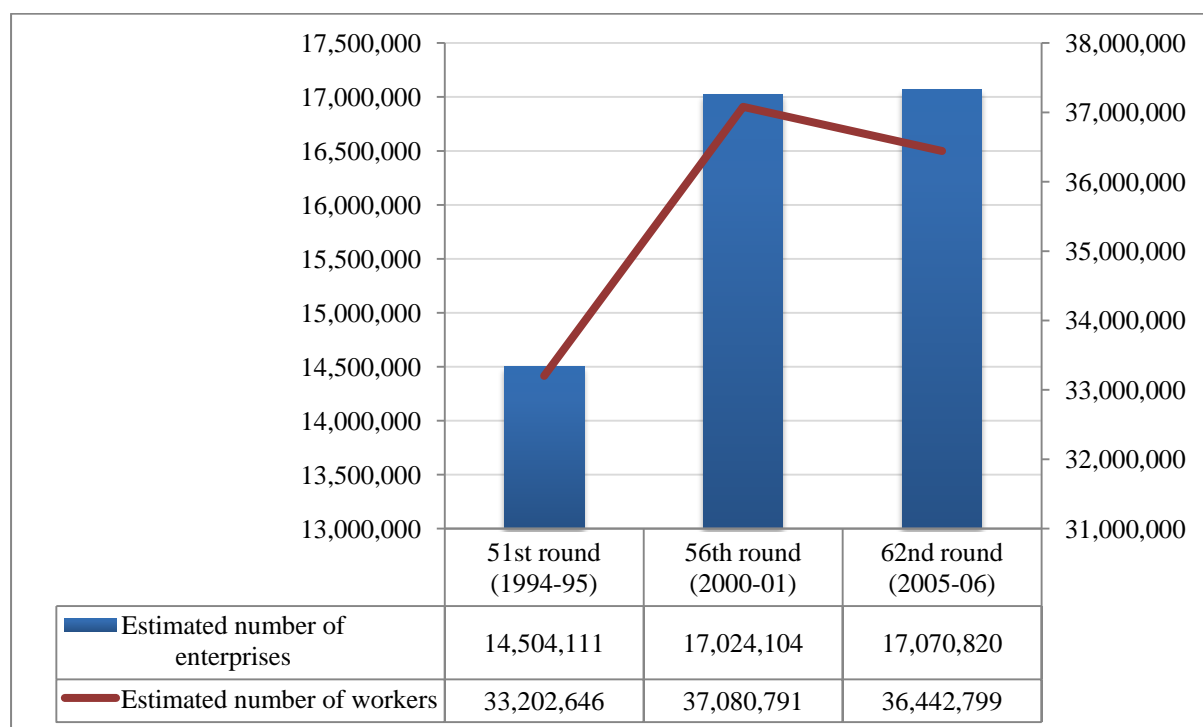
**Figure 1: Employment in various states in the Unorganised Manufacturing sector**



Source: NSSO 62<sup>nd</sup> Round, July 2005-June 2006, Unorganised Manufacturing Sector In India - Employment, Assets and Borrowings, January 2008

Further, a comparison between NSSO rounds, in terms of the estimated number of manufacturing enterprises and the estimated number of workers is as follows. As seen, though the number of enterprises has marginally improved (increase of 0.3%) between 2000-01 and 2005-06, the number of workers employed has *dropped* by about 1.7%.

**Figure 2: Comparison between NSSO Rounds**



Source: NSSO, IMAcS Analysis

## 1.5. Employment in Unorganised Service Sector

The number of enterprises and employment in the unorganised service sector is detailed in the following exhibits.

As per the NSS 57<sup>th</sup> round (2001-2002) on ‘*Unorganised Service Sector in India, Characteristics of Enterprises*’, India had about *14.3 million enterprises* engaged in service sector activities, employing about *26.6 million person<sup>10</sup>s*. However, it should be noted that this is a sample survey and limited to sectors such as Hotels and Restaurants, Transport, Storage, and Communication, Real Estate and Business services, Education, Health and Social work, and Other community, social, and personal services, from an *unorganised sector* perspective.

<sup>10</sup> Limited to unorganised Hotels and Restaurants, Transport, Storage, and Communication, Real Estate and Business services, Education, Health and Social work, and Other community, social, and personal services



It *does not* include details of employment pertaining to activities of wholesale and retail trade, repair of motor vehicles, motorcycles, and personal and household goods; financial intermediation; public administration and defence; private households with employed persons and extra-territorial organisations and bodies.

However, the information captured in this survey is *indicative* of the nature of informal employment in the service sector.

**Table 11: State-wise distribution of enterprises in Unorganised Service Sector**

<b>State</b>	<b>No. of enterprises in select service sectors in unorganised sector</b>	<b>% of enterprises</b>
Uttar Pradesh	2,467,168	17.3%
West Bengal	1,550,963	10.9%
Andhra Pradesh	1,337,184	9.4%
Bihar	1,180,510	8.3%
Maharashtra	1,167,104	8.2%
Tamil Nadu	1,000,105	7.0%
Karnataka	661,189	4.6%
Orissa	611,048	4.3%
Kerala	591,629	4.1%
Gujarat	568,980	4.0%
Rajasthan	554,747	3.9%
Madhya Pradesh	443,173	3.1%
Assam	388,247	2.7%
Punjab	354,453	2.5%
Chhattisgarh	275,881	1.9%
Delhi	242,300	1.7%
Haryana	220,378	1.5%
Jharkhand	148,697	1.0%
Uttaranchal	148,213	1.0%
Jammu & Kashmir	108,119	0.8%
Himachal Pradesh	79,359	0.6%
Tripura	43,751	0.3%
Meghalaya	27,612	0.2%

State	No. of enterprises in select service sectors in unorganised sector	% of enterprises
Manipur	24,319	0.2%
Pondicherry	18,102	0.1%
Chandigarh	17,639	0.1%
Goa	13,865	0.1%
Nagaland	12,864	0.1%
Sikkim	6,951	0.05%
Mizoram	5,132	0.04%
A & N Islands	2,400	0.02%
D & N Haveli	2,294	0.02%
Daman & Diu	2,034	0.01%
Arunachal Pradesh	1,396	0.01%
Lakshadweep	700	0.00%
<b>Total</b>	<b>14,278,506</b>	<b>100.0%</b>

Source: NSS 57<sup>th</sup> round (2001-2002) on 'Unorganised Service Sector in India, Characteristics of Enterprises'

Transport, Storage, and Communication services, along with Hotels and Restaurants account for a about 50% of the employment among the sectors considered.

**Table 12: Employment in select areas in the Unorganised Service Sector**

Sector	Persons (number)	Persons (number)	Percentage
Hotels	315,189		1.2%
Restaurants	4,774,181		18.0%
<b>Hotels and Restaurants</b>		5,089,370	19.2%
Storage and Warehouse	26,589		0.1%
Mechanised Road Transport	3,118,412		11.7%
Other transport and related activities	3,073,355		11.6%
Communication	1,084,874		4.1%
<b>Transport, Storage, and Communication</b>		7,303,229	27.5%
<b>Real estate, renting, and business activities</b>		2,430,593	9.2%
<b>Education</b>		4,204,224	15.8%
<b>Health and social work</b>		2,177,921	8.2%
<b>Other community, social, and personal services</b>		5,350,382	20.1%
<b>Total</b>		<b>26,555,719</b>	<b>100.0%</b>

Source: NSS 57<sup>th</sup> round (2001-2002) on 'Unorganised Service Sector in India, Characteristics of Enterprises'

## 2. The Ecosystem of Human Resource Supply

As mentioned in the earlier section, about 51% of the informal sector workers are engaged in agriculture. About 20% and 29% are engaged in industry and services sectors. In the manufacturing and services sector, about 60% to 70% of the workforce is self-employed and about 30 to 40 million works in establishments. A large portion of this workforce (employment other than self-employment) finds work through informal means such as word of mouth references, contractors, etc. This is especially applicable to agricultural labourers, and workers engaged in contractual employment in sectors mentioned in the earlier sections.

Accordingly, the 'staffing industry' as such is largely informal in nature and is unorganised. It is estimated that the 'organised staffing industry'<sup>11</sup>. It is estimated that the organised staffing industry, primarily 'temping' (in which companies take staff/workers on their rolls and deploy them in organisations in need of temporary manpower) is about 0.5% to 1% of the total informal workforce.

<sup>11</sup> Staffing in which organised companies are engaged for staffing services

Much of the temporary/contractual staffing in unorganised (about 99%). The temping industry in India is worth about Rs. 4,000 crore and employs about 10 lakh persons<sup>12</sup>. Large players include those such as TeamLease and Adecco. It is expected that the temp staffing industry could grow annually at anywhere between 80% and 100% in the near future. Large portion of the temp employment finds its way into telecom, ISP, ITES, insurance, healthcare, infrastructure, retail, manufacturing, etc.

Interactions with various companies reveal that a significant portion of the blue-collar workforce is being sourced from states such as Bihar, Jharkhand, Orissa, Uttar Pradesh, etc. A large portion of white-collar workforce is being sourced from states native to the place of work (across the country) and also a certain portion from the north-eastern states – especially in sectors such as hospitality, and ITES.

### **3. Projected Unorganised/Informal Employment**

This section outlines the projections of unorganised/informal sector employment as detailed in the report by NCEUS titled, *'The Challenge of Employment in India – An Informal Economy Perspective'* (April, 2009).

The following table presents the projected employment in agriculture, industry, and service sectors. The projections are available for different scenarios for growth as per the NCEUS report.

*Table 13: Projected Employment in agriculture, Industry, and Services*

Year	GDP growth rate	Projected Employment (in million)			
		Agriculture	Industry	Services	Total
2011-12	9%	229.2	105.0	153.5	487.7
	7%	225.4	102.0	149.0	476.4
	5%	221.5	99.1	144.6	465.2
2016-17	9%	240.2	126.2	189.5	555.9
	7%	232.0	116.8	174.8	523.5
	5%	224.0	108.1	161.2	493.3

Source: *'The Challenge of Employment in India – An Informal Economy Perspective'* (April, 2009)

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<sup>12</sup> Various secondary source

The following table presents the share of employment in various sectors for various growth scenarios till 2022. We do not see the proportion of employment to change significantly between 2017 and 2022.

**Table 14: Share of employment of different sectors till 2022**

Year	GDP growth rate	Agriculture	Industry	Services	Total
2007-08	Actual	51%	20%	29%	100%
2011-12	9%	47%	22%	31%	100%
	7%	47%	21%	31%	100%
	5%	48%	21%	31%	100%
2016-17	9%	43%	23%	34%	100%
	7%	44%	22%	33%	100%
	5%	45%	22%	33%	100%
<b>2021-22</b>	<b>7% to 9%</b>	<b>41%</b>	<b>23%</b>	<b>36%</b>	<b>100%</b>

Source: 'The Challenge of Employment in India – An Informal Economy Perspective' (April, 2009) and IMaCS analysis

As per the NCEUS, the economy will experience a greater degree of informalisation of employment that will increase the already high share of informal workers from 91.8% in 2005 to about 94% to 95% in 2022 (in line with the projections of NCEUS till 2017).

This is because the incremental employment in the formal sector will mostly be of an informal kind at different growth rates. A large portion of the employment of those transitioning from 'farm to work' is also expected to be informal in nature.

**Table 15: Projected share of informal employment (in million, and %)**

Year	GDP growth rate	Employment (in million)			% share		
		Formal	Informal	Total	Formal	Informal	Total
2011-12	9%	34.54	453.13	487.67	7.08%	92.92%	100%
	7%	34.18	442.18	476.36	7.18%	92.82%	100%
	5%	33.83	431.4	465.23	7.27%	92.73%	100%
2016-17	9%	33.93	521.96	555.9	6.10%	93.90%	100%
	7%	33.08	490.46	523.54	6.32%	93.68%	100%
	5%	32.26	461.05	493.31	6.54%	93.46%	100%
<b>2021-22</b>	<b>7% to 9%</b>				<b>6%-7%</b>	<b>94% to 95%</b>	<b>100%</b>

Source: 'The Challenge of Employment in India – An Informal Economy Perspective' (April, 2009) and IMaCS analysis

As is seen, informal employment would continue to play a key role in employment in India, spanning both the formal and informal sectors. Hence it is necessary that suitable skills be developed in the workforce to ensure the competitiveness of India's economy.

Further sections of this report present the key skills in demand in select sectors in the economy where there is significant unorganisation. As an illustration of the issues influencing human resource and skill requirements in the informal sector, skill requirements are outlined various sector in work profiles where significant informal employment exists.

#### **4. Key Skills and Jobs in Demand in Sectors having a Large Proportion of Unorganised Employment**

The level of organisation / unorganisation differs from industry to industry. For example, while sectors such as IT and ITES, Automobile and Auto Components<sup>13</sup>, Chemicals and Pharmaceuticals, Electronics Hardware are largely organised, the following sectors have a large proportion of unorganised employment:

- Building, Construction Industry and Real Estate Services Textiles, Apparels and Garments
- Food Processing
- Transportation, Logistics, Warehousing and Packaging
- Leather and Leather Goods
- Gems and Jewellery
- Furniture and Furnishings
- Tourism and Hospitality Services, Travel Trade.

For the above sectors, the key jobs/job titles, the description of skills required, skill gaps, and skills in demand till 2022 are covered under the respective sector reports. The summary of the key jobs/job titles, and the description of skills required till 2022 for these sectors are reproduced below for reference:

***Table 16: Key Skills and Jobs in Demand between 2008 and 2022 in Sectors having a Large Proportion of Unorganised Employment***

<b>Sector</b>	<b>Key Jobs (Jobs titles ) in Demand</b>	<b>Description</b>
Building,	Carpenters, Electricians,	While the sector will continue to employ a large portion of

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<sup>13</sup> Limited to core manufacturing and OEMs, excluding servicing, repair, driving, and related services

Sector	Key Jobs (Jobs titles ) in Demand	Description
Construction Industry and Real Estate Services	Welders, Operators, Plumbers, Masons, Crane Operators	<p>human resource with a relatively lower education profile, the skill levels would need to be continually upgraded even for those with minimal education. Substantial skill building efforts will be needed at the ‘skilled workforce’ level – for example, for carpenters, electricians, welders, operators, plumbers, masons, crane operators, supervisors, and others. The incremental human resource requirement in the ‘skilled workforce’ alone is expected to be above 9 million till 2022. The Real Estate, Electricity, and Roadways segments would drive employment in the Construction sector. Apart from this, the incremental requirement at the level of other construction workers is expected to be over 38 million till 2022.</p>
Textiles, Apparels and Garments	Power Loom Operators, Stitchers/Sewing Machine Operators, Garmenting Operators	<p>Across the mainstream sectors, the incremental human resource requirement for Supervisors and Technicians engaged in Fabric Manufacturing, Fabric Processing, and Garmenting is expected to be around 1.5 million persons. The incremental human resource requirement for Operators is likely to be 13.5 million persons till 2022. A large portion of this requirement will be in Garmenting.</p> <p>Key skill sets in demand would include Power loom Operators, Apparel Manufacturing/Garmenting Operators, Sewing Machine Technicians and Operators. Skill building in these areas would be the key to industry competitiveness going forward. This involves the task of skilling about 15 million persons till 2022 – about 1 million persons per year.</p>
Food Processing	Packers, Operators engaged in sorting, cleaning, processing, Cold Storage Unit Operators	<p>A large portion of the incremental requirement till 2022 would be in the bread and bakery segment, followed by the meat and poultry processing and dairy products segments. There will be a need to build skills in the workforce at the level of (operators/workers/packaging and assembly line</p>

Sector	Key Jobs (Jobs titles ) in Demand	Description
		workers). Sector specific skills (e.g. operation of milling power machine, packing of gunny bag, preparing flour and dough, mixing, cold storage and transportation, handling of milk, slaughtering, safe disposal of waste, preservation techniques); and generic skills (e.g. packaging, labelling, working in hygienic conditions, operation of equipment, GMP, compliance to quality, safety, soft skills) are key areas where skill building efforts need to be focussed.
Transportation, Logistics, Warehousing and Packaging	Drivers, Helpers and Warehouse Workers	<p>Drivers, Helpers and Warehouse Workers, will together account for over 85% of the incremental human resource requirements in this sector. The possible focus areas for skill building are:</p> <ul style="list-style-type: none"> <li>• Road Transport (truck drivers): e.g. Core driving skills and good driving practices, Road safety, documentation, Sanitation and hygiene, handling of complex trucks and hazardous chemicals</li> <li>• Warehousing (loading supervisors, warehouse managers, warehouse supervisors): e.g. people management, safety, supervision, IT systems/technology, stock keeping, loading/unloading, equipment usage, goods arrangement</li> </ul>
Leather and Leather Goods	Operators – Cutting and Clicking, Stitchers	The key skills in demand for this sector would be for skills such as cutting/clicking, stitching, finishing, etc. Such skills can be obtained in lesser time duration as compared to engineering or ITI courses. As many as over 2 million persons are required in the above segment. Thus, the skills of tanning, cutting, stitching, and finishing are potential areas to channelise skill building initiatives in the leather industry going forward. Out of this stitching would be the major driver of human resource requirements where appropriate skills are required (requirement of about 1.4



Sector	Key Jobs (Jobs titles ) in Demand	Description
		million ‘stitchers’ between 2008 and 2022).
Gems and Jewellery	Cutters, Operators of Polishing Machines, Setters	The key skills in demand would be for persons who can handle simple and/or repetitive tasks (persons such as cutters, those engaged in polishing, etc.). Considering skills of specific interest to the Gems and Jewellery industry, about 1.3 million persons with jewellery fabrication skills will be required till 2022. Around 1.1 million persons with the skills of grading, faceting, polishing and cutting will also be required in the same period. Together, these account for more than 50% of the human resource requirement. The skills of setting, polishing, and faceting are potential areas to channelise skill building initiatives in the Gems and Jewellery industry.
Furniture and Furnishings	Carpenters, Stitchers, Sewing Machine Operators	The key skills which will drive human resource requirements in the Furniture and Furnishing industry are Carpenters and Operators for finishing, etc. in the Furniture Segment and personnel for stitching, sewing, stuffing, threading in the Furnishings segment. The total requirement of human resource across the above areas where skill building is required is about 2.7 million persons till 2022.
Tourism and Hospitality Services, Travel Trade	F&B personnel, housekeepers, cooks, guides, ticketing agents	<p>Out of the total incremental requirement of human resources till 2022, the following is indicative of the key skills in demand:</p> <ul style="list-style-type: none"> <li>• Hotels and Restaurants (requiring about 3.5 million incremental personnel): F&amp;B services and kitchen and Housekeeping staff (e.g. managing guests, handling calls, knowledge of menu and cuisines, cleanliness and hygiene, complaint handling, communication skills, time management, team management)</li> <li>• Travel trade (requiring about 0.14 million incremental personnel): Ticketing and sales, tour guides (e.g.</li> </ul>

Sector	Key Jobs (Jobs titles ) in Demand	Description
		passenger routing, travel advisory, knowledge of hotels and site seeing locations, knowledge of passport and visa procedures, Knowledge / awareness of the area, people and culture, historical knowledge/significance of tourist locations, communication skills)

Source: Primary Research and IMACS Analysis

As mentioned earlier, these sectors consist of a significant proportion of human resource employed in the informal sector. Details of skill gaps in these sectors and potential for skill building and employment have been detailed in the following section in this report.

## 5. Skills Required and Skill Gaps in Sectors having a Large Proportion of Unorganised Employment

### 5.1. Building, Construction Industry and Real Estate Services

The following table presents the skill requirements and gaps in the building, construction, and real estate sector in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

*Table 17: Skill requirements and skill gaps in Building, Construction and Real Estate Services*

Function / Level	Employers' Perception of Skills required	Skill gaps
Skilled workmen	<ul style="list-style-type: none"> <li>▪ Ability to coordinate with unskilled workmen</li> <li>▪ Ability to operate key equipment such as cranes, and also mechanisms for loading and unloading of cranes</li> <li>▪ Ability to work at heights (for high rise buildings, especially in the case of crane operators)</li> <li>▪ Ability to deliver quality output</li> <li>▪ Need to be adept in their own trades – e.g. plastering, painting, plumbing, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of construction specific areas - such as lining, leveling, and finishing skills in carpentry</li> <li>▪ Availability of these personnel is an issue - it may be necessary to import people with relevant skills from Middle East/South</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Knowledge of construction specific areas – such as while carpentry is a generic course which is taught, there is a need for carpenters engaged in the Construction industry to be aware of lining, leveling, and finishing skills</li> <li>▪ Need to understand machine operations and basic machine troubleshooting</li> <li>▪ Ability to comply with safety and quality measures</li> <li>▪ Need to have basic knowledge of construction engineering</li> </ul>	<p>East Asian countries/ China, etc.</p> <ul style="list-style-type: none"> <li>▪ Lack of knowledge of basic machine operation – appropriate operation of cranes – lifting and placing</li> <li>▪ Inadequate ability to understand instructions of supervisors/engineers</li> </ul>
Unskilled workmen	<ul style="list-style-type: none"> <li>▪ Ability to perform the operations of excavation, carrying, cutting, helping of mason, mixing, spreading of stones, packing</li> <li>▪ Ability to be involved in and perform manual labour intensive work – thus need to be medically fit</li> <li>▪ Need to have an orientation towards safety requirements and basic workplace practices (reporting to work on time, etc.)</li> <li>▪ Need to be able to move material as required – using carts / manually, and thus also need to be physically strong</li> <li>▪ Ability to take instructions from skilled workmen / supervisors / engineers and execute them appropriately</li> <li>▪ Material preparation / Concrete mixing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very little safety orientation</li> <li>▪ Inadequate workplace skills – discipline, cleanliness, etc.</li> <li>▪ Inability to follow simple instructions</li> <li>▪ Inadequate workplace related skills/work related ethics.</li> </ul>

Source: Primary research and IMaCS analysis

## 5.2. Textiles, Apparels and Garments

### 5.2.1. Skill requirements and skill gaps in the Spinning Segment

The following table presents the skill requirements and gaps in the spinning segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 18: Skill requirements and skills gaps in the Spinning Segment**

Function / Level	Employers' Perception of Skill Required	Skill Gaps
Production Operator	<ul style="list-style-type: none"> <li>▪ Operating knowledge of the spinning machines.</li> <li>▪ Ability to ensure that machine stoppage time in minimal</li> <li>▪ Monitor spinning operation as regards the availability of sliver/bundles/lap as input to respective stages of the spindling operation</li> <li>▪ Should be able to read gauges, dials, or other indicators to make sure a machine is working properly.</li> <li>▪ Ability to work on different machines. For e.g. a spinning operator should be able to work on carding, roving and spinning machines.</li> <li>▪ Discipline at shop floor, punctuality and regular attendance at workplace.</li> <li>▪ Adherence to cleaning and machine maintenance schedule. Understanding of support to be provided for maintenance of various textile machines</li> <li>▪ Ability to comply with quality norms.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Knowledge/ Skill confined to single or few machines</li> <li>▪ Lack of knowledge of compliance to quality</li> <li>▪ Inadequate ability to multi-task between different types of machines.</li> </ul>

### 5.2.2. Skill requirements and skill gaps in the Fabric Manufacturing Segment

The following table presents the skill requirements and gaps in the fabric manufacturing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 19: Skill requirements and skills gaps in the Fabric Manufacturing Segment**

Function / Level	Employers' Perception of Skills Required	Skill Gaps
Production Operator	<ul style="list-style-type: none"> <li>▪ Operating knowledge of relevant type of looms.</li> <li>▪ Examine looms to determine causes of loom stoppage, such as warp filling, harness breaks, or mechanical defects.</li> <li>▪ Observe woven cloth to detect weaving defects.</li> <li>▪ Discipline at shop floor, punctuality and regular attendance at workplace.</li> <li>▪ Adherence to cleaning and machine maintenance schedule. - Understanding of support to be provided for maintenance of various textile machines.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient knowledge of looms, especially shuttle-less type of looms.</li> <li>▪ Inadequate ability to multi-task between different types of machines.</li> </ul>

### 5.2.3. Skill requirements and skill gaps in the Fabric Processing Segment

The following table presents the skill requirements and gaps in the fabric processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 20: Skill requirements and skills gaps in the Fabric Processing Segment**

Function / Level	Employers' Perception of Skills Required	Skill Gaps
Production Operator	<ul style="list-style-type: none"> <li>▪ Operating knowledge of bleaching and colouring, jet dyeing machines, jiggers, soft flow dyeing machines etc.</li> <li>▪ Knowledge of various type of chemicals used</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient availability of personnel who can work in boiler operations.</li> <li>▪ Inadequate knowledge of various</li> </ul>

Function / Level	Employers' Perception of Skills Required	Skill Gaps
	<p>in processing.</p> <ul style="list-style-type: none"> <li>▪ Ability to identify and differentiate colours.</li> <li>▪ Need for Certification of skills - The operators working on boilers need to have certification.</li> <li>▪ Understanding of waste treatment operations</li> </ul>	<p>machines and chemicals.</p> <ul style="list-style-type: none"> <li>▪ Insufficient knowledge of effluent treatment processes</li> <li>▪ Inadequate knowledge of CNC machines.</li> </ul>

#### 5.2.4. Skill requirements and skill gaps in the Garmenting Segment

The following table presents the skill requirements and gaps in the garmenting segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

*Table 21: Skill requirements and skills gaps in the Garmenting Segment*

Function / Level	Employers' Perception of Skills Required	Skill Gaps
Production Operator	<ul style="list-style-type: none"> <li>▪ Good machine control - knowledge of threading of sewing machine, stitching on different shapes, seaming garment components together in various fabrics to specified quality and quality standard</li> <li>▪ Knowledge of machine maintenance procedures</li> <li>▪ Knowledge of Pattern Making, Grading and Draping.</li> <li>▪ Knowledge of CAD for Pattern Development</li> <li>▪ Awareness of industrial sewing machines</li> <li>▪ Ability to sew complete garment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of proper knowledge of sewing machine operations, and different types of seams and stitches</li> <li>▪ Ability to work across different machines is missing</li> <li>▪ Ability to stitch the complete garment is missing ( In case of units which do not follow line system of production)</li> <li>▪ Inadequate ability to used industrial sewing machines</li> </ul>

## 5.3. Food Processing

### 5.3.1. Skill Requirements and Skill Gaps in the Dairy Processing Segment

The following table presents the skill requirements and gaps in the dairy processing segment in areas where *unorganised/informal* employment exists. The skills required have been detailed based on interactions with employers in this sector.

**Table 22: Skill Requirements and Skill Gaps in the Dairy Processing Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Production Helper / Operator	<ul style="list-style-type: none"> <li>▪ Knowledge of basic controls of milk processing machines</li> <li>▪ Basic importance of quality maintenance in terms of consistency to rules</li> <li>▪ Understanding basic quality requirements and adequate knowledge of maintaining hygiene while cleaning and packaging.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of machine handling</li> <li>▪ Poor knowledge of operating in a hygienic environment</li> </ul>

*Source: Primary Research and IMAcS analysis*

### 5.3.2. Skill Requirements and Skill Gaps in the Food Grain Milling Segment

The following table presents the skill requirements and gaps in the food grain segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 23: Skill Requirements and Skill Gaps in the Food Grain Milling Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operations Helper level	<ul style="list-style-type: none"> <li>• Knowledge of basic controls and settings of machines being worked on</li> <li>• Understanding of basic mathematics to identify and accordingly implement the instructions of the supervisor pertaining to production schedules.</li> <li>• Basic importance of quality maintenance in</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate understanding of machine controls in</li> <li>• Inadequate understanding / knowledge of ways to minimise breakage</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	terms of consistency with respect to. following rules / guidelines	
Worker at Artiya <sup>14</sup> shop	<ul style="list-style-type: none"> <li>• Ability to stitch gunny bags neatly so as to avoid leakage</li> <li>• Ability to appropriately mark gunny bags / index them such that markings are unambiguous</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate ability to stitch gunny bags well, leading to leakages from the bags</li> <li>• Inadequate ability to follow rules of marking gunny bags</li> </ul>

Source: Primary Research and IMaCS analysis

### 5.3.3. Skill Requirements and Skill Gaps in the Edible Oil Processing Segment

The following table presents the skill requirements and gaps in the edible oil processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 24: Skill Requirements and Skill Gaps in the Edible Oil Processing Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Manufacturing Operator/ Packer	<ul style="list-style-type: none"> <li>▪ Ability to understand that refining processes are time sensitive processes</li> <li>▪ Knowledge of basic scales for adjusting the correct control settings and codifying of batches (MRP, Batch no etc.)</li> <li>▪ Knowledge of control settings- temperature, time setting controls.</li> <li>▪ Ability to pack quickly</li> <li>▪ Knowledge of label pasting at right place and using appropriate coding</li> <li>▪ Adequate knowledge of machine operations , parts and the ability to</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of machine parts, leading to in- ability to operate machines and tackle breakdowns(sporadic and continuous)</li> <li>▪ Inadequate sensitivity to productivity issues(low process output over a time horizon)</li> <li>▪ Inadequate sensitivity to continuously improve quality by contributing in process improvement (suggesting changes</li> </ul>

<sup>14</sup> Artiya: Middleman/Agent at the village level engaged in the trading of produce



Function / Level	Employers' Perception of Skills required	Skill gaps
	undertake preventive maintenance for small machine problems ■ Basic reading and writing skills to be able to understand the standard operating procedure	so as to remove redundant steps, decrease time in transporting w.i.p, appropriate storage of materials and inventory).

Source: Primary Research and IMACS analysis

#### 5.3.4. Skill Requirements and Skill Gaps in the Meat, Meat Products and Poultry Processing Segment

The following table presents the skill requirements and gaps in the meat and poultry processing segments in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

Table 25: Skill Requirements and Skill Gaps in the Meat/Poultry Segment

Function / Level	Employers' Perception of Skills required	Skill gaps
Worker at Broiler farm	<ul style="list-style-type: none"> <li>■ Basic knowledge of reading/writing to be able to understand the standard operating procedures as specified by the contracting company</li> <li>■ Meticulous tracking of time in specific operations such as (i) eggs when laid in semi solid form should be collected within 1 hour time to avoid any mixing of impurities, (ii) the time of opening /closing of purdah<sup>15</sup>, (iii) providing feed at appropriate timings, etc.</li> <li>■ Ability to undertake rearing of DOC (Day Old Chickens) and continuously monitor supplies, for example, special care has to be given to</li> </ul>	<ul style="list-style-type: none"> <li>■ Inadequate ability to understand standard operating procedures which includes knowledge of what to do / what not to do.</li> </ul>

<sup>15</sup> A veil that controls the light entering into a bird's cage, which influences eating habits

Function / Level	Employers' Perception of Skills required	Skill gaps
	<p>the details such as provision of feed/ water in the shed</p> <ul style="list-style-type: none"> <li>▪ Ability to understand and execute the hygiene requirements such as cleaning of cell of pickings after alternate days, fumigation of laid eggs and their transfer in controlled atmosphere.</li> <li>▪ Ability to carry out basic counting for counting the birds every day.</li> </ul>	
Worker at Breeder farm	<ul style="list-style-type: none"> <li>• Ability to examine the health of birds when they are brought in</li> <li>• Ability to monitor timings since birds at this stage are more sensitive to the quality of feed, the water availability, etc.</li> <li>• Ability to maintain hygienic conditions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate consistency in operations due to inadequate understanding of immediate or long term impacts</li> <li>▪ Tendency to change jobs frequently, leading to a high attrition rate and consequently lower quality of work and lower productivity</li> </ul>
Worker at grand parent farm	<ul style="list-style-type: none"> <li>• Ability to communicate medical problems to supervisors who can arrange for collection of blood sample and further check ups for birds</li> <li>• Ability to administer medicine</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate technical knowledge for primary medication in case of disease/infection</li> <li>▪ Inadequate awareness of preventive care techniques</li> <li>▪ Inadequate adherence to time for operations such as providing feed, lifting purdah, and other such operational jobs</li> </ul>

Source: Primary Research and IMaCS analysis

### 5.3.5. Skill Requirements and Skill Gaps in the Fruit and Vegetable Processing Segment

The following table presents the skill requirements and gaps in the fruit and vegetable processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 26: Skill Requirements and Skill Gaps in the Fruit and Vegetable Processing Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Floor Level Operations	<ul style="list-style-type: none"> <li>▪ Ability to visually examine fruits / vegetables and separate rotten fruits / vegetables</li> <li>▪ Basic reading/writing skills for understanding the standard operating procedures</li> <li>▪ Ability to be conversant with basic measurements so as to understand customer requirements as given in company documents</li> <li>▪ In the case of manual operations, the ability to appropriately size/dice as well as the ability to make end produce visually appealing is critical</li> <li>▪ Knowledge of procedures, sequence of steps / machines and the ability to adhere to the same at all times</li> <li>▪ Ability to operate machines and set parameters such as temperature, running time of machines specific to process requirement.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of operations resulting in wastage</li> <li>▪ Inadequate ability to undertake dicing / slicing at the entry level</li> <li>▪ Lack of interest and knowledge in tracking the productivity and improve the same over a period of time</li> </ul>

Source: Primary Research and IMAcS analysis

### 5.3.6. Skill Requirements and Skill Gaps in the Sugar Based Foods Segment

#### 5.3.6.1. Biscuits Sub-segment

The following table presents the skill requirements and gaps in the biscuits sub-segments in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 27: Skill Requirements and Skill Gaps in the Biscuits Sub-segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operator	<ul style="list-style-type: none"> <li>▪ Knowledge of machine related details such as temperature settings, speed at which machine has to be adjusted, total time setting, etc.</li> <li>▪ Knowledge of the basics of weighing / scaling</li> <li>▪ Basic knowledge of measurements such as conversion between millimetres and centimetres</li> <li>▪ Ability to use printing machines – this includes skills such as the ability to feed in the MRP, the ability to batch print consignment-wise details in the machine, the ability to ensure that all such details appear in the right place and in right format on the biscuit packet, etc.</li> <li>▪ Ability to understand and follow ISO norms – e.g. assigning batch number, stocking etc. should be according to the specifications</li> <li>▪ Ability to execute standard specifications relating hygiene while handling raw material input/ work in progress</li> <li>▪ Basic read/write skills and spoken language skills</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to understand and use different settings of time, temperature on different machines for different biscuit products</li> <li>▪ Inadequate read / write skills leading to problems in understanding verbal/ written communication about production schedule, specifications, etc.</li> </ul>
Oven operators	<ul style="list-style-type: none"> <li>▪ Specific knowledge of technical aspects such as temperature settings, turbulence settings, etc. and the ability to follow specifications</li> <li>▪ Ability to take special care of burner working and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate technical knowledge leading to inefficiency of operations</li> </ul>

Source: Primary Research and IMaCS analysis

### 5.3.6.2. Chocolate Sub-segment

The following table presents the skill requirements and gaps in the chocolate sub-segment segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 28: Skill Requirements and Skill Gaps in the Chocolate Sub-segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operator	<ul style="list-style-type: none"> <li>▪ Knowledge of standard operating procedures such as temperature settings, selection of parts which can be touched and parts which cannot be handled.</li> <li>▪ Knowledge of the sequence of machine usage depending on the flow of raw material or work in progress, as applicable in particular products</li> <li>▪ Understanding of the safety norms</li> <li>▪ Ability to understand specifications of colours, ribbons, etc. to be used while packing for decoration as per client' requirement</li> <li>▪ Ability to make the packed product look aesthetic and attractive</li> <li>▪ Knowledge of the paper to be used to decorate the chocolate with specific patterns in some cases</li> <li>▪ Basic read/write skills and spoken language skills</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ignorance about “chocolate” as a consumable</li> <li>▪ Inadequate speed of packing in comparison with other countries / automatic methods (productivity related issues)</li> <li>▪ Inadequate read / write skills</li> </ul>

*Source: Primary Research and IMACS analysis*

### 5.3.7. Skill Requirements and Skill Gaps in the Fish Processing Segment

The following table presents the skill requirements and gaps in the fish processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 29: Skill Requirements and Skill Gaps in the Fish Processing Segment**

<b>Function / Level</b>	<b>Employers' Perception of Skills required</b>	<b>Skill gaps</b>
Fishermen	<ul style="list-style-type: none"> <li>▪ Ability to undertake fish breeding and rearing – this is a process with several time bound operations such as regular feeding and cleaning</li> <li>▪ Ability to clean the fish, which includes processes such as cleaning, removing internal organs</li> <li>▪ Adequate spoken language skills so as to understand instructions from supervisors</li> <li>▪ Ability to undertake waste disposal in a hygienic manner</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of processes – e.g., fishermen who usually work on removing the internal organs are not aware of correct procedures. Traditional methods which are usually used are unhygienic and do not yield adequate quality results</li> <li>▪ Inadequate knowledge of fish breeding and rearing processes</li> <li>▪ Inadequate sensitivity to environmental issues, thus leading to poor hygienic conditions.</li> </ul>

*Source: Primary Research and IMACS analysis*

### 5.3.8. Skill Requirements and Skill Gaps in the Beverages Segment

The following table presents the skill requirements and gaps in the beverages segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 30: Skill Requirements and Skill Gaps in the Beverages Segment**

<b>Function / Level</b>	<b>Employers' Perception of Skills required</b>	<b>Skill gaps</b>
Operator	<ul style="list-style-type: none"> <li>▪ Basic read/write skills for understanding the standard operating procedures</li> <li>▪ Ability to be conversant with basic measurements so as to understand customer requirements</li> <li>▪ Knowledge of procedures, sequence of steps / machines and the ability to adhere to the same at all times</li> <li>▪ Ability to operate machines and ensure correctness of machine parameters (such as temperature) during processing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge of standard operating procedures leading to mishandling of machines especially at the entry level</li> <li>▪ Inadequate knowledge of hygiene related aspects</li> <li>▪ Inadequate knowledge of compliance to quality.</li> </ul>

*Source: Primary Research and IMaCS analysis*

## 5.4. Transportation, Logistics, Warehousing and Packaging

### 5.4.1. Skill Requirements and Skill Gaps in the Transportation Segment: Road Transport (with focus on Drivers)

The following table presents the skill requirements and gaps in the road transport segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 31: Skill requirements and skill gaps in the Road Transport Sub-segment – Drivers**

Function / Level	Employers' Perception of Skills required	Skill gaps
rivers, Helpers	<ul style="list-style-type: none"> <li>▪ Basic reading and writing skills to be able to read signage, proper documentation of tax levied, octroi paid, etc.</li> <li>▪ Ability to understand routes and the geographical profile of the route being traversed</li> <li>▪ Ability to handle increasing tonnage and heavier trucks</li> <li>▪ Excellent driving skills - Apart from the basic driving skills, knowledge of precautions in case of transporting is critical</li> <li>▪ Knowledge of road safety practices, basic knowledge of the tax regime (region wise), traffic permit rules, etc.</li> <li>▪ Ability to handle dangerous and sensitive cargo</li> <li>▪ Basic spoken language skills for communication with supervisors and fellow drivers or unloaders and supervisors at the customers end</li> <li>▪ Ability to understand basic sanitation and hygiene requirements the and importance of parameters such as non-usage of drugs or not being drunk while driving (this is critical to help avoid accidents)</li> </ul>	<ul style="list-style-type: none"> <li>▪ This set of persons is characterised by a largely illiterate workforce that has inadequate formal training in driving leading to inadequate availability of trained drivers</li> <li>▪ Inadequate exposure to handle increasing tonnage and higher capacity trucks</li> <li>▪ Inadequate knowledge of safety and first-aid</li> <li>▪ Inadequate knowledge of Octroi, VAT applicable</li> <li>▪ Ignorance towards safe driving practices and special precautionary measures in case of handling sensitive materials such as chemicals, petroleum tankers, etc</li> <li>▪ Poor working conditions, combined with inadequate manpower development initiatives by owners or managers, leads to low motivational levels</li> </ul>



#### 5.4.2. Skill Requirements and Skill Gaps in the Third Party Logistics Segment

The following table presents the skill requirements and gaps in the Third Party Logistics segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 32: Skill requirements and skill gaps in the Third Party Logistics Segment (Specific to Warehousing)**

Function / Level	Employers' Perception of Skills required	Skill gaps
Loaders (supervisor level) - Sub contracted services	<ul style="list-style-type: none"> <li>▪ Basic reading and writing skills so as to understand basic scales, measurements, check packages for number of items, consolidate or deconsolidate and number consignments as required before dispatch.</li> <li>▪ Knowledge of good handling practices especially in case of sensitive goods</li> <li>▪ Ability to pick, pack, load and unpack after unloading at the two ends of process</li> <li>▪ Basic monitoring skills, labour handling skills and ability to ensure appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to upgrade technological skills according to changing requirements</li> <li>▪ At supervisory level, the language ignorance is very persistent</li> </ul>

Source: Primary Research and IMaCS analysis

#### 5.4.3. Skill Requirements and Skill Gaps in the Warehousing Segment

The following table presents the skill requirements and gaps in the warehousing processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 33: Skill requirements and skill gaps in the Warehousing Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operators / Workmen / Front line staff	<ul style="list-style-type: none"> <li>▪ Knowledge of stocking, packing and handling practices, including loading and offloading goods at different locations in the warehouse</li> <li>▪ Ability to place goods in appropriate racks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge about material handling equipment such as stackers, hydraulic or hand pallet trucks, forklift</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Ability to manually mark or pack goods, as required</li> <li>▪ Basic reading skills for understanding the written or visual imagery communication about standard operating procedures</li> <li>▪ Ability to undertake value added services such as MRP tagging, repacking, quality checks, etc.</li> </ul>	<p>trucks, jib cranes, etc.</p> <ul style="list-style-type: none"> <li>▪ Inadequate formal training leading to learning on-the-job</li> <li>▪ Inadequate ability to maintain service standards, leading to damages</li> </ul>

Source: Primary Research and ImaCS analysis

## 5.5. Leather and Leather Goods

### 5.5.1. Skill requirement and Skill gaps in the Finished Leather Segment

The following table presents the skill requirements and gaps in the finished leather segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 34: Skill requirements and skill gaps in the Finished Leather Segment**

Function / Level	Employers' Perception of Skills required	Skill Gaps
Manufacturing /Production - Machine operators	<ul style="list-style-type: none"> <li>▪ Ability to decide the pressure level in the fleshing machine for liming</li> <li>▪ Ability to operate the splitting machine.</li> <li>▪ Knowledge of how to adjust for the thickness and to ensure that there are no folds in the leather while feeding them into the machine. (Feeding of folded leather will damage the leather by creating holes in them.)</li> <li>▪ Ability to operate the shaving machine without damaging the grain</li> <li>▪ Ability to decide the right pressure and temperature for the press machine</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of institutes to train workers to work on these machinery</li> <li>▪ Insufficient knowledge about the machinery as operators have come up from the ranks of unskilled workers</li> <li>▪ Not much knowledge of preventive and regular maintenance</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill Gaps
	<ul style="list-style-type: none"> <li>▪ Ability to use the polishing machine without creating marks in the leather</li> </ul>	
Manufacturing /Production - Semi-skilled Operators	<ul style="list-style-type: none"> <li>▪ Ability to identify the completion of rehydration process as the soaking time for the skin varies widely depending upon the time gap between the curing and soaking of the skin</li> <li>▪ Ability to remove the unwanted hair from the skin using the knife without damaging the grain</li> <li>▪ Ability to decide the number of times to feed the leather into the softening machine to do an 'even softening' (too much of softening leads to loosening of leather thereby reducing its value)</li> <li>▪ Ability to remove the unwanted flesh without damaging the grain while buffing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of sufficient institutes and training centres to train the shop floor workers</li> <li>▪ Most of the skills learnt through experience and observing</li> </ul>
Manufacturing /Production - Unskilled	<ul style="list-style-type: none"> <li>▪ Loading and unloading of material into paddles, drums, machines, etc.</li> <li>▪ Assisting the operators</li> </ul>	<ul style="list-style-type: none"> <li>▪ Since they are unskilled there is no major skill expectations and gaps</li> </ul>

Source: Primary Research and IMaCS analysis

### 5.5.2. Skill requirements and Skill gaps in the Footwear and other Leather Products segment

The following table presents the skill requirements and gaps in the Footwear and Leather Products segments in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 35: Skill requirements and skill gaps in the footwear and other leather product segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operator (Cutting,	<ul style="list-style-type: none"> <li>▪ Knowledge of various hand tools, equipment and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient formal training institutes for workers/operators</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
Stitching, Closing, Finishing, etc.)	<p>machinery</p> <ul style="list-style-type: none"> <li>▪ Ability to follow design patterns and related instructions</li> <li>▪ Ability to identify defects and rectify them</li> <li>▪ Eye for detail to ensure good finishing and quality</li> <li>▪ Minimise wastages through proper planning and cutting of leather</li> <li>▪ Ability to work effectively in a team</li> <li>▪ Awareness of health and safety standards</li> <li>▪ Normal colour vision to match stitching, patterns and dyes</li> <li>▪ Physical fitness and strength</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to undertake cutting and stitching jobs effectively with minimum errors, for example: <ul style="list-style-type: none"> <li>• In case of a stitching operator who is given standard instructions to use different sizes of needles for different jobs, the operator does not even realise the importance of doing so</li> <li>• A cutting operator generally does not understand which part of the shoe comes from a particular part of the leather and the importance of cutting with minimum wastage and flaws</li> <li>• In the case of leather gloves, clicking the right number of gauges is very important after the cutting of leather, however operators make mistakes that lead to rejection</li> </ul> </li> <li>▪ Lack of skills to identify defects at any particular point in the production line and rectifying the same on time</li> <li>▪ Callous attitude towards safety and health issues, even if sufficient awareness exists</li> </ul>

Source: Primary Research and IMaCS analysis

## 5.6. Gems and Jewellery

### 5.6.1. Skill requirements and skill gaps in the Diamond Processing Segment

The following table presents the skill requirements and gaps in the Diamond Processing segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 36: Skill requirements and skill gaps in the CPD segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Operator - Cutting and Polishing	<ul style="list-style-type: none"> <li>▪ Basic understanding of technology and how it works (e.g. how a laser machine works), i.e. the need to understand the machinery being used</li> <li>▪ Understanding of the internal structure of a diamond and the concept of why diamond powder is used for cutting and polishing</li> <li>▪ Understanding of shop floor safety practices – for example, the ability to understand that grinding wheels for the faceting / polishing operation are heavy and should not be lifted manually</li> <li>▪ Ability to adapt to technology driven processes – e.g. adaptability to work on auto polishing machines that are expected to come to India soon</li> <li>▪ Ability to take readings from machines (e.g. from pressure sensors on blade sawing machines), interpret them and take appropriate actions without interventions from seniors</li> <li>▪ Ability to understand internal structure of a diamond and accordingly cut along grains</li> <li>▪ Presence of mind in working with laser machines / blade sawing machines</li> <li>▪ Stable hand to be able to accurately hold and polish a diamond</li> <li>▪ Ability to understand technical drawings received from planners</li> </ul>	<ul style="list-style-type: none"> <li>▪ Operators learn ‘on the job’, but do not understand the technique/rationale behind the same</li> <li>▪ Untrained personnel mainly work in these functions currently and thus there is a lack of formal training</li> <li>▪ Ability to operate advanced machines, like laser machines – when advanced technology replaces manual work in the CPD segment, personnel working in these functions may move to manufacturing units that do not employ the advanced technology</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Ability to convert technical drawings to actual physical specifications of the diamond</li> <li>▪ Ability to bring in more symmetry to get more scintillation</li> <li>▪ Regular preventive maintenance of machines and basic breakdown maintenance</li> <li>▪ Regular maintenance of tools</li> </ul>	

### 5.6.2. Skill requirements and skill gaps in the Jewellery Fabrication Segment

The following table presents the skill requirements and gaps in the Jewellery Fabrication segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 37: Skill requirements and skill gaps in the Jewellery Fabrication Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Manufacturing - Helper	<ul style="list-style-type: none"> <li>▪ Distribute water</li> <li>▪ Clean the premises</li> <li>▪ Dusting</li> <li>▪ “Ghaat ka kaam” – like, making wires, strips, wire bending, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ These are generally untrained, uneducated and inexperienced personnel</li> <li>▪ While no technical skills are required, they need basic workplace skills</li> </ul>

Source: Primary research and IMaCS analysis

## 5.7. Furniture and Furnishings

### 5.7.1. Skill requirements and skill gaps in the Furniture Segment

The following table presents the skill requirements and gaps in the Furniture segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

*Table 38: Skill requirements and skill gaps in the Furniture Segment*

Function / Level	Employers' Perception of Skills Required	Skill Gaps
Operator	<ul style="list-style-type: none"> <li>▪ Good machine control, knowledge of various cutting and processing tools (saw machines, hammers, spanner, drill machines, spray painting machines)</li> <li>▪ Ability to size timber, mark and drill holes as per the design specifications of the various Furniture articles.</li> <li>▪ Should be able to identify and use the right tool for a particular operation.</li> <li>▪ Knowledge of chemicals (Thinners, dyes, Varnishes, Adhesives etc.) used during finishing and processing.</li> <li>▪ Should be able to work on the various components of the Furniture being manufactured.</li> <li>▪ Knowledge of various joints and their appropriate applications. Should be able to work on half lap, dove tail, tenon, mortise and other type of joints.</li> <li>▪ Should be able to minimise wastage and dispose the waste materials.</li> <li>▪ Ability to maintain various tools used in Furniture manufacturing.</li> <li>▪ Ability to manufacture simple Furniture articles without much supervision.</li> <li>▪ Should have good hand-eye coordination to work on intricate designs.</li> <li>▪ Physical stamina as the work involves heavy articles. The person should not have any respiratory ailments.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of proper knowledge of machine operations</li> <li>▪ Inadequate ability to work across different machines</li> <li>▪ Knowledge of various type of chemicals</li> <li>▪ Inadequate ability to make simple Furniture items without supervision.</li> </ul>

Function / Level	Employers' Perception of Skills Required	Skill Gaps
	<ul style="list-style-type: none"> <li>▪ Discipline at shop floor, punctuality and regular attendance at workplace.</li> <li>▪ Knowledge of maintenance requirements of various machine and tools.</li> </ul>	

### 5.7.2. Skill requirements and skill gaps in the Furnishings Segment

The following table presents the skill requirements and gaps in the Furnishings segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

*Table 39: Skill requirements and gaps in the Furnishings Segment*

Function / Level	Employers' Perception of Skills Required	Skill Gaps
Operator	<ul style="list-style-type: none"> <li>▪ Good machine control. Knowledge of machines used for cutting, sewing etc.</li> <li>▪ Knowledge of threading of sewing machine, stitching on different shapes, seaming components together to the design specifications.</li> <li>▪ Knowledge of maintenance requirements of various machines and tools.</li> <li>▪ Discipline at shop floor, punctuality and regular attendance at workplace.</li> <li>▪ Good eye sight and hand-eye co-ordination</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of proper knowledge of sewing machine operations and different types of seams and stitches</li> <li>▪ Ability to work across different machines is missing</li> </ul>



## 5.8. Tourism and Hospitality Services, Travel Trade

### 5.8.1. Skill Requirements and Skill Gaps in the Travel and Tour Operators Segment

The following table presents the skill requirements and gaps in the Tourism and Hospitality segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 40: Skill Requirements and Skill Gaps in the Travel and Tour Operators Segment**

Function / Level	Employers' Perception of Skills required	Skill gaps
Travel Counsellors	<ul style="list-style-type: none"> <li>▪ Ability to understand the needs of the customer and act as their travel advisor.</li> <li>▪ Ability to effectively interact with customers and prospects and convert enquiries to sales.</li> <li>▪ Knowledge on various travel routes both domestic and international.</li> <li>▪ Ability to work in Central Registration System (CRS) for booking, cancelling, splitting, reissue of tickets etc.</li> <li>▪ Knowledge on refunding norms in case of partly utilised tickets.</li> <li>▪ Knowledge on various formalities (passport, visa etc.) that the customer needs to comply with in case of outbound travels.</li> <li>▪ Ability to calculate the ticket fare - should know their components (such as surcharge, service tax, etc.).</li> <li>▪ Adequate knowledge of hotels available at various locations in order to execute hotel bookings.</li> <li>▪ Proper follow up with the customers once the tickets are booked and to record their feedback.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of adequate geographical knowledge (especially in case of international travels) leading to higher turnaround time.</li> <li>▪ Need for better time management</li> <li>▪ Lack of adequate procedural knowledge on Passports and Visas.</li> <li>▪ Need for adequate levels of politeness while handling calls.</li> <li>▪ Lack of knowledge of client focussed/ customised products.</li> <li>▪ Inability to maintain a cordial relationship with the corporate clients, leading to misunderstanding.</li> </ul>
Messenger	<ul style="list-style-type: none"> <li>▪ Housekeeping</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of communication</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
/ Delivery boys	<ul style="list-style-type: none"> <li>▪ Ability to interact with customers at the time of collecting travel related documents / delivery of tickets / returning the documents.</li> <li>▪ Ability to interact with airline personnel while meeting them for getting endorsement.</li> <li>▪ Ability to interact with officials in passport and visa office, for document submission and other procedures.</li> <li>▪ Safe and on time delivery.</li> </ul>	<p>skills</p> <ul style="list-style-type: none"> <li>▪ Inadequate behavioural skills – such as being polite, etc.</li> </ul>

The guides in India are regulated by Government of India and they have to compulsorily obtain a license for functioning as a guide in any of the sites in India. The basic skill requirements and skill gaps are as follows:

*Table 41: Skill Requirements and Skill Gaps for a Guide*

Function / Level	Employers' Perception of Skills required	Skill gaps
Services - Meet and Greet People	<ul style="list-style-type: none"> <li>▪ Ability to interact with airport and ticket staff and coordinate travel</li> <li>▪ High energy level</li> <li>▪ Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate energy level when interacting with customers.</li> </ul>
Services - Guide	<ul style="list-style-type: none"> <li>▪ Good communication skills</li> <li>▪ Ability to manage customers</li> <li>▪ Verbal fluency and familiarity with languages</li> <li>▪ Decision making skills</li> <li>▪ Problem solving skills</li> <li>▪ Ability to work in a team</li> <li>▪ Knowledge/awareness of the places, people and culture</li> <li>▪ The knowledge of general decorum.</li> <li>▪ Behavioural knowledge</li> <li>▪ Passion for travelling</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate communication skills</li> <li>▪ Insufficient knowledge of tourist places.</li> <li>▪ Inadequate skills of crises management and time management.</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Crises management</li> <li>▪ Willingness to work hard/long timings.</li> </ul>	
Driver	<ul style="list-style-type: none"> <li>▪ Special driving skills required while driving on mountainous/high risk regions.</li> <li>▪ Ensuring safety of passengers</li> <li>▪ Awareness on driving rules and regulations</li> <li>▪ Familiarity with routes</li> <li>▪ Ability to communicate and being sensitive to tourists</li> <li>▪ Awareness on various hotels and other locations in the travel route.</li> <li>▪ Knowledge of First Aid</li> <li>▪ Ability to attend minor problems in the vehicle e.g, changing vehicles tires, other minor mechanical problems, etc.</li> <li>▪ Understanding the traveller's requirements in terms of location preferences and acting accordingly.</li> <li>▪ Knowledge of English (in certain cases)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of adequate communication skills (including English – when interacting with tourists such as international tourists)</li> <li>▪ Inability to understand traveller's requirement.</li> <li>▪ Unable to handle crisis situations.</li> <li>▪ Lack of awareness on driving rules and regulations.</li> <li>▪ Inadequate knowledge of safety norms</li> <li>▪ Inadequate knowledge of First Aid.</li> </ul>

Source: Primary Research and IMaCS analysis

### 5.8.2. Skill Requirements and Gaps in the Hotels & Restaurants Segment

The following table presents the skill requirements and gaps in the Hotels and Restaurants segment in areas where *unorganised/informal* employment exists.

The skills required have been detailed based on interactions with employers in this sector.

**Table 42: Skill Requirements and Skill Gaps in Front Office**

Function / Level	Employers' Perception of Skills required	Skill gaps
Bell Boys	<ul style="list-style-type: none"> <li>▪ Recognising the guest</li> <li>▪ High curtsy level</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate curtsy level</li> <li>▪ Lack of discipline</li> </ul>

Function / Level	Employers' Perception of Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Communication skill</li> <li>▪ Ability to read and write English</li> <li>▪ Ensuring the safety of luggage in the lobby.</li> <li>▪ Maintain personal hygiene</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient communication skills</li> </ul>
Travel desk	<ul style="list-style-type: none"> <li>▪ Booking air/hotel/train or cab based on the requirement of the guest.</li> <li>▪ Awareness about the local areas/site seeing/shopping areas and suggesting the same to guest based on their interest.</li> <li>▪ Communication skill</li> </ul>	<ul style="list-style-type: none"> <li>▪ Communication skill</li> <li>▪ Inadequate awareness on the local areas.</li> </ul>

Source: Primary Research and IMaCS analysis

**Table 43: Skill Requirements and Skill Gaps in Food and Beverage - Services**

Function / Level	Employers' Perception of Skills required	Skill gaps
Waiter/Waitress/Service staff	<ul style="list-style-type: none"> <li>▪ Ability to take orders and serve food in a professional and courteous manner</li> <li>▪ Ensuring cleanliness</li> <li>▪ Maintain customer relationship</li> <li>▪ Being cheerful and presentable</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient servicing skills</li> <li>▪ Inadequate communication skills</li> </ul>
Bartenders	<ul style="list-style-type: none"> <li>▪ Ability to converse with guest to understand their requirements</li> <li>▪ Management of production of cocktails, mocktails, etc,</li> <li>▪ Inventory management of all the sprits, soft drinks, etc.</li> <li>▪ Billing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Poor customer orientation</li> <li>▪ Inadequate knowledge of production of cocktails, mocktails etc.</li> <li>▪ Inadequate communication skills</li> </ul>

Source: Primary Research and IMaCS analysis

**Table 44: Skill Requirements and Skill Gaps in Food Production**

<b>Function / Level</b>	<b>Employers' Perception of Skills required</b>	<b>Skill gaps</b>
Kitchen Assistance	<ul style="list-style-type: none"> <li>▪ Dish washing</li> <li>▪ Cleaning and handling vessels etc</li> <li>▪ Maintain a clean kitchen environment etc.</li> <li>▪ Discipline at workplace</li> <li>▪ Maintaining personal hygiene</li> </ul>	<ul style="list-style-type: none"> <li>▪ Communication skills</li> <li>▪ Lack of attitude to work hard</li> <li>▪ Inadequate knowledge of hygiene</li> <li>▪ Inadequate exposure to working in a kitchen.</li> </ul>

Source: Primary Research and IMaCS analysis

**Table 45: Skill Requirements in Housekeeping and Maintenance**

<b>Function / Level</b>	<b>Employers' Perception of Skills required</b>
Room Attendants	<ul style="list-style-type: none"> <li>▪ Daily room cleaning.</li> <li>▪ Attending to guest requests promptly.</li> <li>▪ Understanding guest's needs and requirements, and servicing accordingly.</li> <li>▪ Inspecting linens, toilets, consumables etc.</li> <li>▪ Upkeep of public/common areas, restaurant, conference hall, etc.</li> <li>▪ Ability to communicate in English</li> </ul>
Laundry /Linen Assistants	<ul style="list-style-type: none"> <li>▪ Collection, sorting and marking.</li> <li>▪ Loading and unloading of cloths in the machines, pressing and delivery of guest laundry and linens</li> </ul>
Maintenance - Assistants	Technical skills in relevant areas, such as Plumbing, Carpentry, Painting, electricians, maintaining HVAC systems

Source: Primary Research and IMaCS analysis

## **6. Skill Requirements and Skill Gaps in Select Informal Sectors**

In addition to the unorganised employment in the above sectors, there are certain sectors / streams of employment which are almost wholly unorganised and in which the employment is informal in nature – such as domestic workers, handlooms and handicrafts, cleaners and gardeners, and drivers. Of these, we have analysed employment in the following segments as *illustrative* cases towards reviewing the issues underlying informal employment:

- Drivers
- Domestic Workers Segment
- Handlooms and Handicrafts Segment
- Beauticians
- Facility Management
- Security Guards.

Skill requirements and gaps pertaining to drivers have been detailed in the report on the Auto and Auto Components sector, and the Transportation, Logistics, and Warehousing sectors.

### **6.1. Domestic Workers**

Domestic Workers is an important constituent of employment in the country, especially in the urban areas. Several reasons such as changes in the structure of the Indian economy, increasing household annual income, increasing urbanisation and thus changing lifestyles, and changing demographic profiles of the country can be attributed to this rising demand.

Domestic Workers in India can be classified as Live-out domestic workers (these workers stay at their own homes and work at multiple households during the day) or Live-in domestic workers (these workers stay at the homes of their employers and are thus typically employed at a single household).

As part of our study, we interacted with employers who employ domestic workers at their homes as well as with domestic workers themselves to understand various aspects such as the profile of the persons employed in this segment, issues faced by employers in terms of skill gaps in domestic workers, benefits received by domestic workers, etc.

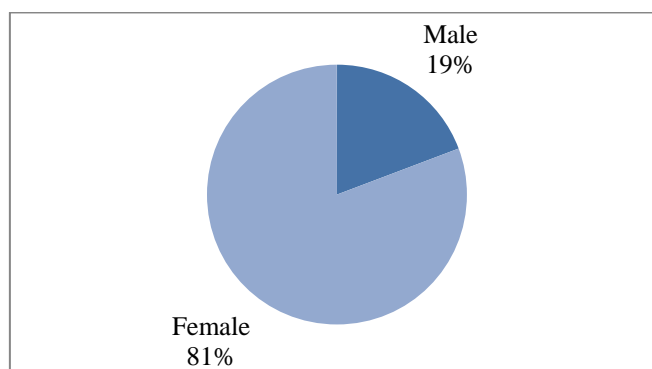
The inputs received during the Primary Research, supplemented by analysis by IMaCS, are as presented in the following sections.

### 6.1.1. Profile of Domestic Workers

#### Gender

The profile of domestic workers in India was found to be primarily female, comprising of about 81% of the workers. The gender distribution of domestic workers in India is as below:

**Figure 3: Gender Distribution of Domestic Workers**



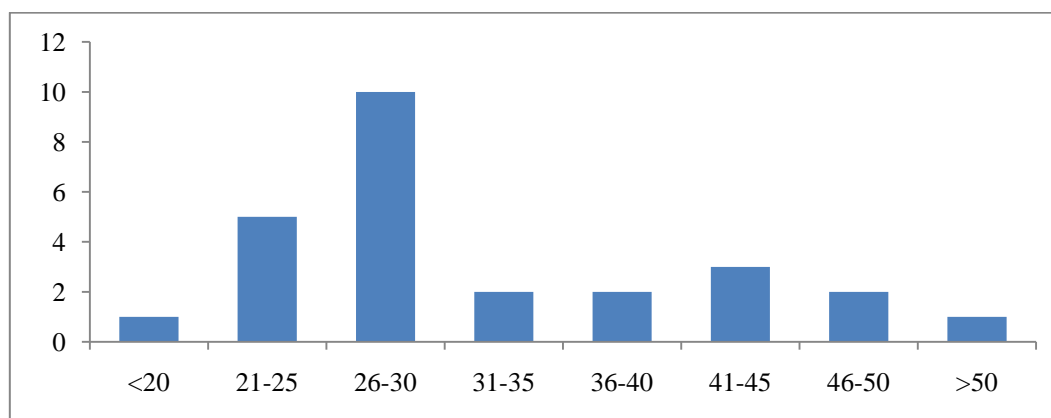
Source: Primary Research and IMaCS Analysis

#### Age

A large proportion of the domestic workers employed in India was found to be between the ages of 21 to 30 years. The average age of domestic workers was found to be in the range of 26-30 years.

The age profile of domestic workers is as below:

**Figure 4: Age Profile of Domestic Workers (in years)**



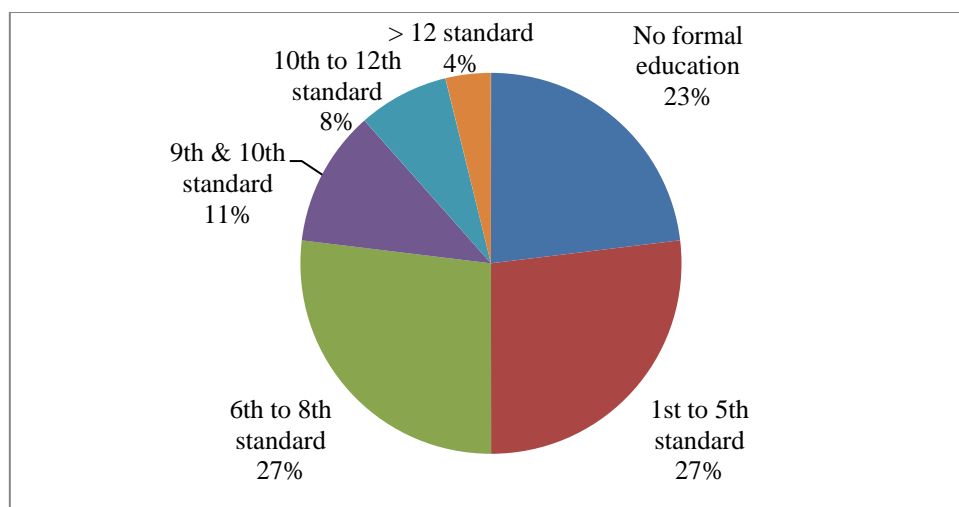
Source: Primary Research and IMaCS Analysis

### Educational Qualifications

It was found that about 23% of the domestic workers employed in India have no formal education. However, about 27% of the domestic workers have undergone primary education (from 1<sup>st</sup> standard to 5<sup>th</sup> standard) and about 27% have undergone middle school level education (from 6<sup>th</sup> to 8<sup>th</sup> standard). About 20% of the domestic workers were found to have undergone secondary level education (from 9<sup>th</sup> to 12<sup>th</sup> standard) and a small proportion has studied beyond the 12<sup>th</sup> standard (4%).

The educational profile of domestic workers in India is as illustrated in the following figure.

**Figure 5: Educational Qualifications of Domestic Workers**



Source: Primary Research and IMaCS Analysis

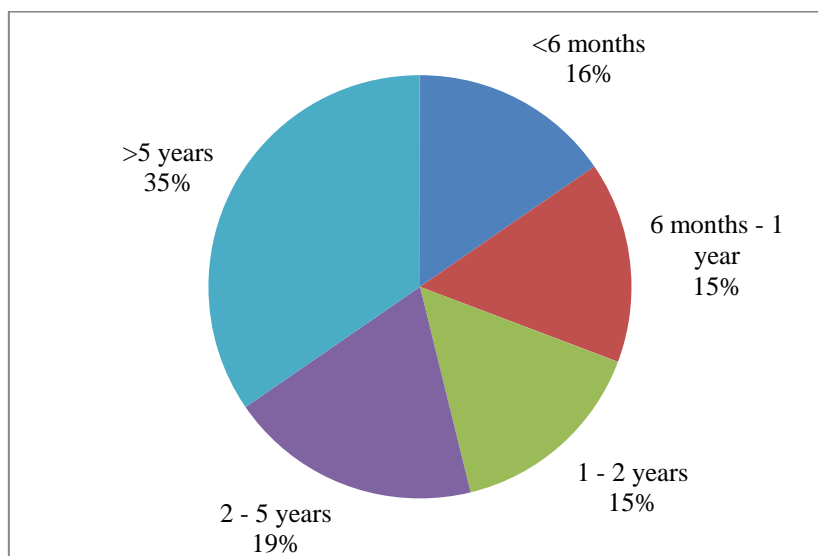


### Work Experience

About 35% of the domestic workers in India were found to have an experience of more than 5 years in domestic work; about 34% domestic workers were found to have experience in the range of 1 to 5 years, and the remaining 31% were found to have less than 1 year experience.

The work experience profile of domestic workers in India is as below:

**Figure 6: Work Experience of Domestic Workers**

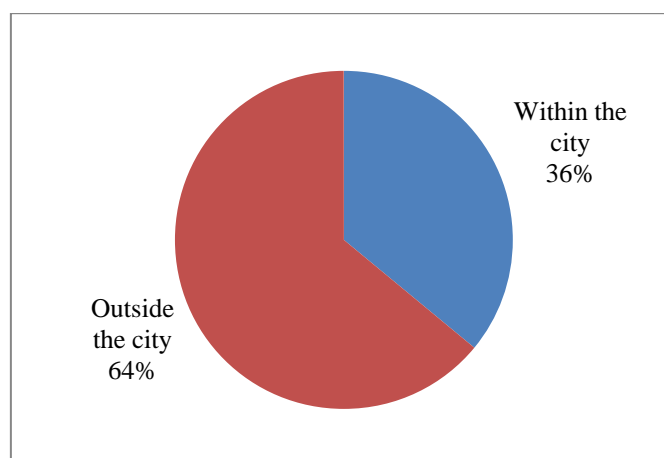


Source: Primary Research and IMaCS Analysis

### Place of birth

It was found that about 64% of domestic workers in India employed in cities are from outside the city of employment, as seen in the figure below:

**Figure 7: Place of Birth of Domestic Workers**



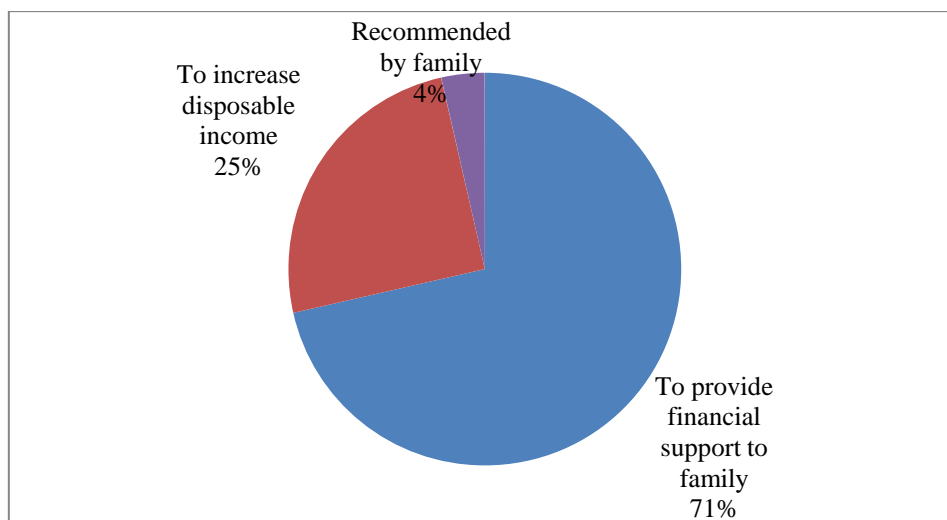
Source: Primary Research and IMaCS Analysis

**Reasons for choosing domestic work as a profession**

It was found that 71% of the domestic workers interviewed had chosen domestic work to provide financial assistance to their families, citing poor financial conditions of their families living in native villages on account of lack of employment opportunities in the local areas. Of the remaining, about 25% of domestic workers had chosen domestic work to increase their disposable income, and about 4% had selected based on recommendations from the family.

The analysis of domestic workers reasons for choosing domestic work as a profession is as presented below:

**Figure 8: Reasons for Choosing Domestic Work as a Profession**



Source: Primary Research and IMA CS Analysis

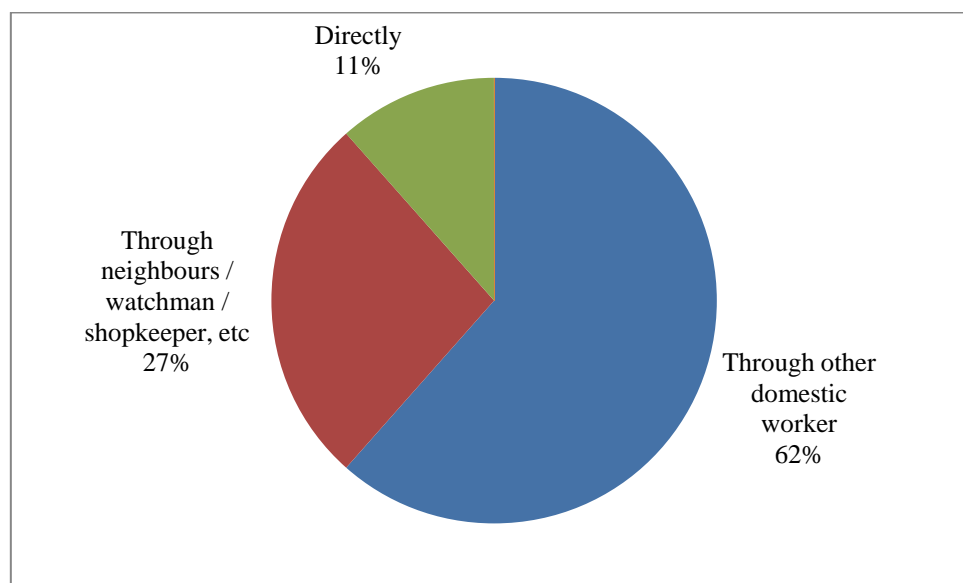
### 6.1.2. Working Conditions of Domestic Workers

#### Sources of employer

It was found that majority of domestic workers in cities get employed through references from other domestic workers, or through other persons such as neighbours, security personnel, shopkeepers, etc.

The analysis of the sources of employers is as below:

**Figure 9: Sources of Employers for Domestic Workers**

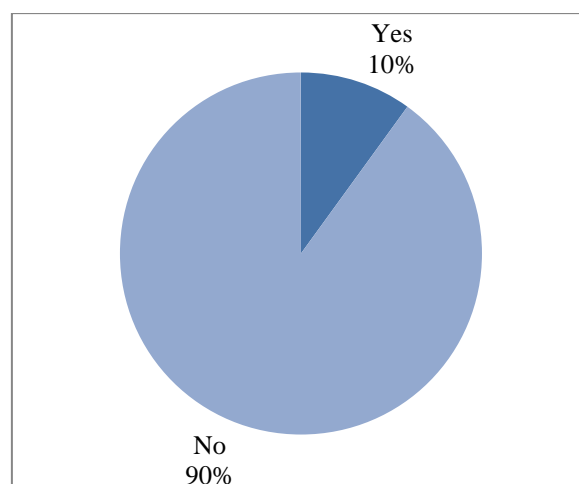


Source: Primary Research and IMaCS Analysis

#### Coverage under contract agreement

Of the domestic workers and employers surveyed, only a small proportion of the domestic workers had a contractual agreement with their employers as seen below:

**Figure 10: Coverage under contract**



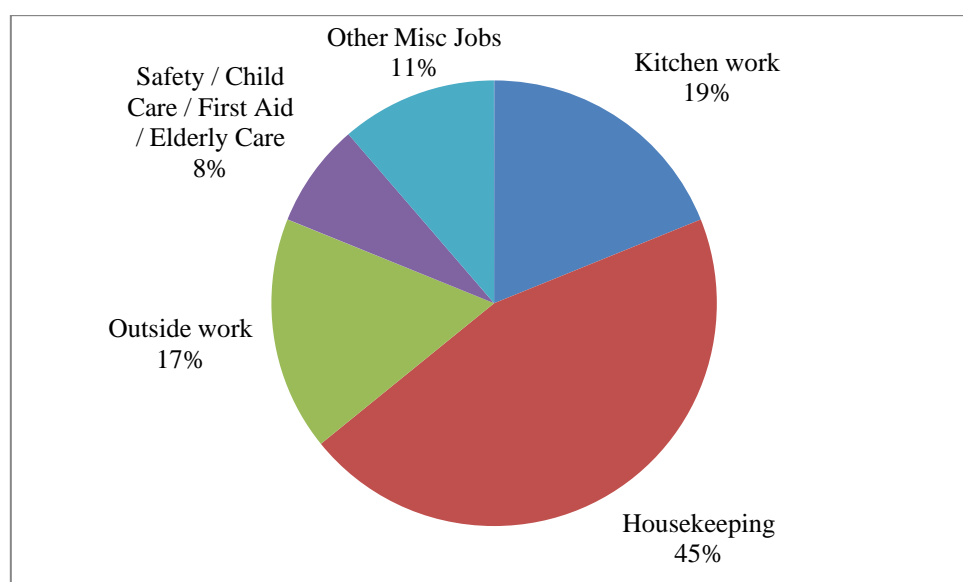
Source: Primary Research and IMaCS Analysis

### Task Profile

The tasks performed by domestic workers were analysed along the dimensions of kitchen work, housekeeping, work outside the home, safety/child care/first aid/elderly care and other miscellaneous jobs.

The typical task profiles of the domestic workers surveyed is as below:

**Figure 11: Task Profile of Domestic Workers**



Source: Primary Research and IMaCS Analysis

The detailed task profile for each of the above, and the proportion of domestic workers performing these tasks is as below:

**Table 46: Detailed Task Profile of Domestic Workers**

<b>Kitchen Work</b>	
Assistance in preparation of food	33%
Cooking	30%
Serving food	22%
Operating kitchen equipments	15%
<b>Housekeeping</b>	
Cleaning utensils	26%
Cleaning rooms / bathroom	21%
Safe and hygienic disposal of garbage	19%
Changing bed-linen	11%
Operating cleaning	15%
Making beds	3%

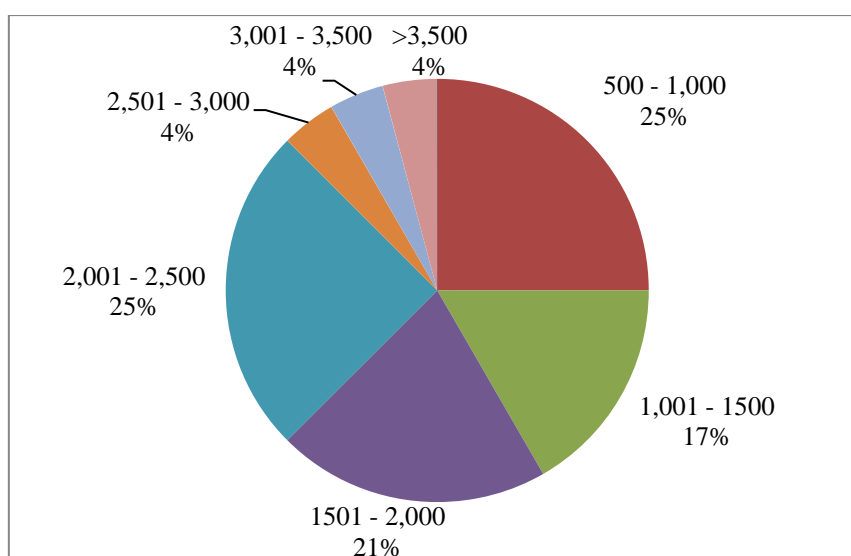
Outside work	
Assistance in / buying household items	82%
Delivery and collection of letters / parcels	9%
Attending to banking related jobs	9%
Safety / Child Care / First Aid / Elderly Care	
Assisting in first aid	17%
Assisting elderly members of the household	25%
Ensuring safety of children or older people	17%
Ensuring safety of house	17%
Child care	25%
Other Misc Jobs	
Attending telephone calls	24%
Welcoming and assisting guests	18%
Supervising other staffs	6%
Gardening	24%
Ironing clothes	18%
Attending to pets	12%

Source: Primary Research and IMAcS Analysis

### Average Monthly Salary

The average salary of domestic workers (including all households worked at) is in the range of Rs. 1,000 to Rs.1,500 per month.

**Table 47: Average Monthly Salary of Domestic Workers (Rs.)**



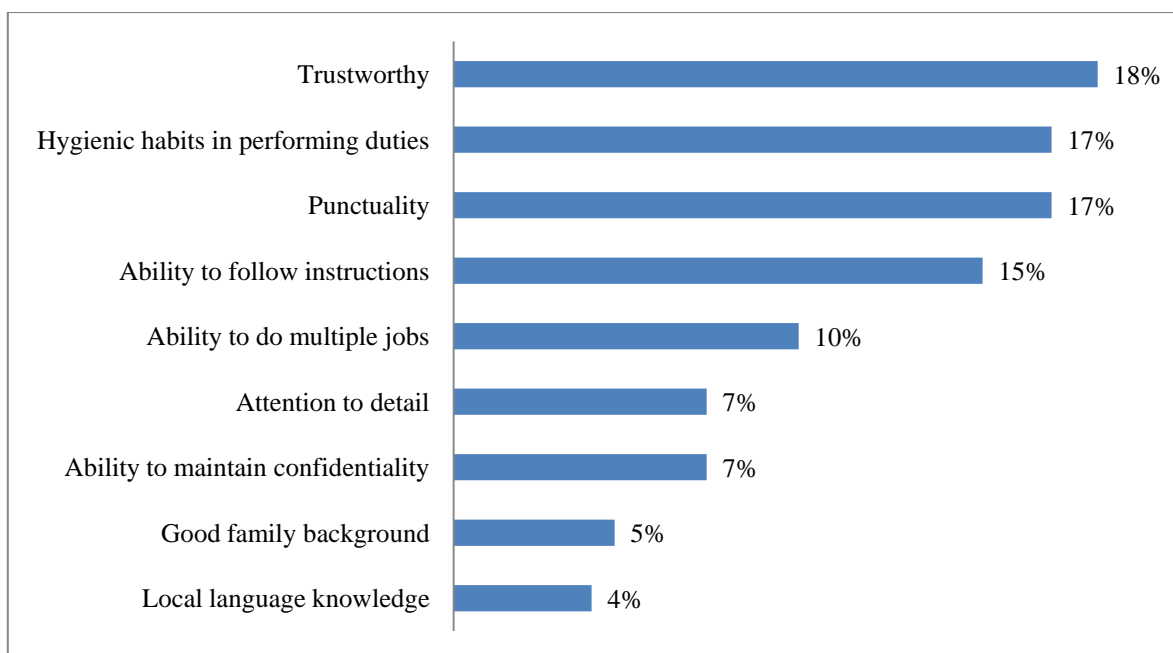
Source: Primary Research and IMAcS Analysis

### 6.1.2.1. Employers' perspective

#### Key attributes expected in domestic workers

With a view to provide the preference of employers on key characteristics of domestic workers, employers were asked to indicate the key attributes they look for when searching for domestic workers. The key attributes indicated by employers are as follows:

**Figure 12: Key Attributes expected by Employers in Domestic Workers**

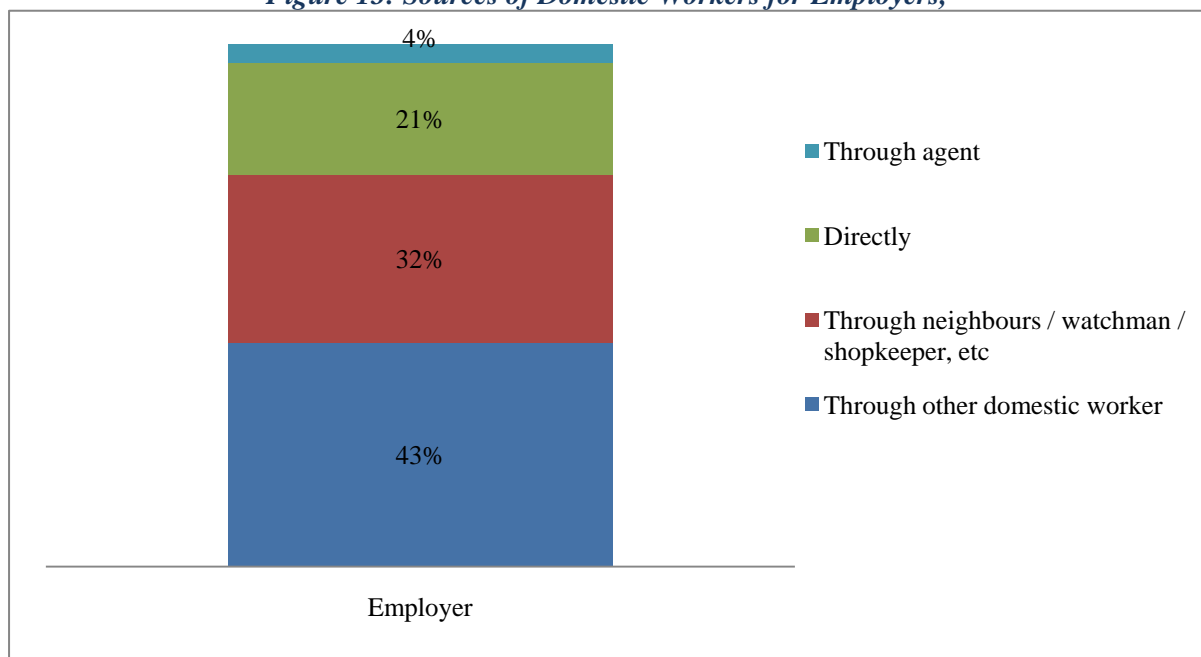


Source: Primary Research and IMAcS Analysis

### Sources of domestic workers

We also analysed how employers go about finding domestic workers – it was again found that the majority of employers get their domestic workers through references from other domestic workers, or through other persons such as neighbours, security personnel, shopkeepers, etc. Unlike domestic workers who had not approached agents, a few employers were observed to have approached agents. The analysis of the sources used by employers to look for prospective domestic workers is mentioned in the following figure:

**Figure 13: Sources of Domestic Workers for Employers,**



Source: Primary Research and IMAcS Analysis

### 6.1.3. Skills Required and Skill Gaps

The following table presents the skill requirements and gaps across various task profiles of domestic workers:

**Table 48: Skill requirements and skill gaps across various task profiles of Domestic Workers**

Function / Role	Skills required	Skill gaps
Food Preparation / Kitchen work	<ul style="list-style-type: none"> <li>▪ Ability to maintain safety and hygiene while performing kitchen functions</li> <li>▪ Knowledge of kitchen equipments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to multi-skill / perform multiple functions</li> <li>▪ Inadequate knowledge of kitchen machines / equipment</li> </ul>

Function / Role	Skills required	Skill gaps
	<p>such as cooker, microwave oven, fridge, etc.</p> <ul style="list-style-type: none"> <li>▪ Ability to pay attention to details</li> <li>▪ Ability to avoid wastage</li> <li>▪ Ability to follow instructions</li> <li>▪ Ability to managing multiple kitchen functions</li> <li>▪ Ability to assist in managing kitchen functions and operations of machines</li> <li>▪ Basic ability to read and write – so as to read the labels on boxes, prepare a list of items to be procured by the employers, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to follow basic safety and hygiene practices</li> <li>▪ Inadequate ability to prepare different cuisines</li> <li>▪ Inadequate basic reading / writing knowledge</li> <li>▪ Inadequate ability to prepare food with different amounts of spices</li> </ul>
Cleaning	<ul style="list-style-type: none"> <li>▪ Ability to assist in housekeeping functions</li> <li>▪ Ability to maintain safety while using cleaning equipments such as acid, vacuum cleaners, etc.</li> <li>▪ Knowledge of cleaning equipments</li> <li>▪ Ability to pay attention to details – e.g. cleaning the corners of floors, cleaning under cupboards, etc.</li> <li>▪ Ability to follow instructions</li> <li>▪ Knowledge of which detergents to use for which kinds of clothes</li> <li>▪ Knowledge of how to dry different types of clothes – e.g. In the sun / in the shade, inside-out, etc.</li> <li>▪ Ability to be careful while dusting delicate items / showpieces</li> <li>▪ Ability to place utensils properly after cleaning, such that they dry</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate knowledge of cleaning specific types of utensils / crockery – e.g. glassware, non-stick cookware, etc.</li> <li>• Inadequate ability to handle fragile items with care</li> <li>• Inadequate ability to ensure minimal spillage of cleaning materials</li> <li>• Inadequate ability to place things back in the proper places / in the correct orientation after cleaning / dusting</li> <li>• Inadequate ability to use the right soap / right quantity of soap for cleaning</li> <li>• Inadequate ability to wash different types of clothes separately, as required</li> <li>• Inadequate ability to ensure thorough</li> </ul>



Function / Role	Skills required	Skill gaps
	fast	cleaning of utensils – for e.g. all cleaning material is not cleaned off well and some remains on the utensils • Inadequate motivation to learn new jobs that may pay more
Child Care and Elderly Care	<ul style="list-style-type: none"> <li>▪ Ability to undertake child care and manage elderly people</li> <li>▪ Ability to read simple instructions</li> <li>▪ Ability to be vigilant</li> <li>▪ Ability to understand the needs of babies / elderly people</li> <li>▪ Ability to ensure proper safety measures</li> <li>▪ Ability to teach children</li> <li>▪ Ability to play with children</li> <li>▪ Ability to understand food habits of children and elderly people</li> <li>▪ Ability to follow instructions</li> <li>▪ Ability to administer proper medication to children and elderly people</li> <li>▪ Ability to understand cultural differences while dealing with elderly people</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge and ability to manage child care and take care of elderly people</li> <li>▪ Inadequate empathy towards children and elderly people</li> <li>▪ Inadequate ability to bond with the child</li> <li>▪ Inadequate consciousness of time</li> </ul>
Outside Work (work requiring interface with persons/parties outside of the household)	<ul style="list-style-type: none"> <li>▪ Ability to undertake basic courier, banking and purchase work</li> <li>▪ Ability to read and write</li> <li>▪ Ability to perform simple calculations</li> <li>▪ Ability to follow instructions</li> <li>▪ Ability to use basic communication tools such as telephones</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge and competency to undertake outside work</li> <li>▪ Inadequate knowledge of basic English language to take up jobs like depositing cheques</li> </ul>

Function / Role	Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>Ability to work independently</li> </ul>	

Source: Primary Research and IMAcS Analysis

This above is illustrative of the skills required and skill gaps in Domestic Workers.

## 6.2. Handlooms and Handicrafts

The handloom and handicrafts segment plays an important role in the country's economy and contributes to one of the largest economic activities after agriculture in India.

**Handicrafts:** The handicrafts sector provides employment to a vast segment of craftsmen in rural and semi-urban areas and generates substantial foreign exchange for the country, while also preserving India's cultural heritage. Handicrafts hold the key for sustaining not only the existing set of millions of artisans, but also for the increasingly large number of new entrants in the crafts activity - the total employment in the sector at the end of 10th Five Year Plan was 67.70 lakh persons, a 3% growth over the 60.16 lakh persons employed at the beginning of the 10<sup>th</sup> Five Year Plan. The handicrafts sector contributes substantially to employment generation and exports. However drawbacks in the sector include the lack of education of persons employed, their poor exposure to new technologies, absence of market intelligence, etc. Taking cognizance of this, the Government has formulated and implemented several schemes and programmes such as Babasaheb Ambedkar Hastshilp Vikas Yojana, Design & Technical Up-gradation scheme, Marketing Support and Services schemes, Human Resource Development Scheme, Research and Development scheme, Handicrafts Artisans Comprehensive Welfare Scheme, etc

*Table 49: Key Handicraft Clusters in India*

Handicraft	Clusters
<b>Art/metal-ware</b>	Moradabad, Sambhal, Aligarh, Jodhpur, Jaipur, Barmer Delhi, Rewari, Thanjavur, Chennai, Mandap, Beedar, Kerala & Jagadhari, Jaisalmer.
<b>Wooden Artwares</b>	Saharanpur, Nagina, Jaipur, Jodhpur, Barmer, Hoshiarpur, Srinagar, Amritsar, Jagdalpur, Bangalore, Mysore, Chennapatna, Chennai, Mandap, Kerala & Behrampur (WB), Ahmedabad, Rajkot .
<b>Hand printed Textiles</b>	Jaipur, Barmer, Bagru, Sanganer, Jodhpur, Barmer, Bhuj, Scarves Farrukhabad & Amroha.

Handicraft	Clusters
<b>Embroidered goods</b>	Barmer, Jodhpur, Jaipur, Jaisalmer, Kutch (Gujarat), Ahmedabad, Lucknow, Jodhpur, Agra, Amritsar, Kullu, Dharmshala / Chamba & Srinagar, Narsapur (AP)
<b>Marble &amp; Soft Stone Crafts</b>	Agra, Chennai, Baster, Jodhpur
<b>Papier Mache crafts</b>	Jammu & Kashmir, Jaipur
<b>Terracotta Zari &amp; Zari Goods</b>	Rajasthan, Chennai, Baster, Bareilly, Jaipur, & Barmer Surat, Amritsar, Agra, Varanasi
<b>Imitation/Fashion</b>	Delhi, Moradabad, Sambhal, Jaipur, Kohima (Tribal).

**Handlooms:** There are about 35 lakh looms in the country, and the handlooms sector currently provides employment to about 65 lakh persons, of which about 60% are women. The traditional handloom weaving in India has been kept alive by professionally skilled weavers. The sector is beset with several problems, some of which include obsolete technology, unorganised production systems, low productivity, inadequate working capital, competition from powerlooms and mill sector. At the same time, the effective implementation of the Handloom Reservation Order shows the Government's endeavour to ensure that there is a well defined and delineated area for handlooms which is not unduly encroached by the powerlooms and mills. Some of the other schemes and programmes by the Government include Integrated Handlooms Development Scheme, Mill Gate Price Scheme (MGPS), Diversified Handloom Development Scheme (DHDS), Handloom Weavers Comprehensive Welfare Scheme, Marketing and Export Promotion Scheme, etc.

### Skills Required and Skill Gaps

The following table presents the skill requirements and gaps in the handlooms and handicrafts sectors:

*Table 50: Skill requirements and skill gaps in the Handicrafts sectors*

Type		Skills required	Skill gaps
Handicrafts	Stone/Marble /Wooden Handicraft  Metal Handicraft	<ul style="list-style-type: none"> <li>▪ Knowledge of use of abrasives</li> <li>▪ Hand control to preserve intricate designs</li> <li>▪ Knowledge and use of tools and materials</li> <li>▪ Ability to perform intricate work / finishing</li> <li>▪ Knowledge and skills for design</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to use machines (e.g. cutting machines, dies, etc.) to perform the required functions</li> <li>▪ Inadequate ability to undertake quality control</li> <li>▪ Inadequate knowledge of</li> </ul>

Type		Skills required	Skill gaps
		<ul style="list-style-type: none"> <li>▪ Ability to transfer skills to inexperienced craftsman</li> <li>▪ Ability to undertake polishing / sandpaper finishing</li> <li>▪ Ability to undertake chiselling and defining of lines and curves</li> <li>▪ Ability to chisel out the basic 3D shape from drawings</li> <li>▪ Ability to undertake finishing of faces and other minute details</li> <li>▪ Ability to conceptualise and create new designs</li> <li>▪ Ability to undertake sheet metal cutting according to drawing</li> <li>▪ Ability to hammer out the 3D shape from sheet metal and undertake fabrication</li> </ul>	<p>materials treatment</p> <ul style="list-style-type: none"> <li>▪ Inadequate ability to undertake design and development as per market requirements</li> <li>▪ Inadequate ability to undertake the polishing process</li> </ul>
	Chindi dari / Dari / Galicha <sup>16</sup>	<ul style="list-style-type: none"> <li>▪ Ability to weave carpet according to design</li> <li>▪ Ability to set up the dari - thannidora and lechhi</li> <li>▪ Ability to conceptualise and create new designs</li> <li>▪ Ability to undertake weaving</li> <li>▪ Ability to convert the design requirement in to the dari setup</li> <li>▪ Ability to undertake wastage control and quality control</li> <li>▪ Ability to create designs as per market requirement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to ensure wastage control / quality control</li> <li>▪ Inadequate ability to undertake final finishing</li> <li>▪ Inadequate designing skills</li> <li>▪ Inadequate knowledge of market trends and requirements</li> </ul>
	Tie & Die, Embroidery,	<ul style="list-style-type: none"> <li>▪ Ability to undertake bandhni tying</li> <li>▪ Ability to undertake embroidery</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to use machines in embroidering</li> </ul>

<sup>16</sup> Types of carpets

Type		Skills required	Skill gaps
	Hand-block printing	<ul style="list-style-type: none"> <li>▪ Ability to undertake dyeing / hand block printing</li> <li>▪ Ability to create designs as per market requirement</li> <li>▪ Ability to undertake tying</li> <li>▪ Knowledge of dyes and chemicals</li> <li>▪ Knowledge of steps to be followed for the desired design</li> <li>▪ Ability to undertake designing of fashionable designs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate knowledge and adherence to quality assurance processes</li> <li>▪ Inadequate designing skills</li> <li>▪ Inadequate knowledge of market trends and requirements</li> </ul>
	Leather Juta <sup>17</sup> / bags etc	<ul style="list-style-type: none"> <li>▪ Ability to undertake embroidery on the raw material</li> <li>▪ Ability to undertake leather procurement</li> <li>▪ Ability to undertake leather cutting according to the design requirement</li> <li>▪ Ability to undertake shoe/bag making – i.e. stitching/pasting</li> <li>▪ Ability to create designs as per market requirement</li> <li>▪ Ability to optimise the use of leather</li> <li>▪ Ability to undertake stitching of leather</li> <li>▪ Ability to undertake templatising of designs</li> <li>▪ Awareness of market trends</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to use technology in leather cutting / stitching</li> <li>▪ Inadequate designing skills</li> <li>▪ Inadequate ability to undertake templatisation of designs</li> <li>▪ Inadequate awareness of market trends</li> </ul>

Source: Primary Research and IMA CS Analysis

<sup>17</sup> Leather shoes

The following are indicative of the skills required in the Handlooms sector.

**Table 51: Skills required in the Handlooms sector**

Function	Skills required
Pre-weaving	<ul style="list-style-type: none"> <li>▪ Ability to understand the designs prepared by designers</li> <li>▪ Ability to prepare the jaggard box as per the design</li> <li>▪ Ability to understand intricacies of the design and replicate the same on the jaggard box</li> <li>▪ Ability to understand the market and requirements of consumers so as to get designs made accordingly</li> </ul>
Weaving	<ul style="list-style-type: none"> <li>▪ Ability to check the rotation of the beams</li> <li>▪ Ability to check finished cloth for damages such as projected threads, cuts, accumulated dust, etc.</li> <li>▪ Ability to match pedal operations with hand operations</li> <li>▪ Ability to ensure shuttle movement as required</li> <li>▪ Ability to check for cut threads and connect new threads so that the knot does not show</li> <li>▪ Ability to tie knots appropriately</li> <li>▪ Ability to maintain good eye contact with shuttle</li> <li>▪ Ability to check the tension in the thread and ensure appropriate tension</li> </ul>
Others	<ul style="list-style-type: none"> <li>▪ Ability to check the condition of the machine and ensure maximum uptime</li> <li>▪ Ability to check rotations, shuttle operations, peddle operations</li> <li>▪ Ability to cut extra threads at the backside of the cloth</li> <li>▪ Ability to ensure the required quality of the final product.</li> </ul>

Source: Primary Research and IMACS Analysis

### 6.3. Beauticians

Beauticians are an important area where a large number of women are employed. A large portion of the beauty saloons/parlours fall under the unorganised sector and are characterised by informal employment.

*Table 52: Skill requirements and gaps in the Beauticians segment*

Function / Level	Skills required	Skill gaps
Hair Stylist	<ul style="list-style-type: none"> <li>▪ Ability to keep the work place clean and sanitise tools, such as scissors and combs</li> <li>▪ Ability to maintain arm and hand steadily</li> <li>▪ Ability to analyse hair and physical features of clients and suggest hair styles</li> <li>▪ Ability to shampoo, rinse, condition and dry hair and scalp with water</li> <li>▪ Ability to undertake a range of basic hair styles for both, men and women, using clippers, scissors, etc.</li> <li>▪ Ability to use trimmers and razors without injuring the client's face</li> <li>▪ Ability to undertake hair massage</li> <li>▪ Ability to select hair colours</li> <li>▪ Ability to bleach, dye, or tint hair using applicator or brush</li> <li>▪ Ability to change the structure of hair to gain alternative look, such as perming, straightening, etc.</li> <li>▪ Ability to undertake treatment of scalp</li> <li>▪ Knowledge of chemicals used and their effects</li> <li>▪ Ability to change the appearance as desired by the client through a combination of hair colouring, hair cut and hair texture methods</li> <li>▪ Knowledge of trends and fashion</li> <li>▪ Ability to demonstrate and sell hair care products and cosmetics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to use advance gadgets</li> <li>▪ Insufficient knowledge on latest techniques and styles</li> <li>▪ Inadequate creativity</li> <li>▪ Insufficient knowledge of safety methods and procedures</li> <li>▪ Inadequate ability to analyse and help the customer in selecting suitable hair style, leading to the tendency to suggest basic hair styles such as like U cut, straight cut or step cut</li> <li>▪ Inadequate communication skills</li> </ul>

Function / Level	Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Ability to develop new styles and techniques.</li> <li>▪ Adequate communication skills to understand customer requirements and discuss options with the client</li> </ul>	
Beautician	<ul style="list-style-type: none"> <li>▪ Ability to be well-groomed and have a sense of hygiene and cleanliness</li> <li>▪ Basic knowledge of chemistry and the human body</li> <li>▪ Ability to undertake eyelash and eyebrow colouring and shaping (threading)</li> <li>▪ Ability to undertake manicure and pedicure, without hurting the hands and legs while using the blade</li> <li>▪ Ability to undertake cosmetic make-up including tanning treatments, face and body painting, ‘mehandhi’ / ‘henna’ skin decoration</li> <li>▪ Ability to undertake temporary hair removal by waxing face, legs, arms, etc.</li> <li>▪ Ability to undertake facials involving cleansing, massaging, black/white head removal and toning the skin</li> <li>▪ Stamina to remain standing during most part of the day</li> <li>▪ Knowledge of and ability to undertake first aid, if required</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate communication skills</li> <li>▪ Insufficient analytical skills to understand the skin type and giving suggestions accordingly</li> <li>▪ Inadequate ability to undertake different types of makeup – e.g. natural makeup, evening makeup, bridal makeup etc.</li> <li>▪ Inadequate ability to understand the chemical combinations that are being used and its reactions</li> <li>▪ Insufficient knowledge of first aid</li> </ul>

Source: Primary Research, DGET MES, and IMAcS Analysis



The following are the skills required in other areas pertaining to the Body Care segment.

**Table 53: Skills required in other areas pertaining to the Body Care segment**

Function / Level	Skills required
Reflexologist	<ul style="list-style-type: none"> <li>▪ Ability to undertake massaging.</li> <li>▪ Ability to apply the right quantity of oil to create the required amount of friction and pressure</li> <li>▪ Knowledge of amount of pressure that needs to be applied at pressure points</li> </ul>
Counsellors	<ul style="list-style-type: none"> <li>▪ Ability to give suggestions to customers on options</li> <li>▪ Ability to ensure quality standards for services</li> <li>▪ Ability to undertake evaluation of customer satisfaction</li> <li>▪ Ability to undertake supervision of hair stylists, beauticians, etc.</li> </ul>
Common skill requirements	<ul style="list-style-type: none"> <li>▪ Safety consciousness and knowledge of safe working practices</li> <li>▪ Ability to undertake care of equipment and tools</li> <li>▪ Punctuality, discipline and honesty</li> <li>▪ Ability to comply with required quality specifications</li> <li>▪ Ability to maintain respect for rules and regulations</li> <li>▪ Ability to maintain concern for health and hygiene</li> <li>▪ Ability to maintain cordial relationships and cooperation with co-workers and team</li> <li>▪ Ability to maintain a positive attitude and behaviour</li> <li>▪ Responsibility and accountability</li> <li>▪ Adequate communication skills</li> <li>▪ Concern for environment and waste disposal</li> <li>▪ Ability for planning, organizing and coordinating</li> <li>▪ Ability to think creatively, solve problems and make decisions</li> <li>▪ Leadership and negotiation skills</li> <li>▪ Ability to bear stress</li> </ul>

*Source: Primary Research, and IMaCS Analysis*

## 6.4. Facility Management

The following are the skills required and skill gaps in the Facility Management segment.

*Table 54: Skills required in other areas pertaining to the Facility Management segment*

Function / Level	Skills required	Skill gaps
Experienced personnel	<ul style="list-style-type: none"> <li>▪ General administration and logistics, after the facility has been occupied, including house keeping, security, front office, power back up, etc</li> <li>▪ Ability to conduct regular preventive maintenance and required breakdown maintenance of civil, electrical and mechanical installations</li> <li>▪ Knowledge and proficiency in handling maintenance of services like plumbing, elevators, auditorium services, fire fighting and associated services</li> <li>▪ Ensuring availability of utilities such as water, electricity, etc.</li> <li>▪ Ability to negotiate with and manage vendors and contractors, including ensuring their payments</li> <li>▪ Ability to have an orientation towards customer service</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incomplete understanding of maintenance services</li> <li>▪ Inadequate customer orientation and interaction skills</li> <li>▪ Inadequate understanding of AMC</li> <li>▪ Inadequate documentation skills</li> <li>▪ Insufficient of managing people involved in delivering services</li> <li>▪ Inadequate experience in building maintenance, equipment maintenance (such as electrical, etc.)</li> <li>▪ Inadequate understanding of energy audits, energy efficiency, and compliance.</li> </ul>
Entry Level personnel	<ul style="list-style-type: none"> <li>▪ Ability to undertake operations and maintenance activities</li> <li>▪ Coordination with multiple agencies and vendors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate orientation towards customer service</li> </ul>

Function / Level	Skills required	Skill gaps
	<ul style="list-style-type: none"> <li>▪ Ability to mobilise resources as and when required</li> <li>▪ Ability to handle complaints from inhabitants and ensure timely resolution</li> <li>▪ Ability to keep track of complaints received</li> <li>▪ Ability to have an orientation towards customer service</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate ability to multitask and coordinate with multiple agencies and vendors</li> <li>▪ Inadequate understanding of energy audits, energy efficiency, and compliance.</li> </ul>

Source: Primary Research, and IMAcS Analysis

The following are the generic skill sets that can be covered under Facilities Management:

- Housekeeping
- Landscaping and Gardening
- Security Services
- Fire-fighting
- Electrical and Mechanical services – maintenance of electrical systems, Diesel Generator (DG) sets, Air-conditioners, etc.
- Environmental management.

## 6.5. Security Guards

The following are the skills required in Security Guards.

Table 55: Skills required for Security Guards

Function	Skills required
Security Guards -	<ul style="list-style-type: none"> <li>▪ Knowledge of certain basic civil and criminal rules</li> <li>▪ Knowledge of different security gadgets/mechanisms</li> <li>▪ Sensitisation about threat potential from different quarters in different situations</li> <li>▪ Knowledge of fundamentals of security skills/practices – e.g. access control/frisking, anti-sabotage checking, cordoning and sealing, surveillance, body search, premises search and area search, etc.</li> </ul>

Function	Skills required
	<ul style="list-style-type: none"> <li>▪ Ability to keep records and scrutinise documents</li> <li>▪ Ability to handle industrial unrest</li> <li>▪ Ability to undertake parking and traffic regulatory arrangements – e.g. for mega-events/conferences</li> <li>▪ Ability to undertake un-armed combat</li> <li>▪ Ability to manage aggression</li> <li>▪ Ability to undertake care of equipment and tools – e.g. gun, lathi, etc.</li> <li>▪ Punctuality, discipline and honesty</li> <li>▪ Concern for quality of service and respect for rules and regulations</li> <li>▪ Orientation towards customer service</li> <li>▪ Adequate communication skills</li> <li>▪ Ability to coordinate with local administration including law and order agencies</li> <li>▪ Safety consciousness and the ability to adhere to safe working practices</li> <li>▪ Ability to multitask – e.g. be vigilant even while speaking on the phone to residents</li> <li>▪ Ability to use of computers/electronic appliances in security arrangements</li> </ul>

## 7. Projected Human Resource Requirements in Select Informal Sectors

The following points present the context of projection of human resource requirements in the informal sectors:

*Projection of human resource requirements in sectors with large proportion of informal employment:*

The projection of human resource requirements for sectors in which significant informal employment exists has been detailed in the respective reports. Predominantly, the employment would occur at semi-skilled and minimally skilled levels as outlined in the respective reports. The earlier section has details on the human resource requirement in areas where informal employment exists (refer section on ‘*Key Skills in Demand*’).

As mentioned earlier, it is estimated that while various ‘sectors’ will continue to organise further, ‘employment’ would continue to remain informal/unorganised to the extent of well over 90% till 2022, as outlined in the report on ‘*The Challenge of Employment in India – An Informal Economy Perspective*’, April 2009 (NCEUS).

- Projection of human resource requirements till 2022 in the following sectors has been detailed in this section as an illustration:
  - Domestic Workers
  - Handlooms and Handicrafts
  - Beauticians
  - Facility Management
  - Security Guards.

## 7.1. Domestic Workers

Our projection of the requirement for domestic workers is based on the following:

- Changing household income – it is expected that the high income segment will triple by 2016 and more than half the households will be ‘middle class’ by that time
- Each domestic worker works in about 2 to 3 or even 4 households.

In this context, it is estimated that number of domestic workers would increase from about 12.5 million currently to about 33 million by 2022, amounting to an incremental human resource requirement of 20.5 million domestic workers.

**Table 56: Projected human resource requirements for domestic workers (in ‘000s)**

	2008	2012	2018	2022	Incremental
Domestic Workers (in ‘000s)	12,558	20,147	27,595	33,126	20,568

*Source: National Council of Applied Economic Research (NCAER), Marketing White Book, 2009-19, Primary Research and IMAcS Analysis*

Urban India accounts for 35% to 40% of domestic worker population and this can go up to 40% to 45% by 2022. Out of this, the top-20 cities alone would account for about 10% (i.e. about 25% to 30% of urban India’s domestic worker employment). The employment of domestic workers in the following top-20 cities is expected to be about 0.8 to 1 million and is likely to go up to 2.3 to 2.5 million by 2022.

**Table 57: Domestic worker employment in select cities (in ‘000s)**

City	2008	2012	2018	2022
Mumbai	158	253	346	416
Delhi	152	244	334	401
Kolkata				

City	2008	2012	2018	2022
	86	137	188	226
Chennai	86	137	188	226
Bangalore	68	109	149	179
Ahmedabad	39	62	85	102
Hyderabad	38	61	83	100
Pune	28	45	61	74
Kanpur	28	45	61	73
Surat	27	43	59	70
Jaipur	25	41	56	67
Lucknow	24	39	53	64
Nagpur	23	36	49	59
Indore	18	28	39	46
Bhopal	16	25	35	41
Ludhiana	15	25	34	40
Patna	15	24	33	40
Vadodra	14	23	31	38
Agra	14	22	30	36
Varnasi	12	19	27	32

*Source: Census 2001 information on city population and IMAcS analysis*

## **7.2. Handlooms and Handicrafts**

The human resource requirement in handlooms and handicrafts will need to be supplemented by initiatives from the Government and Industry. The addition of human resource into these other sectors would be at a much lower rate as compared to mainstream segments in the Textile Industry (such as spinning, fabric manufacturing, fabric processing, and garmenting), due to need for significant support for earnings, scope for enhanced technology intervention and automation as compared to current levels, the need to add value, and attractiveness of the sector among the human resource supply.

Keeping in mind the above factors and the growth of the industry, we have projected the human resource requirement for handlooms and handicrafts.

- **Handlooms sector:** It is expected that the overall employment in the handlooms sector will increase from about 6.7 million currently to about 7.4 million by 2022. This would translate to an incremental human resource requirement of about 0.7 million persons.
- **Handicrafts sector:** It is expected that the overall employment in the handicrafts sector will increase from about 7 million currently to about 9.8 million by 2022. This would translate to an incremental human resource requirement of about 2.8 million persons.
- 

**Table 58: Projected human resource requirement in the handlooms and handicrafts sub-segments (in millions)**

	2008	2012	2018	2022	Incremental
Handloom Sector	6.7	7.0	7.2	7.4	0.7
Handicraft Sector	7.0	8.0	9.0	9.8	2.8
<b>Total</b>	<b>13.7</b>	<b>15.0</b>	<b>16.2</b>	<b>17.2</b>	<b>3.5</b>

Source: Planning Commission, IMAcS analysis

### 7.3. Other informal employment – Beauticians, Facility Management, and Security Guards

The projected human resource employment for the following sectors has been carried out in based on the following assumptions:

- Changing nature of household income in India
- Expected increase in the number of industrial and service sector facilities requiring security guards and facility management staff
- The demand for private security, outsource maintenance and management would drive the need for security guards and facility management staff
- The demand for personal care/body care would drive the demand for beauticians.

The projected human resource requirement is detailed below.

**Table 59: Projected human resource till 2022 for select informal sectors – Beauticians, Facility Management, Security Guards (in ‘000s)**

Sector	2008	2022	Incremental human resource requirement (in ‘000s)
Beauticians	243	788	545
Facility Management <sup>18</sup>	2,243	6,180	3,937
Security Guards (Private Security Services)	7,128	19,643	12,515
<b>Total</b>	<b>9,613</b>	<b>26,611</b>	<b>16,997</b>

Source: Secondary sources, Annual Survey of Industry, Primary Research, and IMaCS analysis

## 8. Possible focus areas for Skill Building for Informal Employment

The nature of skill requirements and gaps in informal unorganised employment has been detailed in the above sections. This spans sectors such as Construction, Food Processing, Textiles, Manufacturing, Repair and Servicing, etc. The informal nature of employment also exists in informal sectors such as driving/transportation, domestic help, handlooms, handicrafts, security guards, etc.

The incremental employment till 2022 in the informal sectors limited to domestic help, handloom and handicrafts, beauticians, facility management staff, security guards alone amounts to over **41 million** persons. These sectors are only indicative of the nature of issues surrounding informal/unorganised employment.

As is evident, there is much need for skill building for sectors with informal employment. The following are *illustrative* of the potential areas to channelise skill building in the informal sector targeting informal employment (these form the larger set of sectors which can be targeted for skill development)

<sup>18</sup> Excludes housekeeping and is limited to estate management



- Construction – workers, stone cutters, and also plumbers, carpenters, masons
- Manufacturing and Production-related – welders, fitters, machinists, machine-operators
- Retail – salesmen, shop assistants
- Transportation – equipment operators, drivers
- Textiles and Apparel - tailors, dress makers, sewers, upholsterers
- Furniture - carpenters, cabinet, related wood workers
- Personal care – beauticians, hair dressers, and other related areas
- Hospitality – cooks, waiters, bartenders
- Food Processing – operators, packers, sorters, cleaners, inspection
- Leather and leather goods – stitchers, tanners, cutters
- Gems and Jewellery – polishers, fabricators/jewellery setters
- Security guards
- Facility Management
- Others – domestic workers, drivers, gardeners, etc.

Skill building in these areas would be critical to ensure that the workforce has '*marketable skills*' and from the perspective of remaining competitive as an economy.

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

IMaCS is a multi-line management and development consulting firm headquartered in India. It has an established track record of over 15 years in consulting across various sectors and countries. IMaCS has completed over 950 consulting assignments and has worked in over 30 countries across the globe. Through the process of carrying out several assignments over the last decade and half, IMaCS has accumulated considerable analytical and consulting expertise, backed by the following capabilities:

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R. Raghuttama Rao

*Managing Director*

IMaCS

4th floor, Electric Mansion

Appasaheb Marathe Marg, Prabhadevi

Mumbai – 400 025

Tel: 91 22 3047 0047, Fax: 91 22 3047 0081

Email: [raghuttama.rao@imacs.in](mailto:raghuttama.rao@imacs.in)

M. Sairam

*Head – Process Consulting*

IMaCS

5<sup>th</sup> floor, Karumuttu Centre

634, Anna Salai, Nandanam,

Chennai – 600 035

Tel: 91 44 2434 0043, Fax: 91 44 2434 3663

Email: [sairam.m@imacs.in](mailto:sairam.m@imacs.in)