

State Report – Uttarakhand Skill Gap Study

Department of Rural Development, Govt. of Uttarakhand

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List of Abbreviations

S. No.	Abbreviation	Expanded form
1	AICTE	All India Council for Technical Education
2	AISHE	All India Survey on Higher Education
3	ATS	Apprenticeship Training Scheme
4	CSSM	Centrally Sponsored State Managed
5	CTS	Craftsman Training Scheme
6	DDP	District Domestic Product
7	DDU-GKY	Deen Dayal Upadhyay Grameen Kaushalaya Yojana
8	DSDE	Department of Skill Development and Employment
9	ELSTP	Employment Linked Skill Training Programme
10	FTAs	Foreign Tourist Arrivals
11	GER	Gross Enrollment Ratio
12	GoUK	Government of Uttarakhand
13	GVA	Gross Value Added
14	ICT&E	Information and Communication Technology & Electronic
15	IDPH	Integrated Development and Promotion of Handicraft
16	ITI	Industrial Training Institutes
17	M&E	Monitoring & Evaluation
18	MoLE	Ministry of Labour & Employment
19	MoRD	Ministry of Rural Development
20	MSDE	Ministry of Skill Development and Entrepreneurship
21	MT	Metric Tonnes
22	NAPS	National Apprenticeship Promotion Scheme
23	NEET	Not in Education, Employment or Training
24	NIC	National Industrial Classification
25	NRLM	National Rural Livelihood Mission
26	NSDC	National Skill Development Corporation
27	NULM	National Urban Livelihoods Mission
28	NVEQF	National Vocational Education Qualification Framework
29	PIA	Project implementing Agencies
f	PMKVY	Pradhan Mantri Kaushal Vikas Yojana
31	RPL	Recognition of Prior Learning
32	RSETI	Rural Self Employment Training Institutes
33	SDM	Skills Development Mission
34	SIDCUL	State Industrial Development Corporation of Uttaranchal Ltd.
35	STPI	Software Technology Parks of India
36	TA	Technical Assistance
37	UHHDC	Uttarakhand Handloom and Handicraft Development Council
38	UKSDM	Uttarakhand Skill Development Mission
39	UKWDP	Uttarakhand Work Force Development Project
40	SPMU	State Project Management Unit
41	VMC	Vertical Milling Center

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Executive Summary

Uttarakhand was formed on 9th November 2000 as the 27th State of India. According to the Census of India 2011, the population of Uttarakhand was approximately 1.01 crores. **The state is the home to around 0.8 percent of the total population of the country and is the 20th most populous state in India.** There are 13 districts in the state which is grouped into two divisions - Kumaon division and Garhwal division. The Kumaon division spreads across an area of 21,035 sq. kms. and inhabits 42.3 lakh people whereas the Garhwal division spreads across an area of 32,450 sq. kms. **It is predominately a rural state with 70 percent of the population residing in rural areas. In the hilly areas of the state, 90 percent of the people resides in rural areas.** The median age of population of Uttarakhand is 23 years, compared to the national average of 24 years¹. The real GSDP of Uttarakhand grew at an average annual rate of 7.7%, from INR 1.15 trillion in 2011-12 to INR 1.93 trillion in 2018-19. During the same period India's real GDP grew at an average annual rate of 6.9%².

As per the Human Development Report (HDR) 2017 of the state, the labour force participation rate was 53 percent and unemployment rate was 4.2 percent. Among those who were working, 56.9 percent was self-employed, 24.2 percent was regular employed, and 18.9 percent was casual workers³. **The working age population of Uttarakhand in 2018 was 62.4 percent of the total population, with an increase of 1.9 percent as compared to 2013**⁴. Migration of youth to the urban areas in the state as well as outside state is very frequent. The state is growing fast and have a favourable demography but suffer from high rate of youth unemployment. Thus, development of the skills and training sector in terms of access, quality and relevance is one of the key priorities of the Government of Uttarakhand.

As a part of Technical Support Agency (TSA) for Uttarakhand State Project Management Unit, Department of Rural Development, Government of Uttarakhand, under the Deen Dayal Upadhyay Grameen Kaushalya Yojana (DDU-GKY), PricewaterhouseCoopers Pvt. Ltd. was expected to conduct a Skill Gap Study for the state of Uttarakhand. PricewaterhouseCoopers Pvt. Ltd. along with Department of Economics and Statistics, Government of Uttarakhand conducted the skill gap study. The primary survey of youth in the state was conducted by the Department of Economics and Statistics, Government of Uttarakhand with support in methodology, data analysis and the preparation of final report was conducted by the Technical Support Agency (PwC) team. The overall objective of the study was to carry out a skill gap assessment by capturing voice of industry and assessing aspiration of youth in the state. This study would lay the foundation for developing the strategy and action plan in order to address key human resource challenges and create potential employment opportunities.

A **mixed-method research design**, encompassing a blend of quantitative and qualitative data collection techniques and desk research using various secondary data sources, was adopted for the study. The study was executed in phased manner. The four distinct phases of the study included: 1) assess & design; 2) discover; 3) analyze and 4) document. The first stage of the study included developing holistic understanding of the sector followed by the designing of the survey tools, taking approvals on the tools, finalizing the approach and methodology, mapping and listing the stakeholders for the survey. In the next stage, we conducted all the primary and secondary research. The study covered a sample of **460 employers from service and manufacturing sector across all the 13 districts of Uttarakhand**. In addition, **40 employers from the Delhi NCR regions were interviewed to understand high demand job roles in the region where youth of Uttarakhand tend to migrate**. The study also conducted a household level survey with the youth of the state to understand their aspirations. A total of 6,582 youth in the age category of 15-34 years was interviewed. The study adopted a wide range of data collection methods ranging from telephonic interviews, online surveys and face-to-face interviews. We have also captured few key sectors value chain and selective case studies from our primary survey highlighting the key job roles.

The main outcomes of this report include socio-economic and demographic profiling of state, assessment of employment scenario, identification of major job roles in demand, job roles vulnerable to technological advancements, analysis of youth aspirations, estimation of demand-supply gap and the labour requirement in next 5 years.

Estimation of labour demand was undertaken based on the analysis of data sourced from the Census of India, the Department of Economics and Statistics of Government of Uttarakhand, the Reserve Bank of India, the

¹ <https://censusindia.gov.in/2011>




² Economic survey of Uttarakhand 2018-19

³ Uttarakhand HDR Report, 2018

⁴ Times of India article Nearly 2/3rds of Indians are of working age, between 15 and 59 on 4th July 2020

National Sample Survey Organisation, and the Bureau of Labour and Employment under the Ministry of Labour and Employment, Government of India. Estimates were further refined based on the data pertaining to the proposed investments (pragmatically rationalised and considered), and the anticipated developments within key sectors; in addition, due consideration is given to the emerging sectors and job roles. This study involved estimating the State-level workforce demand for the upcoming years (up to 2026) categorised as skilled and semi-skilled workforce requirement.

Key Findings of the study:

 <p>Demographic Analysis</p>	<ul style="list-style-type: none"> The population of Uttarakhand is relatively younger than that of India. The median age of population of Uttarakhand was 23 years in 2011-12, compared to the national average of 24 years. The State needs to invest in skill development immediately at multi-levels to reap benefits of the demographic dividend. The sex ratio in the state is 963 females per 1,000 male population which is higher than the national ratio of 933 females per 1,000 males.
 <p>Economic Analysis</p>	<ul style="list-style-type: none"> The real GSDP of Uttarakhand grew at an average annual rate of 7.7%, from INR 1.15 trillion in 2011-12 to INR 1.93 trillion in 2018-19. Even though the GSDP growth rate depends upon several factors, it did show a substantial dip in FY 2019 -20 at 4.3%, largely due to the Covid-19 pandemic. <p>Agriculture Sector:</p> <ul style="list-style-type: none"> Agriculture and allied sector in the state grew at an average annual growth rate of 1% during the period 2011- 2018. Most of the growth in the sector has come from livestock. Livestock has grown at an average annual rate of 4.6% while the crops value added has contracted at an average annual rate of -1% As a result, the share of crops in agriculture sector has fallen from 57% to 50% and the share of livestock has increased from 22% to 28% between 2011 to 2018. <p>Industrial Sector</p> <ul style="list-style-type: none"> Industry sector contributes to more than half of Uttarakhand's economic growth. In 2017-18, of 7.8% of state's GVA growth, 4.7% growth was due to industry sector. Manufacturing account for 75% of industry sector, grew at an average annual rate of 7.4% in 2018-19. During the same period the construction sector, which account for 15% of the overall industrial sector, grew from INR 8.8 thousand crore to INR 14 thousand crores at an average annual rate of 6.9%. The average annual growth in the Industry sector of Uttarakhand is higher than the growth registered at national level (6.1%) but is lower than the growth in comparable state like – Himachal Pradesh (8.3%). <p>Services Sector</p> <ul style="list-style-type: none"> Uttarakhand's services sector has experienced rapid growth during the period of 2011-18. The sector grew at an average annual rate of 9.3%, compared to 8.3% growth at the national level. The share of services sector in the state's economy has increased from 34% to 38%. Tourism is the backbone of the sector and contributes immensely to economic growth alongside generating employment opportunities. Other major drivers of the sector include expansion of trade, hotels, homestays, and restaurants (expanding because of the tourism industry).
 <p>Labour Market Analysis</p>	<ul style="list-style-type: none"> As per the HDR 2017, unemployment rate in Uttarakhand increased from 6% in 2004-05 to 10.2% in 2011-12. The HDR 2017 Survey pegged the youth unemployment (15-29 age group) rate in Uttarakhand at 13.2% in 2017. Youth unemployment (15-29 age group) is higher in the plains (14.9%) vis-à-vis the hills (11.1%) and more in urban areas (17.4%) as compared to rural areas (10.8%).



Education & Skill Development

- 4.7% of the State's population (aged 15 years and above) have undergone vocational training of some kind; lesser than the national average of 5.4%.
- The current apprenticeship scheme generally favours public sector institutions, mainly due to their need for trainees in large numbers; however, such apprenticeships do not transition into employment prospects for the trainee, as the recruitment process at the public sector institutions constrain regularisation of the apprentices into full-time employees.
- Currently, training service providers are largely catering to entry-level mass jobs like Tailoring or Embroidery, BPO/ Call centre operations, etc. Majority of training courses offered at present are in the Apparel & Textile, Telecom and Electronics industries. There is requirement for skilled workers with higher competency levels, in the Engineering and Food Processing industries among others.

Findings from Primary Survey



Youth Profile and Aspirations

- Over 65% of the female respondents engaged in economic activities earned ₹15,000 per month or less indicating that they were either engaged in low skilled jobs or the employers were not willing to pay/ paying for their skills.
- There is a trend of increasing formalisation in jobs with increased education qualification, with 60% of the graduates employed in wage / salaried employment.
- Scarcity of local jobs was the major reason (about 39 percent cited) for being in the status of Not in Education Employment or Training (NEET).
- 94.3 percent of the NEET category respondents expressed their interest in working again and 86 percent were actively looking for job.
- The respondents expressed their interest largely (47.8 percent) for salaried employment in public sector while 18.5 percent expressed their interest of working in private sector. The key factors determining their career aspirations were job security (29.8 percent), good income (28.2 percent) and job location close to hometown (20.3 percent).
- About 65 percent respondents expected salaries more than INR 20,000 per month.
- 35 percent respondents were interested to study beyond their present level of education
- 41 percent respondents believed that they could achieve their career goals by continuing their education while only 30 percent felt it can be achieved by vocational/ skills training.
- Internet and online job platforms (30 percent) were the most frequently used sources to look for job opportunity.
- Lack of jobs in the vicinity of their residence, pressure related to getting married, lack of career guidance, are identified as major challenges in pursuing desired careers.
- Youth perceive relevant work experience, soft skills, and certified technical skills as key factors that determine employability and employment.
- Education and skill development was the priority sector to work among the respondents of Uttarakhand. Other priority sectors cited are security, agro-business, banking financial services & insurance, electronic & IT hardware, tourism & hospitality and healthcare services. Below figure demonstrates the percentage wise preference of sectors.
- 38.8 percent of the respondents were aware about the skill development training programmes conducted by Government.
- 14.4 percent respondents have undergone any type of training in the past. The respondents who had undergone formal training have taken it mostly from the private training service provider (30.8 percent) followed by Government ITI (17.9 percent), NGO led training (11.4 percent).
- 55.7 percent of respondents reported that they wanted job within their district and 29.3 percent wanted to do job anywhere within Uttarakhand.
- There is a requirement for strengthening the availability of labour market information and counselling services.
- The respondents reported that the reason for migration was unavailability of local opportunities. Key reasons for work related migration were unable to find



Employer & Other Key Stakeholder Perspective

employment in hometown (67.9 percent), got employment in different region (13.5 percent), business purpose (6.5 percent) and better working condition (3.3 percent).

Quantitative Survey

- Educational qualification for entry level jobs was reported to be low, as around 90 percent of the workforce employed were less than higher secondary or less school educated. Supervisor level jobs required both experience and higher educational qualification as around two-thirds of the workforce working as supervisors had Diploma and above level of education and training.
- 38 percent employers reported that the hiring was reduced by 10 percent due to COVID, while 28 percent reported that the hiring was reduced by more than 50 percent due to COVID.
- One out of every four employers stated medium to high level of adoption of new technology in the coming years.
- Lack of requisite core skills, candidates' disinterest and attitude are the major challenges faced by the employers in the recruitment and retention of workforce.
- Around 15 percent of the workforce was Highly Skilled on average, 31 percent was reported to be skilled, 25 percent reported to be semi-skilled while 29 percent was reported to be unskilled, on an average by the employers.
- 60 percent of the employers reported employing contractual workforce. On average, contractual employees constituted about a third of their total workforce (33 percent)
- Migrant workforce constituted about only 40 percent of the respondents' total workforce on an average
- Key sectors of employment were agriculture and allied, tourism, mining, manufacturing, construction, education, retail & wholesale trade and other service sectors.
- 32 percent employers responded that they were not willing to pay premium wages to the hires from the ITI/ polytechniques, while 22 percent were fine with paying them 1-5 percent more than the normal wage.
- 57 percent of the employers who reported difficulty in filling the vacancy said that the hard to fill vacancies are creating challenges in the organization.
- 55 percent of the total employers said that their existing workers had skill gap at entry level.
- 24 percent of the employers said that their supervisors have skill gaps.
- 50 percent of the employers said that they had in-house training facilities and 45 percent of their employees were NSQF level 4 or above.
- Average Annual Attrition Rate of the workers was 12.5 percent. The employers mentioned that the main cause of attrition among the employees were better job opportunities, candidates' disinterest, low wages, household responsibilities like farming, childcare or elderly care and migrant nature of workforce. It was observed that COVID-19 was also one of the reason of people getting scared and leaving the job to stay safe with their families.
- 75 percent employers said that there was change in operation due to the pandemic outbreak. 53 percent said that they had to put recruitment on hold
- Though employers are investing in technological upgradation, there is very limited effort on full automation of production process.

Qualitative Inputs

- Employers of manufacturing industries observed that, the youth prefer service sector jobs in industries like Education and Healthcare, BFSI, and Tourism and Hospitality.
- As per the employers, key challenges in recruiting from vocational programs was the mismatch in skills acquired vis-à-vis industry requirement, and their lack of exposure to or experience in working environment due to absence of internships and apprenticeships under the vocational programs.
- MSMEs face tough competition from the larger industries to source apprentices, interns and workers and hence require support from the Govt. on ensuring enough availability of skilled / semi-skilled workers.

	<ul style="list-style-type: none"> • The youth also found the harsh working conditions and lack of amenities including sanitation and transport in many industries as a major deterrent to work in the manufacturing sector. • English Communication was a major challenge among workers in the services sector. Soft skills, interpersonal skills, teamwork, and attitude are other major challenges across all sectors. • Training service providers, District officials, and industries highlighted dearth of good quality trainers for both soft skills and job-specific technical skills. The centralised model of ‘Sector Skill Councils’ being responsible for training and certifying trainers and assessors made it hard for the stakeholders to access good quality trainers and assessors. • Though industries are willing to collaborate with the Govt. for skill development and vocational initiatives, simplification of processes was urgently required in apprenticeship and short-term skill development programs. 																																																			
<div data-bbox="218 972 314 1046"> </div> <div data-bbox="186 1059 368 1126"> <p>Incremental Demand</p> </div>	<ul style="list-style-type: none"> • As per an estimate, nearly 1.7 lakhs of additional skilled and semi-skilled workforce would be in demand over the next 5 years. • Key sub-sectors driving the demand are Manufacturing, Education, Healthcare, Construction, BFSI, Tourism & Hospitality, Retail & Wholesale Trade, Logistics, Agriculture & allied sectors, Real Estate & Professional Services, Communication/ IT & ITES and others. • The industry wise incremental demand for skilled and semi-skilled workers (between 2021 and 2026) is given below: 																																																			
	<div data-bbox="572 922 1292 954"> <p>Estimated Incremental Demand Uttarakhand (2022-2026)</p> </div>																																																			
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1. Introduction

1.1. Background

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is one of the prestigious schemes of Ministry of Rural Development (MoRD). The scheme is tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth. With presence in 28 States and UTs, across 689 districts, impacting youth from over 7,426 blocks⁵, DDU-GKY is focused on rural youth between the ages of 15 and 35 years from poor families. The scheme mandates to conduct a in depth skill gap study in order to analyse the market demand and align the training courses as per the market demand.

In Uttarakhand, 70 percent of the population resides in rural areas and for hilly areas 90 percent of the people resides in rural areas. As per HDR 2017 of the state, the labour force participation rate was 53 percent and unemployment rate were 4.2 percent. Among those who were working, 56.9 percent are self-employed, 24.2 percent are regular employed, and 18.9 percent are casual workers⁶. Given the distinct geographical location of the state, fragmented nature of employers and the diverse socio-economic background of youth, development of the skills and training sector in terms of access, quality and relevance is one of the key priorities of the Government of Uttarakhand. Developing the skills and capabilities of the youth and empowering them by imparting market relevant training, will act as a catalyst to the accelerated growth and development of the state.

1.2. Skill Development in Uttarakhand

Skill development in the state is gaining momentum given the changing dynamics of the demography and the upcoming demand of skills and jobs in the future. Now more than ever, governments, institutions, employers, and individuals are realizing that industry relevant skills and knowledge are of prime importance for both a sustainable livelihood and the development of the state. Lack of relevant skills and knowledge will result in greater consequences in the years to come, which may prove to be an uphill task for the state in generating adequate jobs. In light of the same, the Government of Uttarakhand (GoUK) is implementing various skill development initiatives for the youth. There are three types of skilling interventions available depending on the duration of these initiatives, namely-

- **Short-term training (STT):** These are the courses that range from 3-6 months of skill-oriented training
- **Medium-term training:** The duration of these courses ranges between 12-36 months
- **Technical Education / Long-term courses:** The duration of these courses range from 12-36 months and the training is typically provided through Industrial Training Institutes (ITIs), polytechnics, engineering colleges, university constituent engineering college and so on.

Short-term and medium-term trainings are usually imparted by the State Project Management Unit, Department of Rural Development, , along with various other state agencies across several sectors. The training programmes range for 3-6 months and comply with the National Skills Qualification Framework (NSQF). These training are implemented by a variety of institutions including Public and private sector industries and institutions.

With the aim of alleviate poverty by enabling poor households to access gainful employment opportunities, SPMU is implementing **the Deen Dayal Upadhyaya Grameen Kaushalya Yojana** (DDU-GKY) scheme in Uttarakhand and helping the rural youth in becoming economically independent by building desired skills and securing a job. In order to implement the scheme successfully, the state has enlisted dedicated Project Implementing Agencies (PIAs). These PIAs act as the bridge between the trainees and the employers and make sure that candidates benefit from these measures. The PIA's and training partners get hold of the right trainers, experts, sector knowledge, and infrastructure as well as plan and execute the projects to create an employable workforce.

⁵ <http://ddugky.gov.in/>

⁶ Uttarakhand HDR Report, 2018



**Under Training -
2,442**



**Trained -
2,584**



**Appointed -
1,577**



Placed - 997



**Sectors
Covered - 20**



**Job Roles -
78**

Deen Dayal Upadhyaya Grameen Kaushalya Yojana Scheme statistics

DDU-GKY is a placement lead initiative of the Ministry of Rural Development (MoRD) and occupies an area of major importance amongst other skill training programs owing to its focus on rural poor youth emphasizing on sustainable employment opportunities. It intends to transform poor rural Indian youth into future-ready and skilled manpower.

The state has a number of training centres spread across districts that provide training to candidates in different job roles, under different sectors. These centers are armed with state-of-the-art infrastructure, practical training labs, classrooms, IT facilities, and experienced trainers. Larger importance is given to quality and all-round training, which lays the foundation for life-long learning, and secures employment opportunities for youth in order to provide them a sustainable livelihood. On completion of the enrolled courses, the trainees are employed in a variety of sectors like apparel and garments, automobile and auto components, banking, insurance and other financial services, healthcare services, retail, security, tourism, and hospitality etc. Often trainees also grab placements in top brands both nationally as well as internationally⁷.

The technical education in the state is provided through Industrial Training Institutes (ITIs), polytechnics, engineering colleges, MBA colleges, pharmacy colleges, HM&CT institutes, university constituent engineering college as well as IIT, Roorkee. The mode of operation of these institutes are either government, government-aided or even private⁸. A variety of courses are offered in the institutes like engineering (agricultural, automobile, chemical, civil, computer science, electrical, electronics, mechanical), fashion designing, garment technology, IT, interior designing, mining, PGDCA, pharmacy and others⁹.

Under the Uttarakhand Skill Development Mission provides free skill training to youth. In the year 2016-17, the mission successfully skilled 10,000 youth while currently more than 12,000 are undergoing different types of skill training under different sectors and wings of this programme.

1.3. Requirement for the study

The working age population in Uttarakhand is growing, with working age population constituting nearly two-third of the total population in 2018¹⁰. Increasing working age population should translate to higher economic growth as more people will enter the labour market and will be available for production of goods and services. However, the level of economic growth will depend on how the state enhances the productive capacity of its youth today. A demographic transition continues to present growth opportunities for the state by creating a demographic dividend. This favorable demographic dividend can only be leveraged, if focus is on strengthening and enhancing the skills and capabilities of the labour force, while addressing their career aspirations and designing appropriate interventions to enable active collaboration between various stakeholders for the common good. In this context, it is imperative that the skill development programmes in the state are demand driven and aligned to aspiration of youth. To ensure that the skill development is designed considering the market demand and in alignment with youth aspiration, a holistic skill gap study covering a wide range of stakeholders including youth, employers, government, and other policymakers, was required.

Further, the COVID-19 pandemic has changed the employment landscape. Thousands of migrant workers have returned to their hometowns and are uncertain about their return to work. The nature of work is changing which is in turn demanding new skills and knowledge to be developed. Given this background, it is very important to conduct a holistic study that brings to light the areas like the future of work, workforce post pandemic and so on. This study will therefore, touch upon areas like-the skills required in the future, workforce post pandemic, the innovating the current skill ecosystem and building on the creative and intellectual potential of the youth in the state.

⁷ https://ukrdd.uk.gov.in/?page_id=4377

⁸ <https://www.ukdte.in/AboutUs.aspx>

⁹ <https://www.ukdte.in/CourseList.aspx>

¹⁰ Times of India article Nearly 2/3rds of Indians are of working age, between 15 and 59 on 4th July 2020

1.4. Objectives and Scope of work

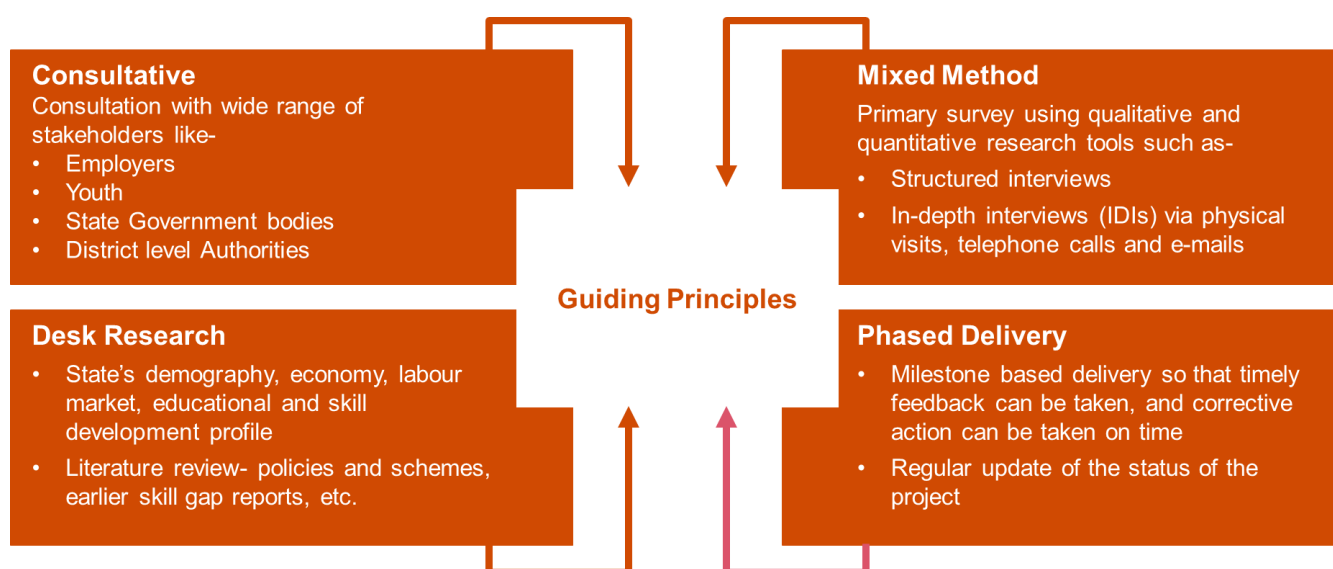
The overall objective of the study was to carry out a skill gap assessment by capturing voice of industry and assessing aspiration of youth in the state. This study would lay the foundation for developing the strategy and action plan in order to address key human resource challenges and create potential employment opportunities. The study covered all the 13 districts of the state and had following scope:

- Understand Socio-economic and demographic profiling of the state
- Capture the viewpoint of all the stakeholders in the skill ecosystem of the state
- Assess aspiration of youth
- Understand employer's perspective and the industry demand
- Identify the gaps in skills requirement in different sectors and job roles
- Identify the priority sectors pertaining to wage employment and self-employment
- Identify the current and future (next 5 years) requirement of manpower by the industry and estimate the gap that exists
- Provide suggestions and recommendations to address the skill gaps

1.5. Study approach & methodology

The study was guided by four key principles as highlighted in the illustrative below.

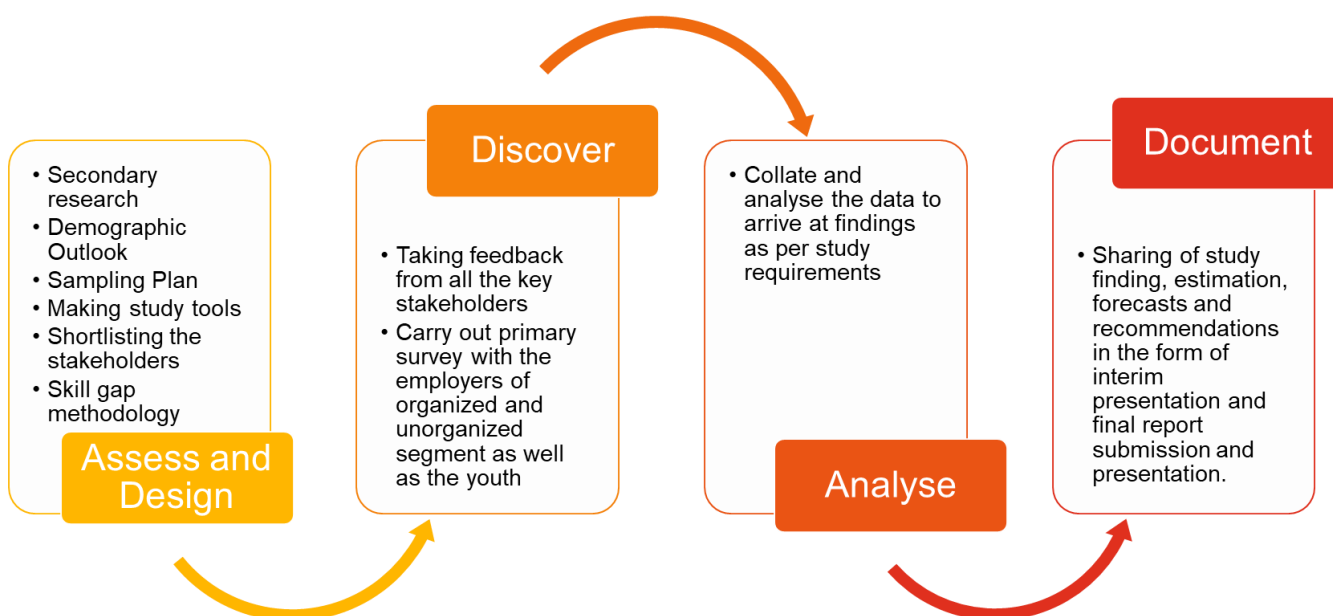
Figure 1 Project approach guiding principles



The study was executed in four stages: 1) Assess & design; 2) discover; 3) analyze; and 4) Document . The first stage of the study included extensive secondary research on demographic and migration shift, economic outlook, labour market trends, and other parameters shaping skill requirement in the state, identification of key stakeholders, finalization of a robust skill gap methodology, development and piloting of survey instruments, and finalization of the survey instruments post receiving feedback from the pilot and other stakeholders.

In the second stage, we conducted training session for enumerators, explained them the objectives of the study, and oriented them on how to conduct the survey. In addition to data collection through the enumerators, the study team members carried out interviews with high level stakeholders such as government officials and industry associations etc. We covered employers from service and manufacturing sector across all the 13 districts of Uttarakhand. We connected with the stakeholders through telephonic interview, online survey tools, physical interviews, e-mails, etc.

Figure 2 Stages of project delivery



In the third phase, we have analyzed the survey findings, the skill gap, and the incremental manpower demand in next 5 years (up to 2026). In the fourth phase, we shared the study finding, estimation and forecast. Based on the input and feedback we have submitted the final report.

1.5.1. Secondary Data Analysis

The main objective of the secondary analysis from the demand side perspective was to gain thorough understanding of critical factors such as economic development, industrial growth, labour market trends, migration pattern, skilling landscape and education system. Having in-depth understanding of these aspects are pre-requisite for assessing skill demand. We attempted to understand these critical factors at both State and district level.

To understand economic outlook of different sectors in the state, we studied the market size of the sector along with its sub-sector, its contribution to the GDP and export, and investment trends in the sector. We also assessed how mega trends such as increasing population, growing income, and rapid urbanization will impact the demand in different sector and how this demand will generate jobs and what kinds of skill sets will be required.

We studied the labour market trends in the sector using Annual Survey of Industry (ASI), Periodic Labour Force Survey (PLFS) and MSME databases. The labour market analysis was aimed to understand employment share across the sub-sectors and growth in the employment over the period. Using economic and labour market indicators, we also established employment elasticity in the sector, which helped us to understand if the sector is labour intensive or capital intensive.

Table 1 Secondary data sources

Sl. No	Database/data source	Areas of analysis
1.	Census of India	Demographic profile, Migration pattern
2.	Socioeconomic Caste Census	Socio-economic profile of rural population
3.	Various round of National Sample Survey (NSS)	Labour market profile
4.	Various round of Employment and Unemployment Survey conducted by Ministry of Labour & Employment, India	Labour market profile
5.	United-District Information System for Education (U-DISE)	Education profile
6.	Annual Status of Education Report (ASER)	Education profile

Sl. No	Database/data source	Areas of analysis
7.	All India Survey on Higher Education	Education profile
8.	Reserve Bank of India- Database on Indian Economy	Economic profile
9.	Ministry of Micro, Small & Medium Enterprise, Government of India	Industry mapping/MSME profiling
10.	Indian Council for Research on International Economic Relations (ICRIER)	Industry mapping/Organised Retail Industry
11.	Annual Survey of Industry (ASI)	Demand side study
12.	NASSCOM	IT & ITES sector analysis
13.	Special Economic Zones in India	Industry mapping

1.5.2. Primary Survey

Table 2 Sample size covered

S. No.	Stakeholder Name	Sample
1	Employers	500
2	Youth	6,582

Employer survey: We conducted a quantitative survey covering 460 employers in the state with adequate representation from Large, Medium, Small and Micro Industries across the key sectors and industries defining the district economy. We have also covered 40 employers from the rest of India majorly Delhi NCR, Bangalore, Madhya Pradesh, where the candidates from Uttarakhand are generally employed.

Classification of the employers as per MSME guidelines¹¹ -

- **Micro Enterprises-** Investment in Plant and Machinery or Equipment Not more than Rs.1 crore and Annual Turnover not more than Rs. 5 crores
- **Small Enterprises-** Investment in Plant and Machinery or Equipment Not more than Rs.10 crores and Annual Turnover not more than Rs. 50 crores
- **Medium Enterprises-** Investment in Plant and Machinery or Equipment Not more than Rs.50 crores and Annual Turnover not more than Rs. 250 crores
- **Large Enterprises-** The enterprises which are not falling under micro, small and medium category

Youth aspiration survey: Youth Aspiration Survey was conducted by Directorate of Economics and Statistics, Government of Uttarakhand. The department conducted a quantitative survey covering 6,582 youth across the following groups – persons engaged in economic activity (self-employed, wage-employed, entrepreneurs), students in formal education, vocational and skill training institutions (Polytechnics, ITI), and those who fall under the Not in Education, Employment or Training (NEET) category.

Youth of age group 15-34 years at the household level from each of the 13 districts (except for Haridwar¹²) in the state was surveyed. The sample had 80% representation from rural areas while 20% from urban areas. The Primary Sample Units (PSUs) for the survey was village in the rural areas and wards in the urban areas. From each district, 23 villages (including 7 migration intensive villages) and 4 wards was covered to distribute the sample. The villages and wards from each district were identified using Probability Proportion to Size (PPS). From the selected household, one youth (male or female aged 15-34 years) was interviewed. The female sample did not include the respondents who identify themselves as housewives, unable to work and are dependent. Computer Assisted Personal Interview (CAPI) methodology was used for the data collection.

Other stakeholder consultations across a wide group of stakeholders including, representatives from Industrial units (with additional focus on MSME sector), district-level Industry Associations across priority sectors, officials from various government departments, representatives from various higher education institutions, and training service providers.

¹¹ <https://msme.gov.in/know-about-msme>

¹² All districts except Haridwar consist 7 migration intensive villages. Haridwar doesn't have any migration intensive villages. Haridwar will have 20 Primary Sample Units including 16 villages and 4 wards.

2. Socio-Economic and Demographic Context of the State

2.1. Overview

Uttarakhand was carved out of northern Uttar Pradesh on the 9th of November 2000 as the 27th state of India. The state is also known as the 'Dev Bhoomi' owing to the presence of the char-dham, or the four sacred and revered Hindu temples of Badrinath, Kedarnath, Gangotri and Yamunotri, that attract large number of tourists from all over the country¹³. Further, the State has a unique and beautiful landscape with a rich cultural heritage. Located at the foothills of Himalayan mountain ranges, the state shares international borders with China (Tibet) in the north and Nepal in the east. On the north-west lies Himachal Pradesh while the southern frontier is bordered by Uttar Pradesh. The state abounds in natural resources especially water and forests along with the presence of glaciers, rivers, dense forests, and snow-clad mountain peaks. It is blessed with rare biodiversity and is the home to 175 rare species of aromatic and medicinal plants. The state enjoys nearly all major climatic zones and is drained by various rivers of Ganges river system, thereby facilitating commercial opportunities in horticulture, floriculture, and agriculture. In addition to this, the state also has a vast potential in the tourism and hospitality sector owing to its picturesque landscapes and being a pilgrimage hub.

State's industrial landscape is characterized by a relatively large number of small-scale enterprises and handicraft units, followed by medium scale industries. There are a total of 54,047 handicraft units in the state¹⁴. It has around 25,294 small scale industries providing employment to 63,599 people in the state, 1,802 heavy and medium industries employing 5 lakh people. Heavy industries are present predominantly in the plain districts of Uttarakhand. The state holds rich reserves of limestone, marble, rock phosphate, dolomite, magnesite, copper, gypsum, etc.

Table 3 Districts – Kumaon and Garhwal Division

Kumaon Division	Garhwal Division
Almora	Dehradun
Bageshwar	Haridwar
Champawat	Tehri Garhwal
Nainital	Uttarkashi
Pithoragarh	Chamoli
Udham Singh Nagar	Pauri Garhwal
-	Rudraprayag

The 13 districts in the state are grouped into two divisions - Kumaon division and Garhwal division. The Kumaon division spreads across an area of 21,035 sq. kms. and inhabits 42.3 lakh people whereas the Garhwal division spreads across an area of 32,450 sq. kms. and is the home to 58.6 lakh people¹⁵. The Kumaon division includes six districts whereas the Garhwal division includes seven. The state languages include Hindi, Garhwali, Kumaoni and English¹⁶. Out of these 13 districts, 3 districts are plain districts while the other

10 are the hill districts. The state can be geographically divided into the following zones.

- **Upper Hills** - Uttarkashi, Chamoli, Rudraprayag, Pithoragarh and Bageshwar.
- **Middle Hills** - Tehri-Garhwal, Garhwal, Almora, and Champawat, the hill regions of Nainital and Chakrata tehsil of Dehradun.

Figure 3 Uttarakhand at a Glance



¹³ <https://uk.gov.in/pages/display/115-state-profile>

¹⁴ <https://uk.gov.in/pages/display/115-state-profile>

¹⁵ http://du.ac.in/du/uploads/Academics/centres_institutes/Agricultural_Eco/22.2015%20AGRI.Profile%20UK-Usha%20Tuteja,%202015.pdf

¹⁶ <https://www.ibef.org/states/Uttarakhand.aspx>

2.2. Demography

The population of Uttarakhand is relatively younger than that of India. The median age of population of Uttarakhand was 23 years in 2011-12, compared to the national average of 24 years. According to the Census of India 2011, the population of Uttarakhand is approximately 1.01 crores. The state is the home to around 0.8 percent¹⁷ of the total population of the country and is the 20th most populous state in India. The districts in the plain region of Uttarakhand – Dehradun, Haridwar, Udham Singh Nagar and Nainital – are home to 61 percent of state's population. Haridwar (18.7 percent) houses the largest share of Uttarakhand's population, followed by Dehradun (16.8 percent), Udham Singh Nagar (16.3 percent) and Nainital (9.5 percent). The districts in the hill region of Uttarakhand – Garhwal, Almora, Tehri Garhwal, Pithoragarh, Chamoli, Uttarkashi, Bageshwar, Champawat and Rudrapurayag – are home to 39 percent of state's population, with Garhwal accounting highest 6.8% and Rudrapurayag accounting lowest 2.4 percent.

The plain and hill region of Uttarakhand differ in terms of level of urbanization. About 42 percent of the population in plain region resides in urban areas whereas only 12 percent of the population in hill region resides in urban areas. Overall, 30 percent of Uttarakhand's population resides in urban areas. Dehradun is the most urbanized district of Uttarakhand with 56% of its population residing in urban areas, followed by Nainital (39 percent), Haridwar (37 percent) and Udham Singh Nagar (36 percent). Among districts of hill region, Garhwal has the highest 16 percent of its population in urban areas whereas Bageshwar has the lowest 3 percent of its population in urban areas.

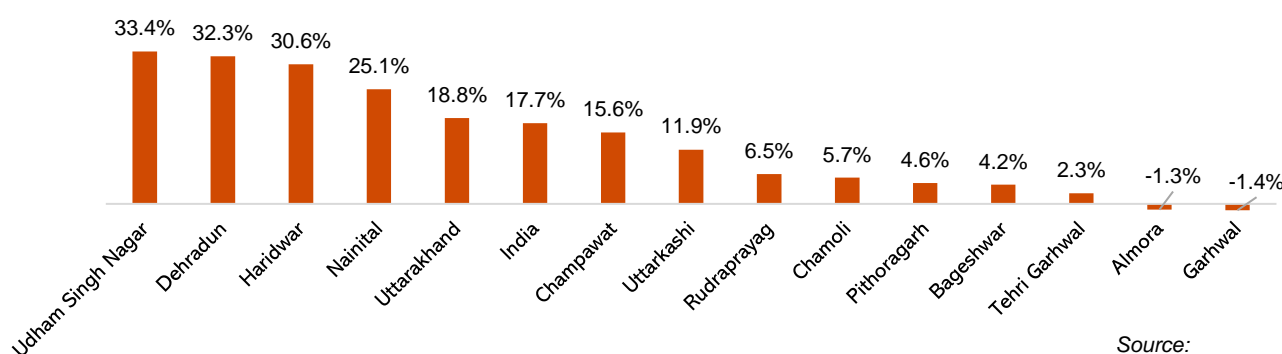
Table 4 Key Demographic Indicators– Uttarakhand vs India

SN	Indicator	Uttarakhand	India
1	Total population	10,116,752	1,210,193,422
2	Population density per sq.km	189	382
3	Population sex ratio	963	933
4	SC population (as % of total population)	15.2	16.6
5	ST population (as % of total population)	2.6	8.6
6	Literacy rate	79.6%	74 %
7	Rural population (as % of total population)	69.8	68.8
8	Decadal growth rate	19.2%	17.6%
9	% population is in the working age group (15-59 years)	61%	61%

Source: Uttarakhand at a glance 2018-19 & Census 2011

Population growth in Uttarakhand has been higher than the national average. During the period of 2001 and 2011, the population of Uttarakhand grew at the decadal growth rate of 18.8 percent while the population of India grew at the decadal growth rate of 17.7 percent. The decadal growth of population was highest in Udham Singh Nagar followed by Dehradun, Haridwar and Nainital. The population growth in the hill region of Uttarakhand was lower than the state and national average with districts like Almora and Garhwal experiencing negative growth of -1.3% and -1.4%, respectively. Champawat (15.6%) and Uttarkashi (11.9%) were the only two districts in hill region that registered double digit decadal growth. One of the primary reasons behind high population growth in plain districts of Uttarakhand is large scale inter district and interstate migration into these districts.

Figure 4 Decadal Growth Rate



Source:
Census 2011

The working age population (15-59 Years), which accounted for 60% of the state's population in 2011-12, is projected to increase up to 65% in 2026-27. Increasing working age population should translate to higher

¹⁷ https://censusindia.gov.in/2011-prov-results/data_files/india/Final_PPT_2011_chapter3.pdf

economic growth as more people will be available for production of goods and services. However, the level of economic growth will depend on how the state enhances the productive capacity of its youth today.

Figure 6 Population Pyramid- 2011-12

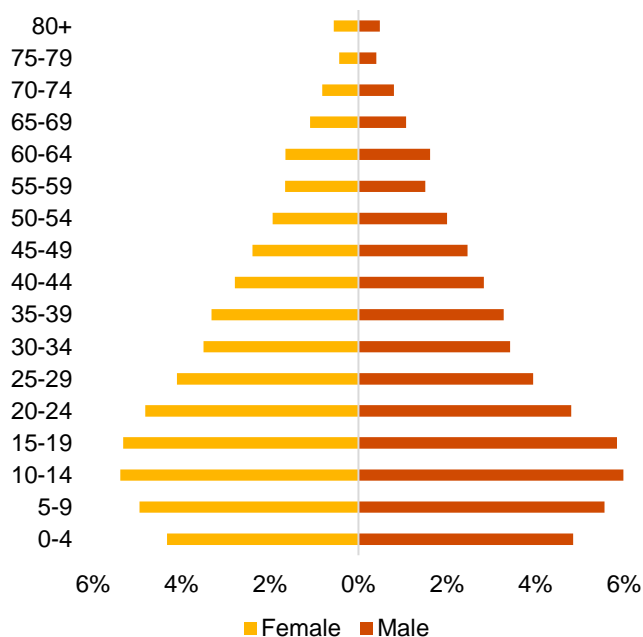
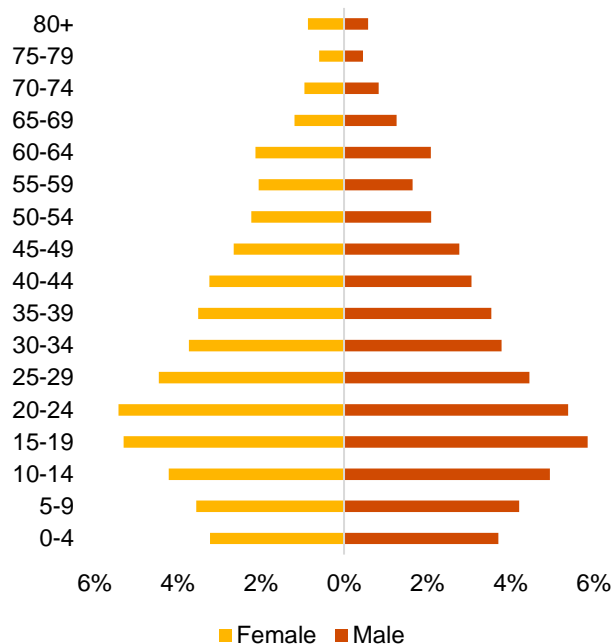


Figure 5 Population Pyramid- 2026-27



2.3. Key Highlights from the analysis of Census Data¹⁸

Literacy: The literacy rate of the state stands at 79.6% which is above the national average of 74%. A gap of around 18% is noticeable in the male and female literacy rates (Male - 88.3% & Female - 70.7%). However, the overall averages in the state have increased since 2001. In 2001, the male and female literacy rates were recorded as 81% and 63.4% respectively¹⁹. Although the gap between the male and female literacy rates over the two decades have remained almost the same, there has been an overall increase in the literacy levels of the state.

Sex Ratio: The sex ratio in the state 963 females per 1,000 male population is higher than the national numbers of 933 females per 1,000 males. The population seem to be fairly split among both the genders in the state. At least 6 districts in the state namely Almora, Bageshwar, Chamoli, Garhwal, Pithoragarh and Rudrapur have a positive sex ratio²⁰.

2.4. Migration

Migration from rural to urban areas in Uttarakhand is a major challenge. A comparison between 2001 and 2011 census data showing a slow decadal growth of population in most of the mountain districts of the state. In the last 10 years, a total of 3,83,726 persons in 6,338 gram panchayats have migrated on a semi - permanent basis, though they come to their homes in the villages from time to time and have not migrated permanently.

An absolute decline of 17868 persons in the population of Almora and Pauri Garhwal districts between 2001 and 2011 points towards an out flux of people from many hill regions of the state. The decadal growth of various districts has slowed down between 1981 and 2011, with the figure being negative in the districts of Pauri and

¹⁸ Note: Urbanization data (2011) in figure 4 taken from https://mpr.ub.uni-muenchen.de/88772/1/MPRA_paper_88772.pdf

¹⁹ https://www.ukhfw.org/details.php?pgID=mi_15

²⁰ https://www.ukhfw.org/details.php?pgID=mi_15

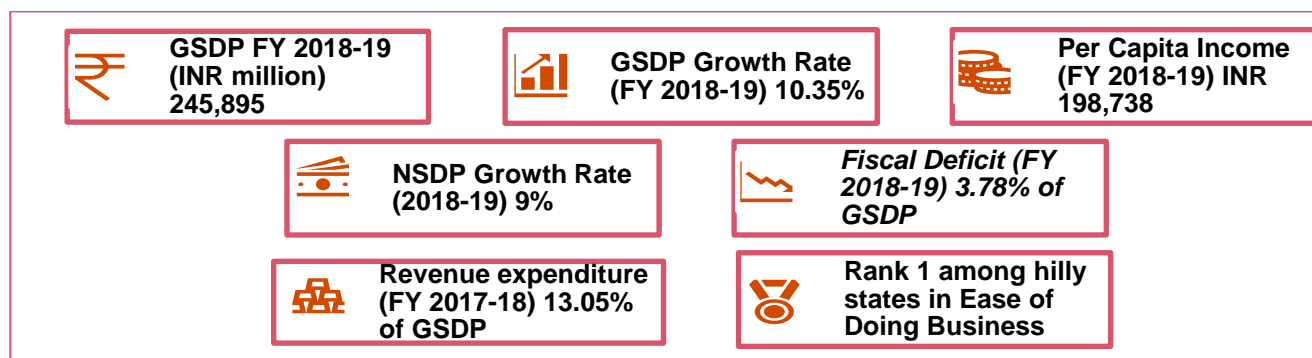
Almora and relatively very low in Tehri district. Out-migration in Uttarakhand has become an issue of prime importance and proactive steps are required to curb migration in the region²¹.

2.5. Economy

Uttarakhand has been growing consistently. Over the years the state has grown from strength to strength by successfully navigating through the socioeconomic as well as environmental challenges. This consistent growth can be attributed to improved utilization of the existing resources, capacities, and successfully attracting investments in key areas and sectors along with the massive growth in capital investment arising from conducive industrial policy and generous tax benefits²².

However, the sectoral composition of the economy indicates that the secondary and tertiary sectors have brought about most of this growth in the economy of the state, whereas the share of primary sector in the GDP has contracted. This is perceived as an area of concern given the fact that 70% of rural population of the state is engaged in agriculture and allied activities as a key source of their livelihood²³. The major reason behind this can be attributed to fragmented and small land holdings, lack of forward linkages and access to all weather roads. However, the state intends to address these challenges and shortcomings with explicit interventions, based on region specific challenges, while addressing the structural constraints²⁴.

Figure 7 Economic Snapshot of Uttarakhand



Source: Economic Survey of Uttarakhand

The real GSDP of Uttarakhand grew at an average annual rate of 7.7%, from INR 1.15 trillion in 2011-12 to INR 1.93 trillion in 2018-19. During the same period India's real GDP grew at an average annual rate of 6.9%. The growth in Uttarakhand's GSDP, for the most part, has come from Industry and services sector. The industry sector contributes 54% of Uttarakhand's Gross Value Added (GVA) and has grown an average annual rate of 7.4% during the period 2011-18. The services sector has grown an average annual rate of 9.3% while it's share has grown from 34% of state's GVA in 2011-12 to 38% in 2018-19.

²¹ Uttarakhand Migration Commission Report 2020

²² <https://www.ibef.org/download/Uttarakhand-June-2020.pdf>

²³ Economic Survey of Uttarakhand 2018-19

²⁴ Economic Survey of Uttarakhand 2018-19

Figure 8 Annual GDP growth- 2012-18 (DES)

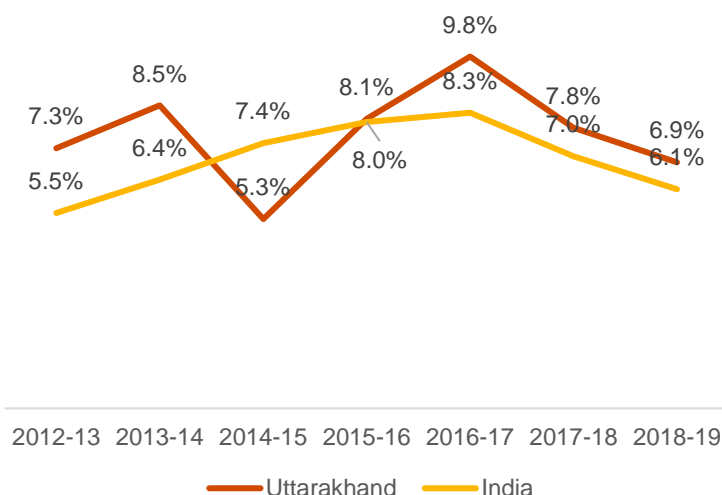
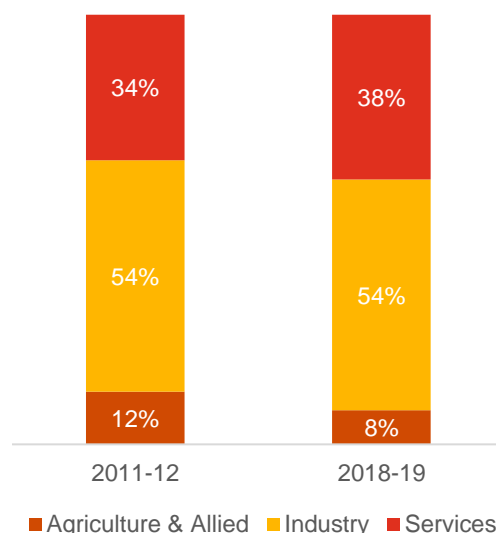


Figure 9 Sectoral Share of Gross Value Added



2.6. Key Highlights from the macroeconomic aggregates²⁵

The sectoral composition of GSDP in the state's economy is dominated by the secondary sector which contributed 48.9% of the state GDP. The tertiary sector in the state has been growing rapidly, resulting in increasing share of tertiary sector and marginal decline in share of secondary sector in the state economy. The state tertiary sector has contributed 40.5% of GDP in FY 2018-19. The primary sector in the state is facing a major competition from the secondary and the tertiary sector. The tertiary sector has contributed 40.5% of GDP in FY 2018-19 while the primary sector's contribution to the GSDP was 10.6%. Provisional estimates for FY 2018-19, at current prices, reveal that tertiary sector grew at the rate of 12.5% followed by the secondary sector at 6.9%, while the primary sector was lagging behind with growth rate at 6.9%.

The GSDP growth rate for FY 2018-19 was 10.4% showing a GSDP growth rate of 6.9% over the previous year. Even though the GSDP growth rate depends upon several factors, it is likely to show a substantial dip in 2019-20 and the coming year 2020-2021 due to the covid-19 pandemic.

The District Domestic Product (DDP) indicates that the plain districts in the state are better off as compared to the hilly districts in terms of size of the economy, rate of growth as well as the per capita income. According to the provisional estimates, Dehradun was the fastest growing district in FY 2016-17 recording a growth rate of 7.6% while the district with the lowest growth rate was Champawat at 5.8%. In terms of size of the economy for FY 2016-17, Haridwar district was the largest with a size of INR 5,816,824 lakhs and Rudrapur district was the smallest with a size of INR 251,040 lakhs. Haridwar district registered the highest per capita income at INR 254,050, while Rudrapur district was at the bottom with a per capita income of INR 83,521 for FY 2016-17.

The reason behind these variations are the infrastructural facilities provided by the plain districts of the state. Plain districts have a large Industrial base along with IT parks and several eminent educational institutions. These districts also offer better connectivity facilities than the hill districts. Such factors have not only helped to boost the economic growth in the plains but also acted as the pull factor for migration from the hills to plain districts of the state. Nevertheless, the government is trying to address such concerns through implementation of programmes that promote income of people in hill districts as well as through employment generation by developing tourism, horticulture, and micro, small & medium industries²⁶.

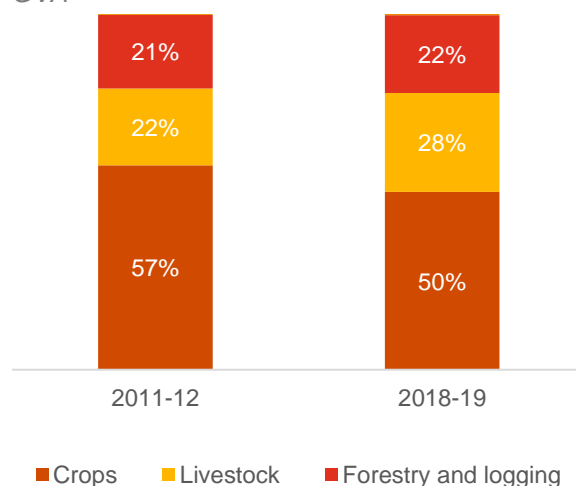
²⁵ Economic Survey of Uttarakhand 2019-20

²⁶ Economic Survey of Uttarakhand 2018-19

2.7. Agri and Allied Sector

The hill districts of Uttarakhand are heavily dependent on agriculture sector for income whereas, among the plain districts, except for Nainital, the dependence on agriculture sector for income is quite low. In the hill districts the share of agriculture and allied sector in the district's GVA is as high as 20% in Uttarkashi and as low as 12% in Garhwal. Among the districts in the plain region, except for Nainital that has 17.2% of its GVA coming from agriculture and allied sector, the share of agriculture in the district's GVA is less than 10%. Despite agriculture being one of the major sectors among the hilly districts, their contribution to the state's agriculture Gross Value Added (GVA) is low. The plain districts of Uttarakhand – Udham Singh Nagar, Haridwar, Nainital and Dehradun – together contributed 56.4% of the total agriculture GVA of the state, in 2016-17. Udham Singh Nagar contributed the highest 18.1% of state's agriculture GVA followed by Haridwar (15.4%), Nainital (14.2%) and Dehradun (8.7%). The hill districts contributed to 44% of state's agriculture value added. Among the hill districts, Almora contributed the largest 7.7% while Rudrapur contributed the lowest 2.3%. The plain and hill districts of Uttarakhand vary significantly in terms of agriculture productivity. The agriculture productivity in the hill districts is low due to small and fragmented land holdings in the hilly region. Nainital has highest agriculture productivity followed by Udham Singh Nagar, Dehradun and Haridwar.

Figure 10 Sub-sectoral share of Agriculture & Allied GVA



Agriculture GVA in the state has grown at an average annual rate of 1% from INR 13.3 thousand crore to INR 14.1 thousand crore, during the period 2011-18. Most of the growth in the sector has come from livestock. Livestock value added has grown at an average annual rate of 4.6% while the crops value added has contracted at an average annual rate of -1% from INR 7.6 thousand crore to about INR 7 thousand crores. As a result, the share of crops in agriculture GVA has fallen from 57% to 50% and the share of livestock value added has increased from 22% to 28%. Forestry and logging contribute to 22% of the agriculture GVA.

Table 5 Agriculture & Allied Sector GVA and Growth (Value in Rs. Crore)

	Uttarakhand		
	2011-12	2018-19	CAGR
Crops	7,640	7,063	-1.1%
Livestock	2,878	3,934	4.6%
Forestry and logging	2,748	3,086	1.7%
Fishing and aquaculture	36	44	3.0%
Total	13,302	14,127	0.9%

Horticulture (including aromatic and medicinal plantation) is one of the key sectors that can augment farmers income in hill districts of Uttarakhand. Uttarakhand's Vision document 2030 proposes transforming agriculture sector in order to reduce migration from hill districts. The document proposes to increase productivity in agriculture sector by focusing on horticulture and animal husbandry.

However, the growth in horticulture crops production has not been satisfactory. The production of horticulture crops in the state has fallen from 1,909 Thousand Metric Tonnes (MT) in 2011-12 to 1,717 Thousand MT in 2017-18 at average annual rate of -1.8%. In comparison the production of horticulture crops in India has grown at an annual rate of 3.3% during the same period. The production of fruits has contracted at annual rate of -3% from 802 Thousand MT to 670 Thousand MT compared to 4% growth at the national level. Similarly, production of vegetables has also contracted from 1,067 Thousand MT to 989 Thousand MT at an annual rate of -1.2% compared to the growth at national level of 2.8%.

2.8. Industry Sector

Industry sector contributes to more than half of Uttarakhand's economic growth. In 2017-18, of 7.8% of state's GVA growth, 4.7% growth was due to industry sector and in 2016-17, of 9.1% GVA growth, 5.4% growth was due to industry sector. Manufacturing, which account for 75% of industry sector, grew at an average annual rate of 7.4% from INR 43.6 thousand crore in 2011-12 to INR 71.9 thousand crores in 2018-19. During the same period the construction sector, which account for 15% of industry sector, grew from INR 8.8 thousand crore to INR 14 thousand crores at an average annual rate of 6.9%. The average annual growth of Industry sector of Uttarakhand is higher than the growth registered at national level (6.1%) but is lower than the growth in comparable state like – Himachal Pradesh (8.3%).

Table 6 Industry Sector GVA and Growth (Value in Rs. Crore)

	Uttarakhand			India		
	2011-12	2018-19	CAGR	2011-12	2018-19	CAGR
Mining & quarrying	1.9	3.3	8.6%	261	345	4.1%
Manufacturing	43.7	71.9	7.4%	1,410	2,317	7.4%
Utilities	4.0	6.6	7.5%	187	297	6.8%
Construction	8.8	14.1	6.9%	777	1,020	4.0%
Industry	58.3	95.9	7.4%	2635.0	3978.6	6.1%

Manufacturing in Uttarakhand is predominantly concentrated in three districts namely Haridwar, Udham Singh Nagar and Dehradun, with Haridwar being the manufacturing hub of Uttarakhand. Of the total manufacturing value added in the state in 2016-17, Haridwar contributed about 45%. After Haridwar, Udham Singh Nagar contributed the second largest share of 28% followed by Dehradun (12.9%) and Nainital (3.2%). The plain region together generated 89% of manufacturing value added in the state.

The MSME sector in Uttarakhand has grown tremendously in the state and plays an important role in the economy of the state by not only contributing to the employment and output but also generating inclusive growth. In the initial stages, the state had 14,163 MSMEs, with a total investment of INR 700 crore and provided employment to 38,509 people. However, two decades later, the state has 53,000 MSME units, with a capital investment of INR 10,960 crore, providing employment to 258,000 people. It is the second-largest employment generator in the state after agriculture. Nevertheless, by 2030 the state aims to establish 170,000 MSME units, with a capital investment of 36,000 crore and providing employment opportunities to 850,000 people.

The state has been making continuous efforts to push the sector from time to time and has also come up with a number of policy interventions ranging from provision of incubation to supply chain support for rural enterprises, from skill development through vocational training to improving marketing facilities and various others. While these policies have been doing their part to address the bottlenecks that plague the MSME sector, a lot more attention in terms of the policy are needed to help the sector climb up the ladder from its current scenario.

The thrust sectors activities have been identified under the Special Industrial Package. Along with these activities, poultry farming and tourism activities, are the other category have also been granted the status of the industry by the state. Various schemes and programmes for handloom and handicraft development are being implemented through Uttarakhand Handloom and Handicraft Development Council (UHHDC). These products are marketed under the brand name "Himadri". Various schemes of DC(Handlooms) and DC (Handicrafts) is also being implemented under the Integrated Development and Promotion of Handicraft (IDPH). The major activities of the MSMEs in various districts are explained in table 8²⁷.

Table 7 Major activities of the MSMEs in various districts

District	Major activities of MSMEs
Almora	Fruit Processing, Hotel & Resort, Auto Repairing Service, Tiles Manufacturing, Printing Press, Handmade Paper Manufacturing, Poultry & Hatchery, Auto Repairing Service, etc.

²⁷ Economic Survey of Uttarakhand 2019-20

District	Major activities of MSMEs
Chamoli	Hotel & Resort, Stone Crusher, Fruit Processing, Bakery Industry etc.
Tehri Garhwal	Milk Products, Packaging of Drinking Water, Hotel and Restaurant, Cardboard, Printing Press, Industrial Gas, Nitrogen Gas, Copper Wires, Steel fabrication, etc.
Uttarkashi	Resort, Stone Crusher, Hot Mix Plant, Packaging of Drinking Water, Hotel and Resort, Fruit and Vegetable processing, Printing Press, Woolen Shawl, ITES, Ayurvedic Medicines
Rudraprayag	Food Product, Milk Products, Bakery Products, Hotel, Stone Crusher, Auto Mobile Repairing, Tailoring, Fruit Processing etc.
Champawat	Hotel and Restaurant, Readymade Garments, Rice and Paddy Husk, Fruit Juice, Poultry and Hatchery, Plastic Chair, Readymade Garments etc.
Pauri Garhwal	Pet Bottle, Fabrication Works, Hotel & Resort, Furniture, Paper Plate, Handicraft, Printing Job Work, Ayurvedic Medicine, Pharma Products, Milk & Milk Products, Electrical Panels, Aluminum & Copper Wire etc.
Pithoragarh	Readymade Garments, Hotel & Resort, Cement Block, Tiles, Candle, Printing Press, Gate Grill, Mineral Water etc.
Bageshwar	School Dress, Hotel & Restaurant, Fruit Processing, Food Dishes, Honey Processing, Computer Repair & Cyber Cafe, Printing Press etc.
Nainital	Agarbatti, Readymade Garments, Packaging, Fruit Processing, Food Products, Casual Processing, Pharmaceutical Products, Hosiery, Paper Printing Press, Hotel and Resort, Rice Mill, Kids Bicycle, Pillow Cover, Medical Service, Readymade Garments, Packaging, Purified water etc.
Udham Singh Nagar	Industrial Gas, Floor Mill, Rice Mill, Packaging and Printing Material, Food Processing, Corrugated Box, Cosmetic Products, Plastic Bottle, Handmade Paper, Cattle Feed, Poultry Feed, Paint Roller Brush, Automotive Parts, Handicraft Goods, Metal Ware, Spice, Animal Food etc.
Haridwar	Corrugated Box, Hotel and Resort, Printing Box, Plastic Moulded Components, Sheet Metal Fabrication, Liquid Soap, Soap Cake, Mobile Phone, Tablet, Stone Dust, Spice & Herbal Oil, Mushroom Products, Stone Grits etc.
Dehradun	Fruit and Vegetable Sorting, Presentation and Grading, Bakery Products, Off Set Printing, Dona Pattal, Grain Milling, CLAFLED, Internet Service Provider, Offset Printing, Corrugated Box, Pharma Products, Steel Fabrication, Ayurveda Footwear Sanitary Napkin, Diaper, Pet Bottle & Cane, Water Pump Assembling, PCV Pipe, Artificial Flow Bridesmaid, water, and beverages etc.

Source: Economic Survey of Uttarakhand 2019-20

While there are several activities distributed across the different districts in the state, it is important to note that the MSMEs also show a skewed distribution with the concentration of establishments in plain districts of the state. Therefore, both the employment and investment are higher in plain districts in comparison to hilly districts of the state. It is depicted in the table below.

Table 8 MSMEs in Uttarakhand: District Wise Distribution (Up to March 2019)

Districts	Total MSME Industries	Total Investment in MSME (INR crores)	Total Employment in MSME
Haridwar	10,616	4850.7	93,591
Udham Singh Nagar	8,221	4425.9	66,007
Dehradun	8,824	1392.3	54,857
Pauri Garhwal	6,244	498.36	22,292
Nainital	4,454	1053.8	21,061
Tehri Garhwal	4,555	296.1	13,273
Almora	4,171	210.7	9,833
Pithoragarh	3,224	97	7,402
Uttarkashi	4,172	114.8	8,176

Districts	Total MSME Industries	Total Investment in MSME (INR crores)	Total Employment in MSME
Chamoli	3,331	103.6	7,372
Champawat	1,694	87.4	4,571
Rudraprayag	2,007	109.4	5,295
Bageshwar	1,870	60.6	4,176
Total	63,383	13,300.7	317,906

Source: Economic Survey of Uttarakhand 2019-20

From table 8, we can observe that there are a lot of variation in distribution of MSMEs between the hilly and plain districts in the state. Haridwar district leads the state with 10,616 MSMEs, an investments worth INR 4850.7 crores and offering employment to 93,591 people. While the districts that are at the bottom of the list include Champawat and Bageshwar, with the previous one having the least number of MSMEs (1,694), and the later one having the lowest investment (INR 60.6 crore) as well as the lowest number of jobs generated. Policy interventions need to be in place with the intention to reduce disparities to address these regional imbalances. Hilly districts of the state should be given special attention in this regard. Interventions such as easy accessibility and availability of credit, addressing the infrastructural constraints and formulation of policies with time bound targets to be achieved in the hill districts can be supportive in bring down inequalities among the MSMEs in the state²⁸.

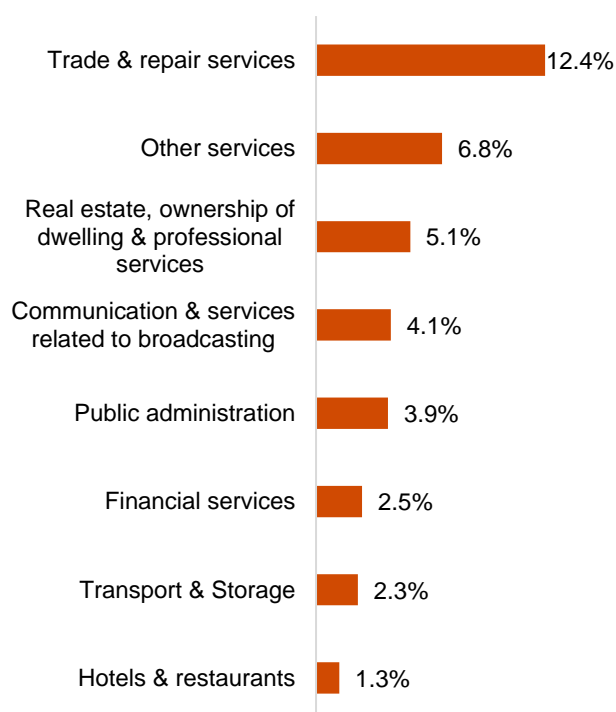
2.9. Service Sector

Uttarakhand's services sector has experienced rapid growth during the period of 2011-18. The sector has grown from INR 36.7 thousand crore to INR 68.4 thousand crore at an average annual rate of 9.3%, compared to 8.3% growth at the national level. The share of services sector in state's GVA has increased from 34% to 38%. Trade and Repair services contributes the largest 12.4% to state's GVA while the contribution of hotel and restaurant services is the lowest 1.3%

Tourism is the backbone of the sector and contributes immensely to economic growth alongside generating employment opportunities. Other major drivers of the sector include expansion of trade, hotels, and restaurants (expanding as a result of the tourism industry).

The state is expected to see further growth in this sector with the expansion of trade catalyzed by the improvement of road networks and other means of communication. Further trade and the manufacturing sector can also be seen as a complement to each other. Trade, hotels, and restaurants have contributed 36.94% to the service sector in FY 2018-19. Other components of this sector include transport, storage, communication & broadcasting, real estate & ownership of dwellings, public administration including railways, financial services, and others²⁹.

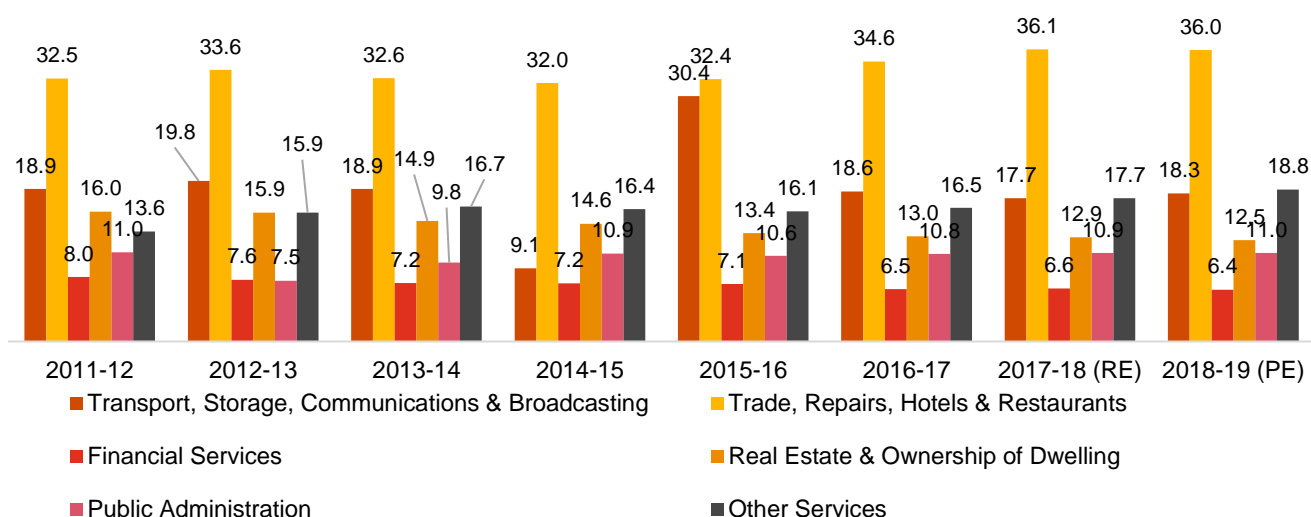
Figure 11 Services Subsector share to state GVA



²⁸ Economic Survey of Uttarakhand 2019-20

²⁹ Economic Survey of Uttarakhand 2018-19

Figure 12 Contribution of different sectors within the Service sector (in %)



Source: Economic Survey of Uttarakhand 2019-20

Further interventions to boost growth has been planned by the state government in service sector. Subsectors of service sector such as IT/ITes, Tourism and Hospitality are being thought about that would further push this sector. The interventions are discussed as follows: -

2.10. IT/ITeS

Uttarakhand has been making constant efforts to develop the IT sector in the state and to attract the finest companies to set up their businesses in the state. The Incorporation of Information Technology & Industrial Development along with the State Industrial Development Corporation of Uttaranchal Ltd. (SIDCUL), was nominated as the nodal agency in 2002, to endorse the growth of It sector in the state. To promote the growth of IT in the state, SIDCUL has developed a state-of-the-art Software Technology Park over more than 60 acres of land in Dehradun, the state capital with hi-Tec buildings. The IT Park in Dehradun offers several:

- Developed plots of variable sizes
- Provision of academic zone for educational and research organizations to STPI incubation center to promote and encourage local entrepreneurs
- Large tracts of land devoted to green areas and open spaces
- Conference hall & training centres
- Guest houses
- Forex services, banks & ATM's
- Multi-cuisine food court
- Health club with gym as well as a medical centre
- Serviced apartments
- Library and information bureau
- Indoor and outdoor sport facilities like squash, tennis, badminton courts, billiards etc.

Following table gives an overview of IT/ITes oriented export units. The exports of IT products from Uttarakhand were worth INR 126.68 crores in 2017-18³⁰. The major players in the state include Hiltron, HCL Infosystems (Rudrapur, SIDCUL Industrial Estate), Wipro Infotech (Kotdwar), Modi Infotech Services (Haridwar)³¹, Hewlett-Packard (Rudrapur, Udham Singh Nagar) and others.

Table 9 Uttarakhand IT Export Units and Manpower Statistics (FY 2017-18)

S. No.	Particular	Quantum
1	Total Export Units	10 units

³⁰ <https://www.investindia.gov.in/state/uttarakhand>

³¹ IBEF Report on Uttarakhand, June 2020

S. No.	Particular	Quantum
2	Total Value of Exports	INR 126.7 crores
3	Total Manpower of Export oriented units	1,977 Males 548 Females
4	Top Exporters	MPS Ltd. Evon Technologies Ramtech Software Solutions Pvt Ltd. RMSI Pvt Ltd. Global Content Transformation Pvt Ltd. Smart Data Enterprises Ltd.

Source: IT Sector Profile - Information Technology Development Agency, Government of Uttarakhand

Uttarakhand has successfully brought IT businesses to the state by providing adequate infrastructural support. The industry has also been identified as one of the growth enablers of the state.

With the creation of the Software Technology Parks of India (STPI) earth station in Dehradun, Uttarakhand has been able to offer high-speed connectivity thereby facilitating the development of IT firms in the state³². Various other stations have been planned at other locations. Facilities by BSNL and Reliance is also available in the state³³.

Uttarakhand offers several comparative advantages to the companies to operate and flourish in the state. Some of them are mentioned as follows³⁴:

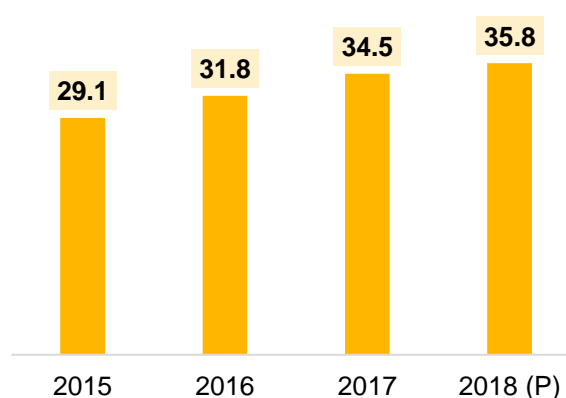
- The industrial electricity tariff is lower compared to other states in India, has adequate availability of land and an enabling environment for doing business in the state.
- Uttarakhand has a known history of industrial harmony with very low man-days lost due to industrial strife in India.
- A number of renowned educational institutions providing skilled manpower
- Provision of skill development trainings in Information technology and other related services
- The reputed IT firms already operating in the state have built state-of-the-art operating practices and have developed an ecosystem in the state that can help the newer establishments

Apart from these, the state also provides incentives on power, land rates, land registration as well as ETP and Extra Employment Subsidy. The state has the Information Technology Policy 2016-2025 in place that provides incentives to ICT&E Industries for Economic Development in the State as well as to provide a policy framework for effective infusion and management of Information and Communication Technology & Electronic ("ICT&E") for achieving genuine progress of the state in all aspects³⁵.

2.11. Tourism

Tourism is considered as the key driver of development in the state. Uttarakhand not only offers leisure tourism, but also possesses massive potential for adventure tourism like water sports, trekking, skiing, paragliding, camping, angling, mountaineering, and rock-climbing. In recent years, spiritual, yoga, wellness, heritage, culture, community-based and eco-tourism have also emerged as important attractions. Yamunotri, Gangotri, Kedarnath, and Badrinath, collectively known as Char Dham. These pilgrimage centers draw the maximum numbers of pilgrims each year, thus becoming the most important hubs of religious travel in the whole of Northern India.

Figure 13 Tourist arrivals in Uttarakhand (in million)



Source: IBEF Report on Uttarakhand, June 2020

³² <https://www.investindia.gov.in/state/uttarakhand>

³³ IBEF Report on Uttarakhand, June 2020

³⁴ IBEF Report on Uttarakhand, June 2020

³⁵ <https://www.lexploration.in/uttarakhand-government-issues-the-information-technology-policy-2016-2025-offering-various-incentives-to-ict-e-industries-for-economic-development-in-the-state/>

In 2017, the State recorded around 34.5 million domestic visitors while there were more than 0.13 million Foreign Tourist Arrivals (FTAs) in the state which accounted for 2.1% and 0.1% of the total tourist respectively. The overall tourism footfall growth rate in Uttarakhand is 9.3%. The state has set up a target for itself to make its position among top 10 tourists' destinations in the country by 2020, up from its current rank of 12, to acquire a place among the top 5 tourism destination states by 2024, and finally to attain a position among the top 3 tourism destination states by 2030³⁶.

About 21 places in the state namely Jageshwar, Baijnath, Saat Taal, Bhimtal, Patal Bhuvaneshwar, Chakori, Someshwar, Pithoragarh, Chakrata, Roopkund, Hanaul, Anson Barrage, Harshil, Dhanaulti and Dayara meadow have the potential to become major tourist attractions. Jauljiwi in Kumaon and Tons in Garhwal division are two destinations which have been identified as adventure tourism spots³⁷.

Various interventions have been taken up both by the state as well as central government to further promote tourism in the state. The state has also come up with a revised tourism policy. The Uttarakhand Tourism Policy 2018 intends to develop the image of the state as a safe, secure, and friendly destination for tourists. The policy provides same status to tourism like that of the industries, thereby encouraging investment from investors through favorable incentives, subsidies, and provisions. The policy also takes in consideration the tourism offerings like balloons, caravans, homestays, ropeways, golf, as well as winter destinations to make the state a global, 'all season' destination³⁸. The Gramin Paryatan Uthan Yojana is being promoted by the state government in order to help the villagers in generating products and services. The Central government has also launched a scheme named "Udan" in January 2018, with the intention to help people with low-income groups fly at affordable air fares. In December 2019, a public utility mobile application named "Hello Uttarakhand" was launched with the view to provide multilingual translation facilities to tourists and help them communicate with the locals. The state government is also planning to introduce mobile caravans or motor homes equipped with attractive facilities to draw tourists³⁹.

However, the covid-19 situation caused a panic in various sector of the economy, tourism being one of the hardest hit sectors. Lockdown and restrictions on movement paralyzed the tourism industry in the state. Therefore, immediate measures should be taken by the state to position Uttarakhand as a safe destination for travelling, immunity boosting, wellness yoga and spiritual experience⁴⁰.

2.12. Key Indigenous sectors

Uttarakhand abounds in artisans and a variety of art and craft. Both the rural and urban populations engage themselves in manufacturing incredible pieces of art worth witnessing. Woodwork is commonly practiced by the locals in the state, along with that paintings from Garhwal School of Paintings and murals like Aipan demonstrate both the rich culture of the state as well as the skills of the natives. The Ringaal handicraft is practiced by the backward communities of the state and the Rambaan handicraft made using jute and hemp also reflect the richness of art and craft in the state. Apart from these woolen knitted wear and embroidered cushion covers, carpets, bedsheets and curtain made by both rural and urban women in the state are also a favorite among tourists visiting the state. Last but not the least the state also possesses artisans with quintessential candle making skills. An entire market in Nainital is dedicated to this art form⁴¹. Uttarakhand's traditional artisans also include "Tamtas" (copper smiths) recognized for making handmade utensils and other household items⁴².

2.13. Woodwork and Wooden Craft

Exquisite woodwork is the most common art form of the state. Abundant availability of forest reserves and timber, locally skilled workforce, suitable temperatures for insulation of wood, and the prevalence of family traditions are the major contributors promoting this art form in the state⁴³. The wood carvings of Garhwal and Kumaon are renowned for its simple yet delicate and attractive designs. Found mostly in temples and on doors of houses, this local form of art adorns almost the doors of the house. Known locally as Kholi, these door carvings act as a marker of the social status of a family. Dehradun and Nainital are the key areas where this art form is performed.

³⁶ Economic Survey of Uttarakhand 2019-20

³⁷ IBEF Report on Uttarakhand, June 2020

³⁸ Economic Survey of Uttarakhand 2019-20

³⁹ IBEF Report on Uttarakhand, June 2020

⁴⁰ Economic Survey of Uttarakhand 2019-20

⁴¹ <https://www.tourmyindia.com/states/uttarakhand/brief-introduction.html>

⁴² <https://www.uttarapedia.com/handicrafts/>

⁴³ <https://www.uttarapedia.com/handicrafts/>

The tribes engaged in making these masterpieces of art include the buxa's, the jaunsaries, the bhotia's and shaukas's.

Banrauts or Raji's are known for carving beautiful wooden utensils. These are the indigenous groups of people residing in the Rachi, Juma, Kannar, etc. villages. Banrauts are reputed for their wooden crafts. Van Rawats of Pithoragarh is known to be experts in making wooden pots. Tharus and bukshas of tarai are also specialists in making wooden utensils⁴⁴.

2.14. Woolen products and Weaving

Owing to the latitudinal placement, the climatic conditions in Uttarakhand are suitable for rearing animals like sheep, angora rabbits and pashmina goats. These animals provide with some of the finest quality wool for the production of woolen crafts in the state. Traditionally woolen crafts were used only for local consumption in the state. However, in recent times they have reached a greater number of people. Wool is extracted from animals in the rural as well as border areas to make products like kaaleen (carpets), pankhi, thulma (thick blanket), chutka etc.

While Johar-Munisiyar in Pithoragarh district is renowned for producing woolen carpets and thulma, Almora is well known for producing its famous tweeds, woollen carpets, and artistic woolen shawls. Other places where wool craft can be seen are Bageshwar, Nainital, Dehradun, Chamoli, Rudraprayag and Uttarkashi⁴⁵.

Among the indigenous group of people, Bhotiyas are essentially known for their woolen art and craft. Bhotiyas of Uttarakhand are mainly shepherds rearing sheep and goats. Horses, jabbu and yak are also reared by them. Carpet weaving is the chief traditional art and craft of this community. Bhotiya carpets are different from Kashmiri carpets. While Kashmiri carpets are generally silken and have intricate designs based on vines and flowers, the designs and techniques used in the making Bhotiya carpets are inspired and adopted from Tibet. They have certain Buddhist (Tibetan) motifs and designs and are mainly made of woollen carp⁴⁶.

2.15. Paintings and Murals

Murals can be found in almost every home of places of worship in the state. These are done either in the form of proper wall painting or in the form of Aipan (motifs including geometric and repetitive patterns) and Peeth (decorative and ritualistic art)⁴⁷. The womenfolk in the state are the main artists behind Peeths.

Coming to paintings both the Garhwal School and Kumaun School of painting lays a very important role in Indian art. However, Mughal influence is a predominant trait of the paintings in Uttarakhand. The Garhwal School of Paintings or the Gharwal "Gharana" is the birthplace of some of the most stunning miniature paintings in the state⁴⁸. Wall paintings are also widely practiced in the Gharwal and Kumaon regions of the state⁴⁹.

Other than these, the art of painting can also be seen on walls, paper and pieces of cloth⁵⁰.

2.16. Bamboo Craft, Basketry

Baskets and other items are made by the local craftsmen residing in the tribal areas. Basketry is one of the common traditional art and craft of women in the state. Chamoli and Pithoragarh are the important districts where the art form is practiced. Different varieties of baskets are made by the Tharu and Buxa tribal. Bamboo basketry of Thana village in Chakrata is well known in the region⁵¹.

Apart from these stone carvings, ornaments, ritualistic folk art, candle making, Wool dyeing, leather bone and horn craft and other form of art are practiced by the people in the state⁵².

The following figure gives us an idea to the indigenous art form practiced by the vulnerable and indigenous communities of Uttarakhand.

⁴⁴ http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of Uttarakhand.pdf

⁴⁵ <https://www.uttarapedia.com/handicrafts/>

⁴⁶ http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of Uttarakhand.pdf

⁴⁷ <https://himalayanheight.com/Uttarakhand-Art-&-Craft.html>

⁴⁸ <https://himalayanheight.com/Uttarakhand-Art-&-Craft.html>

⁴⁹ <https://www.mapsofindia.com/uttarakhand/society/art.html>

⁵⁰ <https://www.mapsofindia.com/uttarakhand/society/art.html>

⁵¹ http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of Uttarakhand.pdf

⁵² http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of Uttarakhand.pdf

Figure 14 Major art and craft traditions of Uttarakhand tribes

Bhotia/ Shauka/ Ran/ Marchha	Van Rawat / Raji	Tharu	Buxa	Jaunsari
<ul style="list-style-type: none"> • Art & craft of wooden • Weaving carpets, dan, asan • Wool dyeing 	<ul style="list-style-type: none"> • Craft of wooden utensils 	<ul style="list-style-type: none"> • Basketry • Matting • Fishing nets • Cot weaving • Clay pots • Woodcraft 	<ul style="list-style-type: none"> • Relief Work • Basketry • Matting • Fishing nets • Cot weaving • Clay pots • Woodcraft 	<ul style="list-style-type: none"> • Temple art • Woodcraft • Basketry • Woolen crafts

Source: Art and Craft of Tribal of Uttarakhand by Sranjana Tripathi⁵³

2.17. Labour Market

The employment structure in Uttarakhand has seen a change over the past years. There has been a considerable shift in employment from the primary sector to towards the secondary sector and also to some extent towards the tertiary sector. More individuals in the state prefer service-related occupations than agriculture and other allied services.

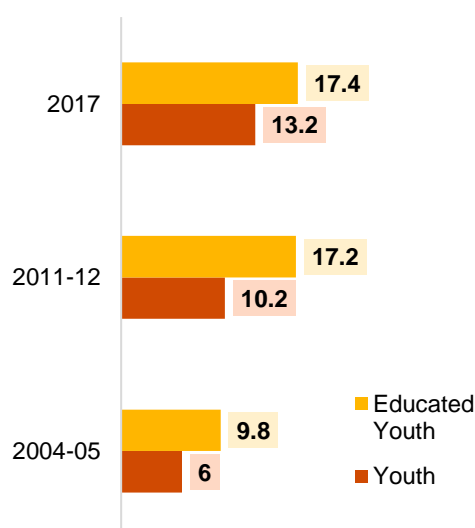
2.18. Unemployment rate

As per the HDR 2017, unemployment rate in Uttarakhand increased from 6% in 2004-05 to 10.2% in 2011-12. The HDR 2017 Survey pegs the youth unemployment (15-29 age group) rate in Uttarakhand at 13.2% in 2017. A spatial distribution of the indicator demonstrates that youth unemployment is higher in the plains (14.9%) vis-à-vis the hills (11.1%) and more in urban (17.4%) as compared to rural areas (10.8%).

In contrast to the overall scenario, youth unemployment is the highest for females in the plains (16.9%) and males in the hills (15.8%). The gender gap in youth unemployment is much wider in the hills (11%) and in rural areas (7%), with female youth showing much lower unemployment rates than their male counterparts in these areas. In the plains, female youth are at a disadvantage showing higher rates of unemployment (16.9 percent) vis-à-vis male youth (14.5%).

The interest findings from the survey however are that the unemployment situation is worse amongst the youth at 17.4% for the state. Such high youth unemployment rates are major areas of concern and important pointers for policy interventions⁵⁴.

Figure 15 Uttarakhand: Youth (15-29 years) Unemployment Rate (in %)



Source: HDR of Uttarakhand, 2017

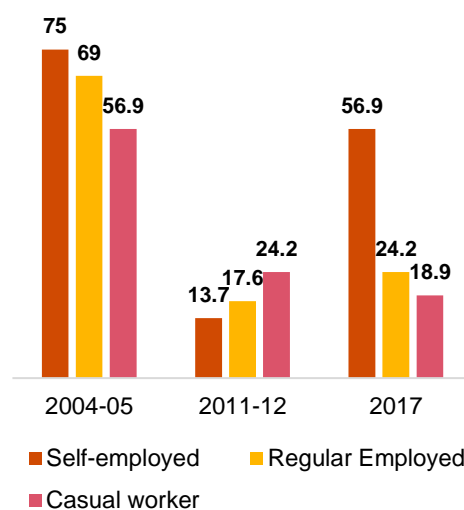
⁵³ http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of_uuttarakhand.pdf

⁵⁴ http://www.shodhsandhan.net/uploads/1/0/6/0/10606004/art_and_craft_of_tribals_of_uuttarakhand.pdf

2.19. Status of Employment in the State⁵⁵

The employment status of the state can be segregated into three parts - self-employment, regular employment, and casual workers. Amongst the various forms of employment, regular or paid employment is considered to be the safest, and self-employment considered to be fairly secure even though there can be some kind of irregularity, inadequacy, and even uncertainty in income. As per the HDR 2017, self-employment in Uttarakhand is 56.9% exhibiting more than half of the population is self-employed (although this portion has been dropping over years). The proportion of the population engaged in regular work raised from 13.7% in 2004-5 to 17.6% in 2011-12. The proportion further increased in 2017 at 24.2%, thus showing that a fourth of the total population of the state is engaged in regular work. The proportion of casual workers has shown an increase from 11.3% in 2004-05 to 13.4% in 2011-12. However, in 2017 the proportion was found to be 18.9% thereby showing a steady increase. The proportion of regular workers also showed an upward rise between 2011-12 and 2017. The reduction in self-employment, as well as the shift towards regular employment or casual labor in Uttarakhand, can be perceived to be reflecting increased underemployment in agriculture and related activities, alongside the absenteeism of income-generating non-farm self-employment activities in the state.

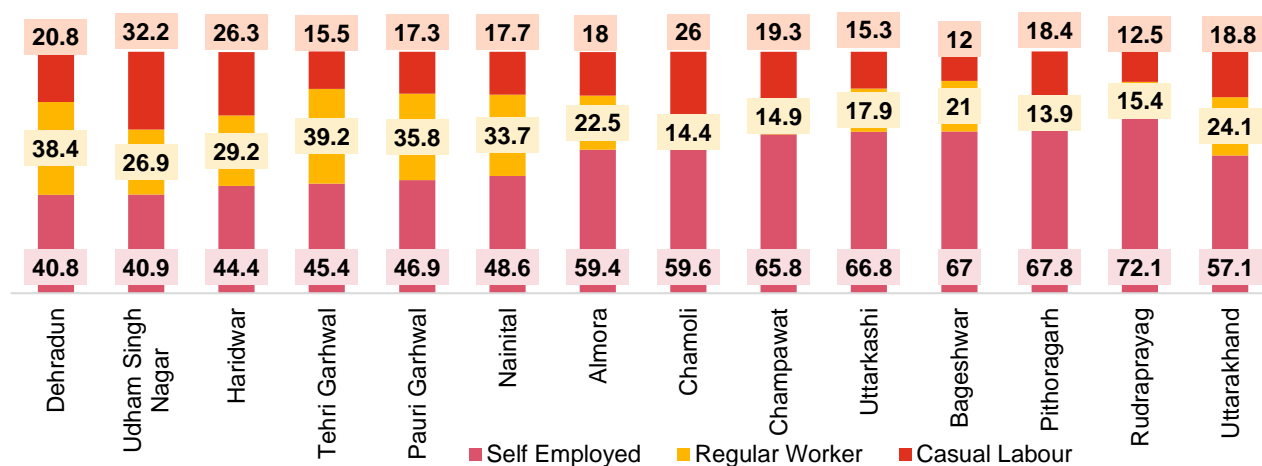
Figure 16 Changes in Status of Employment (in %)



Source: HDR of Uttarakhand, 2017

Self-employment is also predominant in the rural (60.6%) and hilly areas (60.8%) of the state. Regular or salaried jobs are higher in urban areas (40.4%) and the plains (31.5%). While those engaging in casual labour (26.6%) is maximum in the plains of Uttarakhand.

Figure 17 District-wise Employment Status in Uttarakhand (in %)



Source: HDR of Uttarakhand, 2017

The district wise employment status in the state shows there has been large variations in districts w.r.t all the three categories of labour force shown in the figure above. In the five hilly districts, namely Rudrapur, Pithoragarh, Bageshwar, Uttarkashi and Champawat over two-thirds of the working population was self-employed in 2017, which is well above the state average of 57.1%; whereas the plains districts of Dehradun, Udham Singh Nagar and Haridwar ranked at the bottom in terms of self-employment (40.8%, 40.9% and 44.4% respectively). Therefore, it can be observed that self-employment is higher in the hills than the plains. Tehri Garhwal, Pauri Garhwal, Nainital, Almora as well as the plains of Dehradun are seen to have higher levels of regular employment.

⁵⁵ Human Development Report of the State of Uttarakhand, 2017 - Directorate of Economics & Statistics

The plain district of Udham Singh Nagar (32.2%), Haridwar (26.3%) and Chamoli (26%) witnessed maximum employment as casual labours. The same is illustrated in the figure shown below.

More than three-fourths of the workers are either engaged in self-employment or in casual work, as per the HDR 2017. Even though employment in regular work has seen an upward trend in the recent years especially among women, its quality, remuneration and impermanent nature are issues that need proper research and understanding.

2.20. Employment by Occupational Structure⁵⁶

As per the HDR survey, over the years the population of Uttarakhand has shifted from agricultural activities to a range of service-related operations. Based on skills possessed by workers, the activities can be divided into three categories. These are high skilled (senior officials, managers, professionals, technicians & associate professionals); medium-skilled (clerks, service, shop & market sales workers, agriculture & fishery, craft & related trades, plant & machine operators & assemblers) and last but not the least low skilled (elementary occupations such as labour in agriculture; construction, mining, manufacturing, transport, & sales and services).

The HDR survey 2017, bring to light that the majority of the population in Uttarakhand is middle-skilled (65.5%) followed by low-skilled workers (24.9%) and lastly high skilled (9.6%). Middle-skilled workers are the ones that involve mostly in farm and other related activities, services work, shop & market sales activities, craft & related trades workers as well as plant & machine operators assembling activities. Whereas the skilled workers involve mostly in professional, technical, and other associated activities. Lastly, low skilled workers involve themselves in daily wage-earning works or work as labourers in both farm and non-farm activities.

Table 10 Occupational Distribution of Workers by Level of Skill (in %)

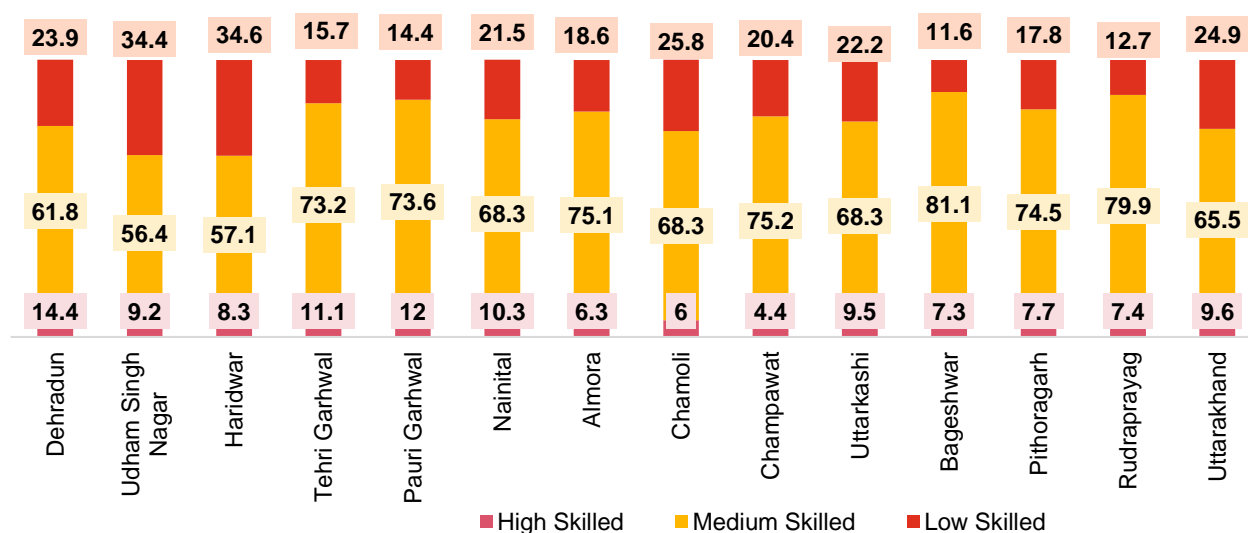
Skill Level	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
High	7.7	4.9	6.9	13.8	26.9	15.5	9.9	8.9	9.6
Medium	61.7	85.4	68.4	59.5	58.4	59.4	60.9	80.5	65.5
Low	30.7	9.7	24.8	26.7	14.7	25.1	29.2	10.6	24.9
Total	100	100	100	100	100	100	100	100	100

Source: HDR of Uttarakhand, 2017

Coming to the gender-wise analysis of the above-given table, HDR 2017, states that women involve themselves majorly in medium-skilled occupations, especially agriculture while men are employed more in low-skilled occupations. In hilly and rural areas, employment is seen to be higher in skilled agriculture, craft, and related trade activities. In contrast to that, in the urban areas and the plains, the workforce engages mainly in services work and shop market sales activities, elementary occupations (labour activities) as well as professional activities. For the urban areas and plain districts, a larger proportion of people involved in elementary or low-skilled occupations. The probable reason behind this out-migration from the rural and hilly districts is mainly in the search of livelihood activities, with the migrating populace, eventually engaging in whatever employment opportunities are available, as a survival and livelihood strategy.

⁵⁶ Human Development Report of the State of Uttarakhand, 2017 - Directorate of Economics & Statistics
Department of Planning Government of Uttarakhand

Figure 18 District-wise Distribution Workers by Occupations (in %)



Source: HDR of Uttarakhand, 2017

The occupational structure of Uttarakhand at the district level shows that the majority of individuals engage in high skilled activities in the districts of Dehradun (14.4%), Nainital (10.3%), Tehri Garhwal (11.1%) and, Pauri Garhwal (12%). These numbers are even higher than the state average of 9.6%. The hilly districts of Champawat (75.2%), Almora (75.1%), Bageshwar (81.1%), Rudrapur (79.9%), and Pithoragarh (74.5%) have higher proportions of medium-skilled workers. Lastly, the workers engaging in low-skilled activities such as non-farm labour are seen to be residing in the plain's districts of Haridwar (34.6%) and Udham Singh Nagar (34.4%) in higher proportions than the state average (24.9%).

Uttarakhand has some of the best-in-class institutes that produce skilled manpower in the state. However, the constraints faced due to the hill topography are some of the areas of concern in the state. Often the infrastructure and connectivity of the hilly regions are not up to the mark. The main opportunities and challenges faced by the state to build up an efficient, adequate and effective manpower base has been summaries as follows.

2.21. Education

The literacy levels in the state have been higher than the national average. The proportion of illiterate is low whereas the proportion of diploma holders, graduates and postgraduates are high. However, the unemployment is also high among the graduates, postgraduates and diploma holders. In essence, Uttarakhand faces a problem of poor employability despite having higher levels of literacy rates.

The literacy rate in Uttarakhand in 2011-12 was 78.8%, compared to the national average of 74%. Among the district of Uttarakhand, Dehradun had the highest literacy rate of 85.2% whereas Udham Singh Nagar had the lowest literacy rate of 74.4%. Uttarkashi, Tehri Garhwal, Haridwar and Udham Sing Nagar had literacy rate lower than the state average of 78.8%.

Figure 19 General Education distribution

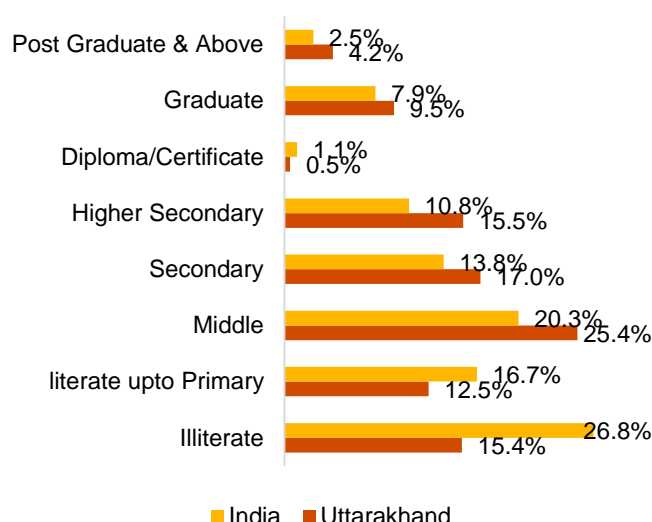
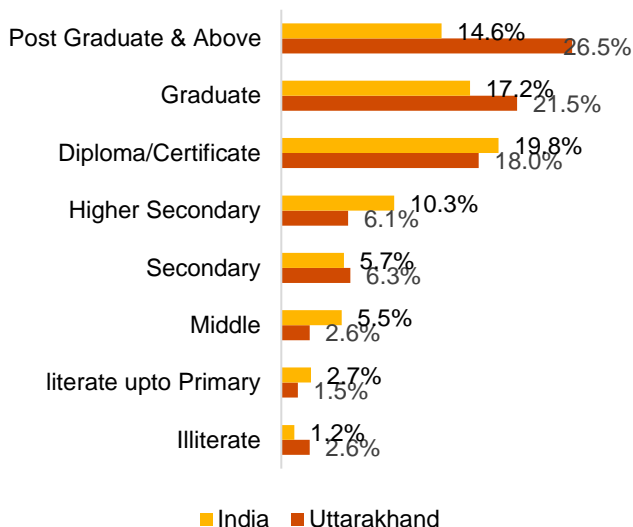


Figure 20 Education level Wise Unemployment rate



The Gross enrollment ratio in Uttarakhand is higher than the national average, at all levels. In 2016-17, the GER in Uttarakhand at the secondary level was 84.4 percent, higher than the national average of 79.4 percent; similarly, at the higher secondary level the GER was 77.1 percent, higher than the national average of 54.9%. The GER in Uttarakhand have followed a mixed trend. It has increased at the higher secondary level from 74.7% in 2014-15 to 77.1 percent in 2016-17 but it has decreased at the secondary level from 87.2 percent to 84.4 percent. There is also a decline in GER as we move up the stages of school education - from 84.4 percent at secondary level to 77.1 percent at higher secondary level.

The state has a number of recognized leading academic and research institutions, that impart the required knowledge and skills for setting up a strong foundation and producing quality human resource. It also helps to create a strong base for industries in the state⁵⁷.

Table 11 Gross Enrolment Ratio (in %)

	Uttarakhand						India					
	Secondary (IX-X)			Higher Secondary (XI-XII)			Secondary (IX-X)			Higher Secondary (XI-XII)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2014-15	87.0	87.4	87.2	73.2	76.3	74.7	76.4	77.5	76.9	52.5	52.6	52.5
2015-16	85.5	85.3	85.4	72.4	77.4	74.7	78.6	80.1	79.3	55.4	56.1	55.7
2016-17	83.9	84.9	84.4	75.4	78.9	77.1	78.5	80.3	79.4	54.9	55.9	55.4

The dropout rate in Uttarakhand is lower than the national average, at all levels, however the rate has been fluctuating over the years. In 2016-17, the dropout rate in Uttarakhand at the secondary level was 9.1 percent, which was much lower than the national average of about 20 percent; similarly, at the higher secondary level the dropout rate was 1.7 percent, lower than the national average of 6 percent. The dropout rate at secondary level has increased slightly from 8.7 percent in 2014-15 to 9.1 percent in 2016-17.

⁵⁷ <https://www.investindia.gov.in/state/uttarakhand>

Table 12 Dropout Rate in Uttarakhand and India (in %)

	Uttarakhand						India					
	Secondary (IX-X)			Higher Secondary (XI-XII)			Secondary (IX-X)			Higher Secondary (XI-XII)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2014-15	9.9	7.4	8.7	0.2	-	-	17.9	17.8	17.9	1.5	1.6	1.5
2015-16	11.3	9.5	10.4	3.4	2.6	3.0	17.2	16.9	17.1	0.3	-	-
2016-17	9.9	8.2	9.1	2.2	1.2	1.7	20.0	19.8	19.9	6.4	5.5	6.0

Higher Education: As per the All-India Survey on Higher Education (AISHE) for 2018-19, the total number of students enrolled in Uttarakhand for higher education is 253,273. Amongst them, 125,037 are enrolled in private institutions whereas

128,236 in government institutions. Enrollment in higher education at various levels has also been considerably encouraging with a total enrollment of 76,615 among which 462 are enrolled in Ph.D., 27 in MPhil and 71,926 in postgraduate levels. In addition to that 19,612 students are enrolled in Postgraduate programmes through distance mode. The estimated enrollment in the colleges of Uttarakhand postgraduate programmes stands at 31,082 (with 12,285 males and 18,797 females). This in turn indicates that women are leading and moving ahead of their male counterparts. The hilly districts of the state also paint a similar picture which shows that the enrollment of women has been higher than men. This lead taken by the female population can be attributed to the fact that a higher number of male candidates migrating to the urban plain areas in search of education as well as jobs. The Gross Enrollment Ratio (GER) of Uttarakhand with respect to higher education (18-23 years) stands at 39.1 percent which is higher than the national figure of 26.3 percent⁵⁸.

Table 13 Number of Universities in Uttarakhand (2018-19)

Institute	Number
Central University	1
Institute of National Importance	4
State Public University	10
State Open University	1
State Private University	17
Deemed University – Government Aided	1
Deemed University – Private	1

Table 14 Enrollment in Private and Government Colleges in Uttarakhand (2018-19)

Institute	Numbers
Private Un-Aided	78,278
Private Aided	46,759
Total Private	125,037
Government	128,236
Total	253,273

Table 15 Enrollment at Various Levels of Higher Education in Uttarakhand (2018-19)

Course	Male	Female	Total
Ph.D.	2,903	1,759	4,662
M.Phil.	18	9	27
Postgraduate	32,342	39,584	71,926
Undergraduate	177,767	174,137	351,904
PG Diploma	1,174	1,105	2,279
Diploma	23,572	8,585	32,157

Source: Economic Survey of Uttarakhand 2019-20 & AISHE 2018-19

Uttarakhand is way ahead from the other states in computer education as well. Some of the leading institute's colleges and universities in the state include G.B. Pant University of Agriculture & Technology in Pant Nagar, Indian Institute of Technology in Roorkee, Forest Research Institute in Dehradun, GB Pant Institute of Himalayan Environment and Development in Almora, Rural Biotechnology Complex in Kosi and Herbal Research, Uttarakhand Ayurveda University in Dehradun and Uttarakhand University of Horticulture & Forestry in Bharsar. There are a number of other institutes imparting quality education in the state.

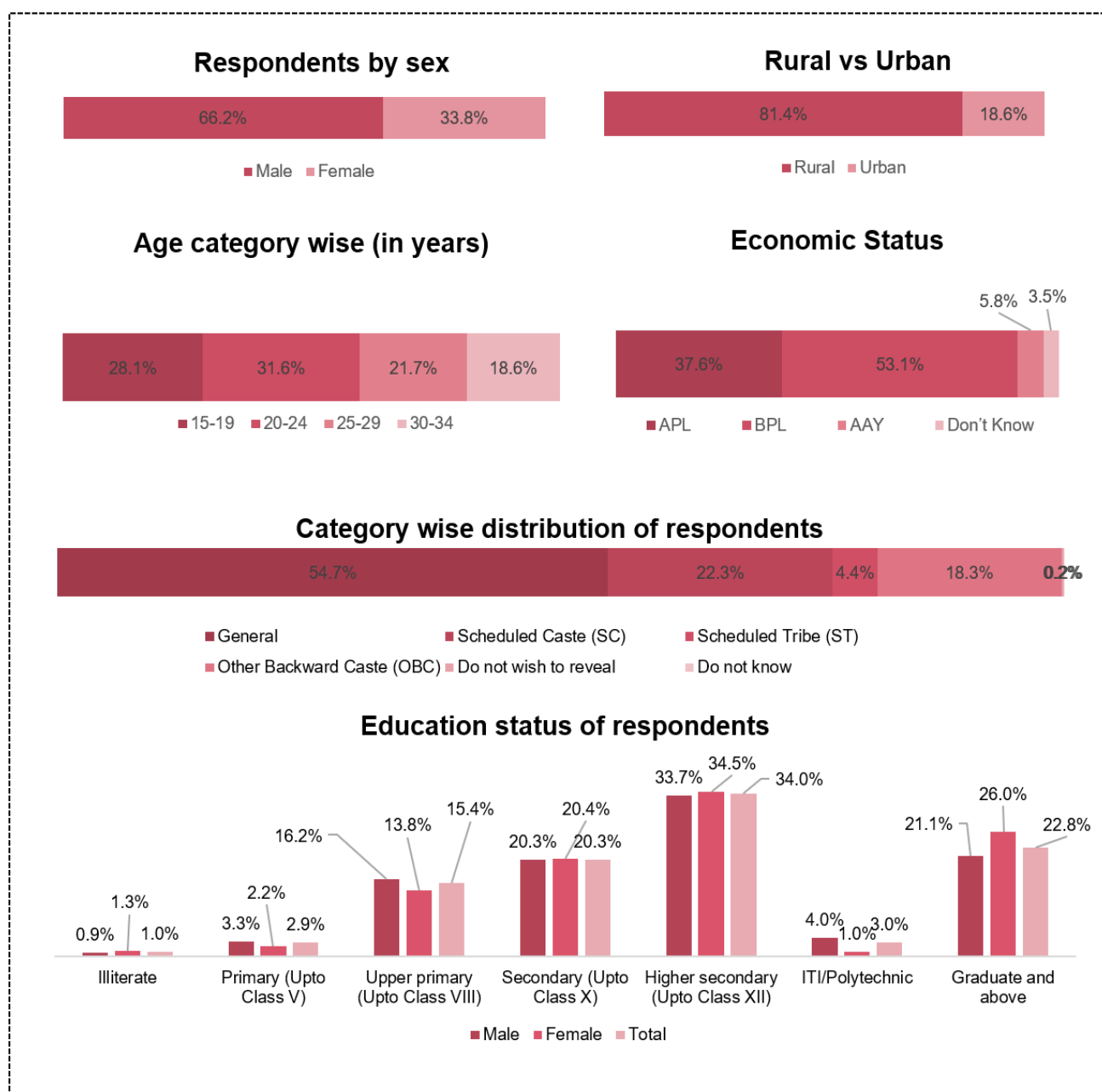
⁵⁸ Economic Survey of Uttarakhand 2019-20

3. Youth Aspiration and Perspective

3.1. Respondents' Profile

A structured household survey tool was administered among 6,582 youth (young men and women in the age group of 15-34 years) in the state. The sample was drawn from all 13 districts. The sample has a representation of various categories in line with the objective of the study to capture the perspectives of a diverse group of youth, especially to understand their aspirations. The below figure highlights the respondent profile of the survey. This gives us a detailed look into the sample which covered a wide variety of respondents.

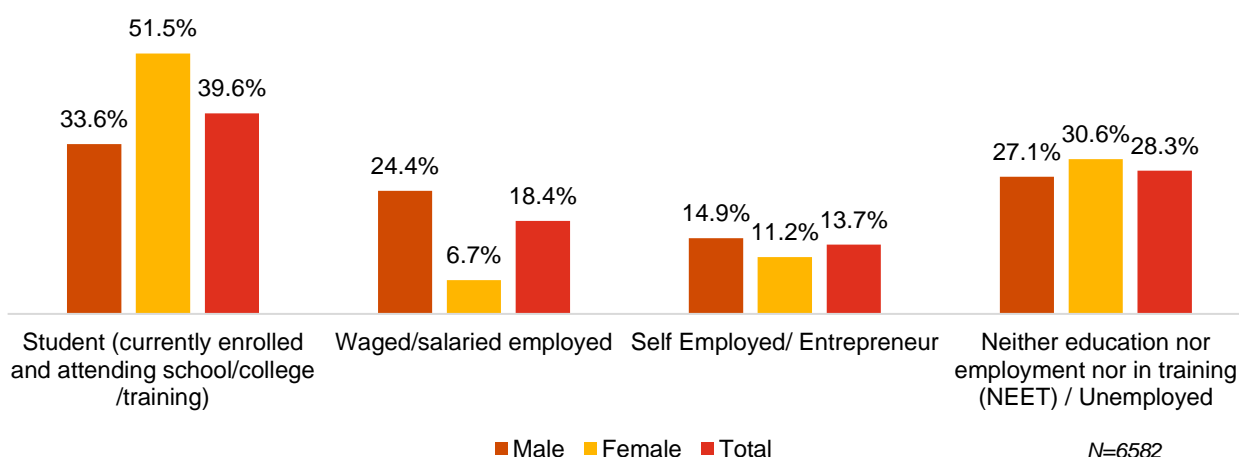
Figure 21 Respondents' Profile



3.2. Respondent's Current status

The survey enquired about the current status of the respondents at the time of interview. Nearly 18.4 percent of the respondents were from wage / salaried employed category, 39.6 percent respondents were in education, 28.3 percent respondents were in NEET/unemployed category, while 13.7 percent of respondents were self-employed/entrepreneur. Nearly 31 percent of the female respondents were in the NEET/unemployed category. More than half of the females were pursuing their education. District wise analysis suggests that share of NEET/unemployed category respondents was higher in hilly districts such as Pithoragarh (43 percent), Almora, Tehri Garhwal and Bageshwar (34 percent), Rudraprayag (31 percent) and Chamoli (30 percent). In the plain districts, the share of respondents who identified themselves in the NEET/unemployed category was relatively lower. For instance, in Dehradun, US Nagar and Haridwar, the respondents who reported to be in the NEET/Unemployed category was 18, 21 and 23 percent respectively.

Figure 22 Respondent's Current Status by Gender



3.3. Economic Activity of Respondents

Over 42 percent of the total respondents reported to have been ever engaged in work or economic activity. However, only 32 percent of the respondents were presently engaged in work. Among those engaged in economic activity, the median monthly income was ₹14,595. While the median monthly income among females was ₹12,866 per month, among males, it was ₹14,758. Over 65 percent of the female respondents engaged in economic activities earned ₹15,000 per month or less indicating that they were either engaged in low skilled jobs or the employers were not willing to pay/ paying for their skills.

Figure 23 Monthly income of Respondents (INR) by Sex

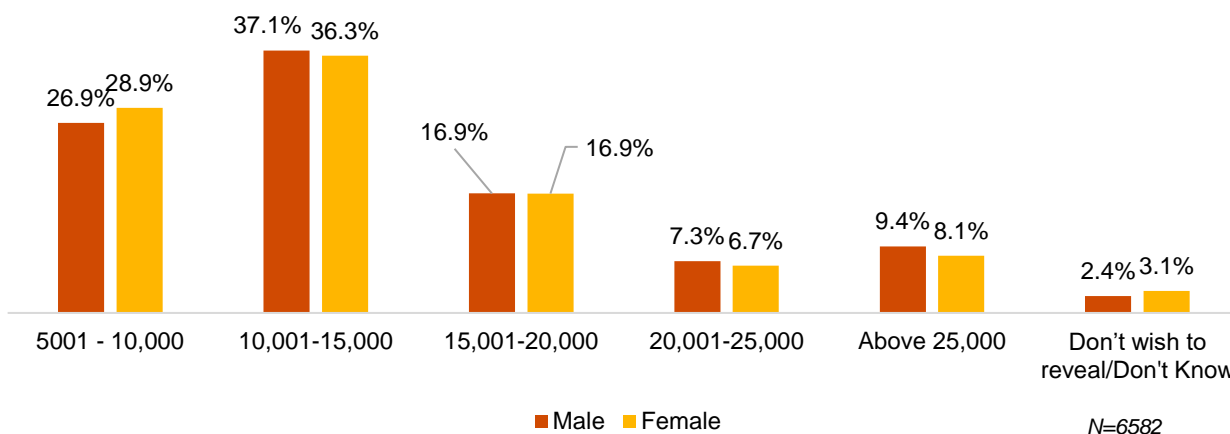


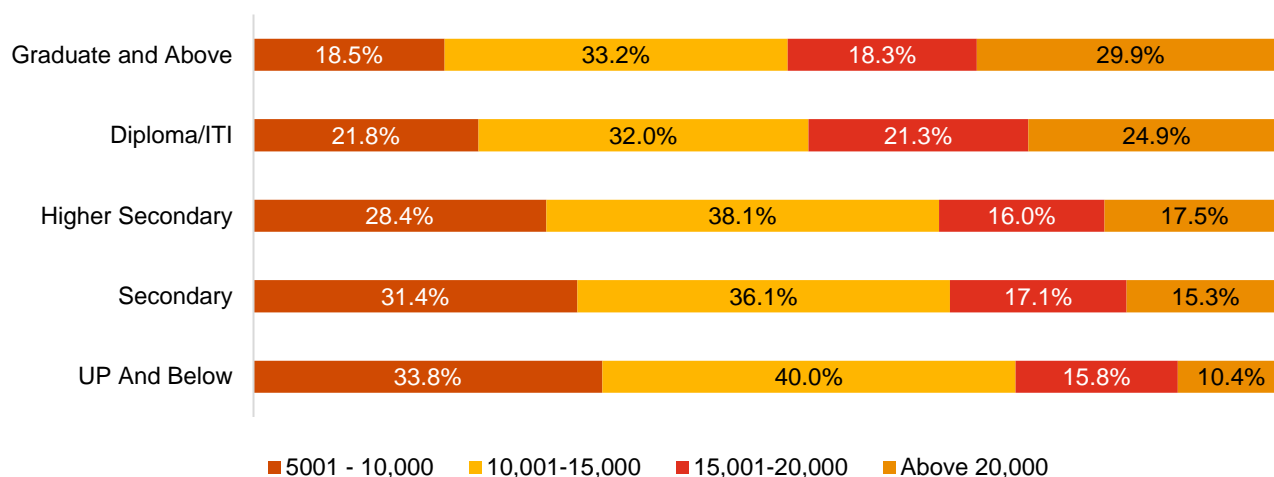
Table 16 Median Income by education Level

Education Level	Median Monthly Income
UP and Below	₹11,904
Secondary	₹12,324
Higher secondary	₹12,635
Diploma/ITI	₹14,285
Graduate and Above	₹14,575

There is a positive relationship between education qualifications and incomes. However, the difference between the median income of the respondent with education level of upper primary and below (₹11,904) and the respondent with at least a Graduation (₹14,575) is only ₹2,671 per month. It is observed that 72% of respondents engaged in economic

activity and with at least a graduation level education earned less than ₹15,000 a month. Though graduates do increase their incomes with experience, most of them continue to earn less than ₹15,000 per month even after 3-4 years of experience. The median income (₹14,575 per month) is not substantially larger than the income Diploma / ITI holders (₹14,285). This indicates that higher levels of education alone aren't translating into substantial differences in income among the youth.

Figure 24 Distribution of Income Categories by Education Level



There is a trend of increasing formalisation in jobs with increased education qualification, with 60% of the graduates employed in wage / salaried employment vis-à-vis 26% of respondents with higher secondary qualification. However, around one-fifth of the 'Graduates and above category' are engaged in agriculture and unskilled labour. This further indicates that, there is substantial scope in providing market linked skill development programs even among respondents with higher education qualifications.

Table 17 Education Qualification of Wage employment respondents and Employment Type

Employment Type \ Qualification	Upper Primary and Below	Secondary	Higher secondary	Diploma/ ITI	Graduate and Above	Total
Unskilled work (MGNREGA, construction labour, mining, brick kiln, household, etc.)	69.5%	59.3%	53.4%	27.6%	22.4%	52.0%
Skilled worker (tailor, mason, electrician, plumber etc.)	12.8%	12.0%	9.2%	6.9%	5.2%	9.9%
Salaried Employment (teacher, government official, etc.)	10.4%	19.6%	26.2%	48.3%	60.4%	28.2%
Manufacturing	0.5%	1.4%	2.4%	3.4%	2.2%	1.6%
Others	6.8%	7.7%	8.8%	13.8%	9.7%	8.3%
Total Respondents for Education Qualification	384	209	294	29	268	1,184

3.4. Responses of candidates belonging to Not in Education Employment or Training (NEET) category

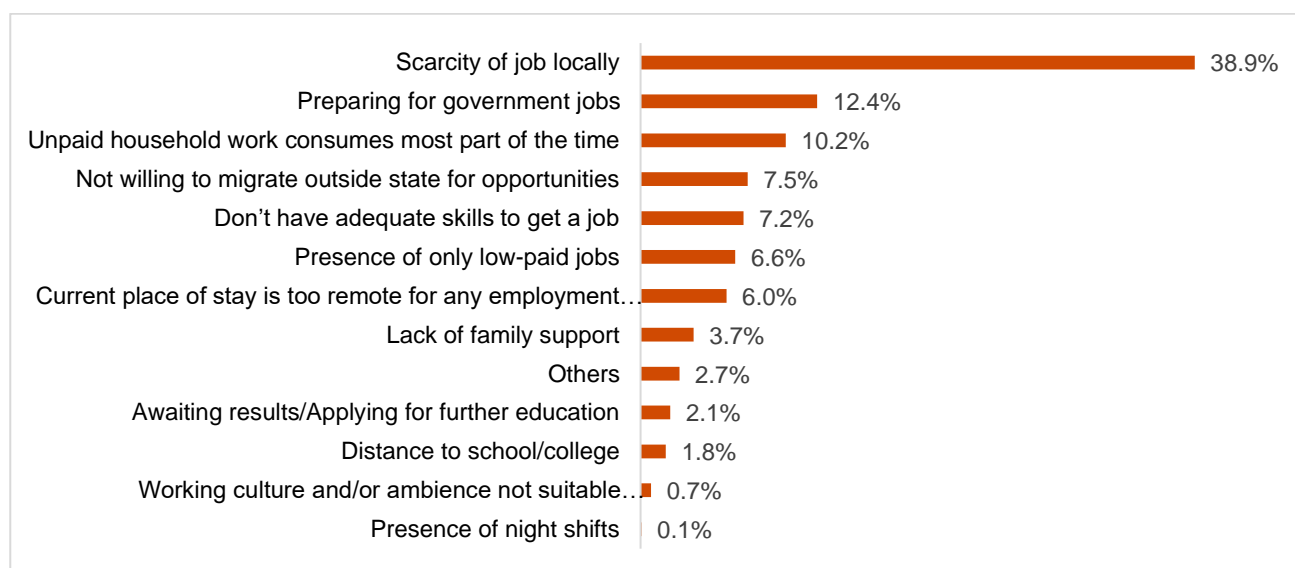
More than one-fourth of the respondents (28 percent) were from the NEET category. Among all the females, 30% were in NEET category. As for all the males who were surveyed, 27 percent were in NEET category. About 57% of the female respondents in the NEET category had been out of economic activity or education for more than 2 years compared to 39% of the male respondents. Over 39% of the respondents in the NEET category were between the ages 20-24 years while 33% are between 25-29 years.

Table 18 NEET Category Respondents

Duration in NEET Category				Wish to Work			
	Female	Male	Total		Female	Male	Total
Less than 6 months	6.6%	8.8%	8.0%	Yes	91.8%	95.8%	94.3%
6 months- 1 year	16.0%	27.8%	23.5%	No	8.2%	4.2%	5.7%
1- 2 years	20.5%	24.4%	23.0%	Total	682	1,181	1,863
2- 3 years	16.0%	13.1%	14.2%	Actively Seeking Work			
3- 4 years	8.2%	7.1%	7.5%	Yes	76.2%	91.4%	86.0%
4-5 years	7.2%	4.8%	5.7%	No	23.8%	8.6%	14.0%
More than 5 years	25.5%	14.0%	18.2%	Total	626	1,131	1,757
Total	682	1,181	1,863				

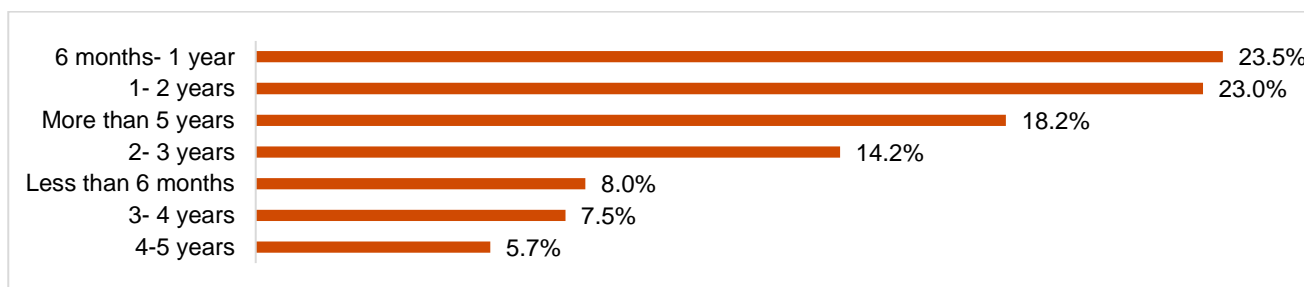
Scarcity of local jobs was the major reason (about 39 percent cited) for being in the status of NEET. Apart from that, there were multiple other reasons for being in the NEET category. Some respondents fall under this category since they were preparing for the government jobs or are involved in the household work, which did not pay them. 7.5 percent mentioned that they were not willing to migrate outside the state for job opportunities, 7.2 percent responded that they do not have adequate skillset to get a job and 6.6 percent responded that the jobs are of less pay. In case of females, lack of family support, working culture or presence of night shifts were the reasons for being in NEET category and for those whose family allow them to work are looking for job in their current location only.

Figure 25 Reason for being in NEET category



Only 36.1 percent of the NEET category respondents cited that they have worked in past. Among those who had not worked in the past, 34 percent said that they tried to find a job in past, 6.1 percent said that they tried to look for training opportunity to make themselves employable and remaining 59.9 percent respondents had made no efforts for working.

Figure 26 Duration of being in NEET category



Among the respondents who reported that they had worked in the past, 8 percent reported that they were not working for about 6 months, 23.5 percent were not working for past six months to one year and 23 percent were not working for past one year to 2 years. 18 percent respondents had not worked for more than 5 years.

Figure 27 Duration spent in looking for job



94.3 percent of the NEET category respondents expressed their interest in working again and 86 percent were actively looking for job. Upon asking that for how long they have been looking for job, about 74 percent responded that they were looking for job for more than a year now. However, 12.1 percent responded that they started looking for job over the last 6 months and last year, each.

3.5. Career Aspirations among the Youth

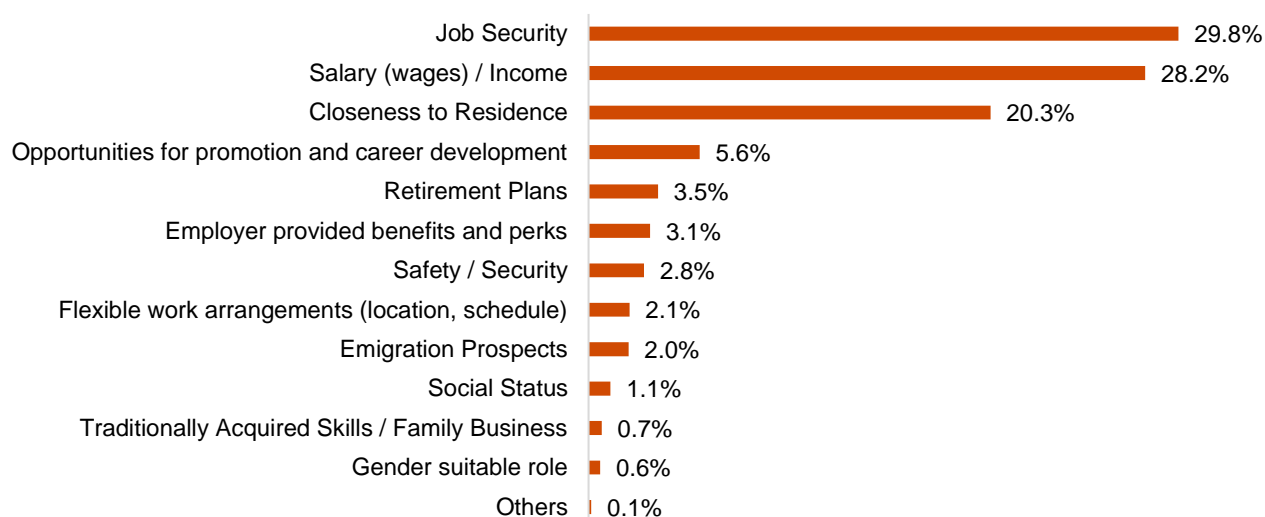
The respondents expressed their interest largely (47.8 percent) for salaried employment in public sector while 18.5 percent expressed their interest of working in private sector. A substantial number of respondents (32 percent) showed interest in doing their own business.

Table 19 career aspiration among youth

Career Aspirations among youth	Male	Female	Total
Self –employment	31.9%	24.0%	29.2%
Entrepreneurship	3.2%	2.0%	2.8%
Wage/Salaried employment with Private Sector	19.0%	17.3%	18.5%
Wage/Salaried employment with Public Sector	44.7%	53.7%	47.8%
Multiple part-time	0.6%	2.1%	1.1%
Others	0.5%	0.9%	0.6%
Total	100.0%	100.0%	100.0%

The key factors determining their career aspirations were job security (29.8 percent), good income (28.2 percent) and job location close to hometown (20.3 percent). Opportunity for career development, retirement plans, employee benefits, safe working conditions during job, flexible working conditions, emigrations prospects, social status were some of the other factors determining the career aspirations among respondents.

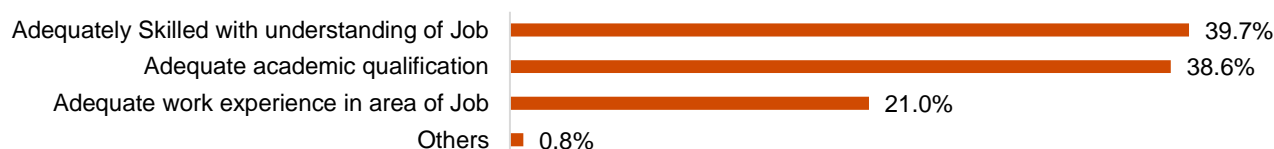
Figure 28 Factors determining career aspirations



***Multiple Choice Question, Respondents may add up to more than 100 per cent.*

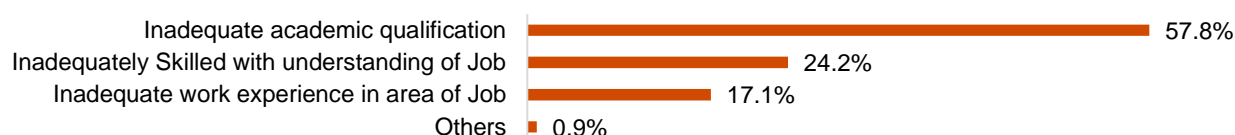
42.4 percent respondents felt that they were prepared for their ideal work. They mentioned that the reasons for being prepared are adequate work experience, adequate academic qualification, and adequate skills with an understanding of job.

Figure 29 Reasons for feeling prepared for the job



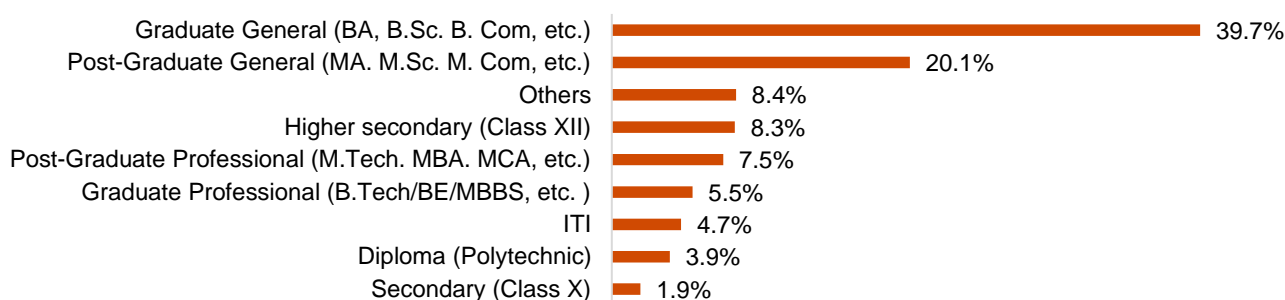
7.9 percent respondents felt that they were moderately prepared, 8.5 percent felt that they were somewhat prepared, and 16.3 percent felt that they were largely prepared for their ideal job. **21.4 percent responded that they did not feel prepared for their ideal work.** They mentioned that inadequate academic qualification, inadequate skills, and work experience in the job are the reasons for not feeling prepared.

Figure 30 Reasons for not feeling prepared for the job



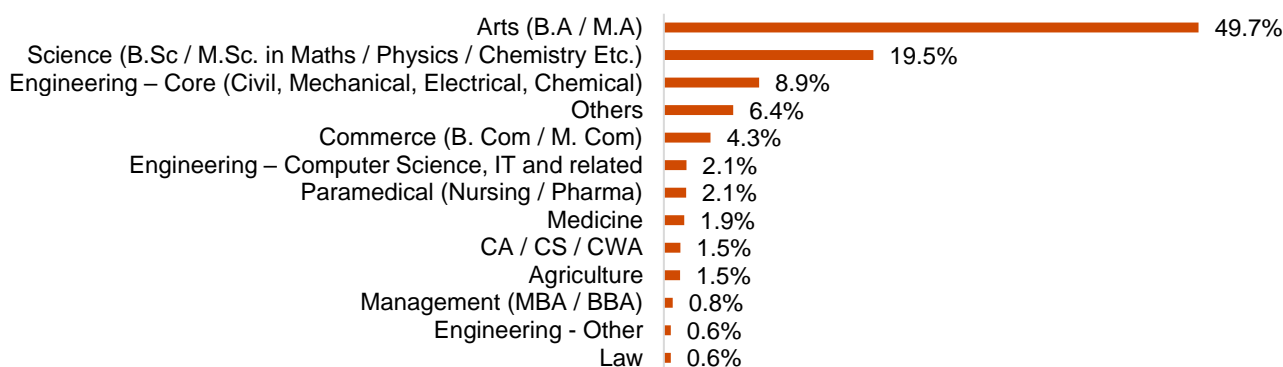
35 percent respondents were interested to study beyond their present level of education. Among those who were interested in further studies, 40 percent of the respondents were interested in doing general graduation and 20 percent were interested in general post- graduation as their highest education degree. 7.5 percent and 5.5 percent were interested in doing professional post-graduation and graduation respectively.

Figure 31 Highest level of education the youth of state hope to attain



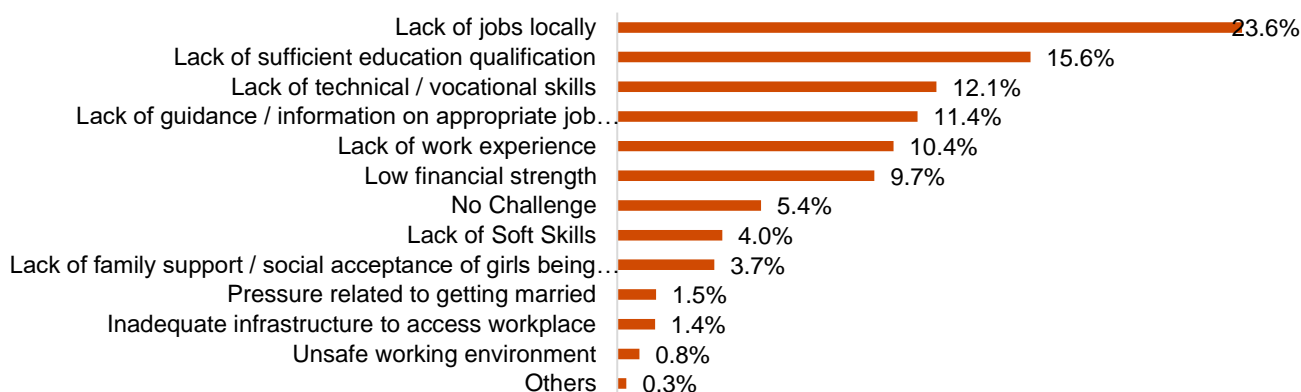
Majority of the respondents want to pursue their studies in the field of arts (49.7 percent) followed by science (19.5 percent) and engineer (8.9 percent). The below figure demonstrates the area of interest for respondents.

Figure 32 Interest area of studies of the candidate



Lack of availability of job locally was mentioned as the biggest challenge in finding or doing ideal job. Other reasons were lack of sufficient education (15.6 percent), lack of technical/vocational skills (12.1 percent), lack of guidance on job availability for appropriate skill levels (11.4 percent), lack of work experience (10.4 percent), etc. as shown in below figure.

Figure 33 Challenges faced in finding ideal job

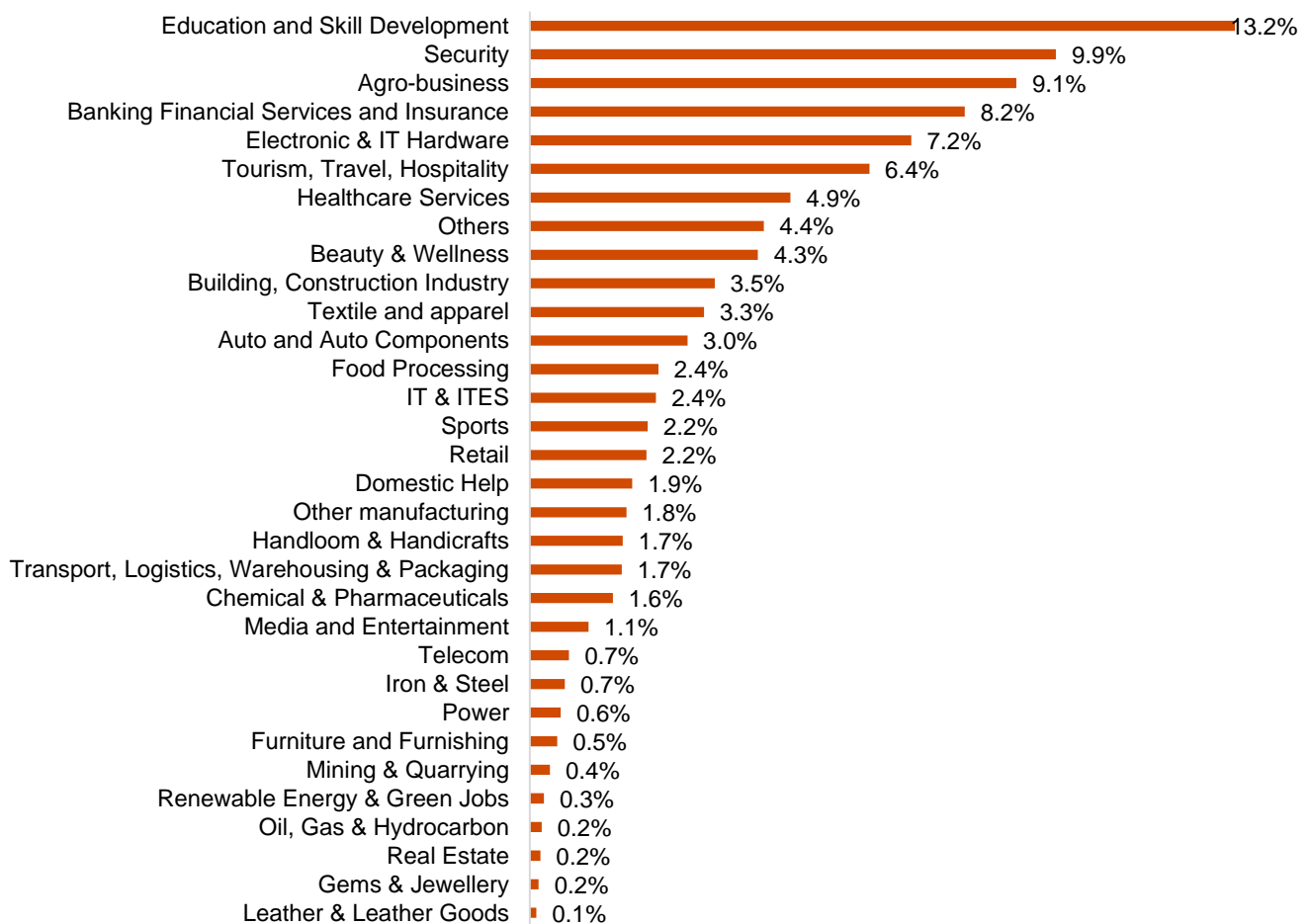


41 percent respondents believed that they could achieve their career goals by continuing their education while 30 percent felt it can be achieved by vocational/ skills training and 20 percent felt it can be achieved by apprenticeship training or work experience.

Education and skill development was the priority sector to work among the respondents of Uttarakhand. Other priority sectors cited are security, agro-business, banking financial services & insurance, electronic & IT

hardware, tourism & hospitality and healthcare services. Below figure demonstrates the percentage wise preference of sectors.

Figure 34 Priority sectors among respondents.

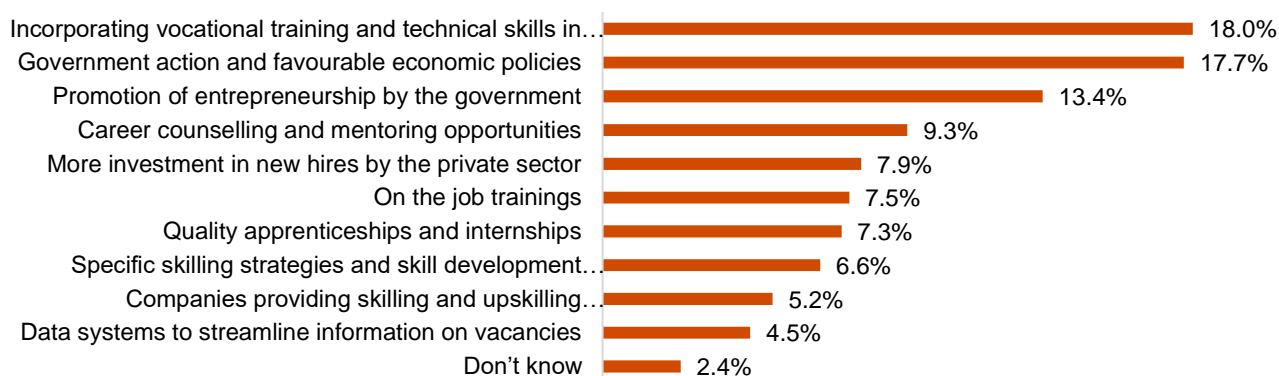


Internet and online job platforms (30 percent) were the most frequently used sources to look for job opportunity. The other modes were through friends & peers (24 percent) and newspaper (24 percent). Most of the respondents were not aware of the career counselling services. While taking counselling services candidates primarily wanted advice on how to look for a job or how to get a desirable job and guidance on applying for training programs. **About 65 percent respondents expected salaries more than INR 20,000 per month.**

Responding to the willingness to work in the gig economy, 71 percent has not shown interest, about 20 percent has shown interest and about 10 percent has chosen not to respond. Those who have shown any interest to work as a gig worker (ola/uber/Zomato/etc.), wanted to pursue that because of lack other opportunities, it can add on the income, requirement of less education qualification.

Incorporating vocational training and technical skill in school curriculum; Government action and favourable economic policies are the most cited ways to address the mismatch between youth aspirations and job market realities. Apart from this, the respondents expressed their views on Government promoting entrepreneurship and career counselling or mentoring to make them ready for job. The figure below presents some of the steps that can be taken to make the youth employable.

Figure 35 Steps to address the mismatch between youth aspirations and job market realities



3.6. Skill training awareness and preferences

Only 38.8 percent of the respondents were aware about the skill development training programmes conducted by Government. The table below illustrates the responses captured when they were asked regarding different skill development programmes or schemes or institutions.

Table 20: Awareness of skill development schemes among youth of Uttarakhand

Are you aware of the following programme / schemes?	Yes	No
Uttarakhand Skill Development Mission (UKSDM)	26.3%	73.7%
Rural Self Employment Training Institutes (RSETI)	33.2%	66.8%
National Urban Livelihoods Mission (NULM)	15.9%	84.1%
Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY)	22.6%	77.4%
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) / National Skill Development Corporation (NSDC)	41.2%	58.8%
Craftsman Training Scheme (CTS) / ITIs	35.0%	65.0%
Apprenticeship Training Scheme (ATS)	15.0%	85.0%
Any Other	0.8%	99.2%

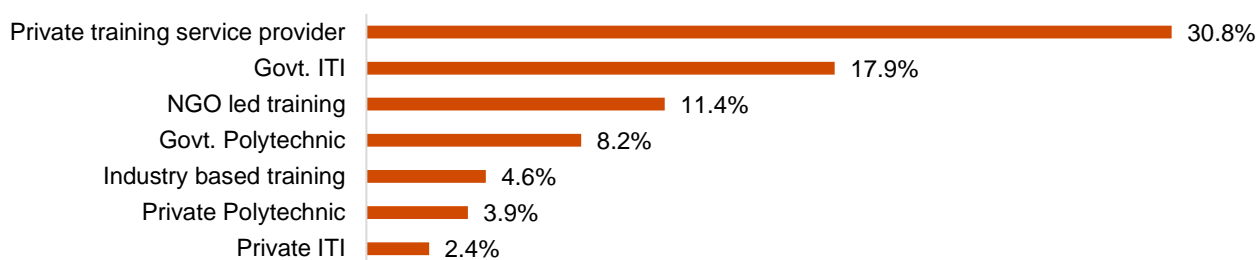
14.4 percent respondents have undergone any type of training in the past. Among those who have undergone any type of training, 86 percent had received formal vocational training; 7.6 percent had learned on the job; 5 percent had non-formal training (hereditary or self-learning) and 1.5 percent had both formal and non-formal training. Below figure shows the type of training the respondents had undergone in past.

Figure 36 Type of training undergone by the candidates



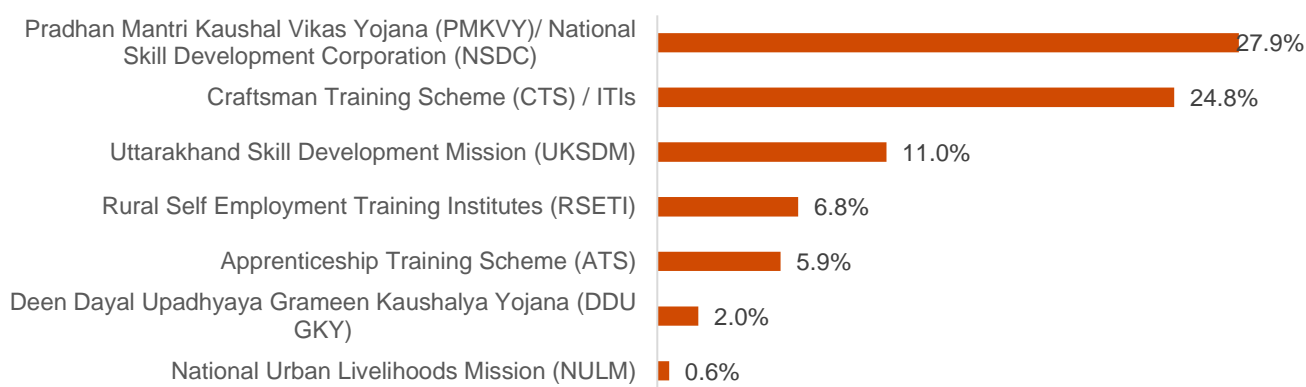
The respondents who had undergone formal training have taken it mostly from the private training service provider (30.8 percent) followed by Government ITI (17.9 percent), NGO led training (11.4 percent) and others.

Figure 37 Nature of the training provider



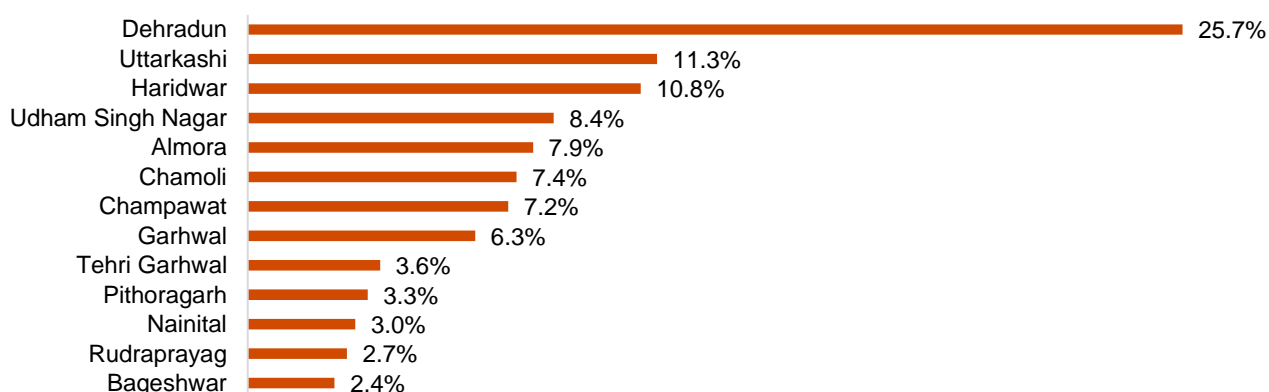
40.3 percent responded that the courses delivered were under some Government scheme. Among those who have undertaken courses under some Government scheme, 27.9 percent reported that they had undergone training under PMKVY scheme followed by CTS scheme (24.8 percent), UKSDM (11 percent) and others like RSETI, ATS, DDU-GKY, NULM.

Figure 38 Government schemes under with youth undergone training



Of all the training centres under different Government schemes, 76.3 percent training facilities were non-residential, 20.6 percent were residential and 3.1 percent training facilities were both residential and non-residential. Maximum centres were in Dehradun followed by Uttarkashi, Haridwar, U. S. Nagar and others. Below figure shows the spread of the training centre across different district.

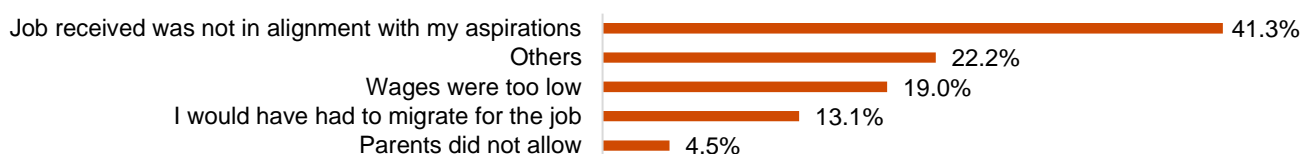
Figure 39 Spread of training centre across different location of Uttarakhand



85.5 percent respondents were satisfied by the training they had received, and 3.6 percent reported that they were highly satisfied. More than 50 percent of the respondents paid for their own training. Of those who had paid for their training, 91.8 percent said that they completed the training. 21.7 percent respondents had got job offer after completing training. Of those who had got job offer, 32.8 percent reported that they joined the job. Among

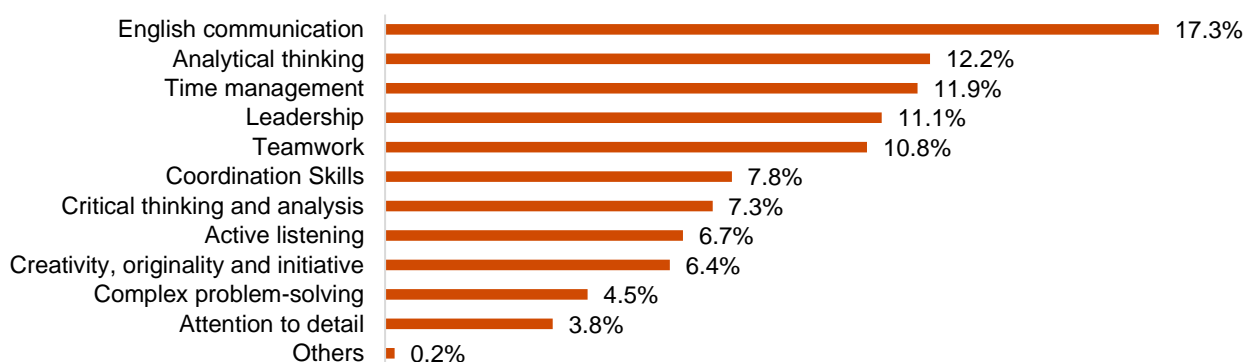
those who had not joined, 41.3 percent reported that the job received was not in alignment to their aspirations. Below figure shows the key reasons for not joining job.

Figure 40 Reasons for not joining job



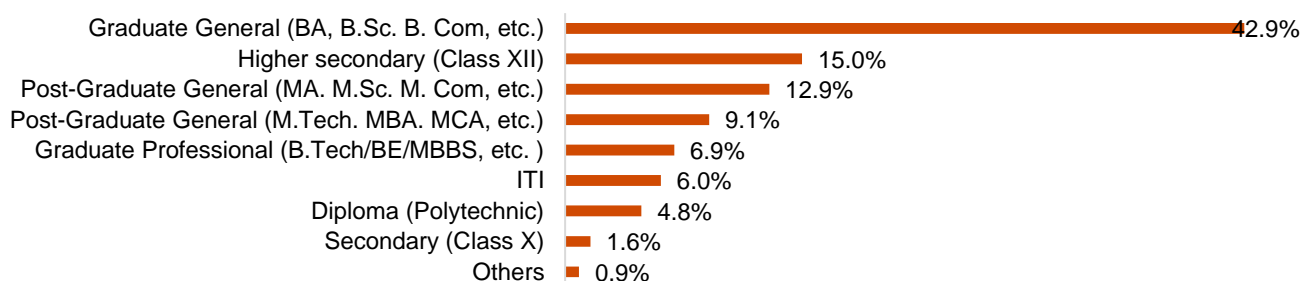
Respondents felt that level of education, years of work experience and certification of technical skills are the most important when an employer select their employee. Below figure shows the skills cited by the respondents as important to get the job of their wish.

Figure 41 Skills important for getting aspired job



More than 50 percent of the respondents reported that graduation or above level education is important for getting a decent job now a days. 42.9 percent reported that general graduation is sufficient while 15 percent said that higher secondary was required. Below table represents the level of education respondents felt are necessary for getting a decent job.

Figure 42 Level of education necessary to get decent job

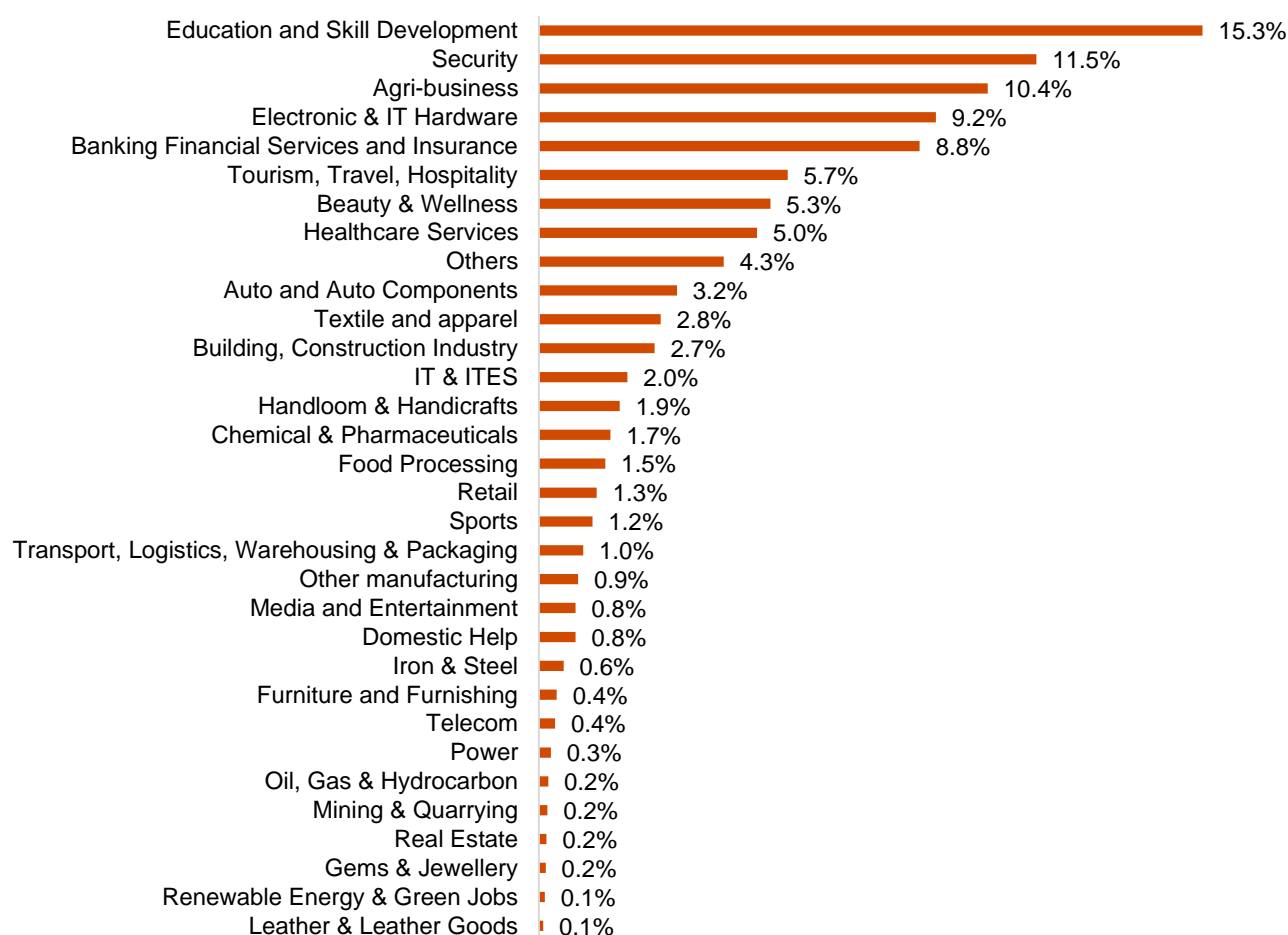


77.3 percent respondents were willing to participate in training to get their desired job or to enhance their skills for better employment prospects. Following figure shows the sectors preferred by the respondents in getting skill training for job prospect. Females were more willing to participate in training than males.

Table 21 Willingness to participate in training

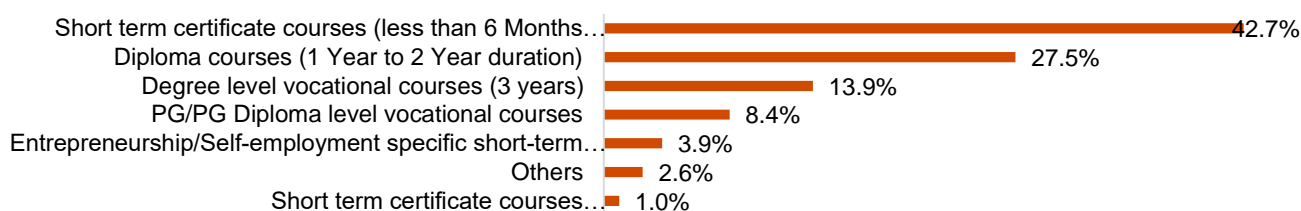
Willingness to participate in training	Male	Female	Transgender	Total
Yes	75.2%	81.5%	0.0%	77.3%
No	24.8%	18.5%	100.0%	22.7%
Total	100.0%	100.0%	100.0%	100.0%

Figure 43 Sectors preferred for skill training



Among those who wanted to undertake skill training, 42.7 percent respondents were looking for short term training courses, while 27.5 percent were looking for diploma courses of 1-2 years duration. Following table shows the skill training types preferred by the respondents.

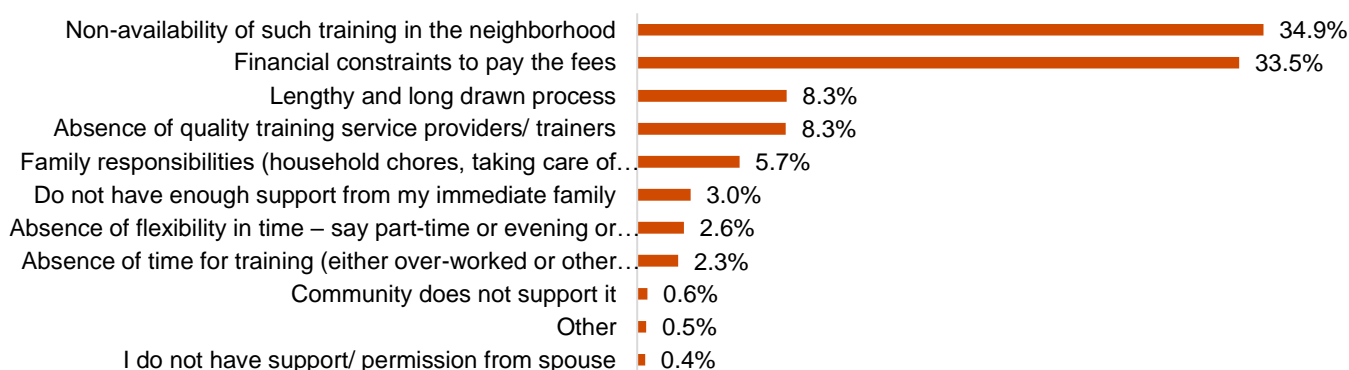
Figure 44 Skill training types in which candidates are interested



Among the respondents who are interested in taking skill training, 65 percent were interested in full time skill training and 55 percent preferred residential training over non-residential training due the challenges

in travelling daily to the training centres. The below figure mentioned the major challenges that stopped respondents from undergoing training programme. For female family responsibilities were the major constraint which stops them to come for training.

Figure 45 Major challenges/ constraints stopping candidates from joining skill training program



The reasons for disinterest in coming for training were lack of time, financial constraints to pay for fees, unable to see value addition of training in getting job, household chores, lack of support from family and community.

Those who were interested in training mentioned that content of the training is the most important aspect of learning along with quality of training or training delivery methodology and practical exposure while training. The brand value of certifying body and the training agency was given importance post the above-mentioned aspects.

3.7. Migration Trend

Preference for migration

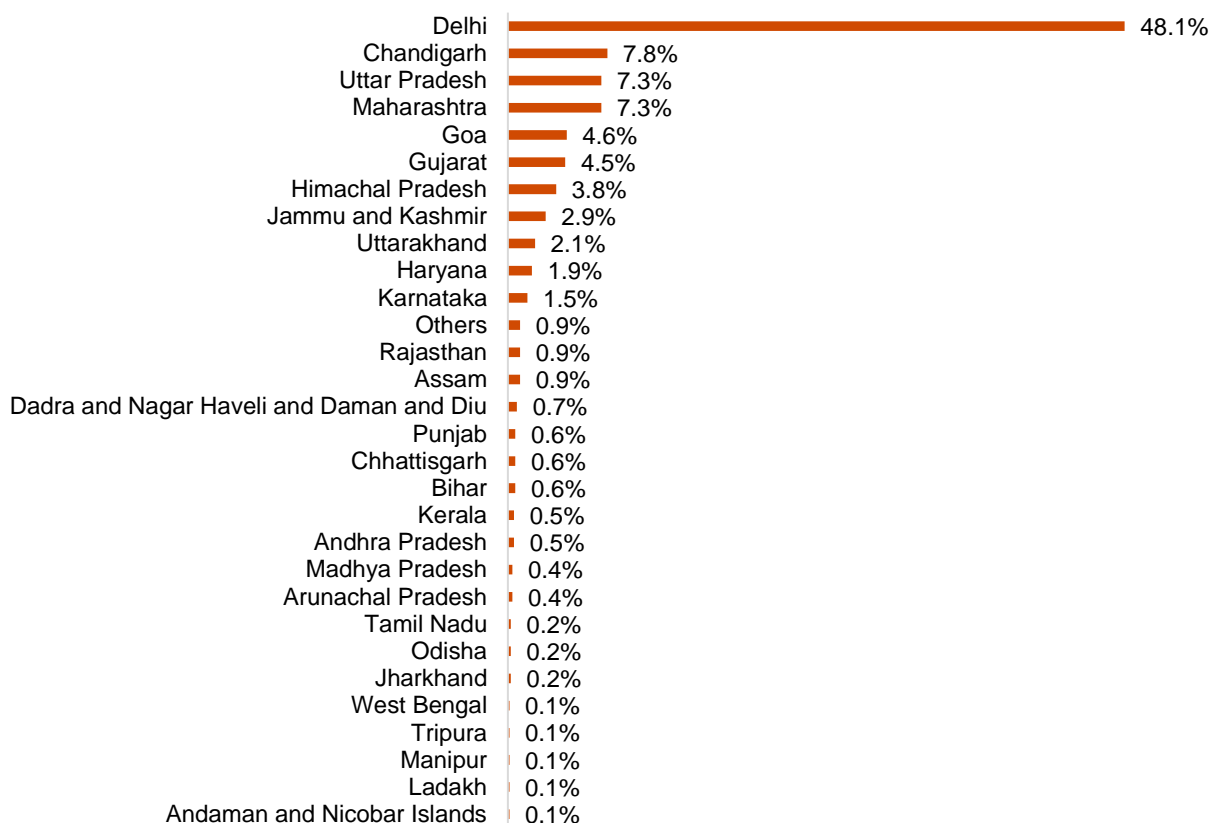
Majority of respondents were willing to stay in their hometown provided they had ample job opportunities. 55.7 percent responded that they wanted job within their district and 29.3 percent responded they wanted to do job anywhere within f. 12.9 percent of the respondents agreed that they could go for job anywhere within India and only 2.1 percent said that they could go outside India in search of job.

Table 22 Willingness to migrate

Willingness to migrate	Male	Female	Transgender	Total
No, I want job within my district	50.8%	65.3%	0.0%	55.7%
Yes, outside my native district but within Uttarakhand	30.0%	27.8%	100.0%	29.3%
Yes, outside Uttarakhand but within India	16.5%	6.0%	0.0%	12.9%
Yes, Outside India	2.7%	1.0%	0.0%	2.1%
Total	100.0%	100.0%	100.0%	100.0%

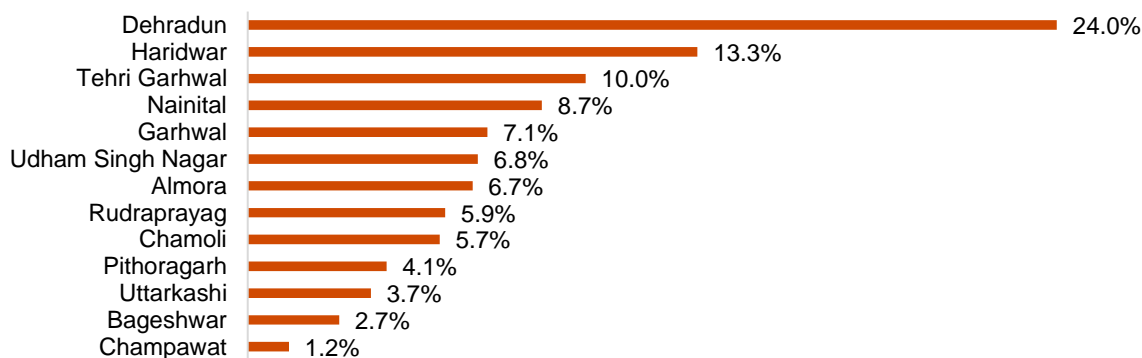
Of those who were ready to migrate to other states for job, Delhi was the most preferred district for migration, 48.1 percent respondents wanted to migrate to Delhi in search of job. Chandigarh, Uttar Pradesh, Maharashtra, Goa and Gujarat are some of the other preferred stated where respondents were willing to migrate. Below table mention the states which are preferred by the respondents for migration.

Figure 46 State preference for migration



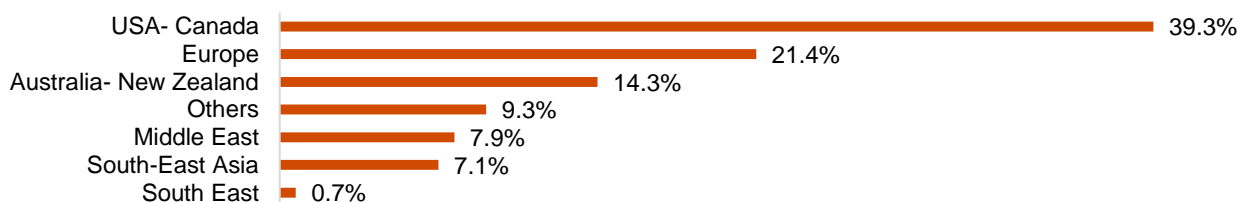
Those who were willing to migrate within the state, had preferred Dehradun (24 percent), Haridwar (13.3 percent), Tehri Garhwal (10 percent) and Nainital (8.7 percent) the most. Following figure shows the district preferences where the respondents were willing to relocate for job.

Figure 47 Preferred districts within state for migration



Among those who were willing to migrate to other countries, 39.3 percent preferred USA-Canada, 21.4 percent preferred Europe and 14.3 percent want to move to Australia- New Zealand. Due to ongoing COVID pandemic, majority of respondents reported that they or their family members had not migrated for job.

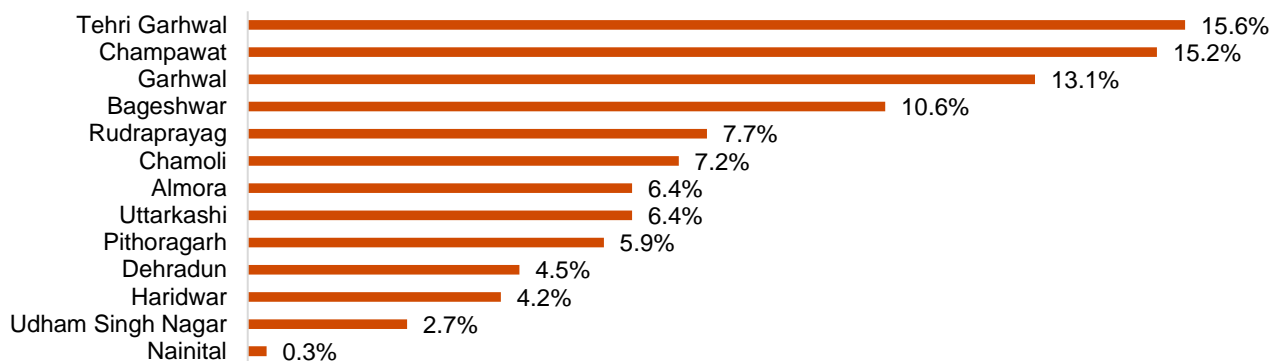
Figure 48 Preference of migration outside India



Migration status in last one year

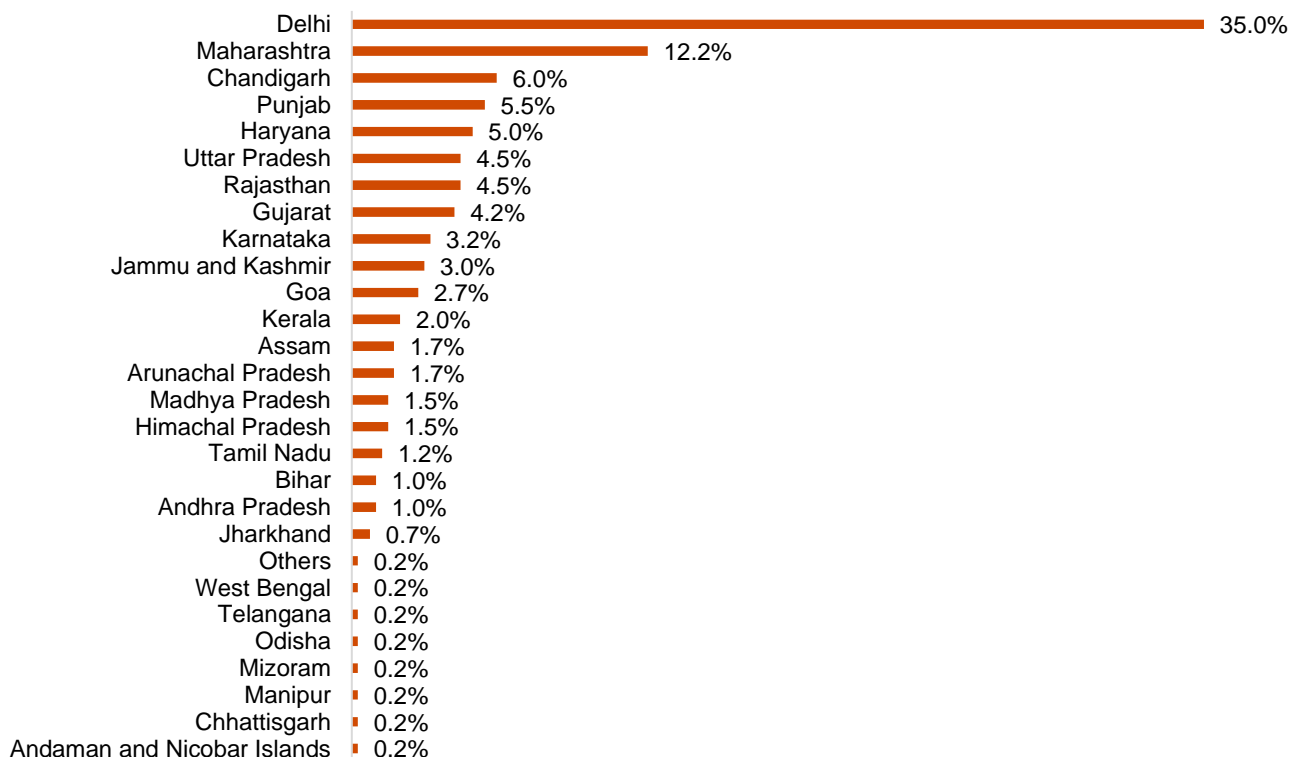
Of those who have migrated, only 9.7 percent said that their family members had migrated in search of job and out of which 92.6 percent said that the person has migrated alone in search of job. Top five districts from where the migration happened was from Tehri Garhwal (15.6 percent), Champawat (15.2 percent), Garhwal (13.1 percent), Bageshwar (10.6 percent) and Rudraprayag (7.7 percent).

Figure 49 Districts from where the migration happened



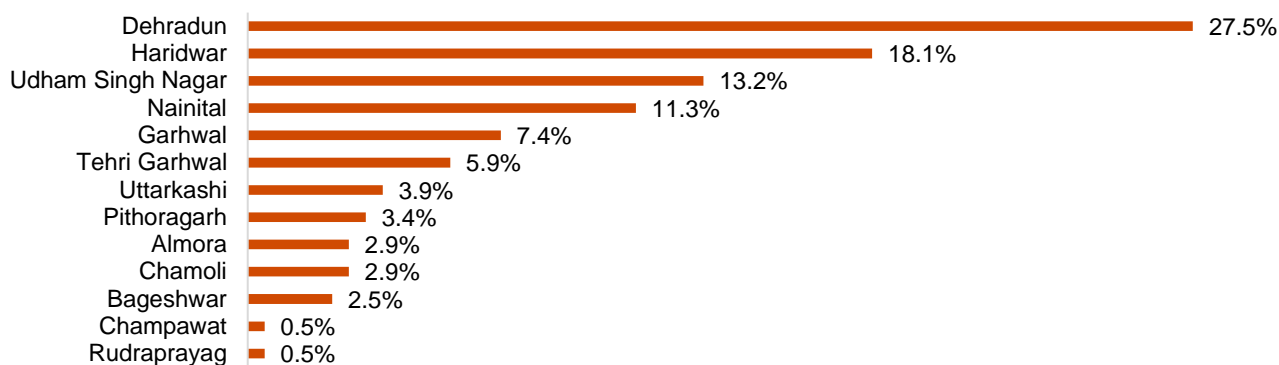
Among the persons who have migrated, 63.1 percent had migrated to other states in India, 31.9 percent migrated to other districts within Uttarakhand and 5 percent migrated to other countries in past one year. Delhi accounted for maximum migration (35 percent) followed by Maharashtra (12.2 percent), Chandigarh (6 percent), Punjab (5.5 percent), Haryana (5 percent) and others.

Figure 50 Migration within India



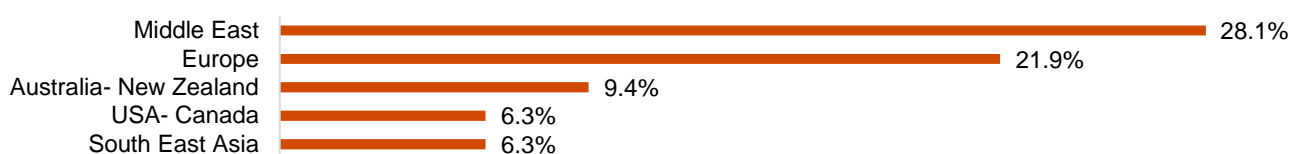
Out of those who had migrated within state in search of job, 27.5 percent migrated to Dehradun, 18.1 percent to Haridwar, 13.2 percent to U S Nagar and 11.3 percent to Nainital in search of job. Below figure lists the districts where the respondents have migrated within district in search of work.

Figure 51 Migration within State



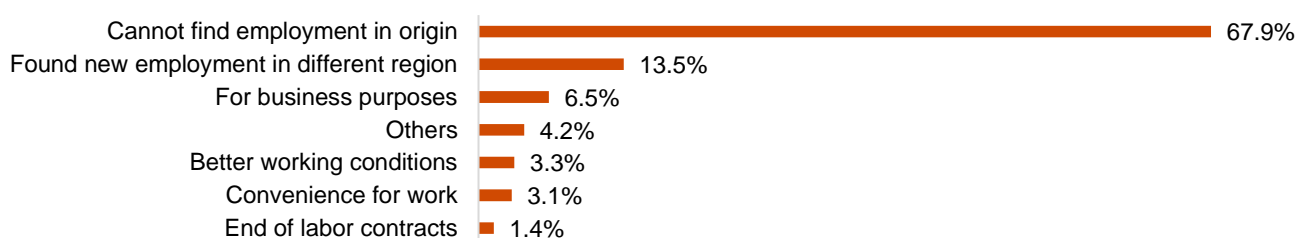
Among the 28.1 percent of the respondents who have migrated outside India went to middle east, 21.9 percent went to Europe and rest went to Australia- New Zealand, USA- Canada and South East Asia.

Figure 52 Migration outside India



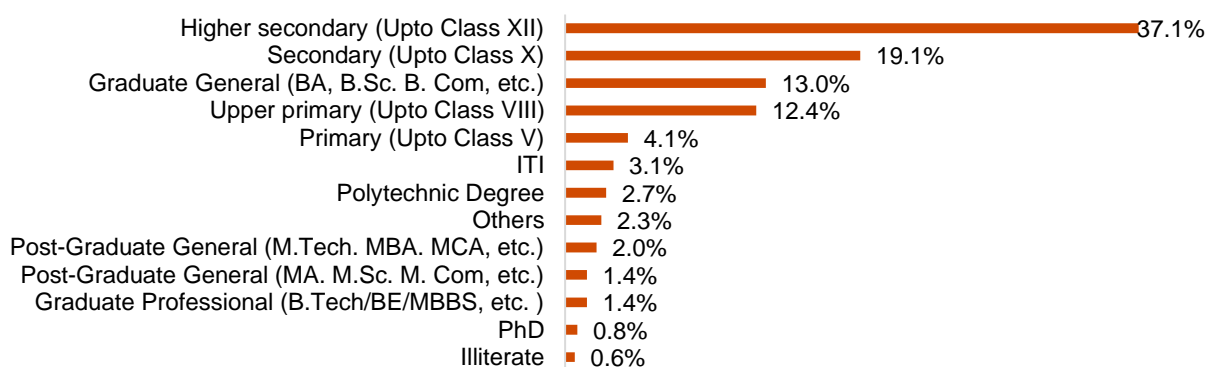
The respondents reported that the reason for migration was unavailability of local opportunities. Key reasons for work related migration were unable to find employment in hometown (67.9 percent), got employment in different region (13.5 percent), business purpose (6.5 percent) and better working condition (3.3 percent).

Figure 53 Reasons for work related migration



Majority of person who had migrated have education up to higher secondary (37.1 percent). Following figure shows the education level of the respondents who have migrated.

Figure 54 Highest education level of migrated persons



77.5 percent responded that they received financial help from the person who had migrated. The major reasons for receiving the remittance were for daily expenses mostly (44.1 percent), healthcare expenses (26.2 percent) and cost of education (22.7 percent). 24.8 percent said that they had received more than INR 50,000 remittance from the person who has gone outside for work.

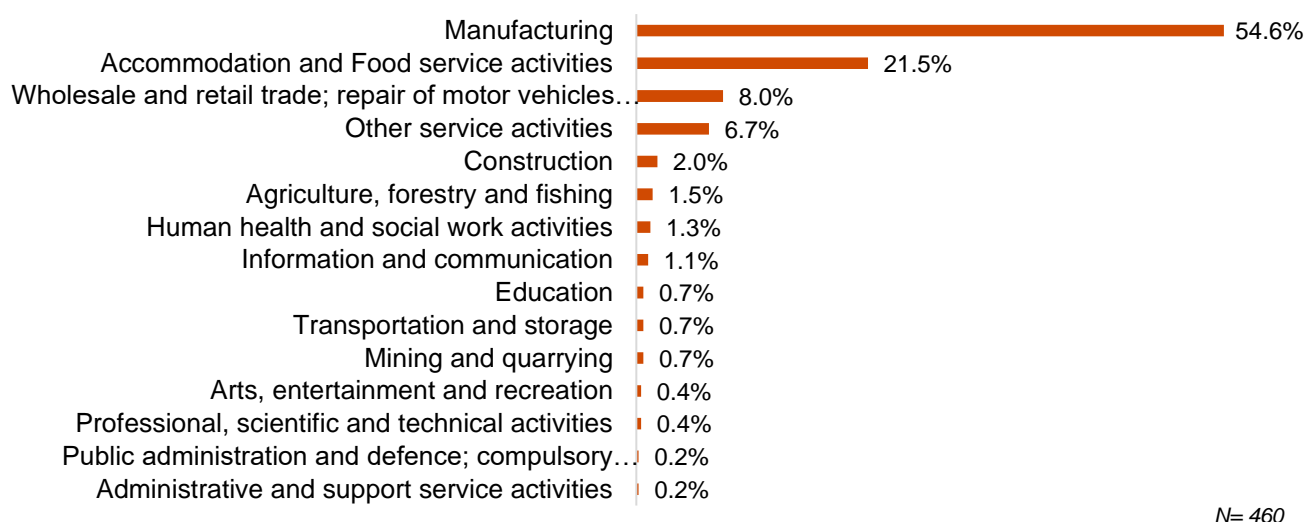
4. Employer's Perspective

4.1. Overview: Coverage Details

The Employer Survey was conducted to provide a comprehensive source of intelligence to Department of Rural Development, Government of Uttarakhand as part of the Skill Gap Study on skill challenges that the employers face. These challenges range in different aspects for these employers such as recruitment, the various problems faced within the existing workforce, the levels and nature of investment in training and development, and the relationship between training activity, skills challenges and business strategy. This survey will further help us to grasp and make a sense of the existing and upcoming labor demand side requirement of the state.

As per our sampling, 460 industries in Uttarakhand state and 40 in Delhi-NCR region- a total of 500 industries were surveyed. The quantitative questionnaire (tool) was piloted in advance before the commencement of the survey. The feedbacks received in our pilot survey were incorporated before finalization of the questionnaire. The final questionnaire was developed to help field investigators collect data in both online and paper format. The online questionnaire was prepared using Qualtrics XM software which used a survey link to enter data and was accessible in all devices (smartphones/ laptops/tablets). The field investigators were trained in a day-long training session to develop an understanding of the modus operandi- which was to enable them to expedite the survey, keeping the scientific nuances in check and to help them maintain the confidentiality and integrity of the data collection process. The survey rounds started in the last week of October, 2020.

Figure 55 Share of broad sector coverage of the survey



In our survey in the Uttarakhand state, **13 percent of the industries covered were Large scale industries, 25 percent of the industries covered were Medium scale, 32 percent of the industries covered were small scale while the remaining 30 percent were Micro scale industries.** The pre-condition set for employers was that they must have at least 5 employees working within their fold. The **average years for these establishment was around 10 years.** Broad array of sectors was covered such as - Agriculture, Manufacturing, Constructing, Wholesale and Retail trade, Accommodation and Hospitality, Human Health, Information and Communication, Education among others. **55 percent of the industries covered under this survey were from the Manufacturing sector while 45 percent were from the Service sector.** These broad sectors typically employ skilled workforce in our economy. Both Manufacturing and Services sector are further divided into subsectors based on their **NIC (National Industrial Classification) of 2008.** These subsectors included Accommodation, Food and beverage service activities, Manufacture of food products, Manufacture of pharmaceuticals, medicinal chemical and botanical products, Manufacture of rubber and plastics products, Manufacture of electrical equipment, Wholesale and retail trade and repair of motor vehicles and motorcycle, Manufacture of fabricated metal products, Manufacture of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, Manufacture of wearing apparel, Manufacture of chemicals and chemical products, Manufacture of textiles, Manufacture of computer, electronic and optical products, Construction of buildings, Manufacture of basic metals among other subsectors. The sub-sector coverage of the survey is given in the table below.

Table 23 Share of Sub sectors covered as per NIC 2008

Sub-Sectors Covered	Share of Coverage
Accommodation	19.1%
Food and beverage service activities	17.6%
Manufacture of food products	9.1%
Retail trade, except of motor vehicles and motorcycles	6.3%
Other manufacturing	6.1%
Manufacture of pharmaceuticals, medicinal chemical and botanical products	5.7%
Manufacture of rubber and plastics products	5.4%
Manufacture of electrical equipment	5.0%
Wholesale and retail trade and repair of motor vehicles and motorcycle	5.0%
Manufacture of fabricated metal products, except machinery and equipment	4.3%
Manufacture of other transport equipment	3.9%
Manufacture of machinery and equipment	3.5%
Manufacture of motor vehicles, trailers and semi-trailers	3.3%
Manufacture of wearing apparel	3.0%
Manufacture of chemicals and chemical products	2.8%
Manufacture of textiles	2.4%
Manufacture of computer, electronic and optical products	2.2%
Construction of buildings	2.2%
Manufacture of basic metals	2.0%
Other Sub Sectors	N= 460 27.6%

***Multiple Choice Question, Respondents may add up to more than 100 per cent.*

District-wise coverage of the survey is given in the table below.

Table 24 Number of industries surveyed in each district

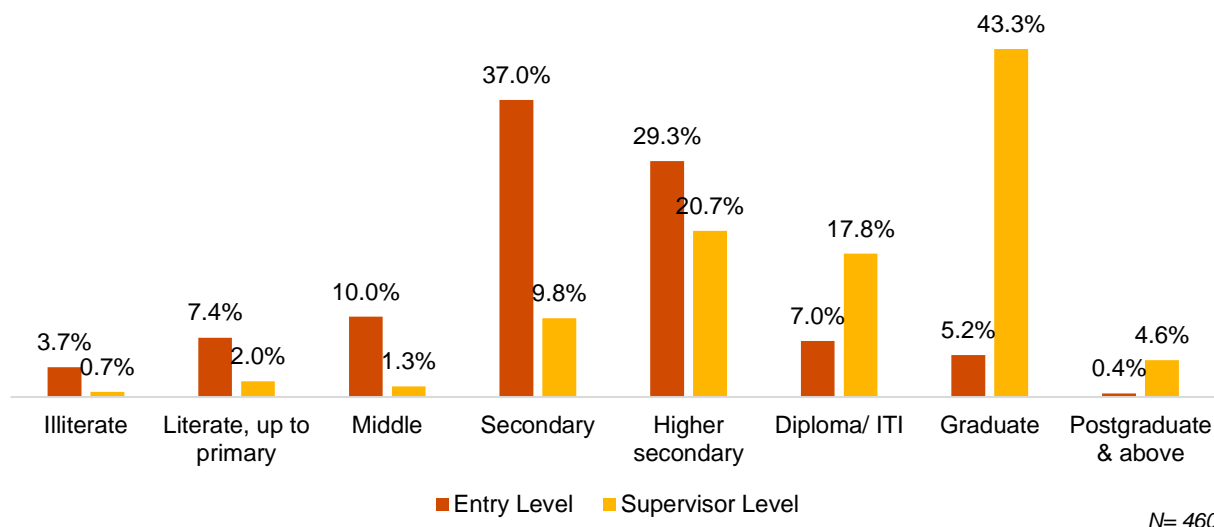
Districts Covered	Number of industries covered
Almora	19
Bageshwar	21
Chamoli	8
Champawat	20
Dehradun	43
Garhwal	22
Hardwar	106
Nainital	37
Pithoragarh	34
Rudraprayag	10
Tehri Garhwal	38
Udham Singh Nagar	75
Uttarkashi	27
Total	460

4.2. Organization and Employee Details

A typical large-scale employer employed around a median of 415 employees. A medium scale establishment employed around a median of 100 employees, 26 employees for a small-scale establishment while a median of 10 employees were employed in a micro-scale establishment. On average, 85 percent of the workforce employed at these establishments reported to be male. Sub sectors such as human healthcare services and education did report a higher female participation. Other than these two sub sectors, very limited female participation was reported to be contributing to the economic activities of the

state. **Educational qualification for entry level jobs was reported to be low, as around 90 percent of the workforce employed were less than higher secondary or less school educated.** Supervisor level jobs required both experience and higher educational qualification as around two-thirds of the workforce working as supervisors had Diploma and above level of education and training.

Figure 56 Education level of Entry and Supervisor level workforce



To understand the composition of the workforce based on their skill levels, the employers were requested to categorise their workforce in group their entire workforce into four categories namely as:

Table 25 Skill levels detail

Skill Levels	Basic Competencies
Highly skilled worker	One can work efficiently and supervises efficiently the work of skilled employees
Skilled worker	One who is capable of working efficiently of exercising considerable independent judgment and of discharging his duties with responsibility, possessing a thorough and comprehensive knowledge of the trade, craft or industry in which he/she is currently employed
Semi-skilled	One who does work generally of a defined routine nature wherein the major requirement is not so much of the judgment and skill but for the proper discharge of duties assigned to him/her, where important decisions is made by others
Unskilled worker	One who does operations that involves the performance of simple duties, which require the experience of little or no independent judgment or previous experience although familiarity with the occupational environment is required

It was reported that **around 15 percent of the workforce was Highly Skilled on average, 31 percent was reported to be skilled, 25 percent reported to be semi-skilled while 29 percent was reported to be unskilled, on an average by the employers.**

In reference to the workforce, **60 percent of the employers reported employing contractual workforce. On average, contractual employees constituted about a third of their total workforce (33 percent)** - as reported by the employers who employed contractual workforce.

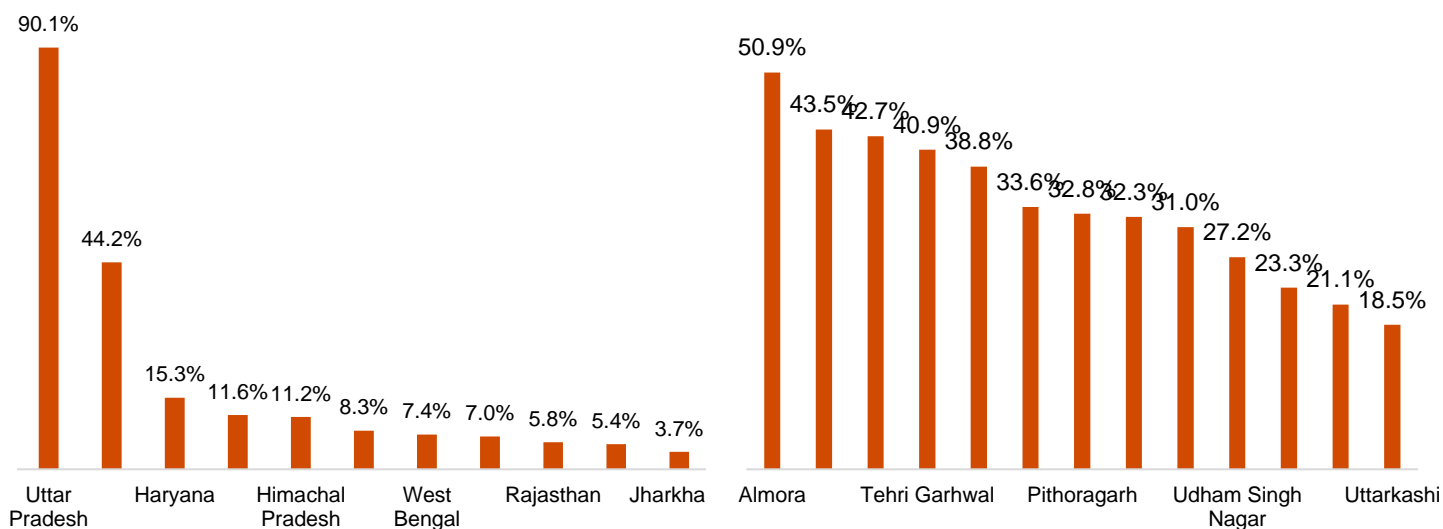
This state typically observes outmigration⁵⁹ and is not perceived as an in-migration destination from other states. Around 63 percent of the employers reported that they employed workers who were migrant (i.e., an individual from different state or a different district). **On average, migrant workforce constituted about only 40 percent of the respondents' total workforce** - as reported by the employers employing migrant workforce. Rest of the

^{**}Multiple Choice Question, Respondents may add up to more than 100 per cent.
N= 460

⁵⁹ http://nirdpr.org.in/nird_docs/srsc/srsc-rr-090518-5.pdf

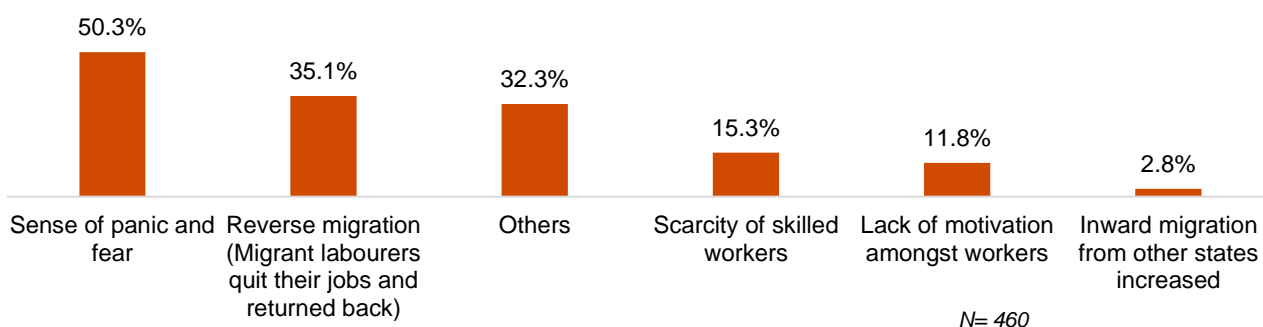
workers were sourced locally. Out of this 40 percent of the total migrant workforce, around 40 percent migrants are from other states while the rest are from the other districts of Uttarakhand. It was reported that a huge chunk of migrant workforce come from states such as Uttar Pradesh, Bihar, Haryana, Delhi and Himachal Pradesh. Border districts such as Bijnor and Rae Bareilly contributes to the in-migration. Further, districts such as Almora, Dehradun, Pauri Garhwal are the largest contributors to the inter-district migrants for the state.

Figure 57 Migrant workforce from different states and districts



COVID-19 pandemic brought about a logistical as well as human resource procurement challenge as the operations were severely affected the employers reported that employees had great apprehension about their personal well-being which led to a sense of panic and fear. Many employers noted that their workers, both migrants and local, returned to their native places as the operations were brought about a screeching halt at end of March 2020. Many employers had experienced little or no affect in their operations as their services were notified/included under the list of essential services by the Government order. Some of these enterprises reported that they experienced lack of availability/ shortage of skilled workforce during the COVID period.

Figure 58 How has the migration trend and workers been affected due to the COVID 19 outbreak as reported by employers.

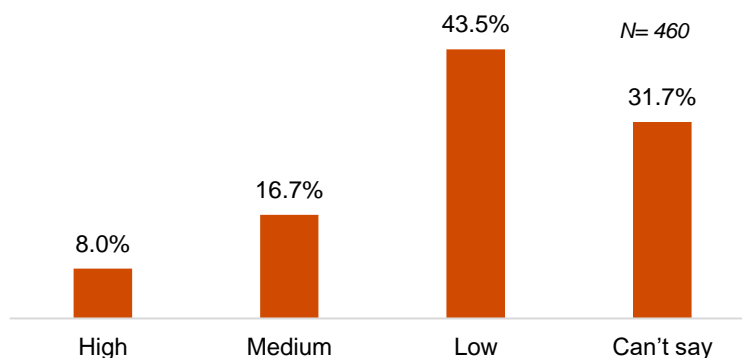


**Multiple Choice Question, Respondents may add up to more than 100 per cent.

4.3. Job Roles

Employers were asked about the job roles in which they employed their skilled workforce to go about their operations and their recruitment plans. Employers from a broad range of sectors namely Agriculture, Mining, Manufacturing, Retail, Tourism, and other service sectors shared their respective insights-providing a detailed understanding into their recruitment processes and their perceived impact of technology in the coming 5 years. **One out of every four employers stated medium to high level of adoption of new technology in the coming years**, given 1) the current pandemic situation and 2) the propensity of the industries, in general, towards technological upgradation. A third of employers are yet unsure about the change and its impact. We will probe further in this regard sector wise and the how it will affect job roles in the section below: -

Figure 59 Level of adoption of technology as perceived by the employers in the coming 5 years.



- Agriculture, Forestry and Fisheries** – The job roles that engage skilled workforce in the sector include Machine operators, Poultry and Dairy farmers, Packers, Farm Supervisors, Pickle/Juice makers and Farm Technicians. In general, as it was observed by the employers, farm industries employed a limited skilled workforce. Majority of the workforce employed by these employers were unskilled. As farm activities are seasonal (different for who use green house for cultivation who need workers all year around), the workforce recruited was also seasonal i.e., contractual, employing few permanent staff. The skilled workforce is sourced locally for job roles such as Juice makers for *Burash and Malta* and Pickle makers. Employers stated that they will continue to recruit for job roles such as Poultry and Dairy farmers, Packers and Pickle/Juice Makers in the coming year. The impact of technology is perceived to be very low by the employers for their sector in the near future.
- Mining and Quarrying** – Mining and Quarrying activities predominantly take place in Almora and Bageshwar Districts. Mining in these districts is done for its Magnesite and Soap stone reserves. The employers hired skilled workforce for job roles such as Technician, Sampler, Quality assurance, XRF operator, Laser operator, Cutter, Driller and Machine operator. Employers stated that they will continue to recruit for job roles such as Laser Operator, Quality assurance, Sampler for the current and the coming year as well. The impact of technology is perceived to be medium by the employers in this sector in the near future. Job roles such as Advance machine operator for advance machineries will be required due to the technological impact while job roles such as Helper and Quality assurance will become redundant in the coming future.
- Manufacturing** – This sector constitutes sub-sectors with job roles **having high degree of technical specification and requirement**. Sub-sectors of manufacturing constitute manufacturing of Food products, Pharmaceuticals, Plastic products, Machinery equipment, Fabricated Metal products, Wearing Apparel and Textiles, Chemicals among others. Employers from almost all the sub-sectors of the manufacturing sector required as well as employed skilled workforce into Administrative job roles such as Managers, Supervisors, HR, Accountants and Sales and Production Executives. **The top job roles into which the skilled workforce were employed by the employers were:- (1) Assistant Machine operators and Machine operators (2)CNC and CLC Machine operator, (3)Fitter, (4)Turner, (5)Packers, (6)Food processing expert, (7)Welder, (8)Winder man, (9)Molding operator for rubber and plastic industries, (10)Microbiologist, (11)Chemist and Lab assistant for pharmaceutical industries, (12)Store and tool room operator, (13)Maintenance Executives and (14)Custom tailor/Sewing Machine Operator/Weaving machine operator.**

Table 26 List of machines for which Machine Operators/ Assistant Machine Operators are in demand

S. No.	Name of Machine
1.	Injection Machine
2.	Molding Machine

S. No.	Name of Machine
3.	Boiler Machine
4.	Diesel Generator Machine
5.	Blade Making Machine
6.	Riveting Machine
7.	Ballooning Machine
8.	Printing Machine
9.	Slitting Machine
10.	Punching Machine
11.	Press Machine
12.	Vertical Milling Center (VMC) Machine
13.	Filling Machine
14.	Short Cycle Machine
15.	Multi Daylight Machine
16.	Calendar Press Machine
17.	Spray Painting Machine
18.	Lathe Machine
19.	Honing Machine
20.	Special Purpose Machine (SPM) Machine
21.	Grinding Machine
22.	Extruder Machine
23.	Soldering Machine

Employers have proposed similar recruitments for the above stated job roles - both for the current and the coming year. This is primarily because (1) employers from the manufacturing industry experiences high attrition of their workforce and (2) there is a constant demand for the above-mentioned job roles as they are always looking for new replacements. **Employers from the Pharma industries have high expectations for future as new investments have been proposed in Selaqui and Vikas Nagar for the establishment of medical devices manufacturing hub.** This would propel businesses of Pharma industries of the region creating new jobs for Lab attendants, Microbiologists, Chemists among others. **The impact of technology is perceived to be medium to high,** depending upon the sub-sector which we are considering. For instance, Packaging industries will experience redundancies due to automation of their packaging processes, which is currently done manually by packers and involves different stages such as cutting and pasting. This *stage-by-stage* process will cease to exist as the entire process would be integrated into one due to automation. Another job role to be affected due to tech advancement would be welding as large-scale fabricating operations for constructions and panel making would be automated. In Textiles and wearing apparels industries, job roles such as hand weaving and handloom weavers would become redundant due to the introduction of power loom. Due to advancement in technology, Furnace operator jobs would be affected or become redundant with the introduction of auto charger furnaces - used for recycling of metals as well as alloy manufacturing. Other job roles such as Big data /Block chain expert, CAD/CAM Expert, E-commerce expert, AI powered machine operators and Advance programmers will be in demand in the coming 5 years due to tech advancement. Another point which should be noted that major manufacturing units are setup in Haridwar, Dehradun and US Nagar districts where these units are located in vicinity to each other, thus facilitating sourcing and replacements of workforce easily from one unit to another.

- **Construction** – Employers from this sector employed skilled workforce into job roles such as Civil Engineers, Architects, Machine operators for JCB, drilling and cement mixing, Mason, Supervisor and Administrative staff. Large scale construction employers are involved in road construction projects and they employ workers *en masse*. Also, employers experience high attrition among job roles such as helpers, labourers and machine operators creating a constant demand for workers with such skill set. This was observed among the employers working on the Char Dham project in Tehri Garhwal district. Employers have proposed similar recruitments for the above stated job roles - both for the current and the coming year. The impact of technology would be medium in the coming years. Job roles such as CAD/CAM expert, Designers, Slope stabilization expert for construction in hilly region would be in demand while making manual labor redundant over time.

- **Accommodation and Food services** – Accommodation and Food services (Tourism) is a major industry employing a large skilled workforce in the state. Employers employed skilled workforce into job roles such as F&B Steward, Chef/Kitchen staff, Admin/Front office staff/Receptionist, Account Executives, Maintenance (Electrician, Plumber) and Yoga/Spa/Wellness expert. Employers noted a high rate of attrition among their workforce wage being the major factor. This is because the average wage for an entry level worker (INR 8,281 per month) and supervisor level worker (INR 12,261 per month) for this sector is less than the overall average for entry level worker (INR 9,426 per month) and supervisor level worker (INR 14,644 per month). Although this sector thrives due to a high footfall of tourists throughout the year from India as well as abroad, it reaches significant heights in the months of April to November. This is the period where religious tourism is at its peak which involves the Char Dham Yatra. This period also coincides with increased demand for skilled workforce for the above-mentioned job roles every year. The impact of technology, however, is going to be very low for this sector. Our economy has evolved over the last 10 years which has seen an increase in people's lifestyles and has increased demand for quality and high-end services. This will certainly create new job roles such as event management expert, juice processing expert and bartender due to the changing tastes and preferences of the tourists visiting the state. Job roles such as Cashiers would become less and less relevant with the introduction of technology. Employers highlighted that they look for multi competencies for hiring (i.e., workers with multiple job role skills such as housekeeping and steward as well as a capable kitchen staff in one individual).
- **Wholesale, Retail Trade and Repair** – This sector includes sub-sectors such as Wholesale trade, Retail trade and repair activities of motor vehicles and motorcycles. Employers from this sector employed skilled workforce into job roles such as Sales Executives, Administrative staff, Accountant, Cashier, Technician/Welder/Mechanic, Denter/Painter, Auto and diesel mechanic/servicing. Sales executive, Auto and diesel mechanic are in great demand by owners of dealerships of motorcycles and cars situated at Dehradun and Haldwani. The impact of technology is going to be minimum as per the employers.
- **Information and Communication** – Employers from this sector employed skilled workforce into job roles such as Mobile Application Developer, Software Developer, Machine Operator, Computer Operator and Sales Executives. Much of the current and future demand is for Computer operator and Software developer for this sector. The impact of technology on this sector is going to be very high as they will need individuals with advance software and hardware developing skills.
- **Transportation and Storage** – This sector includes sub-sectors such as warehousing and support activities for transportation, Postal and Courier activities and Transportations. Employers from this sector employed skilled workforce into job roles such as Assembler, Cutting master, Finisher, Driver and Packers. Much of the current and future demand is for Driver services as well as Packers. The impact of technology is perceived to be very low by the employers of this sector.
- **Professional, Scientific and Technical activities** - This sector includes sub-sectors such as Scientific Research and Development, Advertising, Consultancy among others. Employers from this sector employed skilled workforce into job roles such as Lab Technician, Pharmacists, Cameraman/Professional Photographer, Manager and Supervisors. There is a growing demand for Wedding Photographers and Filmmaking in the state as well as in India. These job roles are very much in demand for the purposes of the employers – both for present and future recruitment needs. The impact of technology is perceived to be very low.
- **Administrative and Support activities** - This sector includes sub-sectors such as Travel Agency, Employment Support services and Office and business support services. Employers from this sector employed skilled workforce into job roles such as Customer Care executives, Digital marketing executives, Online website consultancy and Social Media Marketing.
- **Education** - This sector includes sub-sectors such as Primary to Higher Education service activities as well as other educational support services. Employers are Primary schools or people running private educational institutions – employing skilled workforce into job roles such as Computer Trainer, Hotel Management Trainer, English Language Trainer, Software Trainer and Accounts Trainer. The impact of technology has resulted in a push towards online medium of education and training.
- **Human Health and Social Work Activities** - This sector includes sub-sectors such as Hospital and Nursing care facilities. Employers from this sector employed skilled workforce into job roles such as

Nursing staff, Ayurveda Expert, X-ray technician/Compounder, Doctors and Administrative staffs. Demand for quality healthcare services has increased the demand for skilled workforce for nursing as well as technician jobs. The impact of technology is perceived to be low.

- **Entertainment and Recreation** - This sector includes sub-sectors such as Sports and Amusement services and Entertainment services. For instance, the influx of tourists has resulted into a growing demand for Sports and Amusement activities such as Water sports, River rafting, Trekking etc. Water sports activities includes Jet Ski rides and steamer boat rides- specially around Tehri Lake and Naini Lake. Such amusement activities have witnessed an increase in demand for Jet Ski Operators. Employers from this sector employed skilled workforce into job roles such as Boat operator, DJ and Entertainment Service Providers, Lifeguards and Event Management experts. The impact of technology is perceived to be low.

Table 27 Top Job Roles in which skilled workforce is employed across broad sectors

Broad Sectors	Top Job roles into which the skilled workforce is employed	Top Job roles in which recruitment was done in FY 2019-20	Top Job roles in which recruitment will be done in the next 12 months
Agriculture, forestry and fishing	Marketing Executive	NA	Poultry and Dairy Farmer
	Machine Operator		Packer and Helper
	Poultry and Dairy Farmer		Pickle and Juice Maker
	Packer and Helper		
	Pickle and Juice Maker		
	Farm Supervisor		
Mining and quarrying	Technician	Laser In charge	Laser In charge
	Sampler/Quality Assurance	Quality Assurance/Sampler	
	XRF In charge/ Laser In charge		
	Cutter/ Driller		
	Machine Operator		
Manufacturing	Account Executive	Account Executive	Account Executive
	Administration	Administration	Administration
	Assistant Machine Operator/ Machine Operator/ CNC and CLC Machine Operator	Assistant Machine Operator/ Machine Operator/ CNC and CLC Machine Operator	Assistant Machine Operator/ Machine Operator/ CNC and CLC Machine Operator
	Fitter/ Turner/Packer	Fitter/ Turner/Packer	Fitter/ Turner/Packer
	Food Processing Expert	Food Processing Expert	Food Processing Expert
	Welder/Winder man	Welder/Winder man	Welder/Winder man
	Molding Operator	Molding Operator	Molding Operator
	Maintenance	Maintenance	Maintenance
	Custom Tailor/ Sewing Machine Operator/ Weaver	Custom Tailor/ Sewing Machine Operator/ Weaver	Custom Tailor/ Sewing Machine Operator/ Weaver
	Microbiologist/ Chemist/ Lab Technician	Microbiologist/ Chemist/ Lab Technician	Microbiologist/ Chemist/ Lab Technician
	Production Executive	Production Executive	Production Executive
	Sales Executive	Sales Executive	Sales Executive
	Store and Tool Room Operator	Store and Tool Room Operator	Store and Tool Room Operator
Construction	Civil Engineer	Civil Engineer	Civil Engineer
	Architect	Architect	Architect
	Machine Operator	Machine Operator	Machine Operator
	Welder/ Mason/Driller	Welder/ Mason	Welder/ Mason
	Purchase Assistant	Driller	Driller
	Supervisor/ Manager	Supervisor/ Manager	Supervisor/ Manager
	Accountant/ Admin	Accountant/ Admin	Accountant/ Admin

Broad Sectors	Top Job roles into which the skilled workforce is employed	Top Job roles in which recruitment was done in FY 2019-20	Top Job roles in which recruitment will be done in the next 12 months
Wholesale and retail trade; repair of motor vehicles and motorcycles	Sales Executive	Sales Executive	Sales Executive
	Technician/Welder/Mechanic	Technician/Welder/Mechanic	Technician/Welder/Mechanic
	Cashier	Cashier	Cashier
	Denter/Painter	Denter/Painter	Denter/Painter
	Auto Mechanic/Servicing	Auto and Diesel Mechanic/Servicing	Auto and Diesel Mechanic/Servicing
Transportation and storage	Cutting Master	Taxi Service/Driver	Taxi Service/Driver
	Finisher		Packer/Loader
	Taxi Service/Driver		
	Packer/Loader		
	Assembler		
Accommodation and Food service activities	F&B Steward	F&B Steward	F&B Steward
	Chef/Kitchen Staff	Chef/Kitchen Staff	Chef/Kitchen Staff
	Admin/Front Office/ Receptionist	Admin/Front Office/ Receptionist	Admin/Front Office/ Receptionist
	Housekeeping	Housekeeping	Housekeeping
	Account Executive	Account Executive	Account Executive
	Maintenance	Maintenance	Maintenance
	Yoga/ Spa/ Wellness Expert	Yoga/ Spa/ Wellness Expert	
Information and communication	Mobile Application Developer	Mobile Application Developer	Mobile Application Developer
	Software Developer	Software Developer	Software Developer
	Computer Operator	Computer Operator	Computer Operator
	Machine Operator		
	Admin		
	Sales Executive		
Professional, scientific and technical activities	Lab Technician	Lab Technician	Lab Technician
	Pharmacist	Pharmacist	Pharmacist
	Cameraman/Professional Photographer	Cameraman/Professional Photographer	Cameraman/Professional Photographer
	Manager/Supervisor	Manager/Supervisor	Manager/Supervisor
Administrative and support service activities	Customer Care Executive	Customer Care Executive	Customer Care Executive
	Digital Marketing	Digital Marketing	Digital Marketing
	Online website consultancy	Online website consultancy	Online website consultancy
	Social Media Marketing	Social Media Marketing	Social Media Marketing
Education	Computer Trainer	Computer Trainer	Computer Trainer
	Hotel Management Trainer	Hotel Management Trainer	Hotel Management Trainer
	English Trainer	English Trainer	English Trainer
	Software Trainer	Software Trainer	Software Trainer
	Accounts Trainer	Accounts Trainer	Accounts Trainer
Human health and social work activities	Lab technician/ Medical Laboratory Technician	Lab technician/ Medical Laboratory Technician	Lab technician/ Medical Laboratory Technician
	Nursing Staff	Nursing Staff	Nursing Staff
	Ayurveda Expert	Ayurveda Expert	Ayurveda Expert
	X-ray Technician/Compounder	X-ray Technician/Compounder	X-ray Technician/Compounder
	Doctor	Doctor	Doctor
	Admin	Admin	Admin
	Boat operator	Boat operator	Boat operator

Broad Sectors	Top Job roles into which the skilled workforce is employed	Top Job roles in which recruitment was done in FY 2019-20	Top Job roles in which recruitment will be done in the next 12 months
Arts, entertainment and recreation	Entertainment/DJ Expert	Entertainment/DJ Expert	Entertainment/DJ Expert
	Jet-Ski rider	Jet-Ski rider	Jet-Ski rider
	Lifeguard	Lifeguard	Lifeguard
	Event Management	Event Management	Event Management
Other service activities	Sales Executive	Sales Executive	Sales Executive
	Manager	Manager	Manager
	Maintenance	Maintenance	Maintenance
	Printing Machine Operator	Printing Machine Operator	Printing Machine Operator
	Cashier	Cashier	Cashier

Table 28 Top Job roles that will be in demand/become redundant in the coming five years due to advancement in technology across broad sectors.

Broad Sectors	Top Job roles that will be in demand in the coming five years due to advancement in technology	Top Job roles that will become redundant in the coming five years due to advancement in technology
Mining and quarrying	Advance Machine Operator	Quality Assurance/Sampler/Helper
Manufacturing	Robotics Welding	Hand Weaving and Handloom Weaver
	Programmer	Packer
	Assistant Machine Operator/ AI Operated Machine Operator/ CNC and CLC Machine Operator	Riveting
	Fitter/ Turner/Packer	Stitchery
	Food Processing Expert	Manual Winding Work
	Welder/Winder man	Helper
	Molding Operator	
	Big Data/ Blockchain Expert	
	CAD/CAM Expert	
	IOT Expert/ E Commerce Expert	
	Power Loom Operator	
Construction	Civil Engineer	Manual Labour
	Architect	
	CAD/CAM Expert	
	Slope Stabilization Expert	
	Designers	
	Machine Operator	
Wholesale and retail trade; repair of motor vehicles and motorcycles	Accountant/ Admin	Cashier/Floor Manager
	Sales and Marketing Executive	
	Advance Machine Operator	
	Online Retail Manager	
	Spray Painter	
	Auto Mechanic/Serviceing	
Accommodation and Food service activities	Juice Processing Expert	Helper
	Chef/Kitchen Staff	
	Admin/Front Office/ Receptionist	
	Housekeeping	
	Event Management Expert	
	Maintenance	
	Yoga/ Spa/ Wellness Expert	

Broad Sectors	Top Job roles that will be in demand in the coming five years due to advancement in technology	Top Job roles that will become redundant in the coming five years due to advancement in technology
Information and communication	Mobile Application Developer	NA
	Advance Software Developer	
	Computer Operator	
Administrative and support service activities	Digital Marketing	Manual Labour/Helper
	Social Media Marketing	
Education	Computer Trainer	NA
	Software Trainer	
Human health and social work activities	Lab technician/ Medical Laboratory Technician	Delivery Boy for Blood Sampling
	Nursing Staff	
	Ayurveda Expert	
	X-ray Technician/Compounder	
	Doctor	
	Admin	
Other service activities	Sales Executive	Cashier
	Manager	Helper/Manual Labour
	Maintenance	
	Printing Machine Operator	
	Cashier	

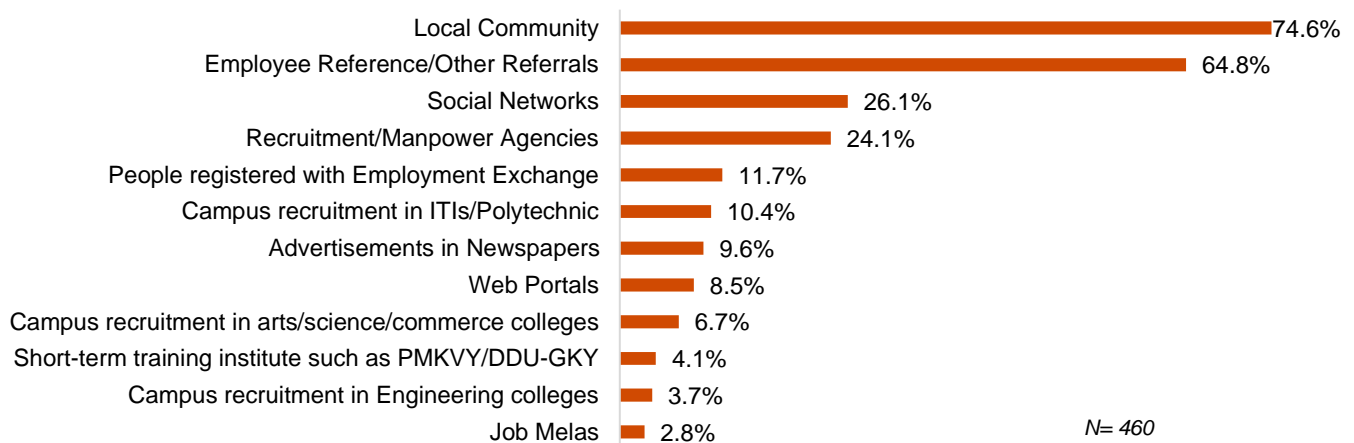
4.4. Recruitment and Attrition

The below table mention the average number of employees recruited in FY 19-20 by the participant enterprises and the estimated average number of employees to be hired in next three years by them.

There was a mixed response received from the employers when they were enquired about the impact of COVID on hiring. 38 percent employers reported that the hiring was reduced by 10 percent due to COVID, while 28 percent reported that the hiring was reduced by more than 50 percent due to COVID.

The illustrative below, highlights the most common mode of the recruitment was through local communities followed by employee referrals, social network, manpower agencies and people registered with employment exchange. Important point to note here is that recruitment through campus placement from engineering colleges, ITI/ polytechnic, short term training institute is very less.

Figure 61 Common modes of recruitment



**Multiple Choice Question, Respondents may add up to more than 100 per cent.

The employers were asked whether they hire candidates from ITI/ Polytechnic. 67 percent said that they do not hire candidates from these colleges. 15.7 percent said that they have hired from ITIs, only 0.9 percent said that they have hired from polytechnic colleges while 16.5 percent said they have hired from both.

Among the employers who have hired from Polytechnic reported that they have categorized 58.8 percent under semi-skilled and 38.8 percent under skilled category. The employers who have hired from ITI, 65.6 percent had categorized the hires under semi-skilled and 28.9 under skilled category. Very few responded that they put the new hires from ITI/polytechnic under highly skilled category.

Figure 60 Reduction in hiring due to COVID

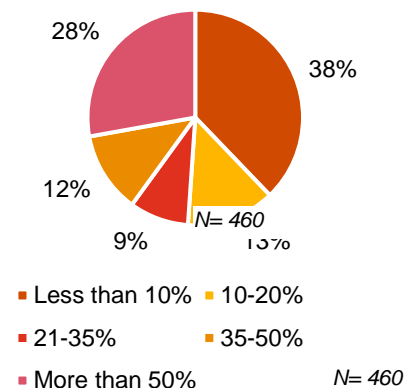


Figure 62 Hiring done from ITI/ Polytechnic

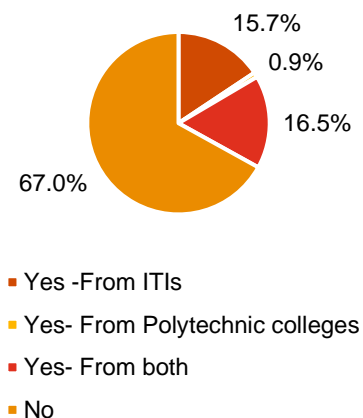
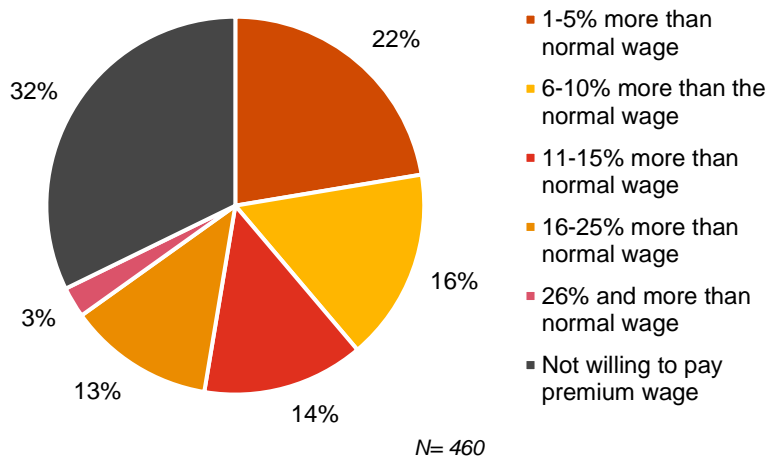


Figure 63 Willingness to pay premium wages to candidates from ITI/ polytechnics



32 percent employers responded that they were not willing to pay premium wages to the hires from the ITI/ polytechniques, while 22 percent were fine with paying them 1-5 percent more than the normal wage. The reason for not being willing to pay the premium wages were the lack of required industrial skills among the candidates. Employers were willing to pay premium wages to only those candidates who have the desired skill set as per the industry requirement.

For both the hires from ITI and polytechnic, the employers stated that they lack job specific skills or competencies, and also skills like IT, problem solving, teamwork, general knowledge, life skills, communication skills and soft skills.

Figure 65 Category under which polytechnic graduates are hired

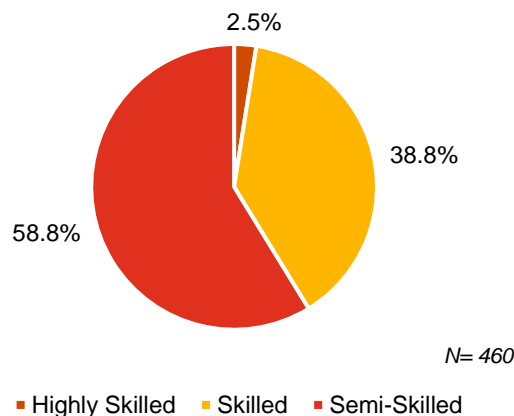


Figure 64 Category under which ITI graduates are hired

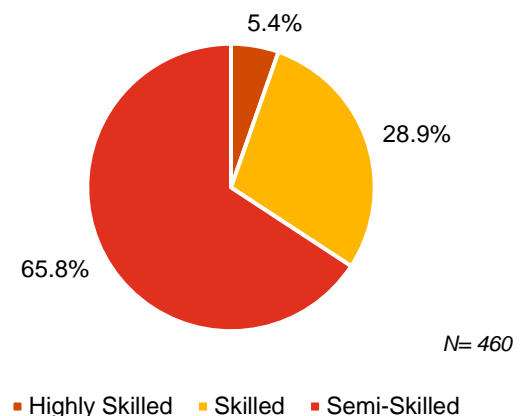


Figure 66 The skills lacked in ITI hires



****Multiple Choice Question, Respondents may add up to more than 100 per cent.**

Figure 67 The skills lacked in Polytechnic hires



N= 460

****Multiple Choice Question, Respondents may add up to more than 100 per cent.**

48 percent of the employers were aware of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme, followed by 33 percent who were aware of Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY) scheme. 25 percent of the employers are aware of Apprenticeship Training Scheme (ATS) and Craftsman Training Scheme (CTS). Even though the awareness was there about the schemes, but recruitment done through these schemes need attention as only 10 percent said that they have hired candidates from PMKVY and CTS scheme, 9 percent hired from ATS and only 4 percent hired from DDU GKY scheme.

Table 29 Scheme awareness and recruitment done under the respective scheme (n=460)

Name of the scheme	Aware of	Recruited from
Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY)	<p>Yes 33% No 67%</p>	<p>Yes 4% No 96%</p>
Rural Self Employment Training Institutes (RSETI)	<p>Yes 10% No 90%</p>	<p>Yes 1% No 99%</p>
Apprenticeship Training Scheme (ATS)	<p>Yes 25% No 75%</p>	<p>Yes 9% No 91%</p>

Name of the scheme	Aware of	Recruited from
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) / National Skill Development Corporation (NSDC)	<p>No 52% Yes 48%</p>	<p>No 90% Yes 10%</p>
National Urban Livelihoods Mission (NULM)	<p>No 91% Yes 9%</p>	<p>No 99% Yes 1%</p>
Craftsman Training Scheme (CTS)/Govt. ITI scheme	<p>No 75% Yes 25%</p>	<p>No 90% Yes 10%</p>
Any other department/ state specific scheme	<p>No 92% Yes 8%</p>	<p>No 98% Yes 2%</p>

The candidates who were hired from the short-term training institutes were majorly deployed under the semi-skilled category as shown in the below figure. 51 percent of the employer said that they were willing to pay 6-10 percent more wages to the candidates who have undergone short term training and 33 percent said that they can pay up to 26 percent or more than normal wages to the candidates who had undergone short term training.

It is quite evident from the responses that the employers are comfortable in paying premium wages to the candidate from short term institutes than from the ITIs/polytechnics. The reason explained for this was that the duration of courses in ITIs/polytechnic are 1 to 2 years long while the short-term courses are 3 to 4 months long and are more specific to the industrial requirement.

Figure 69 Category under which the candidates from short term training are hired

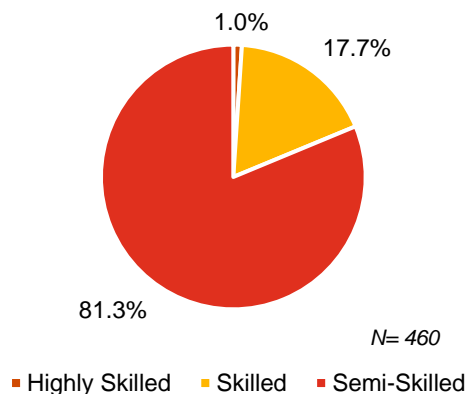
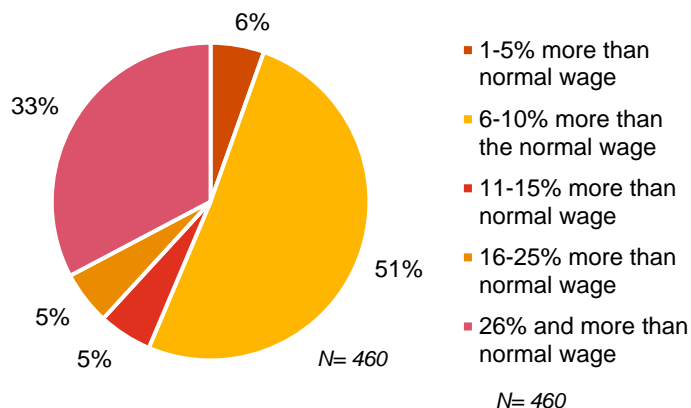
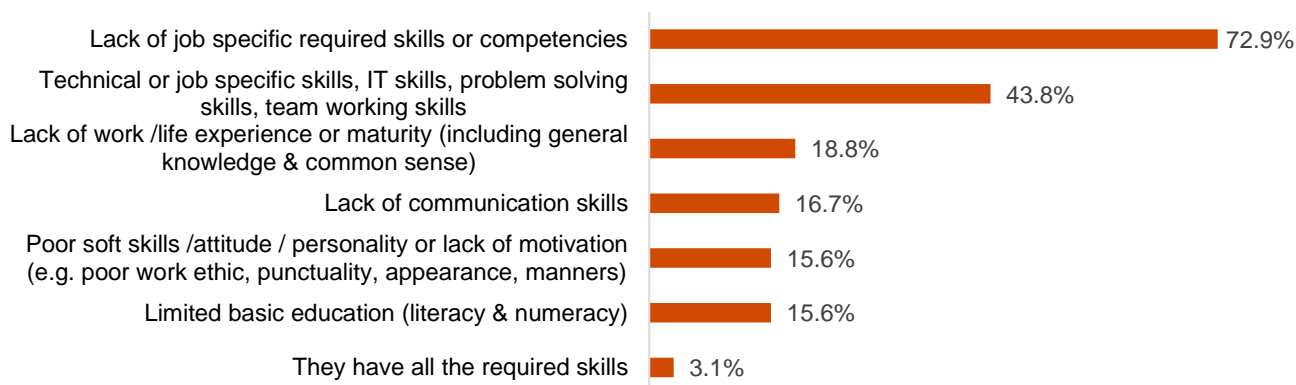


Figure 68 Willingness to pay premium wages to candidates from short term institutes



Although the employers were willing to pay higher wages to the candidates from short term institutes, they said that they had to train them in certain job specific skills, IT skills, problem solving skills, teamwork skills, communication skills, and few other soft skills.

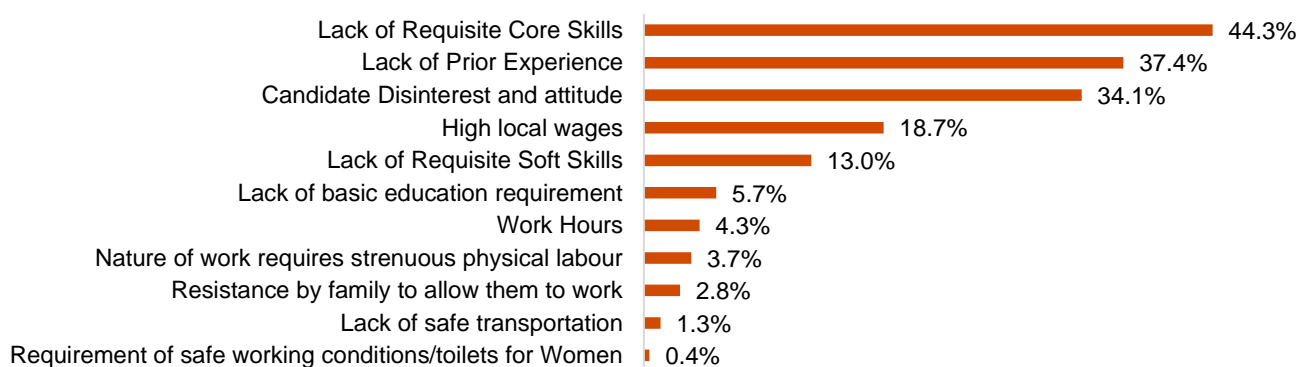
Figure 70 Skills lacked in short term institutes hires



***Multiple Choice Question, Respondents may add up to more than 100 per cent.*

The major challenges faced by the employers while recruiting the candidates were, lack of requisite core skills, lack of prior experience, candidates' disinterest, higher wages in other sectors and lack of soft skills. Apart from that there were other reasons which have lesser impact on the recruitment process but are important to note such as long working hours, need of more physical labour, resistance from family to work, lack of safe transportation and safe working condition. These mentioned challenges were more in case of female recruits.

Figure 71 Key challenges faced while recruiting candidates

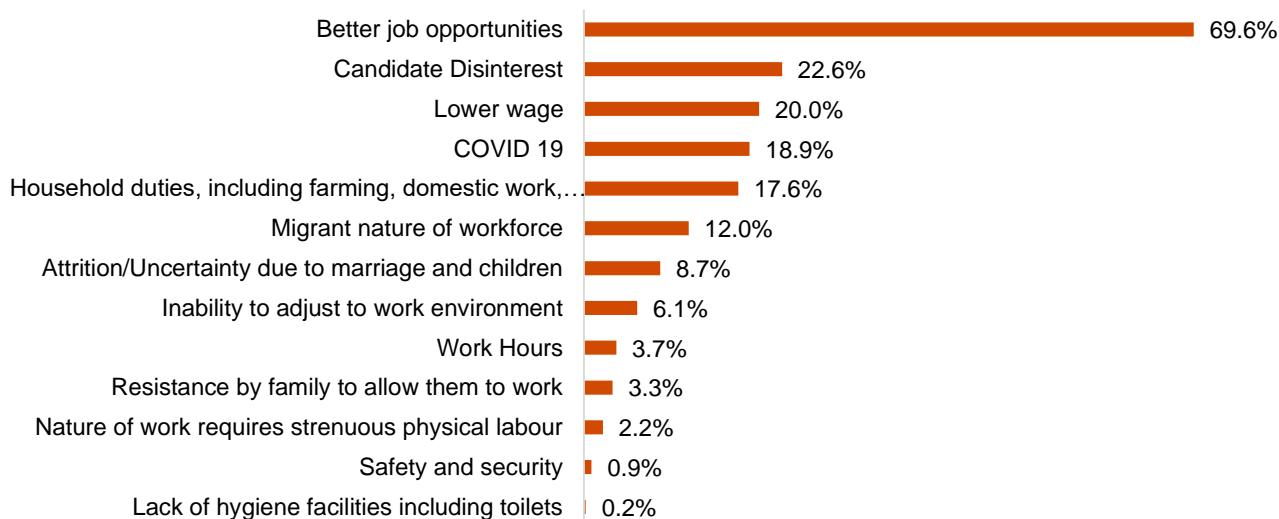


N= 460

**Multiple Choice Question, Respondents may add up to more than 100 per cent.

Average Annual Attrition Rate of the workers was 12.5 percent. The employers mentioned that the main cause of attrition among the employees were better job opportunities elsewhere, candidates' disinterest, low wages, household responsibilities like farming, childcare or elderly care and migrant nature of workforce. It was observed that COVID-19 was also one of the reason of people getting scared and leaving the job to stay safe with their families. For female workers marriage, resistance from family, household duties, strenuous physical activities and lack of hygienic facilities were the reasons for leaving job.

Figure 72 Main causes of attrition among workers



N= 460

**Multiple Choice Question, Respondents may add up to more than 100 per cent.

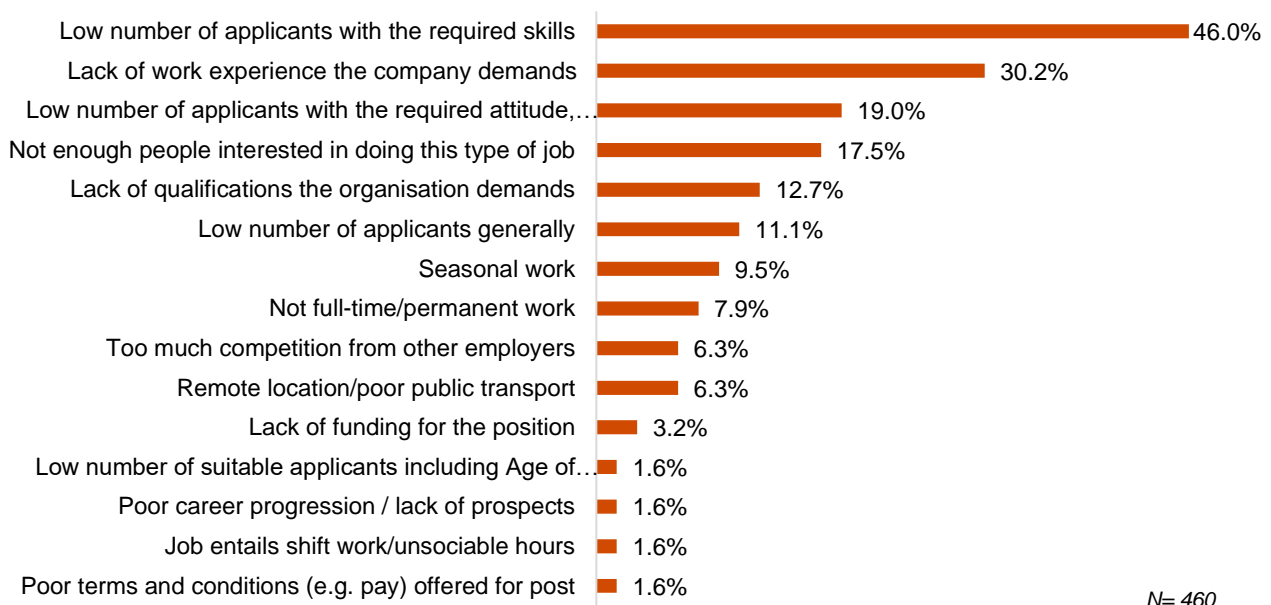
The survey found that on an average, a skilled entry level worker gets INR 9,426 per month and an experienced worker at supervisory level earns INR 14,644 per month across industries and sectors.

4.5. Vacancy and Skill Gap

Only 14% of the employers said that there were vacancies in their organization. Although the salary of entry level skilled workers is good, the employers who have vacancy reported that about 10-20% of the vacancies was hard to fill due to unavailability of the skilled manpower in the market. This indicates that there was a shortage of skilled manpower.

Major constraints faced by the employers in filling these vacant positions were low number of applicants with specific skills for the specific job, lack of required work experience, lack of interpersonal skills or communication skills, less aspiration, lack of basic educational qualification and competition from other employers. The below figure mentioned the challenge that were faced by the employers while filling the vacant positions in their organization.

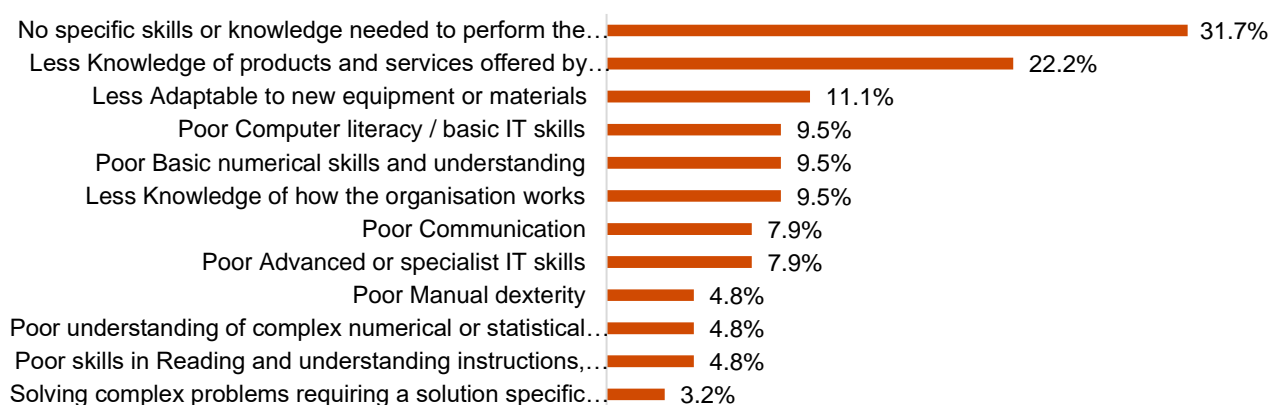
Figure 73 Major constraints in filling the vacant positions due to unavailability of skilled manpower



***Multiple Choice Question, Respondents may add up to more than 100 per cent.*

The employers also reported that there was gap in the skill level of the currently available manpower. Those are lack of specific knowledge required for the job, less knowledge of products and services offered by organization, less adaptability to equipment or material, poor computer literacy, poor numerical skills and lesser understanding of how organizations work. Apart from that communication skills, dexterity skills, problem solving skills are few other skills which was missing in the available manpower.

Figure 74 Gap in skill level of the available manpower in the market

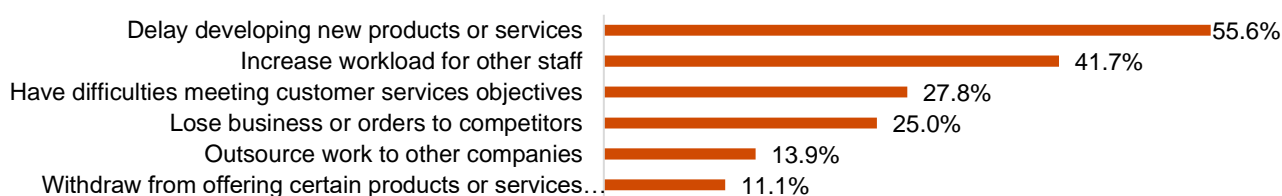


N= 460

**Multiple Choice Question, Respondents may add up to more than 100 per cent.

57 percent of the employers who reported difficulty in filling the vacancy said that the hard to fill vacancies are creating challenges in the organization. Challenges faced in the organization due to lack of skilled workforce are delay in production and service-related activities, increase in workload on the skilled staffs, delay in deliveries, quality issues in final product, which over lead to loss in business.

Figure 75 Challenges faced by the organization due to lack of skilled workforce

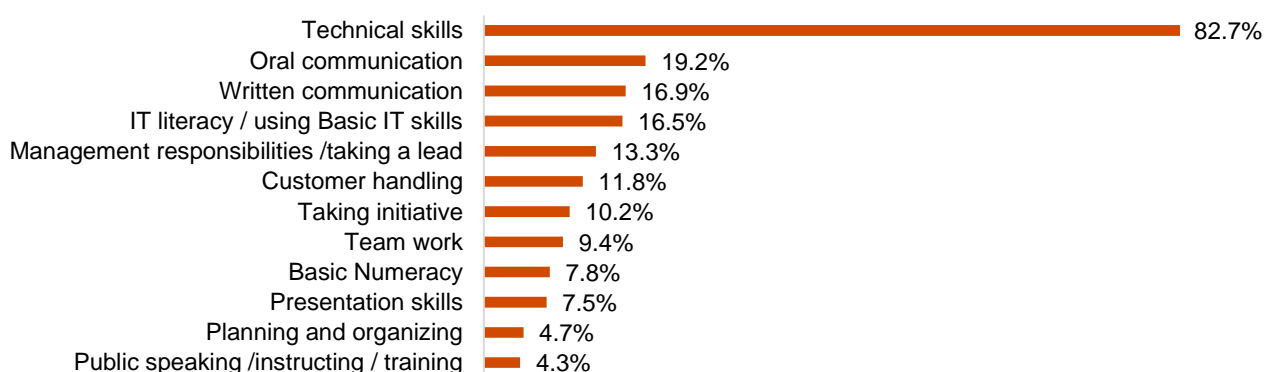


**Multiple Choice Question, Respondents may add up to more than 100 per cent.

N= 460

55 percent of the total employers said that their existing workers had skill gap at entry level. The skills which were lacked among the entry level workers were technical skills, oral and written communication skills, IT skills, management skills, customer handling skills and few other soft skills like teamwork, taking initiatives, planning and organizing, presentation and public speaking. Below figure illustrates the skills which the entry level workers lacked.

Figure 76 Skills that the employees lacked at entry level

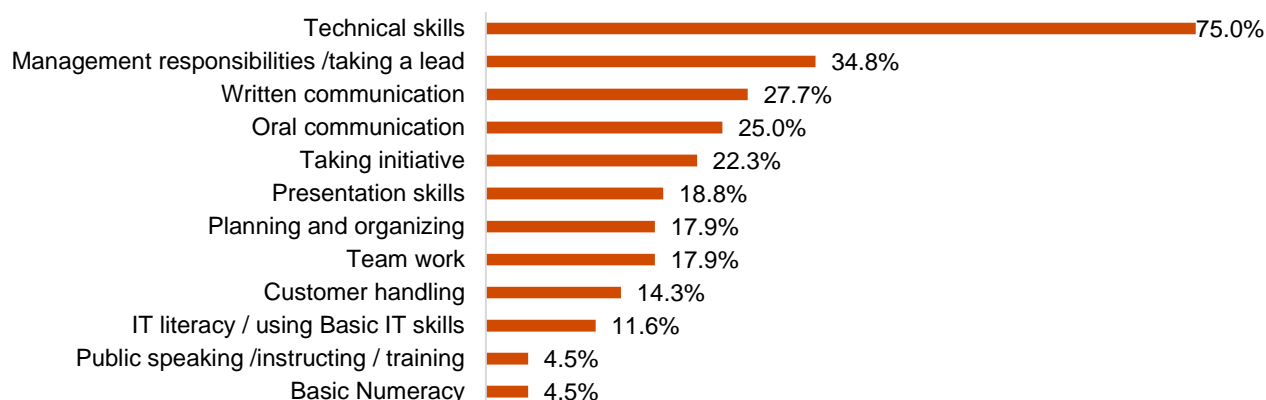


**Multiple Choice Question, Respondents may add up to more than 100 per cent.

N= 460

24 percent of the employers said that their supervisors have skill gaps. The gaps which the supervisor level workers had were the technical skills as per the advance requirement of industry, management skills, oral and written communication, taking initiatives, presentation skills, customer handling, etc. Below figure illustrates the skills which the supervisors lacked.

Figure 77 Skills that the supervisors are lacking



N= 460

***Multiple Choice Question, Respondents may add up to more than 100 per cent.*

The employers who reported about vacancies reported also reported few job roles where they have requirements. In the manufacturing there is demand of job roles like machine operator, quality controllers, mechanics and helpers across subsectors. In construction sector there is demand for masons, operators, drivers, engineers and accountants. In service sector there is demand of sales executives, service engineers, housekeeping staffs, hospitality staffs, medical staffs and technicians. Helpers are required across all the sectors and sub-sector of manufacturing and services.

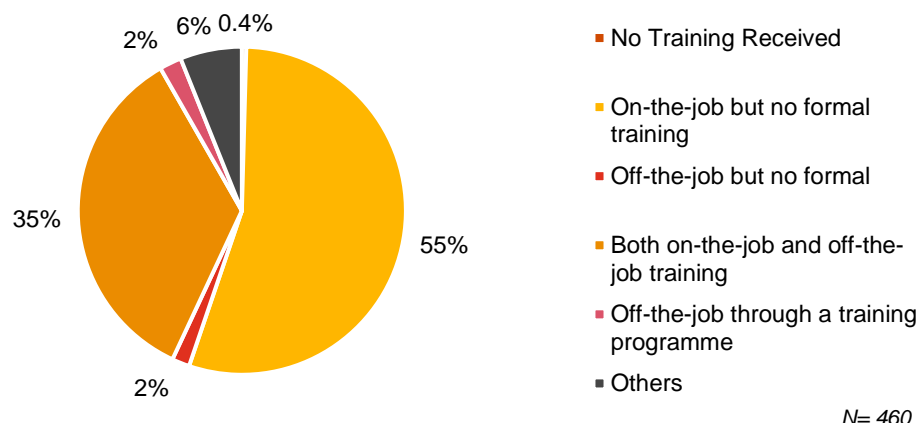
Table 30 Major job roles in which vacancies are there across sectors

Sector	Major job roles
Manufacturing	Machine Operators, Quality Controllers, IT experts, Supervisors, Machine mechanics, Electricians, Commercial Executives, Pharmacist, Tailors, Welders, Fitters, Loaders, Helpers
Construction	Accountant, Civil Engineer, Labour, Mason, Operator, Supervisor
Wholesale and retail trade; repair of motor vehicles and motorcycles	Denter painter, Electrician, Head Technician, Machine Operator, Technician, Washing boy, Sales executives
Transportation and storage	Drivers, Cleaners, Manager
Accommodation and Food service activities	Housekeeping, Chef, Kitchen Helper, Waiter, Manager, Accountant, Carpenter, Cleaners, Counsellor, Data Entry Operator. Plumber, Technician, Front desk assistant
Human health and social work activities	Doctors, Nurses, Paramedical staffs

4.6. Training of Workers

50 percent of the employers said that they had in-house training facilities and 45 percent of their employees were NSQF level 4 or above.

Figure 78 Training received by the existing employees



55 percent of the employers said that their existing employees had received on-the-job training but no formal training, while 34 percent of the employers said that their existing employees had received both on-the-job and off-the-job training.

The trainings provided by the employers during the jobs are specific to the technical skills required for the job, quality control, workplace safety measures, health, sanitation, first aid, firefighting, customer handling, communication skills and interpersonal skills.

4.7. Impact of COVID-19 pandemic

75 percent employers said that there was change in operation due to the pandemic outbreak. Of those who reported change in operation due to the pandemic, 53 percent said that they had to put recruitment on hold, while 33 percent said that there was no effect on the recruitment process, but the way of working has changed. 12 percent of the employers said that they had to lay off staff and 7 percent of the employer said they had to put their staff in leave without pay due to the sudden outbreak of pandemic.

Figure 79 Changes in the organization due to pandemic

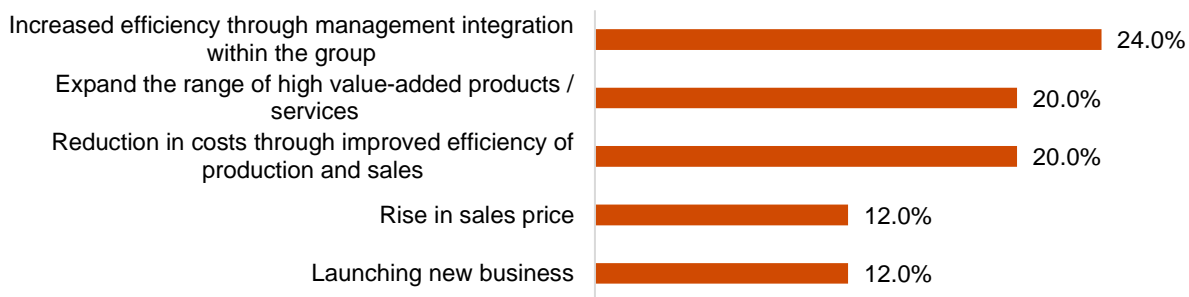


**Multiple Choice Question, Respondents may add up to more than 100 per cent.

Overall, most of the employer reported that the pandemic has impacted their revenue negatively but there were certain positive changes as well in the system like increased efficiency of the managers while interacting with the team, expansion in the products and service offerings, reduction in cost due to improve efficiency of production and sales. Few of them reported that due to pandemic they have expanded their business by launching new businesses. For example, the garment manufacturers have launched manufacturing of masks and PPE kits

during pandemic and pharma industries have also introduced new products like sanitizers and immunity boosters' medicines.

Figure 80 Positive changes in system due to pandemic



**Multiple Choice Question, Respondents may add up to more than 100 per cent.

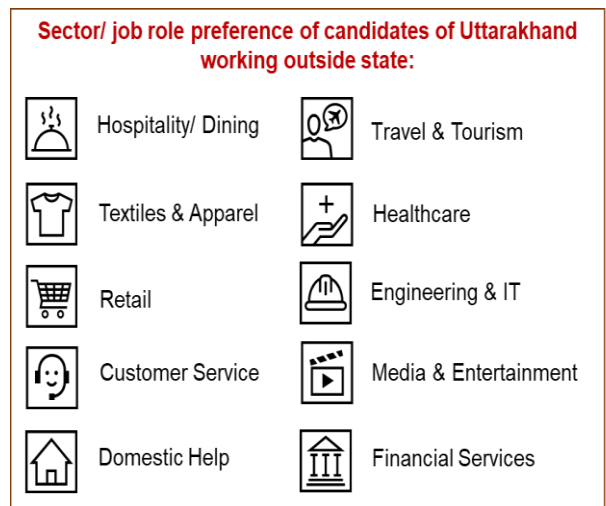
N= 460

The employers said that they used to communicate regularly with their employees during peak times for getting the knowhow of their wellbeing, they used to have online training sessions for their employees, introduces concept of flexible working and have given them moral support.

4.8. Outside Uttarakhand Employers feedback

We had conducted surveys with the employers outside the state across various sector to understand the demand side perspective of the region as it is a popular destination for the migrant workforce from Uttarakhand as observed in the migration trend of the Youth Aspiration Study. We had interviewed about 40 employers outside the state who employ youth from Uttarakhand.

Figure 81: Sector preferences outside Uttarakhand



- Respondents reported that most the youth who had left their state came in search of better livelihood opportunities and earn more income. The industry noted that the youth of Uttarakhand are more aligned to service sector than to manufacturing sector. The youth prefer working in travel, tourism and hospitality sector.
- 85 percent of the employers were large to medium scale. This was an attempt to maximize our findings from (i) the employers about the migrant workforce from Uttarakhand as large employers traditionally employs large share of migrant workforce and (ii) to understand the current and future demand-side prospects in the region. Almost 80 percent of the respondents had migrant workforce from Uttarakhand. 5 percent of the total migrant workforce employed by the respondents (*who had migrant workforce*) were from Uttarakhand on an average.
- 33 percent of the respondents reported that the majority of their entry level workforce had a minimum of higher secondary level of education. For Supervisor level, 73 percent of the respondents reported that the majority had a minimum of Diploma/ITI and above level of education.
- For recruitments, 17 percent of the respondents relied on employee references, local community (15 percent), social networks (12 percent) and advertisements in newspapers (11 percent). What is to be noted is that only 4 percent of the respondents reported that they recruited their workforce from campuses. This is despite 83 percent of the respondents reported that they employed people from ITI and Polytechnic background. Thus, it can be inferred based on the responses that there is a missing linkage between the campus placement cells/coordinators and the recruiters- with the recruiters recruiting candidates from ITI and Polytechnic background through references and local community- only when these candidates have gained some work experience. This can also be substantiated when we observe that respondents don't tend to recruit freshers directly from campuses as 27 percent of the

respondents also stated that ITI recruits lacked job specific skills and competencies, soft skills (23 percent) and experience (14 percent). Similarly, 35 percent of the respondents stated that recruits from Polytechnic had poor soft skills.

- The gap that exists between what an employer wants and what a potential recruit has to offer is crucial to this finding as it makes a case for streamlining our skill development initiatives towards the market expectations- i.e. To train and make the recruits skill adept to be employed directly from campuses. The above-mentioned competencies such as apprenticeship training to gain work experience and soft skills are the skills on which skill training institutes should focus on to improve the freshers' employability in the market.
- Employers suggested that the candidates need to be trained more on the soft skills and life skills so that the attrition can be reduced. As per them the candidates trained in the skilling programs can be considered as semi-skilled as they lack certain technical skills as per the industry requirement. They also suggested that the candidates should be properly counselled at school and college level so that they are clear about their career choices.
- 89 percent of the respondents felt that there was some level of skill gap that existed among the existing entry level workforce. For supervisor level, 50 percent of the respondents stated to have some level of skill gap. Due to this perception, the respondents undertake the training of employees as a priority as 95 percent of the employers reported that they provide some training to their existing workforce. These trainings include soft skills training, new product technical specification training, digital skills training, hands on machine operating skills training, compliance training, safety training among others. This puts a training burden for the employers which in turn discourages them to hire freshers directly from campuses.
- As for Covid-19 pandemic, both respondents from Uttarakhand as well as Delhi NCR were badly affected by it - Tourism and Hospitality sector more so than others. It experienced reverse migration on a large scale as many workers returned back to their home state.

5. Incremental Demand

Sectoral employment elasticity approach has been adopted to understand the overall labour demand in the state for the coming years. Employment elasticity is a measure of the percentage change in employment associated with a one percent change in economic growth. Based on data availability, the period between 2011-12 and 2020-21 was considered for the estimation. Several rounds of the National Sample Survey Organization and various rounds of Employment & Unemployment survey conducted by Ministry of Labour & Employment (MoLE) in India, and Department of Economic & Statistics of Uttarakhand were the main sources of data on sector specific employment and economic growth.

The table below show the sector-wise incremental demand for Skilled and Semi-Skilled workers from 2022 to 2026.

Table 31 Incremental Demand for Skilled and Semi-Skilled Workers (2022-2026)

Sector	Skilled workers	Semi-Skilled Workers	Total
Manufacturing	16,042	32,084	48,125
Education, Health and Other Services	35,024	12,509	47,533
Construction	7,595	18,989	26,584
Banking, Financial Services & Insurance	10,764	5,382	16,146
Tourism & Hospitality	3,897	7,551	11,448
Trade (Retail & Wholesale)	2,374	8,218	10,592
Logistics	2,271	5,450	7,721
Agriculture & Allied Sectors	2,166	4,332	6,498
Real Estate & Professional Services	3,702	1,851	5,553
Communication / IT & ITES	2,818	1,409	4,228
Electricity / Water Supply / Mining	986	1,497	2,483
Total	87,640	99,271	1,86,910

As per the methodology described above, it is estimated that the State will have an incremental skilled labour demand of around 87,000 workers in the priority sectors. Concurrently, the demand for semi-skilled workers would be around 99,271 workers. This totals to an additional demand of around 1.86 Lakhs skilled and semi-skilled workers. The main driver of the worker demand in the state is from the Manufacturing, Construction and the Services sectors including Health and Education.

The state saw a substantial decrease in economic activity in the year 2010-21 with the onset of the COVID-19 Pandemic. The overall GDP of the state shrunk by more than 6%. The pandemic particularly affected all industries barring agriculture and tertiary services like health and education. Trade and Tourism (21.5%), Communication (20%), Construction (14%) and Manufacturing (7.5%) were major sectors whose output was curtailed owing to the prevailing pandemic. Resultantly, it is estimated that there was an overall reduction in demand for over 35,000 skilled and semi-skilled workers across the Manufacturing, Construction, Communication, Trade and Tourism Sectors.

However, it is forecasted that, the economy shall see a revival from the year 2021-22 with the recovery from the COVID-19 Pandemic with a V-shaped recovery of over 10% and subsequently grow at least at 4% per annum thereafter. This shall reduce the demand from the skilled workforce for agricultural jobs and see a movement towards other industries. Manufacturing (48,125) Education, Health & Other Services (47,533), Construction (26,584), Trade & Tourism (22,040) Banking Financial Services & Insurance (16,164) were the key drivers of demand for skilled and semi-skilled workers between 2021 and 2026.

6. Other Stakeholder's Perspective

The stakeholder's consultation with District Level Government Functionaries

- The District Level Industry Department Functionaries observed that solar is an upcoming sector and new investments have been proposed. The top sectors in the hilly region which employ skilled workforce are Tourism, Food processing, Handloom and Handicrafts. There are no large or medium scale industries (with a turnover of ten crore and above) present in the hilly blocks of the districts. These blocks rely traditionally on agriculture and livestock. The remoteness of the hilly region makes it less accessible to the markets and creates supply chain problems. Further, these districts experienced reverse migration of workers from different regions and states during the Covid-19 Pandemic. Many workers were employed under MGNREGA and were beneficiaries of schemes such as MSY, MSSI, PMEGP etc. Army traditionally has been one of the biggest employers of the youth in the state and continues to be so even today. This is because the youth here aspire to join the armed services.
- The districts in Uttarakhand have a high literacy rate compared to national average but faces poor employability in the age group of 15 – 34. There was a general lack of entrepreneurship/enterprising zeal among the general populace of the hilly region despite constant effort of state and district level administration. This poses a big challenge which has resulted into out migration of skilled workforce from Uttarakhand, especially from the hilly regions.
- Apart from the ongoing work of DDU-GKY, a decision was reached under the PMKVY 3.0 that TPs (Training Providers) were not efficient in their assigned roles i.e., earlier training, mobilization and placement of the students were done by the TPs (Training Providers). Now this training, mobilization and placement are done by the Employment Officers of respective districts through the recommendations of the District Skill Councils (DSCs). The DSCs were setup in every district of the state under PMKVY 3.0 guidelines. Each of these councils have 15 members - District Collector as the chief presiding officer with other members such as CDOs, Regional Employment Officer, GM-DIC, Labour Department and Principals from ITI and Polytechnic Colleges. Various job roles have been shortlisted by each of these DSCs and has been sent to NSDC for the period 21-26.
- The return of migrants due to the Covid-19 pandemic has seen an increase in land-based activities. Tea plantations have seen an increase in the districts such as Bagheshwar, Champawat, Pithoragarh. This has provided seasonal work to the house maker women.
- New training curriculum should be proposed for handicraft and handloom sector as the current curriculum is outdated. This has been a common theme across all job roles related to handloom and handicrafts as the curriculum used for training new candidates is outdated and it is not demanded by the employers. The focus of training should be emphasized more on the dropouts than the students who are still studying.

Other responses and feedback

- For companies that hire welder and mason, they prefer people from local community as the absentee rate is usually less than the migrants from other states. The labour demand in such units depend directly on the number of assignments they receive, i.e., when big orders come, they require large number of workers. Students from ITI specially from courses like welding and fabrication are hard to come by in Haridwar.
- Some of the firms also shared their apprehension about training contractual labours as they noted that it augments attrition rate. This happens because contractual labours who are mostly unskilled at the time of joining, join at a lesser salary, learn the trade and leave quite frequently. Much of the training given by firms to the labours are on the job training and industrial safety related training such as ISO training and other compliances.
- Packing units employ female workforce more often. This is because industry sees female workforce to possess more dexterity than their male counterparts. Although much of the work involve is of unskilled type. Industries related to plastics hire CIPET graduates. The industry feels that these graduates should

be trained on extrusion processes as the requirement of these skills are increasing. Packaging related industries would experience an impact of technological advancement as much of the packing work that involve manual labour would be automated. This would be done by brining auto assembly machines.

- Some of the industries also noted that migrant labours tend to demand more work hours than the local labours as they wish to earn more given their migratory status so that they are able to send some money back to their respective states, mostly to offset their cost of migration. Thus, the employers also prefer the labours coming from outside state instead of the same state as they can get more work done from them.
- The industries noted that skill training should be done on a mass scale specially for people who are from Uttarakhand. This is because SIDCUL estates in Haridwar, Pantnagar, Sitarganj, Dehradun and Nainital (Bhimtal) and other mini-industrial estates in Champawat, Uttarkashi, Nainital (Motahaldu, Haldwani) etc. have to maintain a quota of 70% of Uttarakhand workers. They face a dearth or shortage of workers to run their daily operations which gets coupled with the high rate of attrition the industry usually faces. Much of these industrial estates lack nearby medical, residential and conveyance facilities. The biggest challenge is- rent in nearby residential areas are too high for workers. As they are coming from different districts of Uttarakhand, they find it hard to save money to send back to their homes.
- Uttarakhand is often called the “Money Order Economy” because much of its labour force is migrant ones and theses migrants send money back to their homes on which their family depend for their livelihood.
- The industry feels that the candidates who are recruited from schemes like DDU-GKY are not adequately skilled as per the industry standards. Further they feel that the local youth who come out of the training institute don’t tend to join the industries and are looking for other avenues of jobs mainly in service sectors.
- For metal casting and industries related to it, there will be an impact of technological advancement. Furnaces that are traditionally used will be replaced by auto-charger furnaces which will affect furnace operator jobs in the coming years.
- In electrical fan manufacturing units, workers are usually sourced from West Bengal. There will be a high affect due to technological advancement as electrical fan winding machines are going to be automated overtime. Blade maker/riveting jobs will become redundant overtime. As far as the Pharma industries are concerned, the industry expects higher growth in the coming years as the Government is trying to develop medical devices manufacturing industries in Selaqui and Vikas Nagar, Dehradun. most of the Pharma industries didn’t face any impact due to Covid 19 seeing the demand grow over this period. Most of the industries in the industrial estates had working permit in Covid-19 period, as they were put under essential services. Construction and welding units received orders for the construction of Covid hospitals. Packaging industries receive orders for making PPE kits etc. most of the units were operational by June 2020. In the pharma industries, there are some candidates who come through ATS and work as trainees but very few get absorbed in the permanent workforce.
- Machine operators are in great demand in manufacturing units. Most of the industries which hire ITI, and Polytechnic graduates tend to employ them as machine operators in the early years as these candidates have no prior experience of working on the industry specific machines. Also, the industries are hesitant to entrust machine work with new hired candidates. This brings notice to the requirement of improving the infrastructure of ITI and polytechnics.
- Big manufacturing plants tend to hire more freshers compared to medium, small and micro scale industries as these large-scale industries can afford to bear the cost of training. Medium, small and micro enterprises tend to hire experienced workers as they are not able to bear the training cost.
- The Tourism and Hospitality sector suffered severely due to Covid-19 Pandemic. All the operations came to a halt in March 2020 and didn’t resume until October 2020. During this period much of their staff left for their villages. This sector experienced an all-time low of tourist influx. The activities resumed in October 2020 but it operated way below full capacity. The Pandemic restrictions were imposed coincidently at the peak of the tourist season which is generally between April to November (Chaar Dhaam Yatra).
- Common trends that were observed while consulting various stakeholders from industries: -
 - People from hilly region specially from Kumaon region wanted to join engineering jobs, not entry level jobs because of the wage differential. high (approximately 40 percent).

- Helper jobs roles were usually sourced from locality as their attrition rate was higher compared to other job roles. The sourcing for all job roles were either done through word of mouth/references or through a manpower agency.
- Contractual job roles had higher attrition rate compared to a permanent position.
- The Freshers from ITIs, Polytechnics and short-term training institutes are rarely hired by medium and small-scale industries. The employers hired or retained workers with some experience of work, and it was not relevant for them whether the worker had ITI or polytechnic background. This was very well observed when we compared the wage differential between a person with an ITI background and a person without an ITI background.
- The industries in SIDCUL, Bhimtal are facing Supply chain problems as most of the buyers/procurers prefer SIDCULs in the plains such as Haridwar, Rudrapur and Sitarganj. They expect relief on the but laws of the plot, subsidies on the freight transport and some concession on consumption of electricity owing to their location. Only six industries are currently operational in SIDCUL, Bhimtal.

7. Value Chains and Case Studies

We have captured some of the important value chains during our survey which have potential to provide income source to the youth of the state. We have also mentioned some case studies which we have come across during survey, mentioning some job roles which can be looked into to boost the employment.

7.1. Value chain of few priority sectors

This section defines the homestays, food processing and dairy farming value chain as per Porter's value chain analysis model by dividing the activities into primary and support activities. Primary activities include inbound logistics, operations, outbound logistics, and sales. The support activities include, firm infrastructure, human resource management, technology development, and procurement.

7.1.1. Homestays

The tourism sector contributes approximately 25 percent of the state's GDP in Uttarakhand. The state receives approximately 30 million tourists annually⁶⁰. Uttarakhand is known for its **pilgrimage tourism** but in recent past new concepts like **health tourism, wildlife tourism, cultural tourism and trekking, adventure sports, river rafting, skiing, angling, aero sports and winter sports** have also gained popularity. This has led to the increase in homestays in the prime tourist locations like Haridwar, Rishikesh, Badrinath, Kedarnath, Almora, Gangotri and Yamunotri. As on 30th January 2020 there are 2,100 homestays in Uttarakhand⁶¹ which are rated under Platinum, Gold and Silver category based on the quality of infrastructure and service.

Category wise Popular Destination of Uttarakhand

Adventure & Watersports: Aero Sports – Naukuchiyatal; Mountain Biking – Rudraprayag to Gopeshwar; Route Rafting – Rishikesh, Skiing - Auli; Trekking - Munsyari, Roop Kund, and any more

Wellness & Spiritual Spirituality: Wellness – Rishikesh (Anandaspa); Bageshwar Temple and many more

Nature & Wildlife: Wildlife Jim Corbett National Park, Nanda Devi National Park, Rajaji National Park and any more

Fauna: Binog Wildlife Sanctuary, Kedarnath Wildlife Sanctuary Mussoorie Wildlife Sancturay Sonanadi Wildlife Sancturay and any more

Flora: Nanda Devi Biosphere Corbett National Park Rajaji National Park Valley of flowers and any more

Hill Stations: Nainital Mussoorie Lansdowne and many more

Pilgrimage: St. Mary's Church, Char Dham, Lansdowne, Hemkund Sahib, Kaliyar Sharif and many more

⁶⁰ Uttarakhand HDR Report, 2018

⁶¹ <https://timesofindia.indiatimes.com/city/dehradun/ukhand-signs-mou-for-homestays-with-online-travel-company/articleshow/73742136.cms>

Homestays in Almora

As per tourism department, Uttarakhand- 2020, total number of registered home stay at district Almora are 243.

Inbound Logistics- Home stay business in the state is registered under the Uttarakhand Government Home Stay Polices. Value is added to the services offered by entity “Home Stay” through addition of new services likewise – campfire, bonfire, hi-speed internet facilities, cooking, adventure sports activities, gaming and others, which helps to increase their selling value.

Operations- Home Stay operators in Almora area are registered under the two different polices of Home Stay either Veer Chandra Singh Garhwali Tourism Self Employment Scheme or Deen Dayal Upadhyaya Griha Awaas Homestay Development Scheme rules 2018 and these are licensed business entity.

Outbound Logistics- There is very little presence of intermediaries in selling of services of “Home Stay Business in Almora”. E-commerce platform TripAdvisor, Social Media Platforms likewise- Instagram, Facebook and WhatsApp and word of mouth are major selling medium of Home Stay Services. However, pickup and drop services are important concern.

Marketing and Sales- Major Home Stay business entity at Almora having penalty of opportunities to improve offered services, Promotional and Marketing activities, and logistics to generate customer round the clock and ensure good revenue. However, need-based marketing activities are carried out by the services provider entity during scenario like- post covid work from services.

Service- Service training is a key component of the value chain that helps to make its offerings unique. A substantial amount of value is created when campfire, cooking, hi speed internet services and other services are carried out for customers. Some of the unique experience is local site seeing and river side camping.



Infrastructure- This includes line of services like management, online payment, gaming, finance, legal, etc., which are required to keep the entity's services operational. Home Stay entity need to deploy onsite employs business managers/ professional while serving customers, this will certainly help to overseas customers.



Human Resource Management- The committed workforce is considered a key attribute in the entity's success and growth over the years. Training and motivation related activities for the resources working in the homestays are required to further enhance the quality of service.

Technology Development- Home Stay Business Entities have ample opportunities to add technology, for national and international customers, to ensure consistency in quality service offered along with cost savings. Many customers use Home Stay as a work from home center, furthermore they use customized service to enjoy home away from home. Several platforms where customers can ask questions, give suggestions, openly express opinions, and share experiences can be launched to make home stays popular.

Figure 82 Value chain analysis of homestays

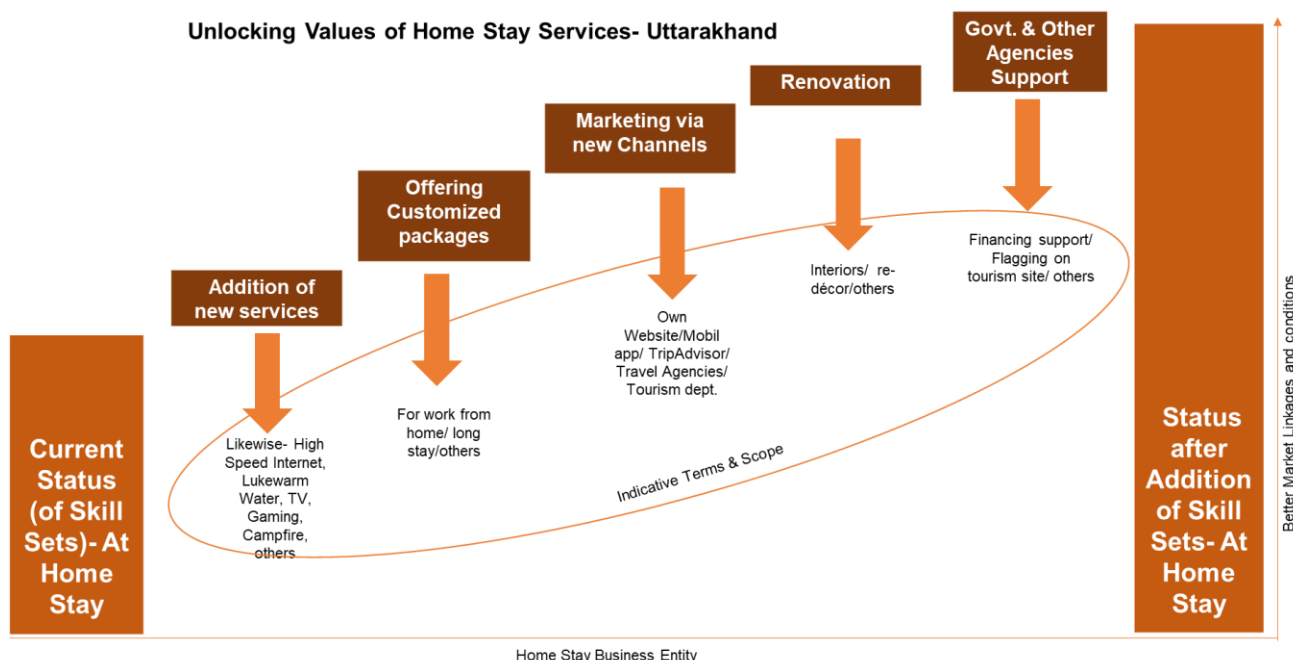


Table 32 Skill gaps in home stay business

Skill Set and Gap- Home Stay Business Entity	
Basic skills required	General skill gaps
<ul style="list-style-type: none"> Recognizing and interacting the guest Ability to maintain guest history and network with guests Promote sales and marketing Co-ordination with Food & Beverages, Housekeeping etc. Knowledge on various hotel offerings, procedures, etc. Maintain personal hygiene Booking air/ hotel/ train or cab based on the requirement of the guest. Awareness about the local areas/site seeing/shopping areas and suggesting the same to guest based on their interest. 	<ul style="list-style-type: none"> Inadequate skills in interact with guests / Inadequate skills in handling customer complaints / Inadequate ability to proactively review occupancy and promote sales Inadequate ability to manage team Inadequate ability to listen to guests Lack of knowledge about various service offerings Offering Customized Packages for long stay

7.1.2. Food Processing

The percentage of agricultural workers in the total workforce of Uttarakhand was 58.4 percent in 2011. The main agricultural crops grown in the hill districts of the Uttarakhand are paddy, wheat, mandua, sawan (millet) and pulses. The hill areas provide excellent agro-climatic conditions for growing a variety of fruits, vegetables, medicinal and aromatic plants that have good domestic and export markets. **Horticulture, livestock, Sericulture, Beekeeping and Fisheries** are few areas which can be looked upon for self-employment. As per HDR 2017 Primary Survey, among the fruits, mango (20.8 percent), apple (14.6 per cent) and litchi (9.4 per cent) occupied the top 3 positions in the state in terms of area under horticultural crops. Uttarakhand's livestock population was 0.83 percent that of India and the area share of livestock was 1.6 percent that of India. There are more than 70 mulberry farms, spread across over 500 acres. The production of mulberry silk cocoons has been around 110 million tones that of the oak tasar cocoon around 31 lacs and raw production was 13 million tones. For fisheries development there is 2686 km large rivers, 20075 ha reservoirs, 297 ha lakes and 676.41 rural ponds. Owing to this growth the **food processing business** is also growing in the state, leading to increase in training requirement in this sector⁶².

⁶² Uttarakhand HDR Report, 2018

Common category of food processing which is commonly found in Uttarakhand are:

- Fruits & Vegetables - Haridwar, Dehradun, Tehri Garhwal, Udham Singh Nagar, Nainital
- Spices - Almora, Chamoli, Haridwar, Dehradun, Udham Singh Nagar, Nainital
- Cereals Production - Haridwar, Dehradun, Almora, Udham Singh Nagar, Nainital

Table 33 Sub-sectors in food processing industry of Uttarakhand

Food Processing	Sub-Sector	Primary Processing	Secondary Processing	Tertiary Processing
Agri Products	Fruits and Vegetables	Cleaning, sorting, grading & Cutting	Pulp, Flakes, Dried, Flavored, Preserved, Paste, Sliced, Diced, Canned	Ketchup, Jam, Juices, Pickles, Squash, Preserves, Candy, Chips, Murraba, Syrup
	Grains and Cereals	Sorting and Grading	Rice puff, Flour, Rawa, Broken, Milling	Biscuits, Flakes, Bread, Bakery items, Cakes, Namkeen, Mixed atta
	Beverage	Sorting, Bleaching, Grading	Powder, Dust, Leaf	Tea Bags, Flavored drinks, soft drinks
	Spices	Cleaning, sorting, grading	Cut, Grind, Dried, Powdered	Spice mix, Mix Salt
Bee Keeping	Honey	Collection, filter	Moisture reduction, Flavoring,	Honey bottled

Food Processing Value Chain in Uttarakhand

Uttarakhand is rich in tropical and temperate horticulture produce. Despite the rich resource, the market is unorganized when it comes to food processing. The government and private players both are creating new players, processes to add value and make a sustainable food supply chain. Different parts of value chain have different constraints and opportunity. The complex value chain spans to all the players and activity including Input, Production, procurement and storage, Processing, retailing. Below table shows an assessment of Uttarakhand food processing value chain.

Figure 83 Assessment of Uttarakhand's food processing value chain

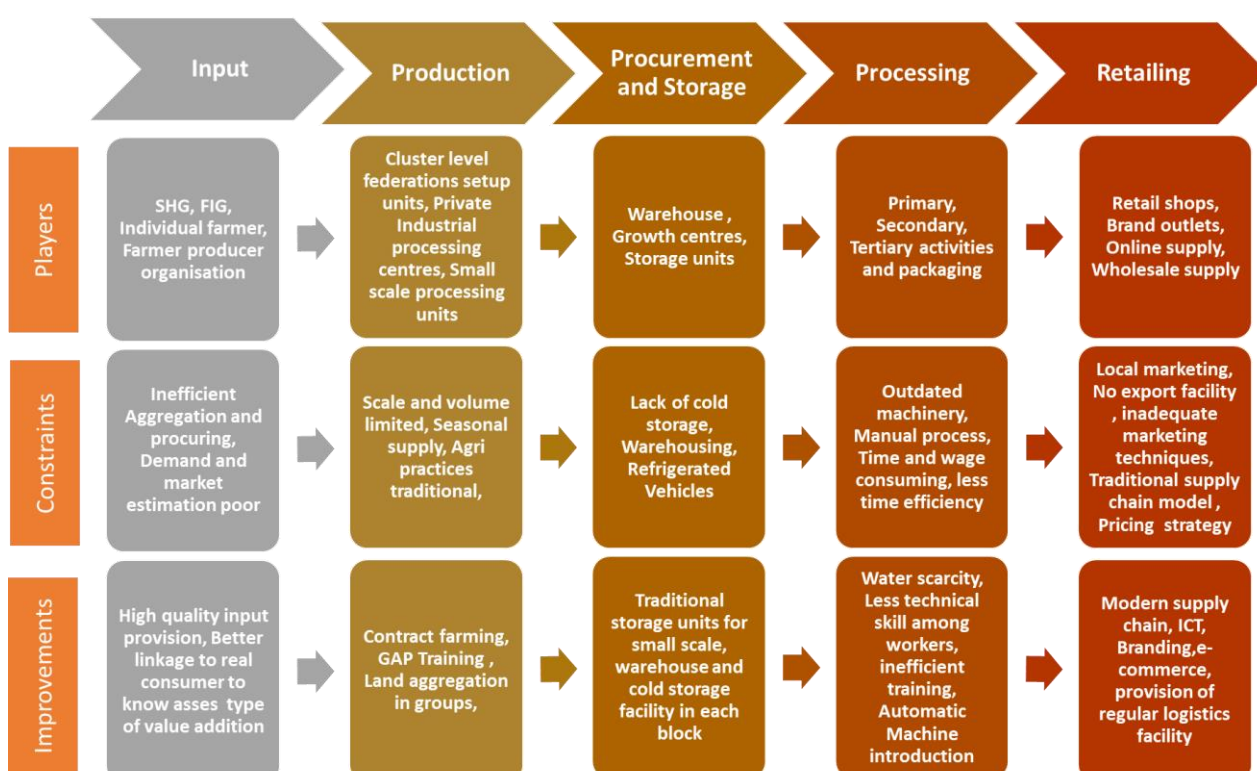


Figure 84 Value chain analysis of food processing

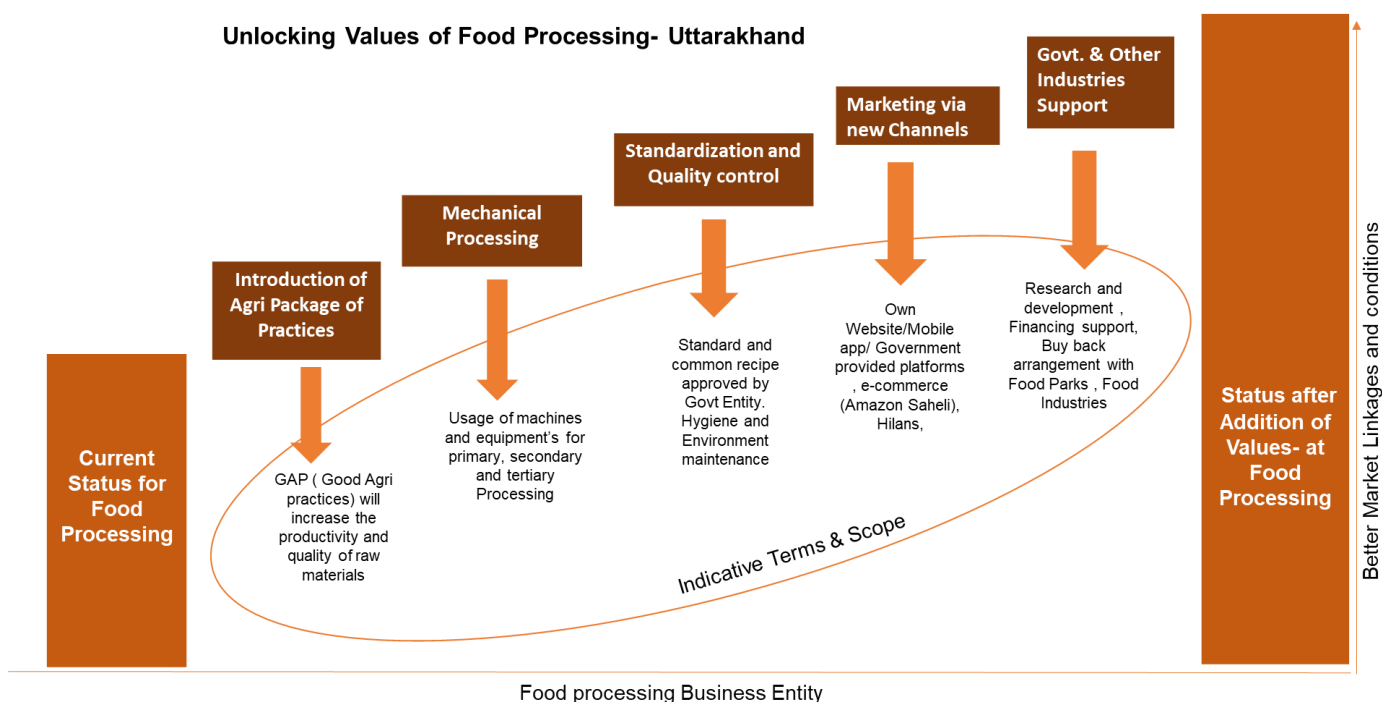


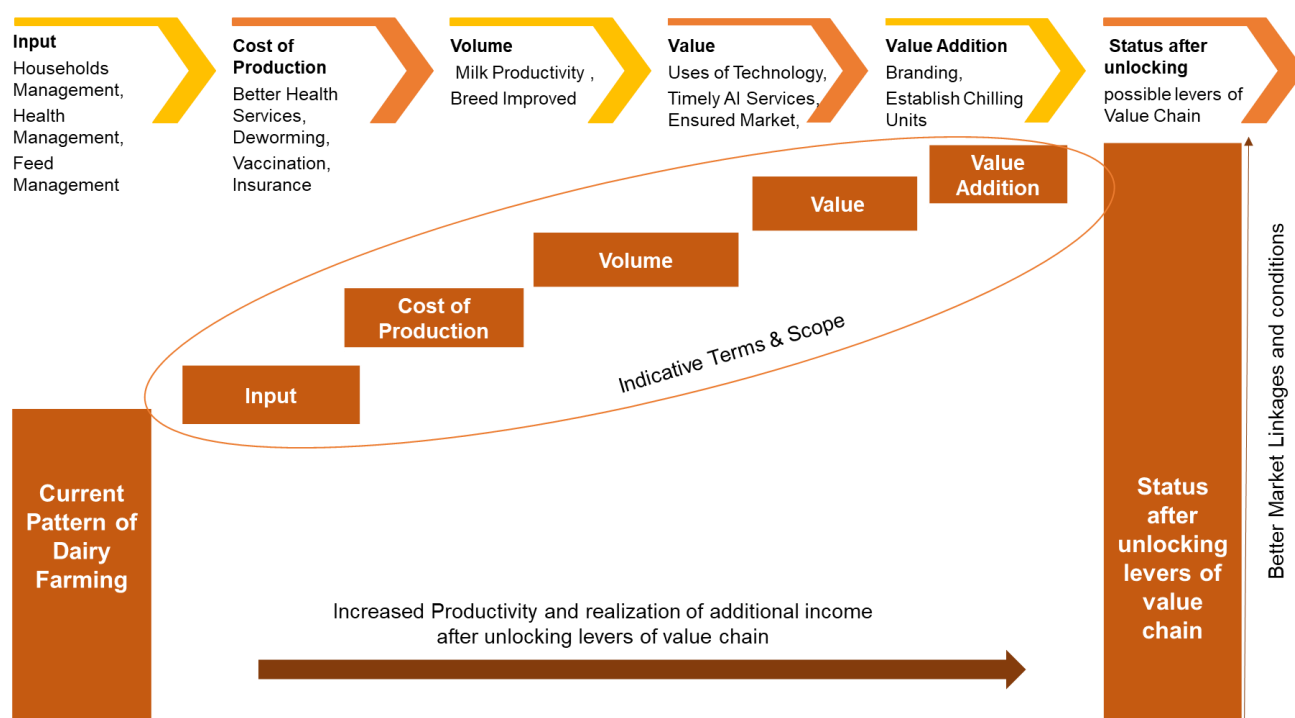
Table 34 Skill gap in food processing business

Skill Set and Gap- Food Processing Business	
Basic skills required	General skill gaps
<ul style="list-style-type: none"> • Production with Good Agriculture practices • Quality assurance • Technical training in value addition • Standardization of procedures involved • Marketing by e commerce • Knowledge if ICT • Familiarity with the market needs • Market accessibility techniques • Awareness about the changing food consumption behaviors 	<ul style="list-style-type: none"> • Inadequate skill in complex processing • Lack of knowledge about government schemes and its implementation • Lack of knowledge of Horticulture produce and its value in market • Lack of bargaining skills with private players and stakeholders • Production if in bulk with no such customization as per changing market • Packaging and Marketing

7.1.3. Dairy Farming

Dairy farming is one of the most important economic activities in the rural mountainous areas of Uttarakhand where land resources are very limited, and options of livelihood are limited. Dairy farming has a high economic potential in the region and have huge potential to promote as Organic Dairy Farming and Organic Dairy Produces. The growth and development of dairy farming mainly depends on the infrastructural support provided to the dairy farmers with lucrative rewards to the produced milk through dairy cooperatives, milk collection centers and milk processing units.

Figure 85 Value chain analysis of dairy farming



Analyzing Dairy Value Chain

Inbound Logistics

The activities of Dairy Farming are associated with receiving, storing, and disseminating the inputs of the products. It includes material handling, warehousing of physical products, as well as architecture to receive and store customer information for digital media company. Dairy Farms and Processing Units at present has outsourced most of its inbound logistics activities. Likewise –

- Cold Storage Network (status - poor)
- Chillers in proximity of villages (status – poor)
- Chilled Trucks for procurement and supply

Operations

It includes activities that help to transform raw material into finished products, like tetra pack milk, Paneer, Curd, Ghee, and others. Few Private processing units having raw milk testing machines only. The quality check mechanism was missing during our filed visits.

Outbound Logistics

Outbound logistics activities include distribution network, wholesalers and retailers order fulfillment, and processing. State Co-operative Federations and Private players having scope to generate the distribution channel to ensure that produces reach every nook and corner of the service.

Marketing and Sales

These activities are undertaken by State Dairy Unions and Local Dairy Processing Units to create means through which the buyer can buy a firm's products. These activities include – marketing, channel selection, advertising and promotion, pricing, sales force management etc.

Services

Dairy Units need to provide after sales services and maintenance for successful usage of the product. Service activities of Dairy Units can include – part supply, post sales maintenance, installation services, training, and product forward and backend alignment of software.

Support Activities in Dairy Value Chain

The four generic support activities are –

1. **Firm Infrastructure-** Firm infrastructure support activities at Dairy Industries at Uttarakhand consists activities such as – planning, quality management, finance and accounting, legal services, and general management. Firm infrastructure activities of Dairy Industries support entire value chain. In Uttarakhand, there is possibilities to improve microbiological quality of upcoming raw milk to give better shelf life of the product, improvement in quality of milk in terms of acidity and sour milk.
2. **Human Resources Management-** Human Resources Management is key to the success of any organization. HRM support activities include – Recruiting, People Planning, Skill Assessment, Training & Development, Selection, Hiring and Compensation at both business unit level and corporate level. Human resource management affects competitive advantage in any firm, but in some industries, it is defining factor. Based on our field visits, we felt that there is a huge scope to improve skills set of Dairy Entrepreneurs, Dairy Workers, para vets, dairy machine operators and others. In addition to this, training for farmers emphasizing on need of management practices like – health management, households management, feed managements and others.
3. **Technology Development-** In the technology industry, technology development has become a source of competitive advantage. Technology development at Dairy Industries may include activities such as - process engineering, feature design, technology selection, component design, and field-testing. Establishment of Automatic Milk Collection Unit for milk testing and fair pricing need to take place at field and farm level. Furthermore, For Commercial Dairy Farming Dairy Information System need to place to facilitate data analysis and decision support in improving milk collection.
4. **Procurement Activities at Dairy Industries-** Procurement activities of Dairy Industries in Uttarakhand include activities that are undertaken to purchase inputs that are used in value chain. It doesn't include purchase inputs themselves. Purchased inputs may include - raw materials, supplies, machinery, laboratory equipment, office equipment, and buildings. Like all other value chain activities procurement also employs technology for things such as – procedures, vendor management, information system, and supply chain partner qualification rules and ongoing performance evaluation.

Table 35 Skill gap in dairy farming business

Skill Set and Gap- Dairy Farming Business	
Basic skills required	General skill gaps
<ul style="list-style-type: none"> • Understanding of cattle care and management • Knowledge of fodder requirement and water supply • Understanding of dairy equipment • Maintaining cattle health records, vaccines, breeding, etc. • Managing the financials of the farms • Understanding shed construction • Knowledge of licensing and legal requirements 	<ul style="list-style-type: none"> • Awareness and adoption of new technologies • Inadequate skill in complex processing • Knowledge of latest breeds • Quality of milk produce • Packaging and marketing

7.2. Select Case Studies

7.2.1. Hans Foundation, Story behind the women weavers of Kumaon, Almora

Located amidst the beautiful mountains and hills in Uttarakhand, “**Himadri Hans Handloom (HHH)**” is an initiative of The Hans Foundation, a non-profit organization, working in collaboration with the Govt. of Uttarakhand, was established approximately 20 years ago with its main office in Almora, Uttarakhand.



A total of **200 female employees** are currently working with HHH, all of them being locals of the Almora town. The HHH initiative has helped these women in becoming financially independent, supporting their families and sustaining their livelihoods.

Figure 86 Women weavers and spinners in Himadri Hans Handloom Factory



- Products manufactured- Shawls, tweeds, bags, mufflers, hand-made coasters, facemasks, soft toys, spices, face packs, juices, pickles etc.
- The average salary being paid to women at **entry-level** is approximately **Rs. 9,000-Rs. 10,000/-** while that paid to a **skilled worker** is approximately **Rs. 12,000- Rs. 13000/-**.
- **More than 50% of these employees are skilled** at their work and the **remaining are semi-skilled**.
- Training is provided to all these local women, post which they are employed and paid for their output.
- Their products are exported globally to the US, Europe, Australia etc. These locally produced products are in great demand by tourists.

Table 36 Key job roles and qualification requirement in Handloom

S. No.	Key Job Roles	Qualification Criteria	Skill Set
1	Spinners	Nil	Experienced
2	Weavers	Nil	Experienced
3	Craftsperson	Nil	Experienced

7.2.2. Kiwi farming and processing, Sama Agri Business Growth Centre, Bageshwar

Located in Sama Village, Kapkot, Bageshwar district of Uttarakhand, it is one of the promising growth centres in the state. It is known for its Kiwi farming and processing of products like kiwi squash, jam, chutney, candy and burance. Apart from that they produce Malta squash.

- Raw material i.e., Kiwi is grown by the villagers with the support of resource person (expert in the agriculture sector)
- In a **land of 1.5 hectare**, approximately 600 kiwi plant can be grown, which can employ about 20-25 people. However, the requirement of manpower is intermittent throughout the growth cycle.
- It takes about 1 year to grow a plat of up to 6 feet.



Figure 87 Kiwi farming and processing in Sama, Bageshwar



Table 37 Key job roles and qualification requirement in Kiwi farming

S. No.	Key Job Roles	Qualification Criteria	Skill Set
1	Farmers	Mid school	Experienced
2	Packers	Nil	Unskilled/ freshers
3	Processors in production units	Mid school	Experienced
4	Helpers for pruning of kiwi plants	Nil	Unskilled/ freshers

7.2.3. Uttarakhand Tea Board, Champawat

The Government of Uttarakhand on 12 February 2004 formally created a separate, independent “Uttarakhand Tea Development Board”. The board has been proving its worth to a great extent in fulfilling its prime objectives since its inception as evidenced by tea development work in establishing tea gardens in Almora, Bageshwar, Champawat, Chamoli, Nainital, Pithoragarh and Rudrapur districts of Uttarakhand.

The tea factories are located in Kausani (Bageshwar), Champawat (Champawat), Ghorakhal (Nainital), Harinagri (Nainital) and Nauti (Chamoli). The tea processed is being exported to South Korea, Japan, Germany, USA, Netherlands, etc.



Figure 88 Uttarakhand tea factory, Champawat



Table 38 Key job roles and qualification requirement in Tea farming

S. No.	Key Job Roles	Qualification Criteria	Skill Set
1	Farmers	Mid school	Experienced
2	Packers	Nil	Unskilled/ freshers
3	Operators in tea processing factories	Mid school	Experienced
4	Helpers for picking leaves	Nil	Unskilled/ freshers

7.2.4. M/S Ringaal Utpaadan Evam Hastshilp Vikas Swayat Sahkarita, Block Bhatwari, Uttarkashi

Shri Bipin Panwar works as a Secretary for the *Ringaal Utpaadan Evam Hastshilp Vikas* NGO in Uttarkashi. They are registered under Cooperative Act. All their employees are locals who know this art of making different products they sell through their retail shop. They specialize in making Baskets, lamp sets, designer windows, muffler out of Hemp and Bicchu (Nettel) grass. They established their unit in 2010 and currently employs around 60 employees. 75 percent of their workers were contractual. These contractual workers work seasonally but are connected to them throughout the year. Their work varies based on the orders they receive. Most of the employees were male. Entry level employees were primarily secondary school educated while at Supervisor-level, the employees were at least graduate. Their work involved high skill, intricate detail work- indigenous to this district as the cloth made from hemp as well as the wood products made from Ringaal is not found anywhere else. Ringaal is found in the mountains above, as these craftsmen usually take up the enduring task of collecting these woods, risking attacks from wild animals such as bears and leopards. Shri Panwar operates out of the Uttarakhand Hathkargha Evam Hastshilp Vikas Parsihad complex in Uttarkashi. Shri Bipin's job is to market the products made through Uttarakhand Hathkargha Evam.

Figure 90 Craft goods



Figure 89 Baskets made from Nettel Grass



Hastshilp Vikas Parsihad complex. They are assisted by the government as they have been allocated space in this complex as well as given frames to weave carpets. The workers are employed in 3 job roles namely:

Figure 91 Artisans



Table 39 Key Job roles and the qualification requirement in handicraft

S. No.	Key Job Roles	Qualification Criteria	Skill Set
1	Craftsmen	Higher Secondary	Experienced
2	Marketing Expert	Graduate	Experienced
3	Craftsmen Trainer/ Designer	Graduate	Experienced

Their business relies heavily on tourists, especially on the Char Dham Yatra season, between March and August, as a lot of tourists' go through Uttarkashi to visit places of pilgrimage in Gangotri, Gaumukh and Harsil. Mr. Panwar suggested that we can train local youth for craftsmanship as an option so that they can earn their livelihood in an event if they are not getting a job because there is a seasonal demand for craftsmen. Craftsmen trainers can train local youth with a training module which can help them a great deal. Their products are in great demand from the tourists and are sold to neighboring states of Uttar Pradesh, Rajasthan and Delhi.

Figure 92 Carpet Weaving frames



7.2.5. M/S Dhirendra Singh Rawat, Village- Odda, Block-Pauri, District- Pauri Gharwal Uttarakhand

Sh. Dhirendra Singh Rawat is the founder of solar plant company in Village- Odda, block Pauri, District Pauri Garwal with the registered name of M/s Dhirendra Singh Rawat under Udyog Aadhar. The Solar Plant was established in the year of 2016 and generating employment in green jobs/energy for local community.

Figure 93 Picture of M/S Dhirendra Singh Rawat, Gharwal, Uttarakhand



He has received subsidy for the establishment of the plant from state government. He started with one solar unit and currently five solar units are working successfully. He is providing employment opportunities to local community. Initially, he faced numerous challenges during the establishment of company out of which major challenges were the acquisition of land and funds.

The plants have employed 35 workers on contractual basis from the local community. Ratio of male workers are high as 95% and female are 5% only. Company is also stepping into providing employment to more female candidates. Apart from provided employment opportunities to the local community company is also providing power supply to state government.

The plant has also proposed expansion plan for setting up seven more solar plants/units within the district and state which will be generating employment opportunities for 35-40 people and more power production.

Currently, plant hires manpower from local community & referrals and in future company is also willing to hire people from any of the institution/ITI/Skill development scheme with requisite skill set. Sh. Dhirendra Singh Rawat himself provides training to these workers for the day-to-day operations of solar plant. Although there is no formal training, and all employees/workers gain technical knowledge related to solar plant operations during the working hours. Sh. Dhirendra Singh Rawat is also providing exposure to his son in this mission who has recently completed his B.Tech.



Table 40 Key Job roles and the qualification requirement

S. No.	Key Job Roles	Nature of Employment	Qualification Criteria	Skill Set
1	Supervisor (Monitoring)	Skilled	B.Tech/ Polytechnic/ Diploma	Experienced
2	Electrician	Semi-skilled	Diploma/polytechnic/ITI	Experienced
3	Helpers (Washing etc.)	Unskilled	Middle	Unskilled/ Fresher

Further, he explained that currently the major challenge he is facing is the acquisition of land as he already invested huge amount in acquisition of land. In this regard, he requested the local administration & state government for the hand holding in availability of land for the expansion of company. Once the plants expand with establishment of new set up of solar units, it will be generating more employment for local as well as other district's community.

Figure 94 Pictures of M/s Dharendra Singh Rawat Village–Odda, Block Pauri, Garwal, Uttarakhand (UK)



7.2.6. Kumaon Namkeen Udyog

Kumaon Namkeen Udyog is a micro enterprise having its head office in the Bin Block of Pithoragarh district, Uttarakhand. The enterprise was established in the year of 1994 and is registered under Udyog Aadhar, Establishment Act and Company Act. Smt. Devika Devi is the founder of Kumaon Namkeen Udyog. She is running her enterprise along with her husband.



The enterprise is indulged in the activities of manufacturing of food products (Namkeen). The company purchases raw materials (like Mandua, Bhatt, Soyabean, Gahat, Rajma, Makka, Ginger, Janghora) from local communities situated in Pithoragarh, Loahaghat and Champawat from SHGs (like Chamu Baba Swaym Sahayata Samuh). The namkeen is sold at various locations, such as Delhi, Dehradun, Mumbai, Lucknow, Allahabad, U.S. Nagar, Pithoragarh, etc. Currently, the company has 01 manufacturing unit in the Pithoragarh district and enterprise is also planning for spreading of its business in other districts within Uttarakhand and outside the state boundaries. This local company provides equal opportunity for male and female employees. A total of 16 peoples are engaged in the business which includes around 40% of male employees.

The major challenges faced by the company are sourcing of raw material from villagers and supplying of finished food product from hilly areas to different major market location. The company generally hires unskilled manpower and provide them proper training. During the tenure of former Chief Minister of Uttarakhand Mr. Harish Rawat, the company got the exemption in GST. The major support company need from the government is for smooth logistics services and availability of market for their product outside the state of Uttarakhand.

The key job roles in this company are Bakers and Packers. The company generally hires unskilled manpower from the local communities mostly for 'Baker' job roles and provide them proper training. There is no bar on skill sets and education level for hiring the employees across different job roles. The wage for existing labor is Rs. 13,000/- (including accommodation and meal).

Figure 95 Illustrative pictures of Kumaon Namkeen



The company had participated in various events. **Some of the major events are as under:**

- Exhibitions organized by Industries Department of Uttarakhand,
- Saras Bazar, Pithoragarh
- International Trade Fair, Delhi

Some of the major awards won by the company:

- Company was the winner of Micro Entrepreneur Awards 2004 under Women Category representing North India in New Delhi. The award was presented by Honorable Finance Minister P. Chidambaram during that time.

- Company was also the runner up of National Productivity Award 2008 for 'Innovation in Food Grain Products' organized by MSME Department.

The company is currently working on small scale due to market constraint. Prior to pandemic situation, the company has had 12 employees (excluding owner) working on job roles like Baker and Packer. The owner has closed her company on temporary basis during nationwide lockdown period and has asked the employees to be at home. During lockdown period, the company has suffered a loss of Rs. 5 lakhs due to spoilage of their plied-up stock (Namkeen food products).

The owner is planning for reopening of her company and selling of her finished products through online channel like Amazon. She has also planned for increase in the production of finished products and for this she has anticipated for introducing 'Automatic Packaging Machine' for smooth packaging of finished products.

7.2.7. TROPICAL DAIRY (M/s Sanjay Jain)

Sh. Sanjay Jain is the founder of Tropical Dairy and its head office has been situated at GGIC Road, Sri Nagar, Pauri Garhwal-246174, Uttarakhand with the registered name as Tropical Dairy, under Udhdyog Aadhar Act. It is one of the leading manufacturers and sellers of Ice Cream (candy, cone and kulfi etc.) in many districts of Uttarakhand like Pauri Grahwal, Chamoli, Rudrapryag, U.S. Nagar, Bageshar, Champawat, Nainital and Uttarkashi. It was established in the year of 2008.



Currently, the company has 01 manufacturing unit in the Pauri district and one outlet to display its products. This local company has 15 employees of male (40%) and female (60%). **Tropical Dairy has seasonal business from March to Aug of a year and provides employment maximum to female staff for packing of ice cream and other allied products.** Prior to pandemic situation, the company had 35 employees (excluding owner) working as job Packers, Machine Operators, and helpers.

Table 41 Key job roles and qualification requirements in dairy

S. No.	Key Job Roles	Qualification Criteria	Skill Set
1	Machine Operator (Ice Candy & continuous freezer)	10 th Pass	Unskilled/Fresher
2	Quality control	Diploma/Graduate	Experienced
3	Logistics/Helpers	Illiterate /Middle	Unskilled/Fresher
4	Accountant	Graduate	Experienced

The company generally hires unskilled manpower from the local communities. Therefore, they have not shown any willingness to hire skilled people for the job roles from the government institution/ scheme.

Tropical Dairy has made a name for itself in the list of top suppliers of Ice-cream in Uttarakhand state. They supply their product mostly in various hotels, restaurants, and shops. They have also registered on www.indimart.com and get order from within state/outside of the state during the summer season.

7.2.8. Lal Singh Poultry Farm Munakot, Pithoragarh

Sh. Lal Singh is the owner & founder of a poultry & fishery farm in Munakot Pithoragarh, District Pithoragarh with the registered name as Suryawanshi Utpadan (Lal Singh Poultry farm) under MSME. The Poultry farm was established in the year of 2017. At the time of inception Lal Singh started, with 3 employees with one unit at Munakot. With course of time Lal Singh expanded the unit and now he is having 5 units in the district. The unit is registered under MSME act. Lal Singh has provided employment to 10 people out of which 90% are male & 10% are females. The mode of employment is contractual/ permanent/ daily basis.

During the initial days Lal Singh faced several challenges in establishing the unit. He was not getting proper land and financial aid. Somehow, he made his mark and established his first unit. Now he has one fishery farm a grocery store & some cultivable land on which he is doing organic farming, wherein he provides employment opportunities to local youths who are seeking for job opportunity in local area. Further to this he is planning to establish a poultry farm in the Pithoragarh district town.

Table 42 Key Job roles and the qualification requirement in poultry farms

S. No.	Key Job Roles	Qualification	Skill Set
1	Poultry Farm Manager	Intermediate	Experienced
2	Broiler Farm Worker	Middle School	Unskilled/Fresher
3	Aquaculture worker	Middle School	Unskilled/Fresher
4	Farm worker	Middle School	Unskilled/Fresher

The company generally hires unskilled manpower from the local communities. Therefore, they have not shown any willingness to hire skilled people for the job roles from the government institution/scheme

The company has proposed expansion plan are within district town Pithoragarh. The company supplies poultry & fisheries products in different block of Pithoragarh like Bin, Didihat, Dharchula and adjoining districts like Champawat & Bageshwar. The further expansion of the company will also lead to employment generation for local youths.

Figure 96 Pictures of Lal Singh Poultry Farm



8. Key Recommendations

Convergence:

There is an urgent need for several departments in the state engaged in Education, Vocational Education, Industrial Development, Agriculture and Allied activities, among others to converge their efforts. Several Departments run Vocational Training / Skill Development Programs in the state. The parallel implementation of Skill trainings by several departments lead to the following (i) Misallocation of training capacity with multiple programs offering the same trades; (ii) Duplication of Beneficiaries without a de-duplicating mechanism like Aadhaar; and (iii) Dip in Quality Assurance owing to varied standards, target groups and monitoring frameworks.

Engagement of Industry:

It was found that, in the hilly districts, there was little interfacing between the local Industries, and the local ITIs and polytechnics / vocational training / skill development centers. This results in a mismatch between the trained youth and the labour market requirement and thus causing migration of the populace in search for better job opportunities as observed, specially in Almora and Pauri districts. Moreover, this results in a lack of feedback from the Industries on the training curriculum and quality. This creates a vicious circle of unemployment of trained youth and mismatch of trainings to the Industry requirements.

The Directorate of Employment has taken up initiative for providing career counselling services and conducts job fairs. These job fairs are held periodically at the District Employment Office, bringing together both employers and job seekers on a common platform. This initiative can be further improved by bringing on board the Vocational Education / Skill Development centers, Local Industrial Associations, Industrial Estates. Further, the use of a Labour Market Information System (LMIS) that collects and disseminates data from the job seekers and the employers can provide better labour market information. These initiatives will provide better opportunities to those beyond the vicinity and reach of the District Employment office. Local manpower agencies should be linked with ITIs, Polytechnics, and short-term training institutes to ensure better placement rates as most of the industries contact these agencies to source their manpower requirements. This can also act as a forum for feedback on the Vocational Training / Skill Development in the state and help in taking course corrections.

The portals of Rural Development Department and Employment Wing and other Departments should interface between each other. This will further strengthen the labour market interaction and act as a bridge between the employers and the target group.

Training of Trainers:

There is a dearth of trainers and master trainers across the State and especially in the hilly Districts like Champawat, Bageshwar, Pithoragarh, Chamoli, Rudrapur etc. There is also limited efforts and investments for continual upgrading/ upskilling of the trainers. Department of Rural Development, Government of Uttarakhand should consider establishing Regional Trainers' Academies (across Garhwal and Kumaon with special focus on hilly regions) equipped with adequate facilities to train, assess and certify trainers and in partnership with the Sector Skill Councils (SSCs), District Skill Councils (DSCs), industry bodies in Haridwar, Dehradun and US Nagar and/or relevant national institutions. Opportunities exist to collaborate with SSCs across sectors like Food Processing, Healthcare, etc.

Improving participation of Youth in Economic activity:

Career aspirants reported concerns about the non-availability of proper transport and residential facilities at workplaces. In fact, some of the SIDCUL estates have highlighted the lack of public transport connectivity and residential facilities for youth coming from different districts. Monthly rents as well as transportation costs leave very little disposable income with the youth working in the industrial estates. Industries have highlighted a preference for employing women, finding them to be better in regularity discipline and reasonable wage expectations. Thus, there is a need for dedicated effort to counsel youth to improve their participation in the labour force. In addition, the Govt. and Industries could work together to provide adequate support systems like the public transportation and affordable residential facilities near the estates.

Breaking the myths and market perceptions of the Youth:

The aspired monthly income amongst youth was much higher than the prevailing wages youth engaged in economic activity presently earn. For instance, candidates with graduate level of education expected almost twice as much as the going market wage. Supervisor-level job roles majorly requires candidates to be Graduate - as a minimum eligibility criterion. The going average market wage for supervisor level job roles in Uttarakhand is around 14,664 INR per month- as found in the employer survey. More than 50 percent youth respondents with at least Graduate level of education aspired wage higher than INR 25,000 per month. This indicates that the youth need systematic counselling about the larger economic trends and career prospects, especially about options outside of Public sector employment or employment in certain white collared and high-prospect blue-collared jobs.

Awareness Generation:

Presently, only 38.8 percent of the youth surveyed had awareness of Govt. run skill development schemes on an average. The general awareness regarding training and skills options is low amongst the target youth. Vocational training is not viewed favourably, especially among the family members of the youth's family and is the least preferred option. Awareness generation at the community level with family and educational institutions is imperative for ensuring better awareness and understanding of the opportunities and the necessity for attaining Skills. The District Employment office in some districts have taken the initiative to provide career counselling in schools and colleges. This could be further expanded in a systematic manner. Exposure visits to industries and service sector institutions to make the youth aware of various job roles may also help.

Nearly a third of the youth respondents surveyed under this study aspire for a career in self-employment/entrepreneurship. However, youth lack appropriate counselling on the opportunities in their line of education / training apart from various initiatives of the Government and Banks to promote it. Even if the youth are interested in self-employment or entrepreneurship, they lack adequate understanding on the processes required to start a venture. It is thus, recommended that sessions on entrepreneurship development and schemes like MUDRA, PMEGP, MSY, MSSY are introduced within the duration of the vocational training / skill development programs under the aegis of the local banks and the District Industries Centre.

The awareness should also be encouraged through ICT initiatives. Department of Rural Development, Government of Uttarakhand's activities need to reach the people through Media and Social Media engagements.

Strengthening Soft-skills and Employability Skills:

Employers across all sectors have acknowledged the limitations on inter-personal skills and communication skills among the youth, as constraining their effective performance of work. Businesses in the tourism sectors highlighted the need for strengthening the skills in spoken English. Given that the existing educational institutions and their mandate do not cater to the requirement of soft-skills and employability skills, it is important for Department of Rural Development to consider designing a targeted intervention on improving the soft-skills and employability skills of the State's Youth. Department of Rural Development can learn from the experiences of other States in this regard, and develop a custom-pack of the interventions, encompassing 21st century employability skills and soft-skills, in addition to spoken-English and basic information and communication technology (ICT). Department of Rural Development should consider implementing this across Schools and Colleges, in addition to integrating the same along with long-term and short-term skill development program.

Strengthening Industry-experience:

It is also seen that the earning potential among college graduates does not vary significantly from Diploma / ITI holders. To enhance the value of graduate programs, it is necessary to strengthen the exposure to work environments among both technical and non-technical students. In technical programs, the industrial visits in the relevant engineering / technical fields and internship programs need to be systematised. In the non-technical courses, apprenticeships in the services sector might be considered as an alternative. These shall expose the youth to the market's requirement for skill and workforce and give a realistic aspiration. However, this will also enable them to explore means to achieve better economic wellbeing through up-skilling or enterprise.

Strengthening deployment of Internship/ Apprenticeship at MSMEs:

MSMEs have highlighted the lack of availability of trainees to be deployed as apprentices at their industrial units, as the trainees are often placed in large industries in bulk. Enhancement in the Government supported stipends to the trainees for preferring MSMEs over the large industries, or a hybrid model of additional incentives/ stipend in addition to extended period of deployment [increase in the apprenticeship period] or assurance of regularisation into employment, could be considered to improve participation of MSMEs and balance the deployment with small/medium and large units. The MSMEs have also faced operational constraints with frequent attritions among the trainees deployed as apprentices. It is suggested that an appropriate check and balance mechanism put in place to ensure successful completion of the apprenticeship program by the trainees. It is also suggested that there is a mandatory inclusion of 'internship' in all the short-term courses, to enable adequate industry exposure and hands-on experience.

In technical programs, the industrial visits in the relevant engineering / technical fields and internship programs need to be systematised. In the non-technical courses, apprenticeships in the services sector might be considered as an alternative. These shall expose the youth to the market's requirement for skill and workforce and give a realistic aspiration. However, this will also enable them to explore means to achieve better economic well-being through up-skilling or enterprise.

Promotion of Traditional Sectors & Indigenous Products:

Uttarakhand is home to several traditional vocations of Ayurveda, Achar and Juice Processing, homestays, handicrafts, handlooms and arts. Aipan Art, Burash Juice, weaving of silk shawls, products made of Ringaal are some of the prominent industries even today. However, many of these are at the risk of dying out owing to lack of appropriate patronage, documentation and transmission of skills. Youth do not find enticed with the traditional vocations, as the alternate vocations are perceived to be of better social status and better remunerative prospects. It is necessary for the Govt. of Uttarakhand to promote the traditional skill-based occupations by formalising the traditional skills and ensuring market access/development through linkages. Department of Rural Development, in partnership with agencies like the Department of Industries, District Cooperatives and Growth Centers and other traditional clusters, should implement targeted interventions to promote traditional vocations/occupations. For this purpose, Department of Rural Development should carry out the following: a) develop Qualification Packs or Q-Files, and the relevant market-linked Curriculum; b) carry out RPL programs for existing workforce (at an Artisan, Trainer, Master Trainer and assessor levels); c) conduct trainings especially for the next generation of the traditional communities through a formal process; and d) promote employment or entrepreneurship through relevant programs of the State and central governments.

Employer Engagement:

41 percent of the youth respondents emphasised the mismatch of aspiration as being a key deterrent in taking up jobs. Concerted efforts are required to ensure that employers are engaged and made aware of their role in advancing the development of youth. Employers will therefore need to be incentivised as well as made aware of capacities of skilled youth to ensure that they invest in business units that hire local skilled labour. Wage subsidies and enhanced apprenticeship stipend may attract further employment in the Industries.

The MSME industries are labour intensive sectors and must compete with the larger customers for the same pool of skilled workers. They have highlighted the lack of placements or apprenticeships from the local ITIs as the students are often placed in larger industries as trainees in the major cities of the state. This results in lack of skilled resources locally. Though the larger industries provide attractive remunerations, exposure to technology, soft skills, and other facilities, they are often unable to absorb a large majority of the candidates post the training period. MSME's on the other hand are more likely to retain the trainees on their rolls. Thus, measures must be taken to provide a fairer chance for the participation of MSME units including bringing on board Industrial Associations to improve their competitiveness.

As highlighted above, the Department of Rural Development and other Govt. departments need to act as an interface between skilled beneficiaries and prospective employers as well as regular interaction with new investors, existing industries, and other units to respond to their manpower needs.

Demand-responsive Sectoral broad basing and Targeted Skilling

The courses in the state largely adhere to the Qualification Packs and National Occupational Standards (QP-NOS) under the National Skill Qualification framework (NSQF) or the courses under the National Council for Vocational Training (NCVT). However, it is seen that there is a concentration of courses in trades like Welding, Plumbing etc. The courses are also largely restricted to certain entry level trades. There is a requirement for diversity into training at higher levels of the NSQF including supervisory roles and those with higher technological requirements. It is seen that, even in ITIs and polytechnics, the exposure to advance machinery is less than sufficient to make the candidates job ready. Also, high level of technical specification and dexterity is required while operating machines in manufacturing units- which are different in different units. Key sectors aspired for the youth include defence, education, agro-business, banking, tourism, and hospitality among others . These service sectors are receiving concerted efforts from the Govt. and investments from Private sector. They also hold potential for considerable self-employment, especially among females. Courses aligned with such demand and should be taken up at the earnest.

The aspirations of the youth, especially on their income and the nature of work are not necessarily linked to the realities of the economy. It was observed, as part of the study, that the income expectation at times is double the actual income, the youth had received for similar levels of education. The State has also been ranked among the last in employability among engineering students according to the National Employability Report. The industries also testify to the same regarding the output of several institutions. Multinational companies and their ancillary units require high levels of soft skills including adhering to timelines, communication, teamwork among others which are reported to be lacking among recruits. There is also a general lack of skill in working on assembly lines. The curriculum must focus on these areas as well.

Annexures

A.1. Youth Aspiration Survey Tool

Interviewer Details

Introduction: Hi, I am..... and have been appointed by the Department of Rural Development, Govt. of Uttarakhand for carrying out this important survey. The objective of the survey is to understand the education and employment status of youth in the age group 15 to 34 years across the state of Uttarakhand. This questionnaire is designed to gather information about your educational and employment aspirations, your willingness to participate in skills training programmes, migration and skill training preferences. It will take about 30 minutes to complete this interview, and therefore we request your kind support during this time. We assure you that your identity will be kept confidential and will not be shared with anyone. If you have any questions about this survey, please let me know. If you agree to participate in this survey, we can start the interview

Identification		
Respondent ID (To be filled by the investigator)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
Name of Interviewer/investigator		
Contact Number of the investigator/interviewer		
Date and Place		
Supervisors Contact details		
Start Time		
End Time		
Status of Interview	Completed	1
	Incomplete	2
	Refused	3

Signature by the Supervisor_____

Key Respondent: Youth aged 15-34

If Age \Rightarrow 15 and \leq 34
then;

Consent for Survey: Yes/No

If Consent=Yes, Start the Interview

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Geography

Can be filled by the interviewer/investigator

SI No.	Description	Option	Code	Skip
A1	District Name	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
A2	Block Name			
A3	Village Name			
A4	Household Number			
A5	Area type	Rural	1	
		Urban	2	

Respondent Profile

SI No.	Description	Option	Code	Skip
B1	Name			
B2	Phone number			
B3	What is your gender?	Male	1	
		Female	2	
		Transgender	3	
B4	What is your completed age in years?	<input type="text"/> <input type="text"/> (In Years)		
B5	What is your Marital status?	Never Married	1	
		Engaged to be married	2	
		Married	3	
		Separated/Divorced	4	
		Widow/Widower	5	
B6	Which community do you belong to?	General	1	
		Scheduled Caste (SC)	2	
		Scheduled Tribe (ST)	3	
		Other Backward Caste (OBC)	4	
		Do not wish to reveal	5	
		Do not know	6	
B7	What is your Religion?	Hinduism	1	
		Islam	2	
		Christianity	3	
		Sikh	4	
		No Religion	5	

		Do not wish to reveal	6	
		Others (specify)	99	
B8	What is the economic status of household?	APL	1	
		BPL	2	
		Antyodaya Anna Yojana (AAY Extreme Poverty Line)	3	
		Don't Know	4	
B9	How many members are there in the household?	<input type="text"/> <input type="text"/> (in numbers)		
B10	How many members of the household are in the education system?	<input type="text"/> <input type="text"/> (in numbers)		
B11	How many members of the household are in the workforce?	<input type="text"/> <input type="text"/> (in numbers)		
B12	Who is the head of the household?	Self	1	
		Grandfather	2	
		Grandmother	3	
		Father	4	
		Mother	5	
		Uncle	6	
		Aunt	7	
		Others (Please Specify)	99	
B13	What is the monthly expenditure of your household per month?	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	
		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
		Don't wish to reveal	12	
		Don't Know	13	
B14	What is the monthly income of your household per month?	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	
		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
		Don't wish to reveal	12	
		Don't Know	13	
B15	What is your highest completed qualification?	Illiterate	1	
		Primary (Upto Class V)	2	
		Upper primary (Upto Class VIII)	3	
		Secondary (Upto Class X)	4	

		Higher secondary (Upto Class XII)	5	
		ITI	6	
		Polytechnic Degree	7	
		Graduate General (BA, B.Sc. B. Com, etc.)	8	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	9	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	10	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	11	
		Others (Specify)	99	
B16	What is the highest qualification of your father?	Illiterate	1	
		Primary (Upto Class V)	2	
		Upper primary (Upto Class VIII)	3	
		Secondary (Upto Class X)	4	
		Higher secondary (Upto Class XII)	5	
		ITI	6	
		Polytechnic Degree	7	
		Graduate General (BA, B.Sc. B. Com, etc.)	8	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	9	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	10	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	11	
		Others (Specify)	99	
B17	What is the highest qualification of your mother?	Illiterate	1	
		Primary (Upto Class V)	2	
		Upper primary (Upto Class VIII)	3	
		Secondary (Upto Class X)	4	
		Higher secondary (Upto Class XII)	5	
		ITI	6	
		Polytechnic Degree	7	
		Graduate General (BA, B.Sc. B. Com, etc.)	8	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	9	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	10	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	11	
		Others (Specify)	99	
B18	Do you have a bank account?	Yes	1	
		No	2	Go to B22
B19	Have you ever applied for a loan from the bank?	Yes	1	
		No	2	Go to B22
B20	Did you get the loan??	Yes	1	Go to B22
		No	2	
B21	What are the reasons for not getting the loan?	Not able to meet collateral requirement	1	
		High interest rate	2	
		Didn't have the required documents	3	

	Multiple Possible Responses	Reason explained to me by the bank was not clear	4	
		Unable to secure surety	5	
		Others (Specify _____)	99	
B22	What is your current status?	Student (currently enrolled and attending school/college /training)	1	Go to section C, G, H and I Skip Section D, E and F
		Waged/salaried employed	2	Go to sections D, G and H and I Skip Section C, E, F
		Self Employed/ Entrepreneur	3	Go to Sections E, G, H and I Skip Sections C, D and F
		Neither education nor employment nor in training (NEET) / Unemployed	4	Go to Sections F, G, H and I Skip Sections C, D and E

Students in education/ Students in training

SI No.	Description	Option	Code	Skip
C1	Are you currently in education or vocational training/ skill training?	In education	1	Go to C3
		In skill / vocational training	2	
C2	Please Specify the skill training/vocational training you are currently taking	Specify (_____)		
C3	Which class are you currently studying in?	Secondary (Upto Class X)	1	
		Higher secondary (Upto Class XII)	2	
		ITI	3	
		Polytechnic Degree	4	
		Graduate General (BA, B.Sc. B. Com, etc.)	5	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	6	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	7	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	8	
		Others (Specify _____)	99	
C4	What do you plan to do after completing your current education/training programme?	Look for a job	1	
		Stay at home	2	
		Immediately go for further education/training	3	

		Preparation of competitive exam for govt. jobs	4	
		Do not know	5	
		Other (Specify) _____	5	
C5	Have you already started looking for a job?	Yes	1	
		No	2	Go to G1
		Not Applicable	3	Go to G1
C6	How are you looking for a job?	Through education/training institution	1	
		Attending job fairs	2	
		Registration at a public employment office	3	
		Registration at a private employment office	4	
		Direct application for employers, participation in a competition	5	
		Checking at worksites, farms, factory gates, markets or other assembly places	6	
		Placing newspaper advertisements	7	
		Answering advertisements	8	
		Seeking assistance of friends, relatives, colleagues, unions, etc.	9	
		Looking for land, building, machinery, equipment to establish own enterprise	10	
		Arranging for financial resources	11	
		Applying for permits, licences	12	
		Other (Specify) _____	99	

Note: After completion of this section, go directly to sections G (Career Aspirations), H and I.

Wage Employed

SI No.	Description	Option	Code	Skip
D1	What is the nature of work?	Full Time	1	
		Part Time but for a continuous duration through the year	2	
		Seasonal	3	
		Occasional/Irregular/Gig work	4	
		Others (Specify) _____	99	
D2	Years of Total Work Experience	<input type="text"/> <input type="text"/> (in years)		
D3	How many days do you work in a month on average? (days)	<input type="text"/> <input type="text"/> (in numbers)		
D4	How many month (s) do you work in a year on an average?	<input type="text"/> <input type="text"/> (in numbers)		
D5	What is the type of work you are involved in?	Unskilled work (MGNREGA, construction labour, mining, brick kiln, household, etc.)	1	
		Skilled worker (tailor, mason, electrician, plumber etc.)	2	

D6	In which sector are you currently working in?	Salaried Employment (teacher, government official, etc.)	3	
		Manufacturing	4	
		Others(specify) _____	99	
		Agro-business	1	
		Auto and Auto Components	2	
		Banking Financial Services and Insurance	3	
		Beauty & Wellness	4	
		Building, Construction Industry	5	
		Chemical & Pharmaceuticals	6	
		Domestic Help	7	
		Education and Skill Development	8	
		Electronic & IT Hardware	9	
		Food Processing	10	
		Furniture and Furnishing	11	
		Gems & Jewellery	12	
		Handloom & Handicrafts	13	
		Healthcare Services	14	
		Iron & Steel	15	
		IT & ITES	16	
		Leather & Leather Goods	17	
		Media and Entertainment	18	
		Mining & Quarrying	19	
		Oil, Gas & Hydrocarbon	20	
		Other manufacturing	21	
		Power	22	
		Real Estate	23	
		Renewable Energy & Green Jobs	24	
		Retail	25	
		Security	26	
		Sports	27	
		Telecom	28	
		Textile and apparel	29	
		Tourism, Travel, Hospitality	30	
		Transport, Logistics, Warehousing & Packaging	31	
		Others (Specify) _____	99	
D7	Is your work related to your field of study/training?	Yes	1	Go to D9
		No	2	
D8	Reasons for working in a field which is NOT related to your field of study/training?	No jobs were available	1	
		Not job ready	2	
		Location was not suited for the job	3	
		Salary was less	4	
		Others (Specify) _____	99	
D9	Where do you work?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	

		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
		Outside State	99	
D10	How much do you earn per month?	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	
		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
		Don't wish to reveal	12	
D11	How satisfied are you with your work?	Very Dissatisfied	1	
		Dissatisfied	2	
		Neither Dissatisfied nor Satisfied	3	
		Satisfied	4	Go to D13
		Very Satisfied	5	Go to D13
D12	What is the reason for dissatisfaction with the job?	Personal choice- lost interest in the job	1	
		To pursue further studies	2	
		Want to go for other work	3	
		Low wages	4	
		Inadequate infrastructure at workplace	5	
		Unsafe working environment	6	
		Lack of skills to complete tasks	7	
		Not favorable condition to work	8	
		Family responsibilities/unforeseen events in the family that forced him/her to quit job	9	
		Inability to dedicate enough time to household and childcare work	10	
		Business ran into losses	11	
		Lack of entrepreneurial skills	12	
		Inability to establish market linkages	13	
		Pressure related to getting married	14	
		Will not continue post marriage	15	
		Lack of family support / social acceptance of girls being engaged in economic activity	16	
		Others (specify)	99	
D13	Do you wish to continue with the current job?	Yes	1	Go to D15
		No	2	
D14	Why do you want to discontinue with the current job?	Higher salary expectation		
		Want to work in another sector		
		Want more challenging job		
		Want job in my native town/district		
		Career growth is stagnant in the current organization		
		Want a government job		
		Others (Specify)		
D15	Do you think you are adequately skilled for the job?	Yes	1	Go to G1
		No	2	
D16		English Communication	1	

Multiple Responses Possible	What kind of skills do you lack for the job?	Technical skills related to job	2	
		IT skills	3	
		Others (Please specify)	4	

Note: After completion of this section, go directly to sections G (Career Aspirations), H and I.

Self Employed and Entrepreneur

SI No.	Description	Option	Code	Skip
E1	Reasons for preferring to be self-employed or be an entrepreneur Multiple Responses Possible	Greater independence as self-employed	1	
		Higher income	2	
		More flexibility with respect to hours of work	3	
		Family business	4	
		Lack of jobs near the place of residence	5	
		Need for higher qualifications for available jobs	6	
		Parents' desire	7	
		Other (specify) _____	99	
E2	Are you Self-employed/Own Account worker or entrepreneur?	Self-employed/Own Account worker	1	
		Entrepreneur	2	
E3	What is the nature of work?	Full Time	1	
		Part Time but for a continuous duration through a year	2	
		Seasonal	3	
		Occasional/Irregular	4	
		Others (Specify) _____	99	
E4	Years of Total Work Experience	<input type="text"/> <input type="text"/> (in years)		
E5	How many days you work in a month on average? (days)	<input type="text"/> <input type="text"/> (in numbers)		
E6	How many month (s) you work in a year on an average?	<input type="text"/> <input type="text"/> (in numbers)		
E7	What is the type of work you are involved in?	Major business	1	
		Trade	2	
		Manufacturing	3	
		Others(specify) _____	99	
E8	In which sector do you work?	Agro-business	1	
		Auto and Auto Components	2	

		Banking Financial Services and Insurance	3	
		Beauty & Wellness	4	
		Building, Construction Industry	5	
		Chemical & Pharmaceuticals	6	
		Domestic Help	7	
		Education and Skill Development	8	
		Electronic & IT Hardware	9	
		Food Processing	10	
		Furniture and Furnishing	11	
		Gems & Jewellery	12	
		Handloom & Handicrafts	13	
		Healthcare Services	14	
		Iron & Steel	15	
		IT & ITES	16	
		Leather & Leather Goods	17	
		Media and Entertainment	18	
		Mining & Quarrying	19	
		Oil, Gas & Hydrocarbon	20	
		Other manufacturing	21	
		Power	22	
		Real Estate	23	
		Renewable Energy & Green Jobs	24	
		Retail	25	
		Security	26	
		Sports	27	
		Telecom	28	
		Textile and apparel	29	
		Tourism, Travel, Hospitality	30	
		Transport, Logistics, Warehousing & Packaging	31	
		Others (Specify) _____	99	
E9	Is your work related to your field of study/training?	Yes	1	Go to E11
		No	2	
E10	Reasons for working in a field which is NOT related to your field of study/training?	No jobs were available	1	
		Not job ready	2	
		Location was not suited for the job	3	
		Salary was less	4	
	Multiple Responses Possible	Others (Specify) _____	99	
E11	What is the location of your work?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
		Outside State	14	
E12	How much do you earn per month?	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	

		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
		Don't wish to reveal	12	
E13	How satisfied are you with your work?	Very Dissatisfied	1	
		Dissatisfied	2	
		Neither Dissatisfied nor Satisfied	3	
		Satisfied	4	Go to E15
		Very Satisfied	5	Go to E15
E14	What is the reason for dissatisfaction with your work?	Personal choice- lost interest in the job	1	
		To pursue further studies	2	
		Want to go for other work	3	
		Low wages	4	
		Inadequate infrastructure at workplace	5	
		Unsafe working environment	6	
		Lack of skills to complete tasks	7	
		Not favorable condition to work	8	
		Family responsibilities/unforeseen events in the family that forced him/her to quit job	9	
		Inability to dedicate enough time to household and childcare work	10	
		Business ran into losses	11	
		Lack of entrepreneurial skills	12	
		Inability to establish market linkages	13	
		Pressure related to getting married	14	
		Will not continue post marriage	15	
		Lack of family support / social acceptance of girls being engaged in economic activity	16	
		Others (specify)	99	
E15	Do you wish to continue with your current work?	Yes	1	
		No	2	
E16	Do you think you need (additional) training on Entrepreneurial skills?	Yes	1	
		No	2	Go to E18
E17	Which specific skill the training should be in?	Accounting/Financial Management	1	
		Leadership/ Decision making skills	2	
		Sales and Marketing (linkages and management)	3	
		Others (specify)	99	
E18	Challenges you foresee/have faced in initiating your self-employment activity or to establish your entrepreneurial venture?	Financial constraints	1	
		Lack of financial institutions/credit providers	2	
		Lack of technical skills	3	
		Lack of entrepreneurial experience	4	
		Lack of Marketing Skills	5	
		Lack of accounting skills	6	

	Multiple Responses Possible	Lack of asset management skills	7	
		Lack of authentic market information	8	
		Community does not encourage women entrepreneurs	9	
		Lack of support from parents/spouse	10	
		Inability to dedicate enough time to household and childcare work	11	
		Uncertainty associated with setting up own business	12	
		Others (specify) _____	99	

Note: After completion of this section, go directly to sections G (Career Aspirations), H and I.

Not in Education Employment or Training (NEET)

SI No.	Description	Option	Code	Skip
F1	What is the reason for your status of being neither employed nor studying? Multiple Responses Possible	Awaiting results/Applying for further education	1	
		Scarcity of job locally	2	
		Presence of only low-paid jobs	3	
		Unpaid household work consumes most part of the time	4	
		Not willing to migrate outside state for opportunities	5	
		Current place of stay is too remote for any employment opportunities	6	
		Distance to school/college	7	
		Lack of family support	8	
		Don't have adequate skills to get a job	9	
		Working culture and/or ambience not suitable (specifically for women)	10	
		Presence of night shifts	11	
		Preparing for government jobs	12	
		Others (specify) _____	99	
F2	Have EVER you worked?	Yes	1	
		No	2	Go to F4
F3	Have you taken any steps in the last 4 weeks to get into job/training?	Yes, Job	1	
		Yes, Training	2	
		No	3	
F4	Years of work experience	<input type="text"/> <input type="text"/> (in years)		
F5	For how Long you have been in the NEET Category?	Less than 6 months	1	
		6 months- 1 year	2	
		1- 2 years	3	
		2- 3 years	4	
		3- 4 years	5	
		4-5 years	6	
		More than 5 years	7	
F6	Do you wish to work?	Yes	1	
		No	2	Go to G1

F7	Are you actively searching for job?	Yes	1	
		No	2	Go to G1
F8	How long have you been actively looking for a job?	More than one year	1	
		Over the last year	2	
		Over the last 6 months	3	
		Over the last month	4	
		Over the Last Week	5	

Note: After completion of this section, go directly to sections G (Career Aspirations), H and I.

Career Aspiration

SI No.	Description	Option	Code	Skip
G1	Would you like to study beyond the present level of education?	Yes	1	
		No	2	Go to G4
G2	What is the highest level of education that you hope to attain?	Secondary (Class X)	1	
		Higher secondary (Class XII)	2	
		ITI	3	
		Diploma (Polytechnic)	4	
		Graduate General (BA, B.Sc. B. Com, etc.)	5	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	6	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	7	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	8	
G3	Which subject do you hope to study?	Others (Specify) _____	99	
		Arts (B.A / M.A)	1	
		Science (B.Sc / M.Sc. in Maths / Physics / Chemistry Etc.)	2	
		Commerce (B. Com / M. Com)	3	
		Agriculture	4	
		Law	5	
		Medicine	6	
		Paramedical (Nursing / Pharma)	7	
		Engineering – Core (Civil, Mechanical, Electrical, Chemical)	8	
		Engineering – Computer Science, IT and related	9	
		Engineering - Other	10	
		CA / CS / CWA	11	
		Management (MBA / BBA)	12	
		Tourism Management	13	
		Others (Specify) _____	99	
G4	What is your career aspiration?	Self –employment	1	
		Entrepreneurship	2	
		Wage/Salaried employment with Private Sector	3	
		Wage/Salaried employment with Public Sector	4	
		Multiple part-time	5	

		Others (Specify)	99	
G5	What are the key factors determining your career aspiration? Multiple Responses Possible	Salary (wages) / Income	1	
		Job Security	2	
		Closeness to Residence	3	
		Emigration Prospects	4	
		Gender suitable role	5	
		Social Status	6	
		Flexible work arrangements (location, schedule)	7	
		Opportunities for promotion and career development	8	
		Employer provided benefits and perks	9	
		Retirement Plans	10	
		Safety / Security	11	
		Traditionally Acquired Skills / Family Business	12	
		Others (Specify)	99	
G6	How prepared do you feel for your ideal work?	Completely Prepared	1	
		Largely Prepared	2	
		Moderately Prepared	3	
		Somewhat prepared	4	
		Not Prepared	5	Go to G8
		No Answer/ Don't Know	6	Go to G9
G7	What are the reasons for feeling prepared? Multiple Responses Possible GO TO G9 AFTER ASKING THIS QUESTION	Adequate academic qualification	1	
		Adequately Skilled with understanding of Job	2	
		Adequate work experience in area of Job	3	
		Others (Specify)	99	
G8	What are the reasons for feeling unprepared? Multiple Responses Possible	Inadequate academic qualification	1	
		Inadequately Skilled with understanding of Job	2	
		Inadequate work experience in area of Job	3	
		Others (Specify)	99	
G9	What are the challenges in finding/doing the ideal work? Multiple Responses Possible	No Challenge	1	
		Lack of family support / social acceptance of girls being engaged in economic activity	2	
		Pressure related to getting married	3	
		Lack of guidance / information on appropriate job available for skill levels	4	
		Lack of sufficient education qualification	5	
		Lack of technical / vocational skills	6	
		Lack of work experience	7	
		Lack of jobs locally	8	
		Lack of Soft Skills	9	
		Low financial strength	10	
		Inadequate infrastructure to access workplace	11	
		Unsafe working environment	12	
		Others (Specify)	99	

G10	How do you think you will achieve your career goal?	Continuing Education	1	
		Vocational/ Skill Training	2	
		Apprenticeship / Gathering Work Experience	3	
		Already Achieved	4	Go to G12
		Others (Specify)	99	
G11	In which industry you aspire to work in?	Agro-business	1	
		Auto and Auto Components	2	
		Banking Financial Services and Insurance	3	
		Beauty & Wellness	4	
		Building, Construction Industry	5	
		Chemical & Pharmaceuticals	6	
		Domestic Help	7	
		Education and Skill Development	8	
		Electronic & IT Hardware	9	
		Food Processing	10	
		Furniture and Furnishing	11	
		Gems & Jewellery	12	
		Handloom & Handicrafts	13	
		Healthcare Services	14	
		Iron & Steel	15	
		IT & ITES	16	
		Leather & Leather Goods	17	
		Media and Entertainment	18	
		Mining & Quarrying	19	
		Oil, Gas & Hydrocarbon	20	
		Other manufacturing	21	
		Power	22	
		Real Estate	23	
		Renewable Energy & Green Jobs	24	
		Retail	25	
		Security	26	
		Sports	27	
		Telecom	28	
		Textile and apparel	29	
		Tourism, Travel, Hospitality	30	
		Transport, Logistics, Warehousing & Packaging	31	
		Others (Specify)	99	
G12	How would you rate the availability of appropriate employment opportunities nowadays?	Very inadequate	1	
		Somewhat inadequate	2	
		Neither adequate nor inadequate	3	
		Somewhat adequate	4	
		Very adequate	5	
		Don't Know	6	
G13	What are the key sources of information when one/you looking for job opportunities? Multiple Responses Possible	District Employment Office / National Career Services	1	
		School/ University career counselling centres	2	
		Parents and other family members	3	
		Community	4	
		Friends and Peers	5	
		Newspaper / Other media	6	
		Internet and Online Job Portals	7	

		Others (Specify)	99	
G14	How would you rate the accessibility to career counselling services?	Very inadequate	1	
		Somewhat inadequate	2	
		Neither adequate nor inadequate	3	
		Somewhat adequate	4	
		Very adequate	5	
		Unaware / Don't Know	6	
G15	If you have access to career counselling mechanisms, what guidance have received/will prefer?	Information on relevant vacancies	1	
		Advice on how to look for a job	2	
		Guidance on applying for desirable jobs	3	
	Multiple Responses Possible	Guidance on applying for training or educational programmes	4	
		Placement for jobs	5	
		Placement in educational programmes	6	
		Others (Specify)	99	
G16	What is your minimum monthly salary/income expectation?	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	
		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
		No expectations	12	
G17	How interested are you in pursuing opportunities as a Gig Worker (Uber / Ola / Zomato / Swiggy – short term contract-based job)?	Completely Uninterested	1	
		Somewhat uninterested	2	
		Indifferent	3	
		Somewhat Interested	4	
		Very Interested	5	
G18	What are the reasons that youth may find the Gig Economy attractive to work in?	Low Entry Barrier in terms of Skill / Education Qualification	1	
		Low Entry Barrier in terms of Investment	2	
	Multiple Responses Possible	Means to augment income	3	
		Flexible work	4	
		Lack of other employment opportunities	5	
		Others (Specify)	99	
G19	What are some of the main steps that can help address the mismatch between youth aspirations and job market realities?	Government action and favourable economic policies	1	
		Career counselling and mentoring opportunities	2	
		More investment in new hires by the private sector	3	
	Multiple Responses Possible	Quality apprenticeships and internships	4	
		On the job trainings	5	
		Specific skilling strategies and skill development programmes	6	
		Incorporating vocational training and technical skills in school curriculum	7	

	Companies providing skilling and upskilling opportunities to employees	8	
	Promotion of entrepreneurship by the government	9	
	Data systems to streamline information on vacancies	10	
	Don't know	11	
	Others (Specify) _____	99	

Skill Training Preference

SI No.	Description	Option	Code	Skip
H1	Are you aware of any Govt. run skill development training programme/schemes?	Yes	1	
		No	2	
H2	Are you aware of the following programme / schemes?			
a.	Uttarakhand Skill Development Mission (UKSDM)	Yes	1	
		No	2	
b.	Rural Self Employment Training Institutes (RSETI)	Yes	1	
		No	2	
c.	National Urban Livelihoods Mission (NULM)	Yes	1	
		No	2	
d.	Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY)	Yes	1	
		No	2	
e.	Pradhan Mantri Kaushal Vikas Yojana (PMKVY) / National Skill Development Corporation (NSDC)	Yes	1	
		No	2	
f.	Craftsman Training Scheme (CTS) / ITIs	Yes	1	
		No	2	
g.	Apprenticeship Training Scheme (ATS)	Yes	1	
		No	2	
H3	Have you received any training in the past?	Yes	1	
		No	2	Go to H20
H4	Identify the type of training you underwent	Formal vocational training	1	
		Non-formal (hereditary, self-learning)	2	
		Learning on the job	3	Go to H20
H5	In which trade/course did you receive vocational training?	(Specify) _____		
H6	What was the nature of the training provider?	Govt. ITI	1	
		Private ITI	2	
		Govt. Polytechnic	3	
		Private Polytechnic	4	
		Private training service provider	5	
		NGO led training	6	
		Industry based training	7	
		Others (specify) _____	99	
H7	Was the course delivered under any of the government schemes?	Yes	1	
		No	2	Go to H9

		Don't Know/Can't Say	3	Go to H9
H8	Name of the Government Scheme under which you underwent training	Uttarakhand Skill Development Mission (UKSDM)	1	
		Rural Self Employment Training Institutes (RSETI)	2	
		National Urban Livelihoods Mission (NULM)	3	
		Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY)	4	
		Pradhan Mantri Kaushal Vikas Yojana (PMKVY)/ National Skill Development Corporation (NSDC)	5	
		Craftsman Training Scheme (CTS) / ITIs	6	
		Apprenticeship Training Scheme (ATS)	7	
		Others (specify _____)	99	
H9	Where was the training institute located?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
		Outside the state	99	
		H10	Was the training facility residential or non-residential?	Residential
Non-Residential	2			
Both	3			
H11	What was the duration of the course?	Half month	1	
		1 month	2	
		2 months	3	
		3 months	4	
		6 months	5	
		12 months	6	
		More than 12 months	7	
H12	How satisfied were you with the course?	Highly dissatisfied	1	
		Dissatisfied	2	
		Satisfied	3	
		Highly satisfied	4	
H13	Did you receive any financial support/funding for the training?	Yes	1	
		No	2	
		Free training	3	

H14	Did you pay for the training course?	Yes	1	
		No	2	Go to H16
H15	How much did you pay for the entire duration of the training course?	(specify ₹ _____)		
H16	Did you complete the training?	Yes	1	
		No	2	
H17	Did you receive a job offer after completion of training?	Yes	1	
		No	2	
H18	Did you join a job (either as part of the placement or on your own)?	Yes	1	Go to H20
		No	2	
H19	What was the reason for not joining a job? Multiple Responses Possible	I would have had to migrate for the job	1	
		Parents did not allow	2	
		Job received was not in alignment with my aspirations	3	
		Wages were too low	4	
		Others (Specify) _____	99	
H20	What do you think the employer's value most in new hires? Multiple Responses Possible	Education attainment (level of education)	1	
		Certifications of Technical Skill	2	
		Years of Work Experience	3	
		Relevant work experience in similar position or field	4	
		Basics and soft skills	5	
		Institution of Education / Skill Training	6	
		Performance in Interviews	7	
		References	8	
		Others (Specify) _____	99	
H21	What general skills do you think are most important for someone in your aspired job? Multiple Responses Possible	English communication	1	
		Analytical thinking	2	
		Teamwork	3	
		Creativity, originality and initiative	4	
		Leadership	5	
		Active listening	6	
		Coordination Skills	7	
		Time management	8	
		Attention to detail	9	
		Critical thinking and analysis	10	
		Complex problem-solving	11	
		Others (Specify) _____	99	

H22	What level of education do you think is necessary to get decent job now-a-days?	Secondary (Class X)	1	
		Higher secondary (Class XII)	2	
		ITI	3	
		Diploma (Polytechnic)	4	
		Graduate General (BA, B.Sc. B. Com, etc.)	5	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	6	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	7	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	8	
		Others (Specify)	99	

H23	Would you be willing to participate in a training that would prepare you for your desired job/ or enhance your skills for better employment prospects?	Yes	1	
		No	2	Go to H32
H24	In which trade/sector do you need skill training?	Agri-business	1	
		Auto and Auto Components	2	
		Banking Financial Services and Insurance	3	
		Beauty & Wellness	4	
		Building, Construction Industry	5	
		Chemical & Pharmaceuticals	6	
		Domestic Help	7	
		Education and Skill Development	8	
		Electronic & IT Hardware	9	
		Food Processing	10	
		Furniture and Furnishing	11	
		Gems & Jewellery	12	
		Handloom & Handicrafts	13	
		Healthcare Services	14	
		Iron & Steel	15	
		IT & ITES	16	
		Leather & Leather Goods	17	
		Media and Entertainment	18	
		Mining & Quarrying	19	
		Oil, Gas & Hydrocarbon	20	
		Other manufacturing	21	

		Power	22		
		Real Estate	23		
		Renewable Energy & Green Jobs	24		
		Retail	25		
		Security	26		
		Sports	27		
		Telecom	28		
		Textile and apparel	29		
		Tourism, Travel, Hospitality	30		
		Transport, Logistics, Warehousing & Packaging	31		
		Others (Specify) _____	99		
H25	Which of the following Skill Training types are you interested in?	Short term certificate courses (less than 6 Months duration)	1		
		Entrepreneurship/Self-employment specific short-term courses	2		
		Short term certificate courses (6 Months to 1 Year duration)	3		
		Diploma courses (1 Year to 2 Year duration)	4		
		Degree level vocational courses (3 years)	5		
		PG/PG Diploma level vocational courses	6		
H26	Would you be interested in a Part-time or Full-time skill training?	Part-Time	1		
		Full-Time	2		
H27	Would you prefer a residential training or a non-residential training?	Residential training	1		
		Non-residential training	2		
		No Preference	3		
H28	What is the minimum amount of money would you be willing to pay for such courses mentioned above?	(specify ₹_____)			
H29	Please rate the following elements of training in terms of their importance in your decision-making with respect to the training course.				
H30	Elements	Very Important	Important	Somewhat Important	Not Important at all
	Content of the training	1	2	3	4
	Brand or market standing (reputation) of the TSP	1	2	3	4
	Brand or market reputation of the certifying body	1	2	3	4
	Quality of the trainer and/or training delivery methodology	1	2	3	4
	Extent of practical exposure/ experience	1	2	3	4

	Quality of internship/ apprenticeship (incl. duration, market reputation of the employer, contents covered within the internship, etc.	1	2	3	4
H31	<p>What are the major challenges/constraints that would stop you from undergoing training programme?</p> <p>Multiple Responses Possible</p> <p>GO TO I1 AFTER ASKING THIS QUESTION</p>	Financial constraints to pay the fees	1		
		Non-availability of such training in the neighborhood	2		
		Lengthy and long drawn process	3		
		Community does not support it	4		
		Do not have enough support from my immediate family	5		
		I do not have support/ permission from spouse	6		
		Family responsibilities (household chores, taking care of children etc.)	7		
		Absence of quality training service providers/ trainers	8		
		Absence of flexibility in time – say part-time or evening or weekend only courses	9		
		Absence of time for training (either over-worked or other commitments – social, professional etc.)	10		
		Other (specify)	11		
H32	<p>Why aren't you interested in joining a skill training programme?</p> <p>Multiple Responses Possible</p>	I don't see any value addition on how it will help me find a job	1		
		Lack of time	2		
		Financial constraints to pay the fees	3		
		I would rather straight away take up a job than get myself enrolled for skill development programme	4		
		I think it is a very lengthy and long drawn process	5		
		Community does not support it	6		
		I do not have enough support from my immediate family	7		
		I do not have support/ permission from spouse	8		

		Family responsibilities (household chores, taking care of children etc.)	9	
		Concerned about my safety at training centre	10	
		Others(specify)	99	

Migration

SI No.	Description	Option	Code	Skip
I1	Are you willing to migrate for work?	No, I want job within my district	1	Go to I5
		Yes, outside my native district but within Uttarakhand	2	
		Yes, outside Uttarakhand but within India	3	Go to I3
		Yes, Outside India	4	Go to I4
I2	Which districts are you willing to migrate?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
I3	To which state are you willing to migrate?	Andaman and Nicobar Islands	1	
		Andhra Pradesh	2	
		Arunachal Pradesh	3	
		Assam	4	
		Bihar	5	
		Chandigarh	6	
		Chhattisgarh	7	
		Dadra and Nagar Haveli and Daman and Diu	1	
		Delhi	2	
		Goa	3	
		Gujarat	4	
		Haryana	5	
		Himachal Pradesh	6	
		Jammu and Kashmir	7	
		Jharkhand	8	
		Karnataka	9	
		Kerala	10	
		Ladakh	11	
		Lakshadweep	12	
		Madhya Pradesh	13	
		Maharashtra	14	
		Manipur	15	
		Meghalaya	16	

		Mizoram	17	
		Nagaland	18	
		Odisha	19	
		Puducherry (Pondicherry)	20	
		Punjab	21	
		Rajasthan	22	
		Sikkim	23	
		Tamil Nadu	24	
		Telangana	25	
		Tripura	26	
		Uttar Pradesh	27	
		Uttarakhand	28	
		West Bengal	29	
		Others (Specify)	99	

I4	To which region do you wish to migrate?	Middle East	1	
		South East Asia	2	
		Europe	3	
		USA- Canada	4	
		Australia- New Zealand	5	
		Others (Specify)	99	

I5	Has anyone from your family member migrated to other place for work in the past 12 months?	Yes	1	
		No	2	End of Survey
I6	Who has migrated most recently in the past 12 months for the work?	My Father	1	
		My Uncle	3	
		My Brother	5	
		My sister	6	
		Other family member	7	
		Please specify (_____)		
I7	Has the person migrated alone?	Yes	1	Go to I9
		No	2	
I8	With whom have he/she migrated?	Wife	1	
		Husband	2	
		Children	3	
		Parents	4	
		Other Family Members	5	
	Multiple Responses Possible			
I9	What is the person's native district?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	
		Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
I10	Where did the person migrate to?	Another district within Uttarakhand	1	
		Other states within India	2	Go to I12
		Outside India	3	Go to I13
I11	Which district within Uttarakhand the person migrate to?	Uttarkashi	01	
		Chamoli	02	
		Rudraprayag	03	

	GO TO I14 AFTER ASKING THIS QUESTION	Tehri Garhwal	04	
		Dehradun	05	
		Garhwal	06	
		Pithoragarh	07	
		Bageshwar	08	
		Almora	09	
		Champawat	10	
		Nainital	11	
		Udham Singh Nagar	12	
		Haridwar	13	
I12	Which state in India did the person migrate to? GO TO I14 AFTER ASKING THIS QUESTION	Andaman and Nicobar Islands	1	
		Andhra Pradesh	2	
		Arunachal Pradesh	3	
		Assam	4	
		Bihar	5	
		Chandigarh	6	
		Chhattisgarh	7	
		Dadra and Nagar Haveli and Daman and Diu	8	
		Delhi	9	
		Goa	10	
		Gujarat	11	
		Haryana	12	
		Himachal Pradesh	13	
		Jammu and Kashmir	14	
		Jharkhand	15	
		Karnataka	16	
		Kerala	17	
		Ladakh	18	
		Lakshadweep	19	
		Madhya Pradesh	20	
		Maharashtra	21	
		Manipur	22	
		Meghalaya	23	
		Mizoram	24	
		Nagaland	25	
		Odisha	26	
		Puducherry (Pondicherry)	27	
		Punjab	28	
		Rajasthan	29	
		Sikkim	30	
		Tamil Nadu	31	
		Telangana	32	
		Tripura	33	
		Uttar Pradesh	34	
		Uttarakhand	35	
		West Bengal	36	
		Others (Specify)	99	
I13	Which region outside India did the person migrate to?	Middle East	1	
		South East Asia	2	
		Europe	3	
		USA- Canada	4	
		Australia- New Zealand	5	
		Others (Specify)	99	

I14	What are the reasons for work related migration of the person? Multiple Possible Responses	Cannot find employment in origin	1	
		Found new employment in different region	2	
		For business purposes	10	
		End of labor contracts	11	
		Better working conditions	12	
		Convenience for work	13	
		Others (Specify)	99	

I15	What was the person's highest education level?	Illiterate	1	
		Primary (Upto Class V)	2	
		Upper primary (Upto Class VIII)	3	
		Secondary (Upto Class X)	4	
		Higher secondary (Upto Class XII)	5	
		ITI	6	
		Polytechnic Degree	7	
		Graduate General (BA, B.Sc. B. Com, etc.)	8	
		Graduate Professional (B.Tech/BE/MBBS, etc.)	9	
		Post-Graduate General (MA. M.Sc. M. Com, etc.)	10	
		Post-Graduate General (M.Tech. MBA. MCA, etc.)	11	
		Others (Specify)	99	

I16	Do you/your household receive any money from the person who has migrated from your household?	Yes	1	
		No	2	End of survey
I17	How much Remittances in total was received in the past one year? Only one code	Less than ₹5000	1	
		₹5001 - ₹10,000	2	
		₹10,001-₹15,000	3	
		₹15,001-₹20,000	4	
		₹20,001-₹25,000	5	
		₹25,001-₹30,000	6	
		₹30,001-₹35,000	7	
		₹35,001-₹40,000	8	
		₹40,001-₹45,000	9	
		₹45,001-₹50,000	10	
		Greater than ₹50,000	11	
I18	For which purpose this remittance was used? Multiple Possible Responses	Daily Expenses	1	
		Cost of Education	2	
		Healthcare costs	3	
		Investment in business and production	4	
		Debt payment	5	
		Lending	6	
		Savings	7	
		Others (Specify)	99	

End of Survey

A.2. Employer Survey Tool

Start of Block: Default Question Block

We have been appointed by the Department of Rural Development, Govt. of Uttarakhand for carrying out this survey. The objective of the survey is to understand the skilling requirements of the employers/industries across the state of Uttarakhand. This questionnaire is designed to gather information about the industry's details, about their working and hiring processes, it's future aspirations and outlook about the future, prominent job roles in the organizations, willingness to participate in skills training programmes, migration, skill training preferences and impact of COVID 19 on the organization.

It will take around 30 minutes to complete this interview, and therefore we request your kind support during this time. We assure you that your identity will be kept confidential and will not be shared with anyone. If you have any questions about this survey, please let me know. If you agree to participate in this survey, we can start the interview

☐ Yes, I consent (1)

☐ No, I do not consent (2)

Skip To: End of Survey If We have been appointed by the Department of Rural Development, Govt. of Uttarakhand for carrying... = No, I do not consent

End of Block: Default Question Block

Start of Block: Organization Details

Q2.1 Respondent's Designation



Q2.2 Respondent's Phone Number

Q2.3 Respondent's Email ID

Q2.4 Organisation's name

Q2.5 Location of the organisation currently

- ☐ Almora (1)
- ☐ Bageshwar (2)
- ☐ Chamoli (3)
- ☐ Champawat (4)
- ☐ Dehradun (5)
- ☐ Garhwal (6)
- ☐ Hardwar (7)
- ☐ Nainital (8)
- ☐ Pithoragarh (9)
- ☐ Rudraprayag (10)
- ☐ Tehri Garhwal (11)
- ☐ Udham Singh Nagar (12)
- ☐ Uttarkashi (13)
- ☐ Others (Please Specify) (14) _____
-

Q2.6 Location of the Head office

Q2.7 How many factories/branches does the company have? (in absolute numbers)

Within State : _____ (1)

Outside State : _____ (2)

Total : _____

Q2.8 Total number of factories currently working/functional?

Q2.9 What is the scale of industry?

(Choose only one code)

☐ Large (1)

☐ Medium (2)

☐ Small (3)

☐ Micro-Enterprise (4)

Q2.10 Which sector does it comes under? (Choose only one code)

- ☐ Agriculture, forestry and fishing (1)
 - ☐ Mining and quarrying (2)
 - ☐ Manufacturing (3)
 - ☐ Electricity, gas, steam and air conditioning supply (4)
 - ☐ Water supply; sewerage, waste management and remediation activities (5)
 - ☐ Construction (6)
 - ☐ Wholesale and retail trade; repair of motor vehicles and motorcycles (7)
 - ☐ Transportation and storage (8)
 - ☐ Accommodation and Food service activities (9)
 - ☐ Information and communication (10)
 - ☐ Financial and insurance activities (11)
 - ☐ Real estate activities (12)
 - ☐ Professional, scientific and technical activities (13)
 - ☐ Administrative and support service activities (14)
 - ☐ Public administration and defence; compulsory social security (15)
 - ☐ Education (16)
 - ☐ Human health and social work activities (17)
 - ☐ Arts, entertainment and recreation (18)
 - ☐ Other service activities (19) _____
-

Q2.11 Which sub-sector does it come under?

(You can choose more than one option if applicable)

- ☐ Crop and animal production, hunting and related service activities (1)
- ☐ Forestry and logging (2)
- ☐ Fishing and aquaculture (3)
- ☐ Mining of coal and lignite (4)
- ☐ Extraction of crude petroleum and natural gas (5)
- ☐ Mining of metal ores (6)
- ☐ Other mining and quarrying (7)
- ☐ Mining support service activities (8)
- ☐ Manufacture of food products (9)
- ☐ Manufacture of beverages (10)
- ☐ Manufacture of tobacco products (11)
- ☐ Manufacture of textiles (12)
- ☐ Manufacture of wearing apparel (13)
- ☐ Manufacture of leather and related products (14)
- ☐ Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (15)
- ☐ Manufacture of paper and paper products (16)
- ☐ Printing and reproduction of recorded media (17)
- ☐ Manufacture of coke and refined petroleum products (18)
- ☐ Manufacture of chemicals and chemical products (19)

- ☐ Manufacture of pharmaceuticals, medicinal chemical and botanical products (20)
- ☐ Manufacture of rubber and plastics products (21)
- ☐ Manufacture of other non-metallic mineral products (22)
- ☐ Manufacture of basic metals (23)
- ☐ Manufacture of fabricated metal products, except machinery and equipment (24)
- ☐ Manufacture of computer, electronic and optical products (25)
- ☐ Manufacture of electrical equipment (26)
- ☐ Manufacture of machinery and equipment n.e.c. (27)
- ☐ Manufacture of motor vehicles, trailers and semi-trailers (28)
- ☐ Manufacture of other transport equipment (29)
- ☐ Manufacture of furniture (30)
- ☐ Other manufacturing (31)
- ☐ Repair and installation of machinery and equipment (32)
- ☐ Electricity, gas, steam and air conditioning supply (33)
- ☐ Water collection, treatment and supply (34)
- ☐ Sewerage (35)
- ☐ Waste collection, treatment and disposal activities; materials recovery (36)
- ☐ Remediation activities and other waste management services (37)
- ☐ Construction of buildings (38)
- ☐ Civil engineering (39)

- ☐ Specialized construction activities (40)
- ☐ Wholesale and retail trade and repair of motor vehicles and motorcycles (41)
- ☐ Wholesale trade, except of motor vehicles and motorcycles (42)
- ☐ Retail trade, except of motor vehicles and motorcycles (43)
- ☐ Land transport and transport via pipelines (44)
- ☐ Water transport (45)
- ☐ Air transport (46)
- ☐ Warehousing and support activities for transportation (47)
- ☐ Postal and courier activities (48)
- ☐ Accommodation (49)
- ☐ Food and beverage service activities (50)
- ☐ Publishing activities (51)
- ☐ Motion picture, video and television programme production, sound recording (52)
- ☐ Broadcasting and programming activities (53)
- ☐ Telecommunications (54)
- ☐ Computer programming, consultancy and related activities (55)
- ☐ Information service activities (56)
- ☐ Financial service activities, except insurance and pension funding (57)
- ☐ Insurance, reinsurance and pension funding, except compulsory social (58)
- ☐ Other financial activities (59)

- ☐ Real estate activities (60)
- ☐ Legal and accounting activities (61)
- ☐ Activities of head offices; management consultancy activities (62)
- ☐ Architecture and engineering activities; technical testing and analysis (63)
- ☐ Scientific research and development (64)
- ☐ Advertising and market research (65)
- ☐ Other professional, scientific and technical activities (66)
- ☐ Veterinary activities (67)
- ☐ Rental and leasing activities (68)
- ☐ Employment activities (69)
- ☐ Travel agency, tour operator and other reservation service activities (70)
- ☐ Security and investigation activities (71)
- ☐ Services to buildings and landscape activities (72)
- ☐ Office administrative, office support and other business support activities (73)
- ☐ Public administration and defence; compulsory social security (74)
- ☐ Education (75)
- ☐ Human health activities (76)
- ☐ Residential care activities (77)
- ☐ Social work activities without accommodation (78)
- ☐ Creative, arts and entertainment activities (79)

- ☐ Libraries, archives, museums and other cultural activities (80)
- ☐ Gambling and betting activities (81)
- ☐ Sports activities and amusement and recreation activities (82)
- ☐ Activities of membership organizations (83)
- ☐ Repair of computers and personal and household goods (84)
- ☐ Other personal service activities (85)
- ☐ Activities of households as employers of domestic personnel (86)
- ☐ Undifferentiated goods- and services-producing activities of private (87)
- ☐ Activities of extraterritorial organizations and bodies (88)

Q2.12 Which act is the organisation registered under ?
(You can choose Multiple options)

- ☐ Factories Act (1)
- ☐ Udyog Aadhar (2)
- ☐ Establishment Act (3)
- ☐ Company Act (4)
- ☐ Cooperative (5)
- ☐ Others (6) _____



Q2.13 Years of operation of the organisation (in numbers)

Q2.14 Name of the goods produced/services delivered by your organization
(Please Specify briefly the goods produced/services delivered)

End of Block: Organization Details

Start of Block: Employee Details



Q3.1 State the total number of employees working currently in the organization.

(in numbers)



Q3.2 State the total percentage of male employees currently working .

(E.g.- For 45% or 45 percent, kindly write 45 only)

Q3.3 What is the education qualification of majority of your employees at the entry level?
(Choose only one code)

- ☐ Illiterate (1)
 - ☐ Literate, up to primary (2)
 - ☐ Middle (3)
 - ☐ Secondary (4)
 - ☐ Higher secondary (5)
 - ☐ Diploma/ ITI (6)
 - ☐ Graduate (7)
 - ☐ Postgraduate & above (8)
-

Q3.4 What is the education qualification of majority of your employees at the supervisor level?

(Choose only one code)

- ☐ Illiterate (1)
- ☐ Literate, up to primary (2)
- ☐ Middle (3)
- ☐ Secondary (4)
- ☐ Higher secondary (5)
- ☐ Diploma/ ITI (6)
- ☐ Graduate (7)
- ☐ Postgraduate & above (8)



Q3.5 State the share of on roll workers based on skills in percentages. [E.g.- For 45% or 45 percent, kindly write 45 only]

All must add up to 100.

Definitions:

1. A highly skilled worker is one who is capable of working efficiently and supervises efficiently the work of skilled employees 2. A skilled employee is one who is capable of working efficiently of exercising considerable independent judgment and of discharging his duties with responsibility. He must possess a thorough and comprehensive knowledge of the trade, craft or industry in which he is employed
3. A semi-skilled worker is one who does work generally of defined routine nature wherein the major requirement is not so much of the judgment, skill and but for the proper discharge of duties assigned to him or relatively narrow job and where important decisions made by others. His work is thus limited to the performance of routine operations of limited scope.
4. An unskilled employee is one who does operations that involve the performance of simple duties, which require the experience of little or no independent judgment or previous experience although familiarity with the occupational environment is necessary. His work may thus require in addition to physical exertion familiarity with a variety of articles or goods
- Total percentage of on roll Highly Skilled workers : _____ (1)
- Total percentage of on roll Skilled workers : _____ (2)
- Total percentage of on roll Semi-Skilled workers : _____ (3)
- Total percentage of employees who are unskilled : _____ (4)
- Total : _____
-

Q3.6 Do you have contractual employees?

- ☐ Yes (1)
- ☐ No (2)



Q3.7 Total Percentage of employees who are Permanent/Contractual

For 45% or 45 percent, kindly write 45 only

Must add up to 100 as total.

Permanent Employees : _____ (1)

Contractual Employees : _____ (2)

Total : _____

Q3.8 Do you have employees who are migrants from other districts or other states?

☐ Yes (1)

☐ No (2)

Skip To: End of Block If Do you have employees who are migrants from other districts or other states? = No



Q3.9 Total percentage of employees in your organization who are migrants?

[E.g.- For 45% or 45 percent, kindly write 45 only]

Q3.10 Do you have employees who are migrants from other districts of Uttarakhand?

☐ Yes (1)

☐ No (2)

Skip To: Q3.12 If Do you have employees who are migrants from other districts of Uttarakhand? = No

Q3.11 Employees migrated from which major districts of Uttarakhand You can choose multiple options

- ☐ Almora (1)
 - ☐ Bageshwar (2)
 - ☐ Chamoli (3)
 - ☐ Champawat (4)
 - ☐ Dehradun (5)
 - ☐ Garhwal (6)
 - ☐ Haridwar (7)
 - ☐ Nainital (8)
 - ☐ Pithoragarh (9)
 - ☐ Rudraprayag (10)
 - ☐ Tehri Garhwal (11)
 - ☐ Udham Singh Nagar (12)
 - ☐ Uttarkashi (13)
-

Q3.12 Do you have employees who are migrants from other states?

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q3.14 If Do you have employees who are migrants from other states? = No

Q3.13 Employees migrated from which major State/UT of India

You can choose multiple options

- ☐ Andaman and Nicobar Islands (1)
- ☐ Andhra Pradesh (2)
- ☐ Arunachal Pradesh (3)
- ☐ Assam (4)
- ☐ Bihar (5)
- ☐ Chandigarh (6)
- ☐ Chhattisgarh (7)
- ☐ Dadra and Nagar Haveli and Daman and Diu (8)
- ☐ Delhi (9)
- ☐ Goa (10)
- ☐ Gujarat (11)
- ☐ Haryana (12)
- ☐ Himachal Pradesh (13)
- ☐ Jammu and Kashmir (14)
- ☐ Jharkhand (15)
- ☐ Karnataka (16)
- ☐ Kerala (17)
- ☐ Ladakh (18)
- ☐ Lakshadweep (19)
- ☐ Madhya Pradesh (20)

- ☐ Maharashtra (21)
 - ☐ Manipur (22)
 - ☐ Meghalaya (23)
 - ☐ Mizoram (24)
 - ☐ Nagaland (25)
 - ☐ Odisha (26)
 - ☐ Puducherry (Pondicherry) (27)
 - ☐ Punjab (28)
 - ☐ Rajasthan (29)
 - ☐ Sikkim (30)
 - ☐ Tamil Nadu (31)
 - ☐ Telangana (32)
 - ☐ Tripura (33)
 - ☐ Uttar Pradesh (34)
 - ☐ Uttarakhand (35)
 - ☐ West Bengal (36)
-

Q3.14 Total percentage of employees in your organization who have migrated from the different States as well as other districts of Uttarakhand
[E.g.- For 45% or 45 percent, kindly write 45 only]

Must add up to 100.

Migrated from Other States : _____ (1)

Migrated from Other Districts : _____ (2)

Total : _____

Q3.15 How has the migration trend and workers been affected due to the COVID 19 outbreak ?

(You can select multiple choices for this question)

☐

Reverse migration (Migrant labourers quit their jobs and returned back) (1)

☐

Lack of motivation amongst workers (2)

☐

Scarcity of skilled workers (3)

☐

Inward migration from other states increased (4)

☐

Sense of panic and fear (5)

☐

Others (6) _____

End of Block: Employee Details

Start of Block: Job Roles

Q4.1 List the Top 5 job roles into which the skilled workforce is employed in your organization? (List down the top 5 roles)

☐

1) (1) _____

☐

2) (2) _____

☐

3) (3) _____

☐

4) (4) _____

☐

5) (5) _____

Q4.2 Could you please indicate the job roles that will register the highest increase in the number of job positions in the next 12 months.

(List down the top 5 roles)

☐ 1) (1) _____

☐ 2) (2) _____

☐ 3) (3) _____

☐ 4) (4) _____

☐ 5) (5) _____

Q4.3 List the Top 5 Job roles in which you have done the recruitment in FY 2019-20 and mention the percentage share of each job role to the total recruitment in FY 2019-20.

Job Role 1 (1) Job Role 2 (2) Job Role 3 (3) Job Role 4 (4) Job Role 5 (5)	List the Top 5 Job roles in which the recruitment have been done in FY 2019-20 Name in the order 1-5 (1)	Percentage share of each job role to the total recruitment in FY 2019-20 (MUST ADD UP TO 100) In percentage (1)

Q4.4 Level of adoption of technology in your Industry in the next 5 years taking into consideration the current pandemic situation and to automatize the operations.

(Choose one code)

- ☐ High (1)
- ☐ Medium (2)
- ☐ Low (3)
- ☐ Can't say (4)

Skip To: End of Block If Level of adoption of technology in your Industry in the next 5 years taking into consideration th... = Low
Skip To: End of Block If Level of adoption of technology in your Industry in the next 5 years taking into consideration th... = Can't say

Q4.5 What type of technological change does your industry anticipate introducing ?

(Please specify briefly)

Q4.6 What are the top 5 job roles that will be in **demand** in the coming five years due to advancement in technology related to your sector?

(List down the top 5 roles)

- ☐ 1) (1) _____
 - ☐ 2) (2) _____
 - ☐ 3) (3) _____
 - ☐ 4) (4) _____
 - ☐ 5) (5) _____
-

Q4.7 What are the top 5 job roles that will become **redundant** in the coming five years due to advancement in technology?

(List down the top 5 roles)

- ☐ 1) (1) _____
- ☐ 2) (2) _____
- ☐ 3) (3) _____
- ☐ 4) (4) _____
- ☐ 5) (5) _____

End of Block: Job Roles

Start of Block: Recruitment and Attrition



Q5.1 Total Number of Employees Recruited in the last FY19-20

(IN NUMBERS)

Q5.2 Have you done any recruitment in the ongoing FY 2020-21 ?

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q5.4 If Have you done any recruitment in the ongoing FY 2020-21 ? = No



Q5.3 Total Number of Employees Recruited in the ongoing FY 2020-21

(IN NUMBERS)

Q5.4 How much reduction in hiring will be there this year due to COVID-19 impact ? Choose only one code

- ☐ Less than 10% (1)
- ☐ 10-20% (2)
- ☐ 21-35% (3)
- ☐ 35-50% (4)
- ☐ More than 50% (5)



Q5.5 What is the estimated number of new recruitments in the next 3 years (2021-2023)?

(IN NUMBERS)

Q5.6 What are the common modes of recruitment?

(You can select multiple choices for this question)

- ☐ Campus recruitment in arts/science/commerce colleges (1)
- ☐ People registered with Employment Exchange (2)
- ☐ Local Community (3)
- ☐ Web Portals (4)
- ☐ Campus recruitment in Engineering colleges (5)
- ☐ Employee Reference/Other Referrals (6)
- ☐ Advertisements in Newspapers (7)
- ☐ Job Melas (8)
- ☐ Campus recruitment in ITIs/Polytechnic (9)
- ☐ Recruitment/Manpower Agencies (10)
- ☐ Social Networks (11)
- ☐ Short-term training institute such as PMKVY/DDU-GKY (12)
- ☐ Others (Please specify) (13) _____



Q5.7 Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics?

- ☐ Yes -From ITIs (1)
- ☐ Yes- From Polytechnic colleges (2)
- ☐ Yes- From both (3)
- ☐ No (4)

Skip To: Q5.14 If Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics? = No

Q5.8 Under which category will you put the hired candidates from ITIs?

- ☐ Highly Skilled (1)
- ☐ Skilled (2)
- ☐ Semi-Skilled (3)
-

Q5.9 What were the skills the recruits from ITIs lacked?

(You can select multiple choices for this question)

- ☐ Lack of job specific required skills or competencies (1)
- ☐ (e.g. technical or job specific skills, IT skills, problem solving skills, team working skills) (2)
- ☐ Limited basic education (literacy & numeracy) (3)
- ☐ Poor soft skills /attitude / personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners) (4)
- ☐ Lack of work /life experience or maturity (including general knowledge & common sense) (5)
- ☐ Lack of communication skills (6)
- ☐ They have all the required skills (7)
- ☐ Not Applicable (8)
- ☐ Others (Please specify) (9)
-

Display This Question:

*If Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics? =
Yes- From Polytechnic colleges
Or Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics? =
Yes- From both*

Q5.10 Under which category will you put the hired candidates from Polytechnic colleges?

- ☐ Highly Skilled (1)
- ☐ Skilled (2)
- ☐ Semi-Skilled (3)

Display This Question:

If Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics? = Yes- From Polytechnic colleges

Or Have you recruited candidates in your factories as workers who passed out from ITIs/Polytechnics? = Yes- From both

Q5.11 What were the skills the recruits from polytechnic colleges lacked?

(You can select multiple choices for this question)

- ☐ Lack of job specific required skills or competencies (1)
- ☐ (e.g. technical or job specific skills, IT skills, problem solving skills, team working skills) (2)
- ☐ Limited basic education (literacy & numeracy) (3)
- ☐ Poor soft skills /attitude / personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners) (4)
- ☐ Lack of work /life experience or maturity (including general knowledge & common sense) (5)
- ☐ Lack of communication skills (6)
- ☐ They have all the required skills (7)
- ☐ Not Applicable (8)
- ☐ Others (Please specify) (9)

Q5.12 How much premium wage are you willing to pay/currently paying to the fresh hired candidates from ITIs and Polytechnics compared to the fresh hired candidates from other institutes (degree colleges) ?

Choose only one code

- ☐ 1-5% more than normal wage (1)
- ☐ 6-10% more than the normal wage (2)
- ☐ 11-15% more than normal wage (3)
- ☐ 16-25% more than normal wage (4)
- ☐ 26% and more than normal wage (5)
- ☐ Not willing to pay premium wage (6)

Q5.13 What is the reason for not paying the premium wage?
(Multiple choice question)

- ☐ Lack of Requisite communication skills (1)
- ☐ Lack of Requisite Technical knowledge (2)
- ☐ Lack of soft skills (3)
- ☐ Lack of interpersonal skills (4)
- ☐ Others (Please specify) (5) _____

Q5.14 Which of the following skill development programs are you aware of ?

Which of the following skill development programs have you recruited employees in the past?

Select the code as applicable

	Aware of		Recruited from	
	Yes (1)	No (2)	Yes (1)	No (2)

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rural Self Employment Training Institutes (RSETI) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship Training Scheme (ATS) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) / National Skill Development Corporation (NSDC) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National Urban Livelihoods Mission (NULM) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Craftsman Training Scheme (CTS)/Govt. ITI scheme (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other department/ state specific scheme (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Skip To: Q5.19 If Which of the following skill development programs are you aware of ? Which of the following skill... : Recruited from [No] (Count) = 7

Q5.15 Under which category will you put the hired candidates from the short term training institutes in the previous question?

Choose only one code

- ☐ Highly Skilled (1)
- ☐ Skilled (2)
- ☐ Semi-Skilled (3)

Q5.16 What were the skills the recruits from short term training programmes lacked?

(You can select multiple choices for this question)

- ☐ Lack of job specific required skills or competencies (1)
 - ☐ (e.g. technical or job specific skills, IT skills, problem solving skills, team working skills) (2)
 - ☐ Limited basic education (literacy & numeracy) (3)
 - ☐ Poor soft skills /attitude / personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners) (4)
 - ☐ Lack of work /life experience or maturity (including general knowledge & common sense) (5)
 - ☐ Lack of communication skills (6)
 - ☐ They have all the required skills (7)
 - ☐ Others (Please specify) (8) _____
-

Q5.17 How much premium wage are you willing to pay/currently paying to the fresh hired candidates from short term training programs compared to fresh hired candidates from other institutes (degree colleges) ?

(Choose only one code)

- ☐ 1-5% more than normal wage (1)
- ☐ 6-10% more than the normal wage (2)
- ☐ 11-15% more than normal wage (3)
- ☐ 16-25% more than normal wage (4)
- ☐ 26% and more than normal wage (5)
- ☐ Not willing to pay premium wage (6)

Skip To: Q5.19 If How much premium wage are you willing to pay/currently paying to the fresh hired candidates from... = 1-5% more than normal wage

Skip To: Q5.19 If How much premium wage are you willing to pay/currently paying to the fresh hired candidates from... = 6-10% more than the normal wage

Skip To: Q5.19 If How much premium wage are you willing to pay/currently paying to the fresh hired candidates from... = 11-15% more than normal wage

Skip To: Q5.19 If How much premium wage are you willing to pay/currently paying to the fresh hired candidates from... = 16-25% more than normal wage

Skip To: Q5.19 If How much premium wage are you willing to pay/currently paying to the fresh hired candidates from... = 26% and more than normal wage

Q5.18 What is the reason for not paying the premium wage?

(Multiple choice question)

- ☐ Lack of Requisite communication skills (1)
 - ☐ Lack of Requisite Technical knowledge (2)
 - ☐ Lack of soft skills (3)
 - ☐ Lack of interpersonal skills (4)
 - ☐ Others (Please specify) (5) _____
-

Q5.19 What are the key challenges faced while recruiting candidates for jobs?

(You can select multiple choices for this question)

- ☐ Candidate Disinterest and attitude (1)
- ☐ Lack of Requisite Soft Skills (2)
- ☐ Resistance by family to allow them to work (3)
- ☐ Requirement of safe working conditions/toilets for Women (4)
- ☐ High local wages (5)
- ☐ Lack of Requisite Core Skills (6)
- ☐ Nature of work requires strenuous physical labour (7)
- ☐ Lack of safe transportation (8)
- ☐ Lack of basic education requirement (9)
- ☐ Lack of Prior Experience (10)
- ☐ Work Hours (11)
- ☐ Others (please specify) (12) _____



Q5.20 What is the annual attrition rate of the workers?

(E.g.- For 45% or 45 percent, kindly write 45 only)

Q5.21 What are the main causes for attrition among workers?

(You can select multiple choices for this question)

- ☐ Lower wage (1)
 - ☐ Better job opportunities (2)
 - ☐ Candidate Disinterest (3)
 - ☐ Work Hours (4)
 - ☐ Lack of hygiene facilities including toilets (5)
 - ☐ Household duties, including farming, domestic work, child or elder care (6)
 - ☐ Inability to adjust to work environment (7)
 - ☐ Resistance by family to allow them to work (8)
 - ☐ Safety and security (9)
 - ☐ Migrant nature of workforce (10)
 - ☐ Nature of work requires strenuous physical labour (11)
 - ☐ COVID 19 (12)
 - ☐ Attrition/Uncertainty due to marriage and children (13)
 - ☐ Others (Please specify) (14) _____
-

Q5.22 How has COVID 19 affected recruitment ?

Choose only one code

- ☐ Recruitment on hold (1)
- ☐ No effect on recruitment process (2)
- ☐ Recruitment on -compensation offered reduced (3)
- ☐ Recruitment of employees in new positions in alignment to the new normal/to compliment the current situation (4)
- ☐ Others (please specify) (5) _____



Q5.23 What is the salary offered for a entry level skilled worker?

(IN NUMBERS)



Q5.24 What is the salary of experienced supervisor level worker?

(IN NUMBERS)

End of Block: Recruitment and Attrition

Start of Block: Vacancy and Skill gap

Q6.1 Do you have any vacancy in your organization currently?

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q6.11 If Do you have any vacancy in your organization currently? = No



Q6.2 State the total number of vacant positions (IN NUMBERS)

Q6.3 Could you please list down the top 5 job roles you have the most vacancies in.

(Please list top five vacant positions only)

☐ Job Role 1 (1) _____

☐ Job Role 2 (2) _____

☐ Job Role 3 (3) _____

☐ Job Role 4 (4) _____

☐ Job Role 5 (5) _____

Q6.4 What number/percentage of vacancies are hard to fill due to **non- availability of skill** of the available man-force in the market?

☐ In Numbers (1) _____

☐ In Percentage (2) _____

Q6.5 What are the main constraints/ facing difficulty in filling vacant positions due to non- availability of skill of the available man-force in the market? (Multiple responses possible)

- ☐ Low number of applicants with the required skills (1)
 - ☐ Low number of applicants generally (2)
 - ☐ Not enough people interested in doing this type of job (3)
 - ☐ Lack of work experience the company demands (4)
 - ☐ Low number of applicants with the required attitude, motivation or personality (5)
 - ☐ Lack of qualifications the organisation demands (6)
 - ☐ Poor terms and conditions (e.g. pay) offered for post (7)
 - ☐ Remote location/poor public transport (8)
 - ☐ Job entails shift work/unsociable hours (9)
 - ☐ Too much competition from other employers (10)
 - ☐ Poor career progression / lack of prospects (11)
 - ☐ Lack of funding for the position (12)
 - ☐ Seasonal work (13)
 - ☐ Low number of suitable applicants including Age of applicants (14)
 - ☐ Poor recruitment channels/mechanisms (including lack/cost of advertising) (15)
 - ☐ Not full-time/permanent work (16)
 - ☐ Others (Please specify) (17) _____
-

Q6.6 What number/percentage of vacancies are hard to fill **due to skill shortage** of the available man-force in the market?

☐ In Numbers (1) _____

☐ In Percentage (2) _____

Q6.7 Main causes of having a hard-to-fill vacancy due to skill shortage of the available man-force in the market You can select Multiple Responses

- ☐ No specific skills or knowledge needed to perform the role (1)
 - ☐ Solving complex problems requiring a solution specific to the situation (2)
 - ☐ Less Knowledge of products and services offered by the organisation (3)
 - ☐ Less Knowledge of how the organisation works (4)
 - ☐ Poor skills in Reading and understanding instructions, guidelines, manuals or reports (5)
 - ☐ Poor Basic numerical skills and understanding (6)
 - ☐ Poor understanding of complex numerical or statistical skills (7)
 - ☐ Poor Computer literacy / basic IT skills (8)
 - ☐ Less Adaptable to new equipment or materials (9)
 - ☐ Poor Advanced or specialist IT skills (10)
 - ☐ Poor Manual dexterity (11)
 - ☐ Poor Communication (12)
 - ☐ Others (Please specify) (13) _____
-

Q6.8 Are hard-to-fill vacancies causing any challenge for the enterprise?

☐ Yes (1)

☐ No (2)

Skip To: Q6.10 If Are hard-to-fill vacancies causing any challenge for the enterprise? = No

Q6.9 What are the challenges faced by the organization due to vacancies/lack of skilled workforce? (You can select multiple choices for this question)

- ☐ Lose business or orders to competitors (1)
- ☐ Delay developing new products or services (2)
- ☐ Increase workload for other staff (3)
- ☐ Outsource work to other companies (4)
- ☐ Withdraw from offering certain products or services altogether (5)
- ☐ Have difficulties meeting customer services objectives (6)
- ☐ Others (Please specify) (7) _____

Q6.10 What are your plans to mitigate the shortage of workers due to reverse migration?

Q6.11 Do you feel your existing workers have Skill Gap at entry level?

(Note: A skills gap is the difference between skills that employers want or need, and skills their workforce offer)

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q6.13 If Do you feel your existing workers have Skill Gap at entry level? (Note: A skills gap is the diffe... = No

Q6.12 What are the skills your employees at entry level lack?

(Multiple responses possible)

- ☐ Technical skills (1)
 - ☐ Basic Numeracy (2)
 - ☐ IT literacy / using Basic IT skills (3)
 - ☐ Oral communication (4)
 - ☐ Written communication (5)
 - ☐ Public speaking /instructing / training (6)
 - ☐ Customer handling (7)
 - ☐ Team work (8)
 - ☐ Taking initiative (9)
 - ☐ Planning and organizing (10)
 - ☐ Management responsibilities /taking a lead (11)
 - ☐ Presentation skills (12)
 - ☐ Others (Please specify) (13) _____
-

Q6.13 Do you feel your existing workers have Skill Gap at supervisor level?

(Note: A skills gap is the difference between skills that employers want or need, and skills their workforce offer)

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q6.15 If Do you feel your existing workers have Skill Gap at supervisor level? (Note: A skills gap is the... = No

Q6.14 What are the skills your employees at supervisor level lack? (Multiple responses possible)

- ☐ Technical skills (1)
- ☐ Basic Numeracy (2)
- ☐ IT literacy / using Basic IT skills (3)
- ☐ Oral communication (4)
- ☐ Written communication (5)
- ☐ Public speaking /instructing / training (6)
- ☐ Customer handling (7)
- ☐ Team work (8)
- ☐ Taking initiative (9)
- ☐ Planning and organizing (10)
- ☐ Management responsibilities /taking a lead (11)
- ☐ Presentation skills (12)
- ☐ Others (Please specify) (13) _____

Q6.15 Please indicate in which job roles the problem is more severe and approximate proportion of people who do not perform jobs at the required level?

(List up to 5 occupations in order of severity of the problem)

	List the Top 5 Job roles In the order 1-5 (1)	Approximate proportion of people who do not perform their jobs at the required level for the respective job role				
		80-100% (1)	60-80% (2)	40-60% (3)	20-40% (4)	0-20% (5)

Job Role 1 (1)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job Role 2 (2)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job Role 3 (3)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job Role 4 (4)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job Role 5 (5)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Vacancy and Skill gap

Start of Block: Training of workers

Q7.1 Does your organisation have any in house training plan for the employees?

☐ Yes (1)

☐ No (2)

Skip To: Q7.3 If Does your organisation have any in house training plan for the employees? = No

Q7.2 Have your current employees received any training?

☐ No Training Received (1)

☐ On-the-job but no formal training (2)

☐ Off-the-job but no formal (3)

☐ Both on-the-job and off-the-job training (4)

☐ Off-the-job through a training programme (5)

☐ Others(Please specify) (6) _____



Q7.3 What percentage of employees in your organisation have NSQF level 4 qualification or above?

(E.g.- For 45% or 45 percent, kindly write 45 only)

Q7.4 In future, list the trainings your organization is planning to provide to your staff.

(Please list up to five in order of importance)

☐ Training Number 1 (1) _____

☐ Training Number 2 (2) _____

☐ Training Number 3 (3) _____

☐ Training Number 4 (4) _____

☐ Training Number 5 (5) _____

End of Block: Training of workers

Start of Block: Impact of COVID 19

Q8.1 Is there any change in operations due to the recent pandemic outbreak ?

☐ Yes (1)

☐ No (2)

Skip To: Q8.5 If Is there any change in operations due to the recent pandemic outbreak ? = No

Q8.2 What type of change did your organization go through?

(You can choose Multiple responses for this question)

- ☐ Financial loss (1)
 - ☐ Operational issues (demand, supply issues due to lockdown) (2)
 - ☐ Manpower availability constraints (3)
 - ☐ Market related issues (4)
 - ☐ Cancellation or postponement of new investment / facility investment (5)
 - ☐ Downsizing of existing business (6)
 - ☐ Closure / withdrawal of business base (including part of a business base) (7)
 - ☐ Employment adjustments (8)
 - ☐ Reduction in days/hours for sales and operations (9)
 - ☐ Reduction in sales price (10)
 - ☐ Review suppliers (limit number of suppliers, change to cheaper suppliers, etc.) (11)
 - ☐ Review delivering companies (change in delivering companies and new business development, including exports) (12)
 - ☐ Expand the range of low price products / services (13)
 - ☐ Others (please specify) (14) _____
-

Q8.3 Are there any positive changes in the system due to the pandemic outbreak ?

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q8.5 If Are there any positive changes in the system due to the pandemic outbreak ? = No

Q8.4 What are new positive changes in the system due to pandemic ?

(You can choose Multiple responses for this question)

- ☐ Launching new business (1)
 - ☐ Increased efficiency through management integration within the group (intensification of other bases, a shift to bases in other location, etc.) (2)
 - ☐ Reduction in costs through improved efficiency of production and sales (3)
 - ☐ Rise in sales price (4)
 - ☐ Expand the range of high value-added products / services (5)
 - ☐ Others (please specify) (6)
-

Q8.5 How has COVID-19 impacted your revenue?

Choose one code

- ☐ Significantly negative impact (1)
 - ☐ Slightly negative impact (2)
 - ☐ No impact (3)
 - ☐ Slightly positive impact (4)
 - ☐ Significantly positive impact (5)
-

Q8.6 Has your organization laid off staff/sent staff on leave without pay due to COVID 19 ?

- ☐ Yes- Laid off staff (1)
- ☐ Yes- Leave without pay (2)
- ☐ No (3)

Skip To: Q8.9 If Has your organization laid off staff/sent staff on leave without pay due to COVID 19 ? = No

Display This Question:

If Has your organization laid off staff/sent staff on leave without pay due to COVID 19 ? = Yes- Laid off staff



Q8.7 How many employees have been laid off due to COVID 19 ?

(IN NUMBERS)

Display This Question:

If Has your organization laid off staff/sent staff on leave without pay due to COVID 19 ? = Yes- Leave without pay



Q8.8 How many employees have been sent on leave without pay off due to COVID 19 ?

(IN NUMBERS)

Q8.9 What measures has your organization taken due to outbreak of COVID 19 to support your employees?

(You can choose Multiple responses for this question)

☐

Online training sessions (1)

☐

Regular communications & connect sessions with employees (2)

☐

Flexible working hours (3)

☐

Regular time-offs (4)

☐

Medical facilities (5)

☐

Others (Please specify) (6) _____

Q8.10 How do you view the future (in the next 3 years) of your organisation's growth?
code

Choose one

☐

High (1)

☐

Medium (2)

☐

Low (3)

☐

Can't say (4)

Q8.11 What is your organization's future readiness for COVID-19 like situation? briefly)

(Please specify

End of Block: Impact of COVID 19
