



# Supplement to the Skill Gap Analysis Report

2017-2022



NATIONAL APEX CHAMBER

## TABLE OF CONTENTS

<b>CHAPTER 1: SSC – INDUSTRIAL SKILLS .....</b>	<b>5</b>
SECTION 1.1 AGRICULTURE SECTOR SKILLS.....	6
Subsection 1.1.a Respondent Spread of Agriculture Practitioners.....	6
Subsection 1.1.b District-wise Agriculture Practitioners .....	6
Subsection 1.1.c Challenges Faced by Agriculture Practitioners .....	7
Subsection 1.1.d Challenges & Action Taken.....	7
Subsection 1.1.e Job Roles Needed – Priority-wise .....	9
SECTION 1.2 APPARELS MADE-UP & HOME FURNISHING SECTOR SKILLS .....	10
Subsection 1.2.a Respondent Spread of Apparels Made - Up, Home Furnishing Sector .....	10
Subsection 1.2.b District-wise Spread of Respondents .....	10
Subsection 1.2.c Incidence of Job Roles in Apparel Sector .....	11
Subsection 1.2.d Job Roles Needed .....	11
SECTION 1.3 AUTOMOTIVE SECTOR SKILLS .....	12
Subsection 1.3.a Respondent Spread of Automotive Sector .....	12
Subsection 1.3.b District-wise Spread of Respondents from Automotive Sector .....	12
Subsection 1.3.c Incidence of Job Roles in Automotive Sector .....	13
Subsection 1.3.d Job Roles Needed .....	13
SECTION 1.4 BANKING & FINANCIAL SECTOR SKILLS .....	14
Subsection 1.4.a Respondent Spread of Banking & Financial Sector .....	14
Subsection 1.4.b District-wise Spread of Respondents from Banking & Financial Sector .....	14
Subsection 1.4.c Incidence of Job Roles in Banking & Financial Sector .....	15
Subsection 1.4.d Job Roles Needed .....	15
SECTION 1.5 BEAUTY & WELLNESS SECTOR SKILLS.....	16
Subsection 1.5.a Respondent Spread of Beauty & Wellness Sector .....	16
Subsection 1.5.b District-wise Spread of Respondents from Beauty & Wellness Sector .....	16
Subsection 1.5.c Incidence of Job Roles in Beauty & Wellness Sector .....	17
Subsection 1.5.d Job Roles Needed .....	18
SECTION 1.6 CAPITAL GOODS SECTOR SKILLS.....	19
Subsection 1.6.a Respondent Spread of Capital Goods Sector .....	19
Subsection 1.6.b District-wise Spread of Respondents from Capital Goods Sector .....	19
Subsection 1.6.c Incidence of Job Roles in Capital Goods Sector .....	20
Subsection 1.6.d Job Roles Needed .....	21
SECTION 1.7 ELECTRONIC SECTOR SKILLS.....	22
Subsection 1.7.a Respondent Spread of Electronic Sector .....	22
Subsection 1.7.b District-wise Spread of Respondents from Electronic Sector .....	22
Subsection 1.7.c Incidence of Job Roles in Electronic Sector.....	23
Subsection 1.7.d Job Roles Needed .....	24
SECTION 1.8 FOOD SECTOR SKILLS .....	25
Subsection 1.8.a Respondent Spread of Food Sector .....	25
Subsection 1.8.b District-wise Spread of Respondents from Food Sector .....	25
Subsection 1.8.c Incidence of Job Roles in Food Sector .....	26
Subsection 1.8.d Job Roles Needed .....	27
SECTION 1.9 HEALTH SECTOR SKILLS .....	29
Subsection 1.9.a Respondent Spread of Health Sector .....	29
Subsection 1.9.b District-wise Spread of Respondents from Health Sector .....	29
Subsection 1.9.c Incidence of Job Roles in Health Sector .....	30
Subsection 1.9.d Job Roles Needed .....	31
SECTION 1.10 IT/ITES SECTOR SKILLS .....	32
Subsection 1.10.a Respondent Spread of IT/ITES Sector .....	32

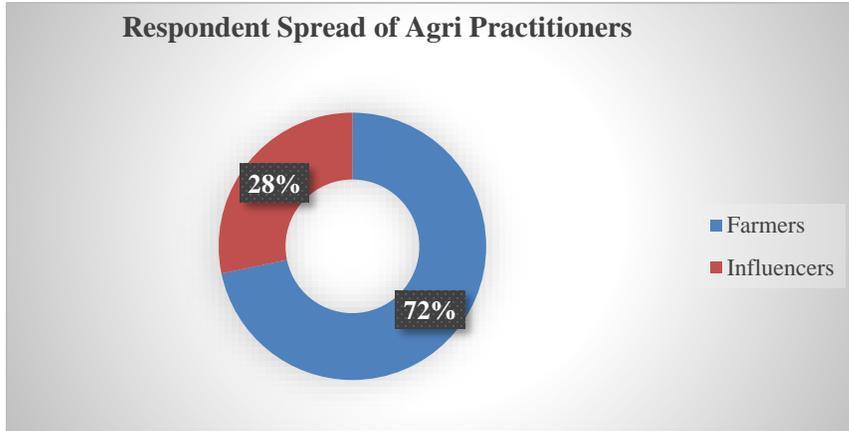
Subsection 1.10.b District-wise Spread of Respondents from IT/ITES Sector .....	32
Subsection 1.10.c Incidence of Job Roles in IT/ITES Sector .....	33
Subsection 1.10.d Job Roles Needed.....	33
SECTION 1.11 LIFE SCIENCES SECTOR SKILLS.....	34
Subsection 1.11.a Respondent Spread of Life Sciences Sector .....	34
Subsection 1.11.b District-wise Spread of Respondents from Life Sciences Sector .....	34
Subsection 1.11.c Incidence of Job Roles in Life Sciences Sector .....	35
Subsection 1.11.d Job Roles Needed.....	35
SECTION 1.12 RETAIL SECTOR SKILLS .....	36
Subsection 1.12.a Respondent Spread of Retail Sector.....	36
Subsection 1.12.b District-wise Spread of Respondents from Retail Sector .....	36
Subsection 1.12.c Incidence of Job Roles in Retail Sector .....	37
Subsection 1.12.d Job Roles Needed.....	38
SECTION 1.13 RUBBER SECTOR SKILLS.....	39
Subsection 1.13.a Respondent Spread of Rubber Sector .....	39
Subsection 1.13.b District-wise Spread of Respondents from Rubber sector .....	39
Subsection 1.13.c Incidence of Job Roles in Rubber Sector.....	40
Subsection 1.13.d Job Roles Needed.....	40
SECTION 1.14 TEXTILE SECTOR SKILLS.....	41
Subsection 1.14.a Respondent Spread of Textile Sector .....	41
Subsection 1.14.b District-wise Spread of Respondents from Textile Sector .....	41
Subsection 1.14.c Incidence of Job Roles in Textile Sector.....	42
Subsection 1.14.d Job Roles Needed.....	43
SECTION 1.15 TOURISM SECTOR SKILLS.....	44
Subsection 1.15.a Respondent Spread of Tourism Sector .....	44
Subsection 1.15.b District-wise Spread of Respondents from Tourism Sector .....	44
Subsection 1.15.c Incidence of Job Roles in Tourism Sector .....	45
Subsection 1.15.d Job Roles Needed.....	46
<b>CHAPTER 2: TRADITIONAL SKILLS.....</b>	<b>47</b>
SECTION 2.1: AIPEN.....	48
Subsection 2.1.a: Respondent Spread of Aipen Practitioners .....	48
Subsection 2.2.b: District-wise Respondents of Aipen .....	48
Subsection 2.1.b: Challenges Faced by Aipen Practitioners.....	49
Subsection 2.1.c: Challenges & Action taken.....	49
Subsection 2.1.e Job Role Recommendation - Priority Charts.....	50
SECTION 2.2 : WOODCRAFT.....	51
Subsection 2.2.a: Respondent Spread of woodcraft Practitioners.....	51
Subsection 2.2.b: District-wise Woodcraft Respondents .....	51
Subsection 2.2.c: Challenges Faced by Wood Crafters .....	52
Subsection 2.2.d: Challenges & Action taken .....	52
Subsection 2.2.e: Job Role Recommendation - Priority Charts.....	53
SECTION 2.3: JEWELLERY .....	54
Subsection 2.3.a: Respondent Spread of Jewellery Practitioners.....	54
Subsection 2.3.b: District-wise Jewellery Respondents.....	54
Subsection 2.3.c: Challenges Faced by Jewellery Practitioners.....	55
Subsection 2.3.d: Challenges & Action taken .....	55
Subsection 2.3.e: Job Role Recommendation - Priority Charts.....	56
SECTION 2.4: YOGA.....	57
Subsection 2.4.a: Respondent Spread of Yoga Practitioners .....	57
Subsection 2.4.b: District-wise Yoga Respondents.....	57
Subsection 2.4.c: Challenges Faced by Yoga Practitioners .....	58
Subsection 2.4.d: Challenges & Action taken .....	58
Subsection 2.4.e: Job Role Recommendation - Priority Charts.....	59
SECTION 2.5: AYURVEDA .....	60
Subsection 2.5.a: Respondent Spread of Ayurveda Practitioners.....	60
Subsection 2.5.b: District-wise Ayurveda Respondents .....	60
Subsection 2.5.c: Challenges Faced by Ayurveda Practitioners .....	61

Subsection 2.5.d: Challenges & Action taken .....	61
Subsection 2.5.e: Job Role Recommendation - Priority Charts.....	62
SECTION 2.6: BAMBOO & RINGAL .....	63
Subsection 2.6.a: Respondent Spread of Bamboo & Ringal Practitioners .....	63
Subsection 2.6.b: District-wise Bamboo & Ringal Respondents.....	63
Subsection 2.6.c: Challenges Faced by Bamboo & Ringal Practitioners .....	64
Subsection 2.6.d: Challenges & Action taken .....	64
Subsection 2.6.e: Job Role Recommendation - Priority Charts.....	65
SECTION 2.7: COPPERWARE .....	66
Subsection 2.7.a: Respondent Spread of Copperware Practitioners .....	66
Subsection 2.7.b: District-wise Copperware Respondents .....	66
Subsection 2.7.c: Challenges Faced by Copperware Practitioners .....	67
Subsection 2.7.d: Challenges & Action taken .....	67
Subsection 2.7.e: Job Role Recommendation - Priority Charts.....	68
SECTION 2.8: WEAVERS.....	69
Subsection 2.8.a: Respondent Spread of weavers .....	69
Subsection 2.8.b: District-wise Weavers Respondents.....	69
Subsection 2.8.c: Challenges Faced by Weavers .....	70
Subsection 2.8.d: Challenges & Action taken .....	70
Subsection 2.8.e: Job Role Recommendation - Priority Charts.....	71
SECTION 2.9: ARCHITECTURE.....	72
Subsection 2.9.a: Respondent Spread of Architecture Practitioners .....	72
Subsection 2.9.b: District-wise Architecture Respondents.....	72
Subsection 2.9.c: Challenges Faced by Architecture Practitioners .....	73
Subsection 2.9.d: Challenges & Action taken .....	73
Subsection 2.9.e: Job Role Recommendation - Priority Charts.....	74
SECTION 2.10: CULINARY .....	75
Subsection 2.10.a: Respondent Spread of Culinary Practitioners.....	75
Subsection 2.10.b: District-wise Culinary Respondents.....	75
Subsection 2.10.c: Challenges Faced by Culinary Practitioners.....	76
Subsection 2.10.d: Challenges & Action taken .....	76
Subsection 2.10.e: Job Role Recommendation - Priority Charts.....	77
SECTION 2.11: IRON-CRAFT .....	78
Subsection 2.11.a: Respondent Spread of Ironcraft Practitioners .....	78
Subsection 2.11.b: District-wise Ironcraft Respondents.....	78
Subsection 2.11.c: Challenges Faced by Ironcraft Practitioners.....	79
Subsection 2.11.d: Challenges & Action taken .....	79
Subsection 2.11.e: Job Role Recommendation - Priority Charts.....	80

# Chapter 1: SSC – Industrial Skills

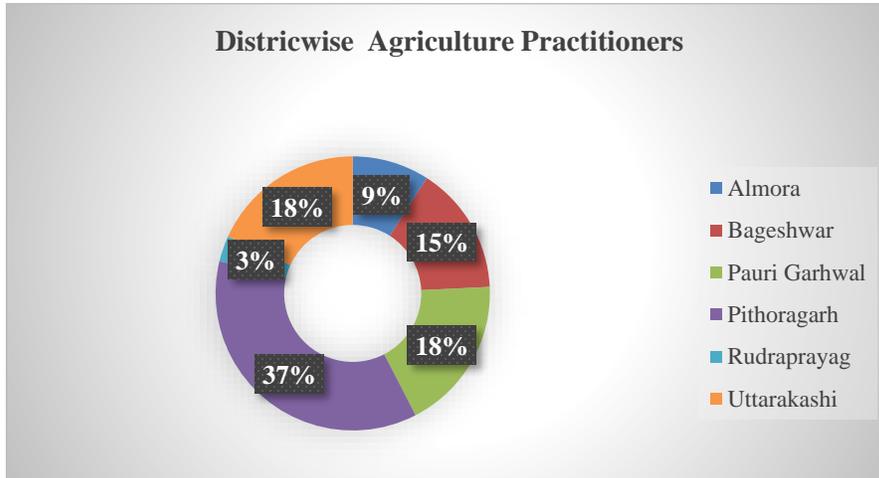
# Section 1.1 Agriculture Sector Skills

## Subsection 1.1.a



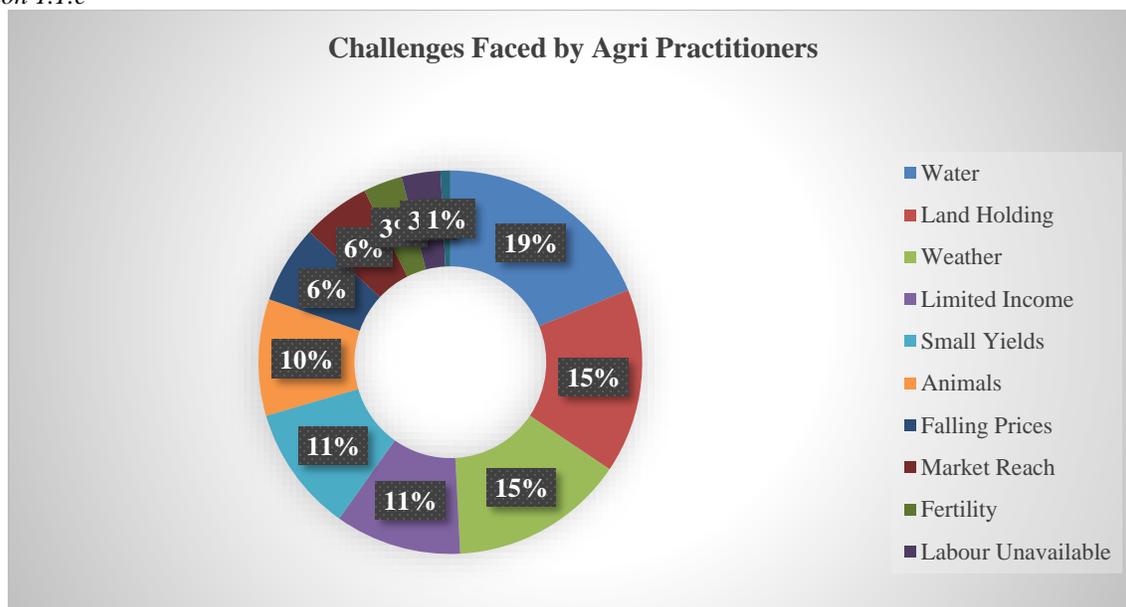
Agriculture is the dominant occupation of the people in Uttarakhand. Most of the traditional artisans are farmers and have some cultivable land. For the Purposes of our study, 72% of our respondents were farmers. The rest, 28% are influencers that include Government officials, industry leaders and eminent personalities in the state.

## Subsection 1.1.b



The Agricultural Practitioners have two distinct profiles, namely, mountainous & plains. The farmers in the plains are prosperous owing to irrigation facilities available to them but the farmers in the mountains depend heavily on the rains. Hence, for the purposes of our study we have focused on the traditional mountainous farming practices. The Respondent spread is Pithoragarh – 37%, Pauri Garhwal – 18%, Uttarkashi – 18% & Bageshwar – 15%.

Subsection 1.1.c



The Challenges enumerated by respondents identified water scarcity – 19%, Small Land Holding – 15%, Harsh Weather – 15%, Limited Income & Small Yields – 11% each and finally Animals – 10%. The hierarchy of reasons discussed above change from region to region.

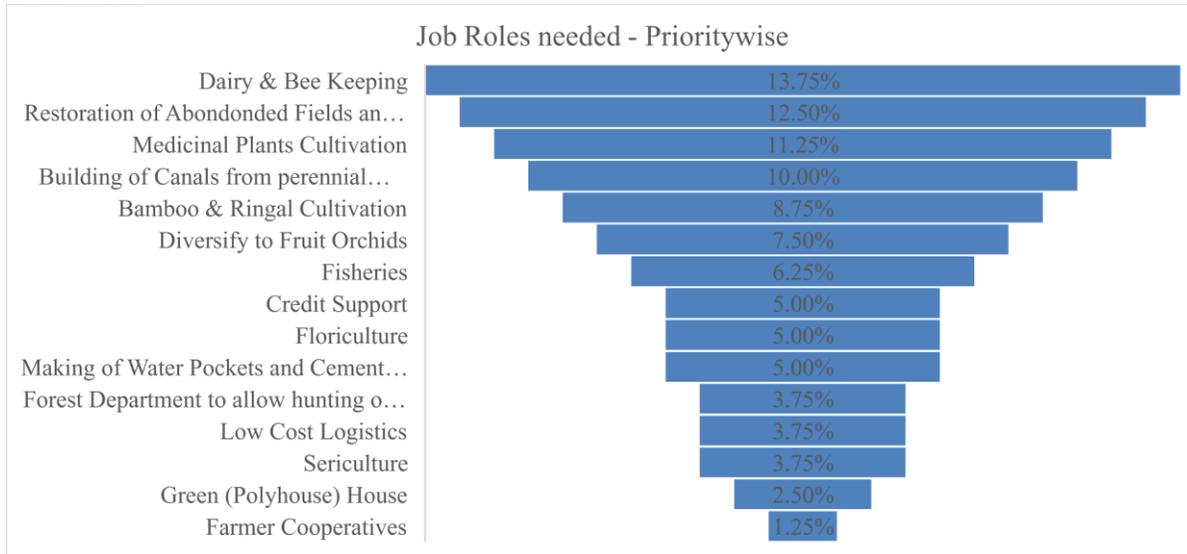
Subsection 1.1.d

Challenges & Action Taken	Priority
<b>Animals</b>	<b>10%</b>
hunt down Animals	8%
Not Threatened by Animals	8%
Vigil and Trapping by Forest Officials. Wild Boar is declared Vermin hence culling is allowed in specified areas.	83%
<b>Falling Prices</b>	<b>7%</b>
Agarbatti, Dhoop, Essence and Medicinal Extracts get Better Prices	13%
Bamboo and Ringal Products Help Augment Income	13%
Diversify to Apple Growing, Dairy, Bee Keeping,	50%
looking for alternative Job opportunities	25%
<b>Fertility</b>	<b>3%</b>
Fertility of the lands is getting affected due to soil Erosion. Since the Flooding of Fields Rarely happens the old fields get less fertile over a period of time. That is the reason why new fields have to be developed periodically.	100%
<b>Labour Unavailable</b>	<b>3%</b>
Family Members work as Security Guards in Dehardun	25%
Hiring Labour From Nepal and Plains	50%
Traditional Farming	25%
<b>Land Holding</b>	<b>16%</b>
Land holdings are very small as the slopes become tough to make step-farms.	95%
Restoring Abandoned Fields and taking other Low yield Fields on Lease	5%

<b>Limited Income</b>	<b>11%</b>
Medicinal Plants are grown and gathered by the tribes which contribute to their limited incomes.	54%
Migrated with Family to Dehardun to have a better Life	8%
Weaving is an Additionally Occupation they take up to support Families	31%
Work as tourist guide for Visitors to the Tons Valley	8%
<b>Market Reach</b>	<b>6%</b>
Agarbatti, Dhoop, Essence and Medicinal Extracts don't perish easily	14%
Almora market is among the largest Markets in the Hills. Haldwani is also not very far.	29%
No Roads will have to carry produce on Foot	14%
Selling at Local Markets to Traders	29%
The Apple Market is very Organised in Himachal Prefer going to Himachal	14%
<b>Migration</b>	<b>1%</b>
Migration to City to work as labourer	100%
<b>Small Yields</b>	<b>11%</b>
Diversify to Apple Growing, Dairy, Bee Keeping,	23%
Growing Rice and seasonal Vegetables for Self Consumption	8%
Lemon Grass is a very good alternative for small yield but greater returns	8%
Medicinal Plants are grown and gathered by the tribes which contribute to their limited incomes.	8%
Rely on Gathering Food from the Mountains	8%
Restoring Abandoned Fields and taking other Low yield Fields on Lease	8%
Sheep Breeding, Dairy	8%
Shifting to Fruit Cultivation	23%
Traditional Farming	8%
<b>Water</b>	<b>19%</b>
Agriculture using Existing Water Springs and making new Irrigation Streams	9%
Cultivating During Monsoons and Gathering Ringal and making Baskets during off-Seasons	4%
No Problem	4%
Restoring Abandoned Fields and taking other Low yield Fields on Lease	9%
Water sources are limited and the irrigation has to be done through Canals which need to be constructed and maintained during the farming seasons.	13%
Watershed projects, Re-charging Existing Aquifers, Building new irrigation streams from Perennial water streams.	61%
<b>Weather</b>	<b>15%</b>
During Winters they leave their fields. Survive on Rearing Fiber Animals like Sheep, Angoora, etc	56%
Snow Cover During Winters. Survive on hunted Animals	44%

The Aforesaid table discusses the various challenges faced by agriculture and the action taken by the respondents to mitigate them.

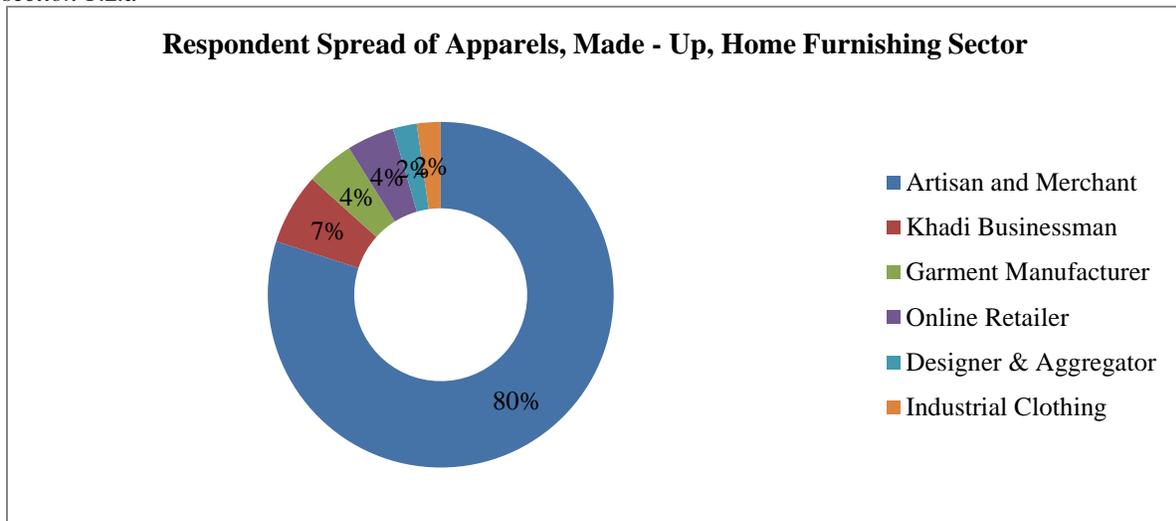
Subsection 1.1.e



The various suggestions made by our respondents have been summarized above. These responses were collected across the state during our interactions with various farmers & influencers.

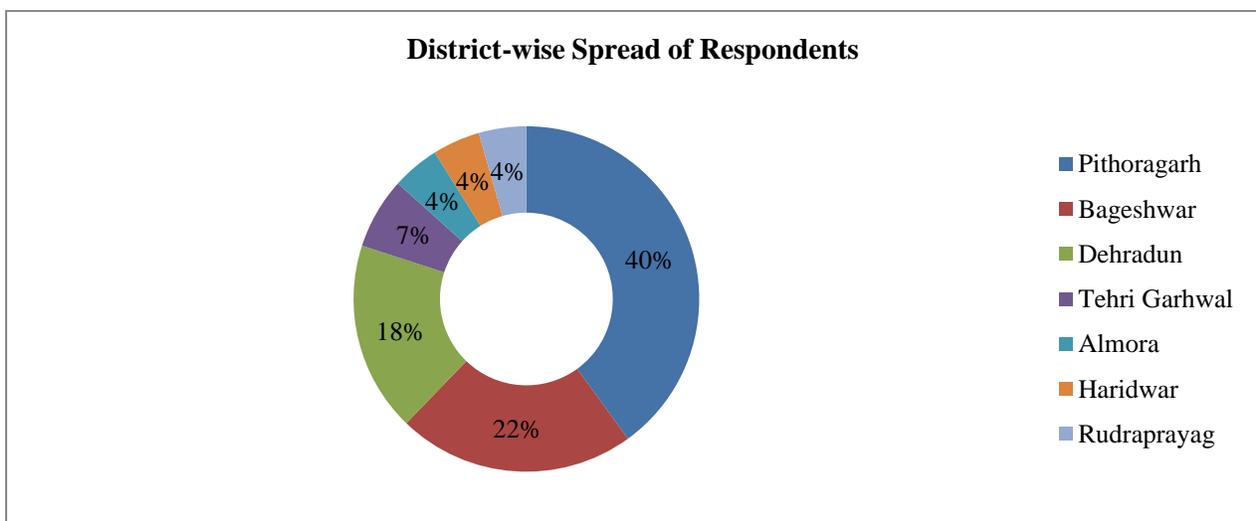
# Section 1.2: Apparels Made-up & Home Furnishing Sector Skills

## Subsection 1.2.a



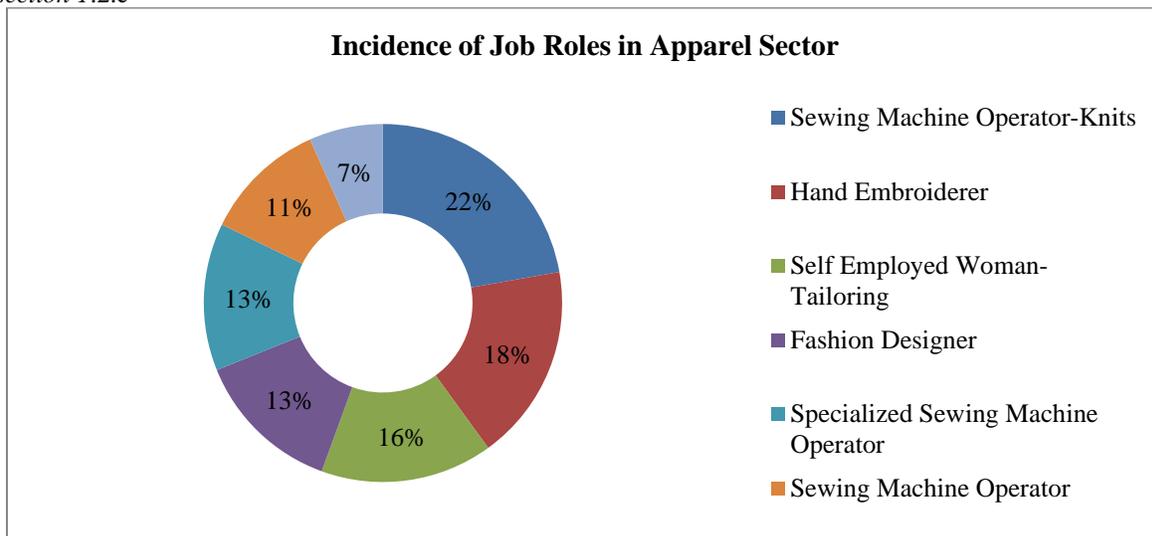
The Apparels, Made – Up, Home Furnishing Sector essentially has two basic approaches namely, Handloom and Industrial. As per the mandate of our study we had to focus more on traditional sector. Hence, the respondent spread for the study has 80% Artisan & Merchant, Khadi – Businessmen – 7%, Garment manufacturer – 4% & Online Retailer – 4% among others.

## Subsection 1.2.b



The District-wise Spread of respondents covers both the Garhwal and Kumoan to understand the trends existing in both cultural hemispheres. For the purposes of our study we drew respondents from Pithoragarh – 40%, Bageshwar – 22%, Dehradun – 18% & Tehri Garhwal – 7%.

Subsection 1.2.c



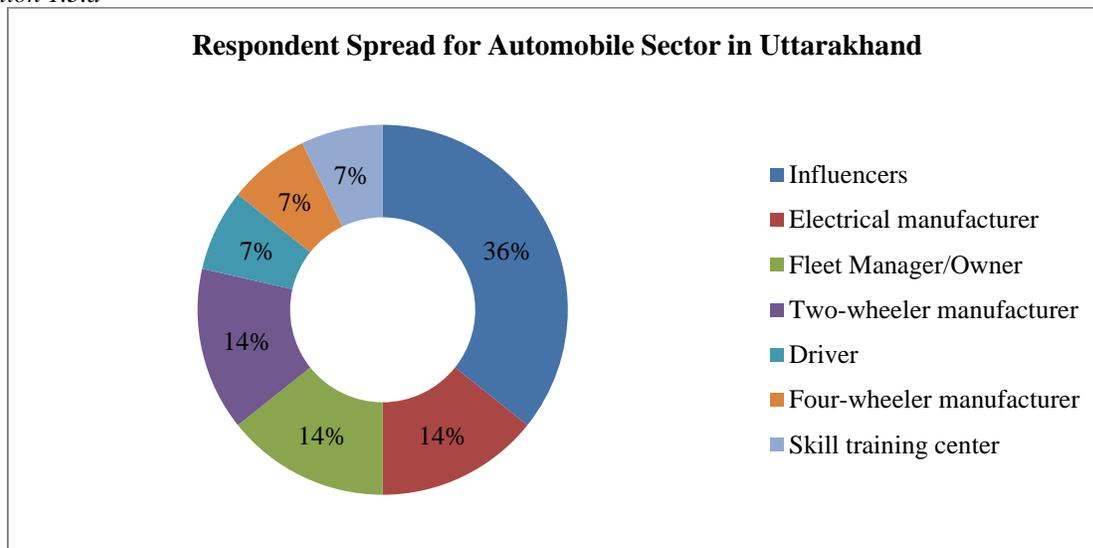
The Major Job roles as shared by the respondents during our interactions have been represented in the charts above. The Job roles that found majority of mentions were Sewing Machine Operator – Knits – 22%, Hand Embroiderer – 18%, Self Employed Women – Tailoring – 16%, Fashion Designer – 13%.

Subsection 1.2.d

Job Roles Needed	Artisan and Merchant	Designer & Aggregator	Garment Manufacturer	Industrial Clothing	Khadi Businessman	Online Retailer
Fashion Designer	13.89%					50.00%
Hand Embroiderer	22.22%					
Hand Embroiderer (Addawala)	5.56%				33.33%	
Self Employed Woman-Tailoring	13.89%	100.00%				50.00%
Sewing Machine Operator	11.11%				33.33%	
Sewing Machine Operator-Knits	22.22%		100.00%			
Specialized Sewing Machine Operator	11.11%			100.00%	33.33%	

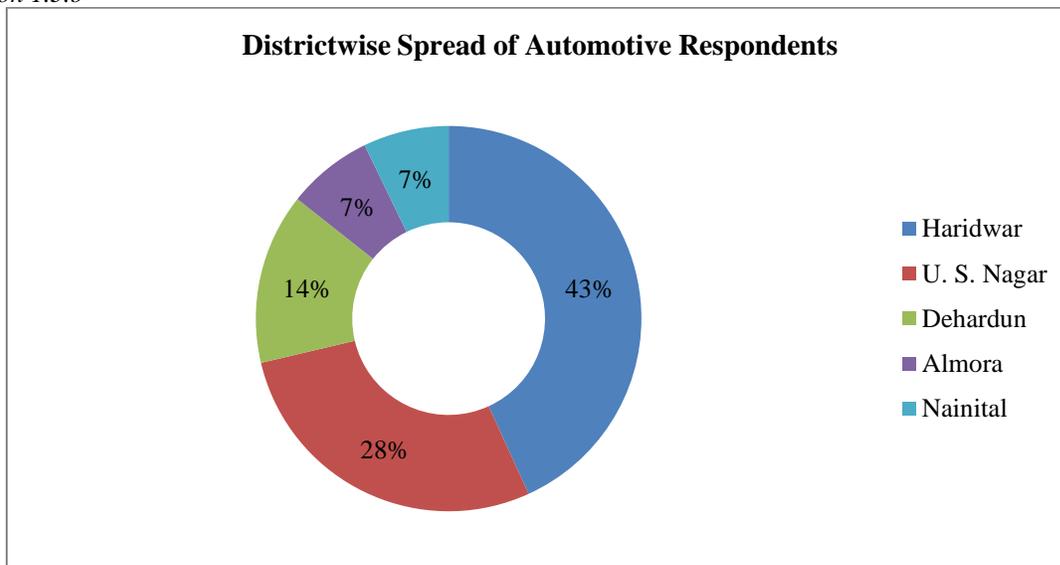
## Section 1.3 Automotive Sector Skill Council

### Subsection 1.3.a



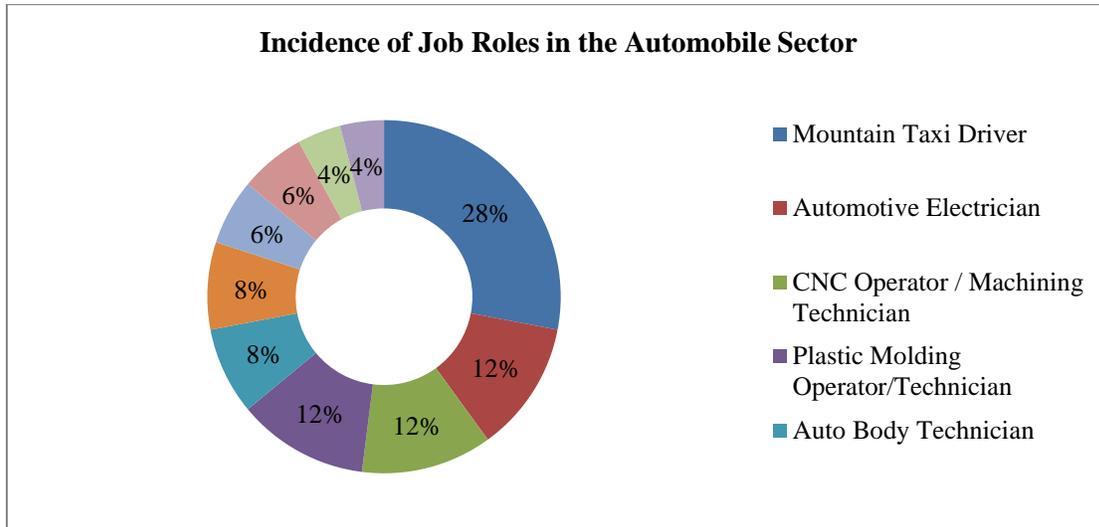
The Automotive Sector Skill Council aims at fulfilling the human resource requirements of the Auto Sector. The two major subsets of respondents belong to manufacturing and the Commercial Drivers. The major influencers in the Automobile Sector numbers were Industries Association members, College Professors, etc. The respondents spread for Automobile SSC are Influencers - 36%, Electrical Manufacturer – 14%, Fleet owner – 14%, Two-Wheeler manufacturers – 14% and Four-Wheeler manufacturers – 7%.

### Subsection 1.3.b



The Respondents for the study had to be drawn from the manufacturing and tourist hubs. Hence, for Automobile Manufacturing Haridwar – 43% and U. S. Nagar – 28% districts were identified. Interestingly the primary tourist destinations like Dehradun – 14%, Almora – 7% and Nainital – 7%.

*Subsection 1.3.c*



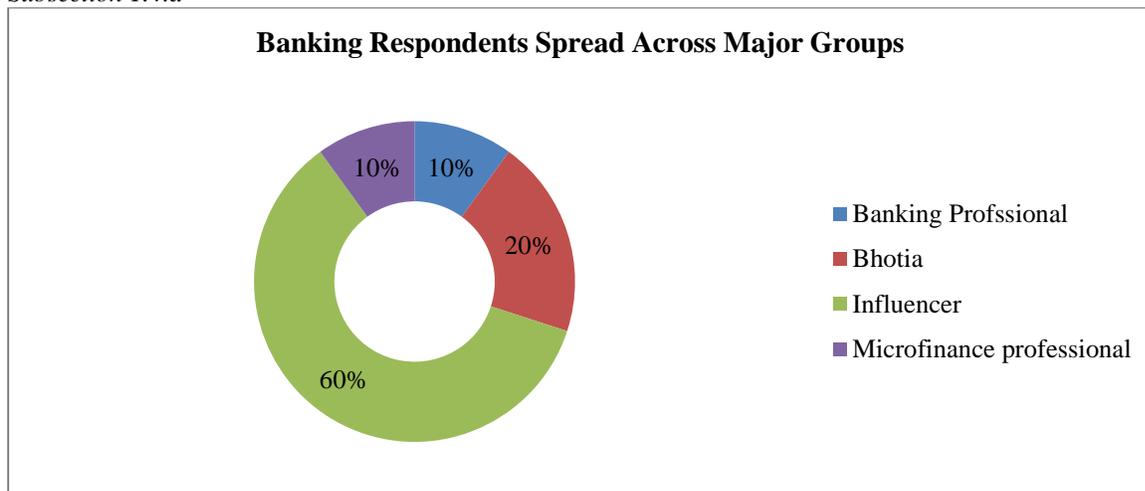
The Job Roles in the Automotive Sector have a very high incidence of Mountain Taxi Drivers. Our Respondents from the Automotive Manufacturing sector identified Automotive Electrician – 12%, CNC Operator - 12% and Plastic Molding/Technician - 12%.

*Subsection 1.3.d*

Job Roles Recommended	2-Wheeler manufacturer	4-Wheeler manufacturer	Rubber Manufacturer
Assembling & curing Operator – Footwear & Sports Good			14%
Autoclave Operator	10%	10%	14%
Bead Room Operator	10%	10%	14%
Building Operator – Hoses	10%	10%	14%
Building Operator-Cables	10%	10%	14%
Building Operator-Rubber Roller	10%	10%	14%
Building Operator-V belts for Transmission	10%	10%	14%
Pneumatic Tyre Molding Operator	10%	10%	
Radial Building Operator	10%	10%	
Solid Tyre Molding Operator	10%	10%	
Tyre Balancing Operator	10%	10%	

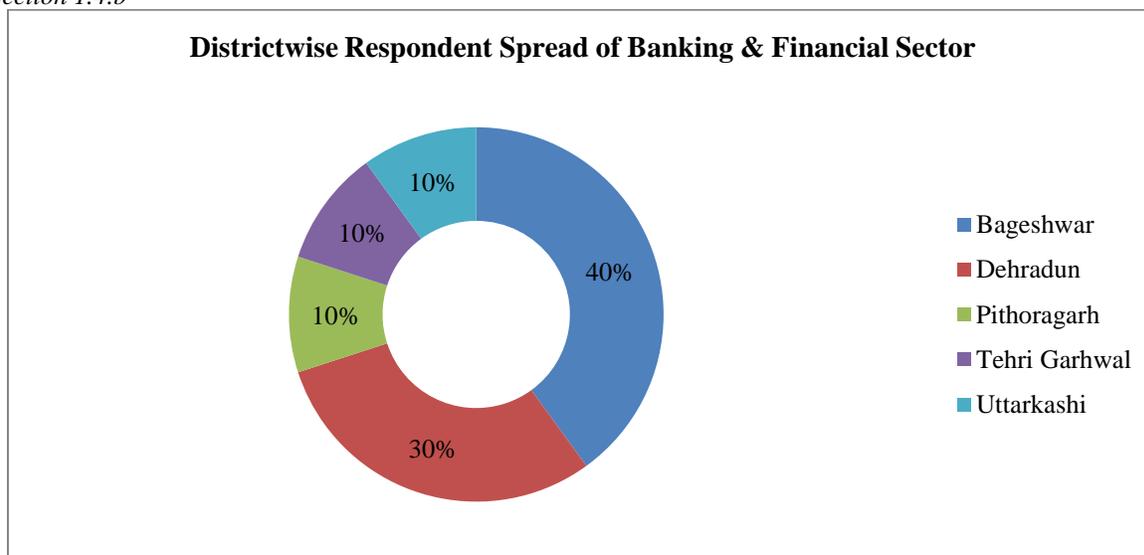
# Section 1.4 Banking & Financial Sector Skill Council

## Subsection 1.4.a



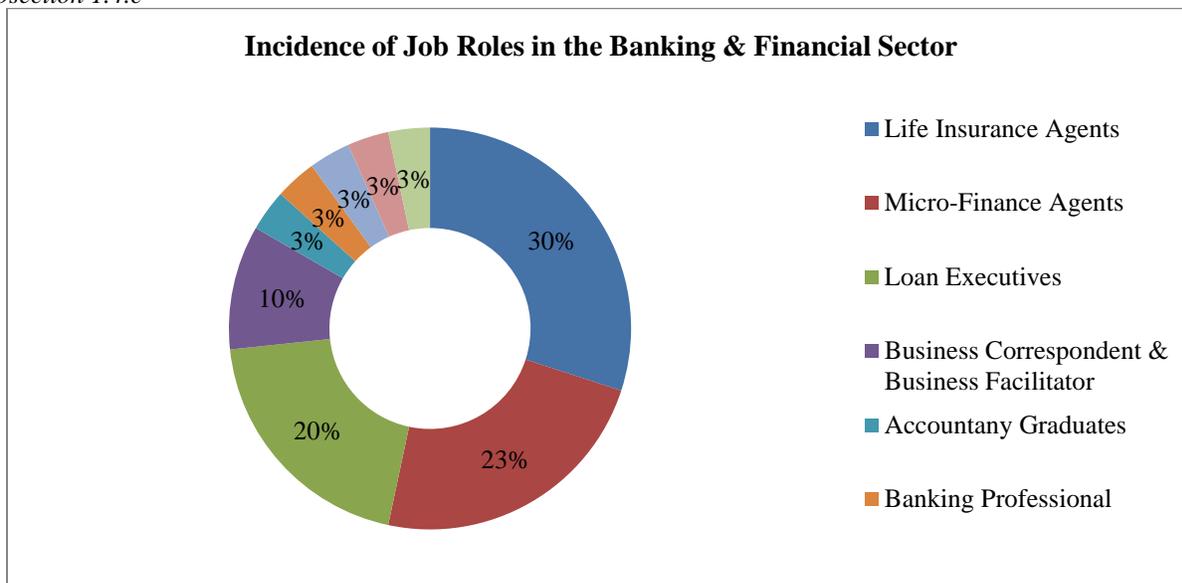
The Banking Sector is largely driven by licensed commission agents. These commission agents help deposit & withdraw cash, apply for bank loans & secure installments and sell various financial products like Life Insurance, mutual funds, etc. The Bank Managers & Local Administration Staff provide the basic understanding on the Banking & Financial Sector Skills.

## Subsection 1.4.b



The Banking & Financial Sector Skills are pervasive across the state. However, the nature of services that are subscribed to by the districts in the plains and mountainous geographies are different. To understand these trends deeply we chose 40% of our respondents from Dehradun and 30% from Bageshwar. Rest of the interviews were done in the districts of Pithoragarh, Tehri Garhwal and Uttarakashi.

Subsection 1.4.c



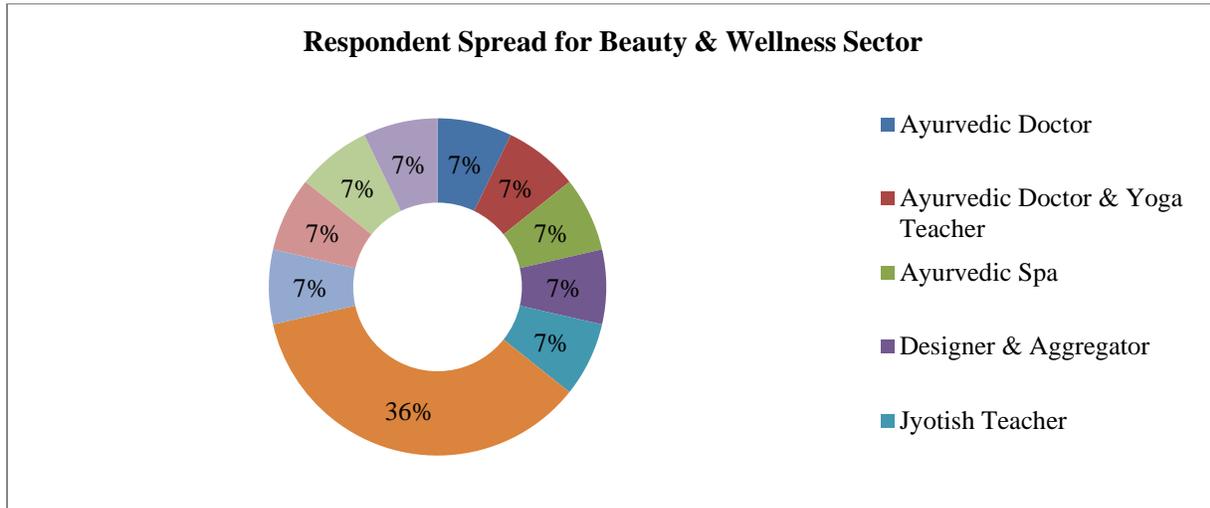
Life Insurance agents have the highest penetration in the Uttarakhand followed by micro finance professionals and loan executives. Business Correspondents have also been rising rapidly owing to the financial inclusion initiatives of the government. For the Purposes of our study we have proportionately interviewed the respondents to establish trends.

Subsection 1.4.d

Job Roles Needed	Banking Professional	Bhotia	Influencer	Microfinance professional
Accountancy Graduates			6%	
Banking Professional			6%	
Business Correspondent & Business Facilitator	25%		11%	
GST Account Assistant			6%	
Life Insurance Agents	25%	33%	28%	50%
Loan Executives	25%	33%	17%	
Micro-Finance Agents		33%	22%	50%
Mutual Fund Agents	25%			
Tally Professionals			6%	

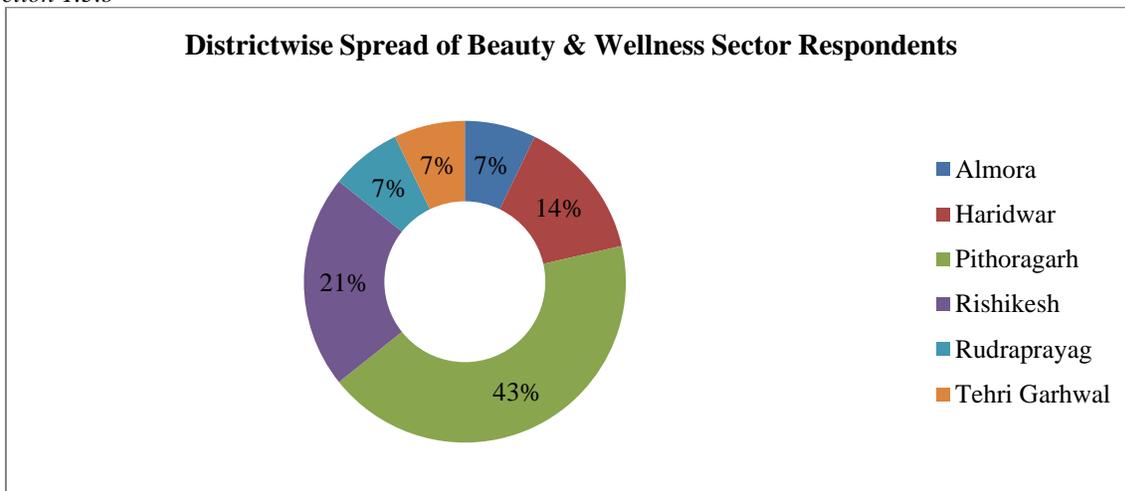
## Section 1.5 Beauty & Wellness Sector Skill Council

### Subsection 1.5.a

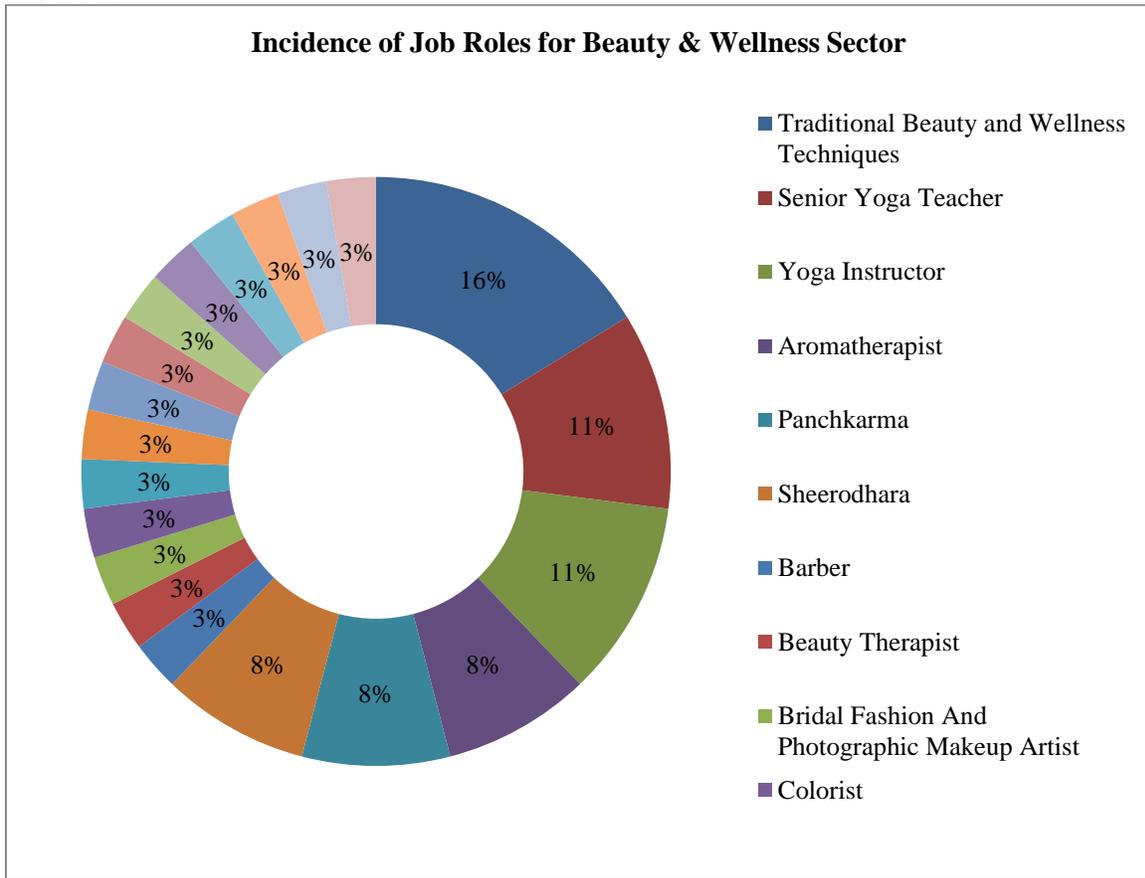


The Beauty and Wellness sector has a huge potential for Self-Employment in the Uttarakhand. The Respondents for Beauty and Wellness Sector included Ayurvedic, Naturopathy and Yoga practitioners who are in high demand both India and Internationally. For the Purposes of our study the Medicinal Plant extractors comprise of 36% of the chosen respondents. The Ayurvedic Doctor & Yoga Practitioners comprise of 28% of the respondents.

### Subsection 1.5.b



The Beauty & Wellness professionals have a strong presence in the districts in the plains like Dehradun, Haridwar, Udham Singh nagar and Nainital. But this is just one side of the story, a lot of manufacturing and extraction of beauty and wellness products happen in the Mountainous regions. For the Purposes of our study, we have kept the focus on Traditional practitioners from Pithoragarh – 43%, Almora – 21% and Haridwar – 14%.



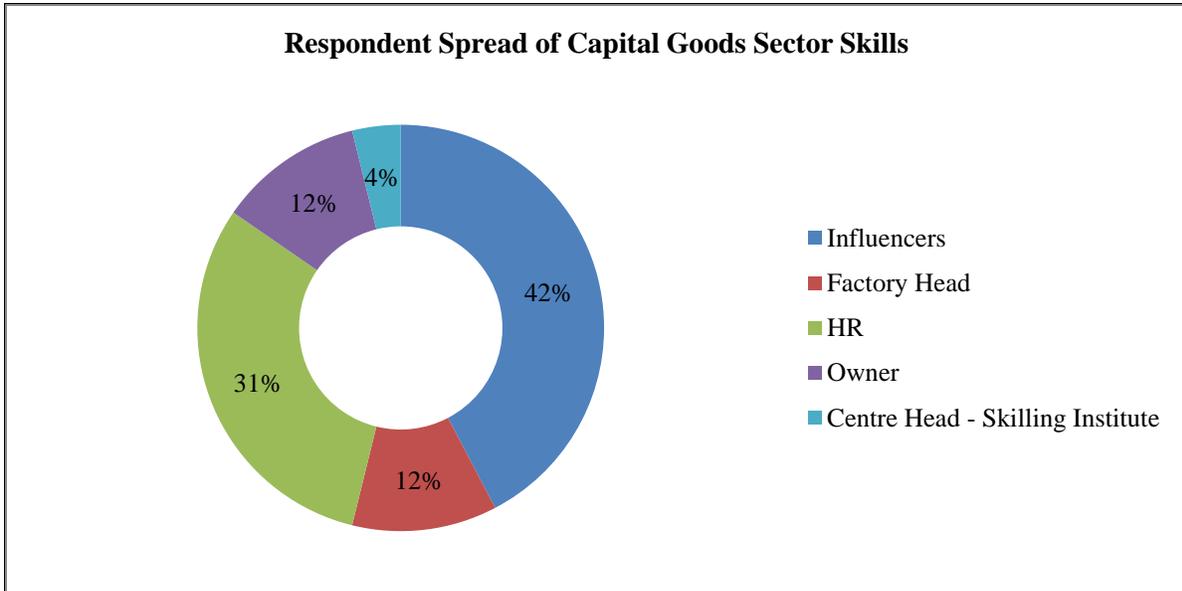
The Indigenous people of the hills have a very good Traditional Knowledge of the Beauty & Wellness routines. Since our focus of our Study was on Traditional skills 32% of our Respondents (including Traditional Practitioners, Panchakarma, Sheerodhara) were from the Ayurvedic and Naturopathy Practitioners. Further, Yoga being in vogue, 22% of our respondents are Yoga Instructors.

Subsection 1.5.d

Job Roles Needed	Ayurvedic Doctor	Ayurvedic Doctor & Yoga Teacher	Ayurvedic Spa	Designer & Aggregator	Jyotish Teacher	Medicinal Plant	Patanjali Ayurveda	Saras Weavers Cooperative	Social Worker-SHG	Yoga Teacher	Influencer
Aromatherapist	33%	25%					14%				
Barber									100%		
Beauty Therapist											14%
Bridal Fashion And Photographic Makeup Artist											14%
Colorist											14%
Fitness Services Trainer				33%							
Gym Assistant				33%							
Hair Stylist Final											14%
Mehendi Specialist											14%
Panchkarma	33%		50%				14%				
Pedicure and Manicure											14%
Personal Trainer				33%							
Personal Trainer		25%									
Senior Yoga Teacher		25%			50%		14%			50%	
Sheerodhara	33%		50%				14%				
Spa Therapist							14%				
Tattoo Artist											14%
Traditional Beauty and Wellness Techniques						100%		100%			
Wellness Neurotherapist							14%				
Yoga Instructor		25%			50%		14%			50%	

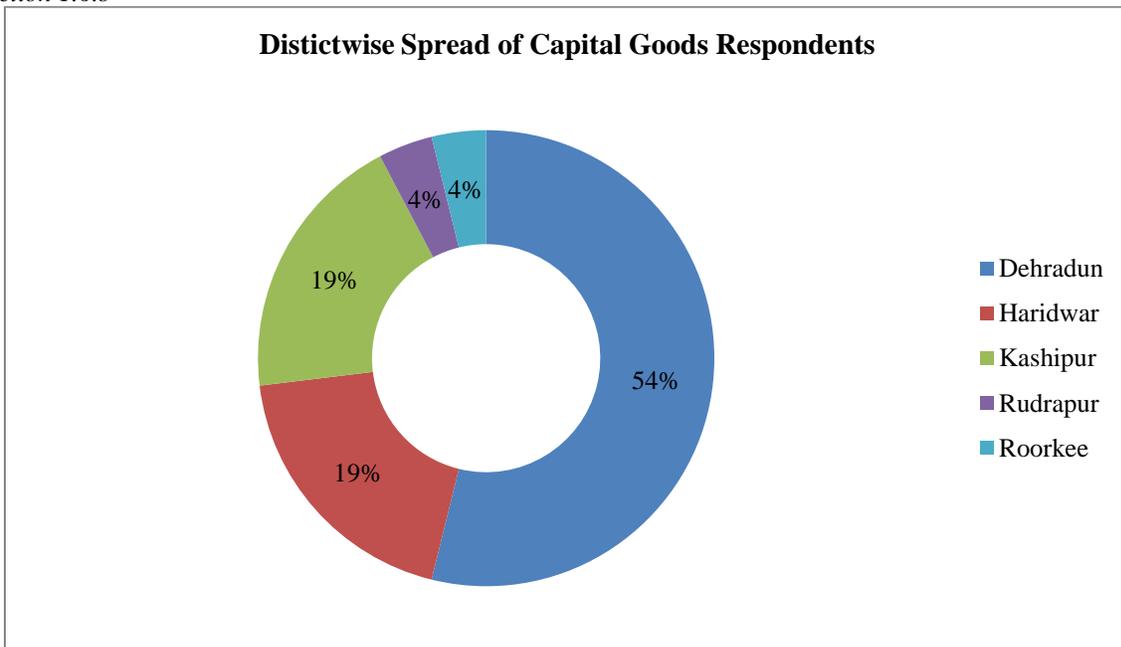
# Section 1.6 Capital Sector Skills

## Subsection 1.6.b



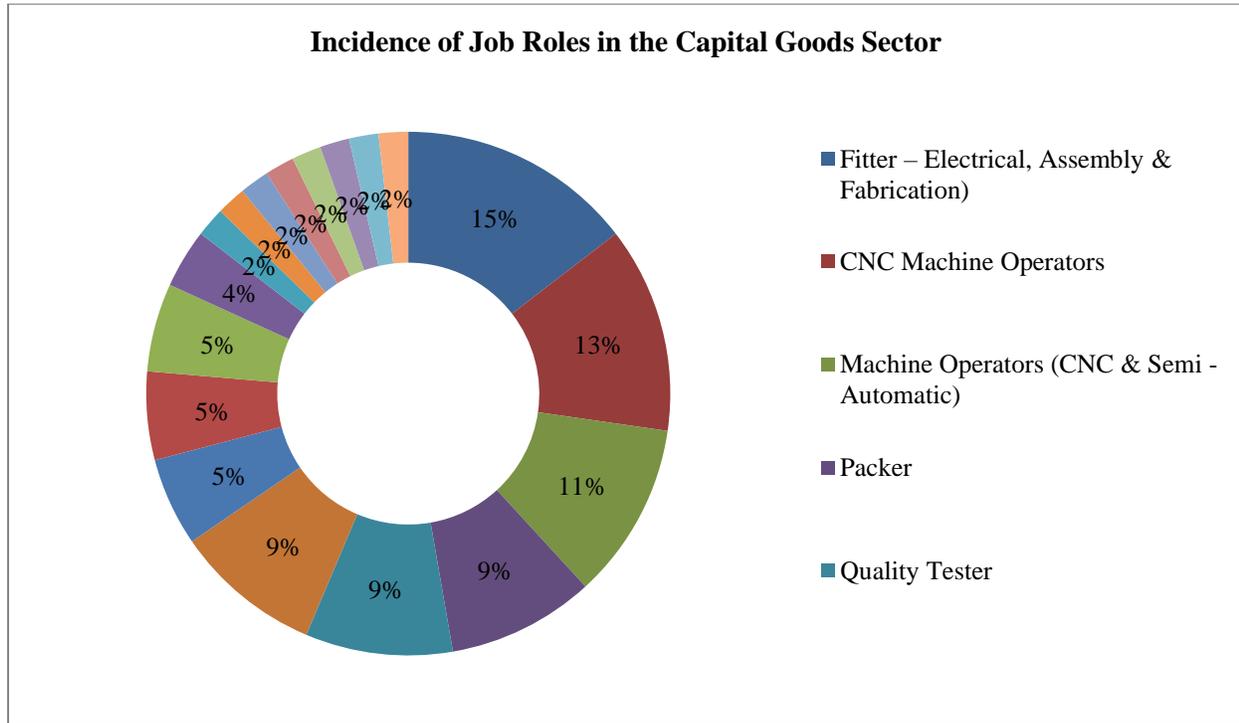
The Capital Goods Sector Skills data has been collated through interactions with various industry Practitioners. The Respondent spread for the major strata include Factory Head - 12%, HR – 32%, Owners – 12% and Centre Head – Skilling is 4%.

## Subsection 1.6.b



District wisely, the Capital Goods skills are tied to industrial bases. The three industrial districts of Dehradun, Haridwar and Udham Singh Nagar have been focused upon for the Skill study. The Respondent spreads for these districts are Dehradun – 54%, Haridwar (including Roorkee) – 23% and Udham Singh Nagar (Including Kashipur & Rudrapur) – 23%.

*Subsection 1.6.c*



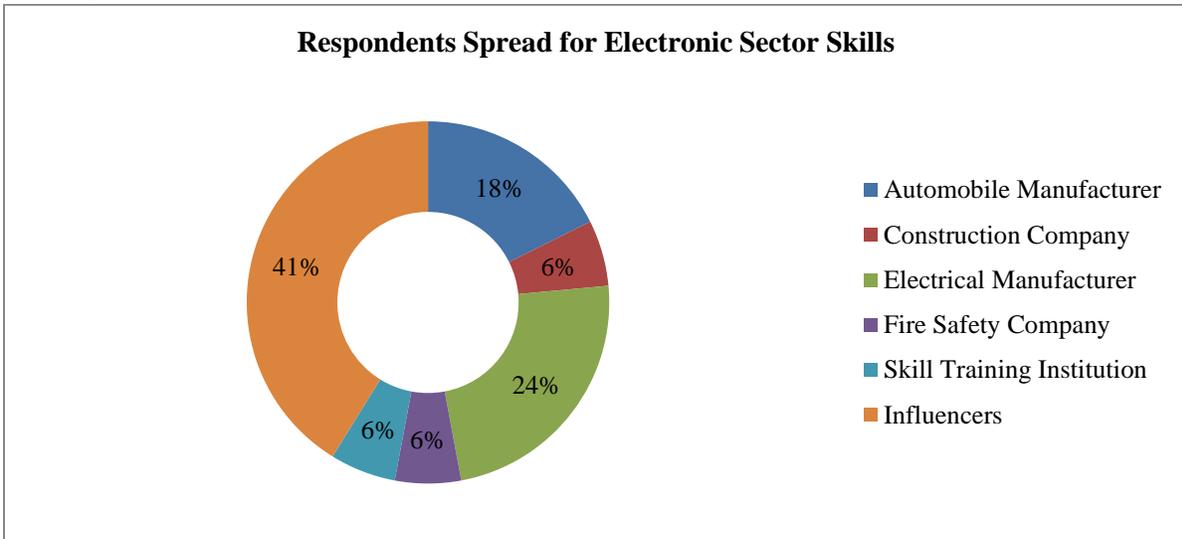
In the Skilling fraternity, the major concentration of trainings focus on four skills, namely, Welder, Fitter, Machine Operator and Electrician. There are other major job roles as well like Painter, Quality Tester, Packer, etc. Based on our interactions, our respondents suggested the following job roles; Fitter -15%, CNC Machine Operator – 13%, Packer – 9%, etc.

Subsection 1.6.d

Job Roles Needed	Factory Head	General Manager - Electrical	HR - Head	Owner - Manager	Skill Training - Head	Grand Total
CNC Machine Operators	33%	25%	11%	9%		13%
fire protection systems designer				9%		2%
Fitter – Electrical, Assembly & Fabrication)	17%		14%	18%	17%	15%
General Industrial (Liquid) Painter			7%		17%	5%
Grinder-Hand & Hand Held Power Tools			7%		17%	5%
Gunner		25%				2%
Lead Wood Quality Examiner			4%			2%
Leak Tester			4%			2%
Loader/Unloader			4%			2%
Machine Engineers			4%			2%
Machine Operators (CNC & Semi - Automatic)			14%	9%	17%	11%
Packer	17%		7%	18%		9%
Quality Tester	17%	25%	7%	9%		9%
Rigger : Rigging of heavy material			4%	9%		4%
Soldering and Brazing Technician		25%				2%
Technician - Installation and Commissioning (Fire Safety System)				9%		2%
Tool and Die Maker			7%		17%	5%
Welder (Including SMAW, FCAW, MIG, GTAW)	17%		7%	9%	17%	9%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

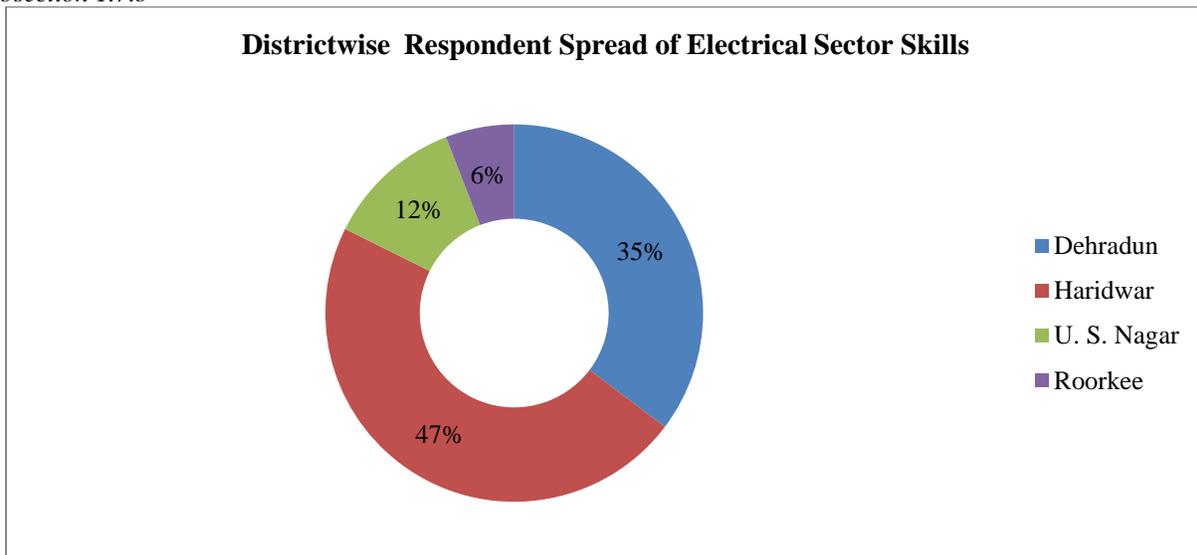
# Section 1.7 Electronic Sector Skill Council

## Subsection 1.7.a



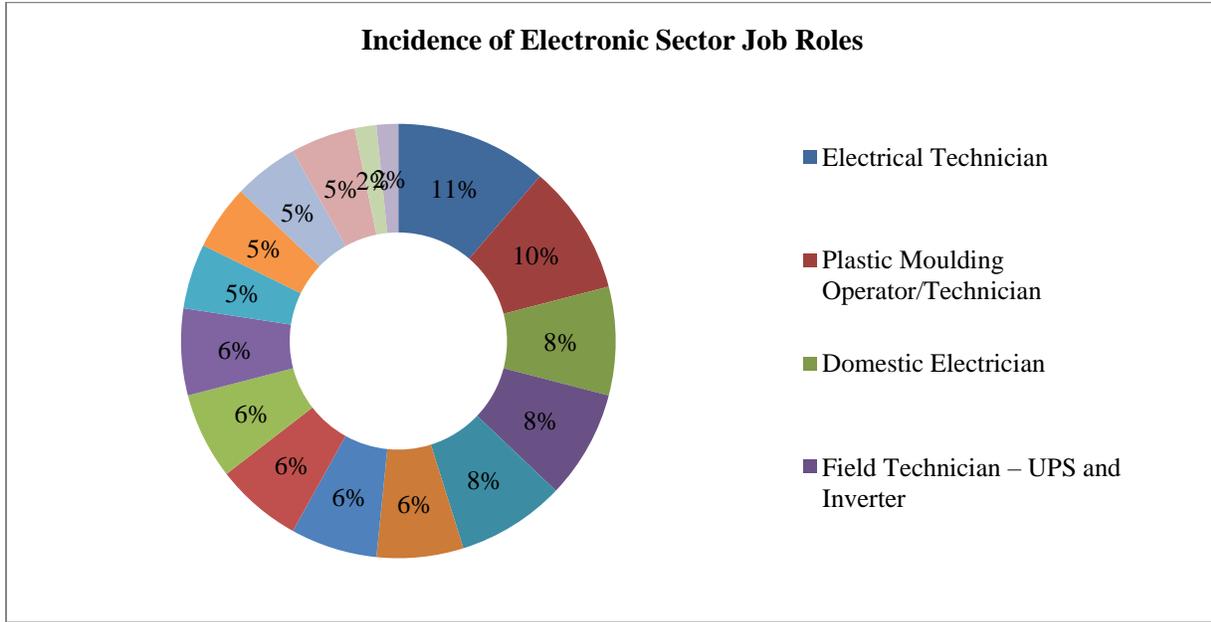
The Electronic Sector Skills have a very wide variety of Applications in Automobiles, Construction, Electricals, Fire Safety, etc. In order to understand the importance of these Skills we have abided by the aforesaid proportion of respondent spreads, namely, Automobile – 18%, Electrical Manufacturers – 24%, Fire Safety – 6%, etc.

## Subsection 1.7.b



The Industrial Districts of Dehradun, Haridwar and Udham Singh Nagar have a huge demand for Electronic Sector Skills. These Districts have strong presence of Automobile, Construction, Electronics, etc. To maintain focus on the objectives our respondents spread from Dehradun – 35%, Haridwar & Roorkee – 53% and U. S. Nagar -12%.

Subsection 1.7.c



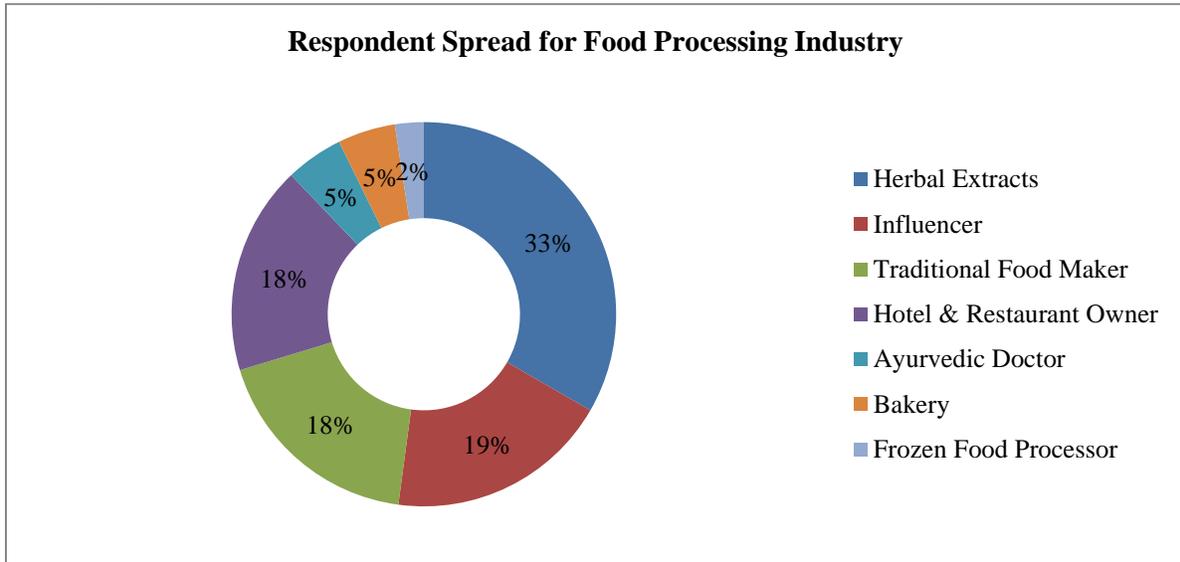
The Respondents identified the most pervasive job roles existing and those likely to be relevant in the coming years. The Graphical Doughnut identifies Electrical Technician – 11%, Plastic Moulding Operator – 10%, Domestic Electrician, Field Electrician (UPS and Inverter) – 8% and Fitter (Electrical, Assembly & Fabrication) – 8%.

Subsection 1.7.d

Job Roles Needed	Automobile Manufacturer	Construction Company	Electrical Manufacturer	Fire Safety Company	Skill Trainign institution
Data Networking and Cable Technician			10%		9%
Domestic Electrician		25%	10%		9%
DTH Set Top Box Installation & Service Technician			6%		9%
Electrical Technician	25%	25%	6%		9%
Field Engineer –RACW			10%		9%
Field Technician – Computing and Peripherals			6%		9%
Field Technician – Networking and Storage		25%	6%		9%
Field Technician – Other Home Appliances			6%		9%
Field Technician – UPS and Inverter		25%	10%		9%
Fitter – Electrical, Assembly & Fabrication)	25%		3%	25%	
Machine Operators (CNC & Semi - Automatic)	25%		3%		
Mobile Phone Hardware Repair Technician			6%		9%
Plastic Moulding Operator/Technician	25%		10%		
Technician - Installation and Commissioning (Fire Safety System)				25%	
Welder (Including SMAW, FCAW,MIG,GTAW)				25%	
Wireman – Control Panel			6%	25%	9%

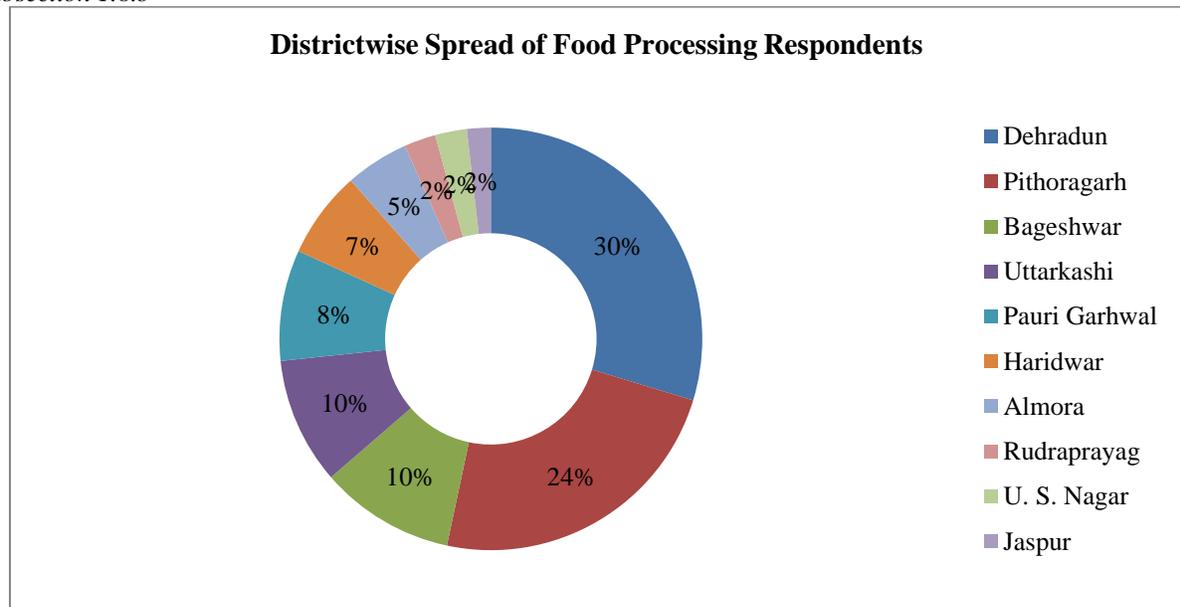
# Section 1.8 Food Sector Skills

## Subsection 1.8.a



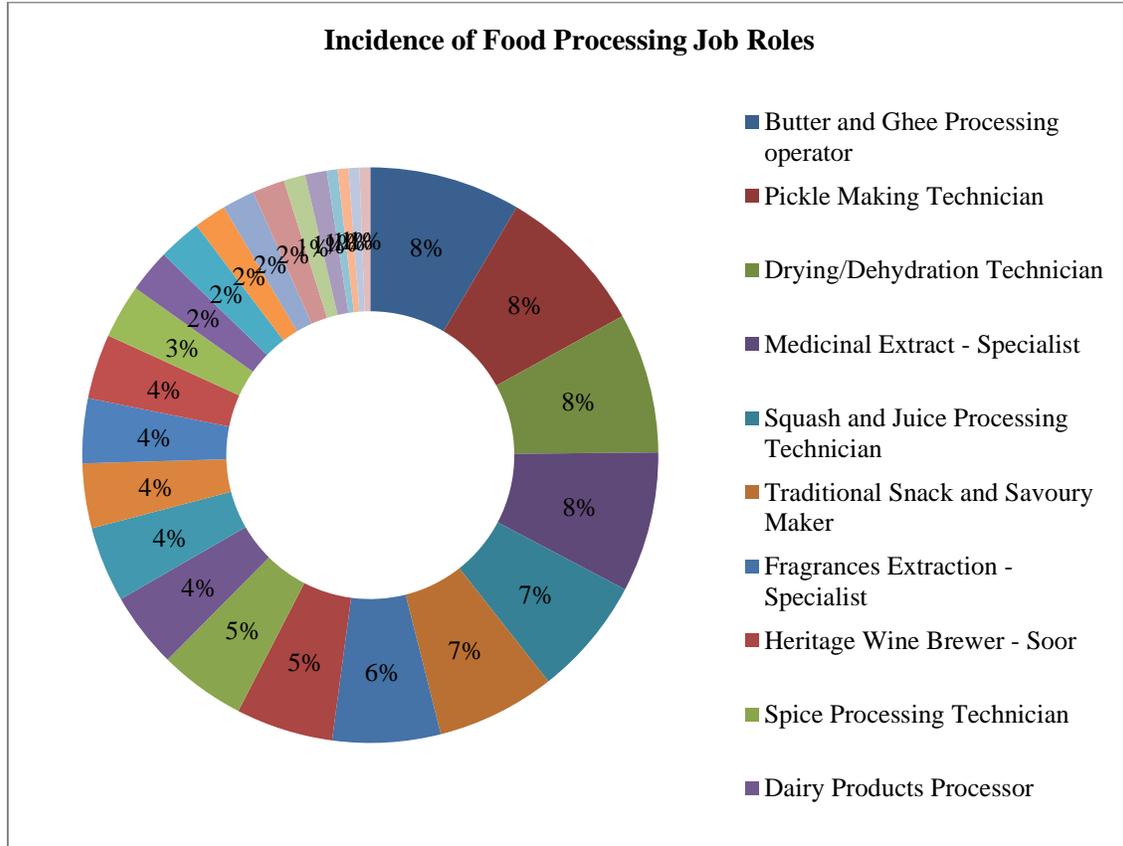
The Respondent Spread for Food Processing Industry includes Herbal Extract Professionals – 33%, Traditional Food Makers – 19% and Hotel & Restaurant Owner – 18% among others. The Ayurvedic Doctors are interesting respondents that informed about the medicinal extraction from seeds, plants, flowers and Fruits. Dehradun and Mussoorie have a very strong tradition of Baker and the respondents from the sector have informed us about their practices as well. Similarly, frozen foods technology has been expanding and the same has been studied under the framework.

## Subsection 1.8.b



The District-wise Spread of the Food Processing sector is present all over the state. For the purposes for of our study, the respondents were drawn from Dehradun - 30%, Pithoragarh – 24%, Bageshwar – 10% and Uttarkashi – 10% among others.

*Subsection 1.8.c*



The Job Roles for Food Processing Sector are very diverse. The major job roles identified by the respondents are Butter & Ghee Processing Operator – 8%, Pickle Making technician – 8%, Dehydration Technician – 8%, Medicinal Extraction – 8%, Squash and Juice Processing Technician – 7% followed by other job roles.

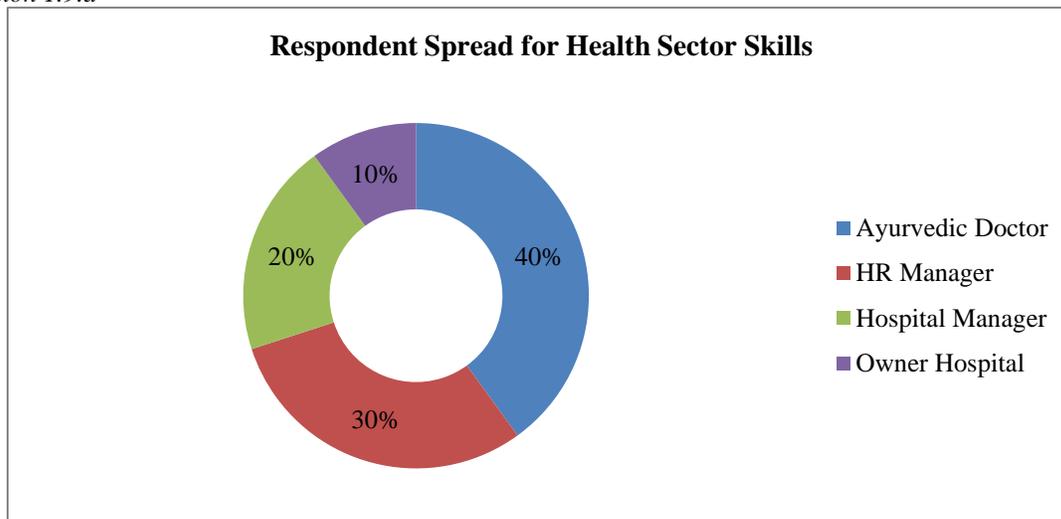
Subsection 1.8.d

Job Roles Needed	Ayurvedic Doctor	Bakery	Frozen Food Processor	Herbal Extracts	Hotel & Restaurant Owner	Influencer	Traditional Food Maker
Baking Technician		25.00%					
Butter and Ghee Processing operator				10.91%	6.90%	12.90%	6.67%
Convenience Food Maker					6.90%	12.90%	
Cottage cheese Maker				1.82%	6.90%	3.23%	
Craft Baker		25.00%			6.90%		
Dairy Processing Equipment operator				1.82%	6.90%		
Dairy Products Processor				9.09%	6.90%		
Drying/Dehydration Technician	25.00%		25.00%	10.91%	10.34%	3.23%	
Flavours Extraction - Specialist	25.00%			1.82%		3.23%	6.67%
Food Products Packaging Technician							3.33%
Fragrances Extraction - Specialist	25.00%			7.27%	3.45%	6.45%	3.33%
Fruits and Vegetables Canning Technician			25.00%				
Fruits and Vegetables Selection IN-Change			25.00%				
Fruits Ripening Technician			25.00%		6.90%		
Grain Mill Operator - including Pulses processing				1.82%		3.23%	3.33%
Heritage Wine Brewer - Soor				10.91%		3.23%	6.67%
Ice Cream Processing Technician					6.90%		
Jam, Jelly and Ketchup Processing Technician				5.45%			6.67%
Medicinal Extract - Specialist	25.00%			10.91%	3.45%	6.45%	6.67%
Milling Technician		25.00%		0.00%		3.23%	10.00%
Pickle Making Technician				7.27%	3.45%	16.13%	13.33%
Plant Biscuit Production Specialist		25.00%			6.90%	9.68%	

Pulse Processing Technician				3.33%
Spice Processing Technician	5.45%	3.45%	3.23%	10.00%
Squash and Juice Processing Technician	9.09%	3.45%	3.23%	13.33%
Traditional Snack and Savoury Maker	5.45%	10.34%	9.68%	6.67%

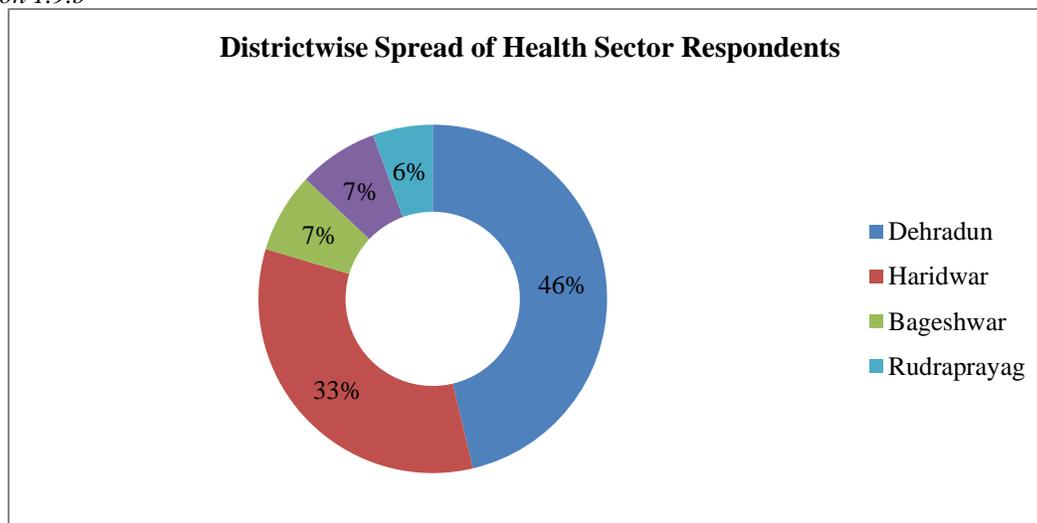
## Section 1.9 Health Sector Skills

### Subsection 1.9.a



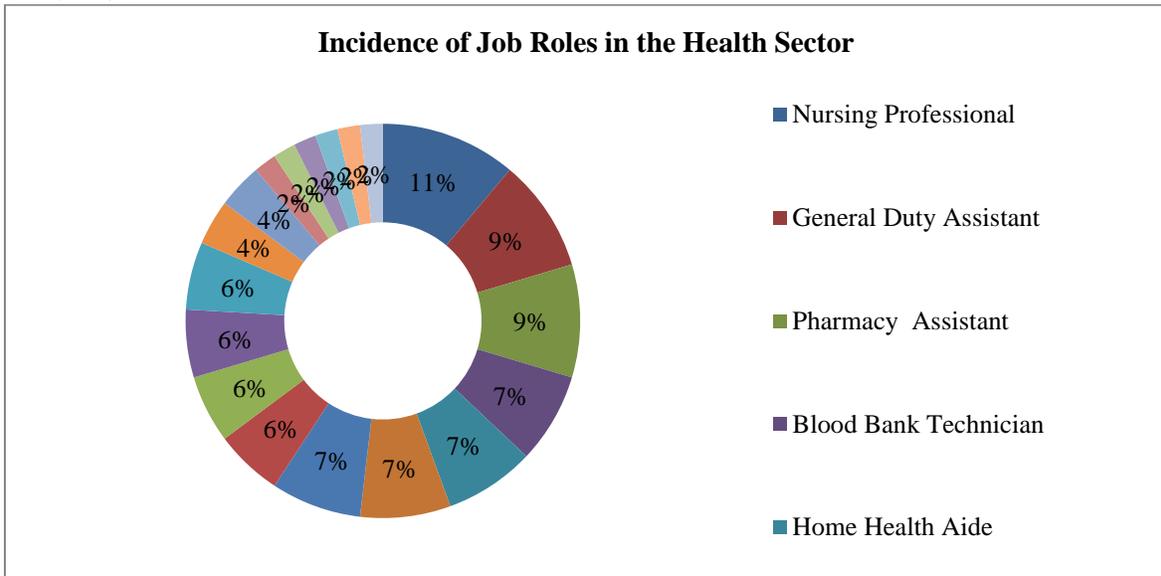
The Health Sector primary comes under the State Government. However, a large number of private players have invested in the health sector to fill the gaps. The Respondent Spread for Health Sector includes Ayurvedic Doctors – 40%, HR Managers of Large Private Sector Hospitals – 30%, Hospital Managers – 20% and Owner of Private Sector Hospitals – 10%.

### Subsection 1.9.b



The Health Sector services have flourished in the districts in the plains owing development of good infrastructure. For the purposes of our study we have drawn our respondents from Dehradun – 46%, Haridwar – 33%, Bageshwar – 7%, Lucknow – 7% Rudraprayag – 6%.

Subsection 1.9.c



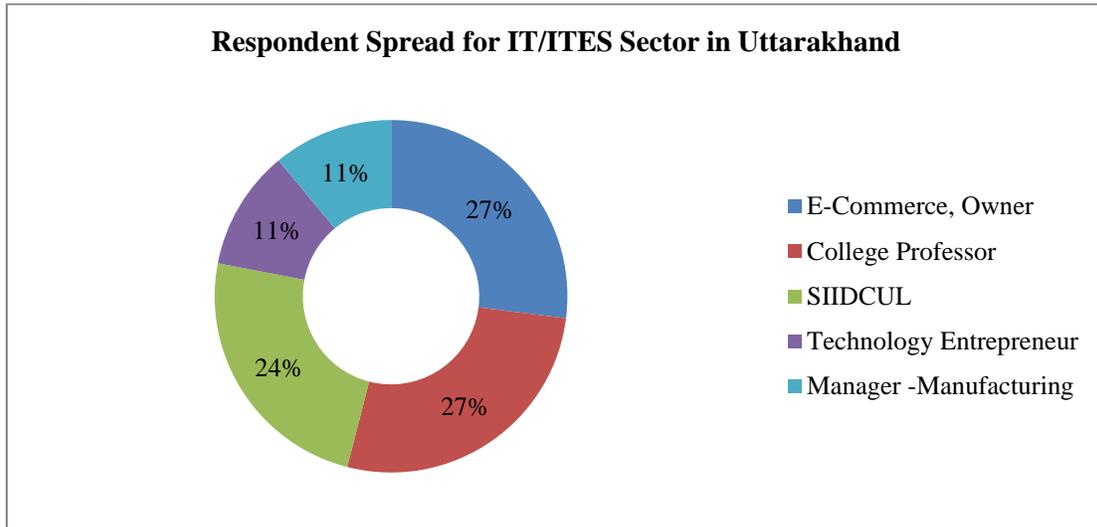
The Health Sector is among the fastest growing sectors in our economy. It has the potential to provide employment under various job roles. The Respondents of our study identified Nursing Professional – 11%, General Duty Assistant – 9%, Pharmacy Assistant – 7%, Blood Bank Technician - 7% and Home Health Aide – 7% as the major job roles.

Subsection 1.9.d

<b>Job Roles Needed</b>	<b>Ayurvedic Doctor</b>	<b>Owner - Matin Health Care</b>	<b>Hospital Manager</b>	<b>HR Manager</b>
Blood Bank Technician			9%	10%
Dialysis Technician			6%	
General Duty Assistant		33%	9%	10%
Home Health Aide			9%	10%
Limited Ayurvedic Education in Ayurvedic Dietetics	29%		3%	
Limited Ayurvedic Education in Ayurvedic Medicine Pharmacists/ dispensers	29%		3%	
Limited Ayurvedic Education in Panchakarma Therapy	14%		3%	
Medical Equipment Technician (Basic Clinical Equipment)			9%	10%
Medical Laboratory Technician			3%	
Medicinal Extract - Specialist			3%	
Medicinal Plants Grower	29%		3%	
Nursing Professional		33%	9%	20%
Pharmacy Assistant		33%	9%	10%
Phlebotomy Technician			3%	
Radiology Technician			3%	
Speech Audio Therapy Assistant			3%	
Vision Technician			6%	20%
X- Ray Technician			6%	10%
Yoga & Meditation Teacher			3%	

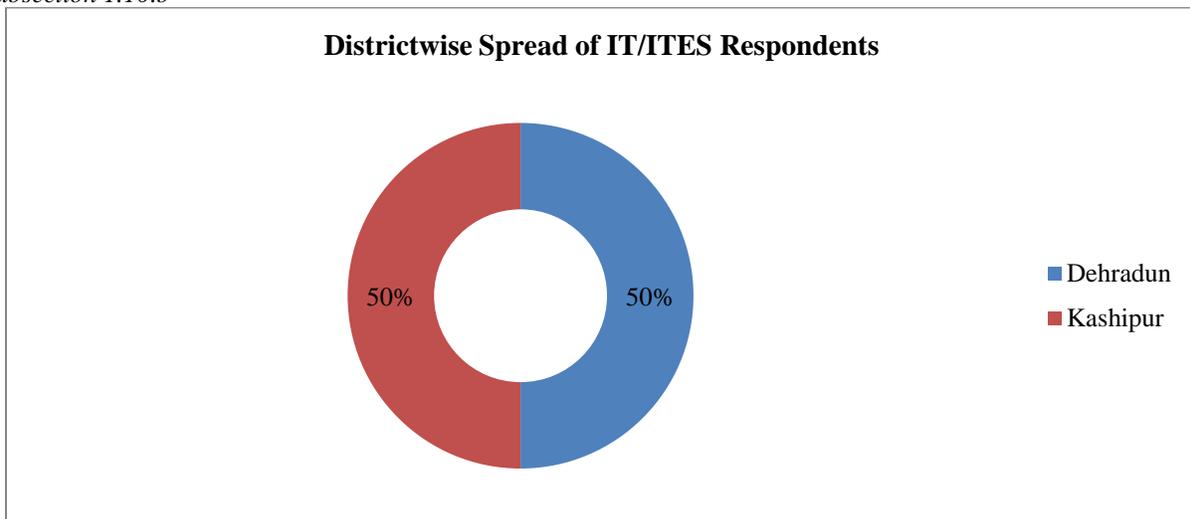
## Section 1.10 IT/ITES Sector Skill Council

### Subsection 1.10.a



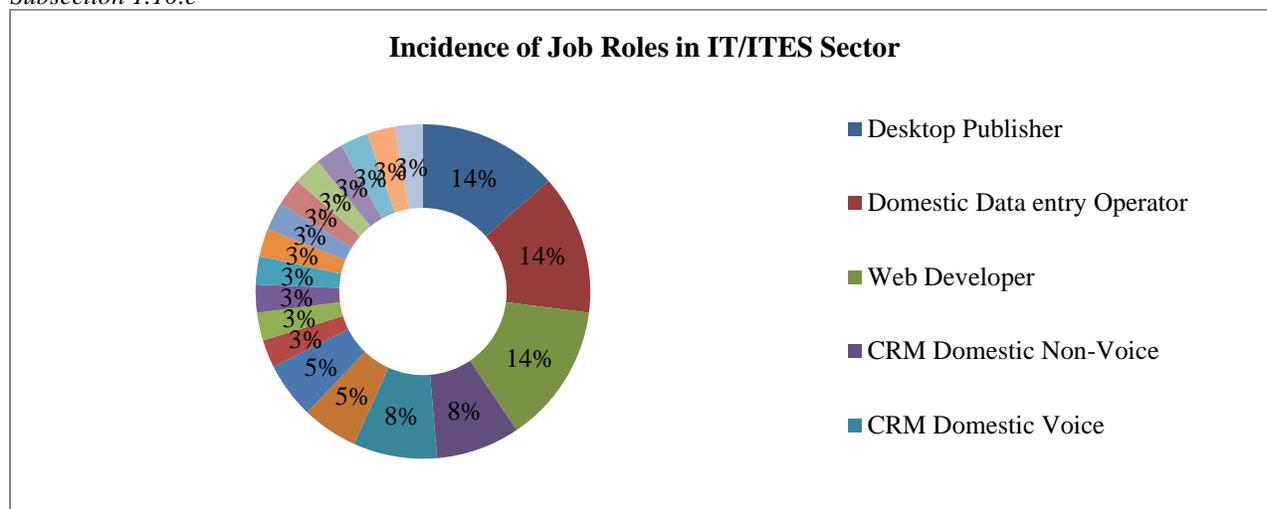
The IT/ITES Sector is one of the major potential areas of growth for the state. We have drawn our respondents from E-Commerce – 27%, College Professors – 27%, SIIDCUL – 24%, Technology Entrepreneur – 11% and Computer Manufacturing – 11%.

### Subsection 1.10.b



The District-wise Spread of IT/ITES sector is primarily in the plain districts. For the purposes of our study we have drawn our respondents from Dehradun – 50% and Kashipur – 50%.

Subsection 1.10.c



The Respondents identified for us the current job roles that are prevalent in the sector. The job roles presented above are only limited to existing capacity of Uttarakhand. The major job roles in demand are Desktop Publisher – 14%, Domestic Data Entry Operator – 14%, Web Developer – 14%, CRM Domestic Non-Voice – 8%, CRM Domestic – 8% and Business Analyst – 8%.

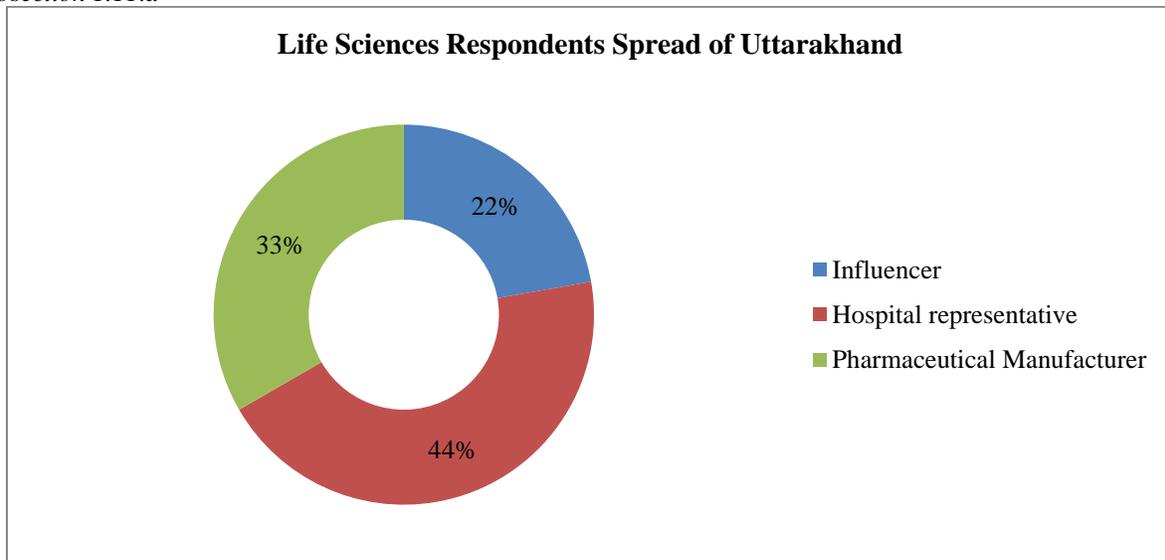
Subsection 1.10.d

Job Roles Needed	E - Commerce, Owner	College Professor	SIIDCUL	Technology Entrepreneur	Manager - Manufacturing
Artificial Intelligence				25.00%	
Business Analyst		20.00%			
Cloud Computing					25.00%
Computer Integrated Manufacturing			11.11%		
CRM Domestic Non-Voice	20.00%		11.11%		
CRM Domestic Voice	20.00%		11.11%		
Data Entry Operator			11.11%		
Data Mining				25.00%	
Deep Learning				25.00%	
Desktop Publisher	20.00%	20.00%	11.11%		
Domestic Data entry Operator	20.00%	20.00%	11.11%		
Mobile Application Development					25.00%
Natural Language Processing				25.00%	
Networking Professionals					25.00%
Operating Computer Numeral Control Machines			11.11%		

Software Engineer		20.00%	
System Architects			25.00%
Tally Professional			11.11%
Web Developer	20.00%	20.00%	11.11%

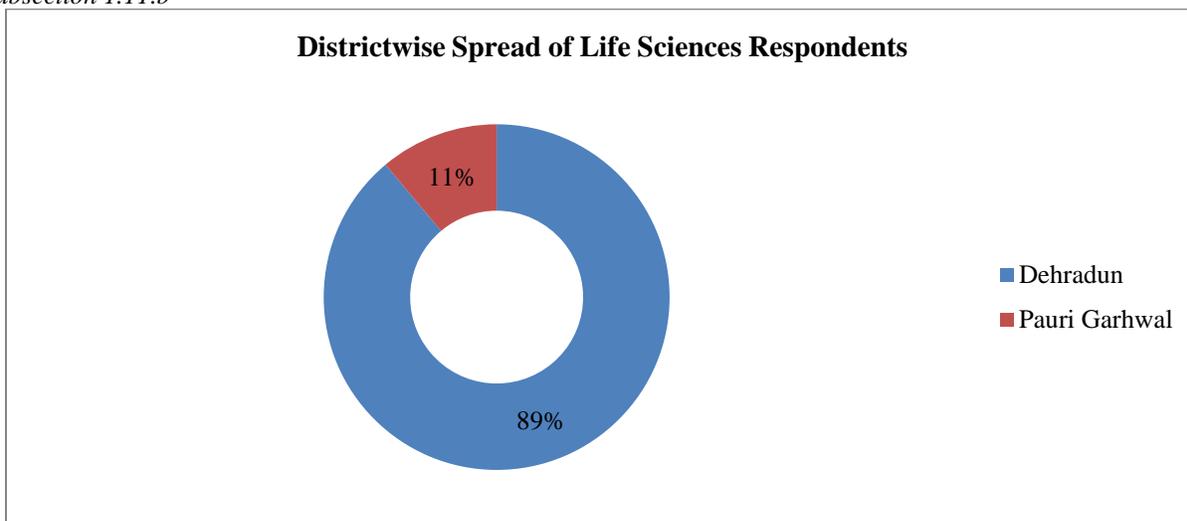
## Section 1.11 Life Sciences Sector Skill Council

### Subsection 1.11.a



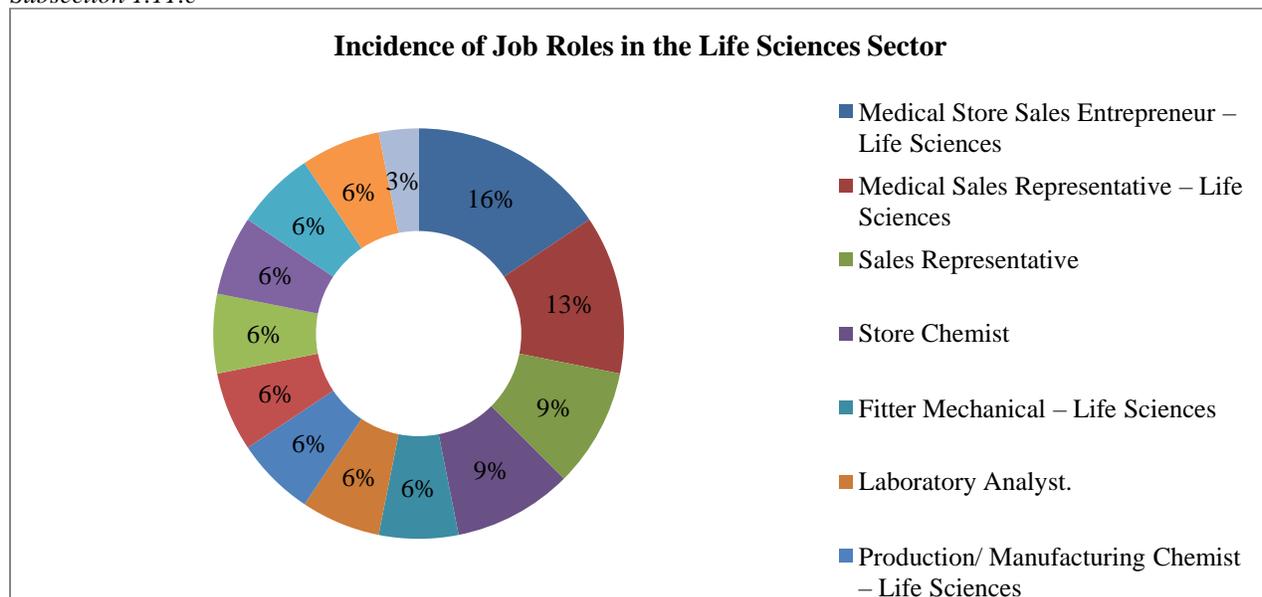
Life Sciences Sector Skills is primarily driven by Hospitals and Pharmaceutical Companies. The Study on Life Sciences Sector skills is based on 44% of respondents from The Hospital Sector and 33% from the Pharmaceuticals Sector.

### Subsection 1.11.b



The Life Sciences Sector is mainly spread across the districts in the plains like Dehradun, Haridwar and Nainital. The Pharma Sector has a large Concentration in Selaqui in the Dehradun Districts. Hence of the total respondents 89% are from Selaqui, Dehradun. The rest are from Pauri Garhwal region so that we can establish the trends in the mountainous regions of the state as well.

*Subsection 1.11.c*



The Life Sciences job Roles in the pharmaceuticals manufacturing domain is dominated by chemists of various specializations. However, the demand for sales professionals in the sector was highest among the respondents we spoke to in the retail domain of pharmaceuticals.

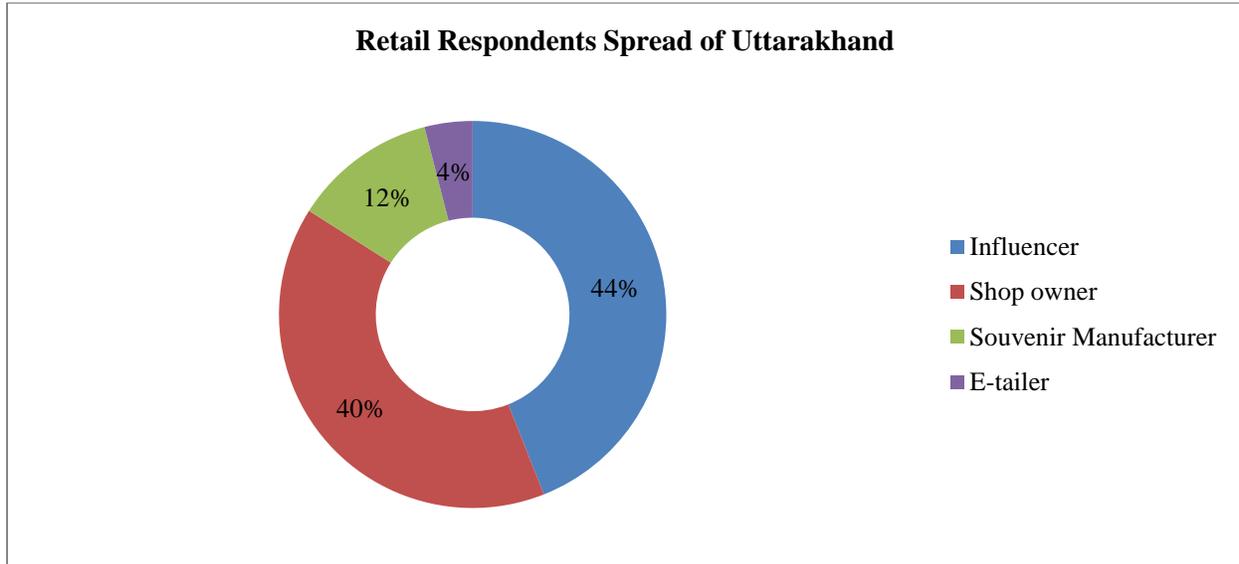
*Subsection 1.11.d*

Job Roles Needed	Hospital representative	Influencer	Pharmaceutical Manufacturer
Chemist	10%		
Fitter Mechanical – Life Sciences			12%
Laboratory Analyst.		20%	6%
Medical Sales Representative – Life Sciences	20%		12%
Medical Store Sales Entrepreneur – Life Sciences	30%		12%
Production/ Manufacturing Chemist – Life Sciences			12%
Production/Machine Operator – Life Sciences			12%
Production Manufacturing Biologist			12%
Project Manager		20%	6%
Quality Manager		20%	6%

Research & Development Manager		20%	6%
Sales Representative	10%	20%	6%
Store Chemist	30%		

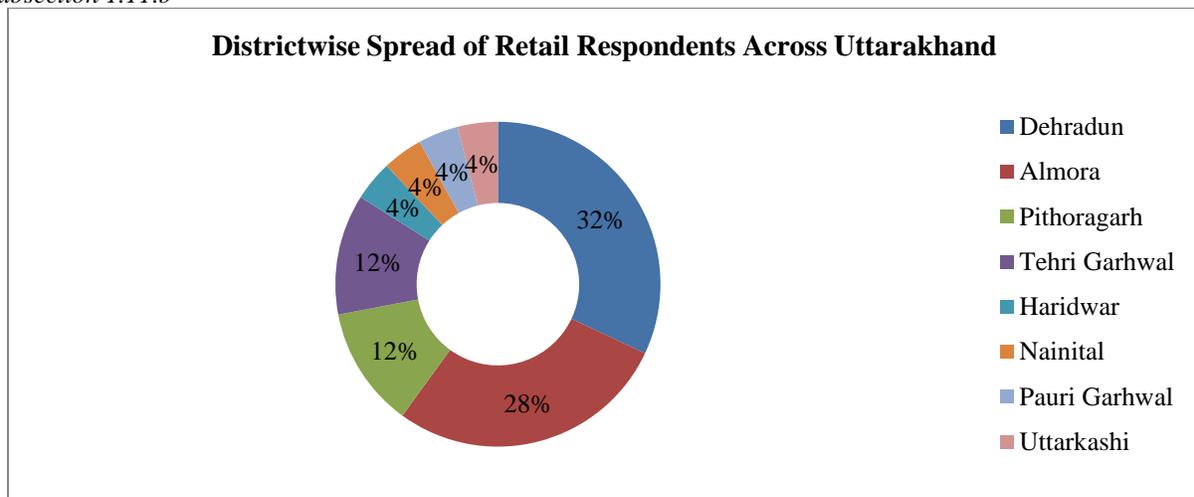
## Section 1.12 Retail Sector Skills

### Subsection 1.12.a



The Retail Sector is all pervasive across Uttarakhand. However, new trends are emerging like Large Format Stores, Online Retail, Influencers of Retail trends like bloggers, etc. Despite these new trends the traditional kirana stores still hold the center stage in the retail story of the store. As for the current study, 40% of the respondents were retail store owners, 12% were Souvenir Manufacturers and 4% were online retailers.

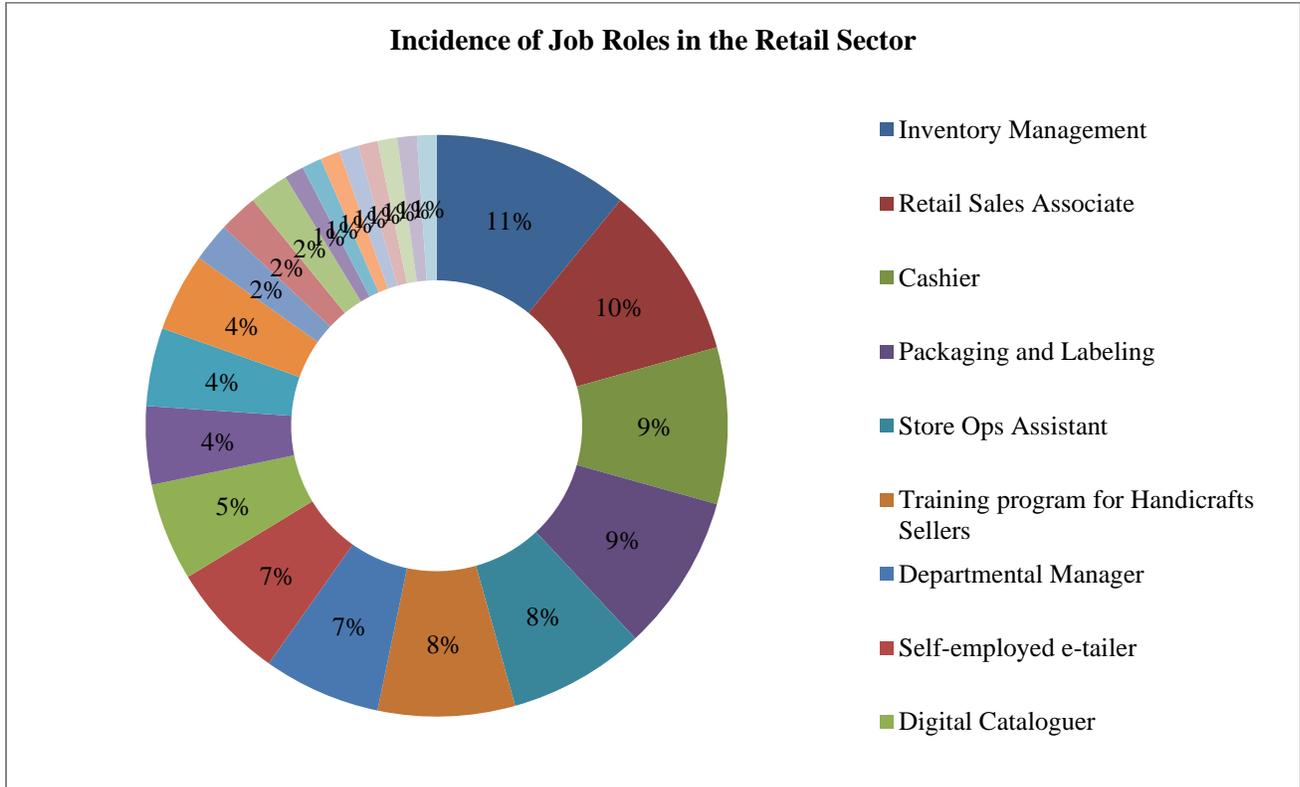
### Subsection 1.11.b



Since Dehradun is one of the fastest urbanizing city in the State we choose 32% of our respondents from here. Further, Almora is also one of the largest trading centers in the hills, hence, 28% of

our respondents were from Almora City. Further, 12% each of our respondents were from Tehri Garhwal and Pithoragarh to understand the retail sector trends emerging in the State.

*Subsection 1.12.c*



Incidence of Job Roles in the Retail Sector is skewed more towards inventory management. This has occurred owing to improvement in logistics. Inventory Management is not only required by large Format Stores & E-Retailers but also by traditional Kirana Stores. Further, Retail Sales Associate is demand. Self-Employed Retailer still maintains the best potential for retail job roles.

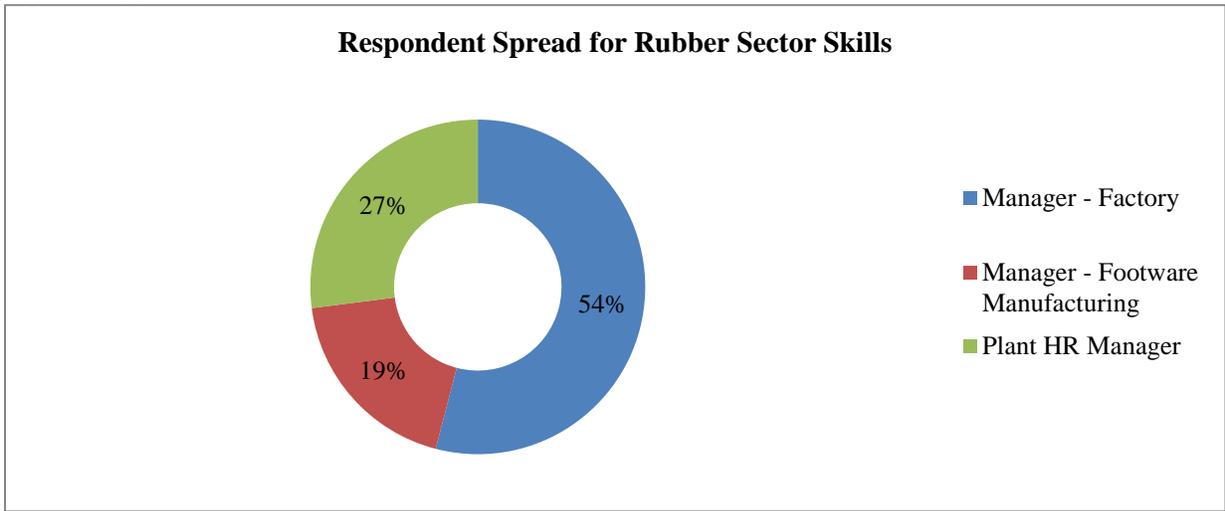
Job Roles Needed	E-tailer	Influencer	Shop Owner	Souvenir Manufacturer	Store Owner	Souvenir Manufacturer
Business Builder/Retailer			4%		3%	
Cashier	17%	5%	12%	17%	7%	
Departmental Manager		11%	12%			14%
Digital Cataloguer		5%	4%		7%	14%
Individual Sales Professional			4%			
Individual Sales Professional/ Self-employed Retailer			8%	33%		
Inventory Management	17%	11%	8%		14%	14%
Inventory Management - Large Format/Multi-Brand Stores		5%	4%			
Inventory Management - Self Employed			4%			
Merchandise Photographer		5%	4%		3%	14%
Packaging and Labeling		16%	8%	17%	7%	
Retail Sales Associate	17%					
Retail Sales Associate		16%	4%		14%	14%
Retail Store Manager		5%	8%		3%	
Retail Team Leader	17%					
Scheduler - Cab Services					3%	
Self-employed e-tailer	17%		4%		14%	
Soft Skills Training	17%			17%		
Store Ops Assistant		16%	8%		7%	
Team Leader - Telesales					3%	
Telecaller - Retail Sales					3%	
Training program for Handicrafts Sellers		5%	4%	17%	10%	14%

Visual Merchandiser		14%
---------------------	--	-----

*Subsection 1.12.d*

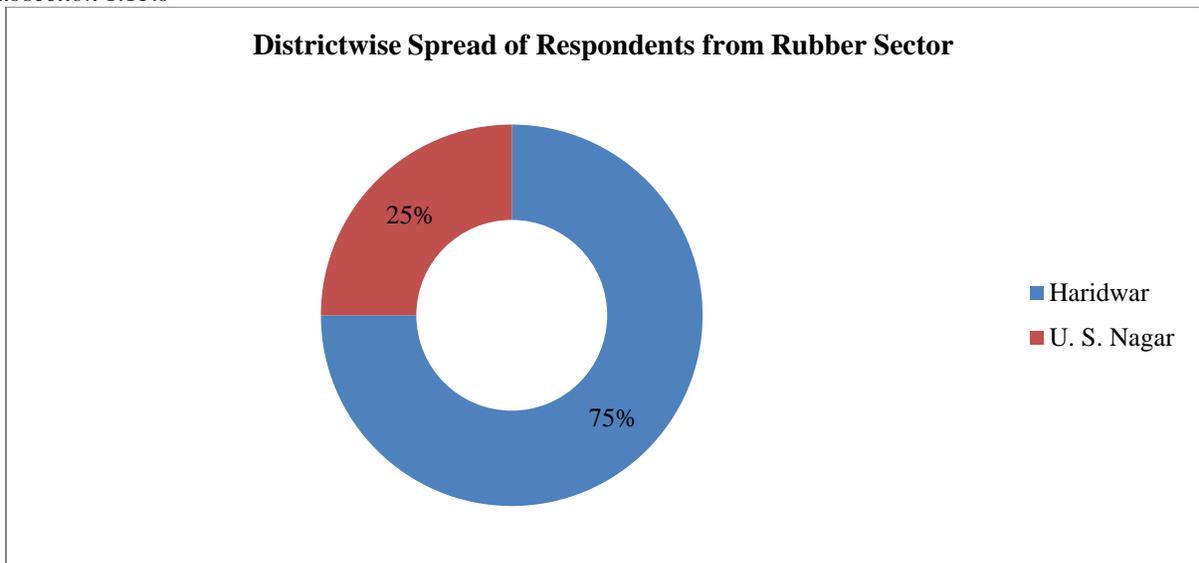
# Section 1.13 Rubber Sector Skills

## Subsection 1.13.a



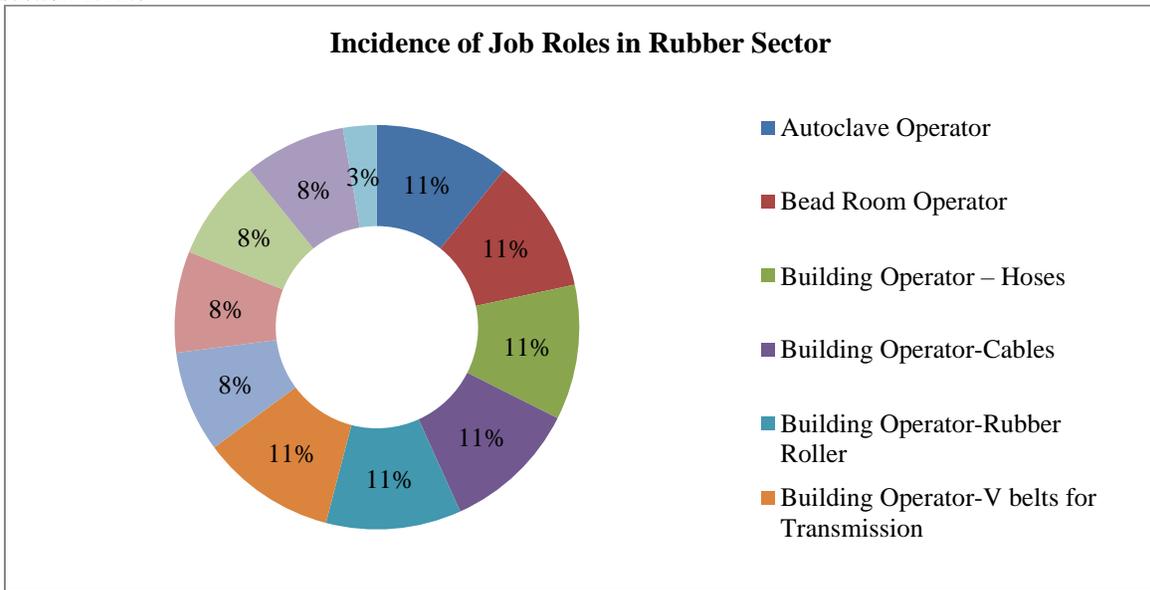
The Rubber sector is one of the most promising sectors for the state owing to the large automotive industry base. The Rubber sector has other emerging uses like those of foot-ware that is coming up in the state. For the purposes of understanding the emerging trends our respondents’ profiles has been Manager – Factory – 54%, Manager - Footwear manufacturing – 19% and Plant HR Manager – 27%.

## Subsection 1.13.b



The District wise Spread of the Sector is limited to two districts, namely, Haridwar and Udham Singh Nagar. For the Purposes of our study, the respondent set drawn is from Haridwar – 75% and Udham Singh Nagar – 25%.

Subsection 1.13.c



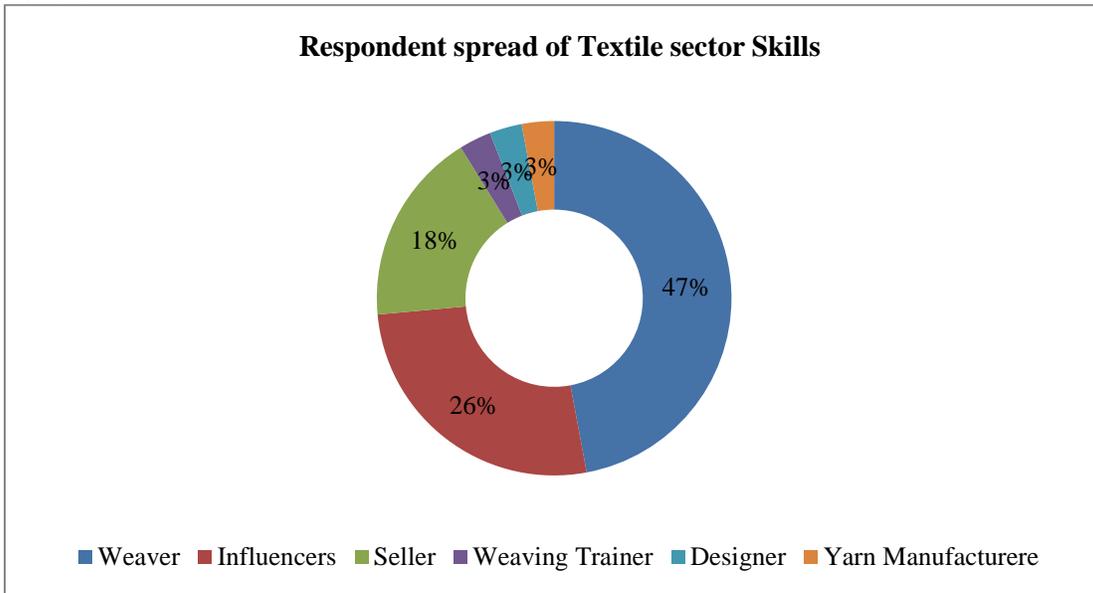
The Incidence of Job Roles for the Rubber Sector is skewed towards the Manufacturing sector. Our Respondents identified the Major job roles as Autoclave Operator – 11%, Bead Room Operator – 11%, Building Operator – Hoses – 11%, Building Operator Cables – 11%, Building Operator – Rubber Roller – 11% and Building Operator – V Belts for Transmission – 11%.

Subsection 1.13.d

Job Roles Needed	Manager - Factory	Manager – Foot-ware Manufacturing	Plant HR Manager
Assembling & curing Operator – Footwear & Sports Good		14%	
Autoclave Operator	10%	14%	10%
Bead Room Operator	10%	14%	10%
Building Operator – Hoses	10%	14%	10%
Building Operator-Cables	10%	14%	10%
Building Operator-Rubber Roller	10%	14%	10%
Building Operator-V belts for Transmission	10%	14%	10%
Pneumatic Tyre Molding Operator	10%		10%
Radial Building Operator	10%		10%
Solid Tyre Molding Operator	10%		10%
Tyre Balancing Operator	10%		10%

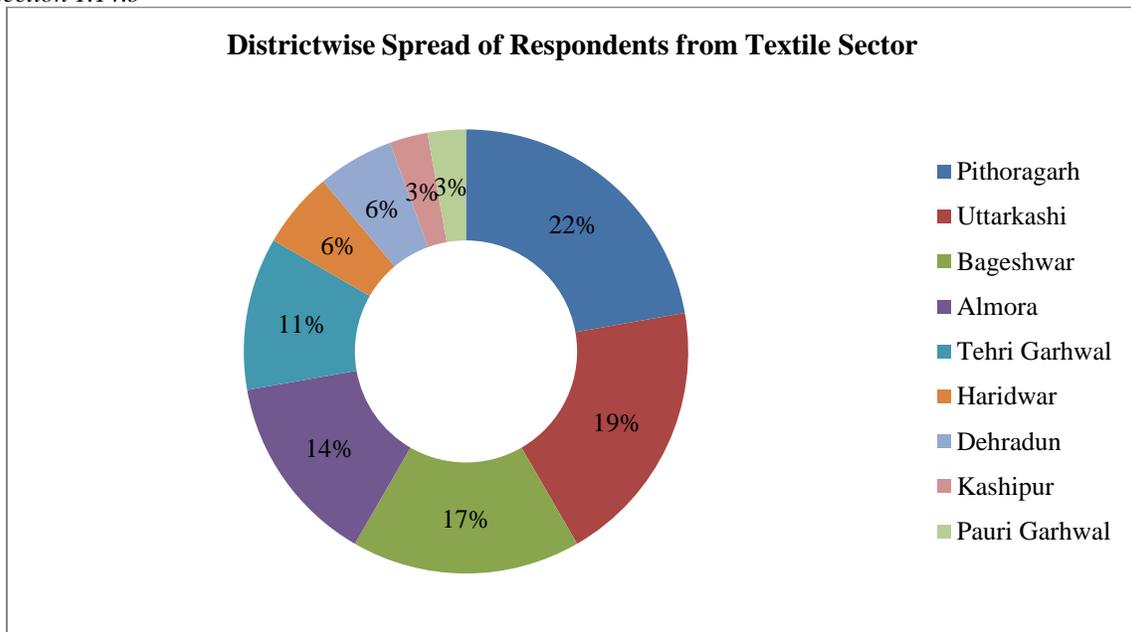
# Section 1.14 Textile Sector Skills

## Subsection 1.14.a



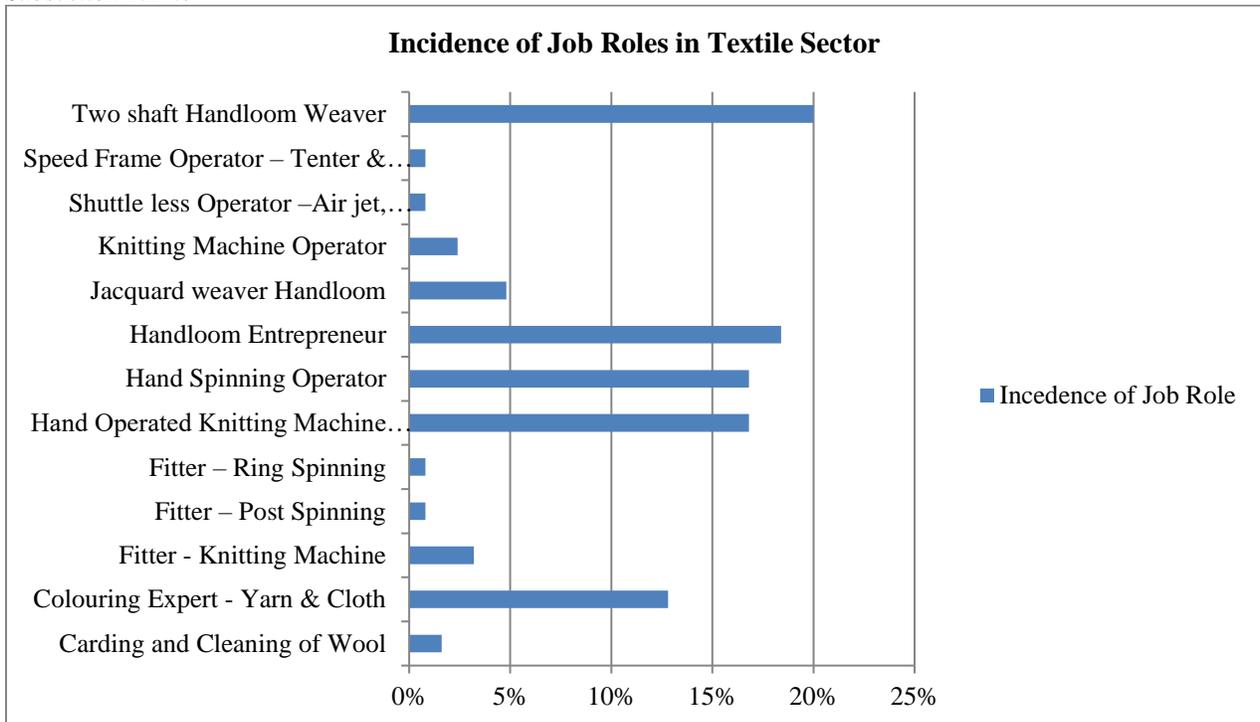
The Major Information sources for the Industry have been Weavers – 47%, Various Govt. Offices and Experts – 26% and the Sellers – 18%. These respondents have shared information in semi-structured interviews steered by a Discussion guide.

## Subsection 1.14.b



The Textile Respondents have been interviewed was very widely spread across Kumaon & Garhwal Regions. Respondents spread for Textiles was done majorly from Pithoragarh – 22%, Uttarkashi -19%, Bageshwar – 17%, Almora – 14% & Tehri – 11%.

Subsection 1.14.c



The Traditional Weavers dominate the Uttarakhand Traditional Landscape. Most of job roles found in Uttarakhand with respect to handloom pertain to Two Shaft Handloom Weavers – 20%, Handloom Entrepreneur – 18%, Hand, Hand – Operated knitting Machine Operator (Circular & Flat) – 17%.

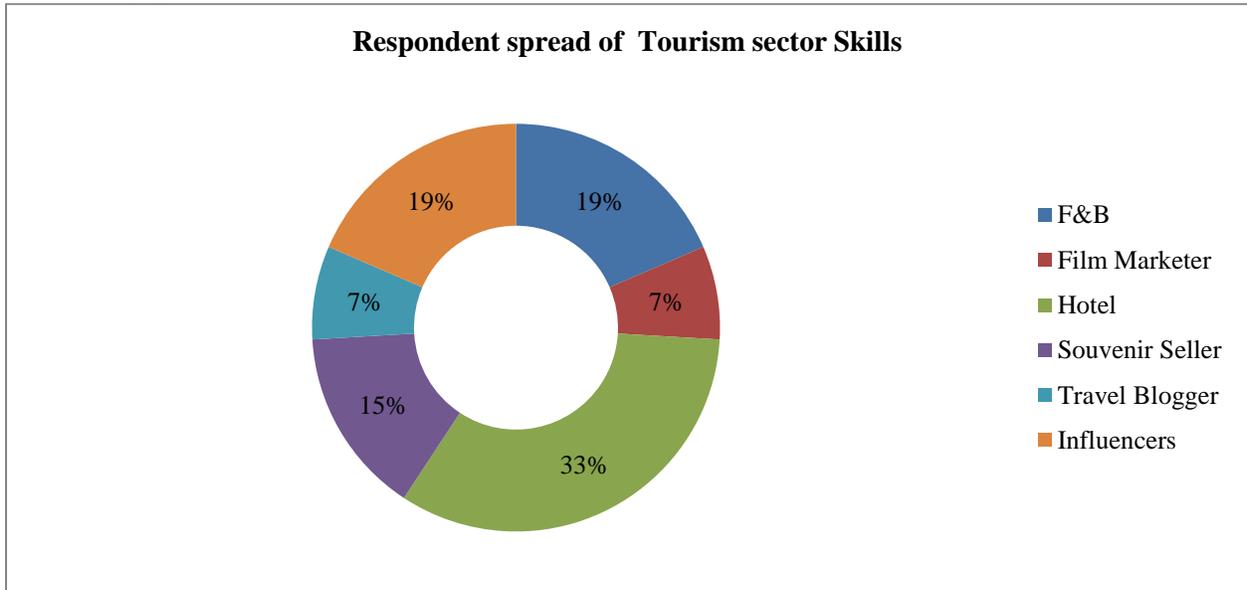
Subsection 1.14.d

Job Roles Needed	Influencer	Seller	Weaver	Yarn Manufacturer	Weaver Trainer	Designer
Carding and Cleaning of Wool		11%				
Colouring Expert - Yarn & Cloth		11%	15%		20%	
Fitter - Knitting Machine	14%		2%	20%		
Fitter – Post Spinning				20%		
Fitter – Ring Spinning				20%		
Hand Operated Knitting Machine Operator (Circular & Flat)		17%	19%		20%	25%
Hand Spinning Operator		22%	17%		20%	25%
Handloom Entrepreneur	29%	6%	21%		20%	25%
Jacquard weaver Handloom	14%	17%	2%			
Knitting Machine Operator	14%		2%			
Shuttle less Operator –Air jet, Projectile, Rapier				20%		
Speed Frame Operator – Tenter & Doffer				20%		
Two shaft Handloom Weaver	29%	17%	21%		20%	25%

Since the Handloom Industry is more labour intensive, the incidence of Job roles was higher in that domain. The incidence of job does not comment on the wages earned by the weavers, it only indicates the jobs identified by the sample selected. In our case, the Two Shaft Handloom Weavers – 20%, Handloom Entrepreneur – 18%, Hand, Hand – Operated knitting Machine Operator (Circular & Flat) – 17%.

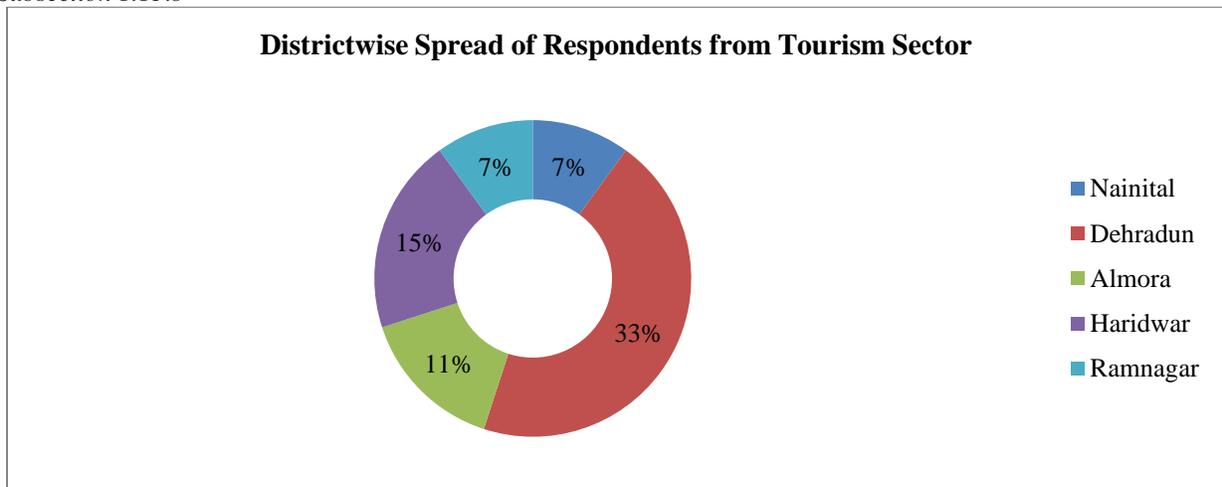
# Section 1.15 Tourism Sector Skills

## Subsection 1.15.a



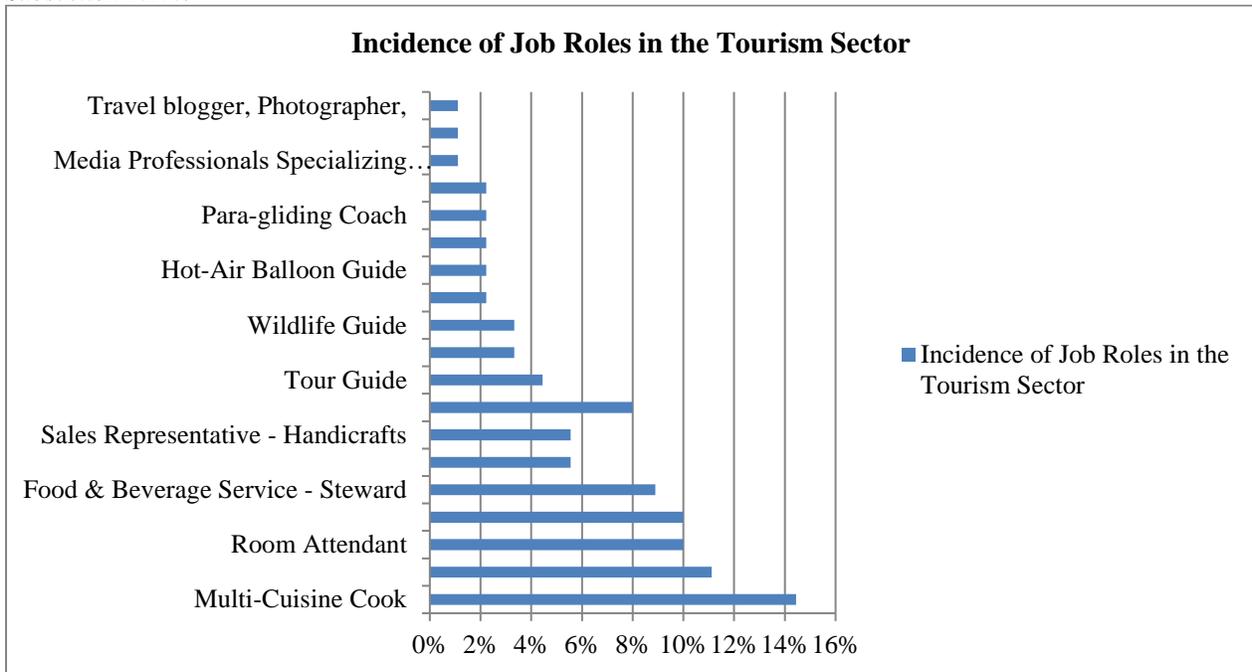
The Tourism Sector is dominated by Standalone enterprises Hotels – 33%, F&B Professional – 19%, & Souvenir Seller – 15%. A large part of the tourism sector are logistics providers like cabs, buses, etc., which are covered under the Automotive Sector.

## Subsection 1.15.b



Uttarakhand has a very strong tourism sector which is spread across the State. For the Purposes of our study we have done the interviews to understand the stakeholders’ priorities across Garhwal and Kumaon. The center spread of respondents comprises of Dehradun – 33%, Haridwar – 15% Nainital – 7%, Ramnagar - 7%.

Subsection 1.15.c



As discussed earlier, most of the jobs in the tourism sector are from Standalone Accommodation, Lodging and Fooding activities. These include Multi-Cuisine Cook – 14%, Housekeeping Attendant (Manual Cleaning) – 11%, Room Attendant – 10%. There are quite a few activities related job roles that have emerged which include Mountaineering Guide – 6%, Trek Guide – 10% and River Rafting – 6%.

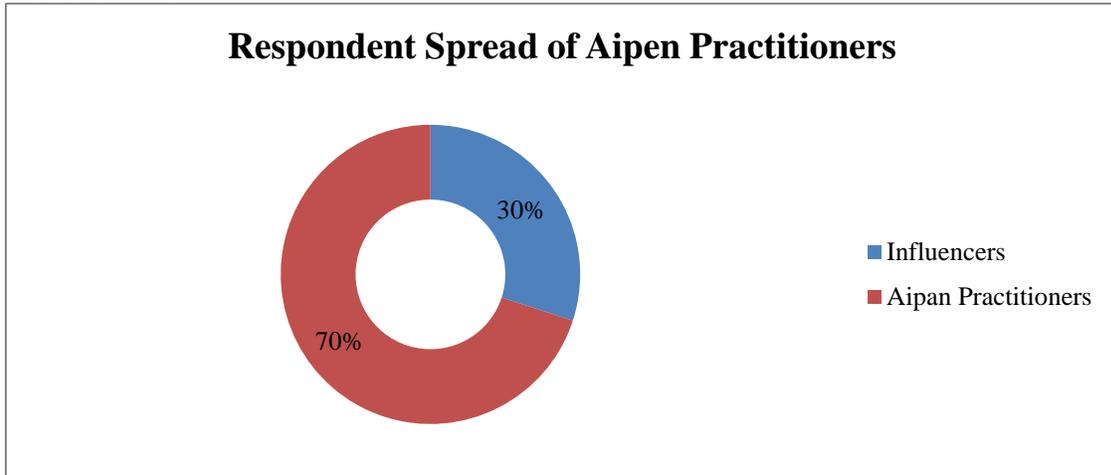
Subsection 1.15.d

Job Roles Needed	F&B	Film Marketer	Hotel	Influencer	Souvenir Seller	Travel Blogger
Food & Beverage Service - Steward			14%			11%
Heli - Ski Guide		11%				
Hot-Air Balloon Guide		11%				
Housekeeping Attendant (Manual Cleaning)			18%			11%
Manager - Homestays			4%			
Media Professionals Specializing in Travel Discipline						11%
Methai Making					10%	
Mountaineering Guide		11%	6%	25%		
Multi-Cuisine Cook	67%		14%	25%	30%	11%
Para-gliding Coach		11%				
Rafting Instructor		11%	4%			
River Rafting Guide		11%	4%			
Room Attendant			18%			
Sales Representative - Handicrafts			2%	25%	40%	
Street Food Vendor - Standalone	33%				20%	
Tour Guide		11%				22%
Travel blogger, Photographer,						11%
Trek Coach		11%	10%			22%
Water Sport Vehicle Operator		11%				
Wildlife Guide			6%	25%		

# Chapter 2: Traditional Skills

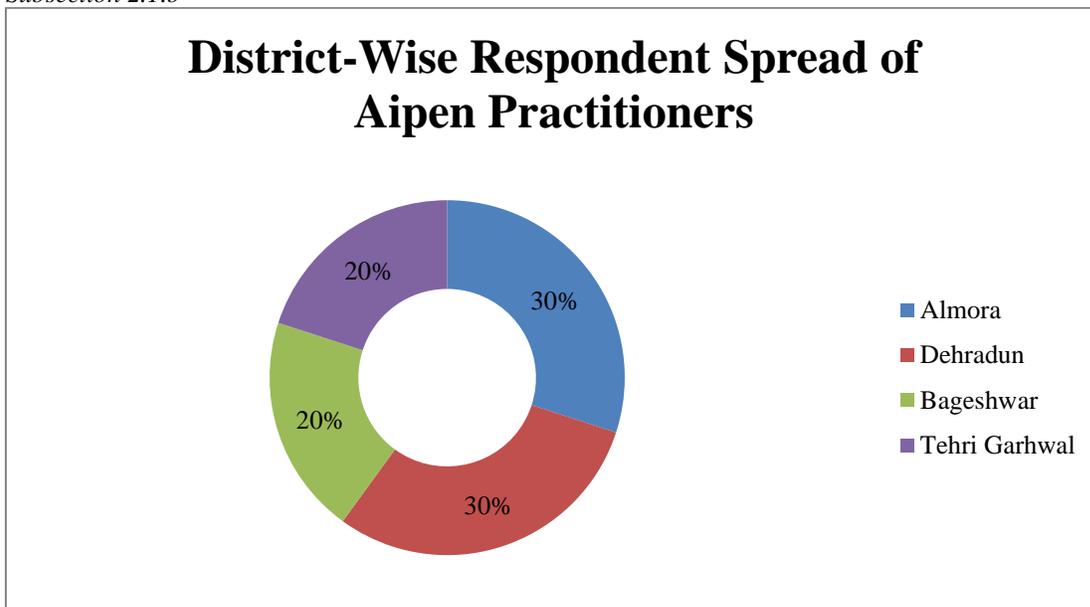
## Section 2.1 Aipen

### Subsection 2.1.a



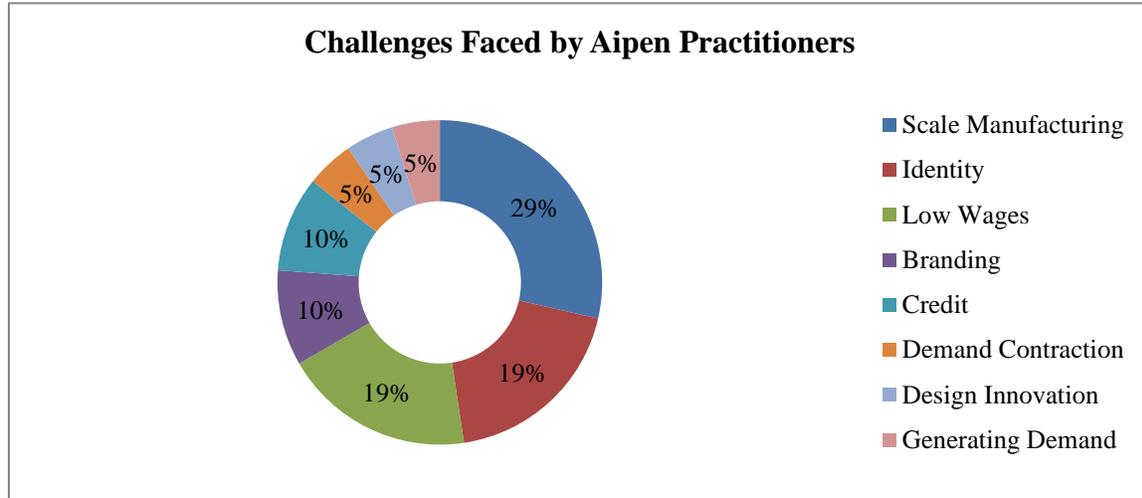
Aipen is very pervasive Art Form of the Kumaon region of Uttarakhand. Almost all women folk in the Kumaon region practice it as a hobby. However, some women have taken up aipen as a profession. We have built the outline of our study based on the 75% of the interviews done with the women who have taken up aipen professionally. The remaining 25% of the interviews are from the govt. and distinguished personalities working in the field.

### Subsection 2.1.b



The Respondent spread for the study of Aipen Practitioners has been drawn from Almora – 30%, Dehradun – 30%, Bageshwar – 20% and Tehri Garhwal – 20%. These respondents have varied profiles that have enabled us to build our frames of reference to understand the growth trajectory of aipen as a livelihood option.

*Subsection 2.1.c*



Aipen Practitioners have identified an array of challenges but the one that have been repeated time and again are Scale manufacturing – 29%, Identity – 19%, Low Wages – 19% and Branding – 19%. There are however, some important reasons that have found mention include Credit Support, Demand Contraction, lack if Design Innovation and Generating Demand.

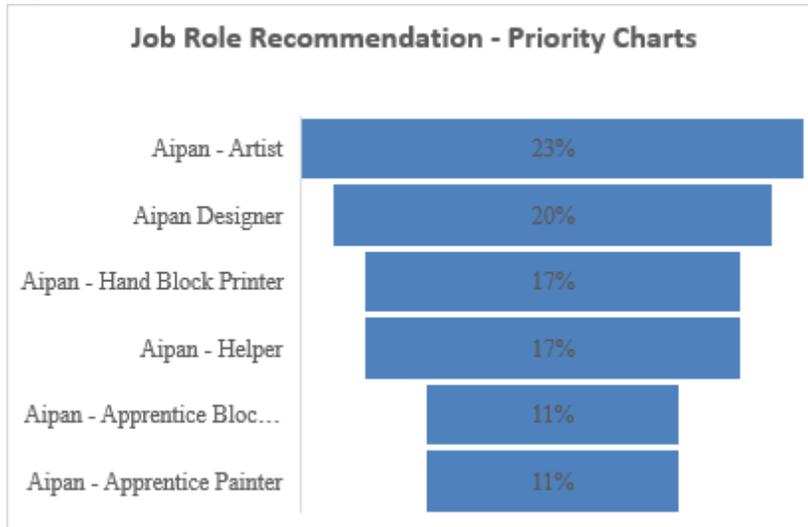
*Subsection 2.1.d*

Challenges & Action taken	Priority
<b>Brand Support</b>	<b>11%</b>
Making Souvenirs	100%
<b>Credit Support</b>	<b>0%</b>
<b>Demand Contraction</b>	<b>6%</b>
It is more of Ritual than Fashion	100%
<b>Design Innovation</b>	<b>0%</b>
<b>Generating Demand</b>	<b>6%</b>
Online Sales	100%
<b>Identity</b>	<b>22%</b>
Kurtas & Kameez	50%
Participated in local fashion shows	50%
<b>Low Wages</b>	<b>22%</b>
Aipen is a Hobby	50%
Giving Piece rates	50%
<b>Scale Manufacturing</b>	<b>33%</b>

Block Printing	33%
Contract Manufacturing	33%
Giving Contracts to women	33%
<b>Grand Total</b>	<b>100%</b>

The Aforesaid table explains various challenges identified by the practitioners. Some challenges have not elicited any response from our respondents hence appear as blanks.

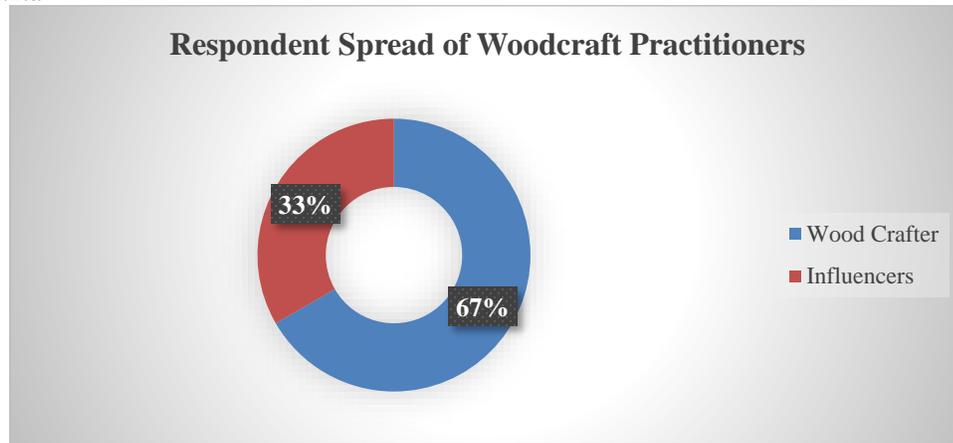
*Subsection 2.1.e*



The Respondents identified the various kinds of job roles that exist in the practice of Aipen. It is important to note here that Aipen is usually practiced alone for a hobby, but, women who run workshops usually have greater division of labour. This is the reason for such a crystalized Job Roles.

## Section 2.2 Wood Craft

### Subsection 2.2.a



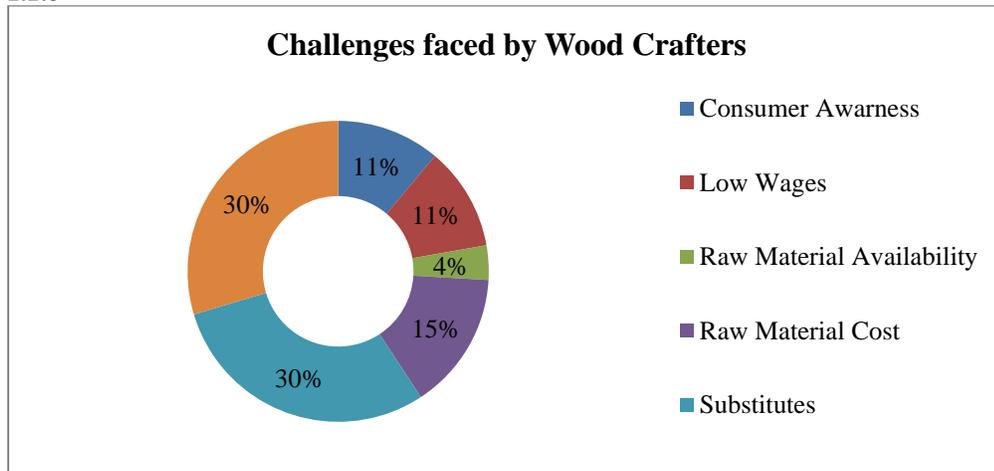
The Woodcraft Practitioners are hard to find in the state as most of the wooden products have started coming from the plains. The Traditional Wood crafters are surviving on the strength of their uniqueness and skill. For the Purposes of this study, we have chosen 67% of our respondents are wood crafters. The influencers include officials of DIC, local administration and retailers.

### Subsection 2.2.b



The District-wise spread of Woodcrafters is pervasive however, they are usually found in large numbers near large trading centers. Our respondent spread is Dehradun – 23%, Uttarakashi – 22% and Nainital – 22%.

Subsection 2.2.c



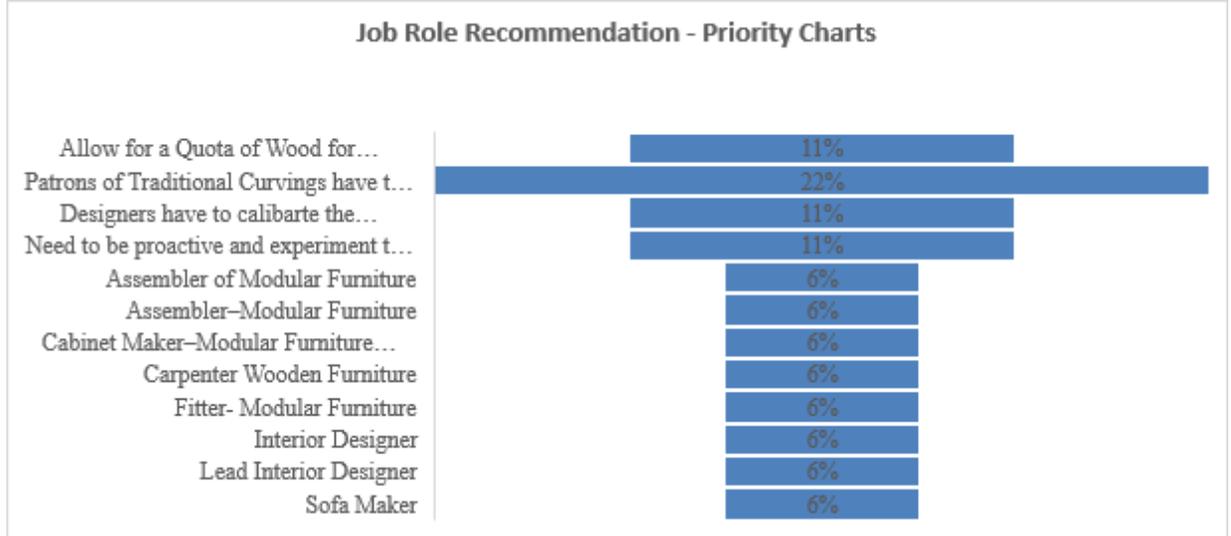
The Wood Crafters have identified the major challenges for their survival namely, Competition from Substitutes – 30%, Unavailability of Skilled manpower – 30% and Raw Material cost -15%. The other major reasons include Consumer Awareness, Low Wages and Availability of Raw materials.

Subsection 2.2.e

Challenges & Action Taken		Priority
<b>Consumer Awareness</b>		<b>11%</b>
Online Blogging		33%
Recognition of the Arts have to be done at credible Platforms		67%
<b>Low Wages</b>		<b>11%</b>
Making Simpler Souvenirs		67%
Selling in Melas and Exhibitions		33%
<b>Raw Material</b>		<b>4%</b>
Buying form Forest Dept.		100%
<b>Raw material Cost</b>		<b>15%</b>
Making Simpler Souvenirs		75%
(blank)		25%
<b>Substitutes</b>		<b>30%</b>
Customization		13%
Making Miniatures		63%
The Substitutes from Saharanpur are cheaper owing to the quality of wood and Level of Craftsmanship. Secondly, Plastic has also replaced most of the Furniture and Fittings made of wood in a Household.		25%
<b>Unavailability of Skilled Manpower</b>		<b>30%</b>
Bringing Labour Form Eastern UP & Bihar		50%
EVOK providing the Necessary Manpower		50%

The Aforesaid table discusses the various challenges and the action taken by the practitioners to survive.

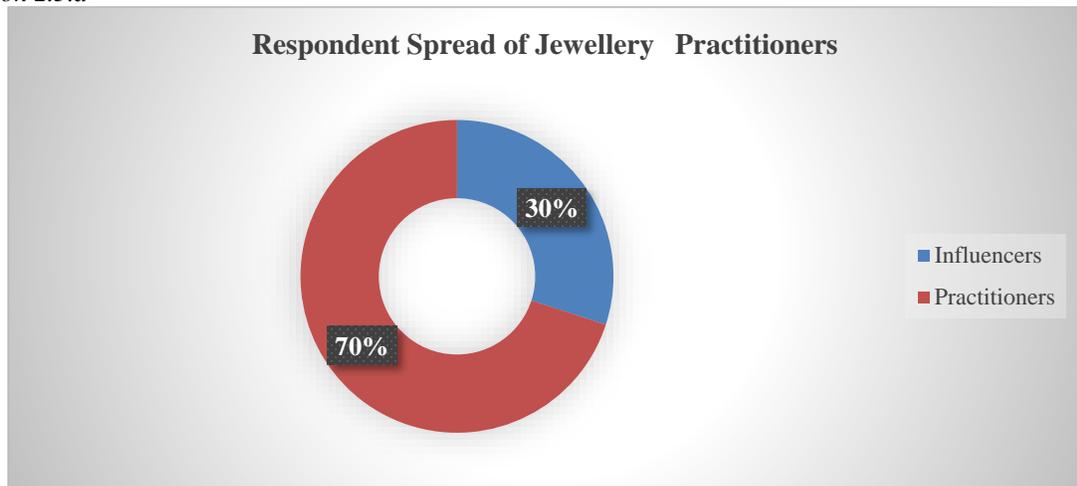
*Subsection 2.2.e*



The Respondents came together to made recommendations on job roles that are currently available in the sector. The aforesaid table shares those suggestions and the weights provided to them by respondents.

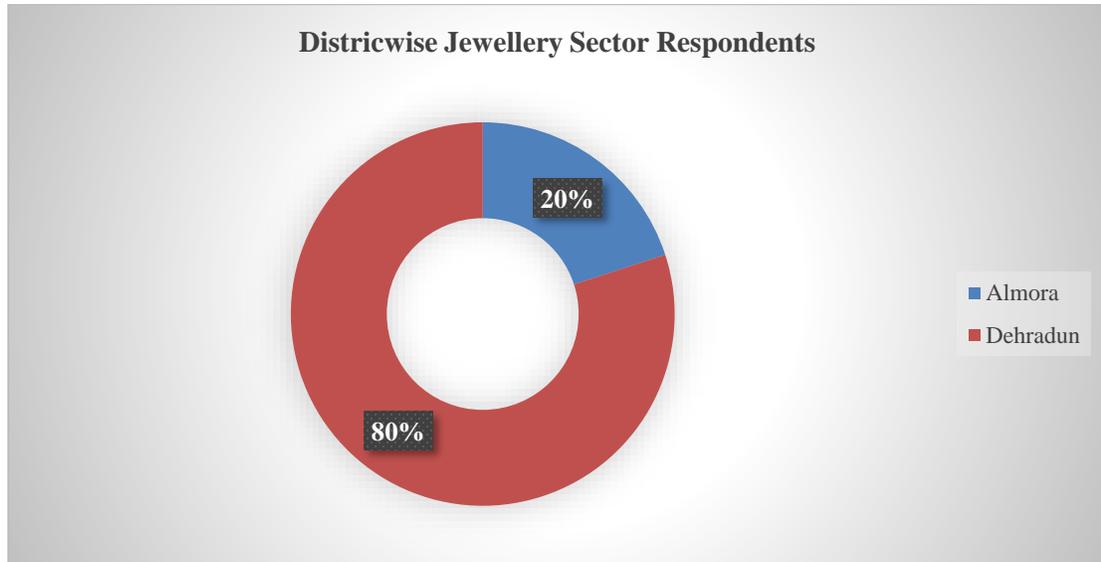
## Section 2.3 Jewellery

### Subsection 2.3.a



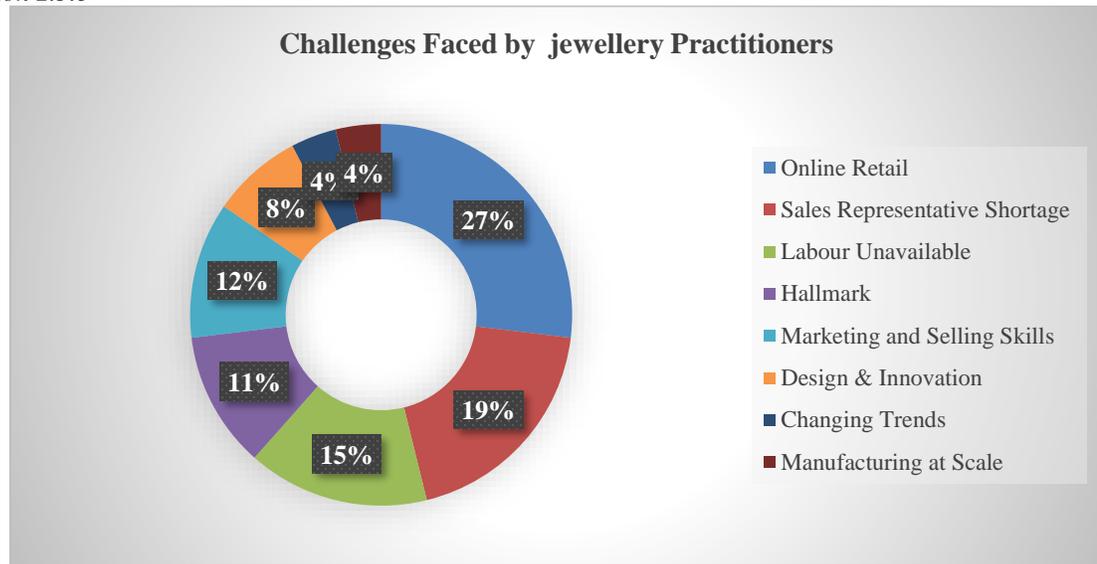
The Jewellery Sector Respondents have been very guarded in their responses towards the information they shared with us. We had to rely a lot on the associations to verify the assertions made by them. The respondent spread for the jewellery sector was 70% practitioners and 30% Associations & Govt. Information.

### Subsection 2.3.b



The Garhwal and Kumaon have distinct jewellery traditions. We have built our data sets based on respondents from Dehradun – 80% and Almora – 20%.

Subsection 2.3.c



The Major challenges coming to the sector are from Hallmark Jewellery sold online. The respondents identified that online retail has provided access to every market. The Challenges spread of the state will include Hallmark Jewellery sales online -27%, Sales Representative Shortage – 19%, Labour Available – 15%.

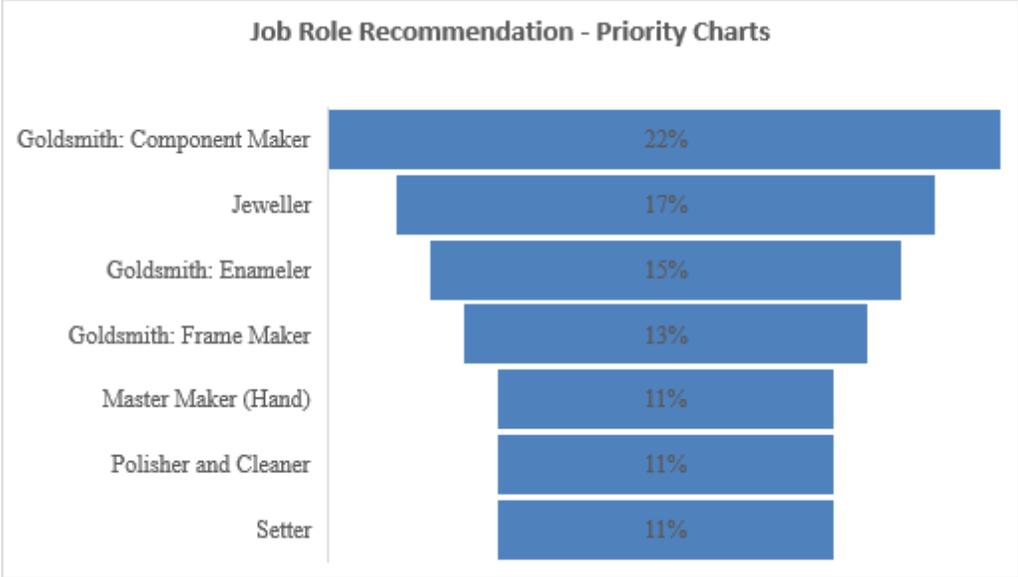
Subsection 2.3.d

Challenges & Action Taken	Priority
<b>Changing Trends</b>	<b>5%</b>
Branded items and Artificial Jewellery	100%
<b>Design &amp; Innovation</b>	<b>9%</b>
Online Sales and Mass production is slowing down design Innovations	100%
<b>Hallmark</b>	<b>14%</b>
24 Carat Gold Hallmark has been initiated	67%
Increased Working Capital Cycle	33%
<b>Labour Unavailable</b>	<b>18%</b>
Bengali Workers	100%
<b>Manufacturing at Scale</b>	<b>5%</b>
Manufacturing Unit in Dehradun and Noida	100%
<b>Marketing and Selling Skills</b>	<b>5%</b>
Fusion of Traditional and Modern Designs	100%
(blank)	0%
<b>Online Retail</b>	<b>27%</b>
AZVA & LoveGold brands are in Online Sales Only.	17%
Branded items are disrupting	33%
Planning on selling Items Online	17%
Selling Designs Similar to Available Online and Television	17%

Will Continue Selling from the Showroom	17%
(blank)	0%
<b>Sales Representative Shortage</b>	<b>18%</b>
Sales Personnel being trained to understand the requirements of customers and selling accordingly.	100%

The table attached aforesaid, indicates the action taken for the challenges enumerated by the respondents.

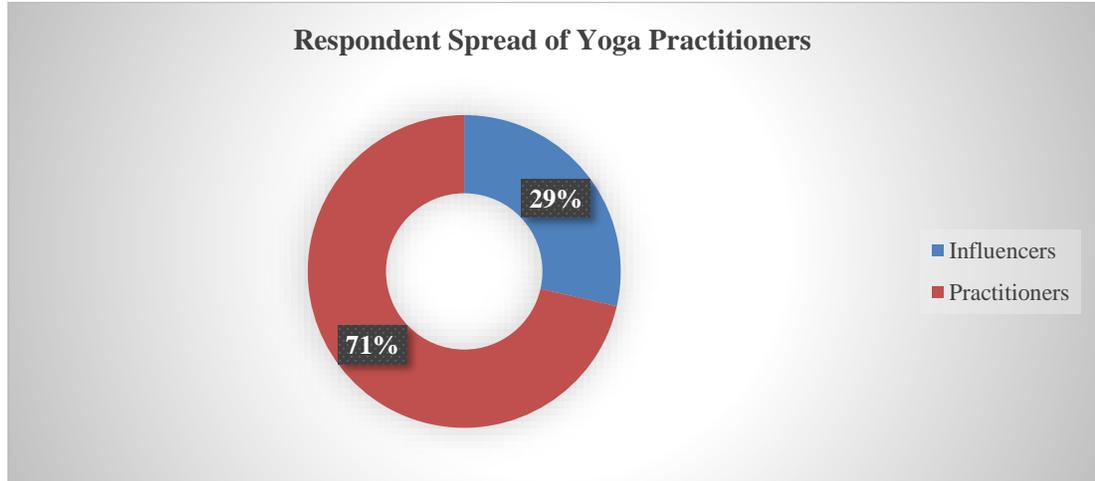
*Subsection 2.3.e*



The Respondents identified the various job roles prevalent in the jewellery sector. The table focuses on the job roles for manufacturing jewellery sector. The other major job roles exist in the Sales Representative – Showroom sales both for multi-brand and single-brand stores.

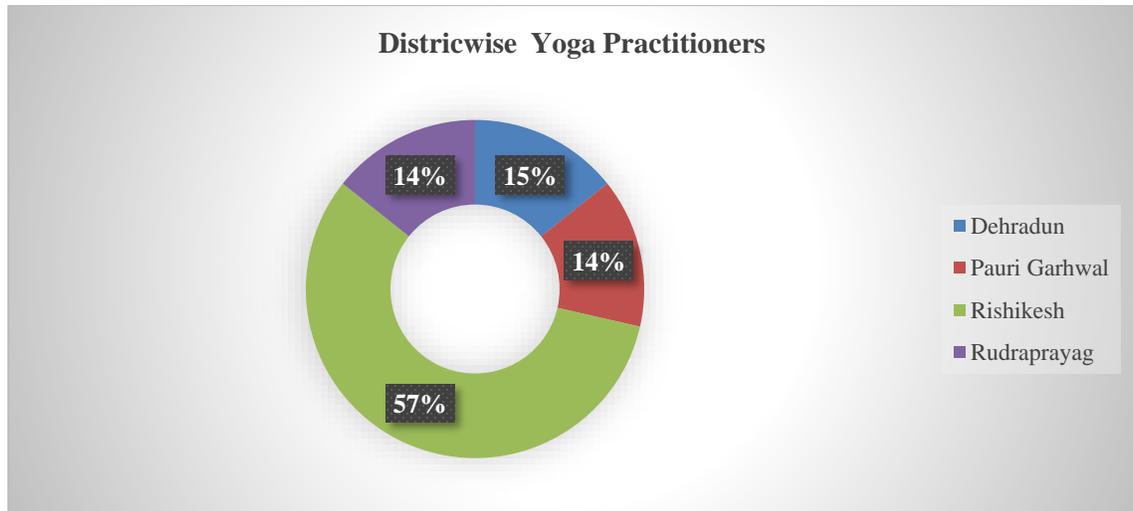
## Section 2.4 Yoga

### Subsection 2.4.a



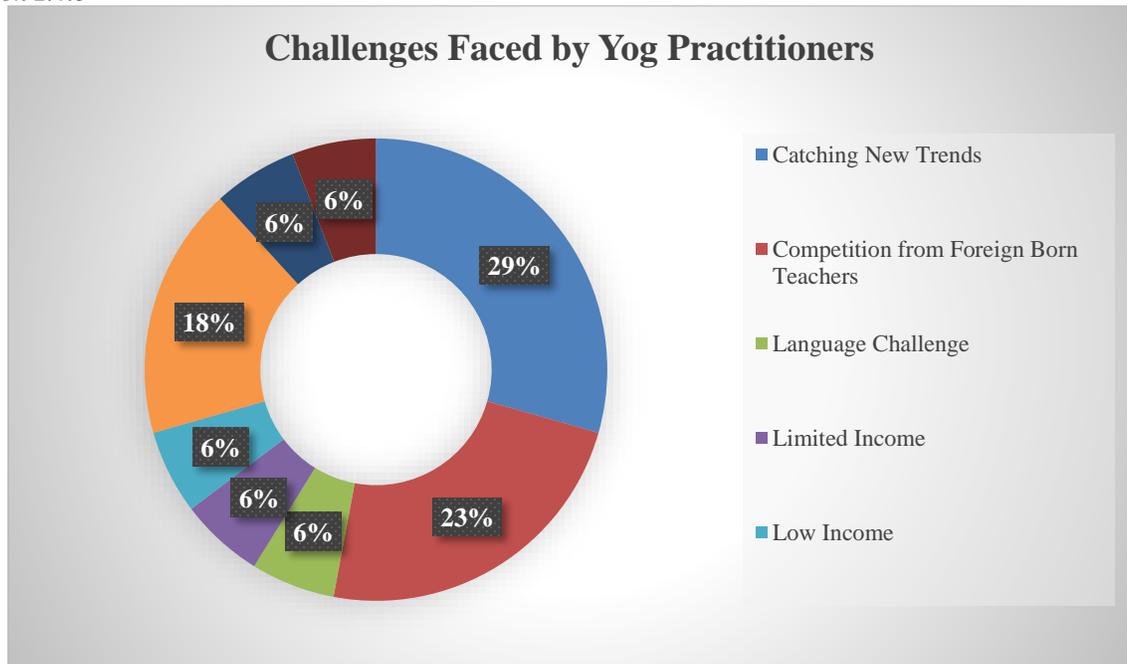
The Yoga Practitioners comprise 71% of the yoga respondent scape for the study. The Influencers - 29% comprise of Practicing Doctors, Hotel Owners and Govt. officials.

### Subsection 2.4.b



Rishikesh is often called the Yoga Capital of the world. Most of respondents, 57% come from Rishikesh. The rest of the districts covered during the study were Dehradun – 15%, Pauri Garhwal – 14% and Rudraprayag – 14%

Subsection 2.4.c



The Challenges faced by the Yoga Practitioners are dominated by the Catching New Trends – 29%, Competition from Foreign Born Teachers – 23% and Online challenge coming from Pre-Booking of Yoga Classes – 18%.

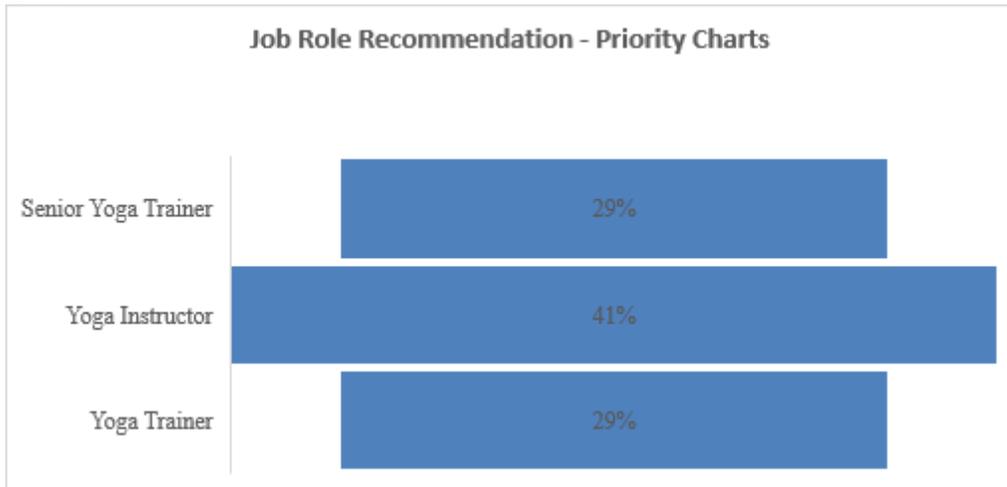
Subsection 2.4.d

Challenges & Action Taken		Priority
<b>Catching New Trends</b>		<b>29%</b>
Keep a very strict alignment to the patanjali Yog Sutras, Hatha Yoga and Meditation Practices.		40%
Lots of People abroad have started taking Interest in Indian Astrology and Ayurveda. This has created a market for Zoran who has studied Yoga, Ayurveda and Astology under a guru.		20%
Power Yoga, Underwater Yoga		40%
<b>Competition from Foreign Born Teachers</b>		<b>24%</b>
Accepting students who are able to understand English and Hindi only.		25%
Bilingual Instruction		50%
Focusing on Indian Community and Corporate MDP Programs.		25%
<b>Language Challenge</b>		<b>6%</b>
Zoran focuses on Russian and East European Travellers as his mother tougue is Russian and they feel comfortable in taking Yoga Lessons in Russian.		100%
<b>Limited Income</b>		<b>6%</b>
The Number of Students is rising but the fees is not rising.		100%
<b>Low Income</b>		<b>6%</b>
Facebook & Other Social Media Sites used for Marketing		100%
<b>Pre-Booking of Yoga Classes</b>		<b>18%</b>

2 Months Waiting is their for joining Classes.	33%
Facebook & Other Social Media Sites used for Marketing	67%
<b>Pricing Yoga with Guest Services</b>	<b>6%</b>
Not Providing round the Year	100%
<b>Yoga Camps are essentially joined by people with Ailments and old Age</b>	<b>6%</b>
Has been Encouraging youth to join Yoga Classes	100%

The Yoga Challenges and the Action taken by the respondents have been summarized above.

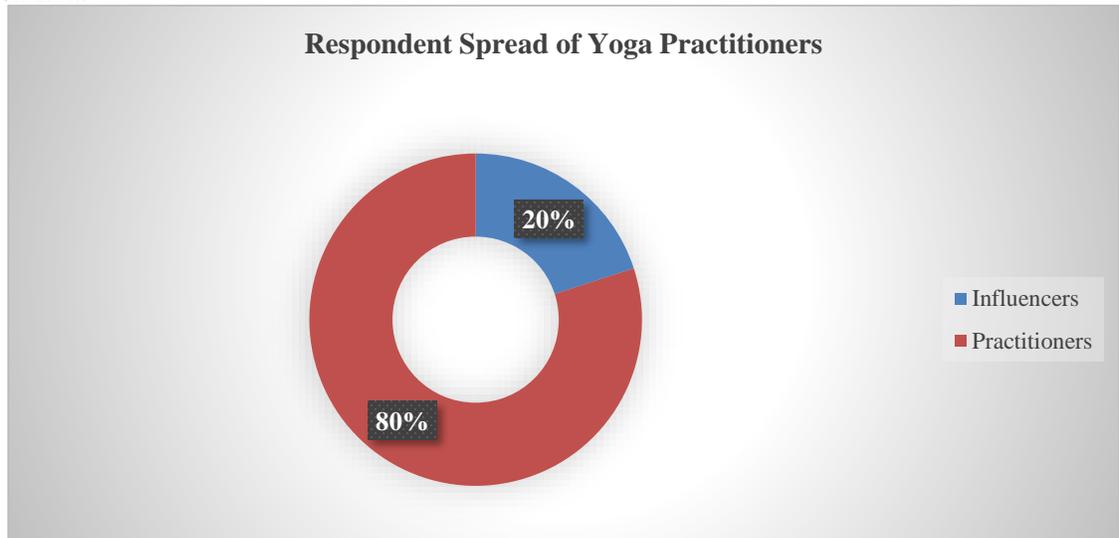
*Subsection 2.4.e*



The Yoga Practitioners have identified three major job roles that stand at various levels of proficiency of their profession.

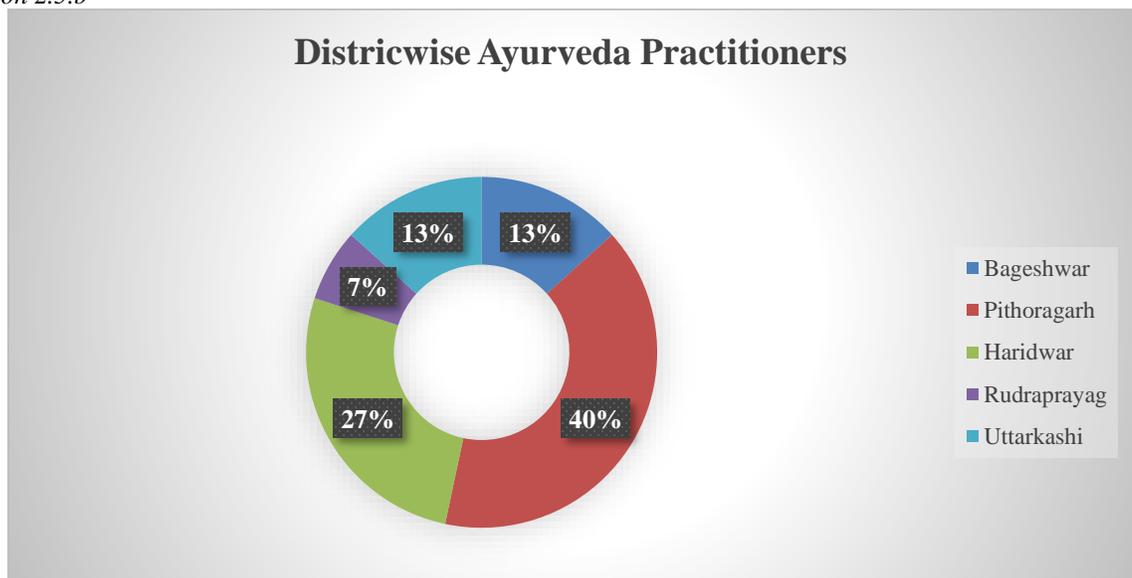
## Section 2.5 Ayurveda

### Subsection 2.5.a



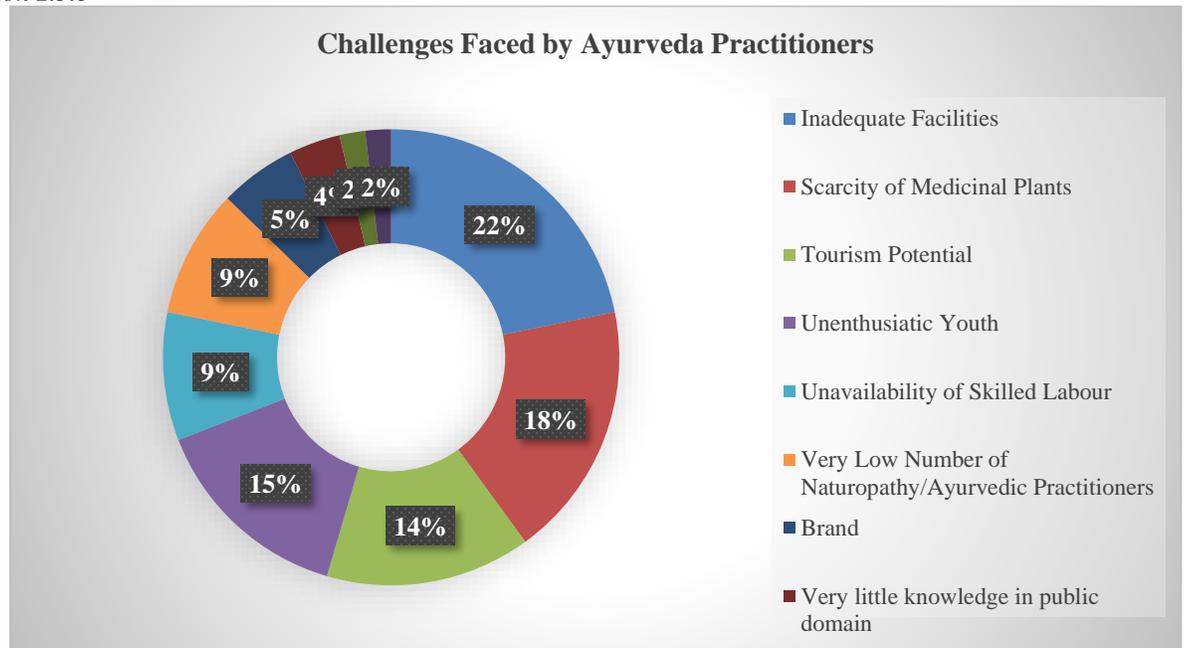
The Ayurveda Practitioners cover 80% of the Respondent Spread of the Study sample. The Influencers including eminent persons from the state and the government.

### Subsection 2.5.b



District-wise ly the Ayurvedic Practitioners are present across the state owing to the government initiatives. However, the Traditional Vaidyas are also very pervasive. For the purposes of the study we covered Pithoragarh – 40%, Haridwar – 27%, Bageshwar -13% and Uttarakashi – 13%.

Subsection 2.5.c



The challenges faced by the Ayurveda Practitioners include Inadequate Facilities – 22%, Scarcity of Medicinal Plants – 18% & Unenthusiastic Youth – 15%.

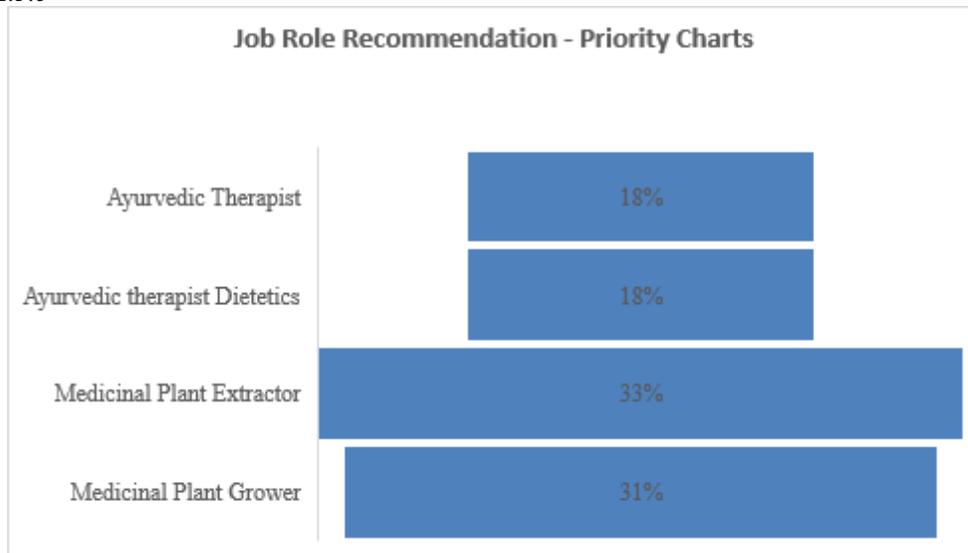
Subsection 2.5.d

Challenges & Action Taken	Priority
<b>Brand</b>	<b>7.50%</b>
Very Few Indigenous Brands like Patanjali & Multani	100.00%
<b>Cultivation Scale</b>	<b>2.50%</b>
Mixed Farming & Co-operative Farming	100.00%
<b>Fakery</b>	<b>2.50%</b>
Working only with established brands	100.00%
<b>Inadequate Facilities</b>	<b>2.50%</b>
Providing only Basic Services	100.00%
(blank)	0.00%
<b>Scarcity of Medicinal Plants</b>	<b>25.00%</b>
Depending upon Local People for Herbs	10.00%
Going to higher Himalayas for gathering plants	90.00%
<b>Tourism Potential</b>	<b>20.00%</b>
Tourism Connect at Melas	100.00%
<b>Unavailability of Skilled Labour</b>	<b>5.00%</b>
Does not employ anyone	50.00%
Working with One Assistant and Local Women	50.00%
(blank)	0.00%
<b>Unenthusiastic Youth</b>	<b>20.00%</b>
Selling only to Middle aged and Older People	100.00%
<b>Very little knowledge in public domain</b>	<b>2.50%</b>

Traveling to Melas as Healer and Dispenser of Ayurvedic Medicines	100.00%
<b>Very Low Number of Naturopathy/Ayurvedic Practitioners</b>	<b>12.50%</b>
Running an Ayurvedic Dispensary	60.00%
Selling to Patanjali	20.00%
Teaching and Dispensing Herbal Extracts	20.00%

The Aforesaid table discussed the action taken by the respondents against the challenges faced.

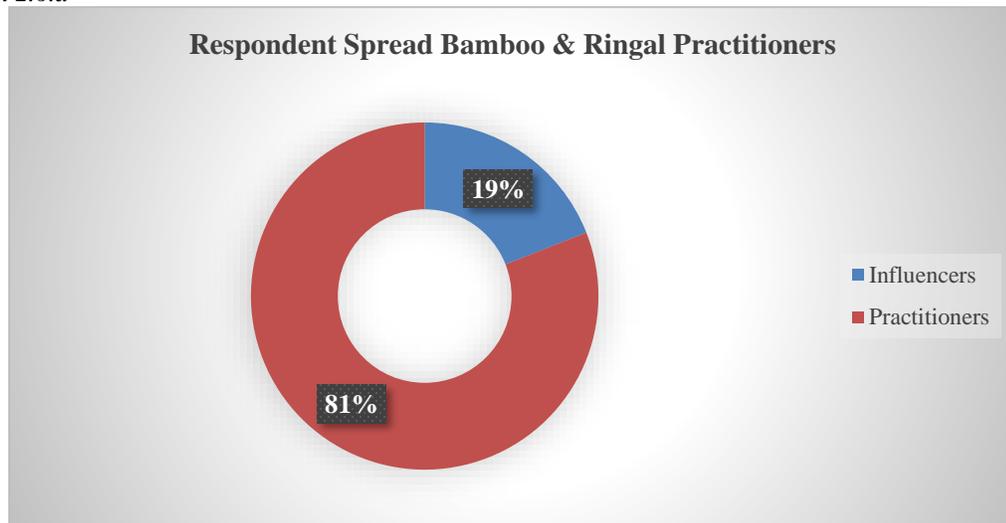
*Subsection 2.5.e*



The Aforementioned job roles have been identified by the Respondents. The job roles are grouped under two groups namely, Ayurvedic Therapist & Dietetics – 32% and Medicinal Plant Grower and Extractor – 64%.

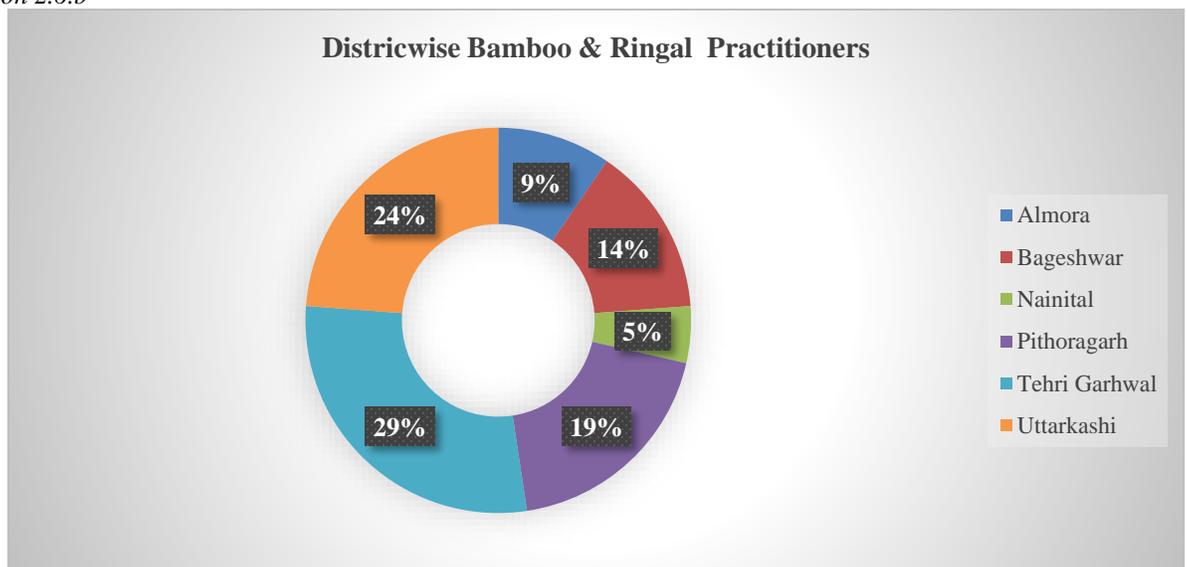
## Section 2.6 Bamboo & Ringal

### Subsection 2.6.a



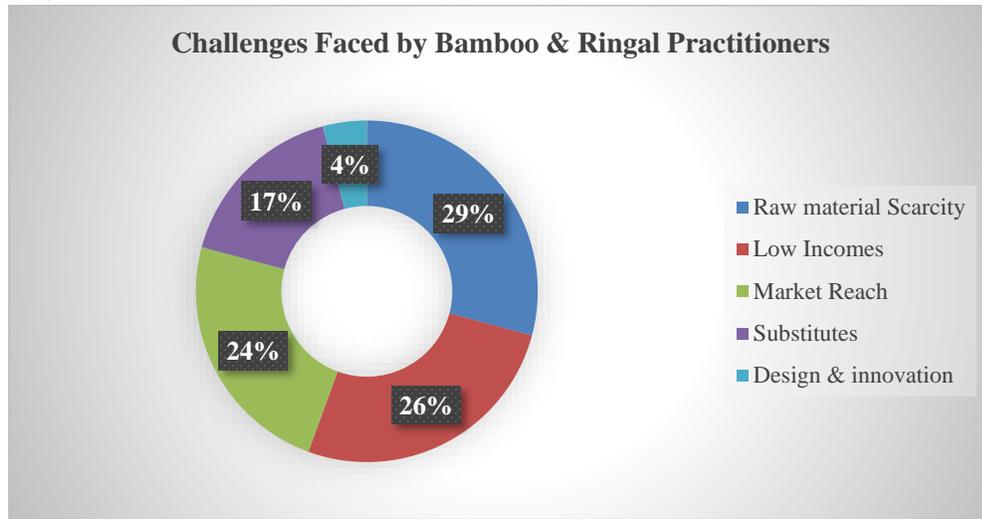
The Bamboo & Ringal products are very ubiquitous. Most of the villages produce these products across the state. For the purposes of our study the sample adopted comprised of 81% Bamboo & Ringal Artisans. The Influencers – 19% include govt. officials and retailers.

### Subsection 2.6.b



Since the products are found all over the state, we drew our sample liberally from both Garhwal and Kumaon. The major draws were Tehri Garhwal – 29%, Uttarkashi – 24% & Pithoragarh – 19%.

Subsection 2.6.c



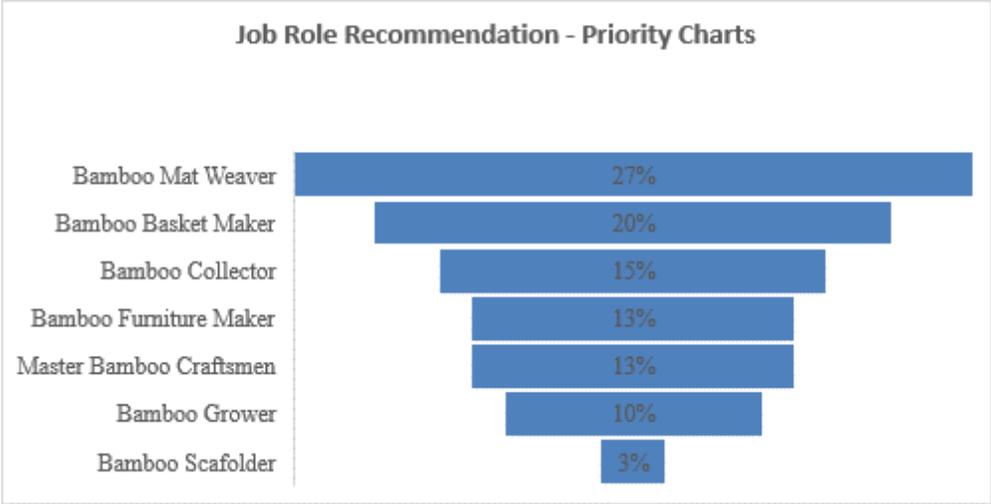
The Challenges faced by Bamboo & Ringal products are Raw Material Scarcity – 26%, Low Incomes – 26%, Market Reach – 24% and Industrial Substitutes – 17%.

Subsection 2.6.d

Challenges & Action Taken	Priority
<b>Design &amp; innovation</b>	<b>3%</b>
Design & Innovations Workshop with DIC	100%
<b>Low Incomes</b>	<b>31%</b>
Bamboo Selling	37%
Design & Innovations Workshop with DIC	5%
Making Furniture out of other woods as well.	16%
Playing Dhol-Damaun	32%
Working as Labour	11%
<b>Market Reach</b>	<b>28%</b>
DIC Handicraft Shop	18%
No Demand	6%
Selling in Village Markets and melas	76%
<b>Raw material Scarcity</b>	<b>34%</b>
Buying from Forest Dept.	14%
Collecting From Forest	67%
Growing Bamboo & Ringal	19%
<b>Substitutes</b>	<b>3%</b>
Making Urban Furnitures & Baskets for Offices	100%

The Aforesaid table gives an action report on the challenges identified by the respondents.

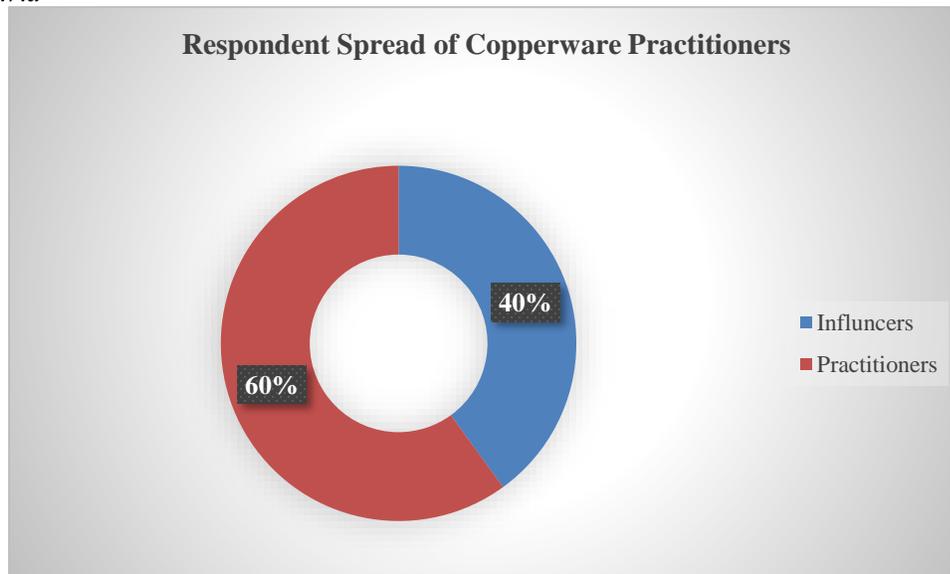
Subsection 2.6.e



The Bamboo & Ringal job roles could be understood by grouping them under two groups, namely, Bamboo Growing & Collection – 25% and Bamboo Usage (Mat Weaver, Basket Maker, Furniture, Craftsmen, Scaffolder) – 75%.

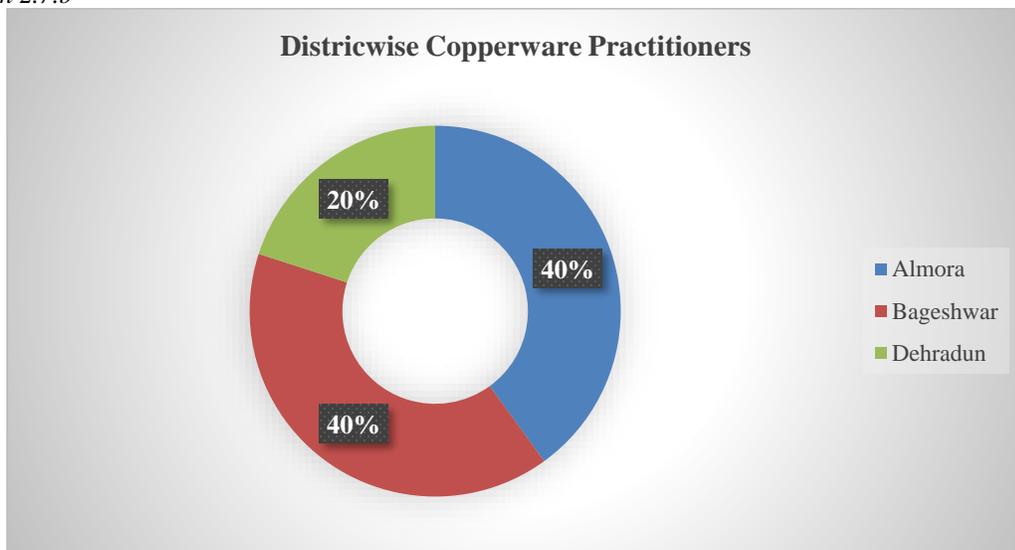
## Section 2.7 Copperware

### Subsection 2.7.a



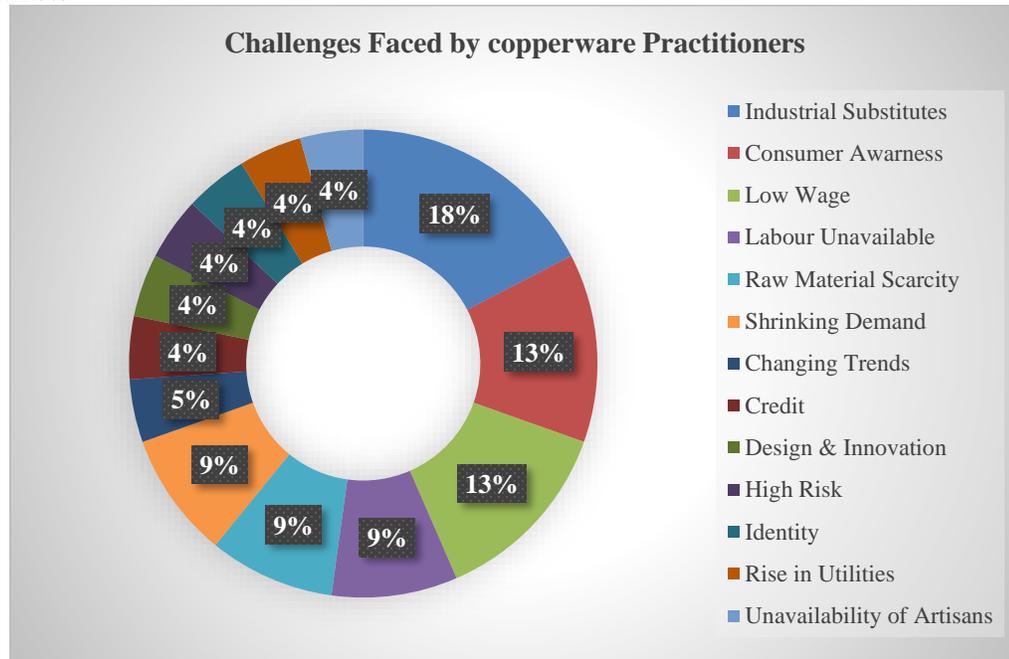
The Respondent Spread of Copperware Comprise of Practitioners – 60% and influencers 40%. The influencers include Govt. Officials, Retailers and Online E-Retailers.

### Subsection 2.7.b



The Spread of Copper Craft is in some pockets in the state. The practitioners drawn as sample for our study include Almora – 40%, Bageshwar – 40% and Dehradun – 20%.

Subsection 2.7.c



The Challenges identified by the respondents include Industrial Substitutes – 18%, Consumer Awareness – 13%, Low Wages – 13% and Raw material Scarcity – 9% among others.

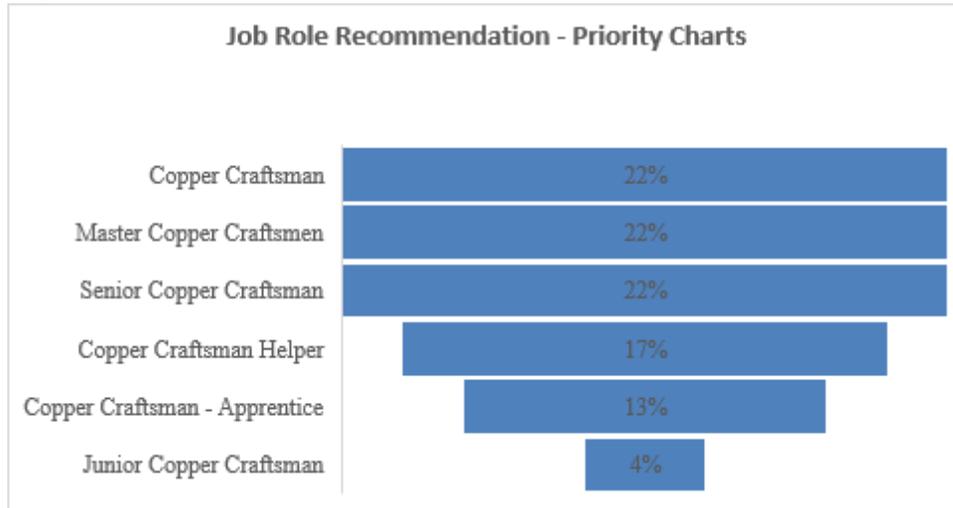
Subsection 2.7.d

Challenges & Action Taken	Priority
<b>Consumer Awareness</b>	<b>17%</b>
Benefits of Copper Vessels presented by the Artisan to Make the Sales	100%
<b>Credit</b>	<b>6%</b>
Buys Instead of Credit from Copper Artisans to help them produce more	100%
<b>Design &amp; Innovation</b>	<b>6%</b>
Design & Innovation Workshop, DIC	100%
<b>High Risk</b>	<b>6%</b>
Selling More of Industrial Manufactured Copperware Items	100%
<b>Identity</b>	<b>6%</b>
Building Online Literature about the Tamta community and making available their Achievements with Copper to the World	100%
<b>Labour Unavailable</b>	<b>11%</b>
Teaching youth	100%
<b>Low Wage</b>	<b>17%</b>
Making new Products like Wall Hangings, Fridge Magnets	100%
<b>Raw Material Scarcity</b>	<b>11%</b>
Buys Copper plates from Haldwani	100%
<b>Rise in Utilities</b>	<b>6%</b>
Selling More of Flasks & Geysers	100%
<b>Shrinking Demand</b>	<b>11%</b>
Design & Innovation Workshop, DIC	100%

<b>Unavailability of Artisans</b>	<b>6%</b>
Reaching out to remote villages where the Copper Craft is practiced.	100%

The Responses to challenges have been compiled in the above table to understand the current state of the art in Uttarakhand.

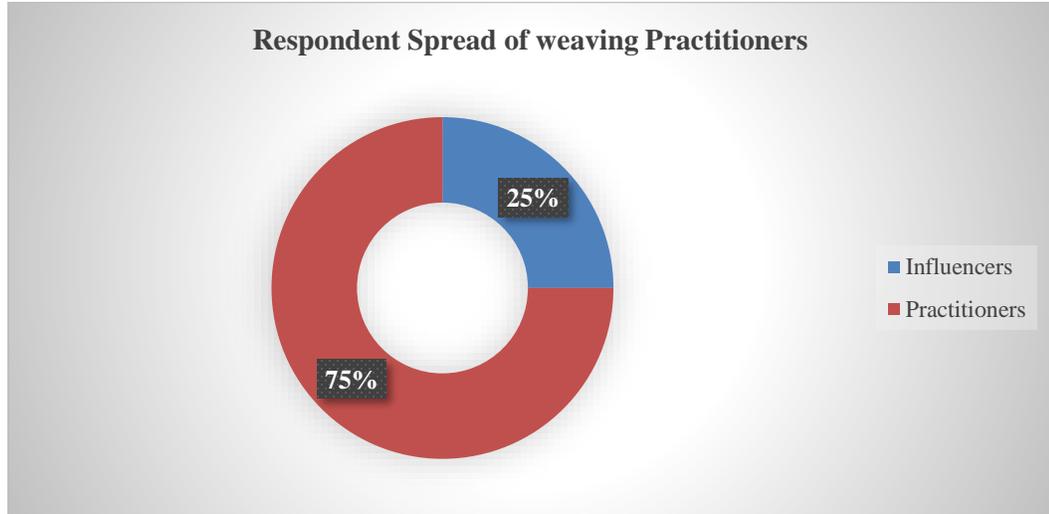
*Subsection 2.7.e*



The Job Roles identified by the Copper Crafters who have been able to create an identity for themselves. These job roles are essentially where workshops exist.

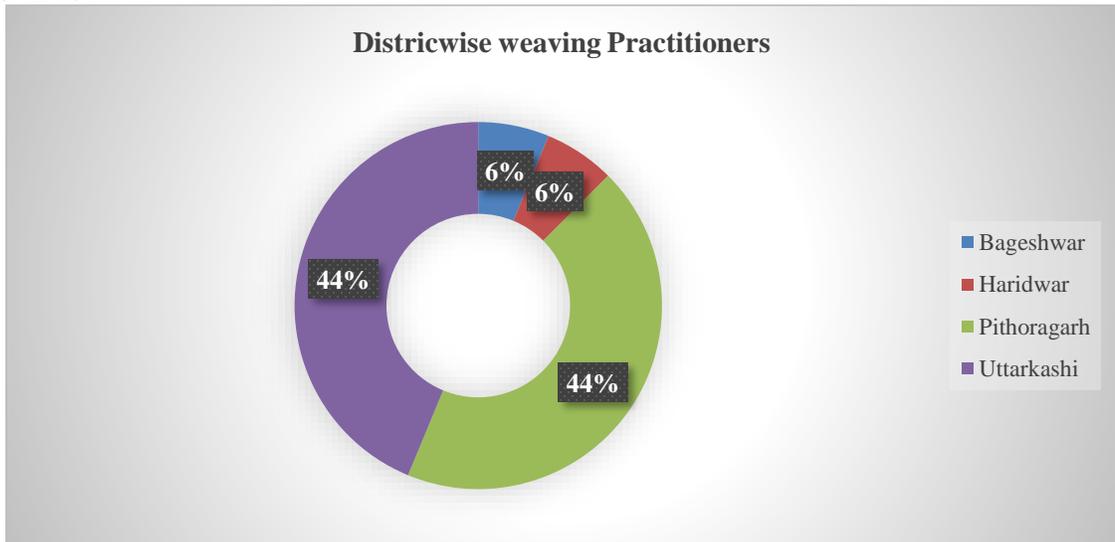
## Section 2.8 Weavers

### Subsection 2.8.a



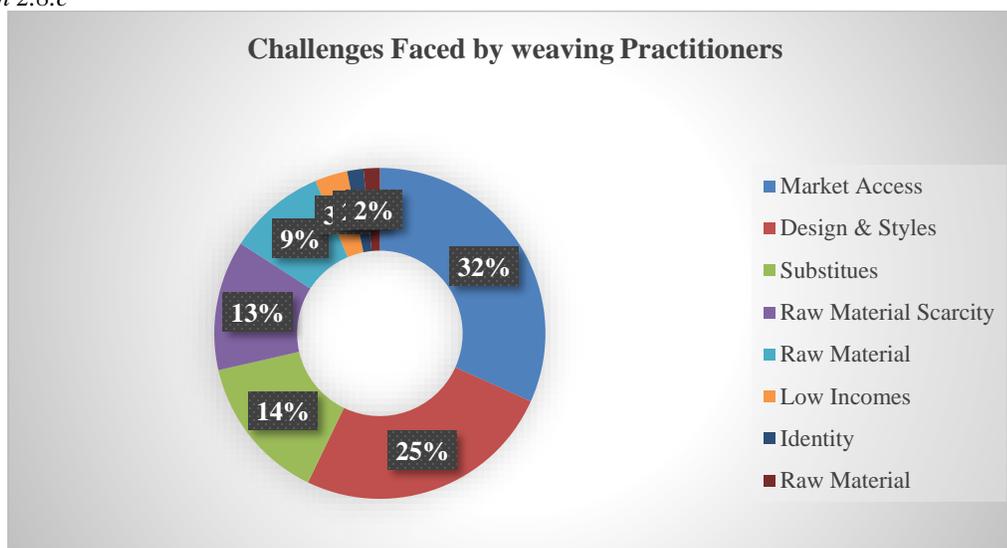
For the purposes of our study we have included 75% of our respondents from the weaving community. The 25% influencers include Retailer, E-Retailers and eminent persons form the industry to help us understand the issues of the community.

### Subsection 2.8.b



The Weavers have a pervasive presence in the higher Himalayas. The two traditions of Garhwal and Kumaon have very strong weaving traditions. The samples drawn are Pithoragarh – 44%, Uttarakashi – 44%, Bageshwar 6% and Haridwar – 6%.

Subsection 2.8.c



The Challenges faced by the weaving community include Market Access 32%, Design & Style – 25%, Industrial Substitutes – 14%, Raw material Scarcity – 13% and Raw Material Cost - 9%. These challenges are plaguing the growth of the sector.

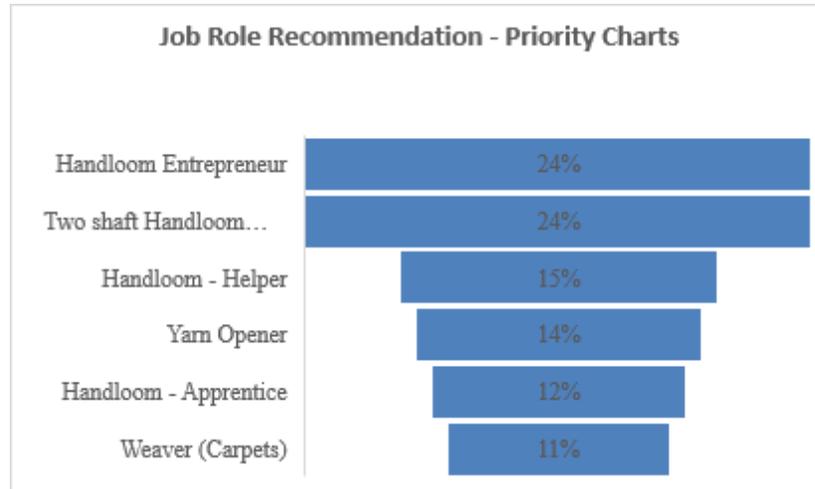
Subsection 2.8.d

Challenges & Action Taken		Priority
<b>Design &amp; Styles</b>		<b>25%</b>
Engaged Designer		6%
Evolving Contemporary Clothing		13%
Feedback from Traders returning after sales at various markets and Melas is the primary source to evolve the Design Responses to Emerging Trends.		38%
Traditional Designs only		44%
<b>Identity</b>		<b>2%</b>
Melas and Shows participation		100%
<b>Low Incomes</b>		<b>3%</b>
Khadi also Manufactures Honey, Vinager, Agarbatti, Aachar, etc.		50%
Selling Readymade Garments as well		50%
<b>Market Access</b>		<b>32%</b>
SARAS Bazaar		25%
Tourist Sales		10%
Traders have been buying at the Village level and displaying in Cities		65%
<b>Raw Material</b>		<b>10%</b>
Buying from Dharchula And Munsiyari		100%
<b>Raw Material</b>		<b>2%</b>
Buying from Other Tribes and Dhachula		100%
<b>Raw Material Scarcity</b>		<b>13%</b>
Rearing their own Sheep		88%
Source from Other States		13%

<b>Substitutes</b>	<b>14%</b>
Competing with Designs and prices	11%
Khadi only	11%
Niches have emerged for Natural and Synthetic Fiber	78%

The Weavers have been struggling to maintain and flourish in this age of heightened competition and changing trends. The table above catalogues the responses adopted towards the challenges posed to them.

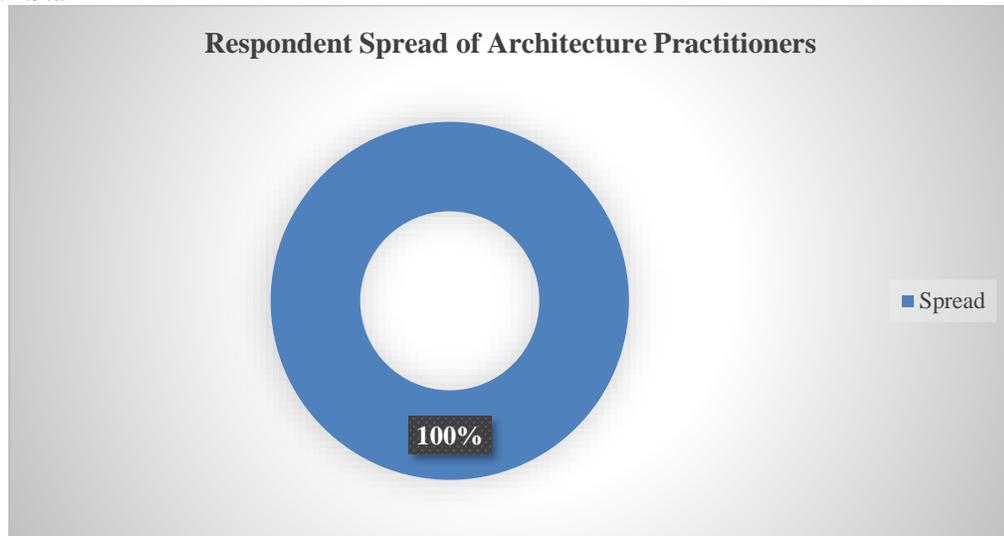
*Subsection 2.8.e*



The Weavers have shared the various job roles that are involved in conducting their business. Please note that these job roles are as per the existing NSQF job roles. The styling and other nuances would form part of individualistic weaving skills of the region.

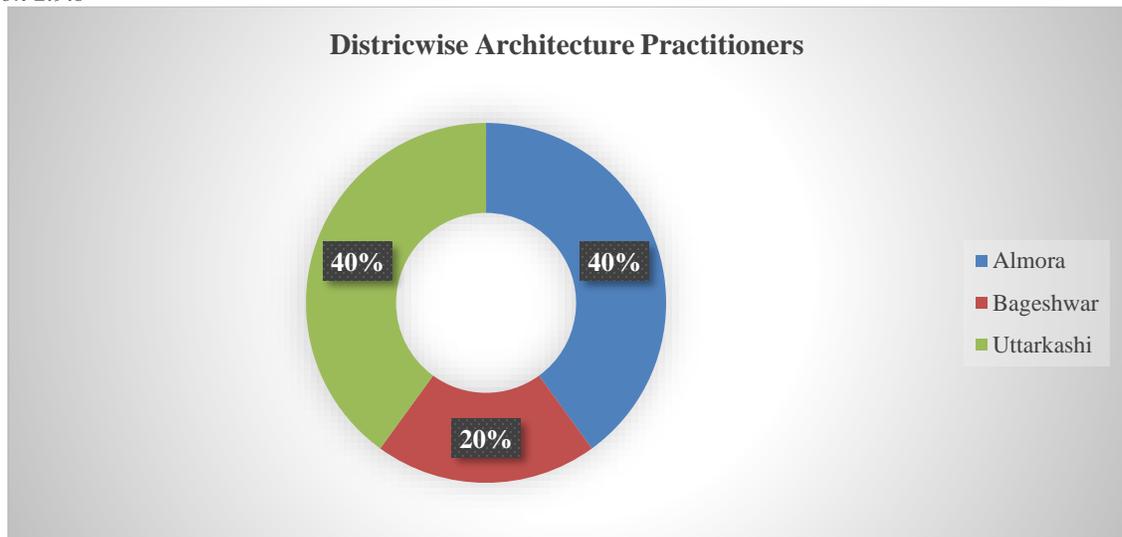
## Section 2.9 Architecture

### Subsection 2.9.a



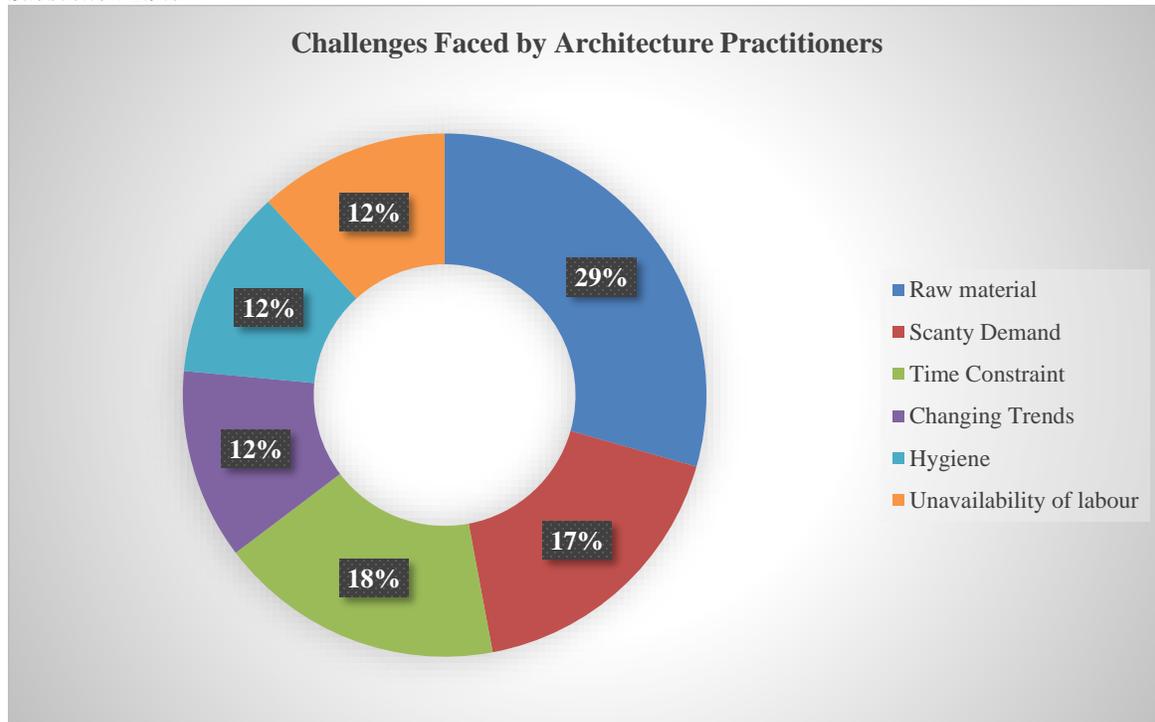
The knowledge of Traditional Architecture practiced in the mountains is practically non-existent in the plains. Hence when we faced the practitioners they were the once who enlightened us about the practices. Hence, the framework for study has not included any influencers.

### Subsection 2.9.b



The Architecture traditions exist in the remote areas of Uttarakhand. Our respondent spread includes Almora – 40%, Uttarkashi – 40%, and Bageshwar – 20%. Further, we did try to identify credible voices to help us build upon the information gathered from the respondents.

Subsection 2.9.c



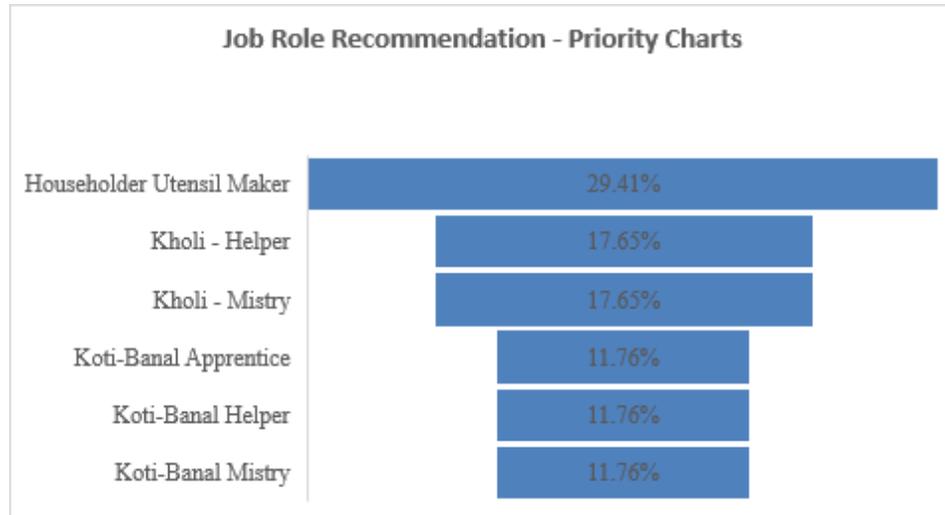
The Traditional Architecture practices are facing multi-dimensional challenges. The major challenges cited by the respondents are Raw Material – 29%, Time Constraint – 18%, Scanty Demand – 17%, Changing Trends – 12%, Hygiene – 12% and Unavailability of Skilled labour – 12%.

Subsection 2.9.d

Challenges & Action Taken	Priority
<b>Changing Trends</b>	<b>0%</b>
(blank)	
<b>Hygiene</b>	<b>0%</b>
(blank)	
<b>Raw material</b>	<b>0%</b>
(blank)	
<b>Scanty Demand</b>	<b>100%</b>
Shifted to Woodcraft and carpentry	100%
(blank)	0%
<b>Time Constraint</b>	<b>0%</b>
(blank)	
<b>Unavailability of labour</b>	<b>0%</b>
<b>Grand Total</b>	<b>100%</b>

The Architecture challenges and action taken by the respondents have been summarized in the table aforementioned.

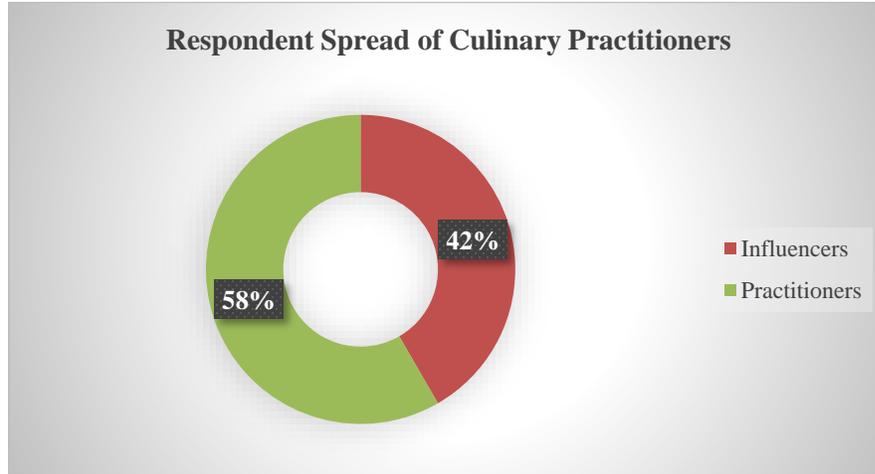
Subsection 2.9.e



The respondents identified the various job roles that traditional architects of the state are involved into. Since most of the commissions come very few and far between they survive by making household utensils and gharats. However, in a construction project Kholi Mistry & Helper – 35% are required. Similarly, in a Kothi project high up in the Himalayas Koti – Banal (Mistry, Apprentice & Helper) – 35% are employed.

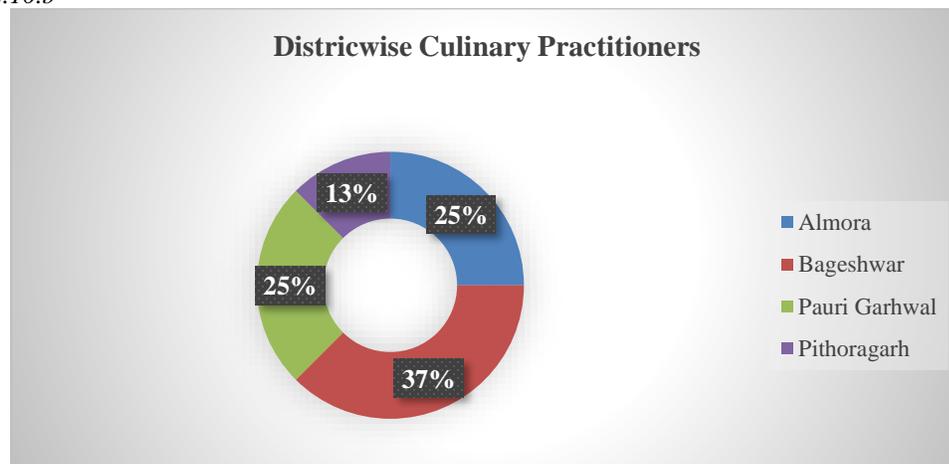
## Section 2.10 Culinary

### Subsection 2.10.a



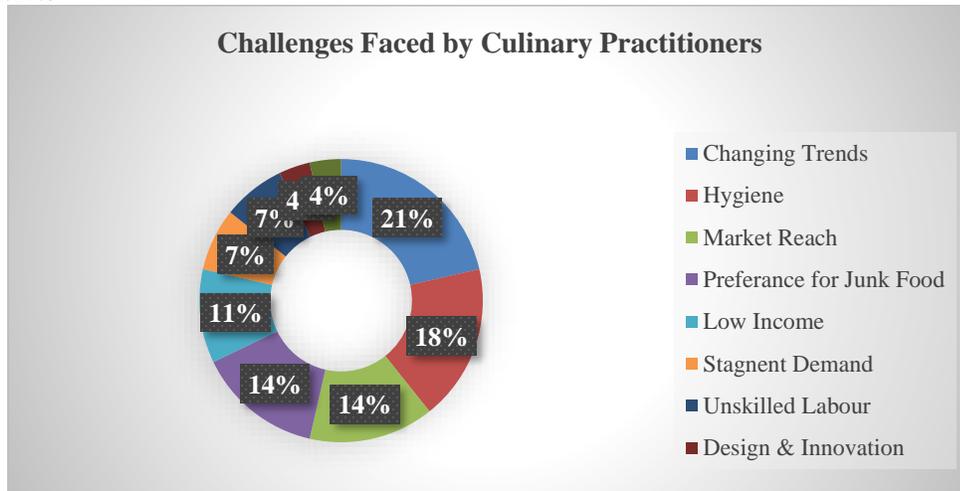
The Delicacies of Uttarakhand are prepared every day in every household of the state. But culinary professionals are those traditional cooks that are invited during functions to prepare food *en masse*. For the purposes of our study, 58% of our respondents have been Culinary Practitioners. However, to have a better understanding we have also spoken to eminent personalities of the state and included their reflections under influencers – 42%.

### Subsection 2.10.b



The District-wise spread of our study has included respondents from Indira Canteen in Bageshwar – 37%, Traditional Cooks & Methai Makers of Almora – 25%, Traditional Cooks of Pauri Garhwal – 25% and Traditional Cooks of Pithoragarh – 13%.

Subsection 2.10.c



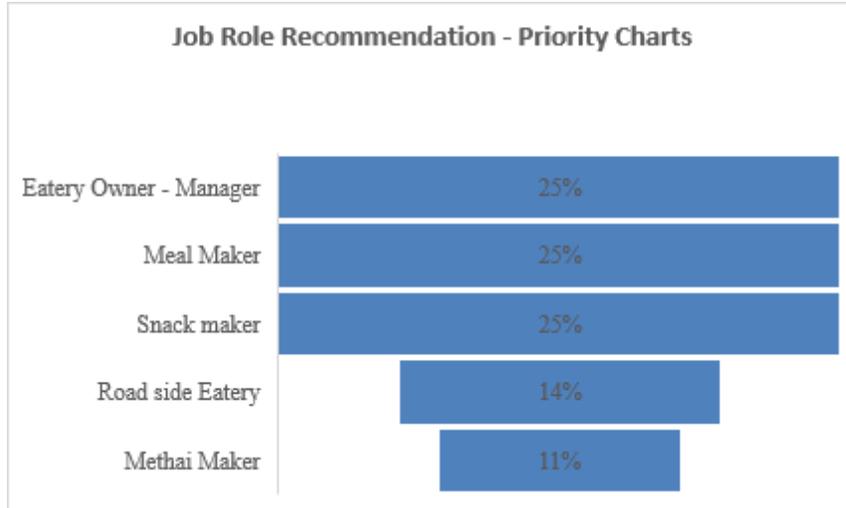
The Traditional Cooks have been facing a lot of challenges in their line of work. Primarily the respondents have identified the Changing Food Habits & Attraction to food habits of the plains & beyond – 21%, Hygiene of preparation of food is also a major challenge – 18% & Outreach of Uttarakhand Cuisine to the plains – 14%.

Subsection 2.10.d

Challenges & Action Taken	Priority
<b>Changing Trends</b>	<b>22%</b>
Continuing with Traditional Recipe	17%
Integrating dishes and Twiking Tastes to gain Universal appeal.	33%
Selling Snacks form the Plains As well.	50%
<b>Design &amp; Innovation</b>	<b>4%</b>
Changing Dishes time to time	100%
<b>Hygiene</b>	<b>19%</b>
Cleaning of Waste is done regularly.	60%
Strict SOPs are in place to monitor form Food Preparation to waste Disposal.	40%
<b>Low Income</b>	<b>11%</b>
Adding Number of Dishes to increase Incomes	67%
Working Part-Time	33%
<b>Market Reach</b>	<b>15%</b>
Built a brand	25%
Selling at City Level	75%
<b>Preference for Junk Food</b>	<b>15%</b>
Homely Food at nominal prices	25%
Spicing up Traditional Snacks.	75%
<b>Stagnant Demand</b>	<b>7%</b>
Traveling to far of places for Cooking	100%
<b>Unskilled Labour</b>	<b>7%</b>
Hiring Regular Labour for Menial Jobs.	100%

The Table above collates the action taken by respondents to mitigate the challenges identified by them.

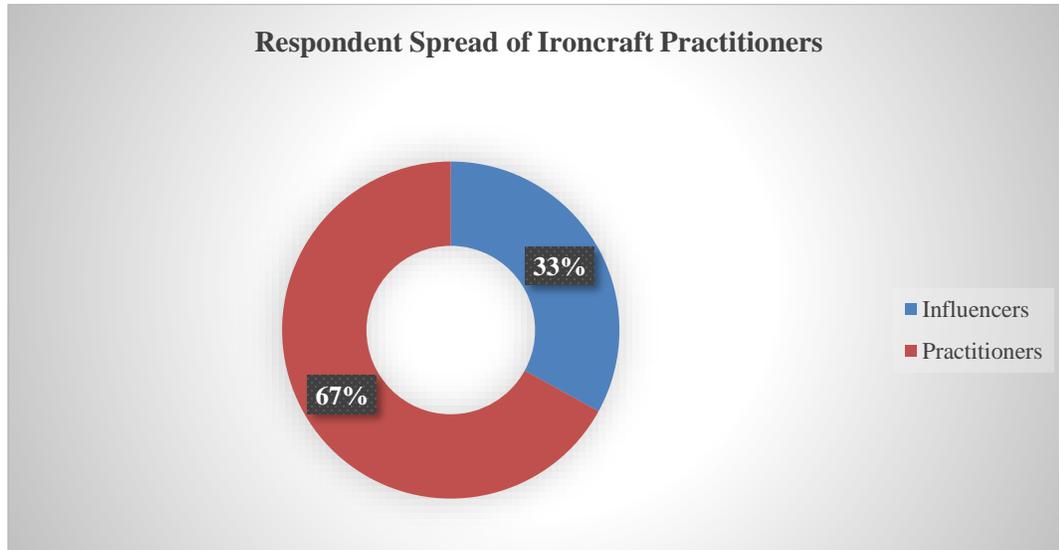
*Subsection 2.10.e*



The Job Roles identified by the Culinary Practitioners is based on the various disciplines of food making in the state. Further, the Eatery Owner – Manager identifies the business aspect of running a food retail business in the state.

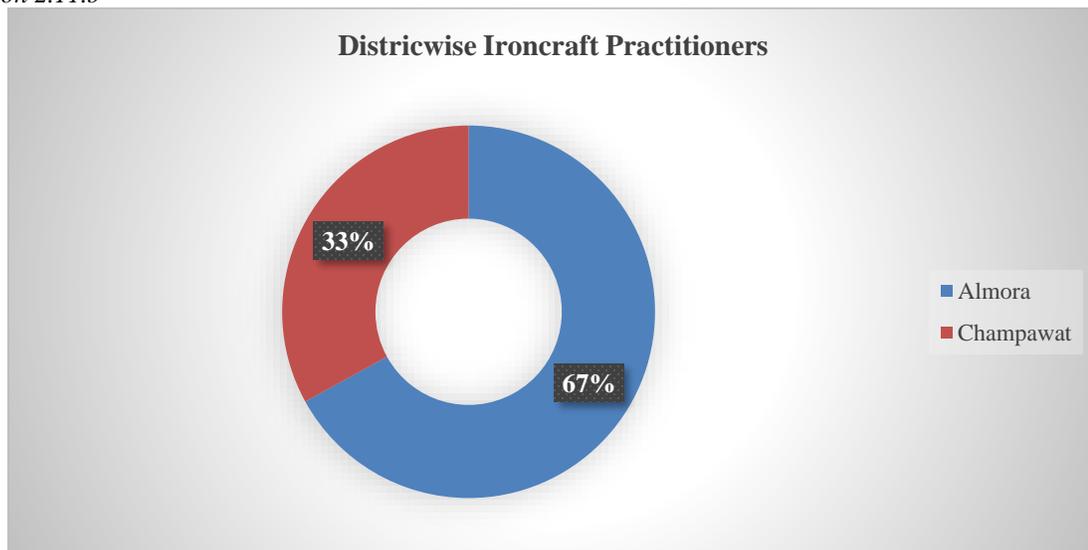
## Section 2.11 Iron-craft

### Subsection 2.11.a



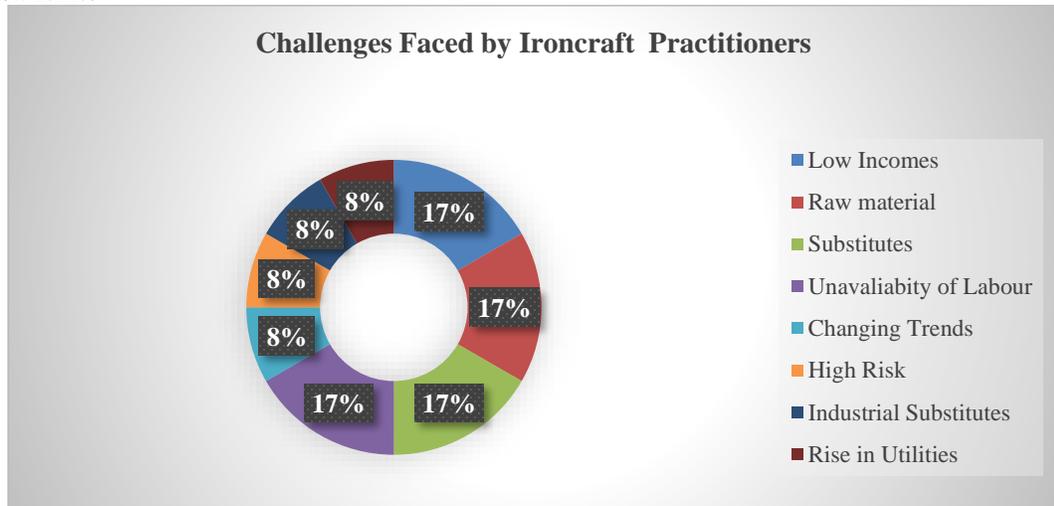
The Iron Craft has a certain uniqueness and skill in Uttarakhand. For the purposes of our study we have drawn 67% of our respondents who practice iron craft as livelihood. The influencers – 33%, comprise of Govt. Officials, Exhibitors & Retailers – 33%.

### Subsection 2.11.b



Lohaghat in Champawat district is specially known for ironcraft. We have drawn our respondents from Almora – 67% and Champawat – 33% to understand the status of the skill being practiced in the State currently.

Subsection 2.11.c



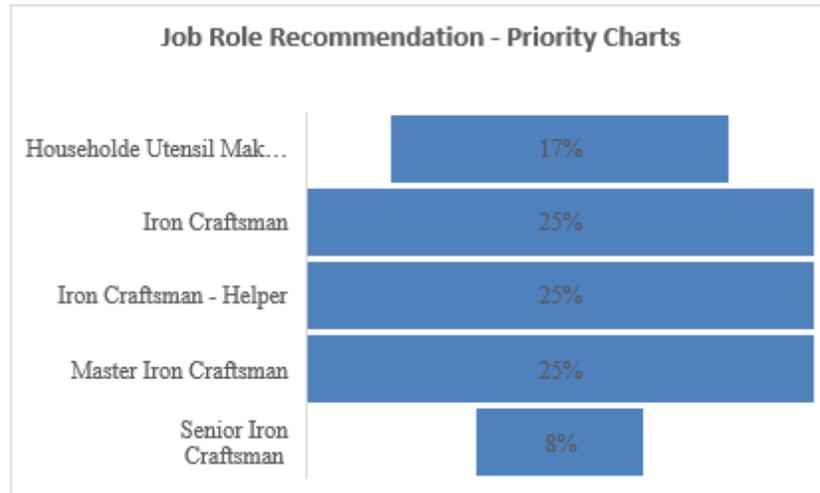
The Challenges faced by the respondents of Iron craft of Uttarakhand have been enormous. The primary challenge identified were Low wages of Artisans – 20%, Raw Material Scarcity – 20%, Industrial Substitutes – 20%, Unavailability of Labour – 20%.

Subsection 2.11.d

Challenges & Action Taken	priority
<b>High Risk</b>	<b>10%</b>
Selling More of Industrial Manufactured Ironware Items	100%
<b>Low Incomes</b>	<b>20%</b>
Selling Iron kadhai as Artifacts	100%
<b>Raw material</b>	<b>20%</b>
Buying Iron form the Plains	100%
<b>Rise in Utilities</b>	<b>10%</b>
Selling More of Flasks & Gysers	100%
<b>Substitutes</b>	<b>20%</b>
Emphasizing the Merits of Cooking in Iron Utensils	100%
<b>Unavailability of Labour</b>	<b>20%</b>
Hiring Labour form Nepal and Plains	100%

The Various Challenges enumerated by the Iron Craftsmen of the Uttarakhand and the action taken to mitigate these challenges has been complied in the table above.

*Subsection 2.11.e*



The Job Roles identified by the Iron Craftsmen in the conduct of their profession have been identified above. The division of labour is minimal but apprenticeship is the primary nature of the setup. The master craftsman leads the manufacturing process with others operating under his guidance and instructions.

