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National
Skill Development
Corporation



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



CONTENTS

<i>DISCLAIMER</i>	8
REPORT STRUCTURE	9
ACKNOWLEDGEMENT	10
1. INTRODUCTION	11
1.1 <i>Study Scope & Objectives</i>	12
1.1.1 Exhaustive Objective Set	12
1.1.2 Symbolic Representation.....	13
1.2 <i>Approach & Methodology</i>	13
1.2.1 Research Type.....	13
1.2.2 Overall Approach	13
1.2.3 Information Sources	15
1.2.4 Sample Size	16
1.2.5 Research Tools.....	19
1.2.6 Analysis Outline	20
1.2.7 Recommendation Structure	22
1.3 <i>Limitations of the Study</i>	23
1.4 <i>Executive Summary</i>	23
2. Goa State Overview	26
2.1 <i>Demographic & Socio-Economic Profile</i>	27
2.1.1 Key Demographic Indicators.....	29
2.1.2 Workforce trends	30
2.2 <i>Industrial Profile</i>	32
2.2.1 State Level Macro-economic Indicators	32
2.2.2 Agriculture Sector	35
2.2.3 Manufacturing Sector.....	39
2.2.4 Services Sector.....	41
2.3 <i>Education & Training Infrastructure</i>	43
2.3.1 Primary & Secondary School Education	43

2.3.2 Higher & Technical Education	45
2.3.3 Vocational Education.....	45
2.3.4 Future Plansfor Education & Training Infrastructure	47
2.4 State Government Skill Development Initiatives	49
3. District wise Skill Gap Assessment	53
3.1 South Goa	53
3.1.1 Overview.....	53
3.1.2 Study of Industrial Scenario.....	54
3.1.3. Supply Side Study	142
3.1.4 Current Education & Training Setup.....	255
3.1.5 Skill Gap Analysis	262
3.1.6 Recommendations.....	266
3.2 North Goa	271
3.2.1 Overview.....	271
3.2.2 Study of Industrial Scenario.....	272
3.2.3 Supply Side Study	355
3.2.4 Current Education & Training Setup.....	474
3.2.5 Skill Gap Analysis	484
3.2.6 Recommendations.....	489
4. ANNEXURES	494
4.1 List of Government Officials met in Goa.....	494
4.2 List of Stakeholders Covered in South Goa	495
4.3 List of Stakeholders Covered in North Goa	498

LIST OF TABLES

Table 1: List of samples covered in Industrial Side of Study in Goa district.....	16
Table 2: List of Supply Side Sample Covered of South Goa District Category Wise	17
Table 3: List of sample covered in Industrial Side of district.....	18
Table 4: List of Supply Side Sample Covered of North Goa District Category Wise	18
Table 5:List of Government Officials covered at Goa.....	19
Table 6: Population of Goa State.....	27
Table 7: Key demographic indicators	29
Table 8: Distribution of Worker by Category in Percentage	30

Table 9: Sectoral composition of GSDP at constant (2004-05) prices.....	32
Table 10: Crop Production in Goa State as per 2010-11	36
Table 11: Incremental Human Resource Requirement for Agriculture Sector for 2012- 2017-South Goa.....	37
Table 12: Incremental Human Resource Requirement for Agriculture Sector for 2017-2022-South Goa	37
Table 13: Incremental Human Resource Requirement for Agriculture Sector for 2012- 2017-North Goa	37
Table 14: Incremental Human Resource Requirement for Agriculture Sector for 2017-2022-North Goa	38
Table 15: Number of Enterprises registered on micro, small and medium category	39
Table 16: Summary of Industries at GOA	42
Table 17: District wise allocation of educational Infrastructure in Goa, as of 2011-12	44
Table 18: Other State Government training Schemes and Initiatives	52
Table 19: Taluka Wise SSI Units in South Goa	54
Table 20: Taluka Wise Large & Medium Industrial Units	55
Table 21: Number of Units of major sectors in Manufacturing of South Goa	56
Table 22: Human Resource Requirement in Chemical & Pharmaceutical Industry	61
Table 23: Human Resource Requirement of Electrical & Electronic Hardware Industry	66
Table 24: Human Resource Requirement of Food & Beverages Sector	70
Table 25: Human Resource Requirement for Steel Sector.....	75
Table 26: Human Resource Requirement of Paper & Packaging Industry	79
Table 27: Human Resource Requirement of Ship Building Industry	83
Table 28: Human Resource Requirement of Plastic Sector	87
Table 29: Human Resource Requirement of Automobile & Auto Components	91
Table 30: Human Resource Requirement of Handicrafts Industry	93
Table 31: Human Resource Requirement of Miscellaneous	95
Table 32: Incremental Human Resource Requirement in Manufacturing for the Year 2012-17	97
Table 33: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22	98
Table 34: Total number of hotels / paying guests with rooms / beds capacity	100
Table 35: Human Resource Requirement of Hospitality Sector.....	105
Table 36: Human Resource Requirement of Retail Sector	109
Table 37: Human Resource Requirement of IT Sector	113
Table 38 Human Resource Requirement of ITes Sector.....	115
Table 39: Human Resource Requirement of Logistic Sector	118
Table 40: Human Resource Requirement of Healthcare Industry	122
Table 41: Taluka Wise Number of Banking Offices	124
Table 42: Human Resource Requirement of BFSI Sector	125
Table 43: Human Resource Requirement Educational Sector	129
Table 44: Incremental Human Resource Requirement in Service Sector for the Year 2012-17	130
Table 45: Incremental Human Resource Requirement for Service Sector for 2017-2022.....	131
Table 46: Business Wise Skill Requirements – Self Employment	134
Table 47: Comparison of South Goa district with the Goa State on different demographic parameters	142
Table 48: Demographic and Socio-economic profile of South Goa District	143
Table 49: Educational Profile of South Goa district.....	144
Table 50: Summary of Aspirations and Constraints	246

Table 51: Summary of Aspirations and Constraints	247
Table 52: Population and Labor Force of South Goa.....	251
Table 53: Estimation of Population for the Year 2017 and 2022	252
Table 54: Estimation of Population & Labor Force for the Year 2017 and 2022.....	252
Table 55: Incremental Human Resource Availability of Labor	252
Table 56: Skills – Qualifications Linkage	254
Table 57: Skill wise incremental Human Resource Availability for 2012-2017	254
Table 58: Skill wise incremental Human Resource Availability for 2017-2022	254
Table 59: School Education Infrastructure and Enrollment, as on 2011-12	255
Table 60: Educational Institute and Enrolment of Student at South Goa.....	255
Table 61: Number of students and Infrastructure of Higher and Technical Education	257
Table 62: List of number of ITI/VTI at South Goa district.....	257
Table 63: Trade wise Capacity in Government ITI/VTI	261
Table 64: Qualitative Skill Gap Analysis of Manufacturing Sector	262
Table 65: Qualitative Skill Gap Analysis of Service Sector.....	263
Table 66: Increase in Labour and Work force participation	265
Table 67: Taluka Wise SSI Units in North Goa	273
Table 68: Taluka Wise Large Scale Industrial Units	273
Table 69: Number of Units of major sectors in Manufacturing of South Goa	274
Table 70: Human Resource Requirement in Chemical & Pharmaceutical Industry	280
Table 71: Human Resource Requirement of Electrical & Electronic Hardware Industry	284
Table 72: Human Resource Requirement of Food & Beverages Sector	288
Table 73: Human Resource Requirement for Iron & Steel Sector.....	292
Table 74: Human Resource Requirement of Paper & Packaging Industry	295
Table 75: Human Resource Requirement of Automobiles & AutoServices	299
Table 76: Human Resource Requirement of Rubber, Petroleum, Plastic and Core Sector.....	304
Table 77: Human Resource Requirement of Handloom & Cottage Industry	306
Table 78: Human Resource Requirement of Shipbuilding & Construction	309
Table 79: Human Resource Requirement of Miscellaneous	313
Table 80: Incremental Human Resource Requirement in Manufacturing for the Year 2012-17	314
Table 81: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22	315
Table 82: Human Resource Requirement of Hospitality Sector.....	321
Table 83: Human Resource Requirement of Education Institute.....	324
Table 84: Human Resource Requirement of Real Estate Sector	328
Table 85: Taluka Wise Number of Banks at North Goa district.....	330
Table 86: Human Resource Requirement of BFSI Sector	332
Table 87: Human Resource Requirement of Retail Sector	335
Table 88: Human Resource Requirement of Logistic Industry	338
Table 89: Human Resource Requirement of IT and ITes Industry.....	342
Table 90: Incremental Human Resource Requirement in Service Sector for Year 2012-2017	343
Table 91: Incremental Human Resource Requirement for Service Sector for 2017-2022.....	344
Table 92: Business Wise Skill Requirements – Self Employment	347

Table 93: Comparison of South Goa district with the Goa State on different demographic parameters	355
Table 94: Demographic and Socio-economic profile of North Goa District	356
Table 95: Educational Profile of North Goa district.....	357
Table 96: Summary of Aspirations and Constraints	466
Table 97: Population and Labor Force of North Goa.....	470
Table 98: Estimation of Population for the Year 2017 and 2022	471
Table 99: Estimation of Population & Labor Force for the Year 2017 and 2022.....	471
Table 100: Incremental Human Resource Availability of Labor	471
Table 101: Skills – Qualifications Linkage	473
Table 102: Skill wise incremental Human Resource Availability for 2012-2017	473
Table 103: Skill wise incremental Human Resource Availability for 2017-2022	473
Table 104: Number of Private Aided, Unaided and Government Schools at North Goa	474
Table 105: School Education Infrastructure and Enrollment, as on 2011-12	474
Table 106: Capacity as per the Faculty of XI and XII class	475
Table 107: Enrollment at Higher & Technical Education.....	476
Table 108: List of Number of ITI/VTIs at North Goa	477
Table 109: District Wise trade Capacity of North Goa	483
Table 110: Qualitative Skill Gap Analysis of Manufacturing Sector	485
Table 111: Qualitative Skill Gap Analysis of Service Sector.....	486
Table 112: Increase in Labour and Work force participation.....	488
Table 113: List of Industries covered in manufacturing sector	495
Table 114: List of Industries covered in service sector.....	496
Table 115: List of ITI/VTIs covered in South Goa District	497
Table 116: List of Manufacturing Industries covered at North Goa.....	498
Table 117: List of Service Sector companies covered at North Goa	499
Table 118: List of Institutes covered at North Goa	500

LIST OF FIGURES

Figure 1: Symbolic Representation of Scope of Work.....	13
Figure 2: Overall Research Approach	14
Figure 3: Approach of Primary research.....	14
Figure 4: Human Resource Requirement Estimation Model.....	20
Figure 5: Human Resource Availability Estimation Model	21
Figure 6: Map of Goa state with 2 district and 12 Talukas.....	26
Figure 7: Year wise trend of GDP of Goa	28
Figure 8: Year wise trend of Per Capita Income of Goa	28
Figure 9: Demographic and worker profile of Goa.....	30
Figure 10: Share of primary, secondary and tertiary sectors in Goa's GSDP	32
Figure 11: Sector wise distribution of Goa's GDDP, as of 2011-12	33
Figure 12: Sector wise break up of Goa's GDP of 2009-10.....	34
Figure 13: Sector wise worker distribution of Year 2009-10.....	34

Figure 14: Taluka Wise Allocation of schools in Goa, as of 2011-12	43
Figure 15: Drop-outs at Various Stages	45
Figure 16: Available Vocational Institutes at South Goa	46
Figure 17: State level schemes and Initiatives	50
Figure 18: Map Showing South Goa District.....	53
Figure 19: Incremental Human Resource Requirement in Manufacturing for the Year 2012-2017.....	96
Figure 20: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22.....	97
Figure 21: Incremental Human Resource Requirement in Service Sector for the Year 2012-17	130
Figure 22: Incremental Human Resource Requirement in Service Sector for Year 2017-2022	131
Figure 23: Educational Background of the Interviewed Students.....	146
Figure 24: Youth Aspiration Mapping.....	248
Figure 25: Incremental Human Resource Skill Availability Estimation.....	250
Figure 26: Incremental Human Resource Availability-South Goa for Year 2017 and 2022	251
Figure 27: Department wise skill classification based on qualification of manufacturing sector	253
Figure 28: Department wise skill classification based on qualification of service sector	253
Figure 29: Drop-outs at Various Stages at South Goa	256
Figure 30: Chart of number of schools in South Goa District.....	256
Figure 31: Institute rating by Alumni based on 6 factors	260
Figure 32: Quantitative Skill Gap Analysis for the Year 2012-17.....	264
Figure 33: Quantitative Skill Gap Analysis – 2017-22.....	264
Figure 34: Decision Map for Recommendations	266
Figure 35: Map Showing North Goa District.....	271
Figure 36: Incremental Human Resource Requirement in Manufacturing Sector for the Year 2012-2017	314
Figure 37: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22.....	315
Figure 38: Incremental Human Resource Requirement in Service Sector for the Year 2012-17	343
Figure 39: Incremental Human Resource Requirement in Service Sector for Year 2017-2022	344
Figure 40: Educational Background of the Interviewed Students.....	359
Figure 41: Youth Aspiration Mapping.....	468
Figure 42: Incremental Human Resource Skill Availability Estimation.....	469
Figure 43: Incremental Human Resource Availability-North Goa for Year 2017 and 2022	470
Figure 44: Department wise skill classification based on qualification of manufacturing sector	472
Figure 45: Department wise skill classification based on qualification of service sector	472
Figure 46: Drop-outs at Various Stages of North Goa	475
Figure 47: Quantitative Skill Gap Analysis for the Year 2012-17.....	487
Figure 48: Quantitative Skill Gap Analysis – 2017-22.....	488
Figure 49: Decision Map for Recommendations	489

DISCLAIMER

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REPORT STRUCTURE

The report is structured in following manner:

Part I includes Foreword, Acknowledgements, Study Objectives, Approach and Methodology, Study Limitations and Executive Summary.

Part II includes concentrates on the profile of the Goa State from a socio economic and human capital perspective as well as the industrial presence and skill developments initiatives taken by the state Government.

Part III consists of detailed analysis of both the districts – South Goa and North Goa from a socio-economic and human capital perspective and provides specific district level recommendations.

Part IV consists of Appendices.

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We are grateful to the Government of Goa and its various departments for their contribution towards the successful completion of the study. Our special thanks to the Director – Craftsman Training, Government of Goa, who gave his time for focused and intense discussions.

We would also like to extend our special thanks to the industry associations in the state which were immensely supportive in multiple aspects right from helping us out with local logistics to getting us in touch with industries as well as providing us with important insights pertaining to the skill scenario. Associations like Goa Chamber of Commerce & Industry, Confederation of Indian Industry, Travel & Tourism Association of Goa, Goa Mineral Ore Exporters' Association, Goa Small Scale Industries Association, Goa Pharmaceutical Manufacturer's Association and many others have played a very critical role in facilitating field operations.

We acknowledge with gratitude the support provided by the district level departments, skill training institutions, NGOs, industry representatives and youth of the State for their contribution towards the study.

In addition, we convey our gratitude to all those who have, in some way or other, contributed towards successful completion of this study.

1. INTRODUCTION

NSDC, a one of its kind Public – Private Partnership initiative, was started with the main objective of bridging the increasing skilled human resource requirement - availability gap by creating large, high quality, for profit vocational training organizations. It was started with a target of contributing to the National Skill Development Mission goals of training around 500 million people in the country by 2022, to the extent of 30% of the target. NSDC acts as a catalyst in skill development by providing funding to enterprises, companies and organizations that provide skill training. It will also develop appropriate models to enhance, support and coordinate private sector initiatives.

In addition to the capacity augmentation role, one of the other key roles of NSDC is to build the right research base to support the decision making of various stakeholders involved in the process of building and strengthening private sector involvement and channelizing the efforts on the part of government sector, in the area of vocational education.

As a part of this role, NSDC has conducted sector skill gap studies for the 20 high priority sectors. In addition to this, state wide district level skill gap studies are also being conducted for use by different stakeholders – employers, state governments, training organizations, trainees etc. The Goa state study here aims at the same objectives with district level inputs for the state of Goa.

1.1 Study Scope & Objectives

This section highlights precisely the objectives of the study, indicates the approach and methodology adopted for conducting the study and provides detailed information which was aimed to be found out from the research and analysis of the collected data and findings based on the analyzed data.

The study includes a review of an overall state and for all the districts of the state. Keeping in mind the primary objective of employment generation in Goa state, the research has been conducted to identify the developmental opportunities and initiatives or government schemes which have an impact on employment generation. The research includes prominent key areas where the youth aspires to go in future. From the demand point of view, analysis of research estimates the gap that exists in terms of quality and quantity of the skilled human resource. To achieve that, we have identified human resource requirements at all the skill levels in various sectors exists in the state, current requirement as well as future requirement in coming 5 & 10 years. The study also includes interviews of existing VT infrastructure both in private sector and the government domain. Based on the research analysis, suitable suggestions and recommendation have been delivered to NSDC so that they can be able to bridge the gap by taking decisions based on the conducted research.

1.1.1 Exhaustive Objective Set

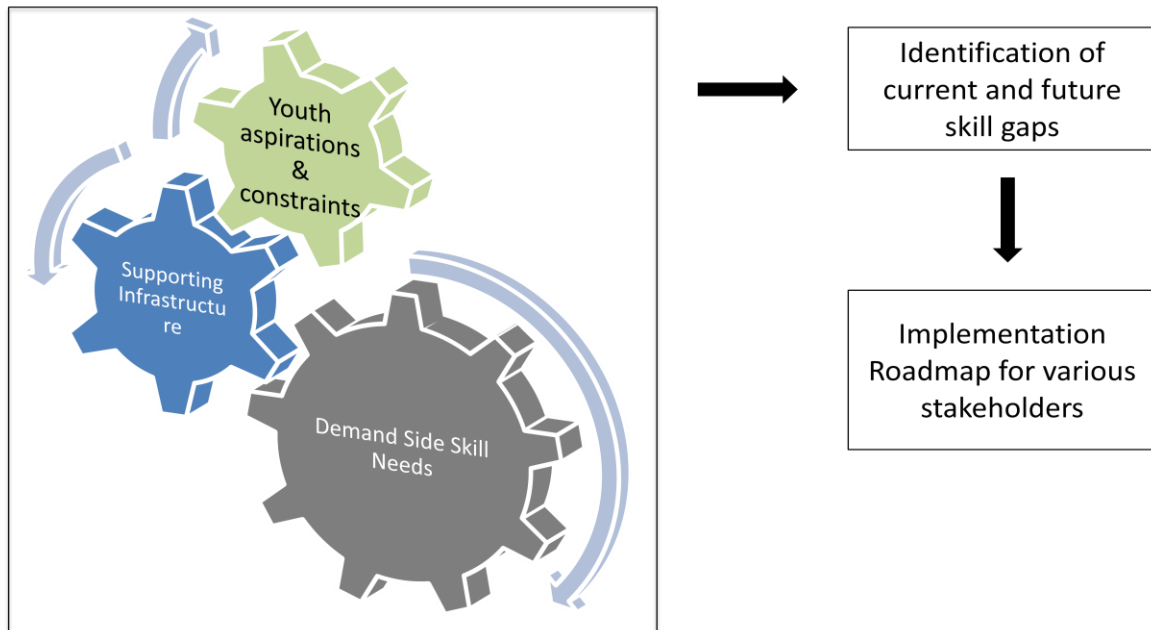
The study includes a detailed understanding of the following at an overall state level and for both the districts of the state:

- Socio-economic profile – demography, economic profile of district by industry, state of education
- Identifying developmental opportunities keeping in mind factor endowments and stakeholder perspectives
- Identifying specific developmental initiatives/projects/government schemes which have an impact on employment generation
- Articulating the aspirations of the youth
- Identifying the current and future (2012-17 to 2017-22) skills and human resource requirements by industry and estimate the gap that exists
- Studying the existing VT infrastructure both in the private sector and the government domain
- Suggesting suitable interventions/recommendations to address the skills gap.
 - Recommendations are specific and actionable
 - Recommendations also include specific initiatives that NSDC can take based on the mandate of the organization
- Create an action plan with indicative timelines

1.1.2 Symbolic Representation

At an overall level, the diagrammatic representation of the scope of work is as follows:

Figure 1: Symbolic Representation of Scope of Work



1.2 Approach & Methodology

1.2.1 Research Type

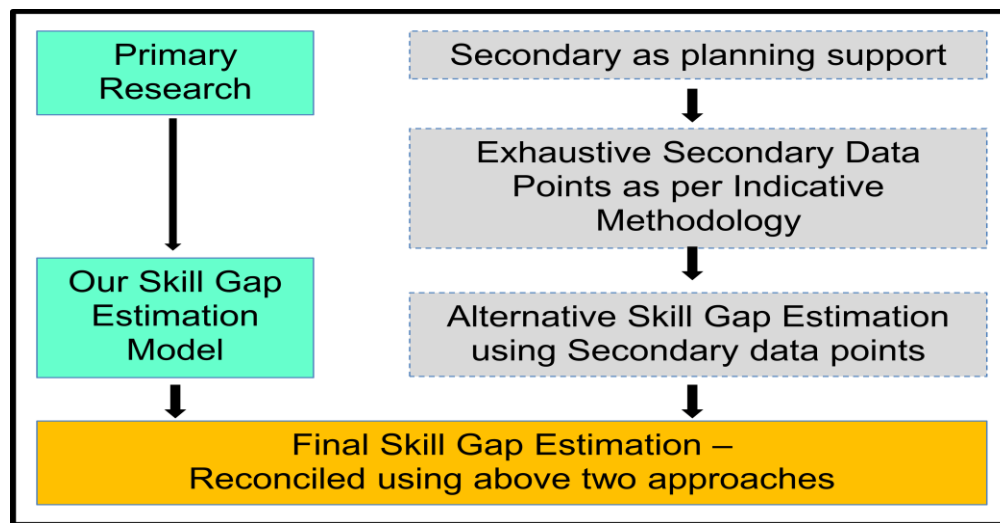
The study includes a mix of intense primary research combined with information available from various secondary sources of information to understand the qualitative and quantitative skill gap that exists in the state at a district level.

1.2.2 Overall Approach

Here, we will be using an approach which relies heavily on exhaustive as well as intensive primary research to arrive at the skill gaps. In this approach, secondary information is primarily used to give directions to the field operations and data collection process. However, in this case, skill gaps are identified using NSDC's well-accepted demand estimation model based on primary research and then is further reconciled against the skill gaps being arrived at using the secondary information driven model as suggested.

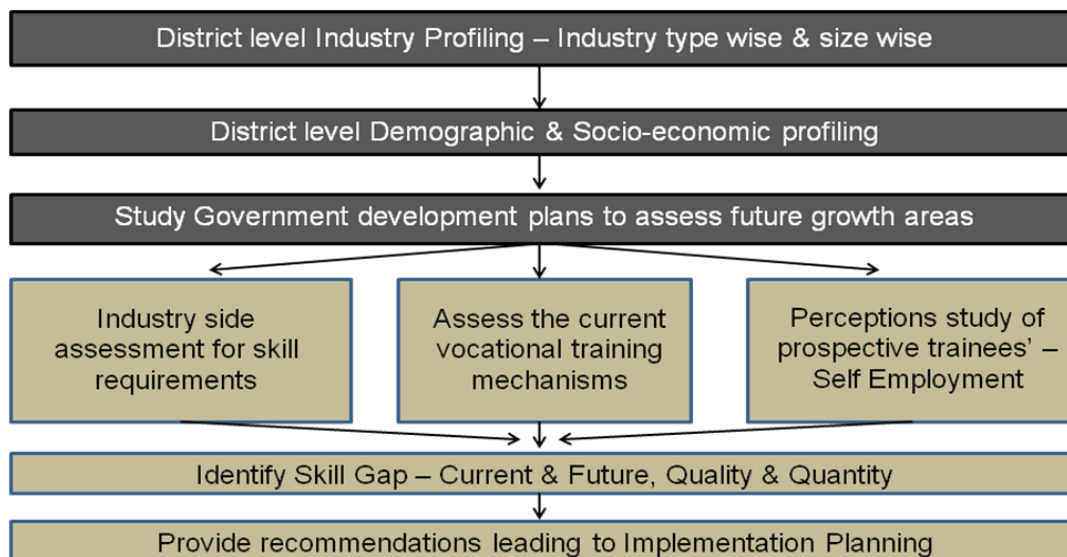
The overall philosophy underlining the approach is as under:

Figure 2: Overall Research Approach



Within Primary the approach has been as under:

Figure 3: Approach of Primary research



1.2.3 Information Sources

Demand side study

Primary Information Sources

- HR / Technical Heads of Manufacturing Sector Companies
- HR / Departmental Heads of Services Sector Companies
- Owners in the Unorganized Self-Employment sector
- Office Bearers of the Prominent Industry Associations in the district
- Industry Experts / Consultants
- Government Authorities – GM DIC, BDOs, Officials of Department of Industries
- Principals / Trainers in the existing Vocational Training Institutes (VTIs)

Secondary Information Sources

- District Industry Profiles – MSME
- Economic Survey, NSSO & Economic Census
- Regulatory Authorities e.g. IRDA, TRAI, etc. & Prominent Industry Associations

Potential students' study

Primary Information Sources

- Target Groups Drop-outs, 10th / 12th pass-outs, ITI / VTI pass-outs looking for job, General as well as Professional college pass-outs
- Parents of the Target Groups
- Influencers of the Target Groups e.g. School / College Teachers, Seniors, etc.
- Alumni of the Vocational Training Institutes already working in the Industry (Both Government as well as Private)
- Current Students at various Government / Private Vocational Training Institutes including the ITIs
- Principals/HoDs in the existing Vocational Training Institutes (VTIs), Colleges & Universities
- Government Officials in the State Government Departments of Education, Higher Education and Vocational Training

Secondary Information Sources

- Census 2011, Census 2001, District NIC Websites, NSSO, Economic Survey – Base Number Estimations
- DGET NVTIS, DTE – State Government, Department of Primary & Secondary Education, Department. of Higher Education, AICTE statistics, etc. -- Student Output Numbers

Study of the Education & Training Setup

Primary Information Sources

- Principals / Faculties / Placement In-charge – Government & Private it is

- Principals / Faculties / Placement In-charge – Service Sector related Vocational Training Institutes
- Other Agencies / NGOs running employment / self-employment driven training programs in the district
- Top Government Officials at Department of Technical Education, State Govt.

Secondary Information Sources

- DGET NVTIS
- Official Website of the Department of Technical Education, State Government
- District NIC Websites

1.2.4 Sample Size

Sampling Technique

Herein, Proportionate Sampling Methodology has been followed for demand side whereas for the supply side, indicative sample size has been kept. The sample selection process was clustered sampling. Within the enablers category, we have tried to cover as much of the entire population as possible. The entire population of Industrial Units in the district as available from the above secondary sources has been used as a base for estimating the Sample Size for Demand Side study in the district. In unorganized self employment sector wherein the base population in the district is not available, geographical tracing process has been used to estimate rough base numbers and cover the proportionate sample.

Again, in case of presence of Multiple Geographical Clusters of Industries in the district, representation across clusters has been maintained as well.

In case of manufacturing sector, the data of Industrial units is made available in 2 categories: Micro & Small and Medium & Large Units. Thus, herein, while maintaining sector wise representation, the sample has been broken up proportionately across these 2 categories to enable accurate projection of skill requirements.

1.2.4.1 Sample Size covered of South Goa District

For the Study of Industrial Scenario

Table 1: List of samples covered in Industrial Side of Study in Goa district

South Goa District	
Industrial Scenario	Samples Covered
Manufacturing Sector	74
Service Sector	77
Unorganized Sector	61

Detailed list of companies covered in Manufacturing & Services sector is given in the Annexure.

For the Study of Youth Aspirations & Constraints**Table 2: List of Supply Side Sample Covered of South Goa District Category Wise**

List of Youth Sample Covered of South Goa District Category Wise		
Sr. No.	Profile	Samples Covered
1	Early School Drop-outs	228
2	10th Class/12th Class Pass-outs who do not go for further studies and join job market	286
3	Professional & Technical Graduate College Pass outs e.g. Engineering, Medical etc.	127
4	General Graduates College Pass-outs	127
5	ITI Pass outs looking for Job	149
6	Workers already employed and looking for skill up-gradation	161
7	Parents(for the above categories)	133
8	Influencers(for the above categories)	16
9	Current Students at VTIs	74
10	Alumni of the VTIs employed in local Industry	63
Total		1364

For study of ITI/VTI

Herein, we have covered the following stakeholders within this category:

- ➔ Principals of 4 Government ITIs
- ➔ Heads / Faculties at 6 Private ITI / Vocational Training Institutes
- ➔ Government Officials as under:
 - Directorate of Craftsman Training
 - Directorate of Higher Education
 - Directorate of Technical Education
 - Directorate of Education
 - Labour Commissioner, Department of Labour and Employment
 - Employment Exchange Officer – South Goa District & North Goa District
 - Department of Industries
 - Department of Tourism
 - Department of Geology and Mines

1.2.4.2 Actual Sample Size of North Goa District**For the Study of Industrial Scenario****Table 3: List of sample covered in Industrial Side of district**

North Goa District	
Industrial Scenario	Samples Covered
Manufacturing Sector	93
Service Sector	72
Unorganized Sector	57

Detailed list of companies covered in Manufacturing & Services sector is given in the Annexure.

For the Study of Youth Aspirations & Constraints**Table 4: List of Supply Side Sample Covered of North Goa District Category Wise**

List of Youth Sample Covered of North Goa District Category Wise		
Sr. No.	Profile	Samples Covered
1	Early School Drop-outs	206
2	10th Class/12th Class Pass-outs who do not go for further studies and join job market	235
3	Professional & Technical Graduate College Pass outs e.g. Engineering, Medical etc.	122
4	General Graduates College Pass-outs	137
5	ITI Pass outs looking for Job	97
6	Workers already employed and looking for skill up-gradation	116
7	Parents(for the above categories)	160
8	Influencers(for the above categories)	37
9	Current Students at VTIs	72
10	Alumni of the VTIs employed in local Industry	31
	Total	1213

For study of ITI/VTI

Herein, we have covered the following stakeholders within this category:

- ➔ Principals of 6 Government ITIs
- ➔ Heads / Faculties at 3 Private ITI / Vocational Training Institutes

Other Important Categories Covered

Table 5: List of Government Officials covered at Goa

Other Important Categories	Samples Covered
Industry Associations	4
Industry Consultant	2
Industrial Contractor	1
Employment Exchange	1
Government & Private ITIs	5
Service Sector VTIs	5
Key Government Officials	8
GM- DIC	1
Total	29

1.2.5 Research Tools**1. Industrial Scenario**

The primary interactions have been conducted using Qualitative Research Process. The tool so designed contained questions that have been mix of both close-ended and open-ended as per the requirement of information. Questionnaires have been attached as separate files with this interim report.

2. Youth Aspirations & Constraints

The primary interactions have been conducted using Quasi-Qualitative Research Process. The tool so designed contained questions that have been a mix of both close-ended and open-ended as per the requirement of information.

3. Supporting Infrastructure

The primary interactions have been conducted using Qualitative Research Process. The tool so designed contained questions that have been a mix of both close-ended and open-ended as per the requirement of information.

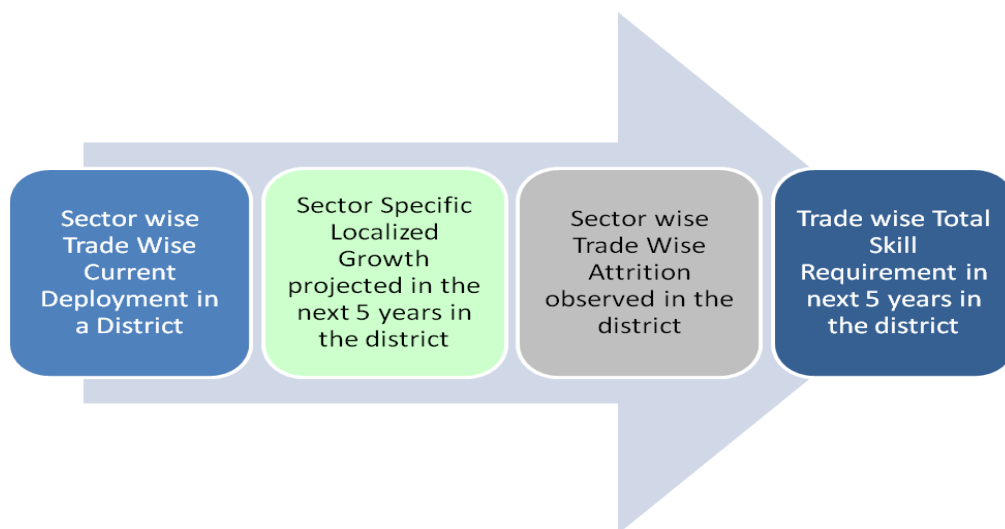
1.2.6 Analysis Outline

Quantitative Skill Gap Analysis

Human Resource Requirement Estimation Model

Herein, we will have to estimate the annual demand of various skills / trades in Manufacturing, Services as well as Self-employment sector in the district for the next 5 years. The below mentioned diagram outlines our overall approach to Skill Demand Estimation in the District:

Figure 4: Human Resource Requirement Estimation Model



The above diagram represents the process of estimating Human Resources Requirement in the district in a simplified manner. Herein, skill wise base for each industry has been aggregated and then industry specific skill requirements has been estimated by applying growth rates as well as attrition rates. In the end, these skill requirements across industries have been aggregated to estimate the skill wise requirements in all companies that we have covered in that particular district.

Human Resource Availability Estimation Model

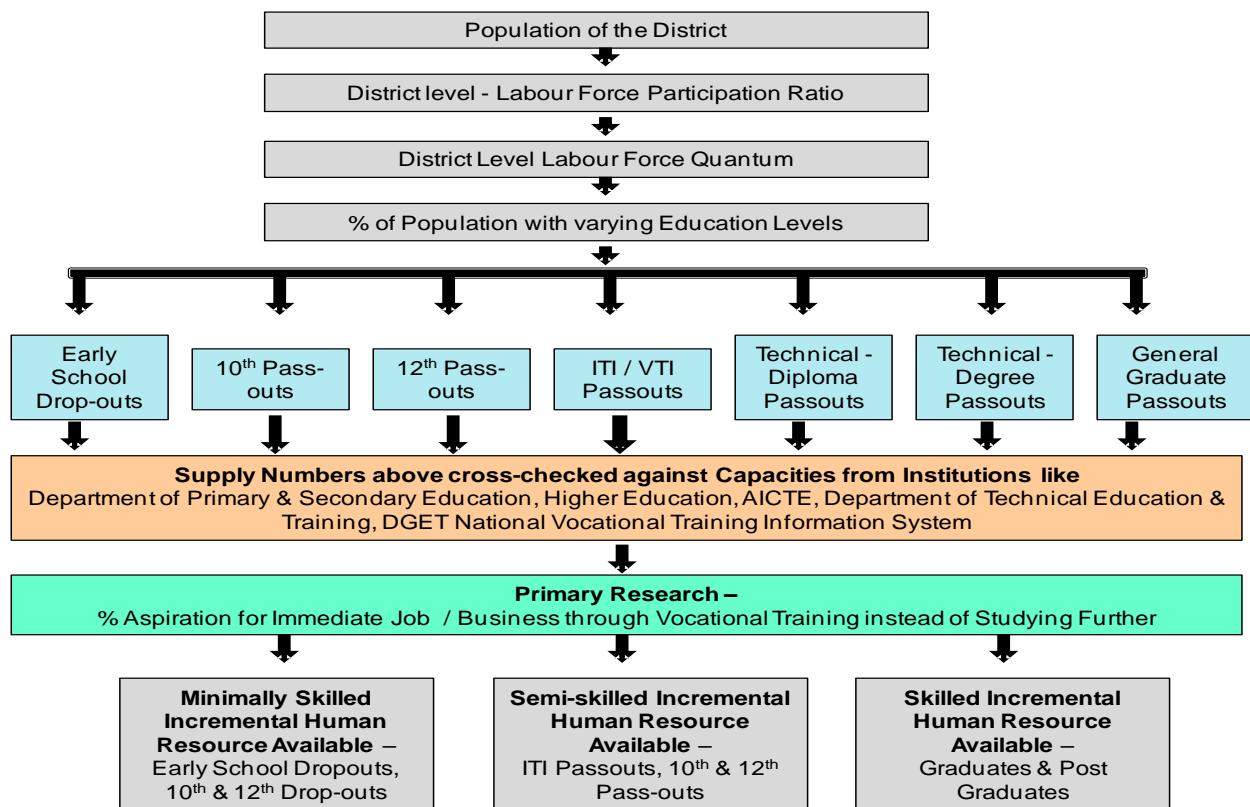
Herein, the Annual human resource availability in the district for the next 5 years needed to be estimated to arrive at a Quantitative annual Demand-Supply gap in the skills required in the Industry. However, to allow ourselves to estimate an exact number of skilled human resource availability to the industry in the district at various levels we need to understand the linkage between Qualifications and Skills. And this is important because we only have the number for output from various Academic Institutions for us to estimate aggregate supply. So, the section below demonstrates how Skills have been found to be, in general, linked to Qualifications

and how this will allow us to project supply using Institutional output numbers. However, this linkage is not a very tight linkage and over the years, there has been shift in the relative Skill level at which a particular Qualification has been employed, to begin with. E.g. Earlier a Diploma was treated as a Highly Skilled Human Resource whereas given the current quality of output from Diploma colleges; they are in multiple cases, recruited at Skilled / Semi-skilled levels.

Estimation Model

The model below mentions the detail steps of Supply Side estimation of human resource availability calculation for minimally skilled, Semi-skilled and Skilled human resources keeping the above Skills – Qualifications Linkage in mind.

Figure 5: Human Resource Availability Estimation Model



This model starts with basic secondary information available from various sources and then later builds itself factoring in validations from other precise secondary information sources as well as primary research conducted on the sample as given earlier. Thus, it has intrinsic checks within the secondary based estimations and then it further cross-checks and reconciles with the findings from the primary Potential Students Study as well as Aspirations as captured during the interactions with the heads of the institutions that are longitudinally connected in time.

Qualitative Analysis

Also, for simplification of the decision supporting Course Addition, Capacity Augmentation and Course deletion decisions in the existing Public or Private Vocational Training Infrastructure in the district, each course has been rated on a 5-point Likert scale on the below mentioned parameters:

- (1) Long Term Demand of the course in the district keeping current and future industries in mind
- (2) Relative aspiration of the course among the Potential Students' side
- (3) Available Trained Supply at required levels in the district

This study also calls for, in addition to other methods, the following Qualitative Analyses:

- Multi-stake holder Analysis
 - Analyze the role of each stakeholder in the decision making processes and how do various decisions like what courses to do, what content to have, whom to employ etc. are taken
- Chain Analysis of Alumni (Subject to availability of past database)
 - Build scenarios and cases to represent likely behaviour – For example, a chain could represent how a certain individual is likely to proceed in his career after doing a certain course from a VTI
- SWOT Analysis of VTIs
 - Relative as well as absolute strength – weakness analysis VTI, and point out areas which could be replicated at other VTIs as well as areas of concern
- Mapping of Catchment Area
 - Analyze on the basis of geography, demography and other socio-economic factors as to what are the areas currently served by, and likely to be served by the VTIs.

1.2.7 Recommendation Structure

Recommendations are given to the following 4 key stakeholders for improvement of current vocational education setup in the state:

- 1) Government
- 2) Industry
- 3) Training Providers
- 4) NSDC

The recommendations have been based on the results from Supply side, Demand Side and Supporting Environmental stakeholders' side that focuses on various measures targeted at all skill levels of the skill pyramid towards skill building at a district and a state level. Recommendations have interventions for the Government, Private Players and NSDC. These interventions focus on various measures/potential ideas/projects required to be pursued for skill development and employability enhancement.

1.3 Limitations of the Study

- In some of the cases, it was a challenge conducting analysis based on secondary data, as some of the data points (especially at the district level) were unavailable – especially on a time series basis. In some cases, there was also a discrepancy in the data obtained from the field level vis-à-vis the secondary data points already available. Therefore, we have used the data sources which we deemed to be reliable and better representing the on-ground scenario. Data for some indicators were even out-dated (e.g. Census 2001), as latest data is still not available / published. So, the findings of the study are accurate to the degree of reliability which can be associated with the data sources chosen herein.
- Since the study aims at a granularity of district level whereas a lot of inputs, both primary as well as secondary, are often available and obtained at the granularity of state level. So, the outcomes, when aggregated at state level will better stand the test of accuracy as against district level outcomes. Having said that, the bottom-up approach of skill demand-supply gap estimation quite well reflects the district level situation in our opinion.
- In some of the Industries, they do not keep the employees' staffing record as per the skill levels, so we have relied on industry interactions and our approximations in those cases.

1.4 Executive Summary

This study aims at conducting the district level skill gap assessment for the state of Goa and providing specific inputs and recommendations for multiple stakeholders involved in improving the skill scenario in a state. NSDC, a public-private initiative, promoted as a part of National Skill Development Mission, has development of research base for enabling better decision making across stakeholders in the skill development space, as one of its key objectives under which district-wise skill gap assessment studies have been conducted in multiple states. The Goa study is aimed at building a comprehensive directional guide for various stakeholders like the Government, Industry & Training providers to take cues for their actionables.

The study takes a 3-pronged approach wherein the entire skill scenario in the state is mapped from the angles of economic growth and related human resource requirement, the demographic and socio-economic scenario and related human resource availability as well as the supporting infrastructure enabling skilling in the state. By mapping all the 3 perspectives, key areas of intervention are identified based on a detailed Qualitative as well as Quantitative skill gap assessment. Extensive primary interactions with the decision makers in the industries, vocational training providers as well as Government bodies were conducted to understand the demand & capacity side of the skill scenario. Additionally, one to one interactions with multiple target groups and their parents & influencers were also conducted as a part of the study to understand the youth aspirations and their constraints along with their decision making process. A total of more than 3500 interactions, in total, in both the North as well as South Goa districts, were done across multiple profiles during the study.

In terms of economic growth, the share of services sector has been significantly increasing in the state and with the mining activities being affected, services and especially Hospitality are being looked at for absorbing the impact of unemployment generated from the mining sector. However, with an average of 9%-10% economic growth in the last few years, Goa has been growing quite well recently. Within manufacturing, Pharmaceuticals has been present ubiquitously both in the North as well as South Goa districts. Additionally, FMCG, Steel as well as Ship Building have emerged as high employment potential sectors in the state. Given Goa's natural biodiversity, Food Processing is also an industry that has high growth likelihood in the future. In Services, Hospitality, the biggest job creator, has not only seen growth in terms of expansion of base for key indicators like tourist arrivals but it also has been experiencing an upward movement in the value chain with increase in the number of charter arrivals as well as lot many upcoming high end hospitality properties in anticipation of the growth.

So, keeping in view the expectation of the state moving onto medium to high growth path given the favorable policies, the estimated incremental human resource requirement of the state across primary, secondary as well as tertiary sectors during the XII plan as well as XIII plan, stand at 100k and 126k respectively.

However, in terms of human resource availability, Goa is likely to feel the pressure of huge inward migration, as in the recent past and unless a significant increase is propelled through Government and Institutional intervention in encouraging higher participation in labour force through promotion of formal as well as vocational education, the issue is likely to snowball further. Skilling, given the cultural gene of the state, gels perfectly with this aimed actionable. One of the other reasons for the emergence of this potential issue is also the much lower population growth of the state that stands at 8.2% for the last decade against 17.6% for the country. The state observe a large proportion of its population dropping out in the latter half of their schooling education and while multiple options in Hospitality allure them with its ingrained seasonal variations suiting the psyche of the local population, skill development remains a major mechanism to address the dropping-out issue by channelizing them into mainstream employment. On a qualitative note, when it comes to youth aspirations, services sector rules the roost. Especially, in the coastal areas, there is a strong trend of joining the hospitality sector and thereafter going abroad, joining cruise liners. Recent developments in IT & ITes along with Retail have also occupied the youth mind space in terms of their aspirations. In the hinterland, the behavior resembles that of surrounding areas of Karnataka and Maharashtra wherein undergoing high education, especially technical education gets priority. There is also a trend observed among a smaller group in the direction of taking up entrepreneurial routes.

So, with the above issues in place, the state's working age population is likely to grow from 10.4 Million in 2012 to 10.8 Million in 2017 to 11.3 Million in 2022 adding approximately 40k additional working age population from 2012 to 2017 and 50k from 2017 to 2022. However, given the relatively lower willingness to work among the local population, reflected through the Labour Force Participation Ratio (LFPR), the estimated skill gap in the state over 2012-17 as well as 2017-22 time period end up at 80.2k and 104.8k respectively, which indicates huge quantum of project skilled manpower deficit for the state.

Based on the gap between the human resource requirement as well as availability while considering the capacity existing at various levels in Goa, a deficit exists across all the levels though the on ground interactions suggest that most of it is felt severely at the semi-skilled level. This clearly indicates the need for revamp in the capacity

of vocational training institutes in the state. In the unskilled level, significant inward migration has already been experienced in the state. In the highly skilled level, while the inputs have been mainly in the direction of qualitative improvement of course structure, the quantitative need felt is not that severe. Also, considering the high drop-out numbers at school level on a relative basis, role of vocational education in the larger context is accentuated. In terms of industrial feedback on the quality of the output from training institutes, industry opined that while most of the ITI trained manpower had sound theoretical basics, it was the practical orientation which was largely missing.

The state runs multiple initiatives and schemes which encourage capacity building in skill development area with both private as well as public involvement. In a move to standardize and improve the quality of vocational courses being run at multiple private institutes, they have brought under the purview of the larger umbrella of HRDF. While this initiative by the Directorate – Craftsman Training has been well received, there are multiple other initiatives run at departmental levels by directorates of Agriculture, Fisheries, Geology & Mining, Health, etc.

Key recommendations for the Government firstly aim at addressing the immediate capacity additions and modifications across courses in the Govt. and Pvt. ITIs. Courses aimed at Hospitality, IT & ITes, Retail as well as Manufacturing have been suggested for capacity additions. Some courses like Hair and Skin care have also been suggested keeping in mind promotion of self-employment, especially among the women, in the region. The report also indicates the role of SDIS scheme in addressing the long term gap in quantity. In terms of improving the quality of vocational education delivered, some measures like performance rating among the HRDF institutes as well as introduction of multi-skilling courses in the ITIs along with mobility from the schools to ITI / VTI have been suggested. One of the key roles of the government is also envisioned in promoting the uptake of Agriculture and Allied activities as career choices among the local youth.

For the Private training providers, one of the key suggestions include better involvement with the industry through an active and well-structured industry interface. It also points at the need for student counseling given the high proportions of students taking up courses without complete understanding of the career ahead. Also, the training institutes are suggested to participate along with the Government in elevating the social status of agriculture as a career choice.

While the industry is required to encourage the interfacing events from the academia's side through multiples modes like Train the Trainers as well as more internships and day tours for students, the key suggestions for NSDC include channelizing funds through its investee training companies in areas where the skill gap is most severe. While, NSDC needs to also put in significant effort in generating awareness about its initiatives, its role in the time to come, in developing NOS, especially Tourism & enabling its acceptance will be pivotal.

2. Goa State Overview

Goa which was liberated on 19th December, 1961 along with Daman & Diu from 451 years Portuguese Colonial Rule, became the 25th State of Indian Union when it was conferred Statehood on 30th Many, 1987.

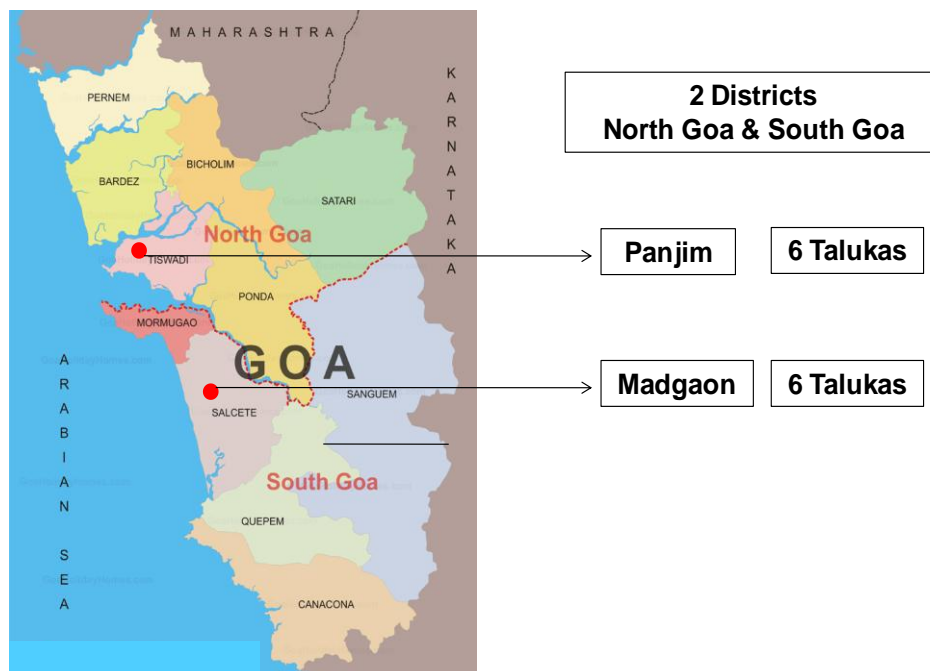
The tiny Indian State Goa, lying on the western coast is the one which boasts of immense natural beauty and jovial atmosphere is the fourth smallest State by population. It is bounded by the state of Maharashtra to the north and by Karnataka to the east and south, while the Arabian Sea forms its western coast. Goa is India's richest state with a GDP per capita two and a half times that of the country as a whole. It was ranked the best placed state by the Eleventh Finance Commission for its infrastructure and ranked on top for the best quality of life in India by the National Commission on Population based on the twelve Indicators.

Vasco da Gama is the largest city while Panaji is the state's capital. The historic city of Margao still exhibits the cultural influence of the Portuguese, who first landed in the early 16th century as merchants and conquered it soon thereafter. Goa is a former Portuguese colony; the Portuguese overseas territory of Portuguese India existed for about 450 years until it was annexed by India in 1961.

Goa is visited by large numbers of international and domestic tourists each year. It also has rich flora and fauna, owing to its location on the Western Ghats range, which is classified as a biodiversity hotspot.

In terms of its administrative structure, Goa is mainly structured around twelve talukas and two districts as under:

Figure 6: Map of Goa state with 2 district and 12 Talukas



2.1 Demographic & Socio-Economic Profile

Goa has a total area of 3,702 sq. km. Goa is located in West India in the region known as the Konkan, The state is a tourist destination renowned for its beaches, places of worship, world Heritage architecture.

Tourism is Goa's primary industry: It handles 12% of all foreign tourist arrivals in India.

Table 6: Population of Goa State

(In lakh)	Total	Male	Female
Population	14.58	7.41	7.17
Rural	5.51	2.76	2.75
Urban	9.06	4.64	4.42

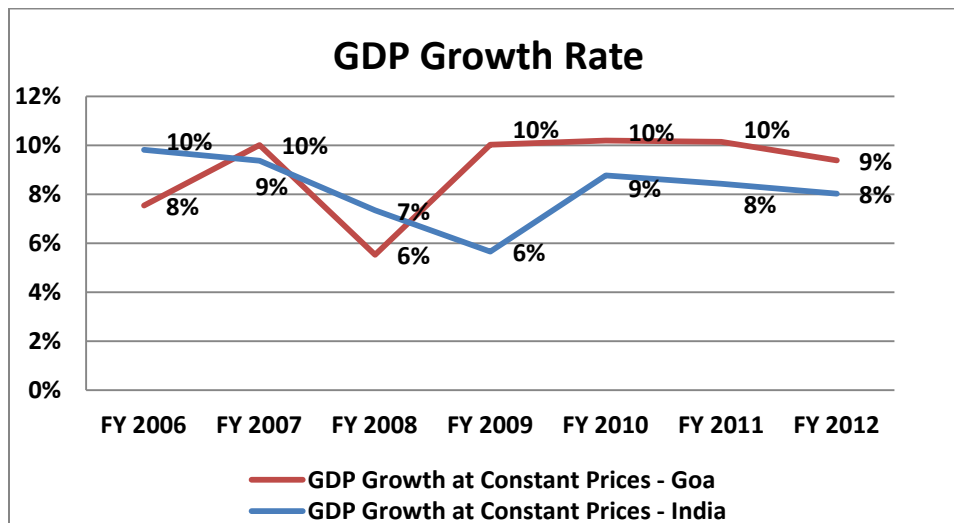
Source: Population of Goa State, Census 2011

At constant price (2004-05), the growth rate of Gross State Domestic Product (GSDP) over its previous year show that the economy of the State which grew at 10.02 percent in the beginning of the Eleventh Plan i.e. in 2006-07, dropped to a 5.54 percent of Growth rate in the first year of the Eleventh Plan and thereafter stabilized at around 10 percent in the next three years. However as per the estimates of GSDP for 2011-12, the growth rate dropped to 8.94 percent in the last year of the Eleventh Plan i.e. 2011-12. Also, the primary Sector registered a growth rate of (-) 2.52 percent as compared to a growth rate of (-) 3.15 percent in 2010-11.

This is attributed to the negative growth rate under mining sector, which is a sub-sector under the primary sector. Secondary sector also registered a steep decline in its growth rate from 11.55 percent in 2010-11 to 5.84 percent in 2011-12. This decline in the growth rate is witnessed in all the sub-sectors of the secondary sector. Tertiary sector which has registered a growth rate of 12.39 percent in 2010-11 witnessed an increase in its growth rate to 13.85%. Sector-wise composition of GSDP at constant (2004-05) prices show that tertiary sector accounted for 52.24 percent of the GSDP followed by secondary sector with 38.05 percent and primary sector with 9.70 percent.

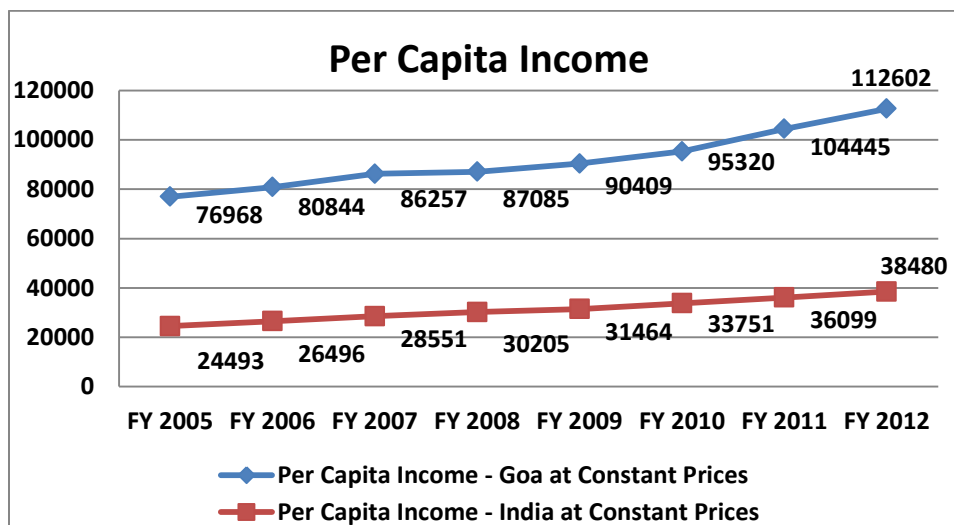
The Economy of Goa depends on the Agricultural, Industrial, Mining and Tourism sectors.

Figure 7: Year wise trend of GDP of Goa



Source: Economic survey 2012-13; Government of Goa, Directorate of Planning, Statistics & Evaluation, Panaji – Goa

Figure 8: Year wise trend of Per Capita Income of Goa



Source: http://mospi.nic.in/Mospi_New/Site/inner.aspx?status=3&menu_id=82

http://pbplanning.gov.in/pdf/merged_statewise11-12.pdf

2.1.1 Key Demographic Indicators

As per the census 2011, Goa population comprises of 1457723 individuals. Its share in total population of the country is 0.12%. In 2001 Goa's population was 1347668. Goa has registered an increase of 110055 persons or 8.17% in this decade.

The population density is 394 people per sq km that has risen by 30 as compared to 2001 density which was at 364 individuals per sq km. The density of population of North Goa is higher than that of South Goa. North Goa has a density of population of 471 whereas South has 326.

Of the total population of 14,57,723 in the state 7,40,711 (50.81 %) are males and the remaining (49.19%) 7,17,012 are females in 2011. Thus the sex ratio of Goa works out 968. The state overall declared a literacy rate of 87.40%. The literacy rate among males in Goa is 92.81% and female is 81.84%.

Table 7: Key demographic indicators

Indicator	Year	Goa	India
Population, No.	2011	1457723	1,210,193,422
Decadal growth rate of population, %	2001-11	8.20%	17.64%
Urban population as a percentage of total population, %	2001	62.17%	28%
SC population, %	2001	1.8%	16.20%
ST population, %	2001	0.0%	8.20%
Sex ratio, No. of females per 1000 males	2011	968	940
Population density, per sq. km.	2011	394	382
Literacy rate, %	2011	88.70%	74%
Working age population* as a percentage of total population, %	2001	66.6%	57%
Work participation rate^, %	2001	38.76%	39%

Source: Census 2001, Census 2011

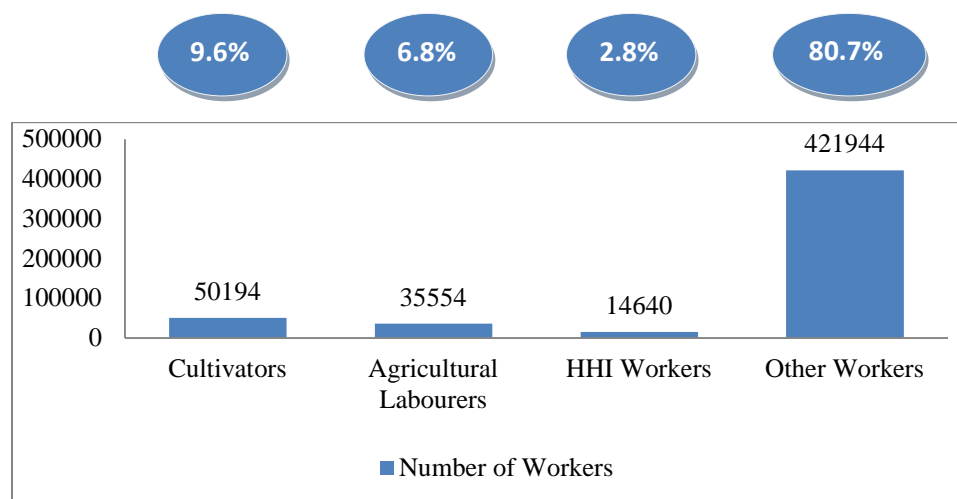
*Working age population is the population in the age-group of 15 to 64 years.

^ Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. It is also known as the labour force participation rate.

2.1.2 Workforce trends

The sex bias may be driven by economic considerations accentuated by the state's workforce profile. The gender gap in Goa's workforce is very striking—men constitute 72 per cent of the registered workforce while women are only 28 per cent. This gap is higher than the national average (Economic Survey 2003-2004). It is, however, well accepted that these kinds of statistics are unable to account for "unpaid" work that women do at home. Given that the educational profile of men and women in Goa are similar, this gap in workforce profile is, therefore, difficult to fathom and needs serious policy redress.

Figure 9: Demographic and worker profile of Goa



Source: Census of India, 2001

Table 8: Distribution of Worker by Category in Percentage

Distribution of Worker by Category in Percentage																
State/ District	Area	Total Workers			Cultivators			Agriculture Laborers (%)			HHI Workers (%)			Other Workers (%)		
Goa	T	522855	375218	147637	9.6	6.9	16.7	6.8	4.3	13.4	2.8	2.4	3.9	80.7	86.5	65.9
	R	274452	185648	88804	16.7	12.7	25.2	11.3	7.3	19.7	3.2	2.7	4.1	68.8	77.2	51.1
	U	248403	189570	58833	1.8	1.1	4	1.9	1.3	4	2.4	2.1	3.6	93.9	95.6	88.4
North Goa	T	307628	217255	90373	10.2	7	18	7.2	4.5	13.8	3	2.5	4.2	79.5	86	64
	R	175509	118605	56904	16.3	11.8	25.7	11.1	7.1	19.6	3.5	2.9	4.8	69.1	78.3	49.9
	U	132119	98650	33469	2.2	1.4	4.9	2	1.4	3.8	2.3	2	3.3	93.4	95.3	88
South Goa	T	215227	157963	57264	8.8	6.6	14.8	6.3	3.9	12.9	2.6	2.3	3.3	82.3	87.2	69
	R	98943	67043	31900	17.5	14.3	24.2	11.6	7.7	19.8	2.6	2.5	2.8	68.2	75.4	53.1
	U	116284	90920	25364	1.3	0.9	2.9	1.8	1.1	4.2	2.5	2.1	4	94.3	95.9	88.9

Source: http://planningcommission.gov.in/plans/stateplan/sdr/sdr_goa1909.pdf

The total population living in urban areas is 906,309 of which 464,590 are males and while remaining 441,719 are females. The urban population in the last 10 years has increased by 35.15 percent.

Sex Ratio in urban regions of Goa was 951 females per 1000 males. For child (0-6) sex ratio the figure for urban region stood at 917 girls per 1000 boys. Total children (0-6 age) living in urban areas of Goa were 87,174. Of total population in urban region, 9.62 % were children (0-6). Average Literacy rate in Goa for Urban regions was 89.31 percent in which males were 93.47% literate while female literacy stood at 84.96%. Total literates in urban region of Goa were 731,594.

2.2 Industrial Profile

2.2.1 State Level Macro-economic Indicators

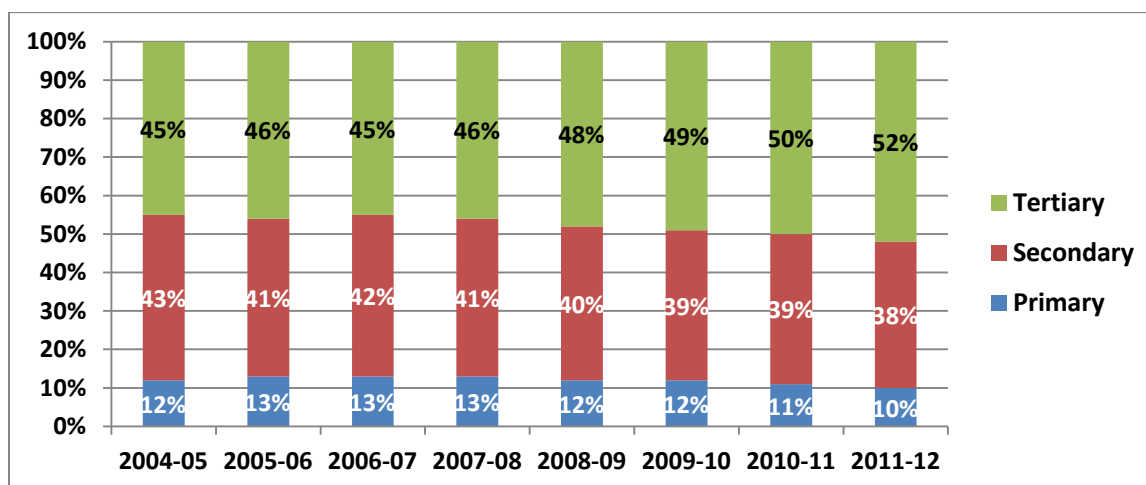
Goa the smallest Indian State, situated on its west coast amidst the States of Maharashtra and Karnataka, has impressive socio-economic indicators. However, the main thrust of the Government is to ensure sustainable and all round development of the State.

Table 9: Sectoral composition of GSDP at constant (2004-05) prices

Year	Sectors			GSDP
	Primary	Secondary	Tertiary	
2004-05	12.27	42.54	45.19	100.00
2005-06	13.37	41.45	45.17	100.00
2006-07	13.09	41.50	45.40	100.00
2007-08	12.59	40.99	46.41	100.00
2008-09	11.97	39.38	48.64	100.00
2009-10	12.33	38.67	48.99	100.00
2010-11	10.84	39.16	49.99	100.00
2011-12	9.70	38.05	52.24	100.00

Source: http://www.goapse.gov.in/publications/Economic_survey_2012-13.pdf

Figure 10: Share of primary, secondary and tertiary sectors in Goa's GSDP



Source: <http://www.goa.gov.in/pdf/goa-esurvey-2010-2011.pdf>

So, as we can see from the above graph, the share of tertiary sector which is mainly constituted of services industry and especially hospitality, has been increasing in the last decade whereas the share of secondary i.e. manufacturing and mining and primary sector i.e. Agriculture has been reducing.

Figure 11: Sector wise distribution of Goa's GDDP, as of 2011-12

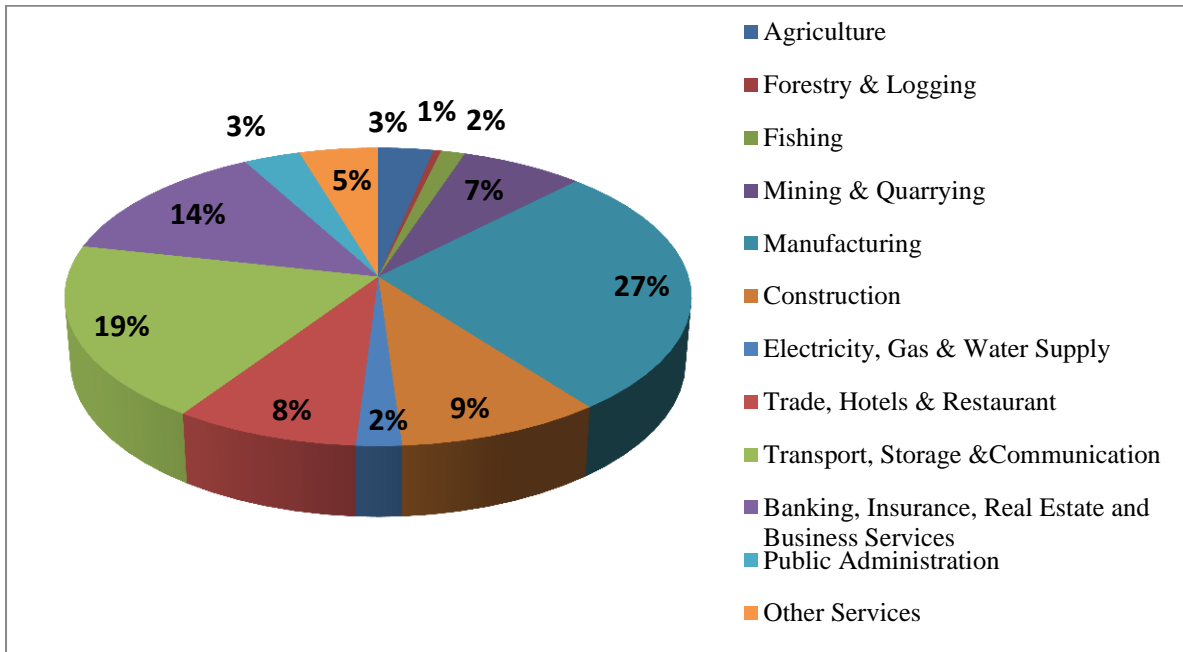


Source: http://goadpse.gov.in/publications/ECONOMIC_SURVEY_2012-13.pdf

In the last 3 years, as visible from the above graph, a significant slowdown has happened in the primary sector and this is mainly because of the slowdown in mining activities in the state.

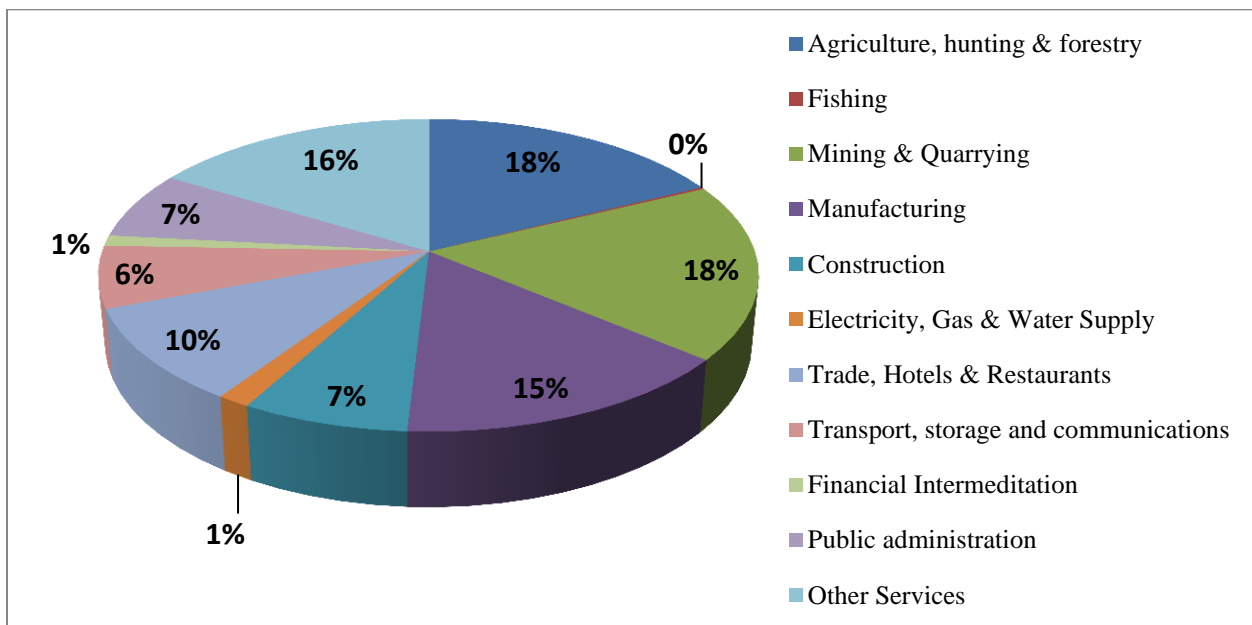
Below graph shows sector wise break up of Goa’s GDP and worker distribution in each sector of the year 2009-10.

Figure 12: Sector wise break up of Goa’s GDP of 2009-10



Source: http://goadpse.gov.in/publications/ECONOMIC_SURVEY_2010-11.pdf

Figure 13: Sector wise worker distribution of Year 2009-10



Source: NSS 66th Round

Figure 12 and 13 show the contrast in the manpower employment in each sub-sector vis-à-vis the contribution of that respective sub-sector in the economy. This is a comparability analysis done as per 2009-10 figures. So, as seen Mining and Quarrying which employs 18% of the workforce is contribution currently to the extent of 7% of the economy. Similarly, trade, hotels and restaurants which employ 10% of the workforce contribute to 8% of the economy. Agriculture, Forestry and Fishing which employs 18% of the workforce contributes to 6% of the economy. But at the same time, manufacturing which contributes to 27% of the economy employs only 15% of the workforce. With this background, we will now have an overview of Agriculture, Manufacturing & Services sector presence in the state before going onto the district wise analysis.

2.2.2 Agriculture Sector

The economy of the state of Goa depends to a good degree for its revenue on the agricultural sector. The various kinds of crops grown in Goa are rice, maize, bajra, ragi, pulses, and jowar. The state also produces cash crops such as cashew- nut, coconut, pineapple, jack fruit, and mango. In Goa, cashew- nut is an important cash crop for it is used in the manufacture of feni which is an intoxicating drink. The cultivation of sugarcane has also started in the state as a sugar factory has been set up. Goa produces a wide variety of mangoes like mussarade, alfonsa, fernandine, mancurade, colaco, and xavier. In the state, the irrigation sources are rivers, tanks, canals, wells, and streams. This sector has contributed to the growth of economy in Goa.

The staple produce of Goa is rice followed by coconut trees which accounts for variety of uses to which their products are applied. It is grown abundantly in groves all along the coastal stretch of the state, at many places interspersed with horticultural plantations. Hilly places and inferior soils are used for cultivation of cereals and pulses as nachne, urid, culit,orio, mug and tori; of fruit trees, the most important of which are the mango, the jackfruit, the cashew, and the banana; of oil and fibrous plants, as till, son; and of various kinds of vegetables, as potatoes, radishes, yams, ladyfingers, melons, watermelons, cucumbers, pumpkins, bottle gourds, and snake gourds. Besides these, chillies, ginger, turmeric, onions, and certain vegetables of daily consumption are extensively cultivated in some villages.

Over the last few decades, although agriculture in Goa is in a state of steady decline, it is one of the dominant economic activities of the state. As per the government estimates for 2001-2002, out of the total reporting area of 36.11 lakh hectares, 13.93 lakh hectares of the area is sown. Further, as per the Economic Survey 2001 conducted by the state Government contribution of agriculture alongwith livestock to the net domestic product (NDP) of the state is only 15%. Such a decline from primary sector is attributed to static agricultural production, decline in fish catch, falling output from forest sector etc. Goa is heavily depending on neighboring states for food grains, cereals, vegetables, milk etc. The Salaulim dam provides irrigation to a command area of 11,749 hectares in south Goa. Anjunem irrigation project provides irrigation facilities to 2100 hectares. The Tillari dam, under construction, which is as a joint venture between the state of Goa and the State of Maharashtra, is expected to irrigate 16,978 hectares of land in North Goa.

Table 10: Crop Production in Goa State as per 2010-11

Sr. No	Crop	Production (2010-11)
1	Rice	172489
2	Ragi	254
3	Pulses	7982
4	Groundnut	16812.24
5	Sugarcane	49108
6	Cashewnut	23138
7	Coconut	128.88
8	Arecanut	2818
9	Mango	9284
10	Banana	25006
11	Pineapple	4530
12	Vegetables	60472
13	OtherFruits	40850
14	Oil Palm	2146
15	Pepper	232
16	Tree Spices	4

Source: Economic Survey 2011-12

2.2.2.1 Human Resource Requirement of Agriculture Sector

Now, assuming that in terms of human resource, given the focus of the state government on agriculture and allied activities, the sector observes a reversal of trend and observes 3-4% agricultural growth on per annum basis and accordingly, observes 2-3% increase in human resource on per annum basis given the technological intervention, the quantitative skill requirement for the sector stand as follows. The below table shows the estimation made for Agriculture sector of human resource requirement for each of the skill levels for the year 2012-2017 and 2017-2022.

Table 11: Incremental Human Resource Requirement for Agriculture Sector for the Year 2012- 2017-South Goa

Skill Level	Demand - Agriculture
Skilled	314
Semiskilled	628
Minimally Skilled	5346
Total	6289

Source: Dexter Analysis

Table 12: Incremental Human Resource Requirement for Agriculture Sector for the Year 2017-2022-South Goa

Skill Level	Demand – Agriculture
Skilled	347
Semiskilled	694
Minimally Skilled	5902
Total	6944

Source: Dexter Analysis

Table 13: Incremental Human Resource Requirement for Agriculture Sector for the Year 2012- 2017-North Goa

Skill Level	Demand – Agriculture
Skilled	402
Semiskilled	803
Minimally Skilled	6826
Total	8030

Source: Dexter Analysis

Table 14: Incremental Human Resource Requirement for Agriculture Sector for the Year 2017-2022-North Goa

Skill Level	Demand – Agriculture
Skilled	443
Semiskilled	887
Minimally Skilled	7536
Total	8866

Source: Dexter Analysis

FISHERIES

The State has a coastline of about 104 Km. It has 250 Km of inland waterways and also a number of small tanks of fish ponds covering an area of 100 hectares. The coast is full of creeks and estuaries which provides excellent nurseries for major fishes as well as good shelter for fishing crafts. Goa is blessed with 4000 hectares of marshy, khazan lands for shrimp farming. There is ample scope for development of eco-friendly shrimp farms in Goa within the guidelines for sustainable development and management of aquaculture. The share of fisheries in GSDP of Agriculture & Allied Sector was 1.23% in 2011-12. During the year 2012, the marine fish production of 86628 tons and Inland fish production of 3887 tons was achieved.

Out of 11 talukas of the state, fishermen from 8 talukas are involved in fishing activities and fishermen from 42 villages are involved in marine fishing. Estimated population of fishermen in the state is over 30,000 and population of active fishermen is 12,000. The state has a registered fleet of 1,134 mechanized boats, 755 country crafts, 1963 non-motorized country crafts and 6463 nets, there are five fish landing centers and 14 fish landing ramps.

2.2.3 Manufacturing Sector

Table 15: Number of Enterprises registered on micro, small and medium category

No. of Enterprises registered(Rs. in Crores)

Type	Units
Small & Micro	7621
Medium & Large	189
Total	7810

Source: http://goadpse.gov.in/publications/ECONOMIC_SURVEY_2012-13.pdf

The economy in the state of Goa also gets its revenue from the industrial sector. There are many industries in Goa that manufacture tyres, fertilizers, chemicals, wheat products, pesticides, steel rolling, fish and fruit canning, brewery products, textile, footwear and Pharmaceuticals. As the state has a useful and efficient sea network, export of products to foreign countries by the industrial sector is being possible. This has boosted the industrial sector in the state which in turn has helped the economy of Goa to grow.

As per one of the independent studies, the economy in Goa depends for its revenue on the mining sector which is the second biggest industry in the state. The various kinds of minerals found in Goa are iron ore, clay, high magnesia, manganese, limestone, and bauxite. The total production of mineral was 137.37 lakh tons in 1996-1997. This sector provides employment to more than 21,000 people. The sector of mining has given a major boost to the economy of the state of Goa.

The land away from the coast is rich in minerals and ores and mining forms the second largest industry. Mining in Goa focuses on ores of iron, bauxite, manganese, clays, limestone and silica. The Marmagao port handled 31.69 million tons of cargo last year, and accounts for over 39% of India's iron ore exports. The leaders in the Goan iron ore industry include Sesa Goa (now owned by Vedanta Resources) and Dempo. Rampant mining in areas rich in iron ore and other minerals is now threatening the forest cover as well as posing a health hazard to the local population. Mining corporations are also indulging in illegal mining in some areas without proper permits. In fact, offlate, there has been a total cut-down on mining activities severely affecting the corporate houses like Sesa Goa and Dempo while also rendering all those employed directly and indirectly in mining. An association of miners estimate the total resulting unemployment caused to the extent of 45000 local workers and 55000 migrant workers, directly and indirectly. Though the migrant workers have left the state, the key task with the local administration remains to find alternative employment for the locals rendered unemployed. Agriculture, while of shrinking importance to the economy over the past four decades, offers part-time employment to a sizeable portion of the populace. Rice is the main agricultural crop, followed by areca, cashew and coconut. The fishing industry provides employment for about forty thousand people, though recent official figures indicate a decline of the importance of this sector and also a fall in catch, perhaps coupled with the fact that traditional fishing has given way to large-scale mechanized trawling.

Almost two decades back, with the government's pro-industry approach, many industrial giants, including Pharmaceutical companies started approaching. The approach is providing Tax holidays to Goa the reason for that is Goa is a very small in size and also a tourist destination. The land require for Industry is expensive and availability was also less. That is why Government has started providing Tax benefit for the limited period of time in a small state and to a specific industry such as Pharmaceutical. At the time Goa State Government

provides more attention for development of Pharmaceutical sector which is non polluting industry. There is a rapid growth in export of Pharmaceutical products through the port of Goa. At South Goa there is an Industrial Belt at Verna where well known companies of Pharmaceutical are operating. Goa is most suitably placed and has great potential of being a hub for Pharmaceutical industry in India; the factors in favor of Goa are English Speaking population, natural port with infrastructure and connectivity with all metro cities.

In Goa, large scale ship building industries are also present because of its geographical structure. Medium scale industries include the manufacturing of pesticides, fertilizers, tyres, tubes, footwear, chemicals, Pharmaceuticals, wheat products, steel rolling, fruits and fish canning, cashew nuts, textiles, brewery products. The Goa government has recently decided to not allow any more special economic zones (SEZs) in Goa. This is in stark contrast to policy followed by other states of India. SEZs are known to bring tax revenues for the government and employment option for local citizens since industries flock there for lower tax rates as compared to other areas. Currently there are sixteen planned SEZs in Goa. This decision was taken by state government after strong opposition to SEZs by political parties and Goa Catholic Church.

Goa is also notable for its low beer, wine and spirits prices due to its very low excise duty on alcohol. Another source of cash inflow into the state comes from many of its citizens who work abroad and remit money to their families.

2.2.4 Services Sector

Goa economy depends to a very large extent on the tourism sector. The state of Goa gets almost 12% of all the foreign tourists that visit India. The state handled 2670937 tourists in 2011. Goa's pristine beaches, Gothic churches, cuisine, temples and cultural festivals attract the tourist to visit Goa again and again. The sector of tourism has contributed a great deal to the growth of the economy of Goa. The other sectors that contribute to the economy of the state of Goa are the fishing industry, electronic industry, and cottage industry.

The literacy rate of Goa is 87.40% because of the high growth of Education sector. The growth of literacy rate is 11% from the last decade. District has Presence of large number of prominent IT/ITes industries at Verna Industrial Estate. Due to large number of beaches at Goa it is connected by all the metro cities by sea way which is a major reason behind growth of logistic sector at district.

Goa's gross state domestic product for 2007 is estimated at \$3 billion in current prices. Goa is one of India's richest states with the highest GDP per capita — two and a half times that of the country as a whole — and one of its fastest growth rates: 8.23% (yearly average 1990–2000). This is likely to drive the retails sector boom in addition to the increase in tourist inflows expected. Tourism is Goa's primary industry: it handles 12% of all foreign tourist arrivals in India. Goa has two main tourist seasons: winter and summer. In the winter time, tourists from abroad (mainly Europe) come to Goa to enjoy the climate. In the summer time (which, in Goa, is the rainy season), tourists from across India come to spend the holidays.

Goa economy has witnessed tremendous growth over the last few years. This has happened due to the contribution of a great many sectors.

TOURISM

Goa is known as **“TOURIST PARADISE”** for having a soul which goes deep into unique history of rich culture, temples, churches, old houses and prettiest natural scenery and god gifted beaches. “Sea, Sand and Surf” - these are the words, which attract millions of tourists to the state. Goa has been a major destination on the itinerary of international and domestic tourists. Besides, substituting beach tourism with other hinterland eco and adventure aspects, world's best tourism consultant are being engaged to formulate new tourism policy and tourism master plan for the state to create basic amenities and infrastructure to sustain tourism industry.

Government is also determined to ensure the Safety and security of tourists on the beaches of Goa. As such Government has engaged the services of M/s. Drishti Special Response Service Pvt. Ltd., to undertake the work of development, development, management and operation of a water safety patrol with “State of Art” facilities in the coastal waters of the State of Goa. Also Tourist Security Force named as Tourism Security Organization comprising of Ex-serviceman formulated in order to give additional protection and guidance to the tourists visiting the State.

The Government of Goa has declared the Tourism as an Industry with effect from 1.4.2000. The new Tourism Policy acknowledges the leading role of private sector in the development of the Tourism in the State. The thrust of the policy is diversification and value addition of tourism product while emphasizing on the basic role of the Government as a prime facilitator responsible for the up gradation of the quality infrastructure encouragement to the existing private tourism initiative through an appropriate package of fiscal and friendly taxation measures, generation of an investor friendly environment for new private initiative through a combination of a prompt processes and progressive fiscal and taxation policies. Also entrust regularity measures to ensure social, cultural

and environment sustainability by involving local community in the tourism sector for its own benefit and create trained human resource primarily from the local population.

Lastly, besides the natural beauty, the fabulous beaches and sunshine, travelers to Goa love the laid-back, peaceful, warm and friendly nature of the Goan people. More than anywhere else on planet earth, Goa is a place where people really know how to relax.

Table 16: Summary of Industries at GOA

Summary of Industries at Goa

Services	Manufacturing	Agriculture & Allied	Mining								
<ul style="list-style-type: none"> • Tourism, the biggest contributor in terms of employment • 12% of foreign tourists in India are received by Goa • 104 km of coastline and 250 km of inland waterways support Logistics Sector presence • MPT is a significant contributor • Other Sectors include: <ul style="list-style-type: none"> • IT / ITES • BFSI • Retail • Healthcare 	<ul style="list-style-type: none"> • Ship Building, Steel, Pharmaceuticals & Food Processing are the major industries • Other smaller industries include tyres, Fertilizers, Chemicals, Wheat Products, Pesticides, Fish and Fruit Canning, Brewery Products, Handloom and Cottage, Footwear, etc. <table border="1"> <thead> <tr> <th>Type</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Small & Micro</td> <td>7621</td> </tr> <tr> <td>Medium & Large</td> <td>189</td> </tr> <tr> <td>Total</td> <td>7810</td> </tr> </tbody> </table>	Type	Units	Small & Micro	7621	Medium & Large	189	Total	7810	<p><u>Agriculture</u></p> <ul style="list-style-type: none"> • Paddy, the major crop • Cashew-nut, Coconut, Pineapple, the major cash crops • Over the last 5 years, agricultural growth has been almost negligible <p><u>Fisheries</u></p> <ul style="list-style-type: none"> • Contributed to 1.23% to GSDP 2011-12 • Marshy lands, Creeks and Estuaries support this industry 	<ul style="list-style-type: none"> • Mining which used to contribute to 20% of state's revenue its peak, is at a standstill • There were around 17000-21000 trucks plying at its peak • Nearly 1,00,000 people employed in mining have gone unemployed in last few years • Of these, 45,000 people were locals and rest of them migrants who have gone back to their states
Type	Units										
Small & Micro	7621										
Medium & Large	189										
Total	7810										

Source: Economic Survey 2012-13, GOG

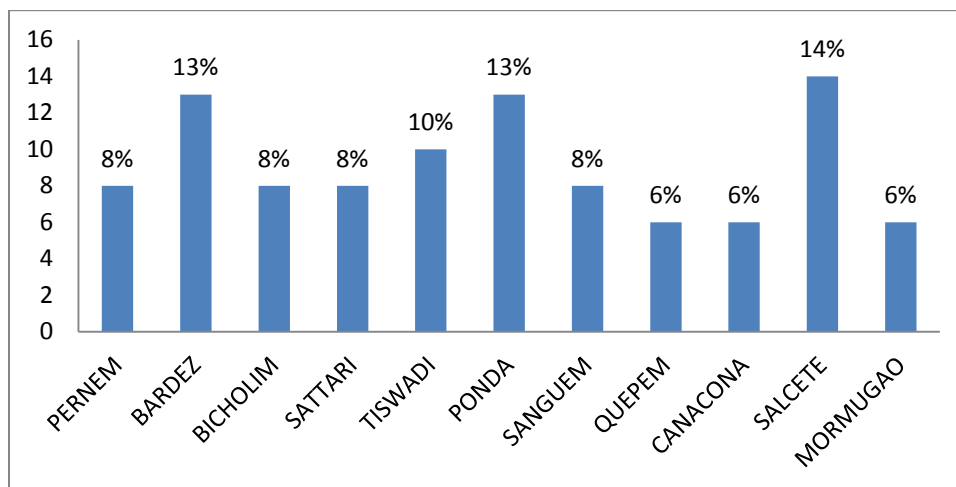
2.3 Education & Training Infrastructure

2.3.1 Primary & Secondary School Education

2.3.1.1 Current Scenario

As of 2011-12, Goa had 1227 primary schools, 444 middle schools and 380 schools at secondary level and 86 schools at higher secondary level. Of the total schools in Goa, maximum at 14 per cent were concentrated in Salcete district alone. This was followed by Bardez and Ponda district at 13 per cent. The lowest percentage of schools was in Canacona district at 5.85 per cent. The total student enrolment in Goa was over 2 lakh.

Figure 14: Taluka Wise Allocation of schools in Goa, as of 2011-12



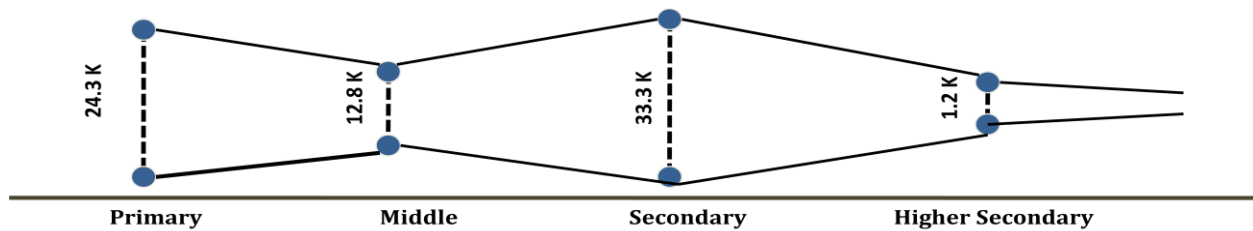
Source: Goa Education Department

Table 17: District wise allocation of educational Infrastructure in Goa, as of 2011-12

Educational Infrastructure(2011-2012)						
Institution	Total		North Goa		South Goa	
	Number	Enrolment	Number	Enrolment	Number	Enrolment
Primary School	1227	100206	734	53578	493	46628
Middle School	444	75863	262	41540	182	34323
High School	380	63055	221	34901	159	28154
Higher Secondary School	86	29762	51	16342	35	13420
Colleges of Non-Technical Courses	72	16872	39	8925	33	7947
Polytechnics and other Diploma level colleges	10	3652	5	1937	5	1715
Colleges of Professional Course	29	4031	23	3271	6	760
ITI/ITC and other related training Institutes	70	3294	45	2719	25	1327
Government ITI	10	3085	6	1967	4	1118
Institutions	54	209	36	752	18	209
Private ITI	6	-	3	-	3	-

Source: Goa at a Glance 2011

Above table clearly shows that total 100206 students enroll at Primary School, of which only 75836 students further take admission at Middle School. Thus 24343 students drop outs at Primary level school only and 12.8K students at Middle level school, 33.3k at Secondary school and lastly 1.2k student drop-outs at Higher Secondary School. At Higher Secondary School, the drop-out rate is lowest as compared to other stages of Education.

Figure 15: Drop-outs at Various Stages

Source: Goa Education Statistics – 2011-12, Directorate of Education, Goa Government

2.3.2 Higher & Technical Education

2.3.2.1 Current Scenario

Goa is known as one of the best tourist places in India as well as a place with the best educational institutes found to pursue higher studies. The programs offered by colleges in Goa are undergraduate, post graduate, Ph.D as well as diploma. Both technical and general courses are offered by the colleges with subjects like social science, life science and environment, management studies, engineering and architecture, fine art, music, language, natural science, commerce law, education and medicine and dentistry.

For higher education, colleges in Goa are affiliated to Goa University, which is the only university in this state which was formed under Goa University Act 1984. It is accredited to National Assessment and Accreditation Council (NAAC). There are a total of 53 colleges in the state. Goa is home for famous colleges, which are administered by private as well as government which include BITS Goa, GIM, St. Xavier's College, Goa and other renowned colleges.

For technical education, as of 2011-12, the State had 11 polytechnics offering different technical courses such as in automobile engineering, civil engineering, computer science, electronics, mechanical engineering, shipbuilding, etc. In addition, there are 5 engineering colleges enrolling 1872 students. In case of technical education, expansion has mainly taken place in the private sector.

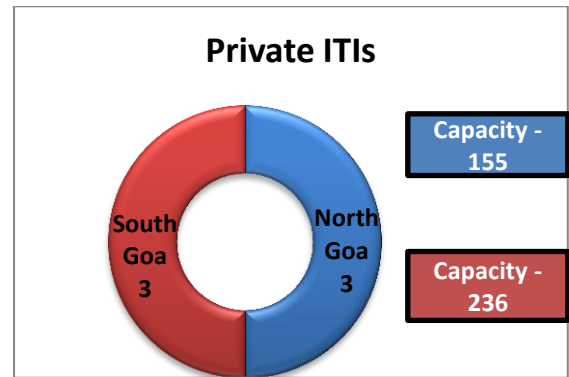
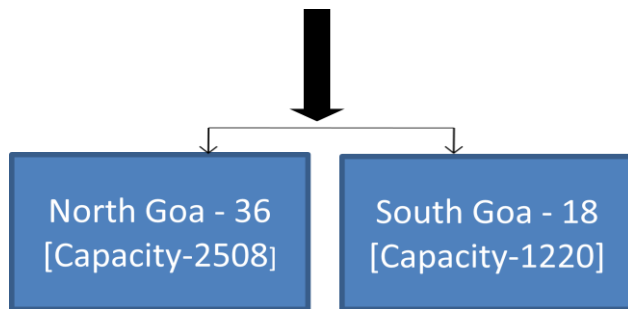
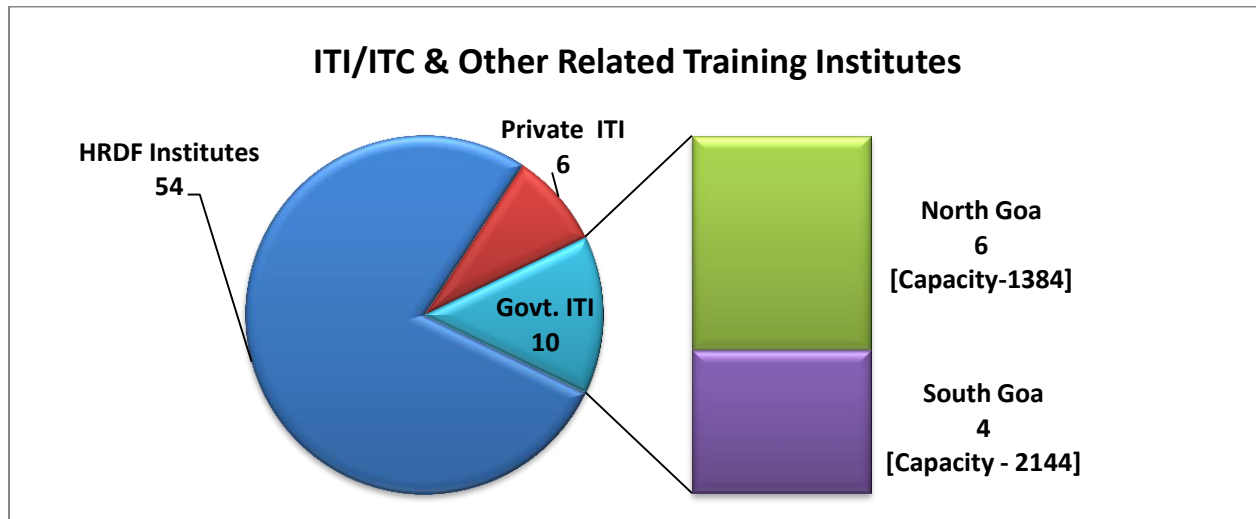
2.3.3 Vocational Education

2.3.3.1 Current Scenario

For vocational education and training, the state has 10 Government I.T.Is having total seating capacity of nearly 3000 trainees and 4 private I.T.Is having a total seating capacity of 400 trainees.

In addition, there is a special "Centre of Excellence" institute for vocational training which is characterized by close links between institutes, other training providers, industry, other employment interests and communities. It focuses on enhancing the skills and careers of those already in work, enhancing the employability of new entrants to the labour market, and also the employment prospects of those seeking employment (including self-employment).

Figure 16: Available Vocational Institutes at South Goa



Source: Goa at a Glance, 2011

Human Resource Development Foundation (HRDF):

In addition to the ITIs, there are multiple institutes which run courses which are not NCVT certified. They have been encouraged by the Directorate of Craftsman Training, Govt. of Goa to step forward and get registered under HRDF. So, such private institutes are registered under HRDF society. Courses of 6 months and one year duration are affiliated to this society. This society conducts exams and issues certificates.

2.3.4 Future Plans for Education & Training Infrastructure

Goa enjoys a place of pride in the country as one of the most literate states of India. Goa Government has been taking active steps for providing better quality education to the people of state

(a) Primary and Secondary School Education

Schooling in Goa is hardly a bottleneck as far as the entire Education supply chain is concerned. In the past, Government has encouraged schools through multiple mechanisms. Government has given financial grants to the 127 English primary schools, which had changed their medium of instruction from the regional language to English two years ago in the academic year 2013-14.

One of the Government scheme encourages setting up of new primary schools with Konkani or Marathi as their medium of instruction. At Education department 72 applicants were received by the DoE for opening such schools, and around 38 schools had started the classes. Department expects the number reach to 60 this year and around 2000 students will be studying in these 60 schools.

Last year, the government had announced 12 lakh one-time grant for new Konkani/ Marathi primary schools, with additional 1 lakh grant to them for five years, besides salary grants to non-teaching staff and a B. Ed. teacher to teach English subject.

The sources from the DoE informed that majority of the applications, which were received by the department under this scheme, were for opening new primary schools in Marathi medium.

(b) Higher Education

At the state level, it is imperative that the higher education system in Goa be able to cater to not only the state's indigenous demand but also be suitably competitive to cater to the overall country's demand.

However, as per a CII report, with a growing number of graduates and post graduates entering the job market each year and with their aspirations of well paying jobs not being met, there is an urgent need to improve the overall quality of higher and technical education in the state. The CII report throws light on some issues in the system that need attention like faculty shortages, lack of adequately qualified and trained faculty, course content and curriculum not in sync with current needs, poor quality of infrastructure, and inadequate linkages of institute with industries.

The initiatives are being undertaken to revamp the higher education system like attracting high quality institutions of learning to Goa for both government and private, emphasizing research, encouraging foreign education provider participation, exploring effective industry-academia linkages and using Information and Communication Technology (ICT) to enhance access to higher education in the state.

(i) Technical Education

As far as technical education is concerned, Government is taking lot of initiatives in Goa State e.g. one of the famous software developing companies; Oracle has signed an MOU with the Goa Government to integrate the Oracle Academy curriculum into the educational programs of the state's colleges and schools. As part of this MoU, 250 faculty members will undergo specialized training on the Oracle Academy curriculum that will be delivered to 18,000 students from 113 institutes in Goa, including the state engineering colleges, polytechnics, degree colleges and secondary and higher secondary schools over the next three years.

(ii) Non-Technical Education

Goa University is planning to start new master course for woman from 2014. There are 7.17 lakh females out of total 14.58 lakh population of Goa State. As the growth of female population of Goa is increasing and also the female literacy ratio is going up to 81.84%, Goa University has planned to start a new master course especially for women candidates from the academic year 2014-15.

According to latest news, the mandate for departments of women's studies requires them to introduce a master level course in women's studies with a full complement of core and optional courses and a dissertation. The requirement states that the core courses will be in feminist theory and methodology with special reference to their contributions to the general theory and methodology. The optional courses may cover the range being developed at one of the 60-odd women's studies centers set up under the UGC program across India, depending upon the competences, interest and thrust of different centers.

There is also a scheme for selection of "Goa Scholars" which is ongoing. The objective of the scheme is to promote pursuit of post-graduate studies by younger population of Goa, by way of recognizing the meritorious and outstanding candidates with a Scholarship to undertake Post-graduate and Ph.D studies in Institutions of proven excellence, in India or abroad. This Scheme is not meant to be the financial assistance scheme but will recognize the merit and merit alone.

The Scheme envisages the selection of maximum of ten 'Goa Scholars' annually from among the younger population of Goa in recognition of their merit by providing them scholarship in their pursuit of Post-Graduate and doctoral studies. The Selection Committee seeks among the eligible candidates, excellence in qualities of mind and in qualities of person that offer the promise of effective service to the country/world in the decades ahead. The Goa Scholarships, in short, are an investment in human capital-building rather than in project proposals.

The Scheme will be managed by the 'Higher Education Promotion Fund' (HEPF) that has separately been established by the Government for grant of interest free loan to the eligible candidates.

(c) Vocational Education

As far as Vocational Education is concerned, one of the major initiatives on the anvil for implementation is the roll out of SDIS scheme. Also, capacity augmentation to the current ITI setup is also being discussed. As per the Directorate of Craftsmanship Training "Skill Development Initiative Scheme" has been adopted, wherein the Chief Secretary of Government of Goa has suggested for concentration on short-term courses in the field of Agriculture, Horticulture and Home-Nursing for Skill Development Initiative Scheme. The 1st meeting for Skill Development Initiative has already been conducted.

The key features of the Scheme are as follows:

1. Demand driven short term Modular Employable Skill courses decided in consultation with Industry to school leavers, existing workers and ITI graduates.
2. Assessment by independent body appointed by Government of India.
3. Tuition fee, Training cost & examination fee will be reimbursed by Govt. of India to successfully trained candidates passing Assessment test.
4. Fees: Rs. 500/- to Rs. 2000/- (depending upon duration of course)
5. Entry qualification: STD V & above depending upon the skill set.
6. Certification Nationally & Internationally recognized.

2.4 State Government Skill Development Initiatives

The Government of Goa has initiated a loan scheme for self employment generation for rural development named “Chief Minister’s Rojgar Yojana” (CMRY). The scheme offers loan for different kind of services, for start up of various kinds of businesses, food processing units and also for Industry. As per the 2012 record, approximately 40% of the loan provided to Tourist Taxi, General Stores, Beauty Parlour, Tailoring and Readymade Garments. The derivative from the above statement is that, majority of the Goa people making their career by choosing the above field of self employment.

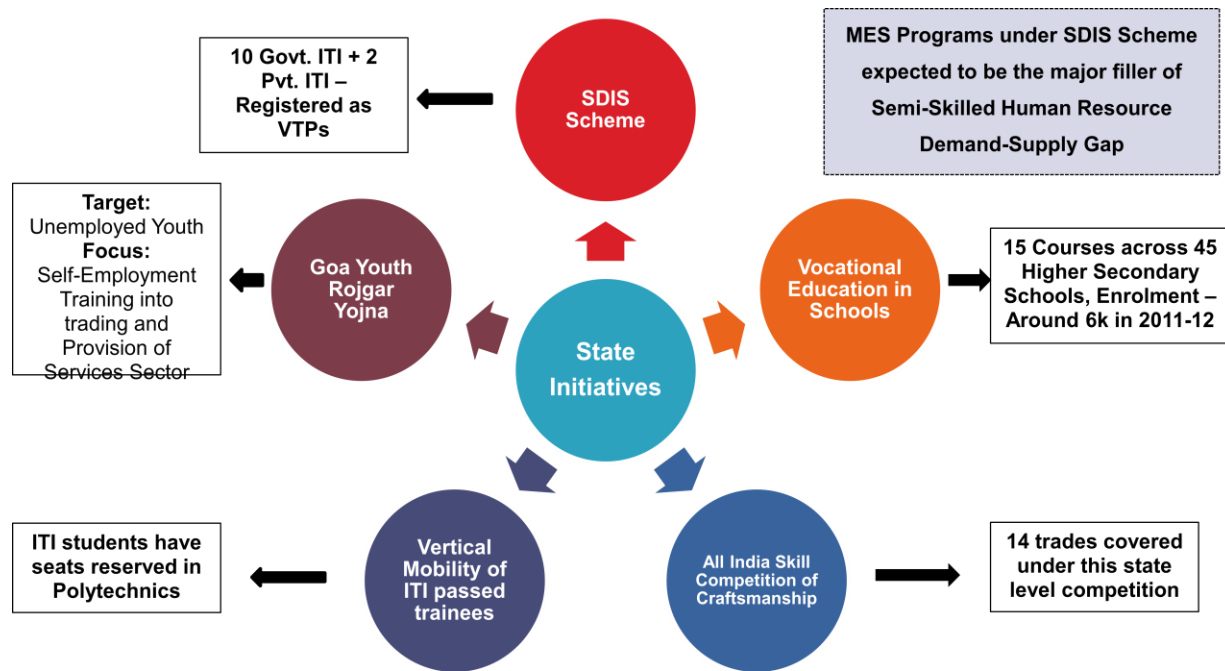
After analyzing the trend of applicants, number of units sanctioned and total loan amount passed, year 2010-11 is at the peak as 701 applications, 661 sanctioned units and the total loan amount was Rs.1911 lakh approximately as comparing from the year 2001 to 2013.

State Bank has started an Institute for Self Employment of rural people of Goa. There are around 17 courses are running at different places of Goa, most of them are of 2 month duration. Approximately, 314 students had taken training under Institute. The courses which have highest number of trainees are Cookery, Tailoring & Embroidery and Jute Bag products.

Looking at the Healthcare Industry, the total sanctioned strength of the positions is approximately 4400 of which around 25% posts are vacant. All the positions are divided into 4 groups. Group A has Sr. Surgeon, Jr. Anesthetist, Jr. Pediatrician, Jr. Gynecologist, Health officers and Public Health Dentist. Apart from all this, the highest strength of a position in Group A is Medical officers. Large numbers of Clinical Instructors are available at Group B as compared to other posts. Staff Nurses, Lab Technician and Drivers are there at Group C and at Group D, Ward Boys and Field Workers, Peon, Patient Attendants etc. Healthcare Industry has highest vacancies for the posts of Medical officers, Staff Nurses and Ward boys. The recruitment at this Industry is steering down from last 2 years.

GSIDC(Goa State Infrastructure Development Corporation) planning for establishing of 40 plots in each of the Industrial Estate in Goa State of around 600 square meters. The department proposes for opening a skill level centre per Industrial Estate in the State.

Figure 17: State level schemes and Initiatives



Source: Citizen's Charter, Directorate of Craftsman Training

Source: Citizen's Charter, Directorate of Craftsman Training

In addition to the existing Government & Private ITI setup along with the HRDF registered private institutes which caters to the skilled human resource requirements of the industry, some other specific initiatives are also run by the Directorate of Craftsman training along with the local industry to promote the culture of Vocational Education in the state. These initiatives are duly described as under.

All India Skill Competition of Craftsmen

For boosting the best vocational skills within the trainees of ITIs the "All India Skill Competitions of Craftsmen" are conducted by Government bodies. Presently 14 trade courses are covered under this program.

Vertical Mobility of ITI Passed Trainees

Government of Goa has provided vertical mobility to the ITI passed candidates in pursuing their studies in the various fields of engineering corresponding to their trades through the seats remaining vacant in the Polytechnics in the state provided the trainees have passed SSC examination and secured 60% of marks in the final ITI examination.

Goa Youth RojgarYojana Scheme

Self-employment has been identified as one of the effective and acceptable means of reducing unemployment on a permanent or semi-permanent basis. Since the last decade, there has been an overall increase in the level of awareness amongst individuals on account of education and also to the growth in viewer ship of the television resulting in mutual respect for professionals, be it in the field of coolers, hairdressers or general traders. This general awareness could be cashed in by encouraging unemployed youth into trading and provision

of service sector. This Scheme envisages provisions for self-employment (opportunity by providing all the necessary infrastructure to physically commence the self-employment ventures).

Under this scheme the jobs are provided along with minimal training to candidates who have the minimum qualification of passed standard XII /ITI / Diploma / Certificate.

Promoting Pre-Vocational Education

The objective of this scheme involves curbing the dropouts rates of students in Standard, IX and X and providing training to students from a large pool of minimally skilled labour force giving them opportunities in some skilled work either in their traditional occupations or in new areas to enable them to take up skilled and gainful occupations.

Vocational Education

This scheme envisages education in secondary and higher secondary education for developing professional skills among the youth thereby providing diversification of educational opportunities so as to enhance individual employability.

Vocational Guidance At +2 Stages

The scheme of vocational education at +2 stages was introduced in the state of Goa from the year 1988-1989. The scheme was introduced to provide an alternative to higher education and bring work and education closer. The main objective of the scheme was to provide diversification of educational opportunities and enhance individual employability, reduce mismatch between the demand and supply and skilled human resource as an alternative for those pursuing higher education and remaining unemployed. Vocational Education is a scheme which intends to prepare students for identified occupations, so as to create areas of self-employability. These courses are provided in the higher secondary schools along with general stream subjects. At present 15 vocational courses are provided in 45 higher secondary schools in the state with student strength of minimum 20 students for commerce based and 15 students for agro based, home science and technical based. Permission is granted to start additional divisions in C.R.M. course to five higher secondary schools.

In addition to this, multiple private organizations and associations are also promoting vocational education in Goa. Sesa Goa runs its own Private ITI. Travel & Tourism Association of Goa plan to conduct multiple Hospitality sector related vocational courses. They are also contemplating setting up of a full-fledged Hospitality Institute. Smart Edusol, the NSDC partner has also been running the private vocational training institute in Hospitality space for some time now. Also, Goa Mineral Ore Exporters' Association has partnered with Dr. Reddy's Foundation to provide Vocational Training to those unemployed out of the mining sector and to seek alternative employment for them.

Table 18: Other State Government training Schemes and Initiatives

Other State Training Schemes and Initiatives:

<p>WesternGhat Development Programme Promoted by: Directorate of Agriculture Target: Farmers Capacity: 100 farmers and 20 extension functionaries (planned)</p>	<p>Fisheries Promoted By: Directorate of Fisheries Target: Min 8th Pass, 18 years + youth Capacity: 25 per annum Period: 6 month program</p>	<p>Farmers' Training Centre Promoted by: Department of Animal Husbandry & Veterinary Target: Unemployed Youth, Farmers Focus: Dairy Farming, Piggery Farming and poultry Farming Capacity: NA</p>	<p>Ferry Services Training Promoted by: Department of Captain of Ports Target: New Joinees, Current employees Focus: Deck & Engineer Capacity: NA</p>
<p>Tourist Guide Training Promoted by: Department of Tourism Target: General Focus: History of Goan Hospitality, Managerial and behavioral skill and other aspects related to tourism Capacity: NA Period: 9 Weeks</p>	<p>Computer Trainings Conducted by: Keonics Target: Unemployed youth of Goa, SC/ST, 10th Pass with age limit of 40 years Focus: BPO, Web Designing, Travel and Tourism Operator, Hardware and Networking and Computerized Financial Accounting Capacity: 1000 per annum</p>	<p>Stockman Training Target: Department of Animal Husbandry & Veterinary Target: Unemployed Youth, Farmers Capacity: 40 per annum</p>	<p>IT Training to Goa Entrepreneurs Promoted by: Goa IT Innovation Centre Target: Incubatees</p>

Source: Department of Agriculture of Goa, Department of Tourism, Department of Information Technology

3. District wise Skill Gap Assessment

3.1 South Goa

3.1.1 Overview

South Goa is one of the two districts that comprise the state of Goa, India. It covers the entire southern part of Goa state. Arabian Sea is to the west; North Goa district to the North; and Uttar Kannada district of Karnataka in the East and South. The total geographical area of the district is 1966 sq. km.

South Goa is divided into 6 talukas for administrative convenience, viz., Salcete, Quepem, Canacona, Sanguem & Mormugao (Vasco-da-Gama)- geographically, Sanguem being the largest taluka & Mormugao being the smallest one. Very recently, one more taluka known as Dharbandora is carved out, dividing the Sanguem Taluka.

Figure 18 Map Showing South Goa District



From north to south and from east to west, the district spans a distance of 86 km and 40 km respectively. Madgaon is the district centre for the South Goa district and is well connected by Rail as well as Road. It also forms the bridge for entry into Karnataka since it touches its border.

South Goa has a number of 5 Star Hotels as well as 3 Star Hotels like Club Mahindra's, Taj Exotica, Cidede-de-Goa, Majorda, Hathi Mahal, Leela etc. Beaches in South Goa are quiet and peaceful not much happening but clean and tidy. South Goa has some good churches and friendly people. So, in terms of tourism, South Goa has a positioning of rather a relaxation destination than a happening destination for youngsters. Also, Sanguem and Canacona talukas happen to be where a lot of mines are located. So, it also used to be the centre stage of mining activities in its heydays.

3.1.2 Study of Industrial Scenario

3.1.2.1 Industrial Profile of the District

In the state of Goa, Iron ore and Pharmaceutical Formulations are the major items of export. And these two items also happen to be manufactured / extracted the most from the South Goa district in comparison with the North Goa District. During the financial year 2011-2012, the Mormugao Port Trust handled 29.37 million tonnes of iron ore including iron ore pellets, 7.21 million tonnes of coal/coke and 1.39 million tonnes of petroleum products and other liquid cargo. In Pharmaceutical Formulations sector, the export was Rs.200 crores in the year 2002-03 and has grown to Rs. 5,000 crores with the total employment of 8,800 people and with total turnover of Rs.10,000 crores.

South Goa district has a Verna Industrial belt where large Pharmaceutical industries are operating and also small presence companies of Food sector and Electrical sector exist. Apart from that Cuncolim Industrial estate, Canacona and Sangem also present in South Goa district. The major cluster in manufacturing sector in the district is Chemical, Pharmaceutical, Automobile & Auto repair parts, Electrical, Ship building and Food processing and Wine Industry. Within Services Sector, in South Goa, Hospitality rules the roost with a very high density of premium resorts and hotels. Additionally, Madgaon, the district centre has now been observing growth in Retail sector as well. Verna, the largest industrial estate in South Goa, also hosts IT and ITes sectors.

Large scale and public sector undertakings in the South Goa district are as follows:

Goa Ship Yard Ltd., Mormugao Port Trust, Zuari industries Ltd., Goa Carbon Ltd., IFB industries Ltd., Siemens Ltd., Indoco Remedies Ltd., Pentair Water India, Aventis Pharmaceutical, Wyeth Ltd., Abbott industries Ltd., Lupin Ltd., etc. are some of the noteworthy employers in the South Goa district.

Major Exportable Items are as follows:

Iron ore, Pharmaceutical Formulations, Electronics and Communication Devices, Medical Equipments, Container cargo, Swimming Pool equipments, etc.

Table 19: Taluka Wise SSI Units in South Goa

Taluka wise SSI Unit		
Sr. No.	Taluka	SSI Unit
1	Salcette	1666
2	Quepem	343
3	Mormugao	662
4	Sanguem	94
5	Dharbandora	42
6	Canacona	160
Total		2967

Table 20: Taluka Wise Large & Medium Industrial Units

Taluka wise Large & Medium Unit		
Sr. No.	Taluka	Large & Medium Unit
1	Salcette	58
2	Quepem	4
3	Mormugao	20
4	Sanguem	7
5	Dharbandora	0
6	Canacona	189
Total		278

Source: http://www.goalpse.gov.in/publications/Economic_survey_2012-13.pdf

3.1.2.2 Manufacturing Sector

Goa was always a tourist destination with South Goa being the more untouched part till industrialization came to folk lore a couple of decades ago. Till then, Mining and Ship Building were the two major industries present in the South Goa district in addition to premium tourism and Agriculture and Allied activities. However, in the last two decades, South Goa has seen significant industrial growth, mainly driven by the benefits rolled out to the industry by Government policy. Pharmaceuticals, a non-polluting industry was identified for growth and was given major thrust which lead to almost overnight growth of the sector in Goa. However, when Baddi in Himachal came up with better sops in mid 2000s, the industry suffered a significant blow. Since manufacturing sector received due focus, almost 6 industrial estates have flourished in South Goa. The major clusters of industries that found its feet in these estates are as under:

The Clusters in the Catchment Area:

1. Chemical & Pharmaceuticals
2. Electricals and Electronic Hardware
3. Food & Beverages
4. Steel
5. Paper & Packaging
6. Ship Building
7. Rubber, Plastic Petroleum and Coal Products
8. Auto & Auto Components
9. Handicrafts

These are the sectors that largely constitute the manufacturing sector in the district. So, we have focused on mainly interviewing the companies in these sectors. Below mentioned table gives basic numbers of these industries.

Table 21: Number of Units of major sectors in Manufacturing of South Goa

Sector	No. of Units
Chemical & Pharmaceuticals	220-240
Electricals and Electronic Hardware	190-200
Food & Beverages	700-720
Steel	410-420
Paper & Packaging	250-260
Ship Building	80-90
Rubber, Plastic Petroleum and Coal Products	260-270
Automobile/Auto Components	30-35
Handicrafts	15-20

Now, we will get into detailed discussion about each of the above sectors in South Goa along with case studies to support our understanding of that sector in South Goa. The case studies are drawn to ensure coverage of variations between small as well as large sizes industry in the district. However, in some cases, for the sake of confidentiality, we would refrain from divulging the details about the company.

CHEMICAL & PHARMACEUTICAL PRODUCTS

3.1.2.2.1 Chemical and Pharmaceutical products

Though Goa Pharmaceutical Cluster is small & compact, it is a very progressive cluster. With half a percent of the total units in the country, about 12% of the medicines are made in Goa. 90% of the units are WHO-GMP compliant. It is growing at a healthy rate of 18-20%. Almost all prominent Indian Companies and MNCs are having their production facilities in Goa and the cluster is self sustaining.

The cluster of companies in Pharmaceutical industry at South Goa are Zypher Medical Product, Wyeth Ltd., Orchid, Neucon Pharma Pvt. Ltd, Lupin Ltd, Vergo Pharma Research, Abbott and many more. Most of the companies are in Verna Industrial Estate. Also we have covered few chemical companies such as Umicore Anadyeya India Pvt. Ltd., Goa carbon Ltd, Nicomet Industries Ltd etc. The pharmaceutical companies are into manufacturing of bulk drugs and capsules. Some of the companies are also into manufacturing of OTC products. Companies have majority of their employees from Goa State itself and very few are from outside the state such as from Mumbai, Kerala etc.

3.1.2.2.1.1 Sector Overview

Primary research was carried out at large and small scale players as per predefined sample size in this sector by interviewing the person in-charge. The case studies for the same have been presented below:

The focus area of a large scale company is mainly in production of medicines. According to the HR Head, company's employee strength is 430 of which 45 are on management level, 185 on non management level are rest 145 are working on contract basis.

- At Top management level, out of 199, 20 people do management work while other involved in non management work. 40 employees are working at highly skilled category which includes Doctors, Juniors Research Followers and Managers with no attrition rate. 60-65 people are working at skilled level which includes BE, B.Tech, Diploma holder having good experiences with 2-3% attrition rate. At semi skilled level there are 50-60 employees working which includes Fitter, Operators, Mechanical, electrical and electronics with 10-12% attrition rate. There are 200 people at minimally skilled category which are Packaging and Loading and unloading with 15% attrition rate.
- Loading and Unloading department have 10 employees working with 8-10% attrition rate. Out of which 2 are on management level and rest are on non management level. There are 2 Senior Helper at highly skilled category with 6-7% attrition rate. At skilled level there are 8 Helper with 13-14% attrition rate.
- 30 employees are working at Quality department of which 4 do management work and others are involved in non management task. There are 4 Quality Control Supervisors at highly skilled category with 5-7% attrition. At skilled level category there are 24 Quality Tester with 10% attrition rate.

As per the HR Head attrition is a major issue in Pharmaceutical Company and it prevails over a longer period of time. Overall they are facing attrition rate of 12-15%. The major reason for attrition seems to be low salary offered as compared to MNCs. As far as growth rate of human resource is concern it is expected to be 80% for

highly skilled category, 35% for skilled category, 55% for semi skilled category and 20% for minimally skilled category in coming 5 years. The growth drivers seen in the sector are diversification of sector and planning to export more to other countries.

The focus area of the small scale company is mainly in manufacturing capsules and tablets. According to the HR Manager of the company, total 49 people work in the company of which 12 do management work and the rest do non-management work.

- Out of the total 20 employees working in services in the production department, 3 are at management level and the rest 17 are at non-management level. The highly skilled employee category includes 3 Mechanical Engineers having 2% attrition rate. The skilled employee category includes 11 mechanics and painters with about 2% attrition rate. The semiskilled employee category includes 6 helpers with 5% attrition rate.
- In the maintenance department, total 9 people are employed of which 1 works under the management department and the rest do non-management work. The highly skilled employee category includes 3 sales representative/customer relationship managers with about 2% attrition rate.

According to the HR Manager, the overall attrition rate of 1.5-2.5% is very negligible and not of much concern to the company. The HR Manager expects the growth rate of human resource to be approximately 50% in the coming 5 years in the highly skilled employee category, approximately 50% in the skilled employee category and approximately 50% in the semiskilled employee category. As per the manager, the major growth driver in this sector in the coming 10 years is that the desire of people to work is increasing.

The focus area of the medium scale company is mainly in manufacturing of zinc powder coating. According to the head of the operations and the technical department of the company, total 84 employees work at the company of which 71 are employed in the non-management department. Rests of them are employed in the management department.

- Out of the total 60 employees working in the production department, 12 are doing management work and the rest 48 are doing non-management work. Here, the skilled employees includes 20 R&D analysts with 10% attrition rate and Rs. 5,00,000 salary, 15 scientists with 10% attrition rate and Rs. 25,000 salary and 20 officers with 10% attrition rate and Rs. 20,000 salary.
- In the maintenance department, total 24 people are employed of which 5 work under the management department and the rest 19 do non-management work. The highly skilled employees here include 10 engineers with 10% attrition rate and Rs. 6,00,000 yearly salary each and 10 technicians with 10% attrition rate and Rs. 20,000 salary each.

According to the head of the operations and the technical department, the attrition rate is not much of an issue. The overall attrition rate in the company is 10% and this is due to the fact that employees get better jobs with a better salary at other companies. The head expects the growth rate of human resource to be approximately 70% in the coming 5 years in the highly skilled employee category and approximately 50% in the skilled employee category. As per the head, the major human resources growth driver in the coming 10 years would be business development strategies employed by the company.

3.1.2.2.1.2 Hiring Practices

Large scale company, hired minimally skilled labour force like Housekeeping and Security through contract basis with minimum qualification of 10th pass. The contractors are such as Marsha and leela enterprises etc. The Semi skilled category workers are recruited through employee references, direct walk in interviews and ads in newspaper like Navprabha. They should be at least 12th pass outs. Mechanical, Machine operator, Fitter, Electrician and Welder are hired through internal employee reference, job portals like Times.com and Naukri.com and newspaper ads at skilled level category. They should be at least ITI/Diploma pass outs. At highly skilled level, technical people are hired who are involved in R&D and Biological combination through ads in newspaper and job portals with the degree of PhD, M.tech or any Graduation.

In the medium scale company, the minimally skilled labour force like helpers, packers, loaders / un-loaders are mainly hired through direct walk-in interviews or consultants. They should be at least 10th pass outs. The semiskilled operations people like machine operators, fitters and welders are also employed in the same way as the minimally skilled people. The company prefers to hire skilled people like mechanics, supervisors and machine operators via direct walk-in interviews. These people must be ITI pass-outs or they should hold diploma or B.Sc. in chemistry or micro biology. The highly skilled people like production managers are mainly selected based on employee referrals, direct walk-in interviews or by giving ads in national newspaper. These people must be M.Pharm. or Ph.D.

In the large scale company, the minimally skilled labour force like helpers are mainly recruited via consultants. They should have a basic understanding of the things around. The semiskilled operational people like machine operators, welders and fitters that are ITI pass outs are recruited via human resource consultancies and through ads in the local newspapers like Navhind Times. The semiskilled technical people like electricians, technicians and mechanic should be ITI pass outs and are recruited through human resource consultancies. The skilled and the highly skilled employees are recruited through ads in the local newspapers and through employee references. The highly skilled workforce includes the chemical engineers.

3.1.2.2.1.3 Demand Side Skill Requirement

Table 22: Human Resource Requirement in Chemical & Pharmaceutical Industry

Chemical & Pharmaceutical Industry		
Category	2012-2017	2017-2022
Skilled	316	368
Semi Skilled	1245	1624
Minimally Skilled	416	543

Semi Skilled	Skilled
Fitters	B. Pharmacy / B. Sc. (Chemistry) – Production + QA
Electricians	Instrumentation Diploma / Degree Graduates – Maintenance
Mechanic Electronics / Instrumentation	

Source: Dexter Analysis

3.1.2.2.1.4 Organization Training Practice

Need based training is provided at large scale company, to all the employees for 7 to 8 days at BMW's training centre in Chennai. The charges for this training are Rs.56000 to 60000 and this training is conducted in-house.

The HR Manager of the large scale company stated that all the employees working in the company are good in their soft skills and since BMW is known for its quality, they hire only those highly skilled people who are good at technical knowledge related to the job and the skilled people who have a good experience. According to him, the training institutes should also teach the student the importance of discipline.

Training provided in large scale company is induction and need based both. They also provide OJT to the employees. Generally training lasts for 30 days and it organizes once per every 3 months. The training is in house as well as outsourced by the organization. According to HR manager Government should invest on infrastructure for training providers.

In the medium scale company, a month long training is provided to the new employees it could be need based or induction based. The target group for this training depends upon the situation like for new joiners the induction based training is provided but for the regular employees need based training is provided as at the time of new drug or machinery introduced the training is provided.

According to the HR manager of the small scale company, they also look for a good attitude and proper behavior in their employees. But, the practical knowledge of highly skilled technical people is not found adequate enough. More technical knowledge should be provided by the training institutes to the students.

ELECTRICAL & ELECTRONIC HARDWARE

3.1.2.2.2 Electrical & Electronic Hardware

Large number of units in Electrical and Electronic hardware Industry are present at South Goa. They are mainly into manufacturing of Silicon chip, Air Conditioners, Refrigerator, Electrical panel & Switch Boards, Watch, Cable and other more electrical equipments. The urban to rural ratio of employees at these companies is found to be on an average 60:40. The companies in these industries are having more male employees as compared to female ones; around 85% of the total employees are male and rest is females. The major reason mentioned by the companies for attrition is increase in competition in the market.

3.1.2.2.2.1 Sector Overview

Primary research was carried out at some of the large and small scale industries in this sector by interviewing the HR managers and functional heads. The case studies for the same have been presented below:

One of the large scale companies of the sector produce a range of products for power distribution of industries, utilities, power plants, infrastructure and cities. HR Assistant of the company stated that company have 270 employees out of which 20 are at management level, 200 are at non management level and 50 work on contract basis.

- Top management department have 120 employees out of which 15 do management work and rests do non management task. There are 5 Supervisor, 55 Senior Electronic Supervisor at highly skilled level, 55 Machine Operators at skilled level, 20 Electronic Engineers at semi skilled level and 35 Helpers at minimally skilled category of the company.
- Middle level department have 80 employees from which 20 are at management and 60 are at non management work. There are 70 Electronic Mechanical and ITes at highly skilled category, 20 technicians at skilled category and 20 Helpers at minimally skilled category.
- At lower level there are 30 employees includes 15-20 Engineers and 10 ETCT.

Attrition is not a major issue for the company. The expected growth rate for human resource in coming 5 years is expected to be 5%. The growth driver is only increase in production of the company.

The focus area of the large scale company is mainly in manufacturing electrical cables. According to the HR Manager of the company, total 30 people have been employed of which 10 are involved in management work and 20 are involved in non-management work.

- Out of the total 23 employees working in the production department, 2 are involved in management work and 21 are engaged in non-management work. Here, the highly skilled employee category includes only 2 engineers with 10% attrition rate and Rs. 15,000 salary. The skilled employee category includes 2 fitters with 20% attrition rate and Rs. 9000 salary, 4 turners with 20% attrition rate and 5 welders with 30% attrition rate and Rs. 9000 salary. The semi skilled category includes 5 injection machine operators with 20% attrition rate and Rs. 7000 salary. There are 10 helpers in the minimally skilled employees' category.

- In the maintenance department, total 4 people are employed of which 1 works in the management department and the rest 3 do non-management work. The highly skilled employee category has only 1 person as maintenance in-charge with no attrition and having Rs. 10,000 salary. The skilled employee category includes 1 electrician with 10% attrition rate and Rs. 8000 salary and 2 technicians with 10% attrition rate and Rs. 8000 salary.

According to the HR Manager, the overall attrition rate of 30% is not much of a concern as the company provides good jobs to the employees with better pay packages. The HR Manager expects the growth rate of human resource to be approximately 5% in the coming 5 years in the highly skilled employee category, approximately 10% in the skilled employee category, 10% in the semiskilled category and approximately 15% in the minimally skilled employee category. As per the manager, the major growth drivers for this sector in the coming 10 years would be better marketing strategies employed by the company and the chance of the right person being at the right place at the right time.

The focus area of the medium scale company is mainly in manufacturing of electrical equipments. According to the HR Manager of the company, total 22 employees work at the company of which 4 are employed in the management department and the rest of 18 are employed in the management department.

- Out of the total 22 employees working in the production department, 4 are doing management work and the rest 18 are doing non-management work. The skilled employee category includes only 2 supervisors with 30% attrition rate and Rs. 12,000 salary. The skilled employee category includes 2 fitters with 20% attrition rate and Rs. 8000 salary. There are 6 helpers in the minimally skilled employee category with 40% attrition rate and Rs. 7000 salary.

According to the manager, the overall attrition rate of 40% is one of the major concerns in the company but then the vacancies quickly fill in. Most of the times, employees leave their jobs due to some or the other family problems or if they find a better job near their home. The head expects the growth rate of human resource to be approximately 10% in the coming 5 years in the highly skilled employee category, approximately 2% in the skilled employee category, approximately 10% in the semiskilled employee category and approximately 10% in the minimally skilled employee category. As per the manager, the major human resource growth driver in the coming 10 years would depend upon the demand from the large industries.

3.1.2.2.2 Hiring Practice

At large Scale Company, the minimally skilled labour force is hired through contractor and employee reference with minimum 10th pass qualification. Semi skilled workers are hired by employee reference with qualification of ITI/12th pass outs or Diploma holder. Also Skilled category employees hired through contractors and employee reference with ITI pass out background and job portals like Naukri.com is a source for recruitment of highly skilled category employees. The selected candidate should have degree of NCUT.

In the medium scale company we spoke to, the minimally skilled labour force like helpers and housekeepers are mainly recruited via consultants. They also go for placements to ITI in order to hire operational level semiskilled people like electricians, fitter and mechanics. The technical semiskilled people like technicians are hired via ads in newspapers like Navhind times. These people must be ITI pass outs and preferably should have some work experience. The skilled and the highly skilled workforce hired via ads in local newspapers like Navhind times and

Herald. Operators and supervisors holding diploma in electrical and mechanical engineering are recruited for the skilled positions and electrical and mechanical engineers are hired for the highly skilled positions.

In the medium scale company, the minimally skilled labour force like helpers are mainly recruited via consultants. They could be 10th or 12th standard drop-outs but should have some experience. The semiskilled operational people like electricians, welders and fitters that are ITI pass outs are recruited via human resource consultancies and through employee references. The semiskilled technical people like electricians and technicians should be ITI pass outs and are recruited through via ads in local newspapers and through employee references. The skilled and the highly skilled employees are recruited through ads in the local newspapers and through employee references. The skilled workforce includes supervisors and foremen holding a diploma in the respective engineering fields. The highly skilled workforce includes the electrical engineers.

3.1.2.2.3 Demand Side Skill Requirement

Table 23: Human Resource Requirement of Electrical & Electronic Hardware Industry

Electrical & Electronic Industry		
Category	2012-2017	2017-2022
Skilled	157	183
Semi Skilled	715	933
Minimally Skilled	177	230

Semi Skilled	Skilled
Electricians	Electrical – Degree, Diploma
Mechanic Electronics	Electronics – Degree, Diploma
Machinists	

Source: Dexter Analysis

3.1.2.2.4 Organization Training Practice

In the large scale company, mainly induction based training is provided which includes induction training, product process training and SAP training for store management. This training is done in a batch of 20 people daily for a month.

The HR Manager of the large scale company stated that a hardworking nature, positive attitude towards work, honesty and good communication skills is what they look for in all of their employees and they have found that the skilled as well as the highly skilled employees in their company satisfy these criteria. As far as the technical

knowledge is concerned, the highly skilled employees are only good in their theoretical knowledge but not sufficient practical knowledge. According to him, government should take an initiative to make education better and the ITI institutes should give the students more industry exposure and focus on imparting practical knowledge.

In the medium scale company, a month long training is provided to the new employees which could be need based or induction based. The target group for this training depends upon the situation.

According to the HR manager of the small scale company, the behaviour and attitude of the highly skilled people are good but the semiskilled people are somewhat careless and not fully dedicated to their work. As far as the technical knowledge is concerned, the highly skilled and the skilled employees are good in theoretical knowledge but possess very less practical knowledge. At the same time, the semiskilled workers have some practical knowledge as they learn on the job but have very less theoretical knowledge. As per his recommendation, more focus should be laid on the practical knowledge.

FOOD & BEVERAGES

3.1.2.2.3 Food & Beverages

Goa is known for its bakery and confectionary products. It is also very well known for its distilleries. Ruled by Portuguese settlers from 1510 – 1961, the colonists brought with them a love of wine and they set about growing grapes despite the unpromising climate. They specialized in port-like fortified wines using *Vitis labrusca* varieties such as Bangalore Blue. Such production still continues. Increasingly, Goa is also becoming a marriage destination for lot of couples across the country as they chose to arrange their nuptial rites in Goa. This has also been a driver for fostering of Bakery and Food industry in Goa.

3.1.2.2.3.1 Sector Overview

Primary research was carried out at large and small scale industries in this sector to understand the market demand of this sector. The case studies for the same have been presented below:

The focus area of one of the small scale companies is mainly in manufacturing liquor. According to the DGM of the accounts department of the company, total 15 people have been employed in the company of which 2 work in the management department and the rest 13 work in the non-management department.

- Out of the 15 employees working in the production department, 15 are engaged in management work and the rest 13 handle the non-management work. Here, the highly skilled employees include 3 supervisors with 0% attrition rate and Rs. 20,000 salary. The semiskilled employees include 2 electronics engineers with 10% attrition rate and Rs. 5,000 salary, 3 technicians with 10% attrition rate and 2 welders with 12% attrition rate and Rs. 5,000 salary. There are 5 helpers in the minimally skilled employees' category. They have 15% attrition rate and a salary each of Rs. 5,000.

According to the DGM, the attrition rate is not much of an issue at the company. The overall attrition rate in the company is 10% and this is due to the fact that the company manages to recruit employees quickly. The HR Manager expects the 100% growth rate of human resource in the coming 5 years in the highly skilled employees' category, approximately 10% in the skilled employees' category and 20% in the minimally skilled employees' category. As per the DGM, the major growth driver in this sector in the coming 10 years would be the amount of perfection that the company tries to achieve in whatever work it undertakes.

The focus area of one of the large scale companies that we spoke to is mainly in manufacturing of ice-creams. According to marketing manager of the company, total 110 employees work at the company of which 7 are employed in the management department while the rest 103 are employed in the non-management jobs.

- Out of the total 80 employees working in the production department, 5 are doing management work and the rest 75 are doing non-management work. The company really does not have any highly skilled workers. The skilled employee category includes 3 female supervisors with 5% attrition rate and Rs. 12,000 salary and 4 male supervisors with the same attrition rate and salary. The semiskilled employee category includes 10 packaging boys with 2% attrition rate and Rs. 10000 salary, 10 washing boys with 2% attrition rate and Rs. 9000 salary and 12 operators with 4% attrition rate and Rs. 10000 salary. There are 40 helpers working under the minimally skilled employee category having 10% attrition rate and Rs. 8000 salary.

- In the maintenance department, total 10 people are employed of which 8 work under the management department and the rest 2 do non-management work. The highly skilled employee category includes 6 quality inspectors with 2% attrition rate and Rs.15000 salary. The skilled employee category includes 2 electricians with no attrition and Rs. 10000 salary.

According to the manager, the overall attrition rate in the company is 10% which is not much of a problem because the company hires the employees season wise like September to January so the employees readily come back during the season. The manager expects the growth rate of human resource to be approximately 20% in the coming 5 years in the highly skilled employee category, approximately 20% in the skilled employee category, approximately 10% in the semiskilled employee category and approximately 20% in the minimally skilled employee category. As per the manager, the main growth driver in the food sector in the next 10 years would be the growth strategies employed by the companies

3.1.2.2.3.2 Hiring Practices

In the large scale company, the minimally skilled labour force like helpers and people for loading/unloading and housekeeping are recruited via consultants or newspaper ads. They mainly require machine operators and electricians who are ITI pass outs in the semi skilled – operations category. Semi skilled technical people like technicians are mainly recruited via employee references, through consultants/contractors or newspaper ads. They use the medium of local newspaper ads or employee references to recruit the skilled workforce like chemists, supervisors. These people must hold a diploma engineer certificate or should have a B.Sc. Chemist degree. The highly skilled people like managers must hold a master degree in micro biology or chemistry. These people are mainly hired via applications found on the job portals and through employee references.

In the small scale company, the minimally skilled labour force like helpers are mainly recruited by giving ads in the local newspapers. The semiskilled operations people like machine operators and having completed at least the 12th standard schooling are recruited via direct walk-in interviews or by giving an ad in the local newspaper Navhind times. The skilled and the highly skilled employees are recruited through ads in the local newspapers. The highly skilled employees include managers and supervisors.

3.1.2.2.3.3 Demand Side Skill Requirement

Table 24: Human Resource Requirement of Food & Beverages Sector

Food & Beverages Sector		
Category	2012-2017	2017-2022
Skilled	286	333
Semi Skilled	1086	1417
Minimally Skilled	539	704

Semi Skilled	Skilled
Fitter	Food Processing Specialist
Electrician / Electronics (Multi-skilling)	Quality Control & Compliance
	Electrical & Instrumentation Engineers in Maintenance

Source: Dexter Analysis

3.1.2.2.3.4 Organization Training Practices

In the large scale company, 3 kinds of trainings are provided to the new employees – induction, communication and entrepreneurship training. This is done in house, free of cost, in a batch of 12 to 15 employees daily for an hour each.

The HR Manager of the large scale company stated that positive attitude towards work is what they look for in all of their employees but some of the highly skilled employees leave the organization after 2 years of experience and are found to be dishonest towards the company. As far as the technical knowledge is concerned, the highly skilled employees are only good in theoretical knowledge but have very less knowledge about what is actually required in the company.

In the small scale company, 15 days need based training is provided to the new employees. The target audience of this in-house training depends on the situation.

According to the HR manager of the small scale company, the skilled and the semiskilled employees possess good soft skills and are co-operative. They do not really need highly skilled people for such an industry and the current skilled people employed in the company are very good in their work. The semi-skilled and the minimally skilled people can do fine without any technical knowledge. But as per his recommendation, government should introduce some courses for the food industry.

STEEL

&

STEEL PRODUCTS

3.1.2.2.4 Steel & Steel Products

India has emerged as the fourth largest steel producing nation in the world, as per the recent figures released by World Steel Association in April 2011. The companies in this industry are mainly into buying and selling of sheet metal products and steel rod. In South Goa, however, this industry is mainly present in form of manufacturers of derived steel products.

Generally male employees are preferable over female in steel companies. Organization suggest to government to provide good infrastructure, safety and transportation facility to people who are connected to this industry and Training providers are to be suggested that more practical knowledge should be provided.

3.1.2.2.4.1 Sector Overview

Primary research was carried out at some of the large scale players in this sector by interviewing the person in charge. The case studies for the same have been presented below:

The focus area of one of the large scale companies in this industry is mainly in manufacturing steel rods. According to the HR Manager of the company, there are 180-200 employees in the company of which 45 work in the management department, 70 are on contract basis and rest of them are employed in non-management jobs.

- There are 135-140 employees working in the production department, 30 are doing management work. Here, the highly skilled employees include 20-25 mechanical, electronic, electrical engineers and operators with 0% attrition rate. There are 50-60 mechanical, electrical mechanics and operators with 2.8-3% attrition rate. The semi-skilled category includes 15-20 helpers of the above operators with 3-4% attrition rate. There are 12-15 people in housekeeping and loading work in minimally skilled category with 5-6% attrition rate.
- In the maintenance department, total 15-20 people are employed of which 5 work under the management department and the rest do non-management work. The skilled category includes 10-12 employees working as helper of machine operator, electrician and in fittings with attrition rate of 5%. There are 8-10 employees in semi-skilled category with 8-10% attrition rate. The rest are in minimally skilled category.
- In the engineering department, 10-15 people work in total of which 2-3 work in the management department and the rest of them work in the non-management department. There is 1 person under highly skilled category and the attrition rate 0%. There are 8-10 lab technicians, machine operator in the skilled category with attrition rate of 2-3%. The semi skilled category includes 2-3 helpers with attrition rate of 3-5%.

According to the production manager the attrition rate is negligible & not much of an issue. The overall attrition rate in the company is 3-5% and this is due to the fact that better monetary benefits elsewhere or due to personal problems. The head expects the growth rate of human resource to be approximately 20-25% in the coming 10 years in the highly skilled employee category and approximately 30-35% in the skilled category. The expected growth rate in semi-skilled category is 25% in the coming 10 years and 15-20% in un-skilled category.

As per the head, the major human resource growth driver in the coming 10 years would be because they are planning to buy new machine and thinking of business expansion.

The focus area of another large scale company in this sector is mainly in manufacturing of M S Ingots. According to Administrative officer of the company, total 325 employees work at the company of which 50 are employed in the management department, 240 are employed in the non-management work and 35 work on contract basis.

- Out of the total 160 employees working in the production department, 3 are doing management work and the rest 157 are doing non-management work. The highly skilled category includes 3 production managers/production head/assistants with attrition rate of 0% and a salary of 50000 to 300000 per month. There are about a 30 production supervisors/foremen in skilled category with attrition rate of 3% and the salary is as per their qualification. The semi-skilled category includes about a 100 machine operators, fitter, welder, machine operator and painter with 20% attrition rate and the salary is more than the industry standards. The minimally skilled category has 36 helpers with 10% attrition rate and the salary is above the Goa norms of minimum wages of labor.
- In the maintenance department, total 5 people are employed of which 1 works under the management department and the rest 4 do non-management work. The highly skilled employee category includes 1 maintenance head with 0% attrition rate and the salary is as per the qualification. The skilled category includes 4 mechanical and electrical engineers with 0% attrition rate and a salary of Rs. 10000 to 25000.
- In the engineering department there are total 15 people and all of them work in non-management area. The skilled employee category includes 15 electrical and mechanical engineers with 5% attrition rate and the salary is more than the industry standards.

According to the owner of the company, the attrition rate is not at all an issue as the company provides salary, allowance, benefits, meals and weekly outings to its employees as per the European style. The head expects the growth rate of human resource to be approximately 20% in the coming 10 years in the highly skilled employee category, approximately 15% in the skilled employee category, approximately 50% in the semiskilled employee category and approximately 30% in the minimally skilled employee category. The major growth drivers in this sector in the coming 10 years would be the increase in the infrastructure and exports.

3.1.2.2.4.2 Hiring Practices

In the large scale company, the minimally skilled labour force like helpers is mainly hired through consultants, walk-in interviews or employee reference. The skilled operations workmen like firemen, welders are mainly hired through walk-in interviews or employee references. The skilled workforce is employed by direct walk-in interviews or employee references.

In the second company, the minimally skilled labour force and the semiskilled operations people are mainly hired through consultants and walk-in interviews. They require semiskilled technical people with experience.

3.1.2.2.4.3 Demand Side Skill Requirement

Table 25: Human Resource Requirement for Steel Sector

Steel Industry		
Category	2012-2017	2017-2022
Skilled	285	332
Semi Skilled	2069	2700
Minimally Skilled	670	874

Semi Skilled	Skilled
General Machine Operator / Machinist / CNC Operator	Fitter
Fitter	Electrician
Electrician / Electronics (Multi-skilling)	Mechanic Electronics / Instrumentation
Grinder	

Source: Dexter Analysis

3.1.2.2.4.4 Organization Training Practice

In the first large scale company, need based as well as induction based training is provided. Induction training is conducted for 7 to 8 hours for only the new employees and the 1 month OJT training is for the new as well as the existing employees. This in house training costs almost Rs. 5000-6000 per batch.

The HR Manager of the large scale company stated that all the employees working in the company demonstrate professionalism and a good attitude towards their work. The highly skilled employees like supervisors and the engineers and even the skilled and the semiskilled employees work very efficiently. The number of vocational training institutes with better infrastructure should be increased.

In the second company, only need based on the job training is provided. The training takes place every month for half a day and the batch size is 30 persons per batch. The training is conducted in house only.

According to the manager of the company, all the employees in their organization possess good soft skills as well as the technical skills. The recommendation given was that the number of ITI and other vocational training institutes should be increased and the existing ITI institutes should focus more on practical and industrial training. Also, the industry should provide better opportunities to the freshers by providing them internship offers.

PAPER & PACKAGING

3.1.2.2.5 Paper and Packaging

The presence of this industry has typically a close correlation with the presence of Pharmaceuticals industry since there, multiple types of packaging materials and mechanisms are useful, especially when the product is to be exported since that requires meeting the international standards and so, companies rather prefer to keep it as a specialized function by outsourcing it to packaging companies.

Major functions of the companies having business of Paper & Packaging are manufacturing of carbon paper, printing on paper and packaging of different kind of material. This industry has half of the employees coming from Goa and other half come from outside Goa, from states like Maharashtra, Assam, etc. The male to female ratio is 80:20 at majority of the companies at industry. However, this industry is known to employ typically more females than any other sectors. This industry has been growing locally from last few years due to demand in the market.

3.1.2.2.5.1 Sector Overview

Primary research was carried out at only two large scale players in this sector by interviewing the person in charge. The case studies for the same have been presented below:

The focus area of one of the large scale companies is mainly in manufacturing packaging products. According to the General Manager of the company, there are 130 employees in the company of which 10 work in the management department, 9 are on contract basis and rest of them 111 are employed in non-management jobs.

- There are 95 employees working in the production department, 5 are doing management work and the rest 90 are doing non-management work. Here, the highly skilled employees include 5 supervisors with 10% attrition rate and Rs. 9000 salary. Skilled employee category includes 10 machine operators with 2% attrition rate and Rs. 8000 salary. Semiskilled employee category includes 5 trainee machine operators with 1% attrition rate and Rs. 7500 salary. Minimally skilled employee category includes 80 helpers with 20% attrition rate and Rs. 7000 salary.
- In the maintenance department, total 10 people are employed of which 2 work under the management department and the rest do non-management work. The skilled employee category includes 2 electricians with 1% attrition rate and Rs. 9000 salary, 2 fitters with 2% attrition rate and Rs. 9000 salary and 6 welders with 2% attrition rate and Rs. 9000 salary.

According to the general manager, the attrition rate is negligible and not much of an issue. The overall attrition rate in the company is 4% and this is due to the fact that the facilities provided are great. The manager expects the growth rate of human resource to be approximately 1% in the coming 10 years in the highly skilled employee category, approximately 10% in the skilled employee category, approximately 10% in the semiskilled employee category and approximately 10% in the minimally skilled category. As per the manager, the major growth drivers in the coming 10 years in this sector would be the introduction of automation and new technology.

The focus area of another large scale company is mainly in manufacturing of carbon paper. According to HR Manager of the company, total 200 employees work at the company of which 150 are employed in the management department and 50 are employed in the non-management work.

- Out of the total 150 employees working in the production department, 6 do management work and the rest 144 do non-management work. The highly skilled category includes 6 managers with attrition rate of 3% and a salary of Rs.25000. The skilled employee category includes 90 chemists with 10% attrition rate and Rs.20000 salary. The semiskilled employee category includes 40 machine operators with 10% attrition rate and Rs. 15000 salary. Minimally skilled employee category includes 60 helpers with 20% attrition rate and Rs. 10000 salary.
- In the maintenance department, total 50 people are employed of which 2 work under the management department and the rest 48 do non-management work. The skilled employee category includes welders with 10% attrition rate and Rs. 12000 salary, 10-15 turners with 10% attrition rate and Rs.12000 salary and 10-15 fitters with 10% attrition rate and Rs. 12000 salary. The minimally skilled employee category includes 10 helpers with 20% attrition rate and Rs.8000 salary.

According to the HR Manager of the company, the attrition rate is not much of an issue with the overall attrition rate of the company being 10%. This is due to the fact that the company is very large and closer to the employees' home so they don't like to leave the company. The expected human resource growth rate in the coming 10 years in the highly skilled employee category is approximately 50%, approximately 50% in the skilled employee category, about the same in the semiskilled employee category and about 20% in the minimally skilled employee category. The major growth drivers in this sector in the coming 10 years would be better production and marketing capabilities.

3.1.2.2.5.2 Hiring Practices

In the large scale company, the minimally skilled labor force like helpers is mainly hired through consultants. The semiskilled operations workmen like firemen, welders are mainly hired through employee references. Semiskilled operations people are hired by giving ads in local newspapers. The semiskilled technical people should be at least 10th pass outs and should have some amount of work experience. The skilled workforce is employed by giving ads in local newspapers or employee references. These people must be ITI pass-outs. The highly skilled people should be at least graduates.

In the second company, the minimally skilled labor force like cleaners and the semiskilled operations as well as technical people like machine operators & technicians respectively are hired through consultants. They should have a basic understanding of the things to be done. The skilled people like the supervisors should be ITI pass-outs or should be holding a diploma in mechanical engineering. They are also hired through consultants. The highly skilled workforce like operational head should be either engineers or MBA and are hired by giving ads in local newspapers.

3.1.2.2.5.3 Demand Side Skill Requirement

Table 26: Human Resource Requirement of Paper & Packaging Industry

Paper and Packaging Industry		
Category	2012-2017	2017-2022
Skilled	135	158
Semi Skilled	479	625
Minimally Skilled	211	275

Semi Skilled	Skilled
Mechanic Electronics / Instrumentation	Mechanical – Degree / Diploma
Fitter	Electrical – Degree / Diploma
Electrician	

Source: Dexter Analysis

3.1.2.2.5.4 Organization Training Practices

In the first large scale company, need based on-the-job training is provided to the employees who have joined newly. The training period is of 3 months and is conducted daily in house.

The GM stated that all the employees were good in their soft skills. The highly skilled people should be aware about the production process and the semiskilled people generally possess some amount of practical knowledge but no theoretical knowledge. The minimally skilled people have no technical knowledge at all. His suggestion was that government should bring about a change in the syllabus of various institutions and the amount of industrial exposure and practical training should be increased in the training institutes.

In the second company, need based process training and safety training is provided for a week every 6 months. The training is conducted in house.

According to the manager of the company, all the employees in their organization are really cooperative and listen to their colleagues. The highly skilled people have the necessary leadership qualities and they should also have full knowledge about chemistry. All the other employees are also good at their technical knowledge. His suggestion was that the training institutes should help the students develop an attitude of doing their work in the best possible manner.

SHIP BUILDING

3.1.2.2.6 Ship Building

South Goa has a wide range of companies in this sector such as Goa Shipyard Ltd, Dempo Ship building and Engineering Pvt. Ltd, Bharti Shipyard Ltd etc. GSL is undergoing a modernizing of its yard to adapt to the latest technology in shipbuilding. Some companies built vessels including barges, tugs, landing craft, offshore patrol vessels and other vessels for the Indian Navy and Coast Guard and for export to countries like Yemen. The services provided by shipbuilding companies are Inland, coastal & sea going vessels, Passenger vessels, ferry crafts, pleasure launches and high performance vessels, Dredgers, split hopper barges, survey launches, police & paramilitary boats, Harbour utilities, tugs, pilot & petrol launches, bunker barges, crane barges etc. In Goa, quite a few number of ship building technology institutes are existing. Although the Indian shipbuilding industry currently accounts for only 1% of the sector globally, local industry estimates say cheap and skilled labour and growth of domestic industries such as steel will boost the sector. The global shipbuilding industry is worth Rs 7.3 lakh crore, while the Indian industry is just worth Rs 7,310 crore.

3.1.2.2.6.1 Sector Overview

Primary research was carried out at few large and small scale companies in this sector. The case studies for the typical companies same have been presented below:

The focus area of the large scale company is mainly in shipbuilding and repairing ships. According to the GM of the company, employee strength is 70 of which 9 are at Management level and 61 are at Non management level.

- Out of 13 employees working in production department, 4 are at management level and rests do as non management work. Here, highly skilled category include 1 QA-Senior Engineer with Rs. 25000 salary, 1 Asst. Engineer with Rs. 20000 salary, 1 Painting-Senior Manager with Rs. 50000 salary, 1 Senior Staff with Rs. 40000 Salary, 1 Steel-GM with Rs. 50000 salary, 1 Deputy Manager with Rs. 30000 salary, 1 Junior Engineer with Rs. 25000 salary, 1 Aluminum-GM with Rs. 50000 salary, 1 Senior Manager with Rs. 50000 salary, 1 Asst Engineer with Rs. 25000 salary, 1 Junior Engineer with Rs. 25000 salary, 1 Outfitting Manager with Rs. 50000 salary, 1 Eng with Rs. 25000 salary, 1 Piping Senior Manager with Rs. 50000 salary, 1 Assistant Engineer with Rs. 25000 salary, 2 Mechanical GM with Rs. 25000 salary, 1 Electrical GM with Rs. 50000 salary and 4 Eng with Rs. 25000 salary. Lastly skilled category includes 6 Electricians with Rs. 20000 salary. At this department company do not face attrition problems. \
- At Store & Purchase Department, 2 people are working at Management level and 4 at Non management level. Here also they have highly skilled and skilled category people. At highly skilled category company have 1 Senior Manager with Rs. 50000 salary. At skilled level they have 2 Assistant. Manager with Rs. 25000 salary, 1 Junior Officer with Rs. 20000 salary and 2 Junior Staff with Rs. 25000 salary. Company was facing 0% attrition at this level as well.
- Admin Department includes 1 Asst Manager with Rs. 25000 salary, 2 Junior Officer with Rs. 25000 salary and 1 Senior Staff with Rs. 30000 salary at highly skilled category. There are 5 Drivers and 35 people at Safety & Security at the company.

According to the GM, the attrition rate is not much of an issue at the company. The company expects 80% growth rate of human resource in the coming 5 years in the highly skilled employees' category. As per the GM, the major growth driver in this sector in the coming 10 years would be the contracts they were getting, Government subsidiary and low tax.

The focus area of the small scale shipping company is mainly into distribution of industrial products. According to Manager of the company, total 15 employees work at the company of which 1 are employed in the management department while the rest 14 are employed in the non-management jobs.

- At Production Department, company has total 24 employees all were at Non management level. Company have 6 people for Structural Fitting with Rs. 9450 salary, 5 people for welding with Rs. 9450 salary, 1 at electrical with Rs. 9450 salary, 5 for Painting with Rs. 9450 salary and 2 for Mechanical with Rs. 8000 salary. There are 5 helpers with Rs. 8000 salary at semi skilled level.
- 3 people are working at QC department of the company and all are involved in non management task. There are 3 Quality Checkers who gets Rs. 15000 salary per month.
- At Security department, company hires people for the Driving and Security. There are 3 security men and 1 driver at the company.

Attrition rate faced by the company is 0% at all the 3 departments. As per the manager it is not much issue for the company. They expect around 5% human resource growth rate in coming 5 years. According to the manager, if mining is restarted, there should be growth in coming 10 years in this sector.

3.1.2.2.6.2 Hiring Practices

In the large scale company, the minimally skilled labour force like people for safety and security are recruited via consultancy. The highly skilled and skilled category employees recruited through Educational institutes, Job portals, employee references and ads in local news paper. They hire employees for production department, Stores and Purchases, Admin and Accounts, Safety & Security, Aluminum, Outfitting, Piping, Mechanical and Electrical departments. Company hires graduate candidate who holds Diploma in Mechanical at Production department also with a good experience and for the other departments company require candidates who have degree of B.E. (Mechanical), BA and B.Com. Company recruits employees through BIT and SBT Institutes.

In the small scale company, the minimally skilled people like driver and security man are mainly recruited by direct walk-in or employee reference. The skilled operations people like for Production department and QC having completed ITI General are recruited via direct walk-in interviews or by employee references or by educational institutes. Employees are typically hired from the SBT institute.

3.1.2.2.6.2 Demand Side Skill Requirement

Table 27: Human Resource Requirement of Ship Building Industry

Ship Building Industry		
Category	2012-2017	2017-2022
Skilled	107	125
Semi Skilled	811	1058
Minimally Skilled	612	798

Semi Skilled	Skilled
Welders	Diploma / Degree – Mechanical
Fitters	Naval Architects
Machinists / Turners	Instrumentation

Source: Dexter Analysis

3.1.2.2.6.4 Organization Training Practices

At large Scale Company, training is provided during probation period which lasts for a 1 year. The target audience depends upon the situation. Here, need based and induction based training is provided to employees. Training organized by the company was purely in-house. Company suggests that Government should increase the standard for improvement of vocational institutional set up at Goa State.

Small Scale Company does not provide any kind of training to their employees. As per the Manager, Government should start the course of Structural Fitters and Welders at ITIs.

PLASTIC & PLASTIC PRODUCTS

3.1.2.2.7 Plastic

Cluster of companies covered in this sector at South Goa are Plastic exporters like Zundert (India) Pvt.ltd, GMI Zarhak Modular Pvt. Ltd, Glynwed Pipe system Pvt. ltd and many more. The focus areas of companies in this industry are Manufacturing Electronic plastic parts, manufacturing of Plastic pipes product, Plastic bags, Plastic ropes for Fishery industry & other Injection Molded products. Males are highly preferable at these industries and according to companies, low competition, large number of orders and increases in plastic product demand these three are the main reasons for growth of sector in Goa.

3.1.2.2.7.1 Sector Overview

Some of the large and small scale players in this sector are interviewed for conducting primary research. The case studies for the same have been presented below:

The focus area of the large scale company is mainly in manufacturing of plastic pipes. According to the HR Manager of the company, 100 employees is the total staff employed in the company of which 10 work in the management department, 50 work in the non-management jobs and the rest are on contractual basis.

- There are 94 employees working in the production department, 84 are doing non-management work. There are 4 production heads and assistant managers in the highly skilled category with 0% attrition rate and salary given to them is as per qualification. The skilled category includes 15 supervisors/operation foremen with 10% attrition rate and the salary paid to them is as per Goa Government rules. There are 40 machine operators/workers in the semi-skilled category and their salary is Rs. 236/day. The minimally skilled category includes 35 helpers or employees in packaging with 35% attrition rate and they are paid as per government's guidelines on minimum wages.
- In the maintenance department, total 6 people are employed and all are in non-management work. The skilled category includes 6 Mechanic/electrician with 20% attrition rate and the salary paid to them is as per rules.

According to the HR Manager, the high attrition rate is one of the major issues but they quickly find replacements for the employees that leave their jobs. The overall attrition rate in the company is 30% and this high rate is attributed to the fact that the Labour availability is through contractor and there is no control on contractors. Also the industry sector is here is Pharmaceutical so higher salary is provided elsewhere. According to the HR manager the growth rate depends on the sale or the project.

The focus area of another large scale company is mainly in manufacturing of plastic bags. According to the production manager of the company, total 300 employees work at the company of which 50 are employed in the management department, 200 in management category and the rest on contract.

- Out of the total 250 employees working in the production department, 40 are doing management work and the rest 210 are doing non-management work. There are 10 Factory/production/assistant production managers in the highly skilled category with 4% attrition rate and the salary is as per qualification. The skilled category includes 30 supervisors

with 4% attrition rate and the salary is as per industry norms or more. There are 180 electricians/mechanics in the semi-skilled category with 4% attrition rate and the salary paid is more than industry. There are 20 helpers in the minimally skilled department with 5% attrition rate and they are paid more than government's rule of minimum wages.

- In the maintenance department, total 25 people are employed of which 4 work under the management department and the rest 21 do non-management work. The highly skilled category includes 10 Chief maintenance Engineers/ Asst. Maintenance Engineer with 2% attrition rate and they are paid as per experience and qualification. The skilled category includes 10 mechanical/electronic engineers with 4% attrition rate and their salary is as per experience. There are 5 helpers in minimally skilled category with 6% attrition rate and they are paid more than industry.
- In the Quality department, 15 people work in total of which 2 work in the management department and the rest of them work in the non-management department. There are 4 employees in highly skilled category with 0% attrition rate. There are 13 quality control supervisors working under the skilled employee category with 2% attrition rate. They all are paid as per qualification.

According to the production manager the attrition rate is not much of an issue. The overall attrition rate in the company is 5% and this is due to the fact that employees have better working environment in the company and they are paid more than the industry. The head expects the growth rate of human resource to be approximately 100% in the coming 10 years in the highly skilled employee category and approximately 100% in the skilled category. Same is the case with semi-skilled and minimally skilled category. As per the head, the major human resource growth driver in the coming 10 years would be expansion of the company and increasing exports.

3.1.2.2.7.2 Hiring Practices

In the large scale company, the minimally skilled labour force is mainly hired through consultants. They mainly hire people from the Eagle security and services. The semiskilled operations people are mainly employed via contractors. They should be minimum 12th pass-outs. The semiskilled technical people like packagers are hired through direct walk-in interviews. They should be at least 12th pass with experience in the related field. The same process is followed for recruiting the skilled employees like electricians and mechanics. These people must have done a course in Plastic technology in an ITI. The highly skilled people like quality assurance officers and machine operators are mainly hired by giving ads in national newspapers like the Hindustan Times. They must hold diploma in plastic technology with 5 years of experience or must hold a degree in plastic technology.

In the small scale company, the minimally skilled labour force like loader/un-loader and housekeepers and the skilled operations people are mainly hired through consultants. The skilled technical people like helpers should be at least 8th pass-outs. Skilled employees like winders are recruited through consultants or personal interview. Highly skilled personnel like machine operators are employed are recruited by giving ads in the local newspaper Navhind Times and through employee reference. These people should be ITI pass-outs.

3.1.2.2.7.3 Demand Side Skill Requirement

Table 28: Human Resource Requirement of Plastic Sector

Plastic Industry		
Category	2012-2017	2017-2022
Skilled	136	158
Semi Skilled	584	763
Minimally Skilled	216	282

Semi Skilled	Skilled
Injection Molding Machine Operator	CIPET – Degree / Diploma or Rubber Technologist
Fitter	Mechanical – Degree / Diploma
Electrician	Electrical – Degree / Diploma

Source: Dexter Analysis

3.1.2.2.7.4 Organization Training Practice

In the large scale company, mainly need based on the job training is provided to the employees depending upon their skill and knowledge. This is done 2 days every month and is conducted in-house.

The HR Manager of the large scale company stated that the highly skilled and the skilled employees in the company were good in their soft skills as well as technical skills but the semi skilled and the minimally skilled employees needed training for their soft skills as well as the technical knowledge. According to him, training institutes must provide more practical knowledge.

In the other company, training provided in-house is need based and it is given on the job. The target audience is decided based upon their skill and the period continues for about a month as per the requirement.

According to the HR manager of the small scale company, all the employees working in the company at various levels are good in soft skills as well as technical knowledge according to the skills required for their respective positions.

AUTOMOBILE & AUTO-SERVICES

3.1.2.2.8 Automobile and Auto Components

South Goa district covered few Automobile part manufacturers as well as Automobile service stations like Caculo Group of company, Bavaria Motor Works etc. The male female ratio of employees working at Auto companies is around 70:30. Companies are involved in the designing, development, manufacture, marketing and selling of motor vehicles. Some companies are into manufacturing of sheet metal components, auto parts and auto ancillaries. The group of large companies hired only highly knowledgeable and experienced people. The high per capita income of the state also means higher purchase of Automobiles and this in turn, translates into need for more service stations. In fact, within this domain, Service stations are the largest employers. Almost all the premium brands have their significant servicing capabilities in Goa.

3.1.2.2.8.1 Sector Overview

Primary research was carried out for large and small scale players as per the decided sample size in this sector by interviewing the person in charge. The case studies for the same have been presented below:

The focus area of the large scale company is mainly in sales of cars and Auto components and providing services. According to the HR Executive of the company, employee strength is 320 of which 30 are at Management level and 290 are at Non management level.

- At Customer Relation Department, company have total 25 employees employed of which 5 are at Management level and rests 20 are at non management level. At highly skilled category company have Customer Relationship manager and Sales Executive. Company is facing very low 2-3 % attrition rate and there are 4-5 employees at this level. In case of skilled category there are 6-8 Sales Representatives are facing attrition of 2%.
- Washing Department includes around 40 employees of which 8 are at management level and rests do non-management work. At semi skilled level they have 5-6 Helpers and security Guard with about 10% attrition rate. There are 10 floor helpers and security man at minimally skilled category with 10% attrition rate.
- At Body Shop department, there are total 90 employees working out of which 4 are at Management work and rest do non management task. There are 15 Engineers and Supervisors at highly skilled category with an attrition of 5%. At skilled category there are around 35 people do work related to Mechanics, Fitter, Painter and Daintier with an attrition of 5%. Companies have Washer Man, Painter, Part repaired at semi skilled category with a very low attrition of 2%. At Minimally skilled category there are around 30 Housekeeping and Floor cleaners with 6% attrition rate.

Minimally skilled employees are getting salary of around Rs.6500 and company offer Rs.8000 to skilled and semi skilled category employees.

As per the HR Executive the total attrition rate faced by the Industry is 4% which is not a major concern for them. In coming 5 years the company expects to grow at the rate of 20% in case of human resource at the category of highly skilled, skilled and semi skilled category but in case of minimally skilled category company

expects to grow at 10%. The growth drivers are launching of new models of car by the large companies like Honda and Ford by in the coming 5 years.

The focus area of small scale company in Auto sector is mainly in to dealing with auto parts and components. As per the Admin Head Company has total 49 employees of which 12 are at management level and rest 37 are at non- management level.

- In Service department, the total employees are 20, of which 3 are at management level and 17 are at non management level. At highly skilled category, there are 3 Engineers and Mechanics with 2% attrition. Total 11 Mechanics and Painters are there with very low 2% attrition at skilled category. At semi skilled category, there are 6 Helpers with 5% attrition rate.
- Sales Department have 9 people at small scale company of which 1 do management work and 8 do non-management work. At highly skilled category there are 3 Sales Representative and 3 Customer Relationship Manager with 2% attrition rate.

Overall company is facing 2% attrition rate which is negligible as per the Admin Head. The company expects 50% growth of human resource in coming 5 years in all the categories except minimally skilled.

3.1.2.2.8.2 Hiring Practices

In the large scale company, the minimally skilled labour force like people for Housekeeping and security are recruited through contract basis. No specific qualification is require for this category people. The semi skilled category people like Washer man are higher through walk-in interviews and employee reference with having qualification of 10th Pass. At semi skilled level the employees hired through database management and employee reference. Helpers are hired at this level with 12th Pass qualification and also experienced candidates' gets priority. The recruitment of skilled and highly skilled category is done through Campus placement as large companies have tie ups with colleges like University of Pane, Carmel College etc. Apart from that at this level employees are hired by ads on local newspaper like Navhind Times and Herald. Mechanical and Fitter who are ITI pass outs are falling in skilled category while Engineer and Chief Mechanic are falling in highly skilled category.

At Small scale company, recruitment is done through direct walk in interviews of minimally skilled people like Helper for whom the required qualification like only candidate able to read and write, are applicable. Ads on local news paper like Navhind Times and Harald are the recruitment sources for the semi-skilled category people. These levels includes Mechanical, Fitter who are ITI pass outs. At Skilled category, recruitment is done by employee reference and ads on local newspapers with having Diploma, Graduate or ITI with experience as a minimum qualification. Mechanical Engineer and Supervisor who are at highly skilled category are hired through Naukari and Times job portals and their minimum qualification required is degree or diploma with work experience.

3.1.2.2.8.3 Skill Requirements

Table 29: Human Resource Requirement of Automobile & Auto Components

Automobile & Auto Components		
Category	2012-2017	2017-2022
Skilled	27	31
Semi Skilled	131	171
Minimally Skilled	73	95

Semi Skilled	Skilled
MMV / Mechanic Diesel Engine	Automobile or Mechanical – Degree / Diploma
Electrician	Floor Sales Person
Painters	

Source: Dexter Analysis

3.1.2.2.8.4 Organization Training Practices

At large Scale Company, training is provided to all the employees and it is categorized at RT1 & RT2 which last for 5-7 days. Company organized need based training for the employees which is outsourced by them.

Small Scale Company provides training at BMW's training center at Chennai to all the employees which last for 7 days. Training costs to the small companies around Rs. 50000 – 60000. Need based in house training is provided by the company at the small scale companies in this sector. As per the manager, training provider at the Institute should teach discipline to the students.

HANDICRAFTS INDUSTRY

3.1.2.2.9 Handicrafts Industry

South Goa has very few units of handicrafts industry. Companies in this sector are into types of fancy sarees, dress materials & suitings-shirtings, Unstitched Garments and also some are into exporting of a wide range of Handicrafts, wooden furniture, textiles & incense to the European Market. Handicrafts and Wooden furniture is sourced directly from artisans and artisan groups from the rural parts of India. Some companies also export a considerable amount of handcrafted textile wall hangings, table runners, cushion covers, lamps and bags.

3.1.2.2.9.1 Demand Side Skill Requirement

Table 30: Human Resource Requirement of Handicrafts Industry

Handloom & Cottage Industry		
Category	2012-2017	2017-2022
Skilled	40	47
Semi Skilled	71	93
Minimally Skilled	160	209

Semi Skilled	Skilled
Handicraft Weavers / Artists	Handicraft Designers

Source: Dexter Analysis

3.1.2.2.10 Miscellaneous

Here, We have covered companies which are into Home Appliances, furniture etc. All the employees working at this companies are almost males. In Goa market, there is a high demand of furnishing products due to the tourism factor. According to the companies we met Home Appliances sector is growing at a very high rate. Suggestions from companies is that Government should start highly demanded courses with affordable cost so as poor people can also get opportunity to learn.

3.1.2.2.10.1 Sector Overview

Primary research was carried out at players across multiple sectors and sizes in this category by interviewing the person in charge. The case studies for the same have been presented below:

Various companies we have covered under this category like Home Appliances, Furniture Industry etc.

The large scale companies of Home Appliances have total employee strength is 500 of which 150 are on management level while 250 are on non management level and rest 100 are at Contract based employees.

- At Production department, 25 highly skilled employees are there which includes Product designer, product brand manager and production manager with 2% attrition; skilled category includes Machine operator, electrician, fitter with 5% attrition; semi skilled includes Helper, Technician, Welder with 6% attrition and minimally skilled level includes Floor cleaner and Loader/Unloaded with 12% attrition.
- Maintenance department includes 50 employees from which 10 do management task and rest do non management work. Here, Chief technician, Technician, Chief Electrician, Electrician and Supervisor are at highly skilled category with 2% attrition rate. At skilled level Fitter, Welder, Machinist and Mechanicals are there with 2% attrition rate. Minimally skilled level includes Floor cleaner and Helper with 6% attrition rate.
- There are 30 people working at Quality and Admin department of which 6 are at management level. Store Manager, Quality Manager and Quality Assurance Manager form the skilled category with 2% attrition rate. At skilled category employees are responsible for store keeping and quality measurement. Floor staff and Helper are at semi skilled level with attrition of 4%. At minimally skilled level there are housekeeping and office boys where the attrition rate is very high.

As per the Sr. Admin Officer, Goans are easily migrating into another industry so overall attrition rate faced by the sector is 4%. Growth rate expected by them is 20% in coming 5 years. The recruitment happens through contract basis, employee references, by ads on newspapers and through direct walk in interviews. Apart from that highly skilled people recruited by campus placement like IIM, BITS Pilani, Xavier Group College etc and job portals like Naukari.com.

Company provides induction based training for new joiners and OJT for regular employees. Induction based training lasts for 3 days and OJT for 45 days. The training is organized both by in house and outsourced also which is held on yearly basis.

The suggestions from their side are students should be provided with more practical exposure and Government should organize seminar related to future vocational training.

Furniture Industry is hire employees through walk in interviews only also they are facing high attrition rate. They have car painter at minimally skilled category. According to the manager attitude and behavior of the current employees were not good. They are providing OJT to the new joiners which last for 3-6 months. The company provides need based in house training.

3.1.2.2.10.2 Demand Side Skill Requirement

Table 31: Human Resource Requirement of Miscellaneous

Miscellaneous		
Category	2012-2017	2017-2022
Skilled	40	47
Semi Skilled	239	311
Minimally Skilled	130	169

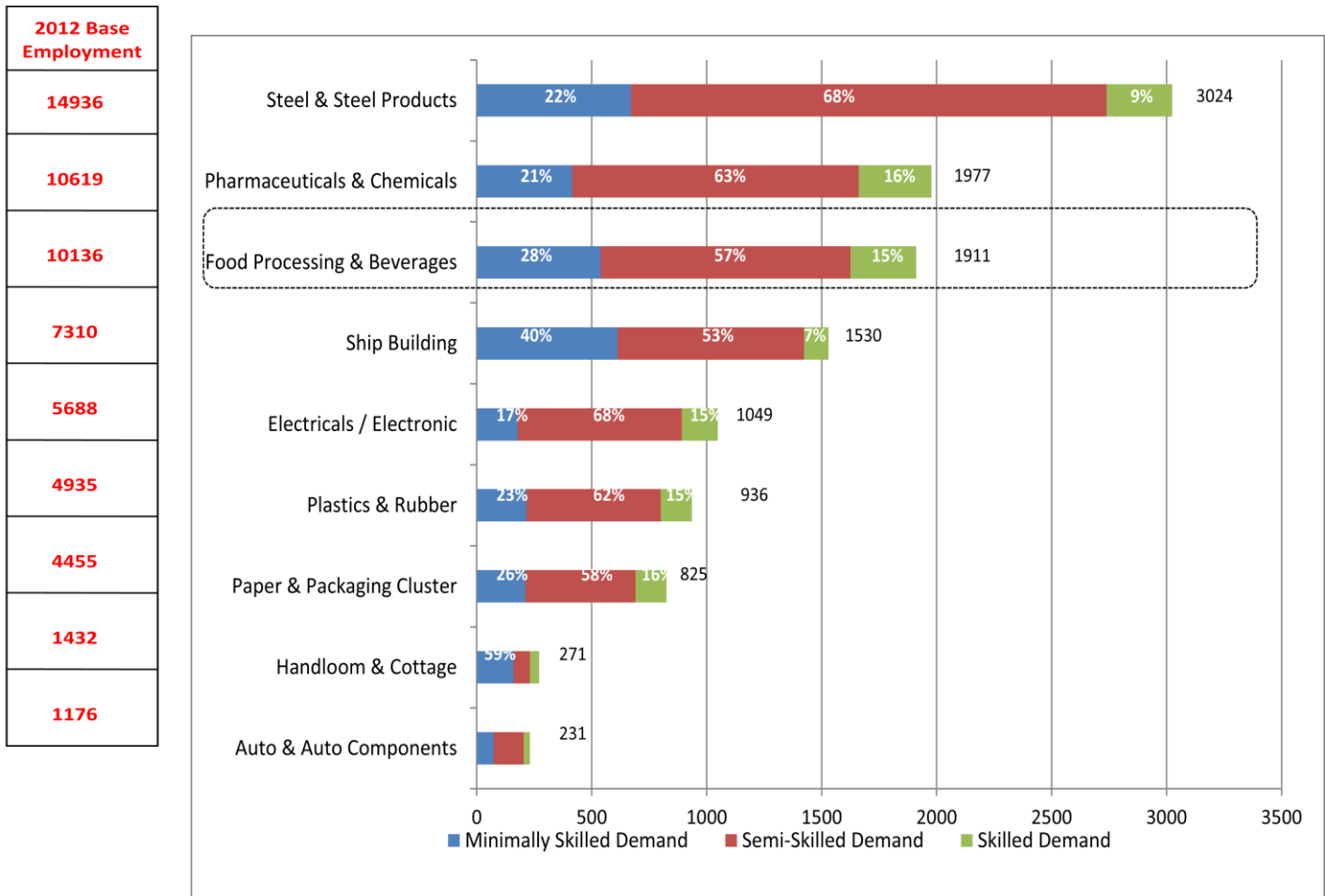
Semi Skilled	Skilled
Fitter	Product Designer, Production Brand Manager
Electrician	Quality Assurance
Machine Operator	

Source: Dexter Analysis

3.1.2.2.11 Incremental Human Resource Requirement in Manufacturing Sector

Now, when we add up the skill requirements for 2012-17 as well as 2017-22 for all the above manufacturing sectors, the total skill demand across the 3 skill levels in the manufacturing sector stand as follows:

Figure 19: Incremental Human Resource Requirement in Manufacturing for the Year 2012-2017



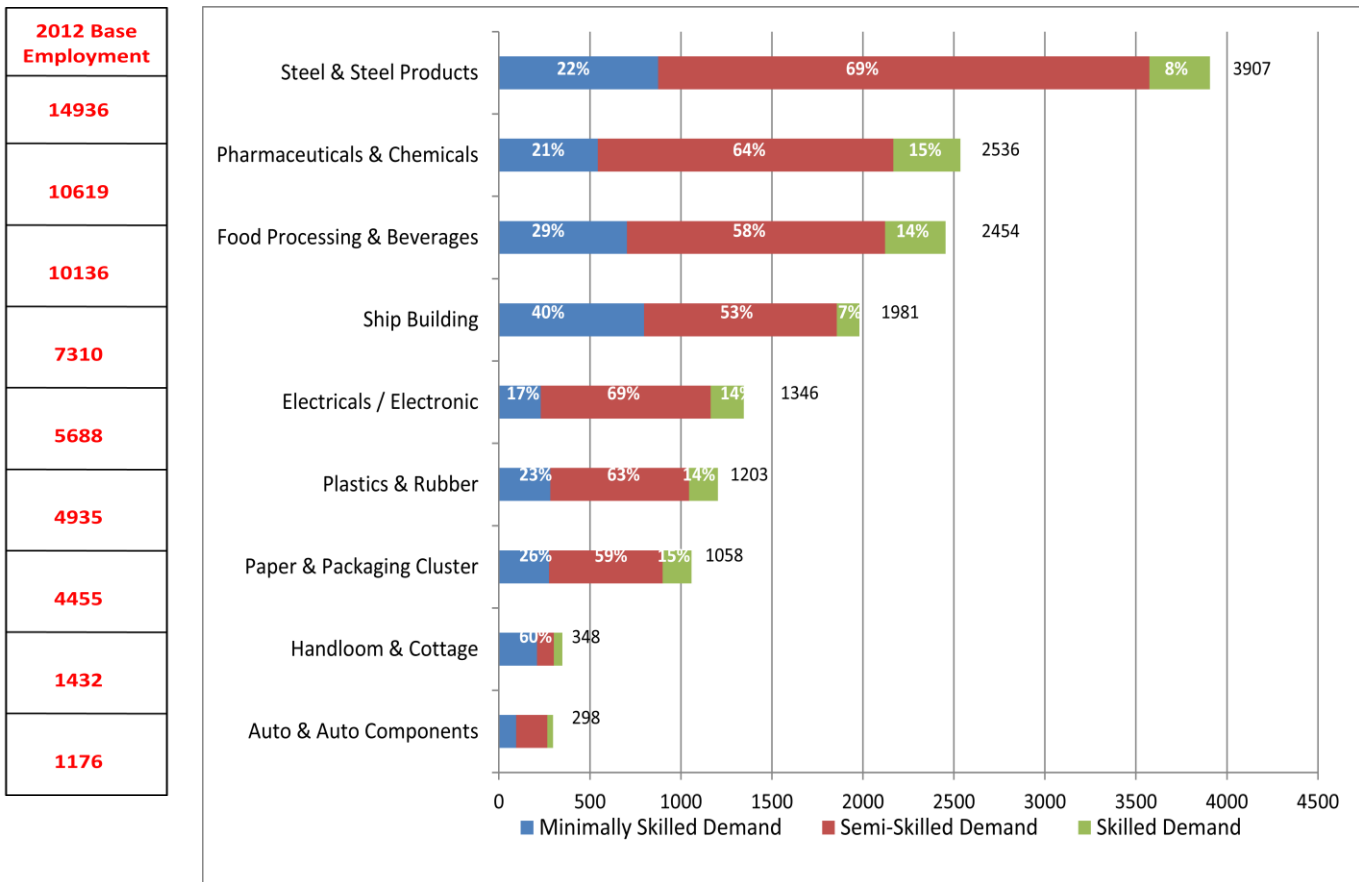
Source: Dexter Analysis

Table 32: Incremental Human Resource Requirement in Manufacturing for the Year 2012-17

Skill Level	Demand – Manufacturing
	(2012-2017)
Skilled	1,530
Semiskilled	7,430
Minimally Skilled	3,203
Total	12,163

Source: Dexter Analysis

Figure 20: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22



Source: Dexter Analysis

Table 33: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22

Skill Level	Demand – Manufacturing
	(2017-2022)
Skilled	1,782
Semiskilled	9,696
Minimally Skilled	4,180
Total	15,658

Source: Dexter Analysis

3.1.2.3 Services Sector

South Goa is a district wherein Hospitality dominates the Services Sector. However, IT and ITes are also present in Verna. Otherwise, Retail is present mainly in form of independent outlets rather than organized retail outlets.

The key industrial cluster in this district includes:

1. Hospitality
2. Retail
3. IT
4. ITes
5. Logistic
6. Healthcare
7. BFSI
8. Education

These are the sectors that constitute largely of the huge companies in the district. So, the focus has mainly been laid on interviewing companies in these sectors.

HOSPITALITY

3.1.2.3.1 Hospitality

This sector is one of the dominated sectors in the district. The Hotels are facing attrition problem badly especially in Housekeeping staff. Majority of the people wants to do job only in Production department. Apart from that majority of Goans aspire to work on Cruise liners and this trend is extremely strong in the coastal taluka of Salcette. So, most of the hospitality aspirants join the top class hotels in South Goa after pursuing their course and then they leave within 6 months having taken the experience letter for groups like Taj and Hyatt..

Below tables show the number of Hotels and Rooms along with the bed capacity in the whole of Goa as on 31st December 2012:

Table 34: Total number of hotels / paying guests with rooms / beds capacity

Category	No. of Hotels	No. of Rooms	No. of Beds
"A"	70	6207	10434
"B"	205	6765	12566
"C"	387	5917	10956
"D"	2115	7970	15211
Total	2777	26859	49167

Source: Department of Tourism, Government of Goa, Tourism statistic 2012

This categorization is the one being followed by the State Government. Hence, all the Hotels are mandated to get their certification from state government which makes this data more exhaustive than the data available about star category hotels. Herein, in the "D" category, mainly paying guests and home stays are included. The same source also talks about the average duration of stay in Goa for a Domestic tourist which happens to be 5 days as against the Foreign tourist which happens to be 9 days. Also, the number of charter arrivals, indicative of the degree of premium that the high profile foreign tourists attach to the destination, have significantly increased from an average of 600-700 in the 5 years from 2005-10 to more than 900 in the last 3 years. So, all in all, the tourism sector in Goa is fostering at quite a pace. However, with the tendency of locals, especially in South Goa, to move abroad, the increasing demand is being filled in by migrants from other places like Darjeeling, Sikkim and the North-East as well as Nepal.

3.1.2.3.1.1 Sector Overview

Some of the prominent player types in this sector in this region are as follows:

- 5-star & 5-star deluxe hotels
- Other starred hotels

- Smaller hotels and lodges
- Spa

The detailed structure of these has been explained on a case by case basis below:

There was a meeting with the HR manager of a renowned 5-star hotel in Goa. Amongst total strength of 450 employees, 60 of them were at managerial level, 240 at non-managerial level and the rest 150 were contract employees. Out of them 66% were from Goa and rest 34% were outside Goa. 83% of the human capital comprised of males and rest females. The human capital basically comprised of-

- Accommodation- It further consists of Front Office & Housekeeping. Front Office consists of 38 employees whereas Housekeeping of 42. The front office consisted of Receptionists, Reserve Assistants and Duty Manager whose salaries ranged from Rs. 5000-15000 per month. Housekeeping consisted of Supervisors, Room Attendants, Room Boy and Executive House Keeper, with a salary of Rs. 5000-10000 per month.
- F& B Department- It consisted of F&B Service and F&B Production. F&B service had 40 employees and F&B production had 50 employees. In F&B production, they have the following hierarchy:
 - Comee3 -> Comee2 -> Comee1 -> DCDP -> CDP -> Sous Chef -> Junior Executive Chef -> Sr. Executive Chef -> Executive chef (Rest are helpers)

The Executive Chefs and Executive Senior Chefs received Rs.15000-25000 per month. The Sous Chefs, CDP, DCDP had salaries ranging from Rs. 10000-20000. The Comee got Rs. 10000-15000 per month.

- Administrative & Utilities- This has further departments as follows: Purchase, Finance, IT, HR and Training, Spa, Sales and Marketing, Security and Engineering. The Purchase Manager, Deputy Manager, Chief Accountant, Chief Engineer, Senior Chief Engineer, Engineers, Supervisors, Purchase Assistants received a salary of Rs. 25000-35000 per month. General Tradesman- Plumbers, Electricians got Rs. 5000-10000 per month. The helpers and security guards had a salary of Rs.5000-10000 per month.

Average yearly attrition rate accounts to about 20%. The reason behind this is the interest of people to move abroad. The main driver for growth is food and beverages.

Next, there was a meeting with the HR manager of another well-known 5-star hotel. Out of the total 400 employees, 70 of them were at managerial level, 330 at non-managerial level. Amongst them, 60 were contract employees. Out of total, 60% comprised of urban folks and rest the rural ones. 80% of the human resource comprised of males and rest females. The human capital basically comprised of-

- F&B production and services- Here, the employees consist of a service manager drawing an amount of Rs. 35000-40000 per month, assistant managers for Rs. 15000-20000 per month, service executives for Rs 20000-25000 monthly, executive chiefs drawing Rs 30000-35000 monthly, Su chiefs for Rs 25000 per month, CDP for Rs 12000-15000 monthly, DCDP for Rs 15000-18000 per month, service supervisors drawing around Rs 12000-15000 per month, comee for Rs 6500-12000 monthly, stewards for Rs 5000-8000 per month and Utilities worth Rs 4000-5000 per month.

- Housekeeping- It consists of housekeeping and front office managers- housekeeping manager gets a salary of Rs 35000-40000 monthly, front office manager has a salary of 35000-40000 per month, housekeeping assistant managers for Rs 15000 per month, front office assistant managers for Rs 15000 per month, executives for Rs 15000-20000 monthly, housekeeping supervisors for Rs 10000-12000 per month and front office supervisors who got around Rs 10000-12000 per month, front office assistants received Rs 8000-10000 per month, bellboys, drivers and room attendants got Rs 6500 per month.
- Maintenance and Spa- It consists of spa manager drawing a salary of Rs 30000-35000 per month, maintenance engineer getting Rs30000 monthly, assistant engineer receiving Rs18000-20000 per month, executives drawing Rs20000 per month, supervisors with Rs10000-12000 per month, SPA-therapist for Rs12000-15000 per month, supervisors getting Rs10000-12000 per month, beauticians for Rs10000-12000 monthly, electricians with Rs8000-10000 per month, plumbers got Rs 10000 monthly and the technicians received Rs9000-10000 monthly.

Average yearly attrition rate accounts to about 10-15%. The reason behind this is the job opportunities in big ships like Cruz. The annual growth rate for the next five years was expected to be 8-10%.The main driver for growth are good image, quality service, spending power of customer and tourism boost.

Then there was meeting with the HR manager of a 3-star hotel. Amongst total strength of 44 employees, 6 of them were at managerial level and the rest 38 at non-managerial level. Out of them 40% comprised of urban population and 60% were rural. 80% of the human resource comprised of males and rest 20% females. The human resource basically comprised of-

- F&B and production- It comprised of the production manager receiving a salary of Rs 30000-35000 per month, executive chef getting Rs28000-30000 per month, chefs with Rs10000-12000 per month, supervisors for Rs12000-15000 monthly, helpers of cooks received Rs 6000-6500 per month, stewards got Rs7000-8000 per month and utilities for Rs6500 monthly.
- Housekeeping- It consisted of manager getting Rs30000-35000 per month, front office manager receiving Rs25000-30000 per month, supervisors getting Rs12000 per month, receptionists receiving Rs7000-9000 monthly, room boys receiving Rs6000-7000 per month and bellboys getting Rs6000-6500 per month.

Average yearly attrition rate accounts to about 20%. The reason behind this is the job opportunities in big ships like Cruz and high pays by other companies. The annual growth rate for the next five years was expected to be 2-4%.

There was also meeting with the F&B manager of a 1-star hotel. Amongst total strength of 60 employees, 5 of them were at managerial level and the rest 55 at non-managerial level. Out of them 60% comprised of urban population and 40% were rural. 80% of the human resource comprised of males and rest 20% females. The human resource basically comprised of-

- F&B and production- It comprised of production manager getting Rs25000 per month- executive chef, chefs got Rs10000-15000 per month, comee got Rs7000-8000 and utilities got Rs3000-4000 per month captains received Rs 12000 per month, senior stewards got Rs10000 per month, stewards for Rs7000-8000 per month, supervisors got Rs10000-12000, room boys received Rs6000 monthly, laundry boys got Rs4000 per month.

- Housekeeping- It consisted of manager getting Rs 30000-35000 per month, front office manager receiving Rs 25000-30000 per month, supervisors getting Rs 12000 per month, receptionists receiving Rs 7000-9000 monthly, room boys receiving Rs 6000-7000 per month and bellboys getting Rs 6000-6500 per month.

Average yearly attrition rate accounts to about 2-5%. The reason behind the same is accommodation, food and working environment. The annual growth rate for the next five years was expected to be 2-5%. The major drivers for growth include better tourism services offered to the target segment.

There were meetings with a large number of other hotels and restaurants. Most of them gave similar reasons for the attrition rate which included- interest to move abroad, join Cruz, high pay at other places, interest to work at a bigger organization. The reasons for the growth drivers were also similar- tourism services, F&B, increasing spending power of people.

There was a meeting scheduled with the owner of a renowned Spa and Salon. Out of the total 11 employees, 1 of them was at managerial level while 10 at non-managerial level. Out of total, 70% comprised of urban folks and rest the rural ones. 40% of the human resource comprised of males and 60% were females. The human resource basically comprised of-

- Manager getting Rs 30000 per month
- Beauticians getting Rs 12000-15000 per month
- Massagers for Rs12000-15000 per month
- Hair dresser for Rs12000-15000 per month
- Cleaners getting Rs3000-4000 per month

Average yearly attrition rate accounts to about 2-3%. The reason behind low attrition is that they are attached to and added facilities like accommodation and good incentives. The major drivers for growth include affordability and good service.

3.1.2.3.1.2 Hiring Practices

At the 1st Five Star Hotel, recruitment is done via third party contractors, consultants, educational institutes, job portals, from panchayats and churches. Gaps are also filled through internal employees. They have no specific preferences but tend to hire people with the following minimum requirements which differ from post to post-10th pass, ITI, IHM/BHM courses.

Hiring of only creamed people has helped them face least problems.

At the 2nd Five Star Hotel, recruitment is done via walk in interviews, newspaper advertisements, through employees, job portals and educational institutions. They look for people with good communication skills and with a good attitude to do work. They have no specific preferences but tend to hire people with the following minimum requirements-

- Utilities, Cleaners, Room-boys - no requirement

- Stewards, Commies, Room attendants- 10th pass/ ITI
- Electricians, Plumbers and Technicians- ITI
- Supervisors, Captains, Commy1, Therapist- Diploma and certification course
- Manager- graduate/ post graduates with experience

At the 3-star hotel, recruitment is done via walk in interview, newspaper advertisements, through employees and job portals. They have no specific gender preferences but tend to hire people with the following minimum requirements-

- Bellboys, Utilities, Room attendants- no requirement
- Stewards, Receptionist, Supervisors, Captains, Chefs - 12th pass/ ITI
- Electricians, Plumbers and Technicians- ITI with experience
- Manager- graduate

At the 1-star hotel, recruitment is done via walk-in interviews, newspaper advertisements, through employees and job portals. They have no specific gender preferences but tend to hire males due to night shifts. There are certain minimum requirements-

- Utilities, Cleaners, Laundry boys- no requirement
- Stewards, Room attendants- 10th pass
- Electricians, Plumbers- ITI
- Receptionist, Supervisors, Captains- 12th pass/ ITI
- Manager, Accountants- graduate

At the Spa and Salon, recruitment is done via walk in interview, newspaper advertisements, through employees and personal reference. They do not have any specific preferences but do follow certain minimum requirements-

- Cleaners- no requirement
- Beauticians, Massagers and Hair Dresser- Diploma in certification course
- Manager- graduate

3.1.2.3.1.3 Skill Requirement

Table 35: Human Resource Requirement of Hospitality Sector

Hospitality Sector		
Category	2012-2017	2017-2022
Skilled	4322	5538
Semi Skilled	5570	7451
Minimally Skilled	1288	1804

Minimally Skilled	Semi Skilled	Skilled
Gardeners	Stewards	Room Attendants
Kitchen Cleaner	Room Housekeeping	Captains
Common Area Cleaners	Comee	Chefs
	General Technicians	Engineer – Mechanical / Electrical

Source: Dexter Analysis

3.1.2.3.1.4 Organizational Training Practices

At the 1st Five Star Hotel, departmental training is provided. It takes place for 4 hours a day up to 4 weeks. The training is basically outsourced. According to the hotel manager, most of the courses available in Goa are of very poor curriculum, so the training institutes should improve it. It should also concentrate on practical training rather than theoretical training. It should also conduct guest lectures and try to improve the courses related to ITI, mainly for electrician.

At the 2nd Five Star Hotel, on job training for newly recruits as well as existing staffs on continuous basis is provided. A total expenditure of Rs 5 lakhs is done annually for training. The training is basically done by both means- in-house and outsourced. According to this hotel, regular visits to institutes should be exercised and scholarship should also be provided. The institutes on the other hand should provide more practical exposure, should be more disciplined. They should also host expert talks. They are also thinking of forming tie ups with institutes and providing them with trainings.

At the 3-star hotel, 1 month on job training is provided to freshers which includes 1 day induction and rest of the days, departmental training. The training is provided in-house. According to hotel manager, the training institutes should improve the education level by providing more focus on practical aspects during the course. They are also planning to form more tie ups with institutes to conduct some seminars so that students get a better idea of the actual scenario at workplace.

At the 1-star hotel, freshers like Stewards, Captains, Supervisors and Room Attendants are trained for a month which involves soft skills, work profile and tasks. The training is provided in-house. According to the respondent, the knowledge and syllabus content should be improved. Institutes should focus on basics and soft skills and should provide guest lectures to students.

Other hotels also had similar recommendations for the institutes.

At the Spa & Salon, 1 month on the job training is provided to all the freshers, which includes safety, equipment handling, job knowledge and soft skills. They give only in-house training. According to the manager, the government should set up some SPA and Salon courses which could give good practical knowledge to the aspirants. It was also thinking of providing internship opportunities to few students.

RETAIL

3.1.2.3.2 Retail

The retail sector is at nascent stage at South Goa as there is very small market of Retail Industry. District does not have a single Mall, only a few single brand outlets were present such as Levi's and Woodland.

3.1.2.3.2.1 Sector Overview

Some of the prominent players in this sector in this region are as follows:

- Renowned shopping mall
- Famous Apparel Showroom
- Footwear showroom

The detailed structure of these companies has been explained on a case by case basis below:

There was a meeting with the HR manager of a Renowned Shopping Mall at Goa. Amongst total strength of 60 employees, 15 of them were at managerial level and the rest 45 at non-managerial level. Out of them 70% were urban and rest 30% were from rural area. 80% of the human resource comprised of males and rest females. The human resource basically comprised of Salesperson, Electrician, Plumber, Technician, Cashiers, Accountants, Supervisors, Store Manager and Account Manager. Average yearly attrition rate accounts to about 5-6%. The annual growth rate for the next five years was expected to be 2-4%. The major drivers for the same were mentioned as preference of people for branded items and affordability.

After that, we met with the manager of a famous Apparel Showroom in Goa. Here, amongst total strength of 5 employees, 1 of them was at managerial level and the rest 4 at non-managerial level. Out of them 100% comprised of rural folks. 50% of the them comprised of males and 50% females. The human capital basically comprised of Salesperson, Receptionist and Manager. A salesperson gets Rs 3000-4000 per month while receptionist gets Rs 4000-5000 per month. Average yearly attrition rate accounts to about 50% due to salary constraints. The major driver for growth was sales.

A meeting was also scheduled with the cashier of a Footwear Showroom in Goa. There were a total no. of 13 employees out of which 1 was at managerial level and the rest 12 at non-managerial level. Out of them 70% were urban and rest 30% were rural. The male female ratio at company was 90:10. The basically comprised of Salesperson, Cashier, Account Manager, Store Manager, Sweepers and Security Guards. A Salesperson gets Rs. 6000-6500 per month, a Sweeper gets Rs. 3000-4000 per month, a Cashier gets Rs. 18000-20000 and a Manager gets Rs. 25000 per month. Average yearly attrition rate accounts to about 6-8% due to salary constraints. The major driver for the same is the pay and the brand.

3.1.2.3.2.2 Hiring Practices

At the mall, recruitment is done via walk in interviews, newspaper advertisements and references. They have no specific gender preferences but tend to hire people with the following minimum requirements-

- Salesperson- 12th pass
- Cashier- diploma/graduate
- Manager- graduate

At the apparel showroom, recruitment is done via walk in interviews and newspaper advertisements. They look for people with good communication skills and with a good attitude to do work. They have no specific gender preferences but tend to hire people with the following minimum requirements-

- Salesperson- 10th pass
- Receptionist- 12th pass
- Manager- graduate

At the footwear showroom, recruitment is done via walk in, newspaper advertisements and job portals. They have no specific gender preferences but tend to hire people with the following minimum requirements-

- Salesperson- 12th pass
- Cashier- diploma/graduate
- Manager- graduate

3.1.2.3.2.3 Skill Requirement

Table 36: Human Resource Requirement of Retail Sector

Retail Sector		
Category	2012-2017	2017-2022
Skilled	176	185
Semi Skilled	352	370
Minimally Skilled	1232	1295

Minimally Skilled	Semi Skilled	Skilled
Stock Boy	Assistant Floor Sales Staff	Floor Sales Staff
Housekeeping	Backend Warehousing Assistant	Store Manager / Mall Manager
		Warehouse Supervisor / Manager

Source: Dexter Analysis

3.1.2.3.2.4 Organizational Training Practices

At the Mall, 1 month on job training for fresher which includes 1 day induction based training and after that departmental training and daily briefing for 15-20 minutes. Training is conducted in-house only. Freshers are lacking at practical knowledge, therefore steps must be taken by the vocational institutes to provide more practical knowledge and soft skills. They should also start good certification courses for sales people.

At the Apparel showroom, they go for on the job training. This is conducted in-house only. They are trying to start a proper training program in the coming years. Their main stress is always on good communication skills and they try to bring an attitude of serving customers in their employees.

At the Footwear showroom, 2 weeks training was conducted by the head office for all which enlightens them about brand knowledge, fittings, customer interaction, and leadership qualities. This costs them about Rs 50000. This is conducted in-house only. Few of them are lacking at practical knowledge, therefore steps must be taken by the vocational institutes to provide more practical training. They must also focus on soft skills. They should also encourage the local people to join this sector.

INFORMATION TECHNOLOGY

3.1.2.3.3 IT

At Verna Industrial Estate and Madgaon, some of the prominent IT companies are situated such as Digisol, Persistent etc. Apart from that, Government is also planning for development of IT Park in the state which in turn shall increase the number of IT companies in the state.

3.1.2.3.3.1 Sector Overview

At one of the large IT Companies, we met the Admin officer & he told that they have a total of 38 employees; all are working on non-management level.

IT department of the company having 10 QA with 15000 salary, 20 Developer having 20000 salary and 8 service executives having 7500 salary. At Admin and Account department, company has total 4 employees. There are 1 Sr. Admin with Rs. 20000 salary, 1 system admin with Rs. 15000 salary, 1 person working on maintenance at 5000 salary and Accountants working with Rs. 20000 salary. Safety and security department of the company has 2 security men, 2 drivers, 1 gardener and 3 house keeper all were having 7500 salary.

Attrition is not a major problem for the company and also as per Admin officer they are expecting 100% human resource growth rate in coming 5-10 years. The growth drivers in these sectors are increasing number of international projects.

HR manager of one of the small scale company provided us the information about the sector. As per him company has total 55 employees of which 50 are at non management level and 5 are at management level.

- At Development & Support department of the company, 47 employees are there of which 3 are doing management work. There are 45 Developers at skilled level having Rs. 10000 salary and 2% attrition.
- HR, Admin and Operation department of the company have 2 employees; 1 HR having salary of Rs.15000 with 2% attrition and 1 employee is responsible for Admin and Operation having salary of Rs. 20000 with 3% attrition rate.
- There are 5 people at Security department include 1 security guard getting Rs. 15000, 2 Housekeeping and 2 Drivers. All were facing attrition rate of 2%.

As per the manager, attrition is not a major problem as very less alternatives are available at Goa. Expectation of human resource growth rate is 20% in coming 5-10 years.

3.1.2.3.3.2 Hiring Practices

The recruitment of all the categories is done through all the sources like employee reference, direct walk in interviews, consultancies etc. For skilled people like Admin IT, maintenance, accountant, QA, developer and service bureau minimum qualification required is Engineering, L.L.B or B.Com. And in case of minimally skilled

category people like security, drivers, gardener and housekeeping minimum requirement is that to know English very well and have experience in that field.

At small scale company, minimally skilled category people like security, house-keeping and driver hired through employee reference, ads on local and national newspaper and consultants. Skilled category people are also hired through same sources. These employees are working at Development, IT, Support HR, Admin & Operation Department. Any graduation can applied for this level of employment.

3.1.2.3.3.3 Skill Requirement

Table 37: Human Resource Requirement of IT Sector

IT Sector		
Category	2012-2017	2017-2022
Skilled	135	173
Semi Skilled	85	114
Minimally Skilled	136	191

Minimally Skilled	Semi Skilled	Skilled
Gardeners	Receptionists	IT / Computers – Diploma / Degree
Housekeeping	Security Guard	Domain Experts

Source: Dexter Analysis

3.1.2.3.3.4 Organizational training practices

At large scale Company the training is considered as probation period which is for 6 months. Company bears training cost of Rs.3750. Both, induction and need based training is provided by the company to their employees.

Small Scale Company gives orientation to their employees which last for 4 days. The training is provided in house as well as outsourced and company provides both need based and induction based training.

They suggest that Government should promote IT sector by preparing an IT Park.

IT ENABLED SERVICES

3.1.2.3.4 ITes

There is a presence of quite a few Business Process Outsourcing companies at Verna Industrial area are like First European Pvt. Ltd., Smart-link Network System Ltd. etc. One of the major drivers behind this is that the Goans are very good at English and also the fact that they are well-spoken too. Also, they hardly have any accent to be neutralized which gives them a clear edge over lot of locals from surrounding states. There, Goa has a natural fit for ITes and BPO industry and this may include both Domestic as well as International BPOs.

3.1.2.3.4.1 Sector Overview

A meeting with one of the large BPO companies at South Goa district revealed the following understanding:

As per the HR manager, their Sector is facing overall attrition rate of 3% locally. The employees leave the organization because of getting good opportunity at some other place. They expect a growth rate of 10% in coming 5-10 years in case of the human resource.

3.1.2.3.4.2 Hiring Practices

The recruitment of minimally skilled and semi skilled employees are done through employee references and by ads on local news papers like Navhind Times and Herald. Security, Housekeeping and Driver are recruited at minimally skilled category. The people at skilled category like for reservation, data entry, ticketing are hired through employee reference, local news paper as well as consultants for which 12th pass candidate can apply. For highly skilled category minimum qualification required is MBA, MSC, B.TECH, BBA and M.COM.

3.1.2.3.4.3 Skill Requirement

Table 38 Human Resource Requirement of ITes Sector

ITes Sector		
Category	2012-2017	2017-2022
Skilled	62	80
Semi Skilled	170	227
Minimally Skilled	136	191

Minimally Skilled	Semi Skilled	Skilled
Gardeners	Tele-callers	Floor Managers
Housekeeping	Receptionists	IT Maintenance – Degree / Diploma

Source: Dexter Analysis

3.1.2.3.4.4 Organizational training practices

The company provides induction and need based training to their employees which lasts for 30 days. As per the HR manager IRTA certification should be given by the Government.

LOGISTICS

3.1.2.3.5 Logistics

Goa has so much been naturally gifted in terms of its coastal areas as well as the Rivers which allows it to use them for transporting Cargo, originating or terminating, not just in the state of Goa but almost in the whole of Southern India. Most of the rivers in Goa are used for waterways. Ferry boats are day-to-day means of crossing rivers in Goa. Rivers Mandovi and Zuari are being used for carrying ore to Mormugao harbour. Goa is also connected by waterway from Bombay. This in turn has lead to fostering of the logistics sector in the state. In fact, a number of integrated logistics service providers are coming up in the state. They are into proving end to end 3PL solutions.

3.1.2.3.5.1 Sector Overview

Some of the prominent players in this sector in this region are covered as follows:

The detailed structure of covered companies has been explained on a case by case basis below:

There was a meeting scheduled with the manager of a reputed logistics company in Goa. Amongst total strength of 28 employees, 6 of them were at managerial level and the rest 22 at non-managerial level. Out of them, 50% were urban folks and rest 50% rural. 72% of comprised of males and 28% females. The basically comprised of sales & BD: a team leader, an area manager, a territory manager; Operations: a team leader, operation supervisors, operation staffs; and customer financial service & utility: executives and security. Average yearly attrition rate is 10%. This is due to security guards. The annual growth rate for the next five years was expected to be 10%.The major drivers for the growth is operations.

3.1.2.3.5.2 Hiring Practices

At the company, recruitment is done by the head office only, for all the levels, and minimum qualification required is Graduate for all the level except minimally skilled. For certain posts, experience is also mandatory.

3.1.2.3.5.3 Skill Requirement

Table 39: Human Resource Requirement of Logistic Sector

Logistic Sector		
Category	2012-2017	2017-2022
Skilled	175	225
Semi Skilled	1580	2062
Minimally Skilled	1064	1444

Minimally Skilled	Semi Skilled	Skilled
Loader / Un-loader	Truck Drivers	Operations Supervisor
	Crane Operators	Customer Service Executives
	Storage & Warehousing Executives	Operations Managers

Source: Dexter Analysis

3.1.2.3.5.4 Organizational Training Practices

At the company, on the job training was conducted daily. The training expense results to Rs. 1 lakh annually. The training is basically in-house. The company hires skilled employees and so does not face any kind of problem.

HEALTHCARE

3.1.2.3.6 Healthcare

Healthcare has a very limited presence in South Goa district. If at all, there are only a couple of large private hospital chains with their presence in the district. Other large hospitals are mainly Government hospitals wherein the recruitment mainly is triggered through a set process. This industry has been facing a severe shortage of especially Nurses, since the attrition here has been very high. The major two reasons for the employees leaving organization are low pay scale and night shifts.

3.1.2.3.6.1 Sector Overview

Some of the prominent players in this sector in this region are covered as follows:

The detailed structure of companies has been explained on a case by case basis below:

There was a meeting with the HR manager of a large sector hospital in Goa. Amongst total strength of 370 employees, 30 of them were at managerial level, 290 at non-managerial level and the rest 50 constitute the contractual employees. Out of them, 80% were from Kerala and rest 20% were from Goa. 50% comprised of males and 50% females. The basically comprised of nurses drawing a salary of Rs. 5000-7000per month, ward boys with a salary of Rs5000-7000per month, technicians getting Rs10000 per month and accountants with a salary of Rs.10000-15000per month. Average yearly attrition rate is very low. This is due to reputation, good atmosphere and work culture. The annual growth rate for the next five years was expected to be 5%. The major drivers for the same are the technicians.

There was a meeting with the MD of a medium sector hospital in Goa. Amongst total strength of 175 employees, 15 of them were at managerial level, 150 at non-managerial level and the rest 10 constitute the contractual employees. Out of them, 50% were urban and 50% were rural. The male female ratio at Hospital was 50:50. The basically comprised of nurses drawing a salary of Rs. 5000-10000 per month, Ward Boys getting Rs. 5000-7000per month, technicians drawing Rs.7000-10000per month and accountant having Rs.10000-15000per month as salary. Average yearly attrition rate accounts to about 60%. The reason for the same is better opportunities at other hospitals. The annual growth rate for the next five years was expected to be 1-5%.

3.1.2.3.6.2 Hiring Practices

At the large sector hospital, recruitment is done via walk in interviews and through employees. They have no specific preferences but tend to hire people with the following minimum requirements which differs from post to post- like for nursing, one should have completed GNM and for OPD's one must have completed ANM. They should also be practically and theoretically sound with good communication skills.

At the medium sector hospital, recruitment is done via walk in interviews and through employees. They have no specific preferences but tend to hire people with the following minimum requirements which differ from post to post- like for nursing one should have done ANM or GNM. They should be practically and theoretically sound with good communication skills.

3.1.2.3.6.3 Skill Requirement

Table 40: Human Resource Requirement of Healthcare Industry

Healthcare Industry		
Category	2012-2017	2017-2022
Skilled	50	63
Semi Skilled	65	84
Minimally Skilled	56	76

Minimally Skilled	Semi Skilled	Skilled
Hospital Housekeeping	Ward Boys	Nurses
Gardening	Receptionists	Lab Technicians
	Ambulance Drivers	Doctors

Source: Dexter Analysis

3.1.2.3.6.4 Organizational Training Practices

At the large sector hospital, on the job training is provided. This continues for 6-12 months. The training is basically in-house. According to this hospital, except 1 nursing college, no technician course is available in Goa. Therefore the government should try to open some institutes with technician courses.

At the medium sector hospital, earlier training was provided with certification but now no more certification is provided. This is only because they are facing a lot of attrition. The training continues for 6 months. The training is basically an in-house one. According to this hospital, except 1 nursing college, no technician and paramedical courses are available in Goa and so the government should try to open some institutes with technician as well as paramedical courses. It also suggested that training providers should recruit better teachers so they can give quality education to the students.

BANKING, FINANCIAL SERVICES & INSURANCE

3.1.2.3.7BFSI

The below table shows Taluka wise number of Banking offices registered in the year 2011-12.

Table 41: Taluka Wise Number of Banking Offices

Taluka wise number of Banking Offices		
Sr. No.	Taluka	2011-12
1	Salcette	131
2	Quepem	23
3	Mormugao	52
4	Sanguem	24
5	Dharbandora	7
6	Canacona	24
Total		261

Source: http://www.goadpse.gov.in/publications/Economic_survey_2012-13.pdf

3.1.2.3.7.1 Sector Overview

Some of the prominent players covered in this sector are as follows:

- Public Sector as well as Private Bank Branches
- Financial Services which includes players across Insurance and NBFC space

The detailed structure of these companies has been explained on a case by case basis below:

There was a meeting with the branch manager of a Renowned Bank in Goa. Amongst total strength of 15 employees, 4 of them were at managerial level and the rest 11 at non-managerial level. Out of them, 80% were urban folks and rest 20% rural. 70% of that comprised of males and 30% females. Basically comprised of branch manager drawing Rs35000-40000 per month, branch operating with a salary of Rs30000-35000per month, relationship officer drawing Rs30000-35000per month, sales manager with Rs30000-35000per month, client servicing officer getting Rs18000-20000per month, sales people with Rs18000-20000per month, banking operators drawing Rs20000-25000per month and cleaners drawing Rs3000-4000per month. Average yearly attrition rate is very low- 5-10%. This is due to good working environment and pay scale. The major driver for the growth is expected to be retail business.

There was also a meeting with the branch manager of a company offering financial services. Amongst total strength of 15 employees, 2 of them were at managerial level and the rest 13 at non-managerial level. Out of

them, 70% were urban and 30% were rural. 70% of comprised of males and 30% females. Basically comprised of branch manager getting a salary of Rs35000-40000 per month, senior executive drawing a salary of Rs30000-35000per month, assistant manager with a salary of Rs20000-25000per month, executives getting Rs20000-25000per month, data entry operators with a salary of Rs15000-18000per month and office boys with a salary of Rs6000-6500per month. Average yearly attrition rate accounts to below10%. The reason for the same is good pays and the brand name. The major driver for the growth was mentioned as new entrants as the mining business was declining.

3.1.2.3.7.2 Hiring Practices

At the Bank, recruitment is done via walk in interviews, through employees, newspaper ads, job portals and consultancies. They have no specific preferences but tend to hire people with the following minimum requirements-

- Cleaners and Sweepers- no requirements
- Sales people, Banking Operators, Client servicing- graduate
- Sales manager, Branch manager, Relationship officer- graduate

At the financial service company, recruitment is done via walk in interviews, through employees, newspaper ads and job portals. They have no specific preferences but tend to hire people with the following minimum requirements-

- Cleaners and office boys- no requirements
- Data entry operators
- Sales manager, branch manager, relationship officer- graduate

3.1.2.3.7.3 Skill Requirement

Table 42: Human Resource Requirement of BFSI Sector

BFSI Sector		
Category	2012-2017	2017-2022
Skilled	68	86
Semi Skilled	22	29
Minimally Skilled	22	42

Minimally Skilled	Semi Skilled	Skilled
Office Boy	Security Guard	Banking Operator
Housekeeping	Receptionists	Financial Services Sales Personnel
		Sales / Operations Manager

Source: Dexter Analysis

3.1.2.3.7.4 Organizational Training Practices

At the bank, 1 week training was conducted by head office for all branches which educates the new employees on job description, customer interaction and leadership qualities. The training is basically in-house. According to the bank, government should come up with good financial courses and change the mind set of local people because they are not ready to work in sales. It should bring more practical oriented courses. It is also thinking to have regular interaction with institutes for better flow of data.

At the financial services company, 1 week training was provided which included 1 day induction, basics, job description, customer interaction and leadership qualities. This is only because they are facing a lot of attrition. The training is basically an in-house one. According to this company, the government should come up with good insurance courses with affordable fees. Steps should also be taken to change the mind set and attitude of students for working in an insurance company. The institutes should invite experts to visit their campuses.

EDUCATIONAL SECTOR

3.1.2.3.7 Educational Sector

Goa has two districts viz. North Goa and South Goa. For educational purposes the State has, however, been divided into three educational zones each comprising of three to four talukas / blocks. The headquarters of these zonal offices are (a) at Panaji for the Central Zone covering Tiswadi, Ponda and Sanguem talukas / blocks; (b) at Margao for the South Zone covering Canacona, Quepem, Salcete and Mormugao talukas / blocks; and (c) at Mapusa for the North Zone covering Pernem, Bardez, Bicholim and Sattari talukas / blocks. Each zonal office is headed by a Deputy Director of Education. He is assisted by an Assistant Director of Education and a Deputy Education Officer who looks after academic matters.

Education sector is growing at South Goa district as Government is planning for opening new courses as per the demand in the market and also plan for establishing new institutions for better employment generation of population of Goa.

3.1.2.3.8.1 Sector Overview

At education sector, we met one of the reputed institutes in the field of Art and Science. As per the Laboratory Assistant, college has total staff of 152 of which 49 are at management level and 104 are included at teaching and non teaching staff at non management level. Among teaching staff 10 are on contract basis and 47 among non teaching are on contract basis.

- Teaching staff includes 56 Professors and the salary of each of them is based on UGC norms or Goa Government norms.
- At non teaching level, there are 47 staff members. In case of skilled category there is 1 Head Clerk, 2 UDC, 1 Accountants and 4 ADC. There are 8 Lab Assistants, 1 Technician, 1 Storekeeper, 3 Junior programmer, 1 collector, 1 Junior stenographer, 2 library attendant and 4 Laboratory attendant are there at semi skilled category and the salary of them is as per Government or UGC norms. At minimally skilled level, there are 4 Peons, 1 Sweeper, 1 Gardener and 2 watchmen are present.
- Management department includes total 49 staff:5 at IT department, 10 at Administration, 5 at Tiger Studio, 13 at Sports,2 at Tiger's coop,6 at State Department, 7 at Support Services and 1Principal.

The attrition rate is very low and there are various reasons for the same. One of which is that very few want to leave the Government job and other reason could be the employee on contract basis or gets very good opportunity at some other place.

3.1.2.3.8.2 Hiring Practices

At Education sector, minimally skilled category staffs like Peons, Sweeper, Gardener and Watchman are hired through ads on national news paper (Navhind Times, National University News paper) with having minimum 10th

pass qualification. In the category of semi skilled staff, Library attendants, Laboratory attendants, Junior stenographer and collector are hired through ads on National news paper and also through Gomantak (Marathi newspapers). Skilled category includes Head Clerk, Lab Assistants, Accountants, Technicians, storekeeper, Junior Programmer, UDC, ADC hired through National University news paper and Gomantak. Lastly, at highly skilled category professors are hired.

3.1.2.3.8.3 Skill Requirement

Table 43: Human Resource Requirement Educational Sector

Educational Sector		
Category	2012-2017	2017-2022
Skilled	92	117
Semi Skilled	44	57
Minimally Skilled	169	230

Minimally Skilled	Semi Skilled	Skilled
Peon	Technician	Head Clerk
Gardner	Lab Assistant	Accountant
Watchman	Junior Stenographer	

Source: Dexter Analysis

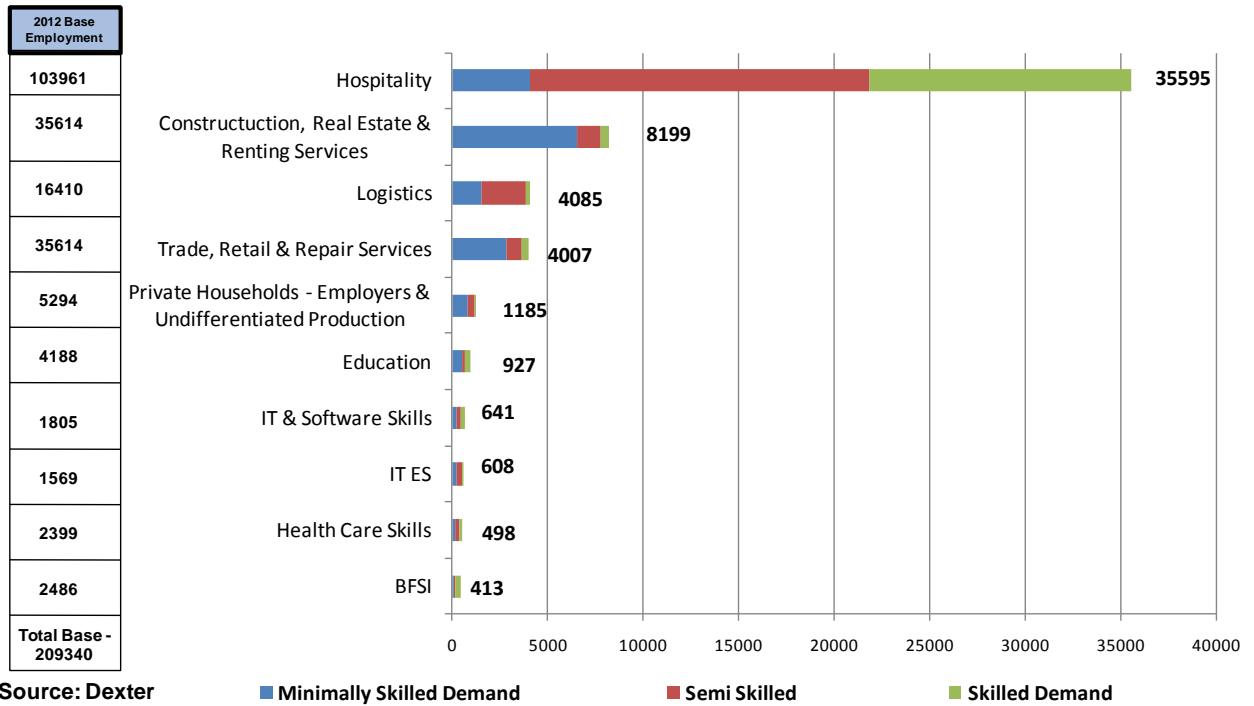
3.1.2.3.8.4 Organizational training practices

Induction based training session is held for the teachers on a yearly basis at Institute as per the Laboratory Assistant.

3.1.2.3.10 Incremental Human Resource Requirement in Services

The graph and table below shows the numbers estimated for each of the skill category in the service sector of Industrial scenario for the year 2012-2017 and 2017 -2022.

Figure 21: Incremental Human Resource Requirement in Service Sector for the Year 2012-17



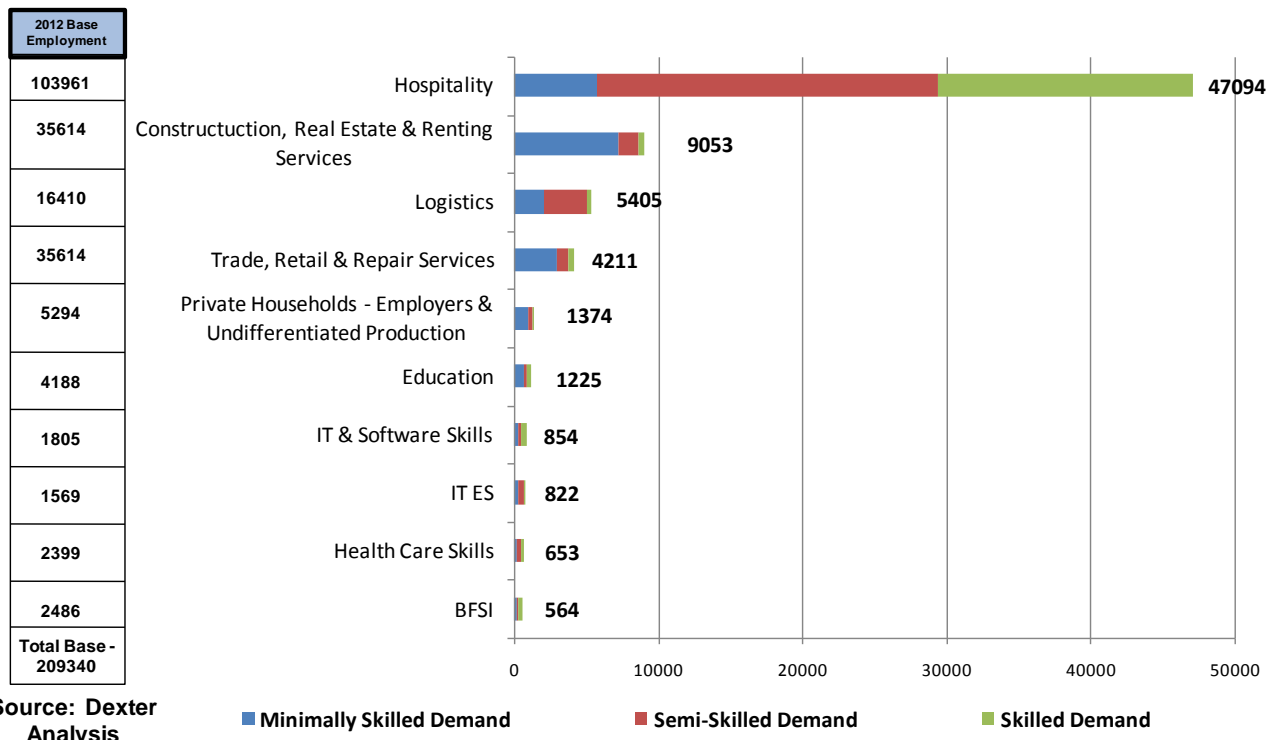
Source: Dexter Analysis

Table 44: Incremental Human Resource Requirement in Service Sector for the Year 2012-17

Skill Level	Demand – Services (2012-2017)
Skilled	5,287
Semiskilled	8,558
Minimally Skilled	7,350
Total	21,194
Total Base	82,435

Source: Dexter Analysis

Figure 22: Incremental Human Resource Requirement in Service Sector for Year 2017-2022



Source: Dexter Analysis

Table 45: Incremental Human Resource Requirement for Service Sector for 2017-2022

Skill Level	Demand – Services (2017-2022)
Skilled	6,696
Semiskilled	11,142
Minimally Skilled	8,876
Total	26,714
Total Base	82,435

Source: Dexter Analysis

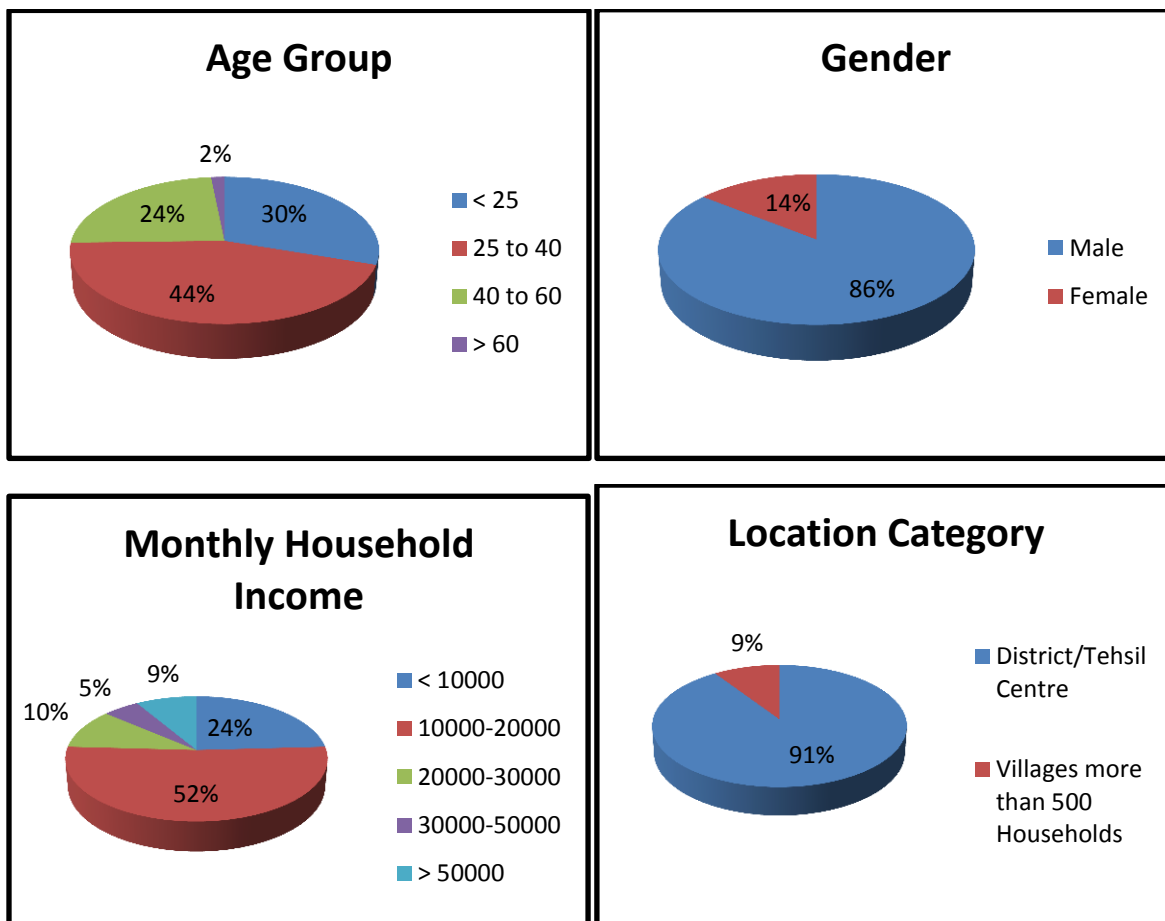
3.1.2.4 Unorganized Sector

The people who are into Self Employed category are interviewed in this section. This category includes people doing work related to Mobile Repairing, Automobile Repairing, Beautician, Driver, Tailoring etc.

3.1.2.4.1 Profiling Data

This section is divided in to two parts: It starts with the background of the respondent category and followed by work profile of the individuals.

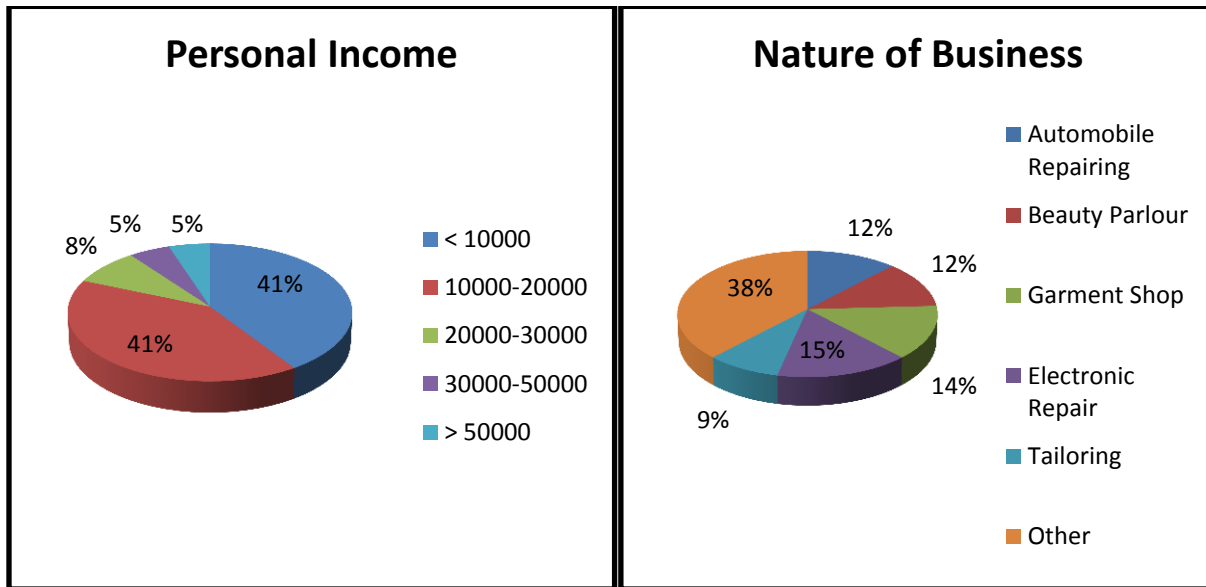
3.1.2.4.1.1 Background



Self Employment is a male dominated sector because of kind of businesses in this category such as Driver, Auto Repairing etc as mentioned above. However, few females also started making their career in the field of Beautician, Hair & Skin Care, Tailoring etc.

3.1.2.4.1.2 Work Profile

Here, Businesses of all the respondents are related to service sector only. High percent of people out of total interviewed are involved in the business of Electronic Repair which includes Mobile & Laptop repairing, Air-condition & Refrigerator repairing etc. Other businesses involved people who have Grocery shop, Cyber Café, Flower making business, Home Appliances, Hotel, Painting Shop, Travel Agency, Stationary Shop and Photography business.



3.1.2.4.2 Skills required to run a Business

There are mainly two kind of skills required to run any business successfully. The skills are Technical and Soft Skills. We also ask the person in charge related to current employees' lacking skill.

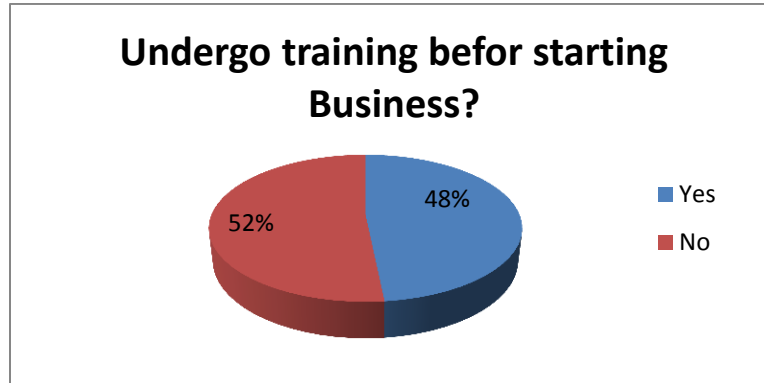
Table 46: Business Wise Skill Requirements – Self Employment

Kind of Business	Attitudinal Issues	Required Technical Skills	Required Soft Skills
Automobile Repairing	Lack of willingness to work on ground i.e. Practically	Knowledge about Engine & Auto parts, Repairing of tubes & Tyres, Air pressure pump usage, Computer Operator Skills	Interpersonal Skills to understand requirements, Documentation Skills
Beauty Parlour	Willingness to stick around for a longer period to learn sufficiently	Knowledge about latest machine operations like Hair Strengthening machine, Ultrasonic machine. Knowledge about the process of doing Eye brows, Haircuts, Facial, Manicure – Pedicure, Waxing, etc.	Housekeeping and knack of maintaining the aesthetics, Soft Spoken-ness
Tailoring	Qualities like Discipline Punctuality	Knowledge about Machine scale, Measurement, Needle, Chalk, Cutting & Computer skill for designing, Stitching Machine	Selling Skills, Communication & Interpersonal Skills, Information gathering about latest trends
Electronic Repair	Willingness and Ability to learn about new things	Knowledge about electrical parts, Hardware & Software mobile Application and ability to Assemble – Disassemble the latest mobile instruments	Communication & Interpersonal Skills
Kind of Business	Attitudinal Issues	Required Technical Skills	Required Soft Skills
Garment Shop	Dedication towards work	Knowledge of stitch types, latest trends in the market, etc.	Communication Skills
Other- Cyber Café, Flower making, Grocery Shop, Home Appliance , Painting, Photography, Travel Agent and Stationary Shop	Employee have Easy going Attitude and are lacking at Concentration, Experience, Activeness, Cleanliness & Finishing	Electrical Skills, Computer Operation Skills, Knowledge about latest DSLR Cameras, About Colour Mixing & reactions, Juke machines, etc.	Communication Skill and Customer handling skill

Source: Dexter Analysis

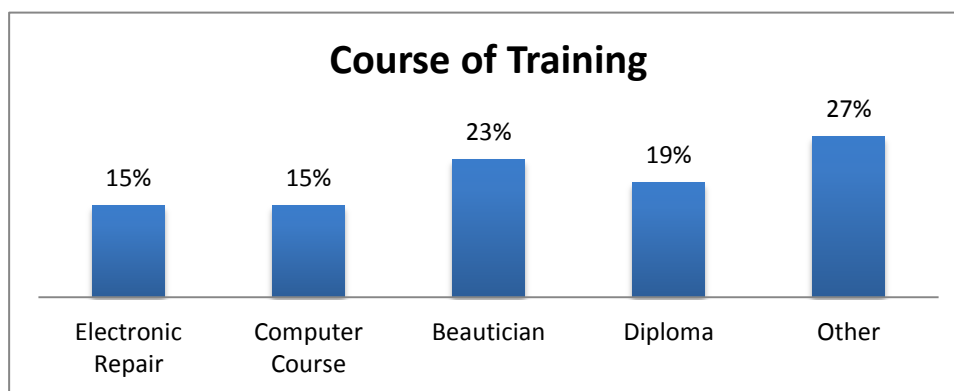
3.1.2.4.3 Training Experience

The respondents in this category people have an experience of running business, 48% of them are already undergone training before starting up their own business.

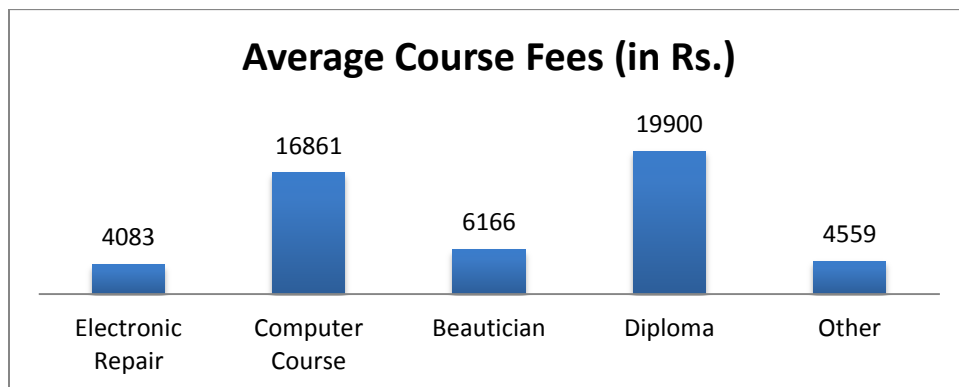
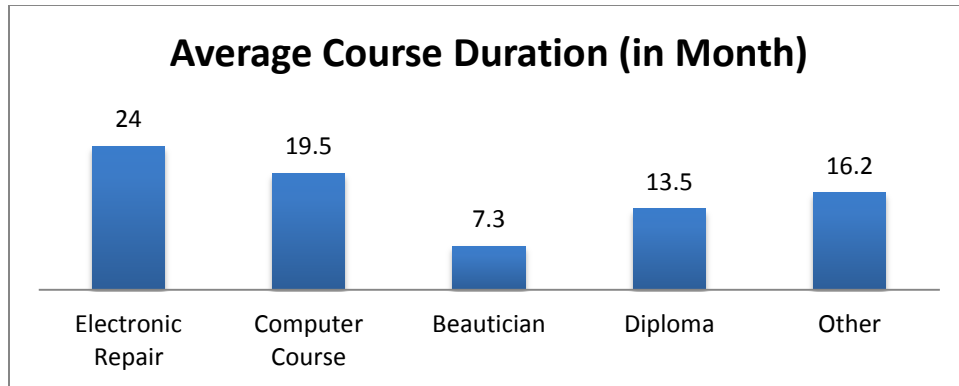


The Institutes from where the respondent's get trained are Arena Institute Guntur, Perfect Bikes, Ok Institute, Government ITI (AIR Conditioning), Pearls in Bombay, Fill Corporation Private Limited in Masha, Delhi board ITI Morgoa, ITI tailoring government of Goa, Nokia care, Dhawarka institute, ITI ODPS, KBP, HBCE, Swanty, polytechnic course, we lady beauty saloon, Ganesh service center, Premium Institute, Dadar Bombay (Altech), ISBT, Computer Impact, Dawal college Panjim, N.M.S enterprises (Bombay), L-Tech, Goa, Mahadev sales (Mumbai) and Goodrej (Aligrah).

Below pie chart shows that majority of the respondents were undergone the training of Beautician which is followed by Diploma courses and Electronic Repair and Computer course. There are also some people who have undergone the training of Hotel Management and Tailoring.

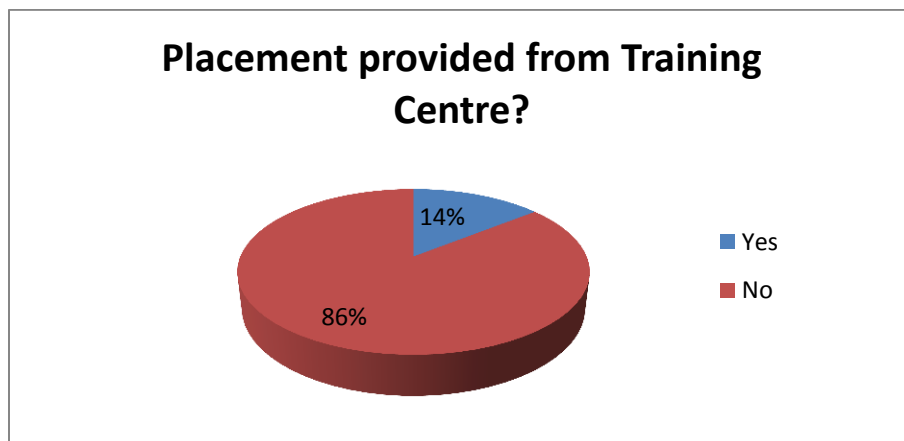


Here, Electronic Repair and Computer Courses are the two courses for which respondents undergone training for 1.5 to 2 year as shown in the below chart. Respondents have paid Rs. 20000 for Diploma course, Rs. 16000 fro Computer course, Rs. 6000 for Beautician course and Rs. 4000 for Electronic Repair for the full course.

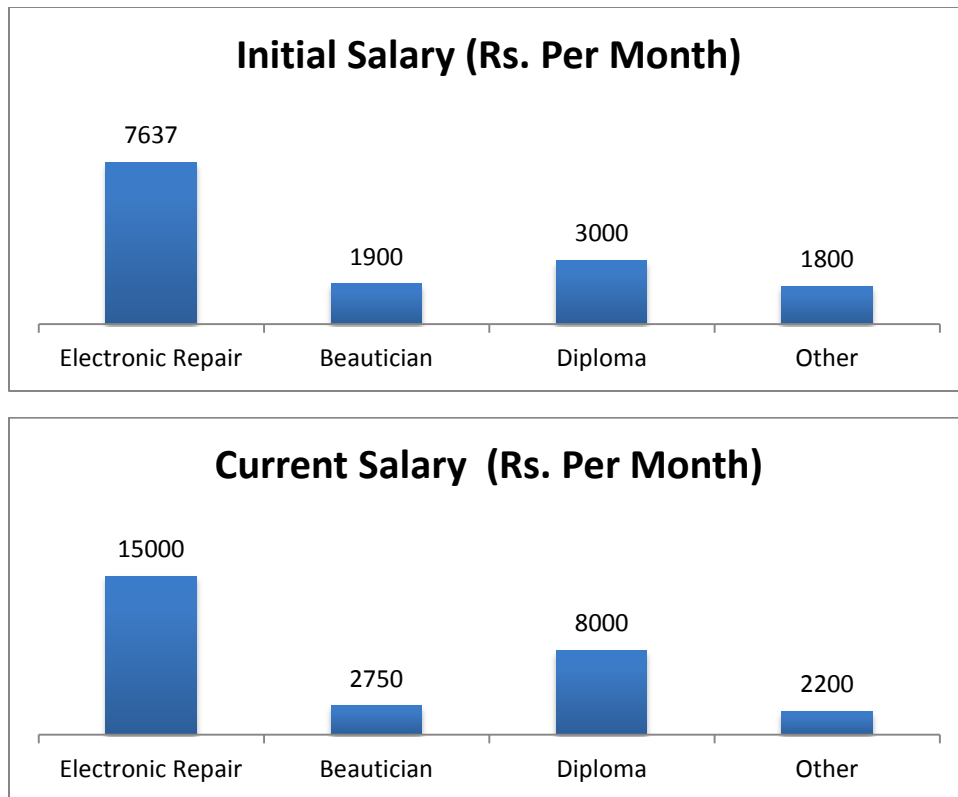


3.1.2.4.3.1 Placement scenario

The placement scenario of the Institutes from which the respondent's get trained is shown below. Only 14% of the people who had taken training got placement from the respective Institute.

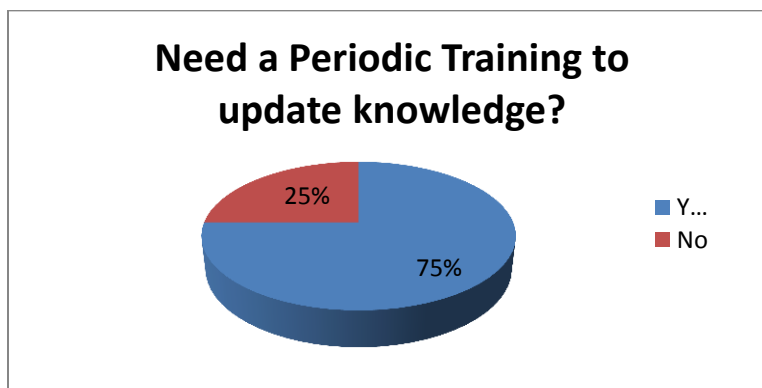


At time of joining the company initial salary was around Rs. 7500 for the job of Electronic Repair and Rs. 3000 after completion of the Diploma courses. In case of Job related to Electronic Repair the salary is significantly grow where as in case of other course the hike is very low on individual basis.



3.1.2.4.4 Requirement of Periodic training to update knowledge

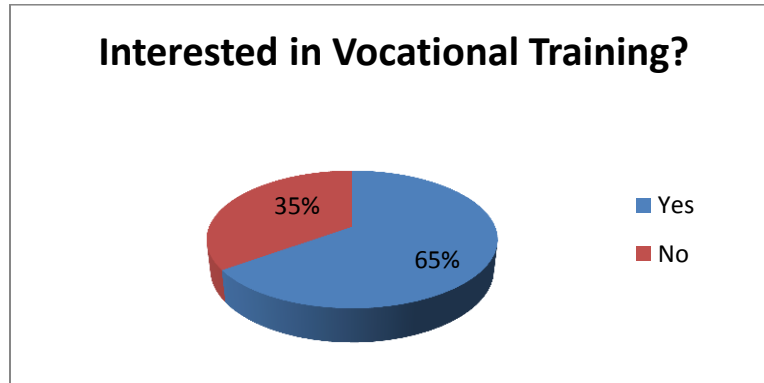
Here we got positive response as 75% of the Self Employed category people said that there is a need of periodic training for updation of their knowledge in respective field.



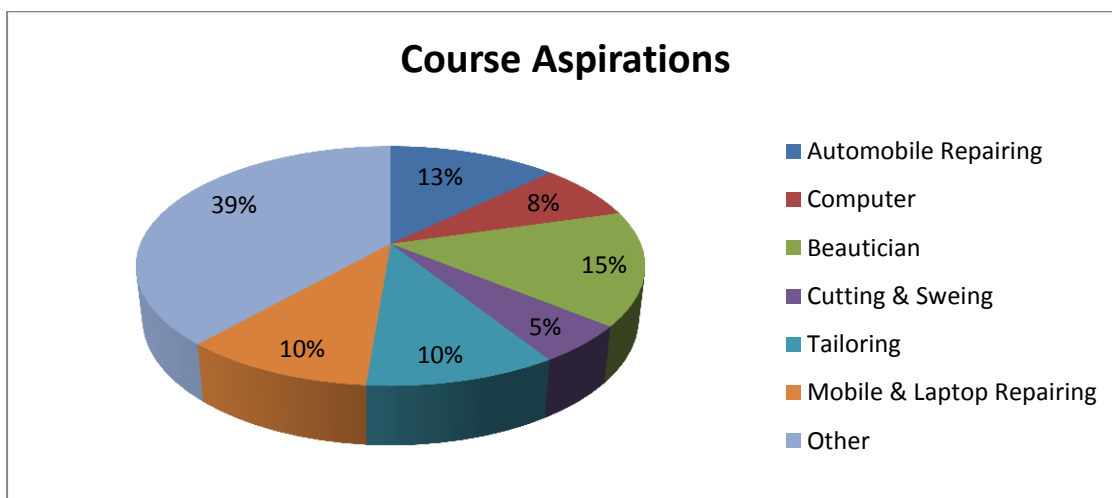
On asking the sources for knowledge updation, we come to know that majority of the people update their knowledge by watching TV, reading Newspapers/magazines and through Internet. Apart from that, some people keep updating themselves through word of mouth, attending seminars, attending training provided by companies. Few said by keep a watch on a competitor they make themselves updated. Some responses were that through experiences and customers, they keep themselves updated.

3.1.2.4.5 Aspiration for Vocational Training

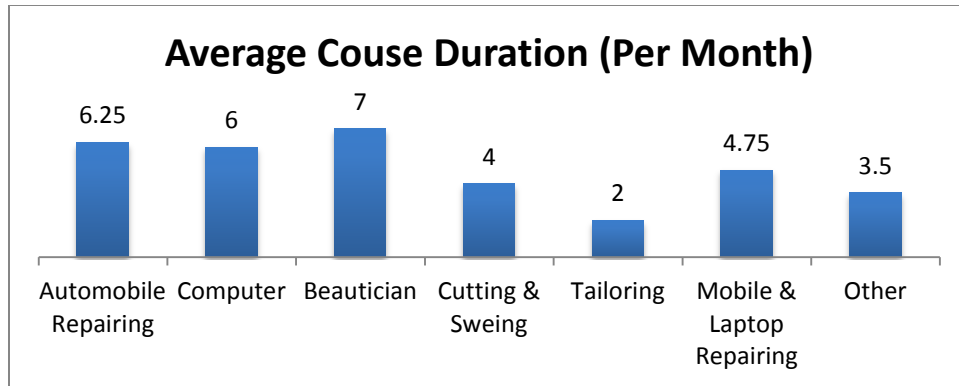
In majority of the interviews, people showed their interested in doing vocational training further though some of them already undergone training earlier.



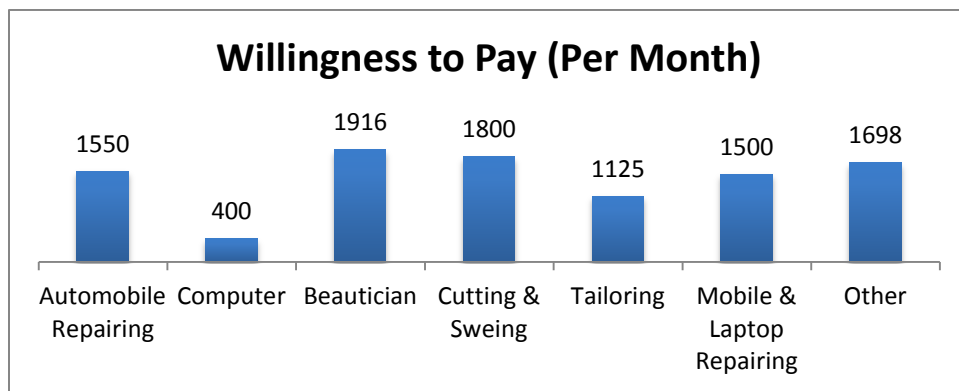
Courses for which they aspired to do vocational training as mentioned below. Majority of the respondents wants to undergo the course of Automobile Repairing. Few of them are also interested for the course of Hotel Management, Air Conditioning, Clock & Watch Repair, LCD/LED servicing, Photography etc.



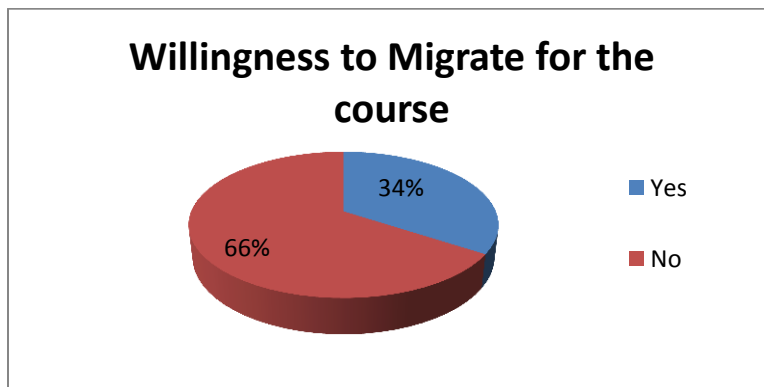
In this category as all were busy with their business they aspire only for maximum duration of 6 month per course.

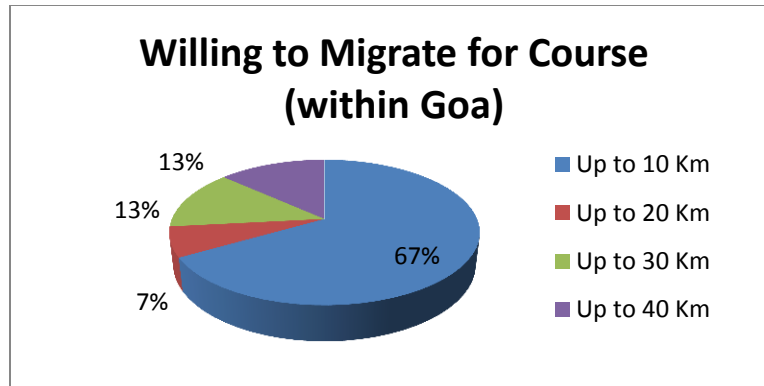


Below graph shows the readiness to pay per month for the listed courses. They are ready to pay in the range of Rs.400 to Rs. 2000 on an average.

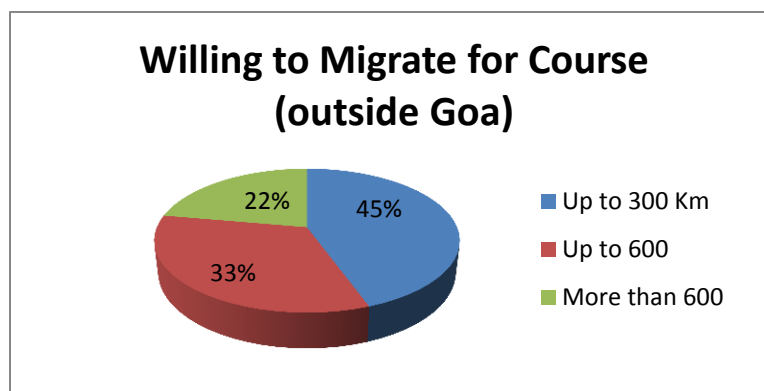


At South Goa district the willingness to migrate for the training of course is very less only 34%. Out of those who are willing to migrate 67% of them were willing to migrate only up to 10 Km within Goa while very few were want to go up to 40 Km. Majority of them wish to migrate up to Margao and Panjim within Goa.



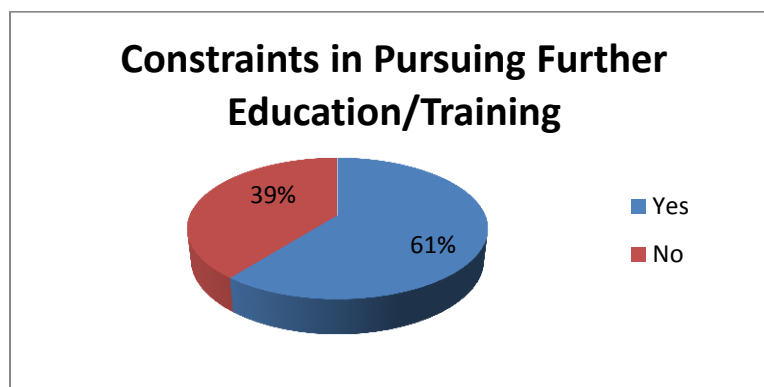


In case of outside Goa, most of them were willing to migrate up to 300 Km and the most preferable places for migration outside Goa are Delhi, Maharashtra, Bangalore and Karnataka.



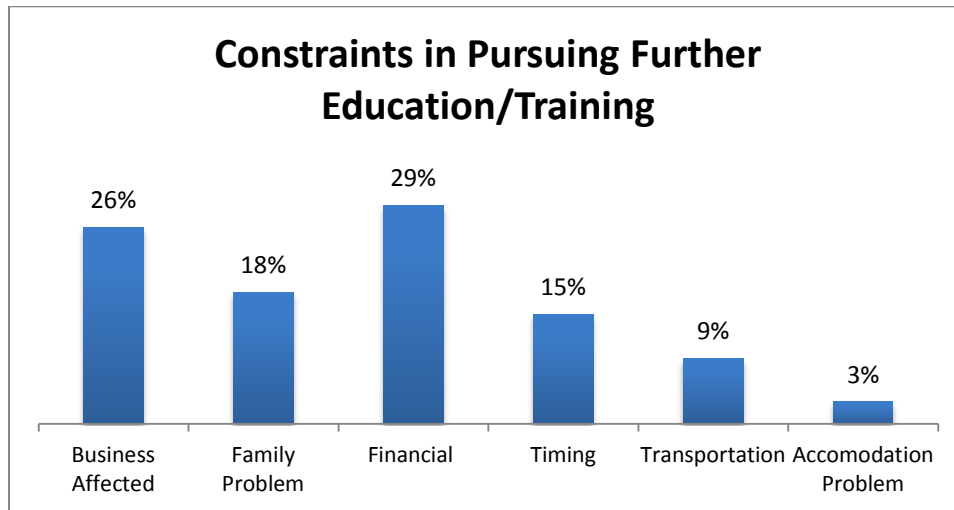
3.1.2.4.6 Constraint

Majority of the self employed category people were facing constraint for undergoing vocational course at district.



Below graph depicts that financial problem is a major issue the respondents are facing. Other than that as all are running business another major constraint is if they join vocational course then how would they taking care of

their current business. Family problems, timing, transportation and accommodation are also issues which resist them to join vocational course.



3.1.3. Supply Side Study

3.1.3.1. Demographic & Socio-economic profile of South Goa

According to the 2011 census, South Goa has a population of 639,962. The district has a population density of 326 inhabitants per square kilometer. Its population growth rate over the decade 2001-2011 was 8.63%. South Goa has a sex ratio of 980 females for every 1000 males, and a literacy rate of 85.53%. Konkani is the mother tongue of a majority of the people living in South Goa district. Marathi and Kannada are spoken by a substantial number of people. English and Hindi are understood by a majority of the population. Portuguese is also spoken and understood by a small number of people.

Table 47: Comparison of South Goa district with the Goa State on different demographic parameters

Indicator	Year	Goa	South Goa
Population, No.	2011	1.46 Mn	6.4 Lack
Decadal growth rate of population, %	2001-11	8.23%	8.73%
Urban population as a percentage of total population, %	2001	62.17%	64.59%
Sex ratio, No. of females per 1000 males	2011	973	986
Population density, per sq. km.	2011	394	326
Literacy rate, %	2011	88.70%	87.59

Source: Goa Senses 2011, South Goa, 2011

Demographics

Table 48: Demographic and Socio-economic profile of South Goa District

Sr. No.	Item	Reference Period	Sanguem	Canacona	Quepem	Salcete	Mormugao	South Goa
1	Area (Sq.Km.)	2001	836.82	352.04	318.25	292.94	109.13	1,966.00
2	Total population	2001	64080	43997	74034	262035	144949	589095
3	Density per Sq.Km.	2001	77	125	233	895	1328	300
4	Total No. of households	2001	13979	9206	16136	59063	32299	130683
5	Male population	2001	32575	22276	37527	129798	76570	298746
6	Female population	2001	31505	21721	36507	132237	68379	290349
7	Rural population	2001	53074	32096	40054	110456	24587	260267
8	Urban population	2001	11006	11901	33980	151579	120362	328828
9	No. of main workers	2001	20698	13831	24227	79219	45140	183115
10	Main workers participation rate to total population (%)	2001	32.3	31.44	32.72	30.23	31.14	31.08
	i) Male participation rate (%)	2001	48.37	44.74	46.85	46.67	48.66	47.25
	ii) Female participation rate (%)	2001	15.68	17.79	18.20	14.10	11.53	14.46
11	Birth rate (per 1,000 population)	2009 (P)	-	-	-	-	-	12.62
12	Death rate (per 1,000 population)	2009 (P)	-	-	-	-	-	6.42
13	Infant mortality rate (Infant deaths per 1,000 live births)	2009 (P)	-	-	-	-	-	2.38

Source: Directorate of Planning, Statistics and Evaluation, Goa (2010) Goa at a Glance – 2010. Available from: <http://www.goapse.gov.in/publications.htm>

Education Profile

Table 49: Educational Profile of South Goa district

Sr. No.	Item	Reference Period	Sanguem	Canacona	Quepem	Salcete	Mormugao	South Goa
1	Total literacy rate (percent)	2001	75.65	74.76	74.83	81.92	82.91	80.06
2	Male literacy rate (percent)	2001	84.62	82.11	81.78	87.13	88.98	86.28
3	Female literacy rate (percent)	2001	66.36	67.25	67.74	76.85	76.11	73.68
4	Rural female literacy rate (percent)	2001	64.48	64.94	61.45	73.96	72.37	68.97
5	No. of primary level schools	2009-10	125	80	94	152	61	512
6	No. of middle level schools	2009-10	23	24	21	77	41	186
7	No. of secondary level schools	2009-10	21	17	19	63	36	156
8	No. of higher secondary level schools	2009-10	3	3	4	16	7	33
9	No. of colleges/university for general education (Arts, Science & Commerce)	2009-10	0	1	1	5	1	8
10	No. of colleges for professional education	2009-10	0	0	0	3	1	4
11	No. of institutions for vocational/technical education (pre-metric level)	2009-10	0	0	0	1	0	1
12	No. of I.T.I.'s	2009-10	0	1	1	3	1	6
13	No. of schools for professional education (post - metric level)	2009-10	0	0	2	3	1	6
14	No. of students at primary stage (I to IV)	2009-10	3918	2830	5354	23417	11264	46783
15	No. of students at middle stage (V to VII)	2009-10	2746	1663	4370	16318	7953	33050
16	No. of students at secondary stage (VIII to X)	2009-10	2382	1954	3451	12372	6319	26478
17	No. of students at higher secondary stage (XI & XII)	2009-10	460	658	1511	6657	2639	11925
18	No. of students in colleges/university for general education	2009-10	0	298	799	3411	1010	5518
19	No. of students in colleges for professional education	2009-10	0	0	0	1297	3	1300
20	No. of students in vocational/technical education (pre-metric)	2009-10	0	0	0	109	0	109
21	No. of students in I.T.I.'s	2009-10	0	252	288	605	256	1401

Sr. No.	Item	Reference Period	Sanguem	Canacona	Quepem	Salcete	Mormugao	South Goa
22	No. of students for professional education (post-metric)	2009-10	0	0	412	0	802	1214
23	No. of libraries (private) aided	2009-10	2	3	3	7	1	16
24	No. of libraries (government) aided	2009-10	7	5	4	14	5	35

Source: Directorate of Planning, Statistics and Evaluation, Goa (2010). Goa at a Glance – 2010. Available from: <http://www.goadpse.gov.in/publications.htm>

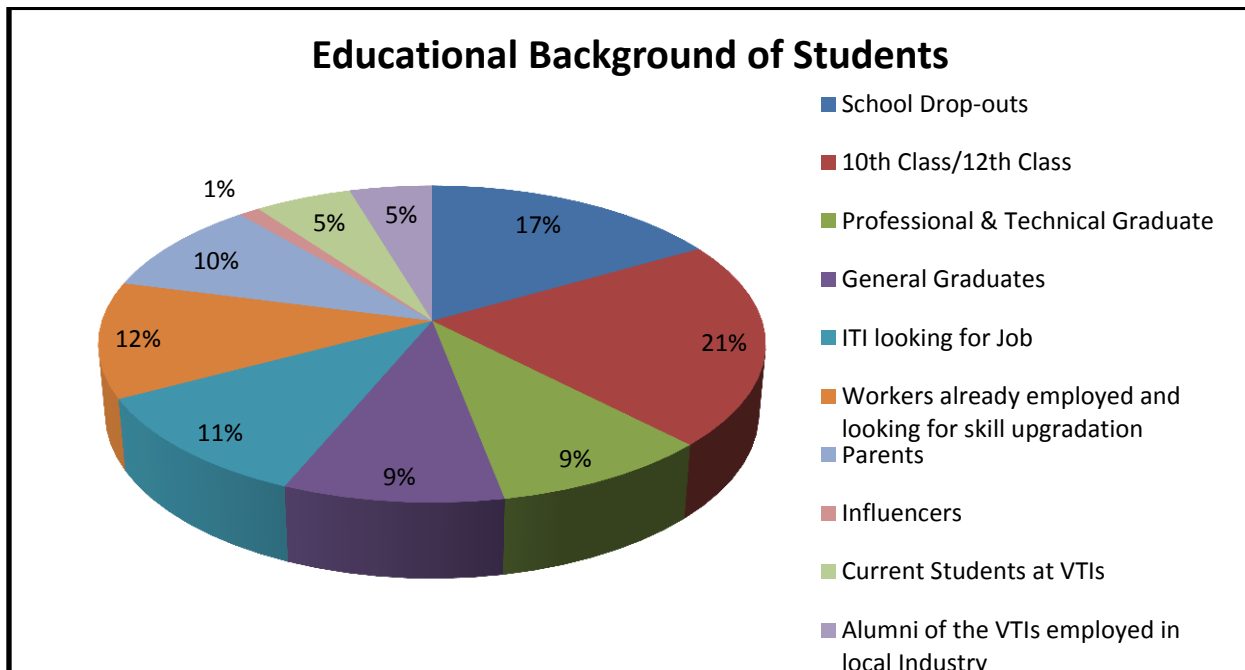
3.1.3.2 Aspirations & Constraints of various target groups

On the supply side, we spoke to people from all sorts of backgrounds. The potential students for a skills school can be any of the following –

- School Drop-outs
 - Early School drop outs
 - 10th /12th Drop outs
- 10th/12th Class Students
- General stream Graduates
- Technical Graduates
- ITI Pass-outs
 - Current Students
 - Pass outs looking for job
 - Alumni
- Workers already employed and looking for skill up gradation
- Parents
- Influencers

In the following sections, we have summarized the outcome of our interactions of people from each of this category in terms of their aspirations, willingness to migrate, expected income and constraints.

Figure 23: Educational Background of the Interviewed Students



Source: Dexter Analysis

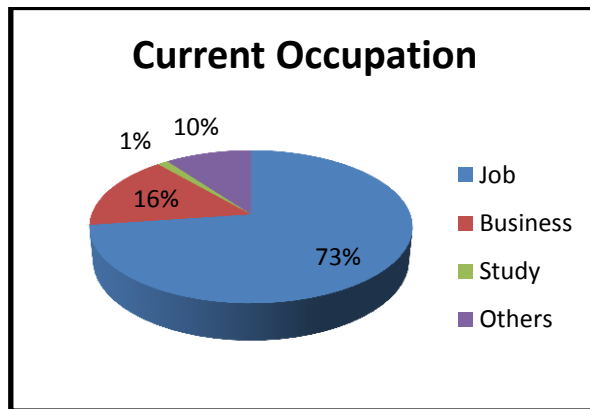
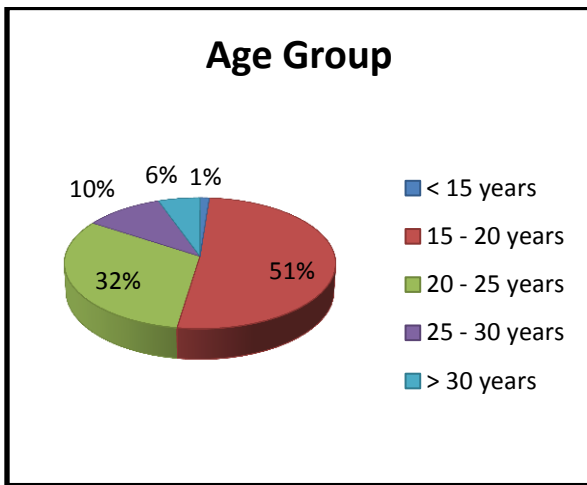
The chart above gives a rough idea of the division of the interviews that we conducted on the supply side.

3.1.3.2.1 School Drop-outs

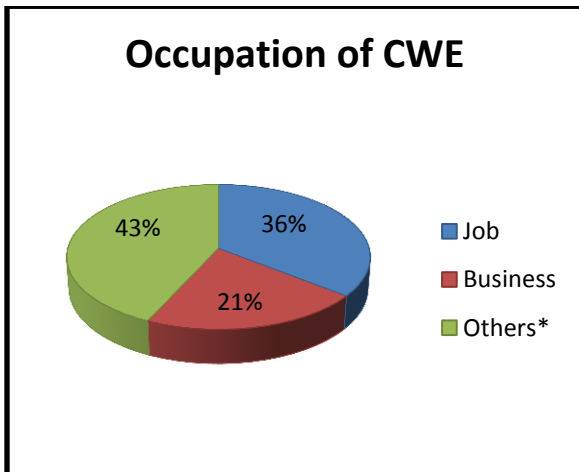
This category includes early school drop outs and 10th/12th Class drop outs. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.1.1 Early School Dropouts

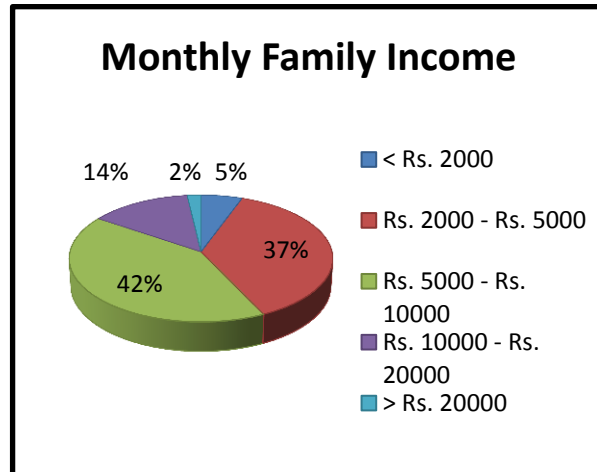
3.1.3.2.1.1.1 Profiling Data

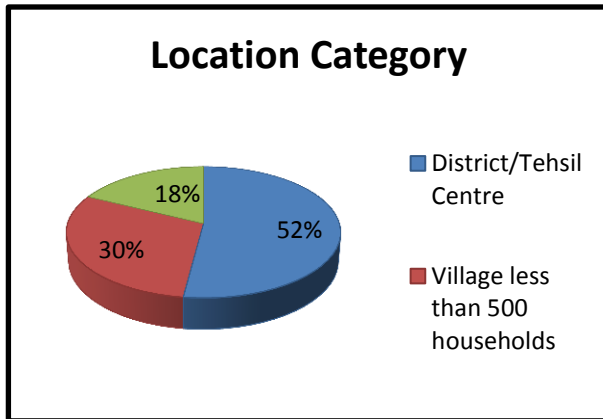


**Others include Farmer, Unemployed*



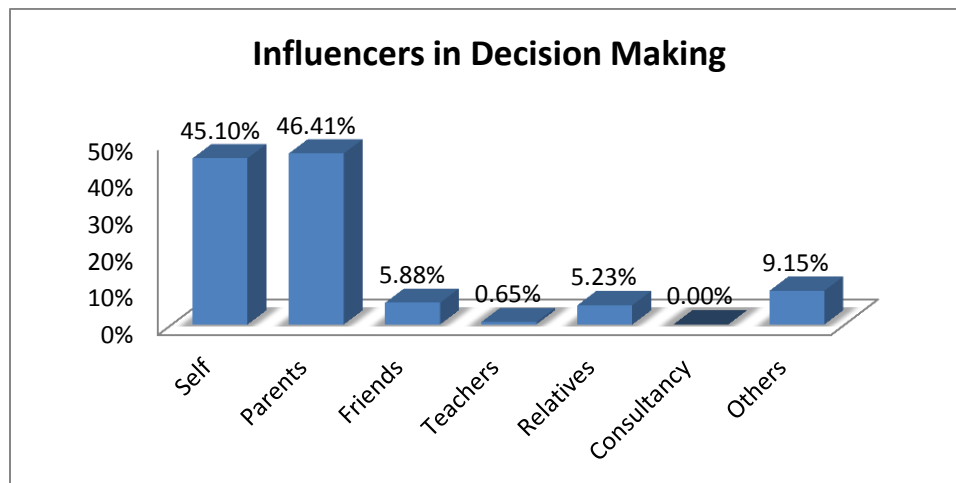
**Others include: Farmer, Carpenter, Painter*





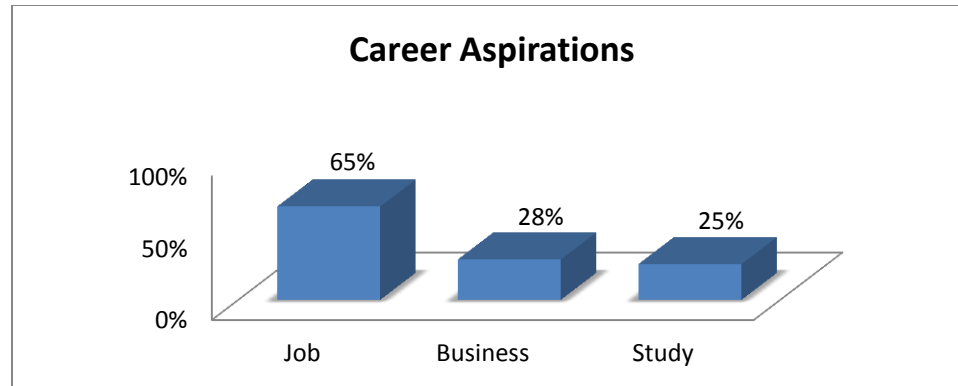
3.1.3.2.1.1.1.1 Decision Making

Majority of the decisions in the life of early school drop-outs are influenced by parents (46.41%). However, around 45% early school drop-out students' decisions are not influenced by anyone. Less than 10% students' decisions are taken by other family members like brother, sister or spouse.

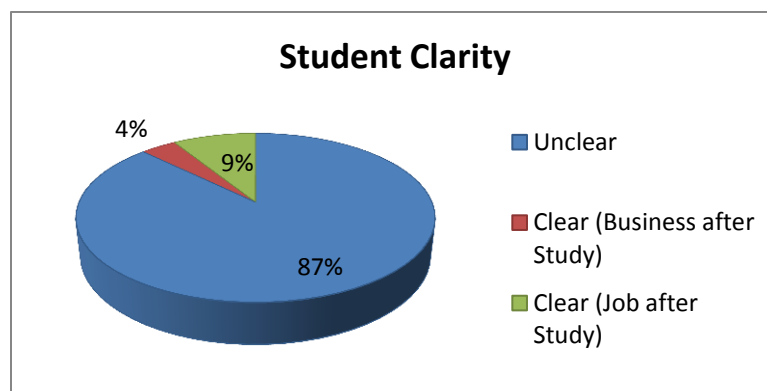


3.1.3.2.1.1.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.

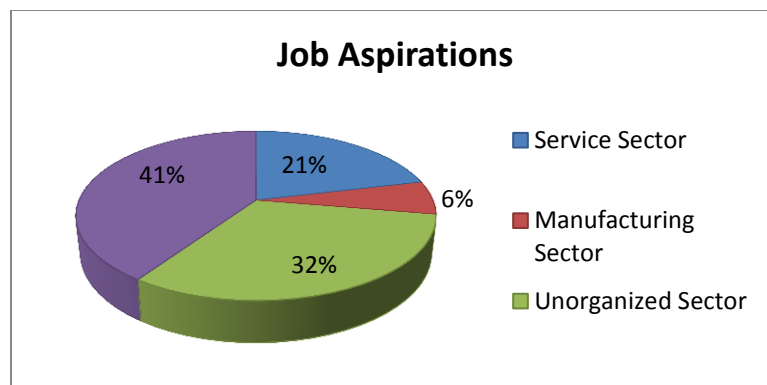


High percent of students in this category were aspire to do job further while only 25% of total early school drop outs wants to do study further in South Goa region.



As the respondents are early school drop outs, they do not have that much knowledge about market scenario and also they are not much visionary for their career which can be proved by the above pie, majority of the respondents were unclear about their future career decision.

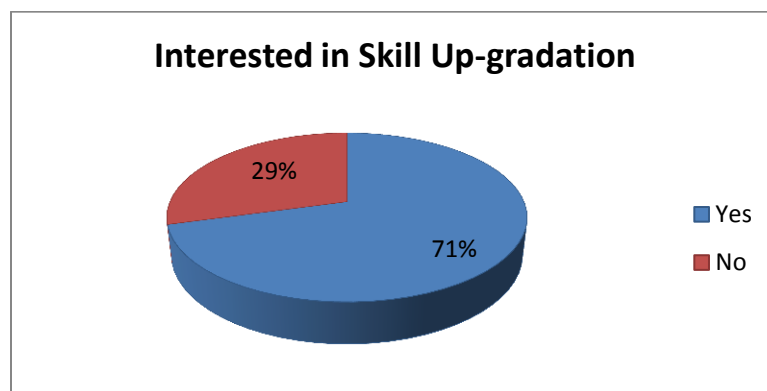
Very few students were aspiring to do job in the manufacturing sector as compared to service sector while there were also 32% students who want to work in unorganized sector.



Majority of the students aspire to do job in following profile in each of the three sectors:

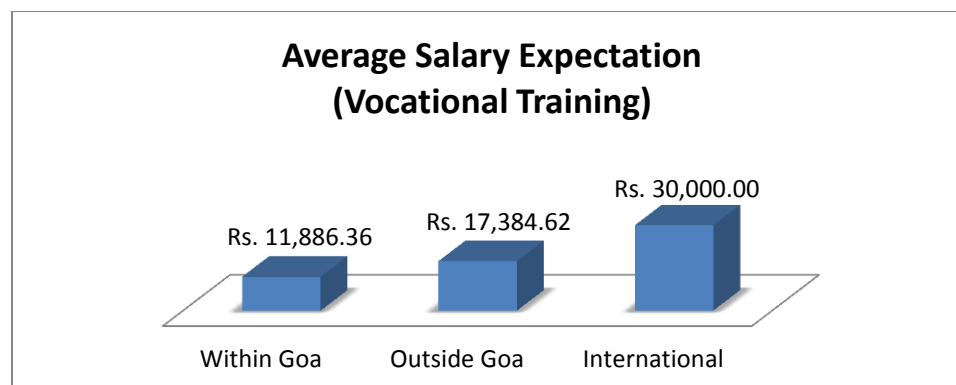
Service Sector	Manufacturing Sector	Unorganized Sector
Waiter	Laborer	Mobile Repairing
Driver	Electrician	
Salesman	Mechanic	
Catering		

3.1.3.2.1.1.2.1 Interested in Skill Up-gradation



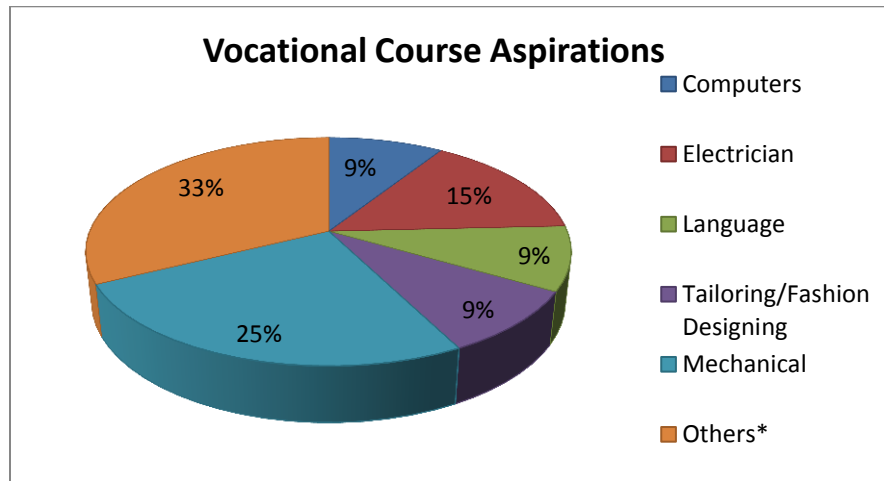
All the students interested in Skill Up-gradation were aspiring to undergo vocational training for an average duration of 7 months. The students were willing to pay an average of around Rs. 1000 per month for the training.

3.1.3.2.1.1.2.2 Average Salary Expectation



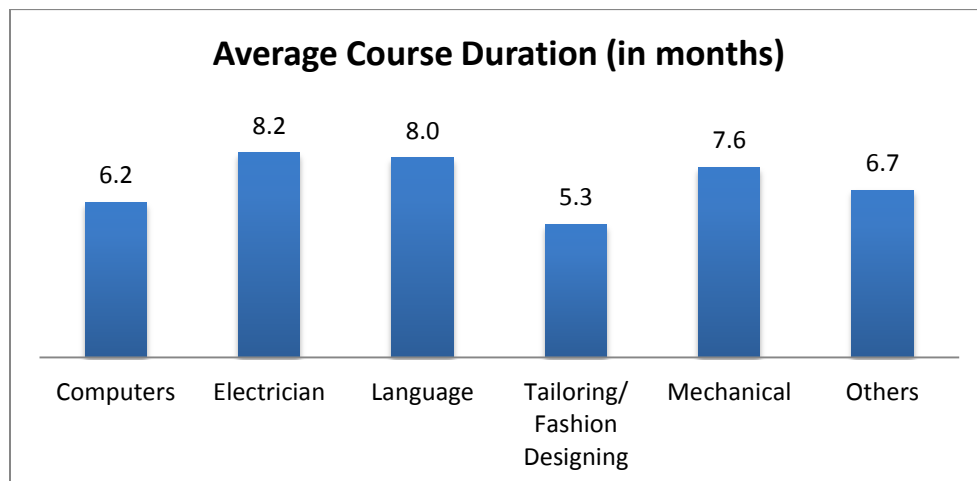
On asking the salary expectation after taking vocational training the students responded that they expect salary around Rs.12000 within Goa and majority of the students expect a salary in the range of Rs. 15000 – 20000 outside Goa.

3.1.3.2.1.1.2.3 Vocational Course Aspirations



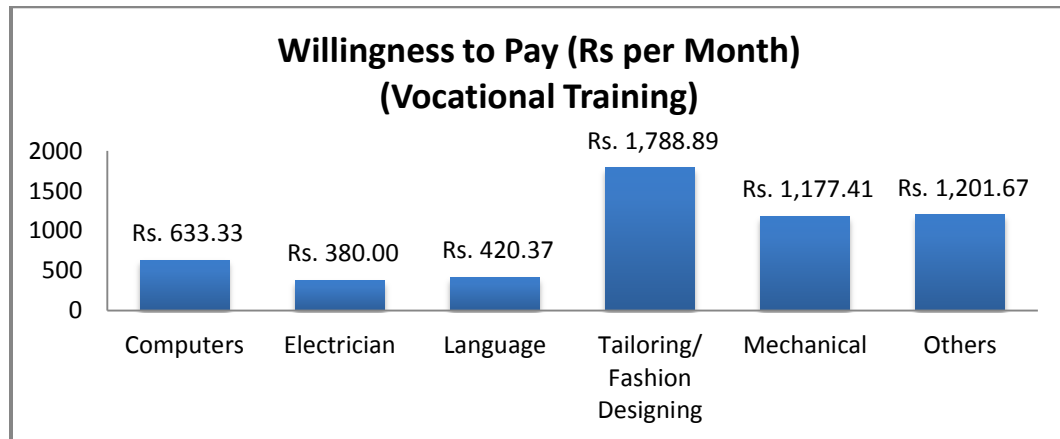
Many students aspire to undergo training of the course of Mobile Repairing and Hospitality while only 9% were wants to take training related to Computer course like Basic Computer, Advanced Computer Course or Languages like C, C++ and also few aspired for fashion designing course.

3.1.3.2.1.1.2.4 Average Duration (Vocational Training)



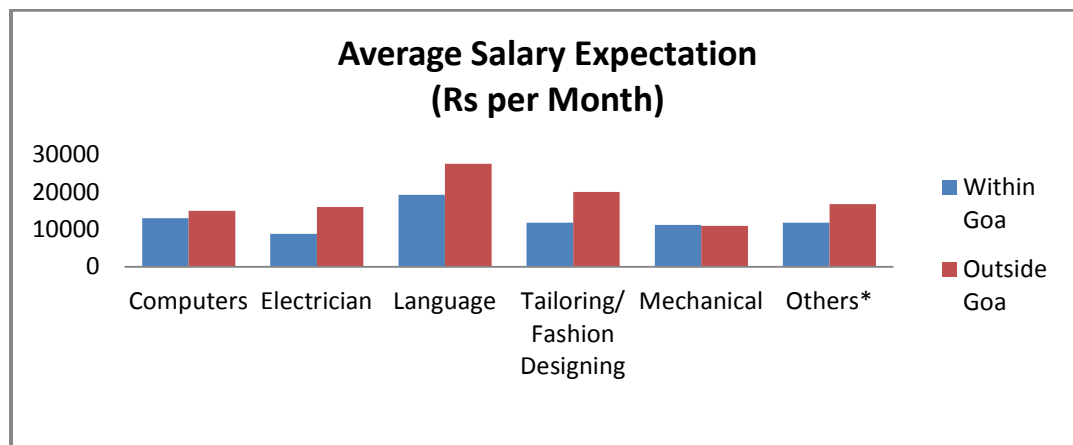
Above pie shows average duration for undergoing training for various vocational course they aspire to do in future.

3.1.3.2.1.1.2.5 Willingness to pay for Courses



From all the aspire courses Fashion designing is the one for which students were ready to pay highest amount which is followed by Mechanical Course, Mobile Repairing and Hospitality.

3.1.3.2.1.1.2.6 Average Salary Expectation



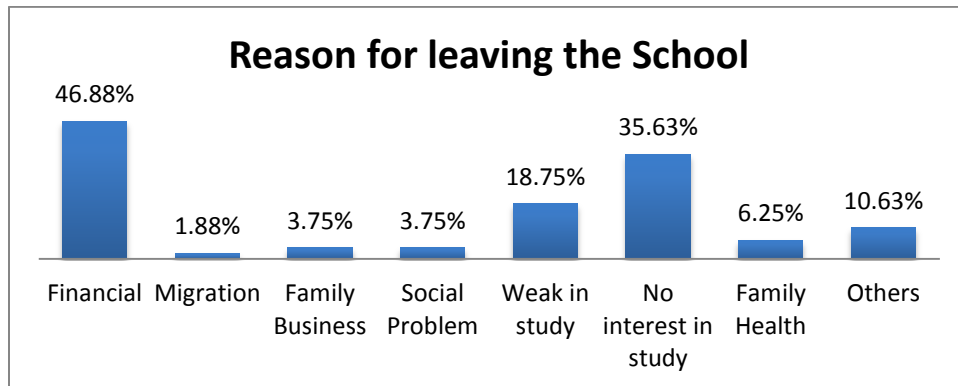
We also ask the students about their salary expectation after taking vocational training, the students who aspire for doing Language course expect highest salary in both the cases within and outside Goa.

3.1.3.2.1.1.3 Constraints

This section includes the reason for which student left their education, constraints faced by the students for further education or undergoing training and willingness to migrate for course.

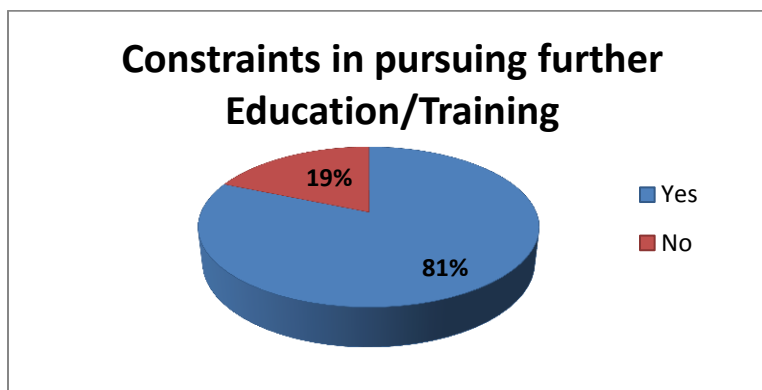
3.1.3.2.1.1.3.1 Reason for leaving School

Here, this category includes the students who were dropped out before 10th Class, thus the reason for leaving the school would be important to know so as to understand the constraints better. We found out that half of the students left their school as they were facing financial problem.

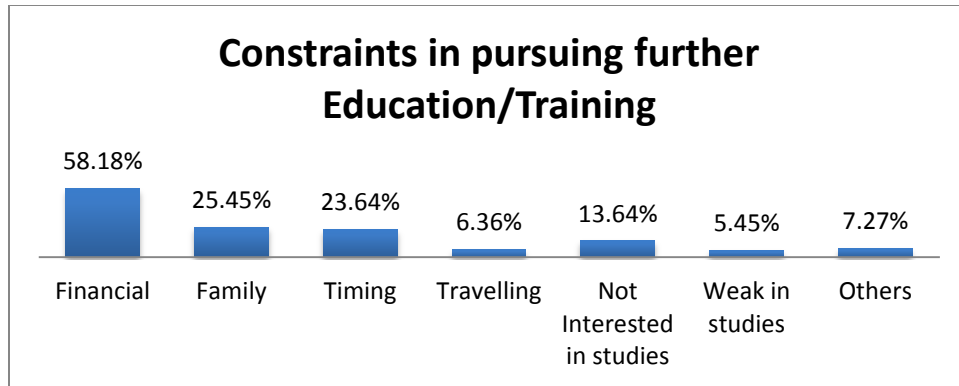


Here, others include other family problems like no parents, family responsibility etc.

3.1.3.2.1.1.3.2 Constraints in pursuing further Education/Training

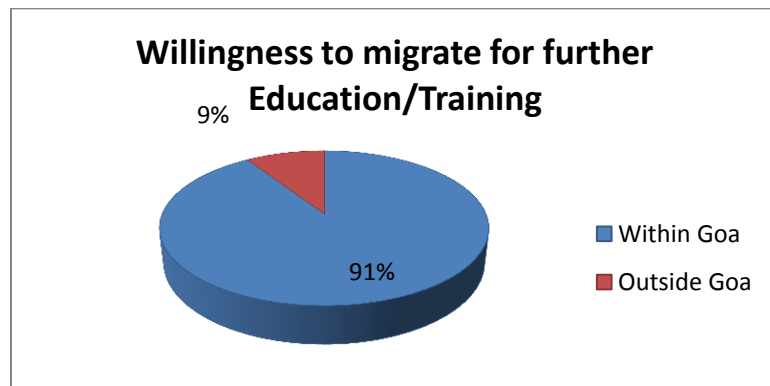
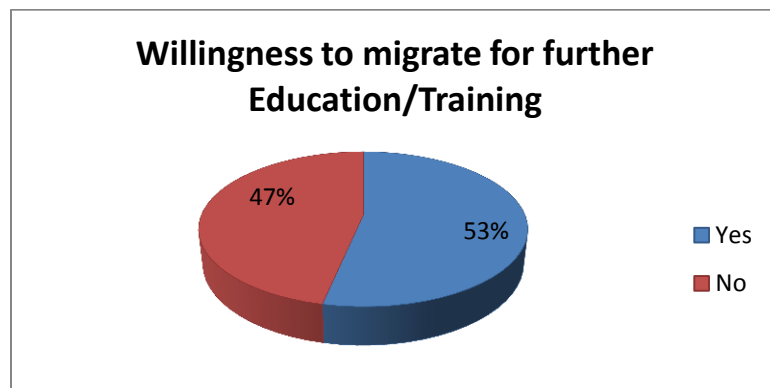


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 81% of the early school drop outs were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

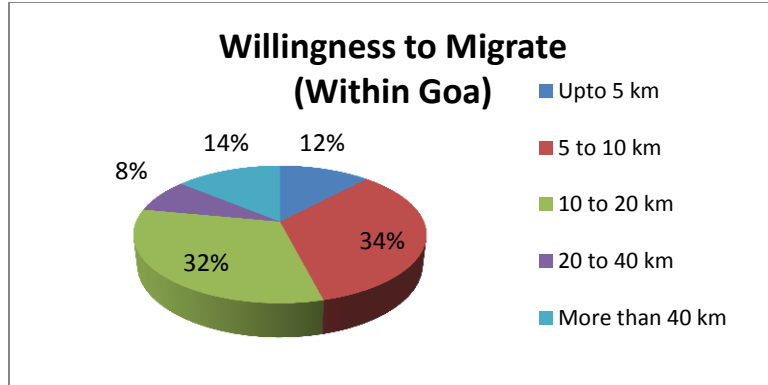


3.1.3.2.1.1.3.3 Willingness to migrate for further Education/Training

In this section, student's willingness to migrate for training has been described. At South Goa district, out of total early drop out students, 53% were willing to migrate for taking training.

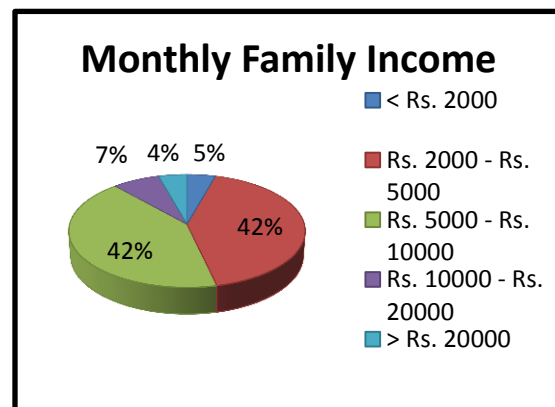
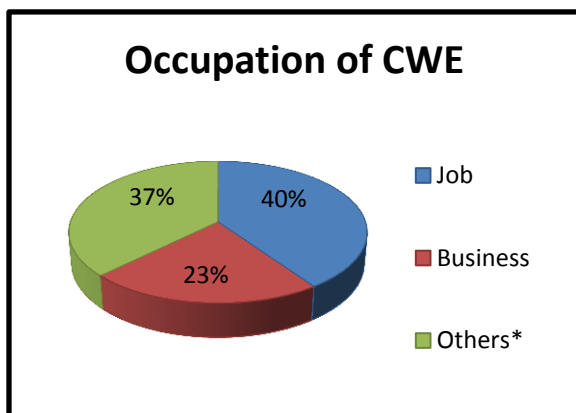
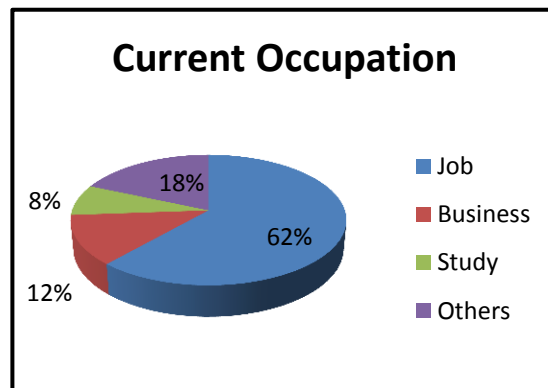
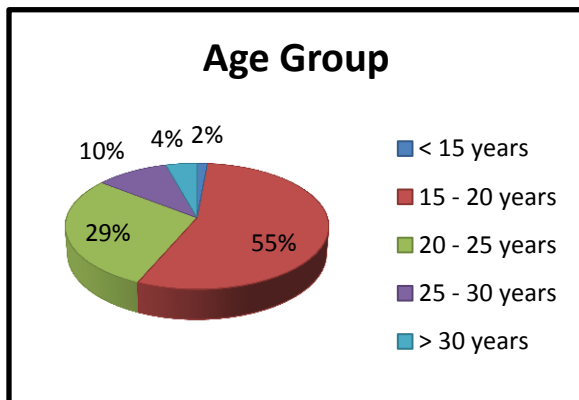


Out of those who willing to undergo training, majority of the students were only willing to migrate within Goa. Most of the students were only ready to migrate up to 5 to 20 Km which shows in the below pie chart.

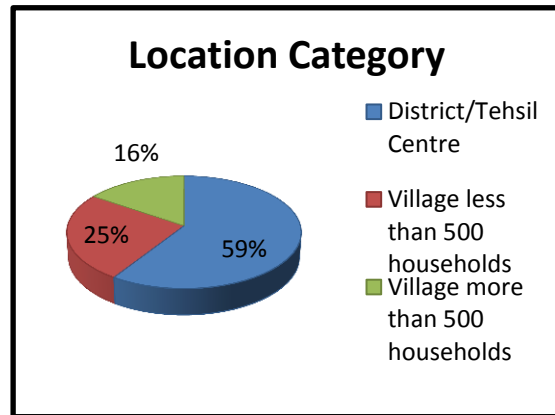
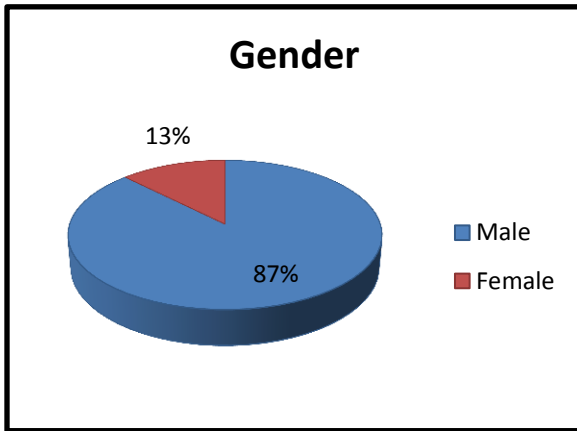


3.1.3.2.1.2 10th and 12th Drop outs

3.1.3.2.1.2.1 Profiling Data

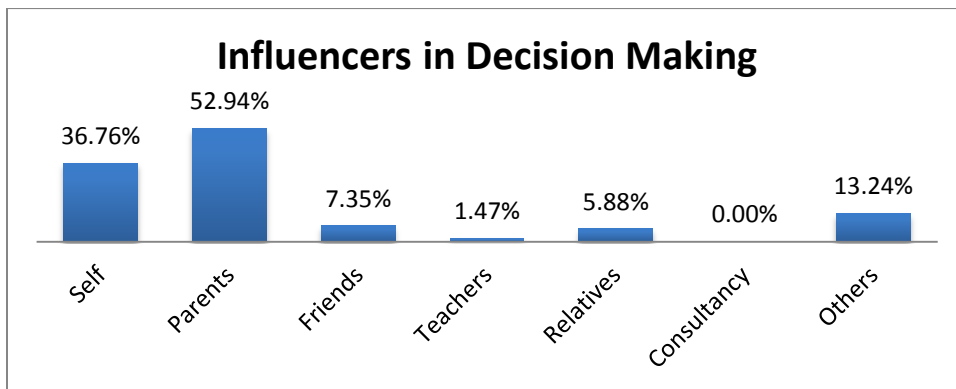


*Others include Farmer, Driver, Painter, etc

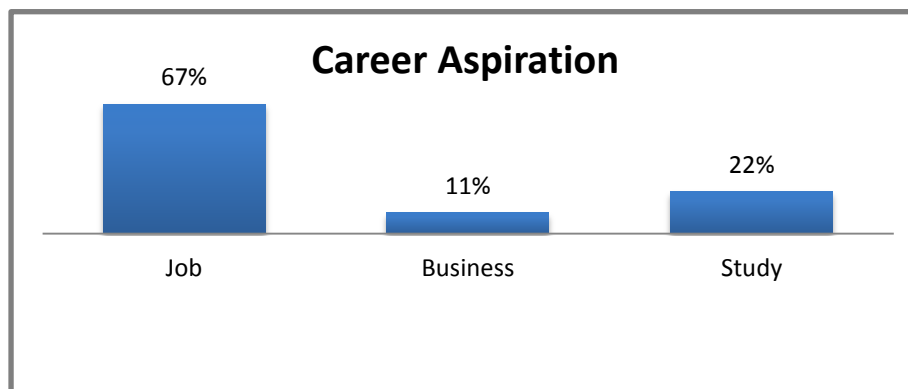


3.1.3.2.1.1.2.1 Decision Making

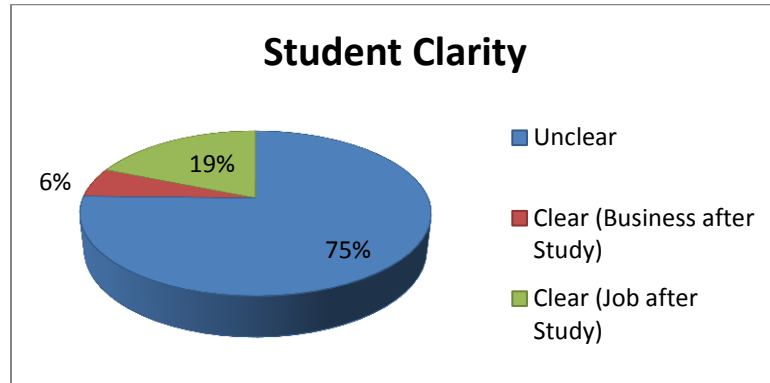
At South Goa district it has been proved that parents play major role in decision making in the life of students of 10th and 12th class. However there were 36.76% students who take their decisions by own.



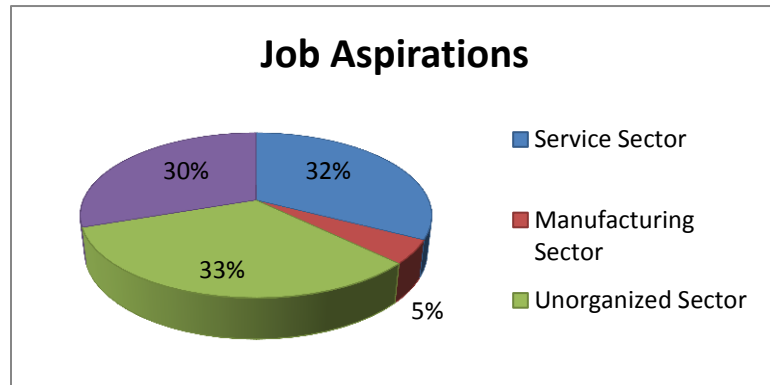
3.1.3.2.1.2.2 Aspirations



From the total interviewed students majority of them wants to do job but also it is notable that there were 22% students who aspires for study further.

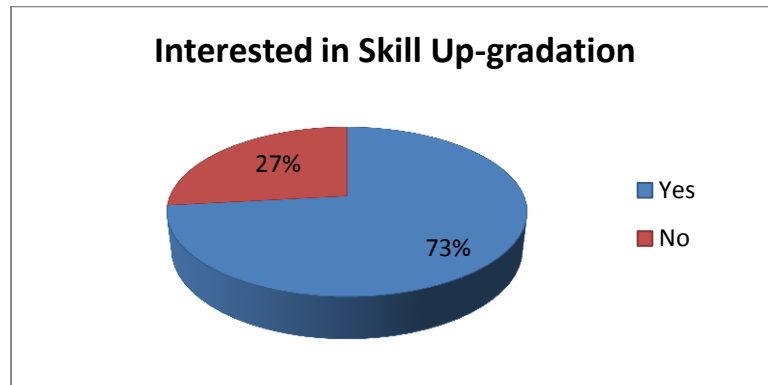


Similar to early school drop outs, 10th / 12th class students were also not clear about their career. Here, only 25% of them had decided what they have to do in their future for making money. Below chart shows the sector in which students aspire to do job in future.



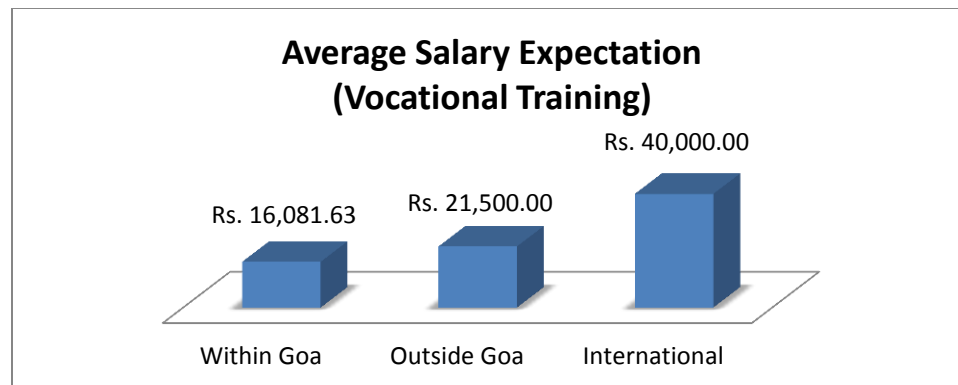
Service Sector	Manufacturing Sector	Unorganized Sector
Police	Mechanical Engineer	Electrical
Hotel Assistant		Automobile mechanic
Computer Engineer		
Architect		

3.1.3.2.1.2.2.1 Interested in Skill Up-gradation



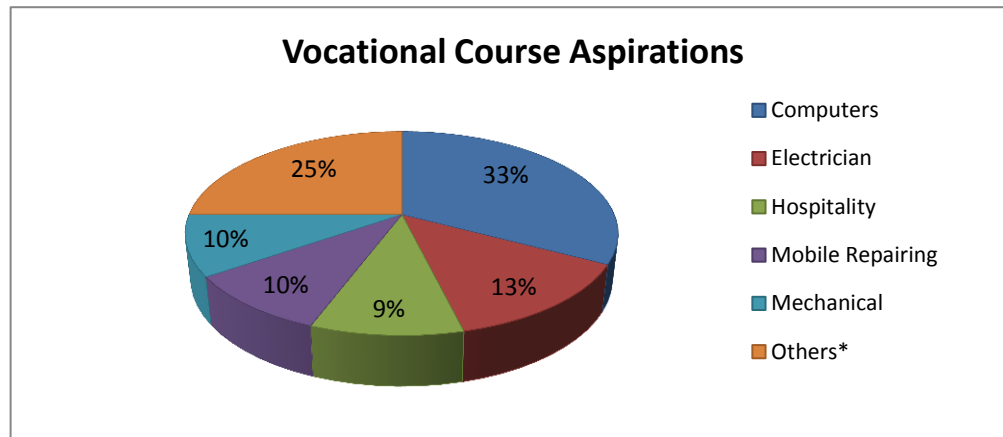
All the students interested in Skill Up-gradation were aspiring to undergo vocational training for an average duration of 6 months. The students are willing to pay an average of around Rs. 1000 per month for the training.

3.1.3.2.1.2.2.2 Average Salary Expectation



The average salary expectation of students in this category is shown in above chart, students expecting Rs.16000 salary in case of job opportunity within Goa.

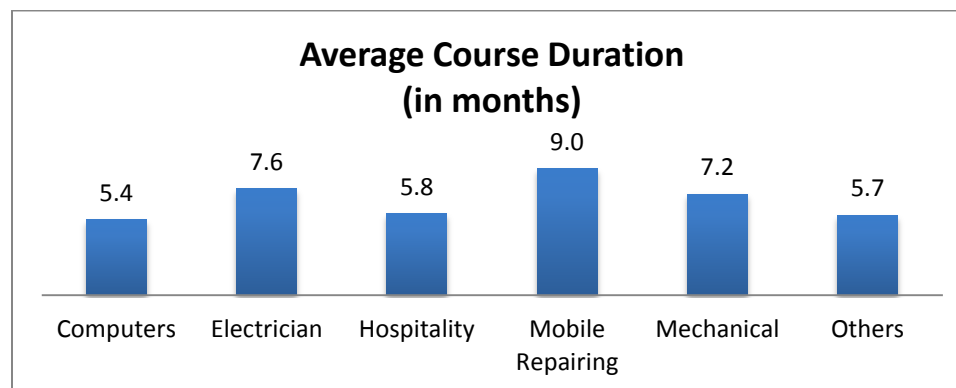
3.1.3.2.1.2.2.3 Vocational Course Aspirations



**Others include Tailoring, Beautician, Plumber, Carpenter, etc.*

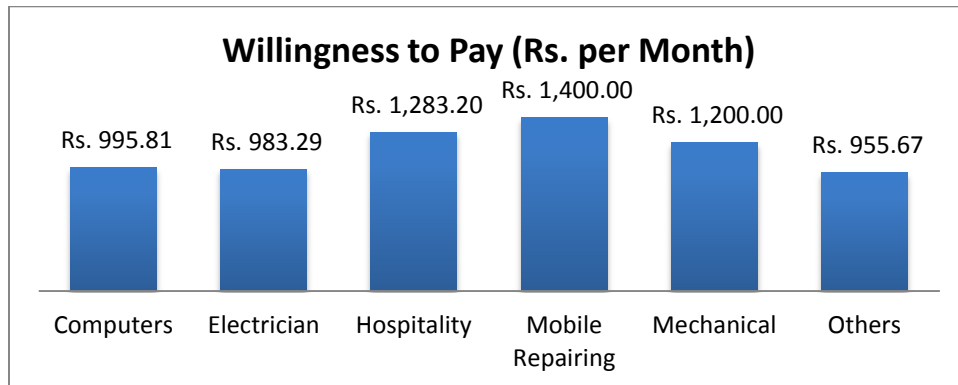
All the students who aspire to undergo vocational training, of which 33% were willing to do Computer course, which is followed by Electrician.

3.1.3.2.1.2.2.4 Average Duration (Vocational Training)



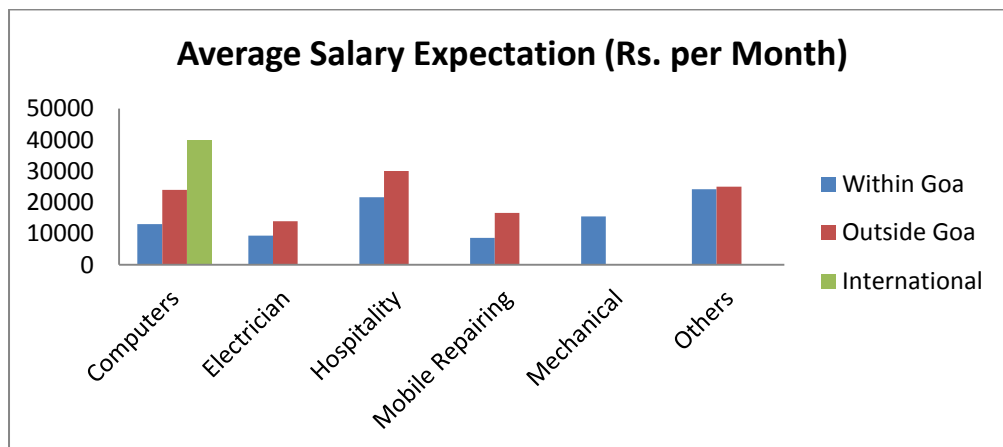
Herein, Mobile Repairing, Electrician and Mechanical are the course for which students require more time duration for taking vocational training as compare to other courses.

3.1.3.2.1.2.2.5 Willingness to pay



In this section, students are willing to pay in the range of Rs.900 to Rs.1400 for the aspired courses, out of which Mobile Repairing is the one for which students' readiness to pay is highest.

3.1.3.2.1.2.2.6 Average Salary Expectation

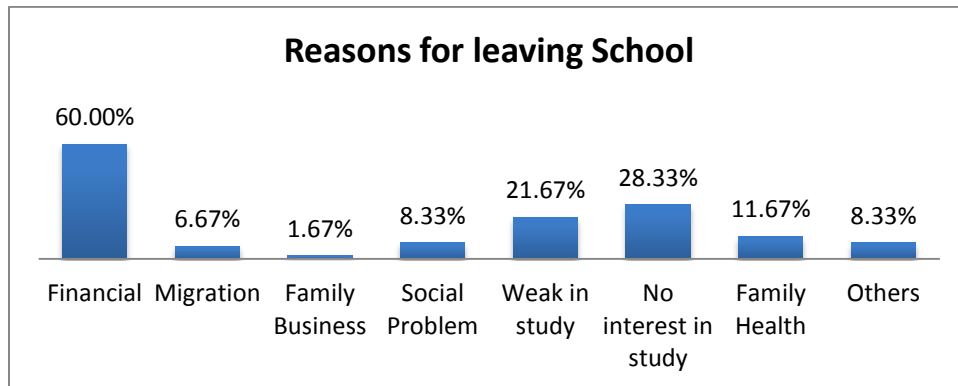


The drop out students of 10th/12th class was not having any idea about the pay packages at outside India. Here, Hospitality is the course for which they expect higher salary as Goa is considered as tourist place.

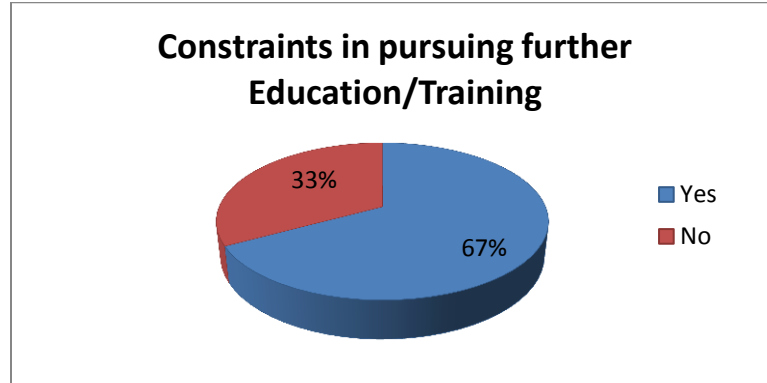
3.1.3.2.1.2.3 Constraints

3.1.3.2.1.2.3.1 Reason for leaving School

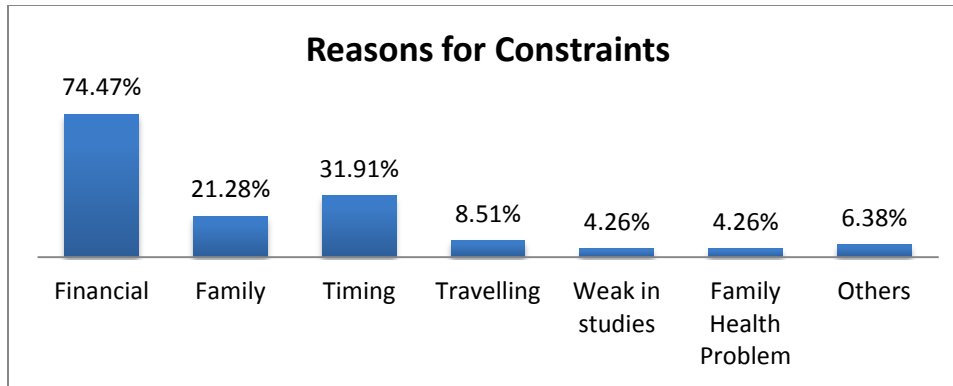
Here, this category include the students who were dropped out in either 10th or 12th Class, thus the reason for leaving the school would be important to know so as to understand the constraints better. We found out that more than half of the students left their school as they were facing financial problem.



3.1.3.2.1.2.3.2 Constraints in pursuing further Education/Training

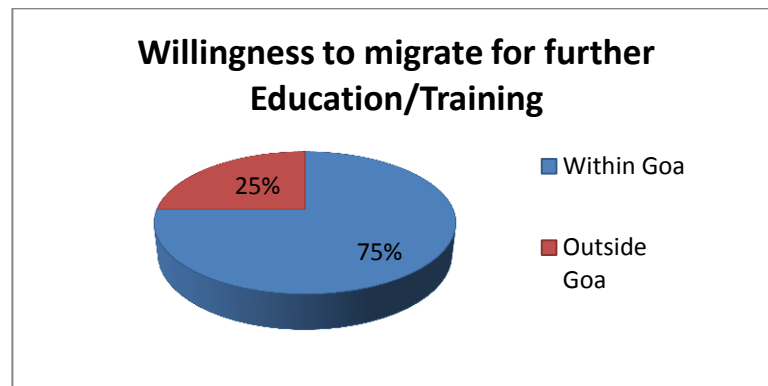
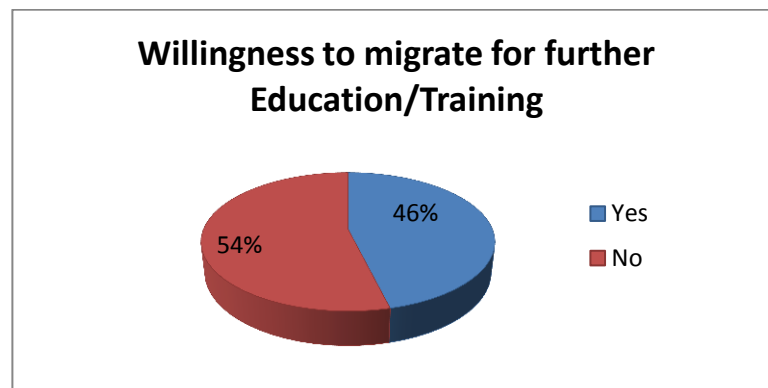


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 67% of the early school drop outs were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

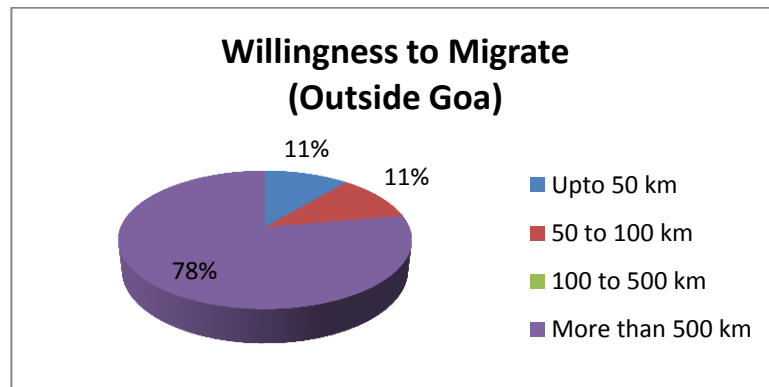
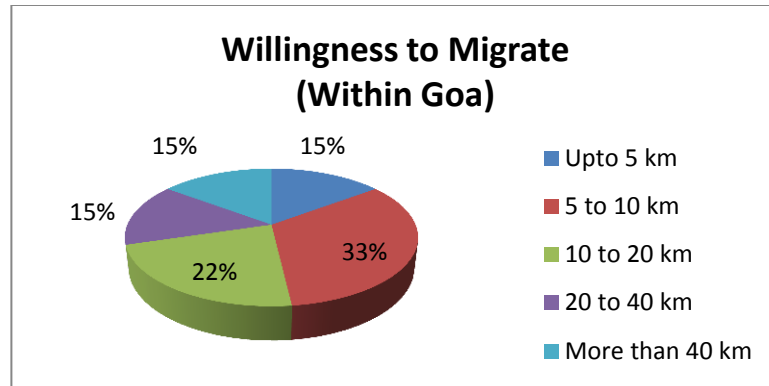


3.1.3.2.1.2.3.3 Willingness to migrate for further Education/Training

In this section, student's willingness to migrate for training has been described. At South Goa district, out of total 10th/12th drop out students, 46% were willing to migrate for taking training.



Out of those who are willing to migrate 75% were only able to migrate within Goa. Similar to early school drop outs, in this category majority of the students were willing to migrate only up to 5 – 10 Km which is shown in pie chart below.

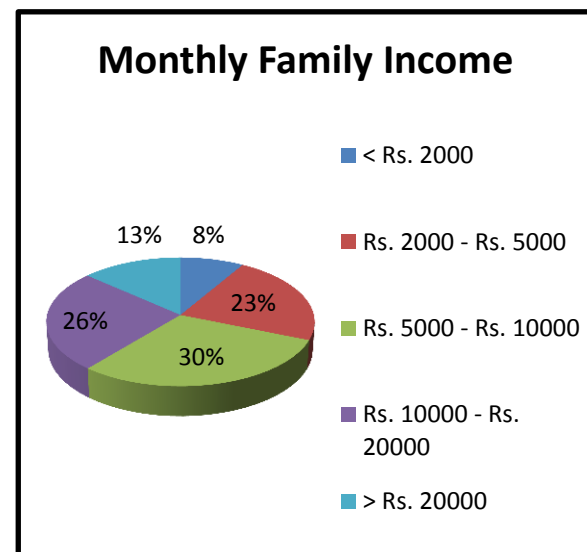
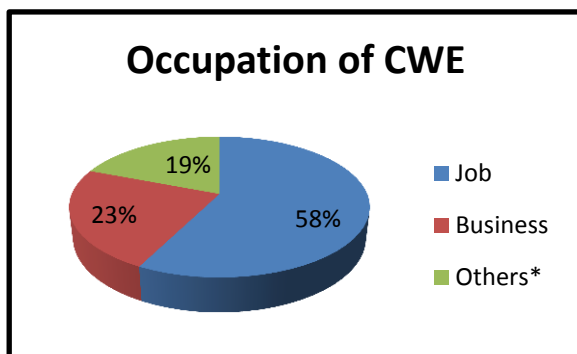
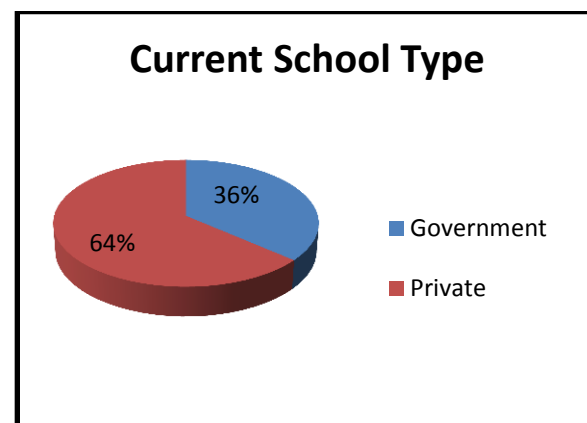
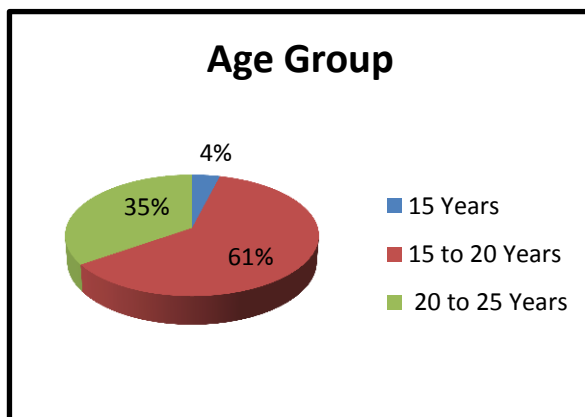


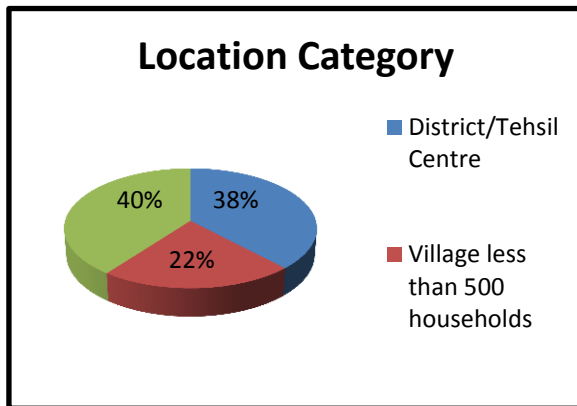
3.1.3.2.2 10th / 12th Students

This category includes students who are currently studying at 10th/12th class and 10th/12th Class pass outs who do not go for further study and joined job market. The major areas we have covered are profiling of category which include educational and economical background of students with influencer's role in decision making of student's life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.2.1 Current 10th/12th Students

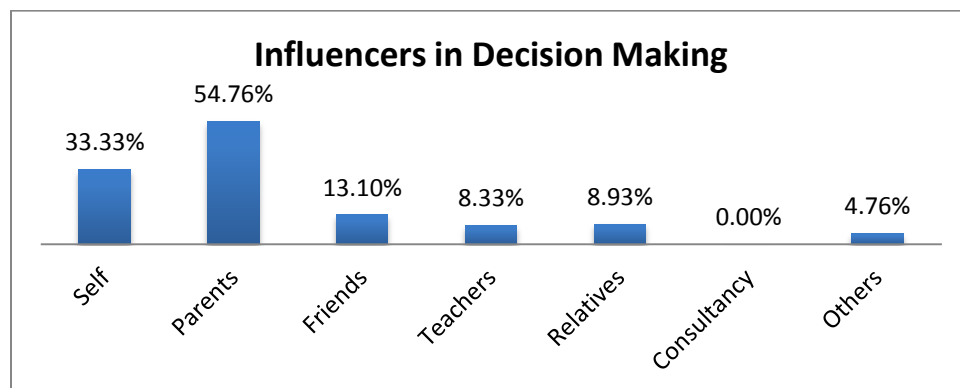
3.1.3.2.2.1.1 Profiling Data





***Others include Farmer, Carpenter, Electrician, Fisherman, etc**

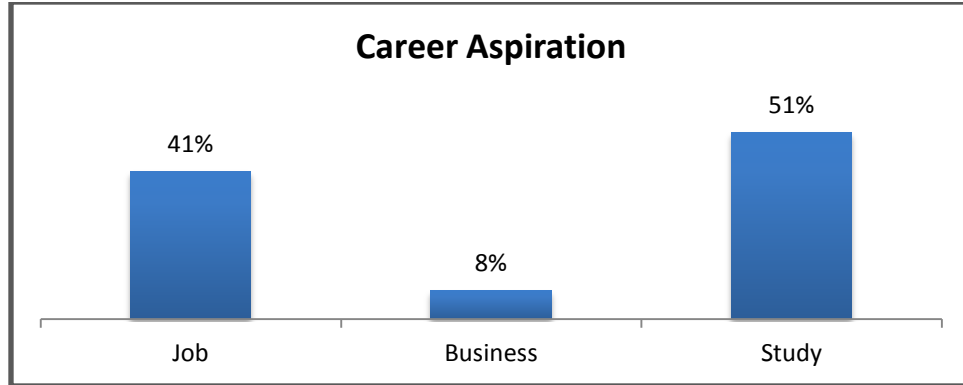
3.1.3.2.2.1.1.1 Decision Making



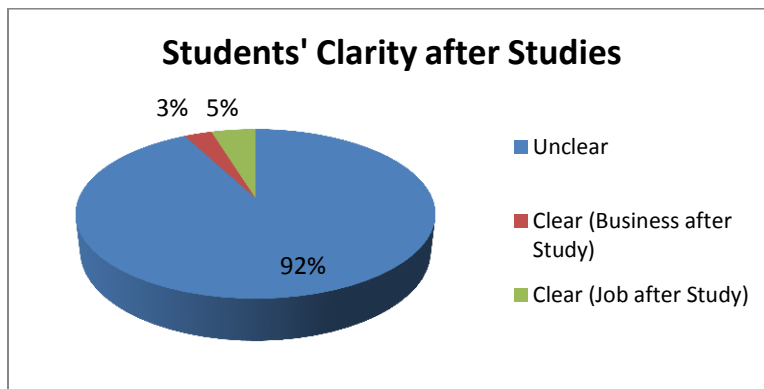
Herein, parents play an important role in decision making of students' career who is currently studying in 10th/12th Class. In this category, we found none of the students were influenced by consultancies in taking their decisions.

3.1.3.2.2.1.2 Aspirations

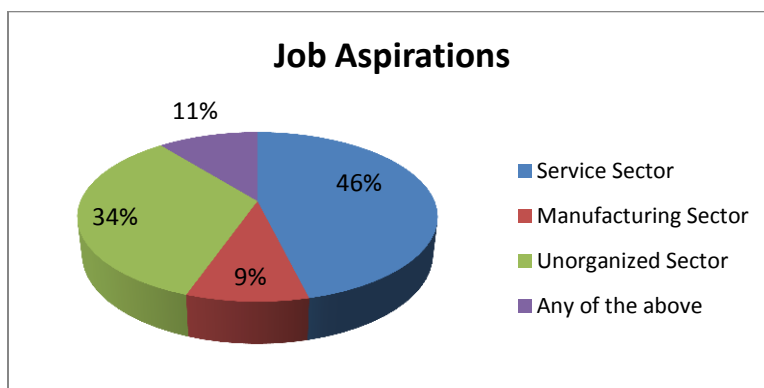
Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.



In this category we found positive response from the students, 51% of them were aspire to study further and very few were want to make their career by setting up any business.

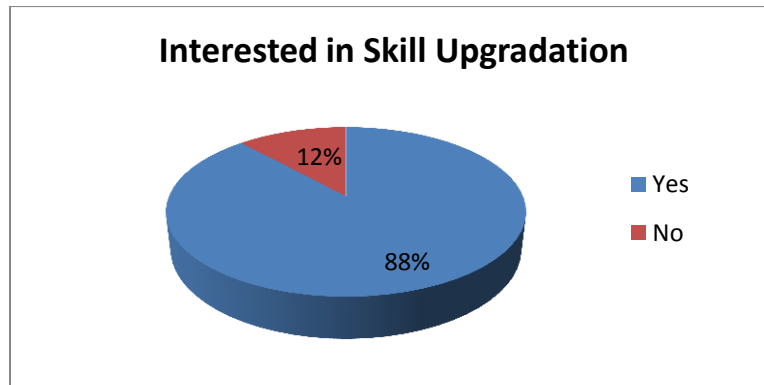


Very few current students of 10th/12th Class were clear about their future weather they want to do business after completion of their study or job after study. The filed in which students aspire to do job further is mention below.

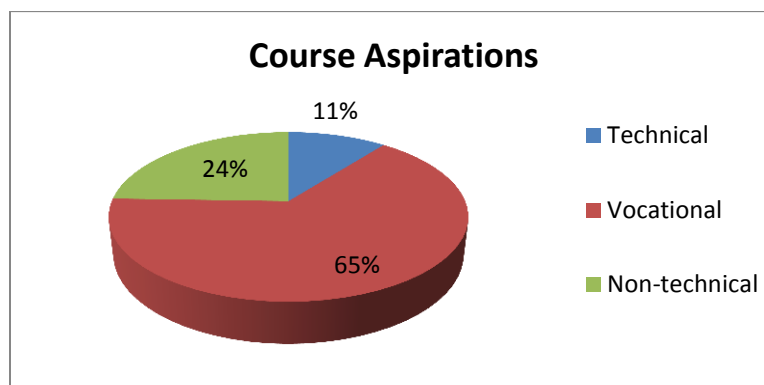


Service Sector	Manufacturing Sector	Unorganized Sector
Computer Engineering	Boiler Attendants	Plumber
Medical	Carpentry	Mechanic
Hospitality	Civil Engineering	Mobile Repairing
Teaching		Petrol Pump
Police Service		

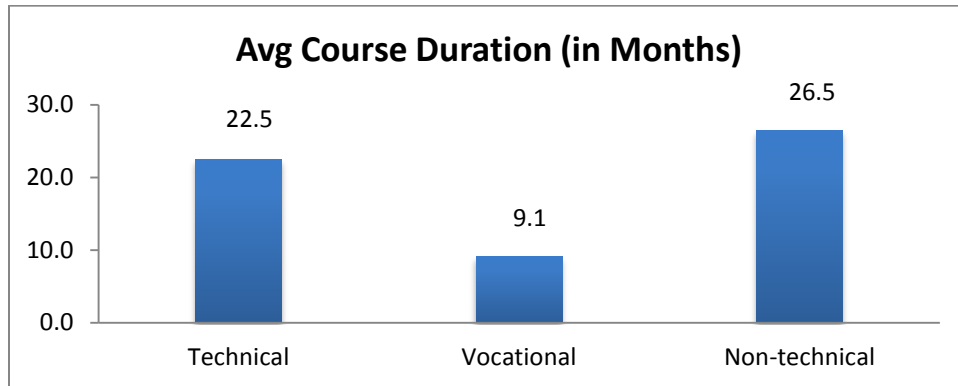
3.1.3.2.2.1.2.1 Interested in Skill Up-gradation



From the students who aspire to study further, we also asked the respondents further that whether they are interested in taking technical education, non-technical education or vocational one. We got positive response as majority of the students were aspire for taking vocational education which can be proved by below pie chart.

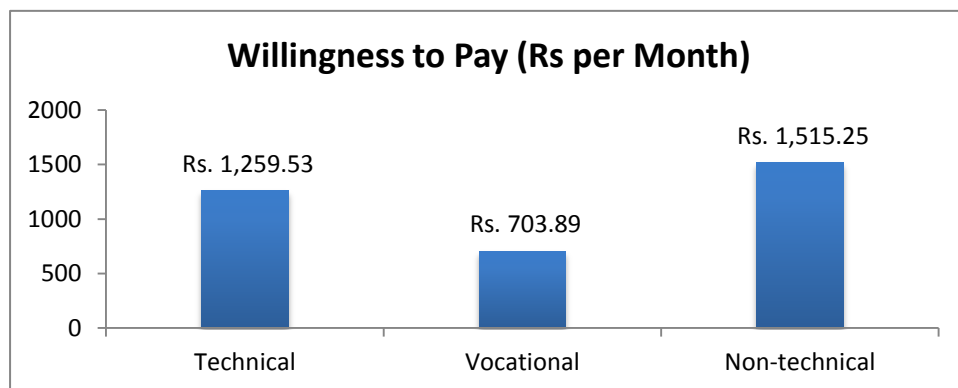


3.1.3.2.2.1.2 Average Course Duration



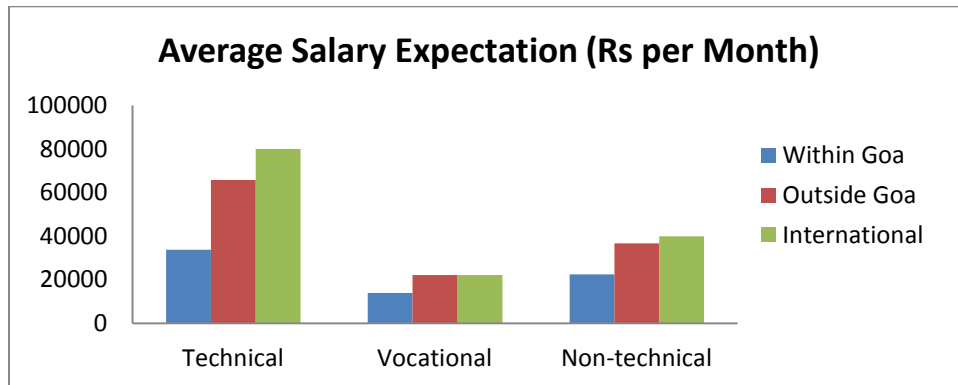
The respondents mention that for vocational course should of around 10 months. They are ready to pay higher for Non-technical course as against Technical course the reason for which is students of 10th/12th might not aware about the scenario of course duration of such courses.

3.1.3.2.2.1.2.3 Willingness to pay



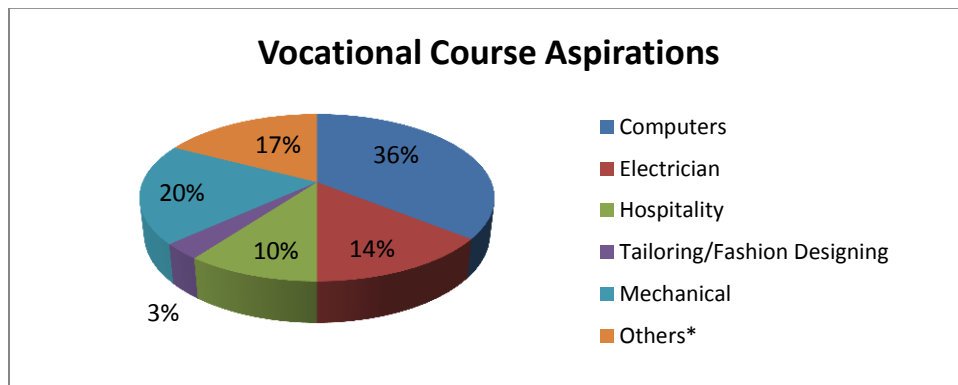
The students in this category are willing to pay in the range of Rs. 500 to Rs. 1000 for undergoing vocational education. Here students are ready to pay higher for non technical as they might have lack of exposure of Technical and Non-technical course fee structure.

3.1.3.2.2.1.2.4 Average Salary Expectation for various categories



The students who are currently studying at 10th/12th expect salary less than Rs.20000 for the course of vocational education.

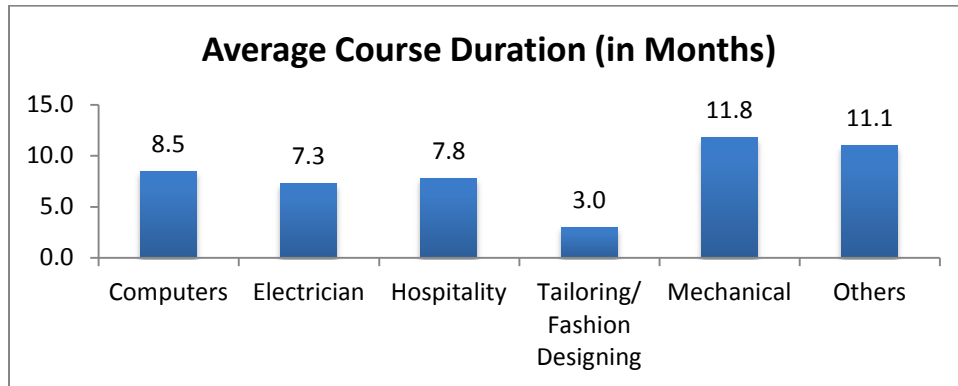
3.1.3.2.2.1.2.5 Vocational Course Aspirations



*Others include Mobile Repairing, Beautician, Teaching, etc.

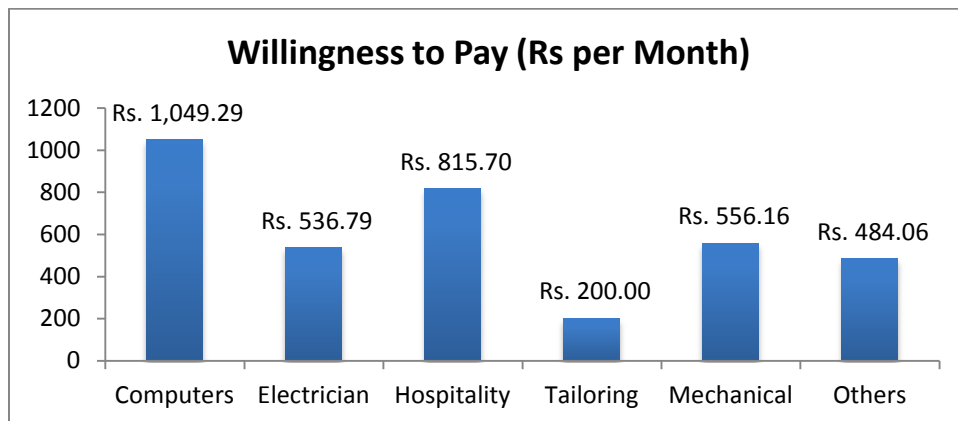
Out of students who aspire for taking vocational education, Fashion designing is the most aspiring course among all as 36% would want to undergo training of the same course.

3.1.3.2.2.1.2.6 Average Duration



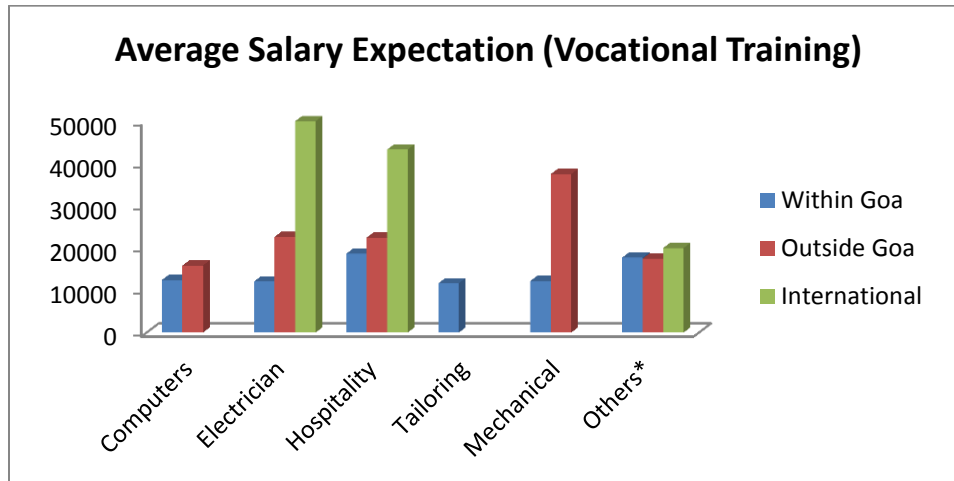
For the course of Mechanical and Computer students need more time for undergoing training as compared to other courses.

3.1.3.2.2.1.2.7 Willingness to pay for various Vocational Courses



From all the vocational courses which students are willing to do Computer and Hospitality are the two for which the readiness to pay is higher than other courses.

3.1.3.2.2.1.2.8 Average Salary Expectation for various Vocational Courses

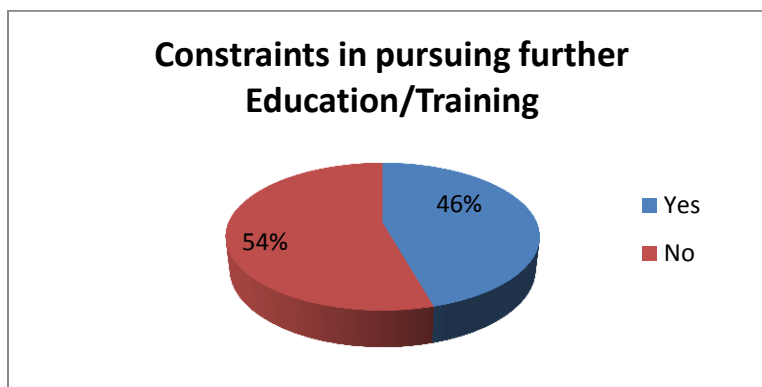


In case of within Goa, Hospitality is the course for which students expect higher salary as the reason already mention above while Mechanical is the course for which students expect highest salary outside Goa.

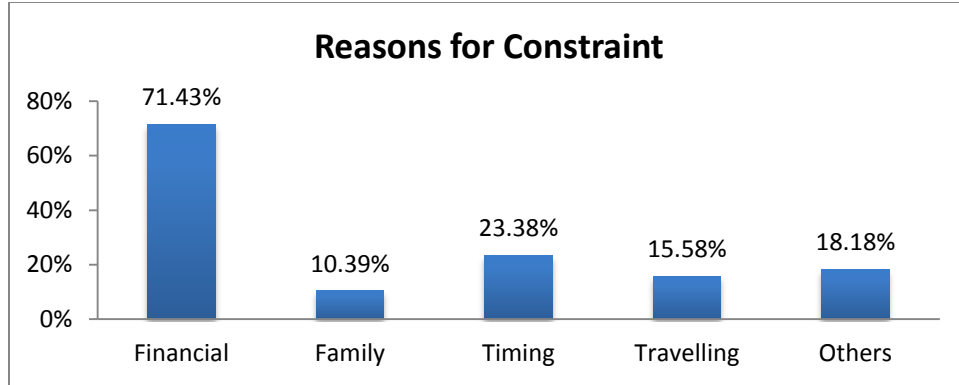
3.1.3.2.2.1.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.2.1.3.1 Constraints in pursuing further Education/Training

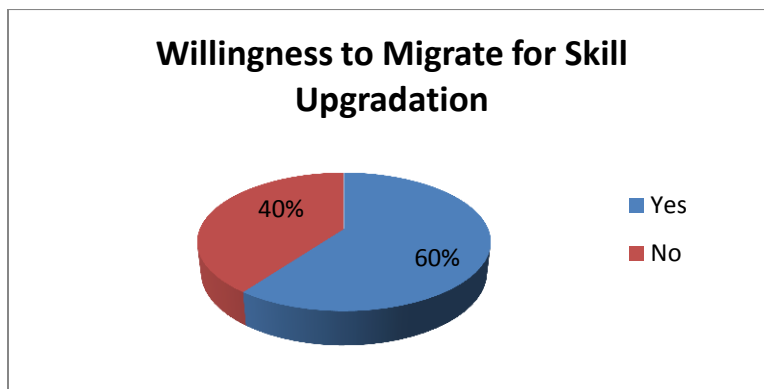


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 46% of the current 10th/12th Class category students were having constraints in pursuing further education or taking vocational training. The reasons for the same are cited below:

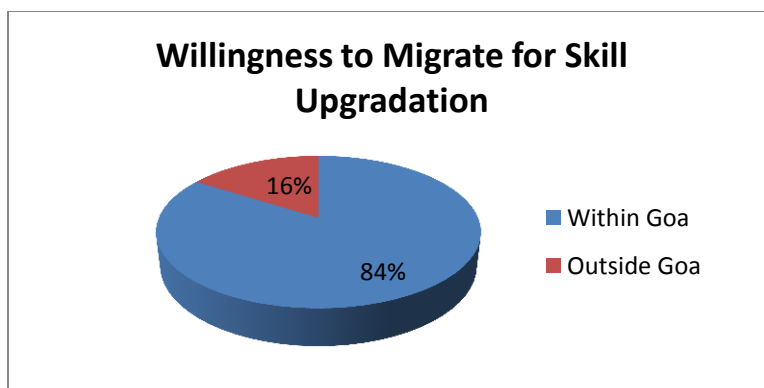


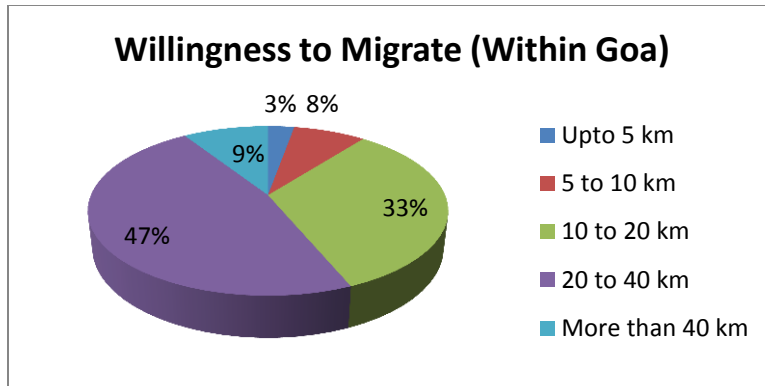
More than half of the students were facing financial problem in pursuing further education or taking any kind of training the reason for the same could be they are from weak economical background.

3.1.3.2.2.1.3.2 Willingness to migrate for further Education/Training

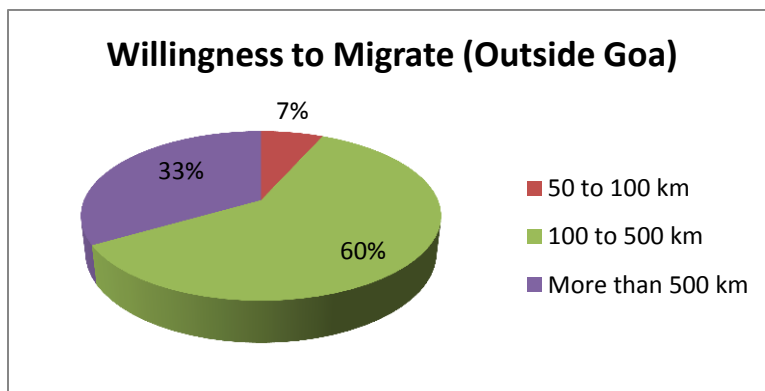


Herein we got positive response on willingness to migrate for skill up-gradation but very few of them were ready to migrate outside Goa which is shown in below chart.



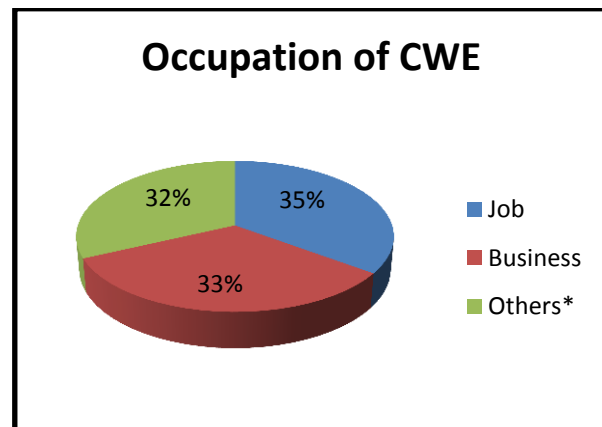
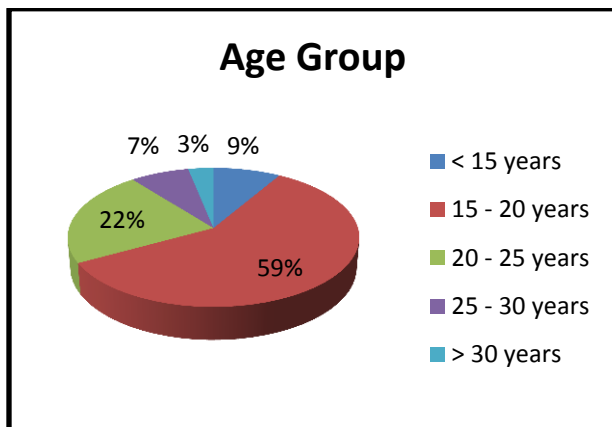


In case of migration majority of the students were able to move up to 20 to 40 Km within Goa while in case of outside Goa readiness to migrate is up to 100-500 Km.

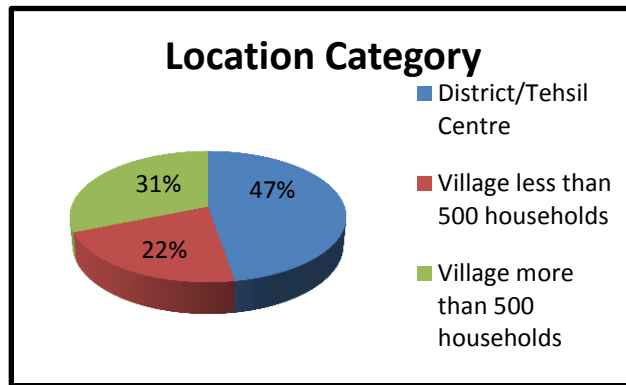
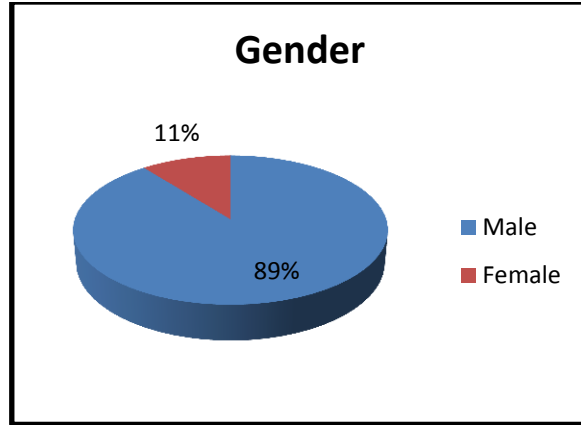
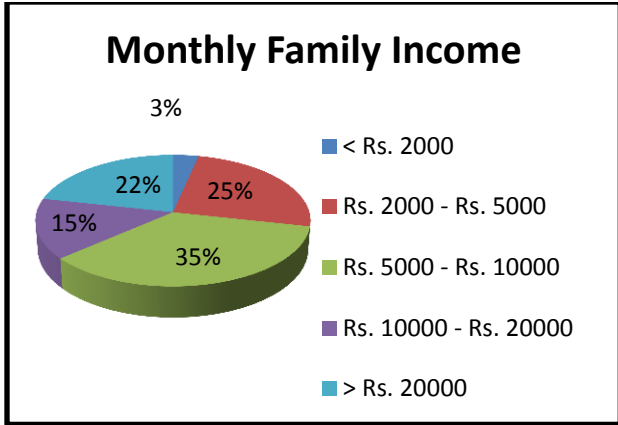


3.1.3.2.2.2 10th/12th Pass outs who do not go for further studies and join job market

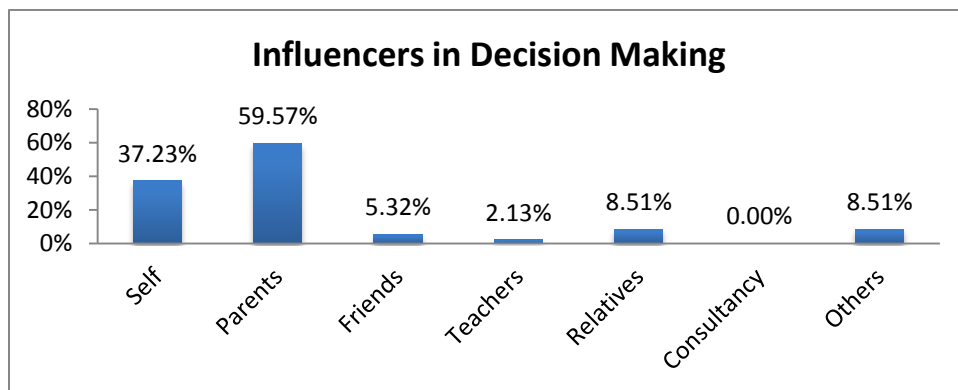
3.1.3.2.2.2.1 Profiling Data



*Others include Farmer, Carpenter, Electrician, etc.

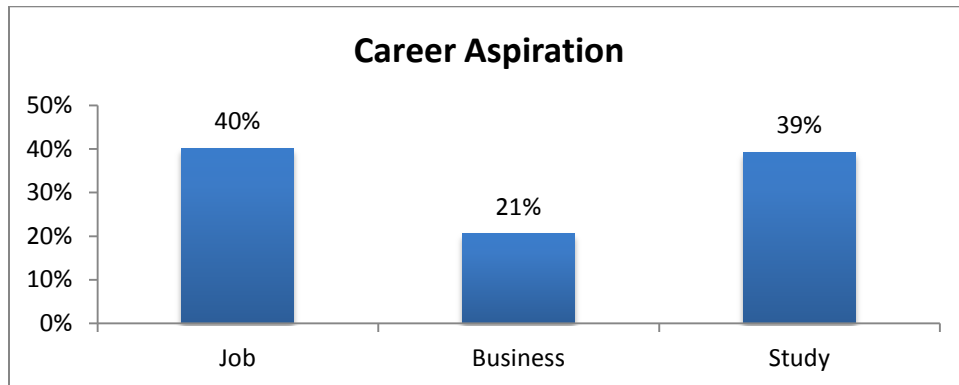


3.1.3.2.2.1.1 Decision Making

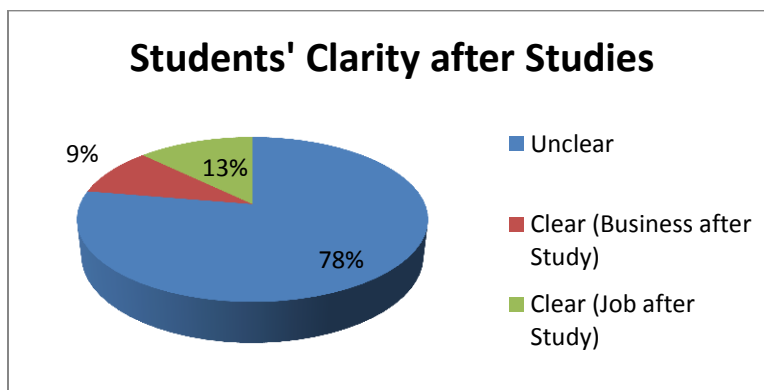


Similar to the category of the current students of 10th/12th Class, the 10th/12th pass outs were also highly influenced by parents, which followed by relatives.

3.1.3.2.2.2 Aspirations

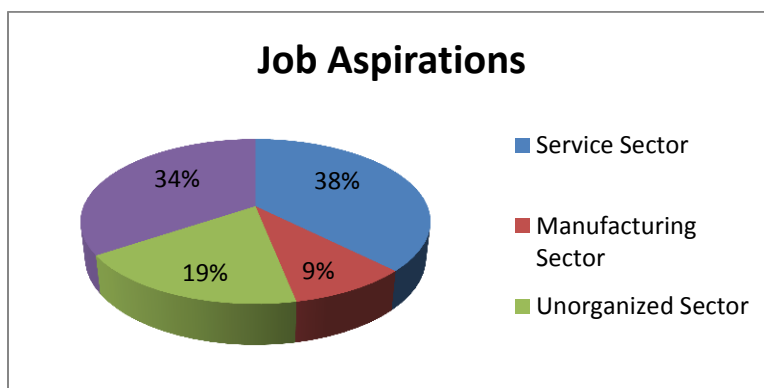


The positive point is that higher percent of students who already join job market are interested in study further.



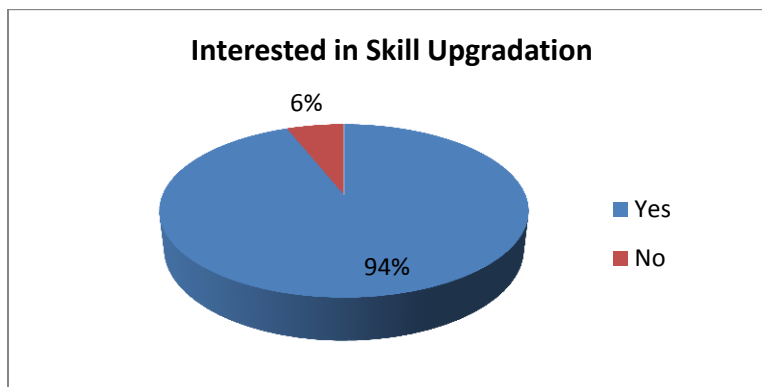
Similar to the above categories 78% of the students were not able to decide their future plan up till now in this category.

Majority of the pass outs of 10th/12th Class aspiring to join service sector in future.



Service Sector	Manufacturing Sector	Unorganized Sector
Computer Engineering	Boiler Attendants	Plumber
Medical	Carpentry	Mechanic
Hospitality	Civil Engineering	Mobile Repairing
Teaching		Petrol Pump
Police Service		

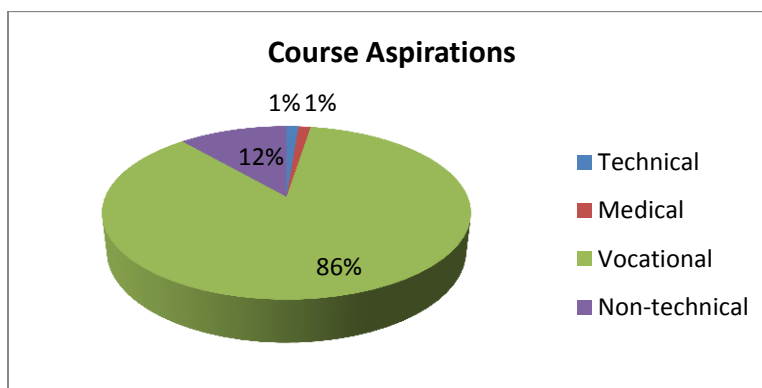
3.1.3.2.2.2.1 Interested in Skill Up-gradation



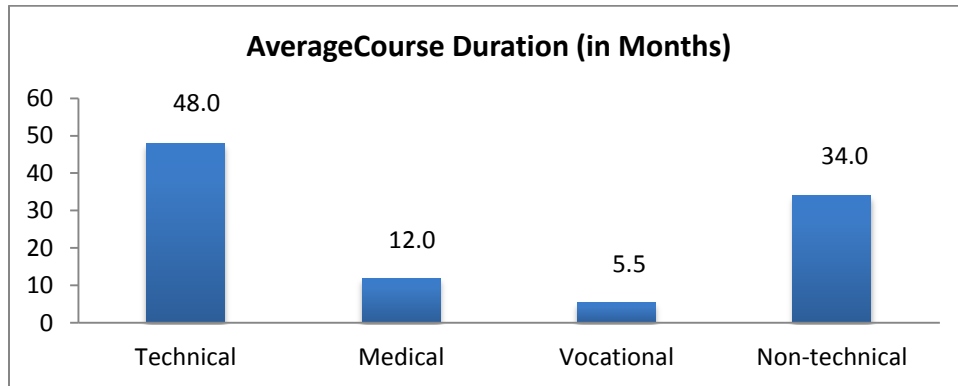
Here we got response towards more positive side as 94% of the pass outs were interested in skill up-gradation.

3.1.3.2.2.2.2 Course Aspirations

Out of those Students who aspire for study further, we ask for bifurcation in field of study. We got highly positive response for Vocational education. However there were also quite a few students who wish to go for technical and medical education.

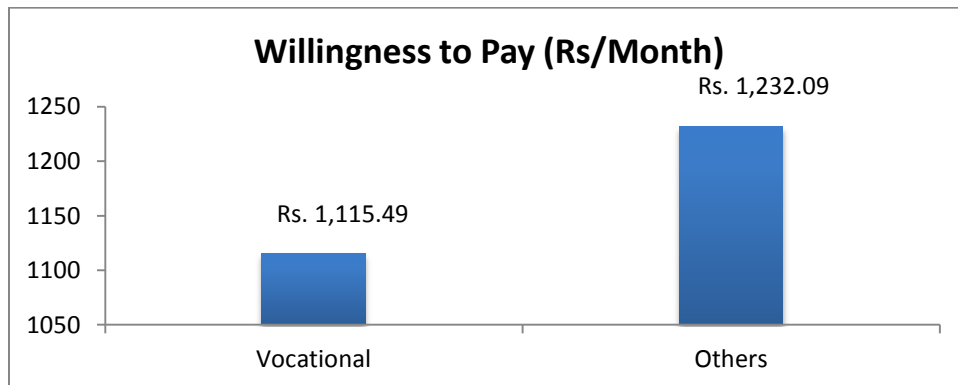


3.1.3.2.2.2.3 Average Course Duration for various Categories



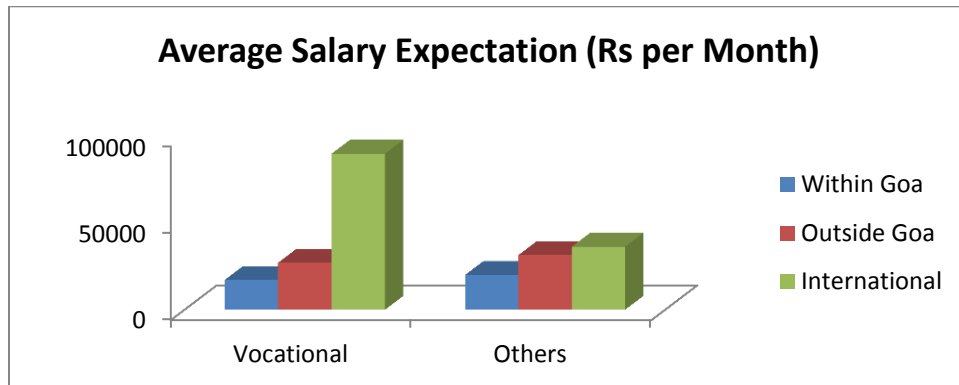
For vocational course, 6 months would be enough time for pursuing training according to the pass out students.

3.1.3.2.2.2.4 Willingness to pay for various Categories



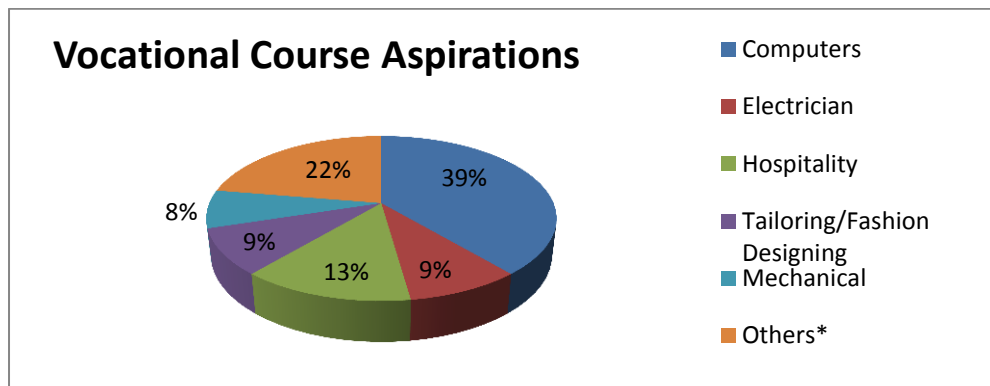
The pass out students are able to pay higher for vocational courses as compare to drop out category students, the reason for the same could be some of them already join the job market and also their family income is well off.

3.1.3.2.2.2.5 Average Salary Expectation



The salary expectation is around Rs.20000 in case of within Goa and around Rs.40000 in case of outside Goa. The expectation of students of this category is higher because as some of them are already joined the job so they are more aware about the market scenario as compare to drop outs.

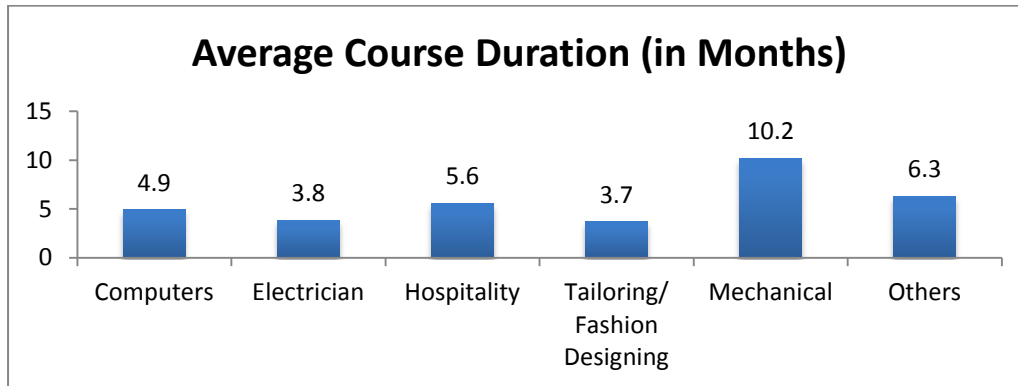
3.1.3.2.2.2.6 Vocational Course Aspirations



*Others include Mobile Repairing, Carpentry, Plumber, etc.

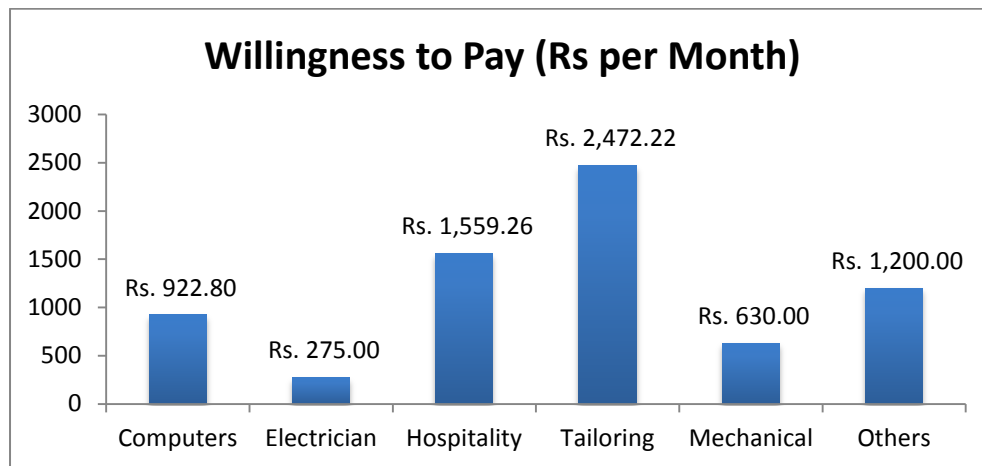
Due to increase in market demand, majority of the interviewed students were willing to undergo training for the course of Computer.

3.1.3.2.2.2.7 Average Duration (Vocational Training)



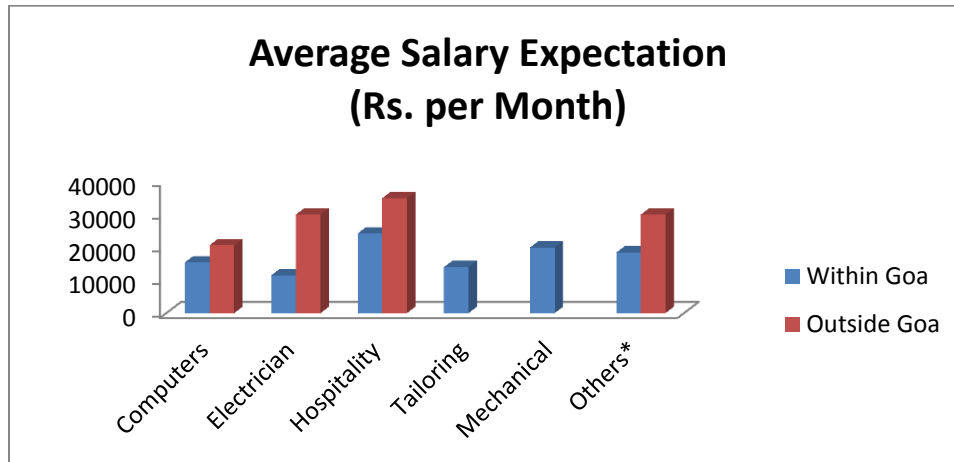
Out of all the aspired courses students feels that Mechanical is the one for which they require more time for undergo training which is around 10 months.

3.1.3.2.2.2.8 Willingness to pay for various Vocational Courses



Tailoring and Hospitality are the two courses for which students willing to pay higher around Rs. 2500 and Rs.1500 per month for Tailoring and Hospitality respectively.

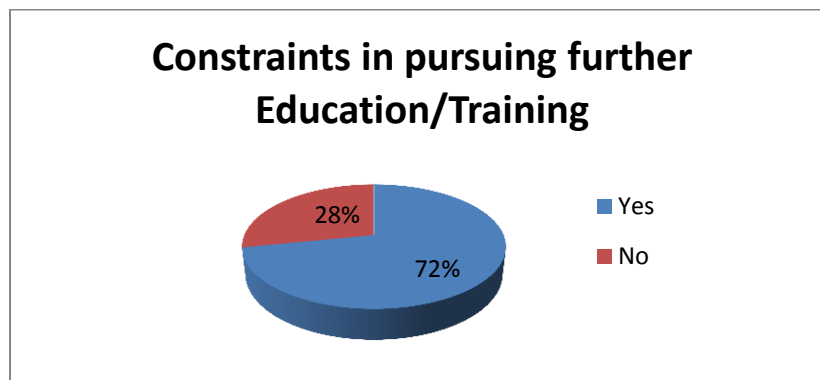
3.1.3.2.2.2.9 Average Salary Expectation for various Vocational Courses



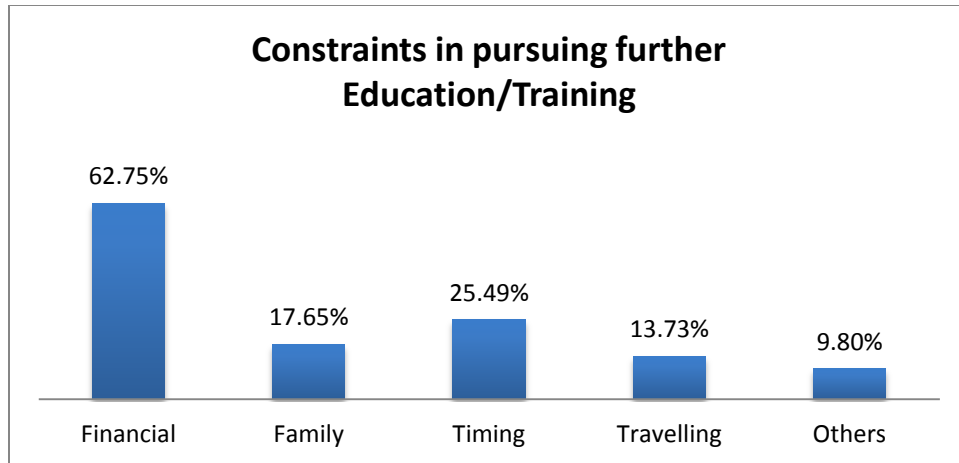
In case of within Goa students expect highest salary after completion of the course of Hospitality as compared to other courses which is more than Rs. 30,000 per month as Goa has large number of high end Hotels.

3.1.3.2.2.2.3 Constraints

3.1.3.2.2.2.3.1 Constraints in pursuing further Education/Training

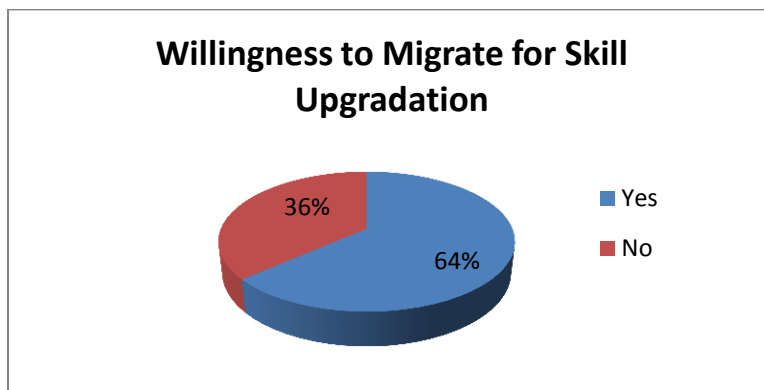


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 72% of the pass outs of 10th/12th Class category students were having constraint in pursuing further education or taking vocational training. The reasons for the same are cited below:

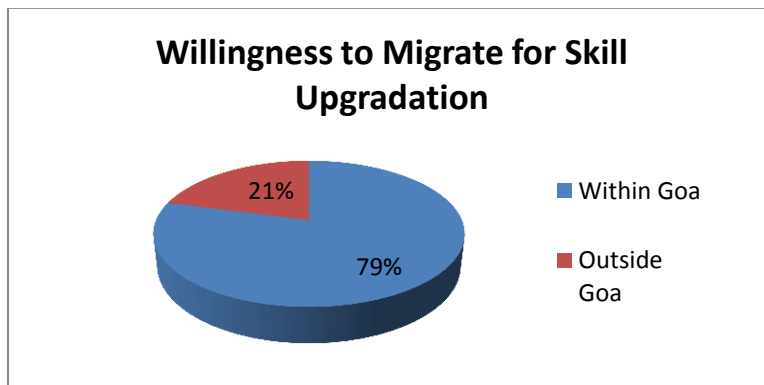


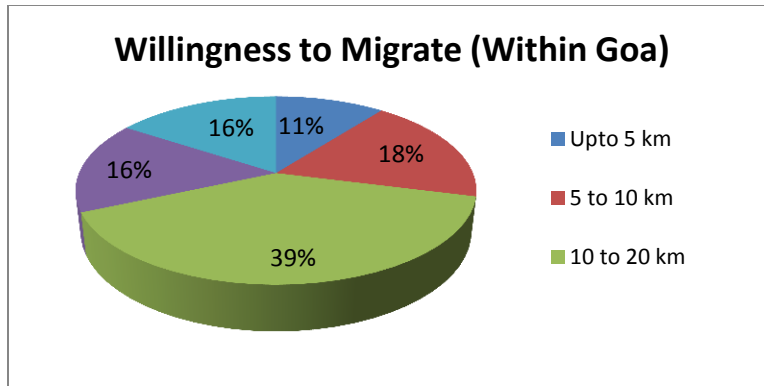
Same as above mentioned categories monetary issue is the major concern for the students of this category which is followed by timing problem, family problem and transportation problem.

3.1.3.2.2.3.2 Willingness to Migrate further Education/Training

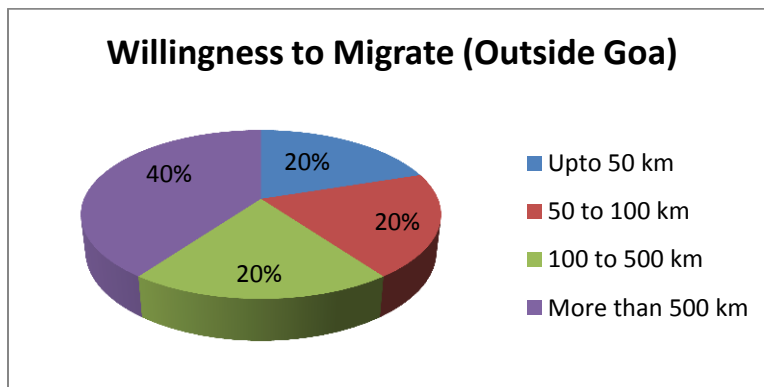


More than half of the pass outs were willing to migrate for skill up-gradation, of which 79% were ready to migrate only within Goa.





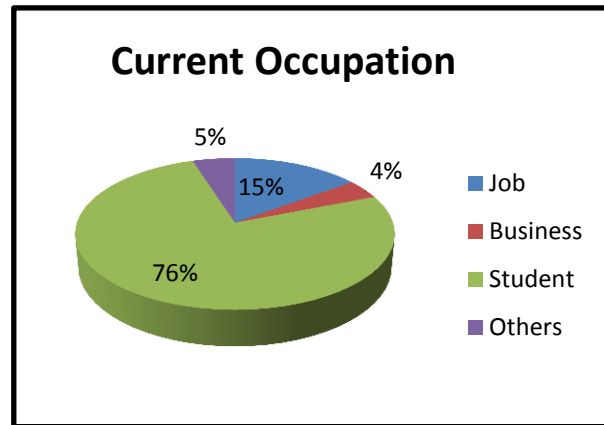
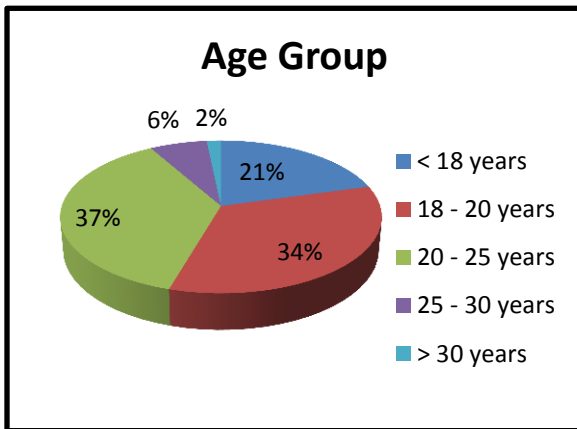
In case of within Goa majority of the respondents were willing to migrate up to 10 to 20 Km from their respective location. While 40% of the students were willing to migrate more than 500 km which is mention below.



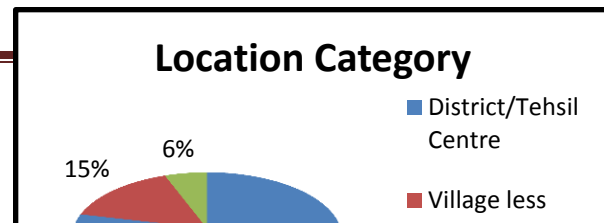
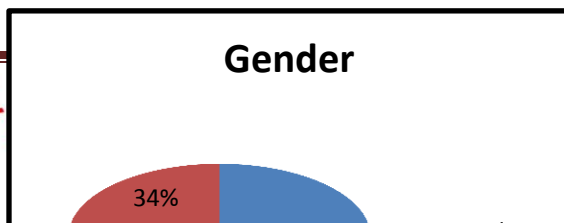
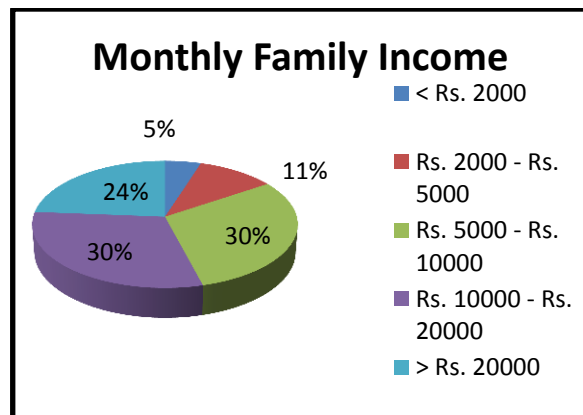
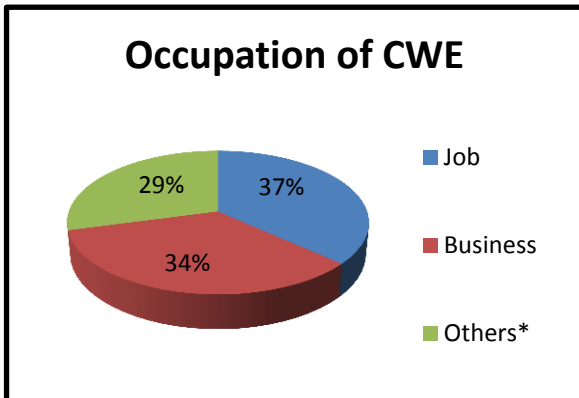
3.1.3.2.3 General Stream Graduates

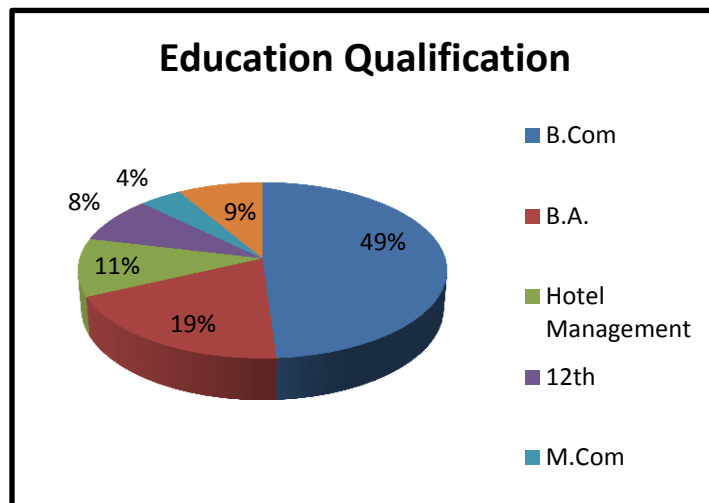
This category includes general college graduate students. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.3.1 Profiling Data

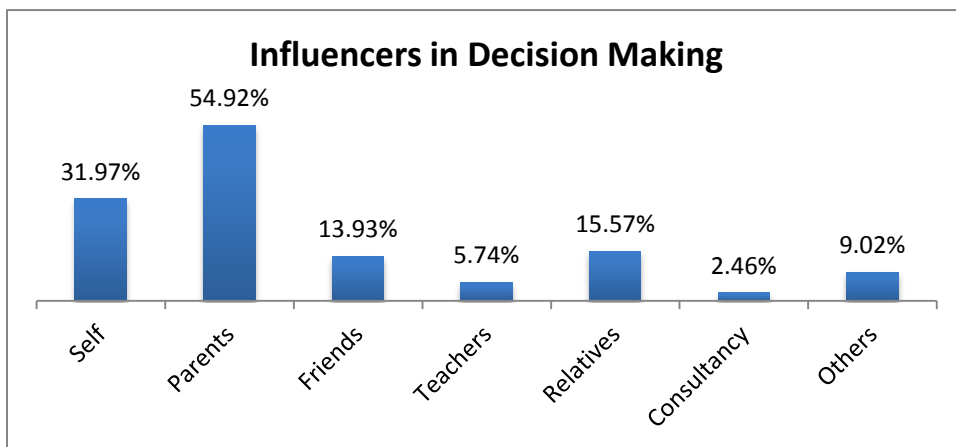


*Others include Retired, Farmer, etc.





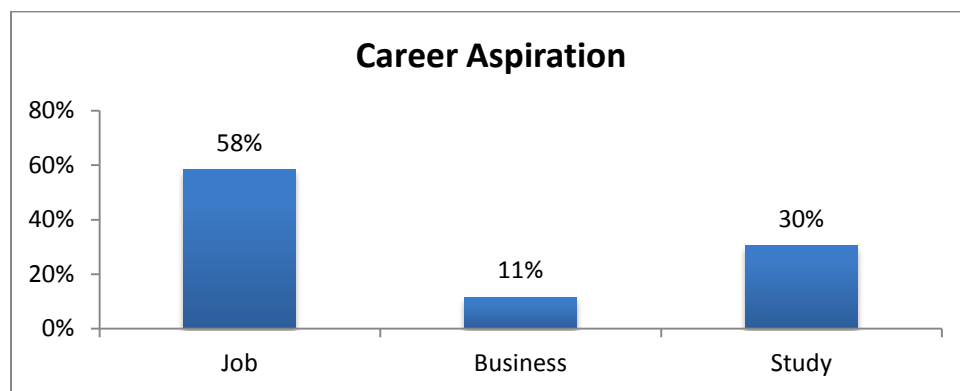
3.1.3.2.3.1.1 Decision Making



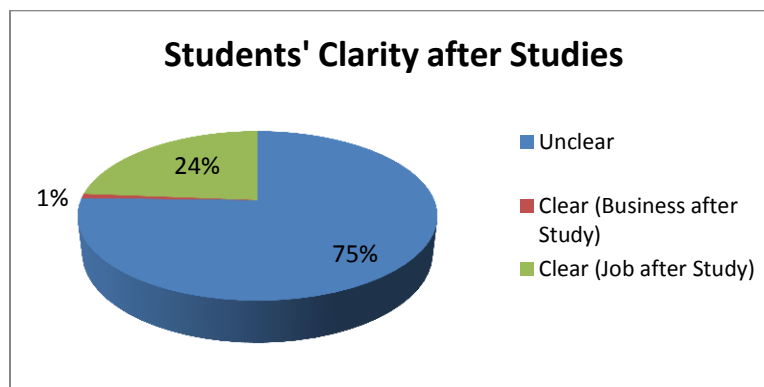
The students in this category have better qualification and are coming from average economical background. Parents, relatives and friends play major role in helping students to take their career decision regarding job, study or business.

3.1.3.2.3.2 Aspirations

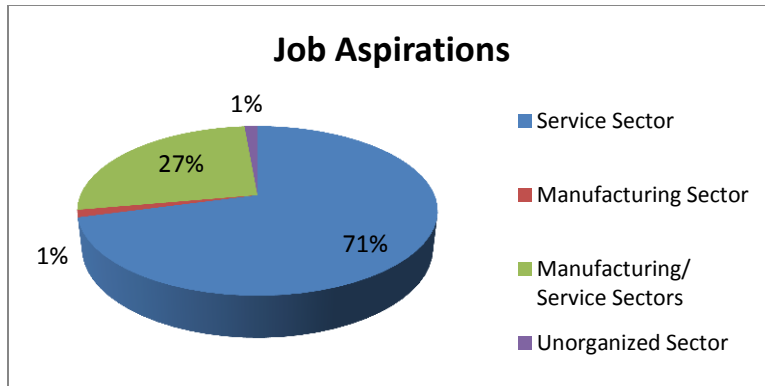
Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.



In this category more than half of the students aspire to do job further however it is to be noted that 30% of the students wish to study further though many of them are graduate.

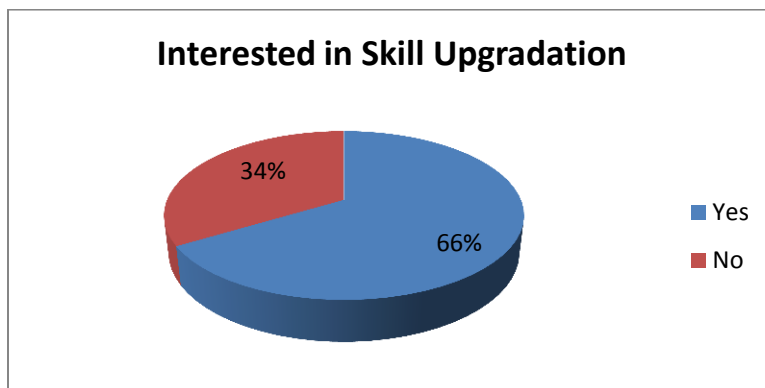


Here 75% of students were not clear that whether they want to do business or job after completion of their study. And the sectors in which students are interested to do job are mentioned below.



Service Sector	Manufacturing Sector
Bank	Food Production
CA	
Hospitality	
Teacher	

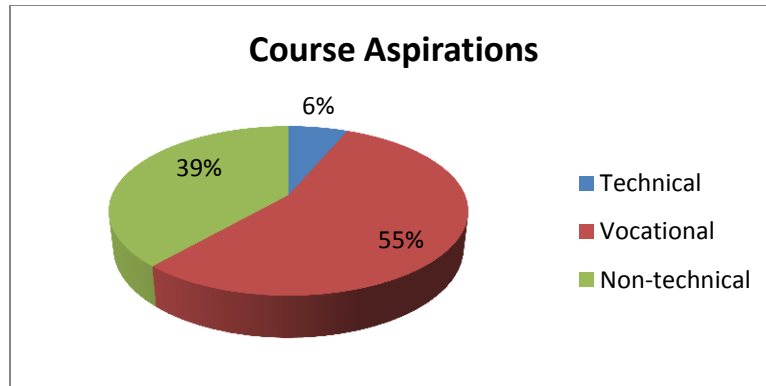
3.1.3.2.3.2.1 Interested in Skill Up-gradation



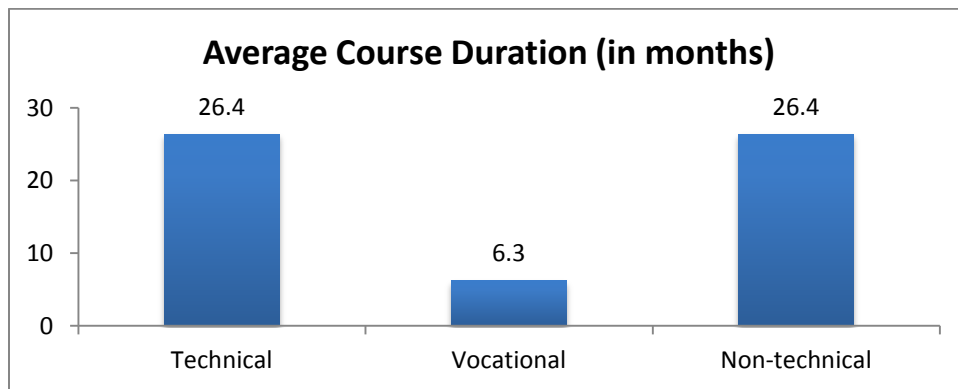
Majority of the students in the category of general stream graduates were interested in skill up-gradation.

3.1.3.2.3.2.2 Course Aspirations

Here, the break up for the course is given as per the students’ aspirations for the technical, non-technical and vocational education after completion of their current study.

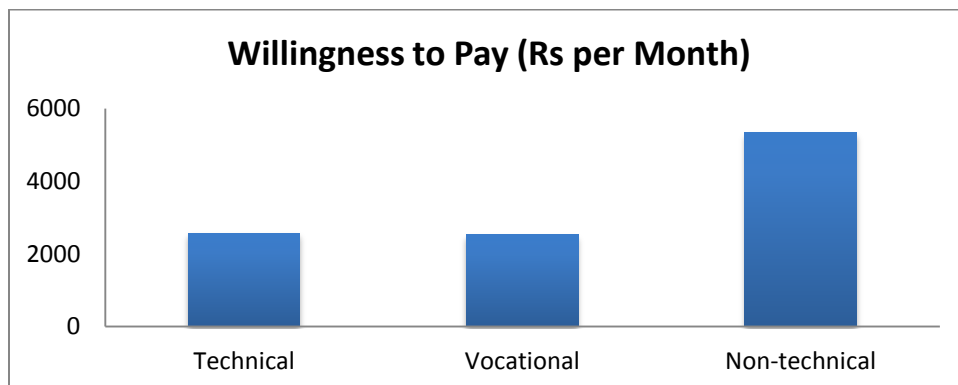


3.1.3.2.3.2.3 Average Course Duration for various Categories



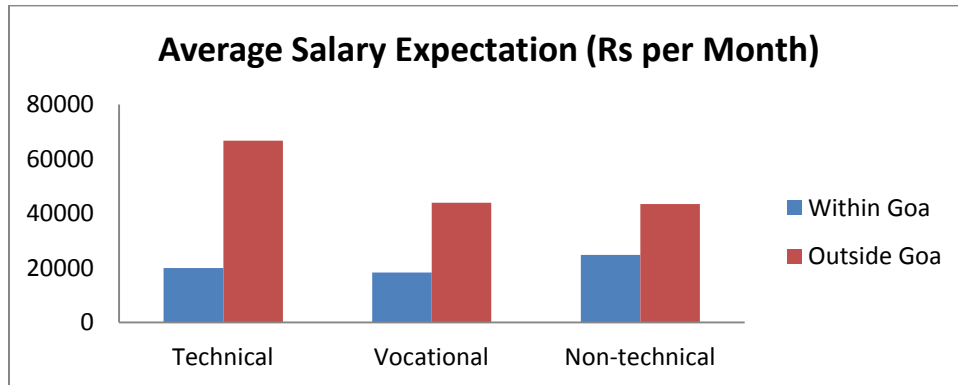
As per the above 3 categories of courses students believe that for vocational course they require only 5-6 months for training.

3.1.3.2.3.2.4 Willingness to pay for various Categories



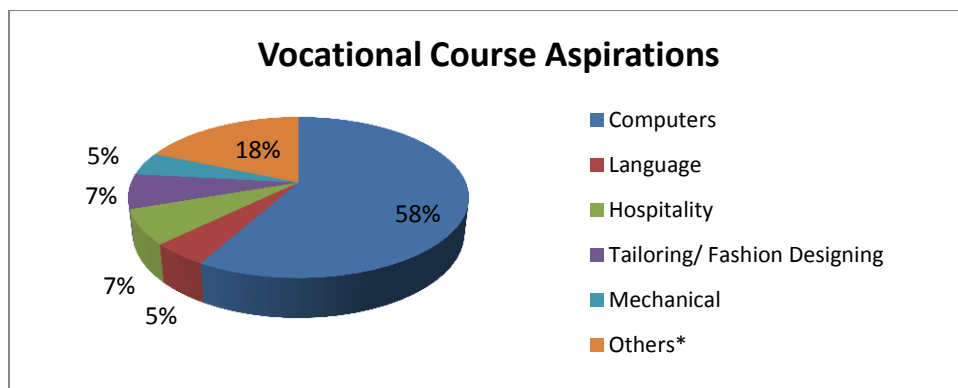
Of the three categories shown in chart, students were willing to pay highest for non technical courses while in case of vocational course students are ready to pay around Rs.2000 per month.

3.1.3.2.3.2.5 Average Salary Expectation for various Categories



Above graph shows that students expects Rs.20000 within Goa after completion of vocational course and Rs. 40000 in case of outside Goa.

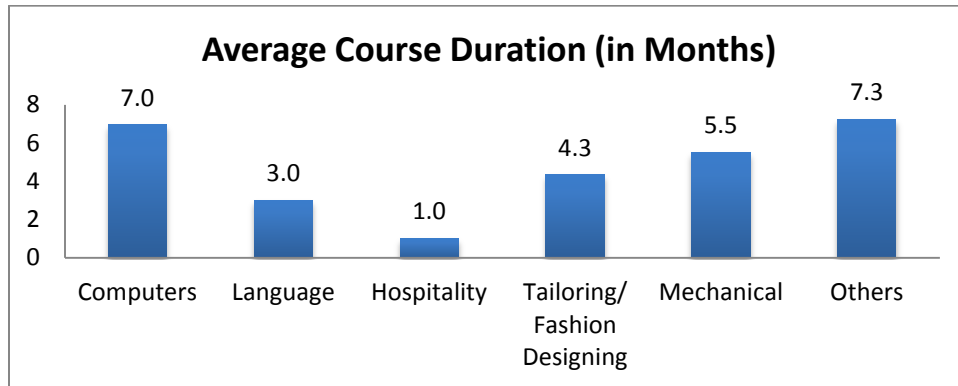
3.1.3.2.3.2.6 Vocational Course Aspirations



***Others include Electronics, Mobile Repairing, etc.**

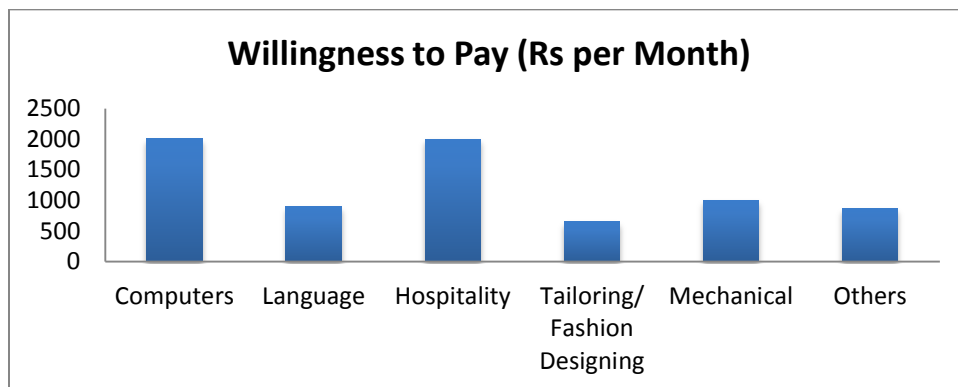
Majority of the general stream students aspire for Computer Course due to high demand in the market. There was also interest show for the courses like Hospitality, Mechanical, Tailoring etc.

3.1.3.2.3.2.7 Average Duration (Vocational Training)



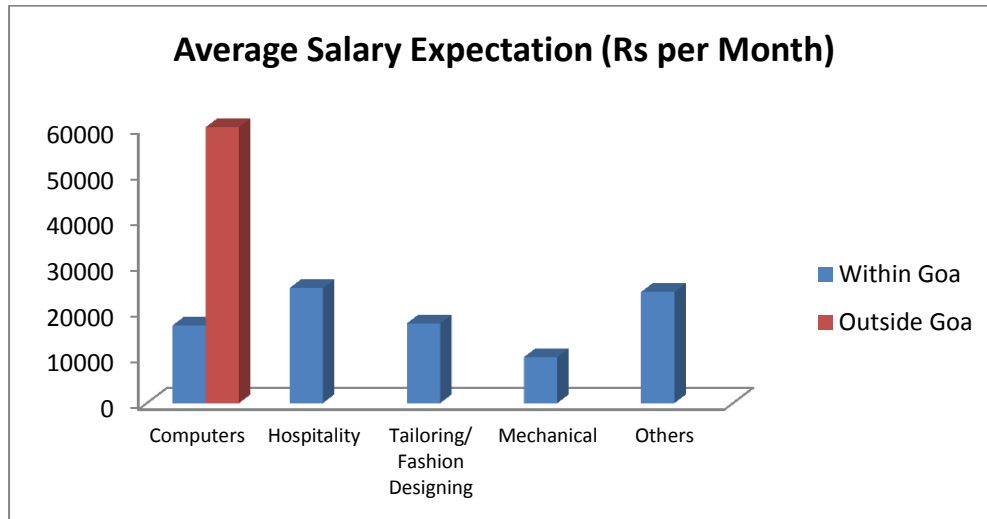
From all the aspired courses, students feel that Computer and Mechanical are the courses which require more time for learning as compared to other courses.

3.1.3.2.3.2.8 Willingness to pay for various Vocational Courses



Interviewed student's willingness to pay is highest for the two courses Computer and Hospitality.

3.1.3.2.3.2.9 Average Salary Expectation for various Vocational Courses

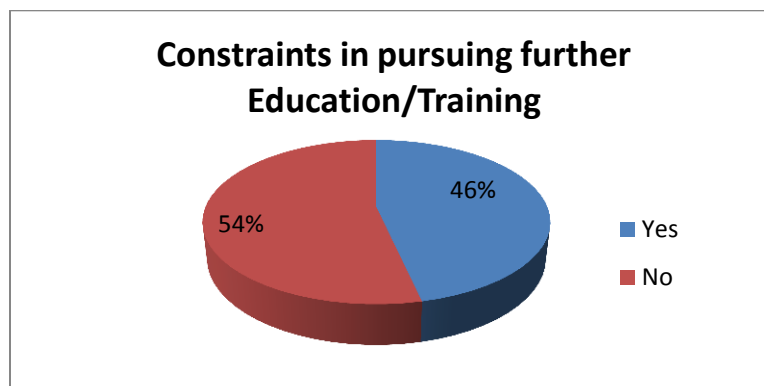


Though the students in this category are graduates they do not have idea about the salary structure outside Goa. In case of within Goa Hospitality is the one for which students expect Rs. 20000 per month after completion of training for vocational Institute.

3.1.3.2.3.3 Constraints

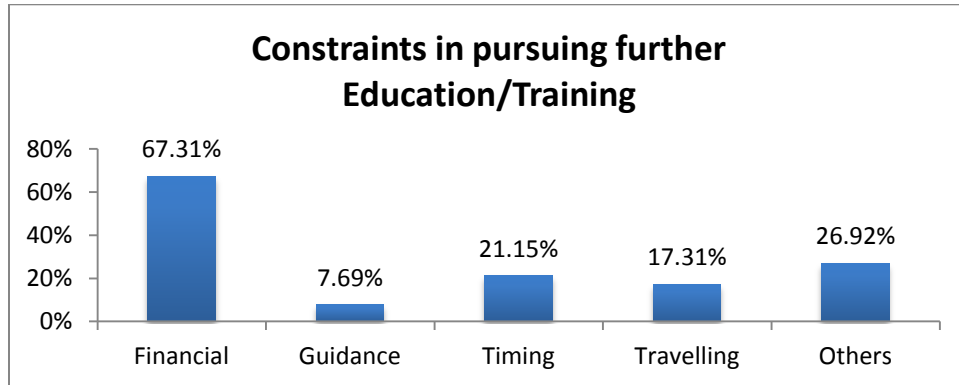
This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.3.3.1 Constraints in pursuing further Education/Training



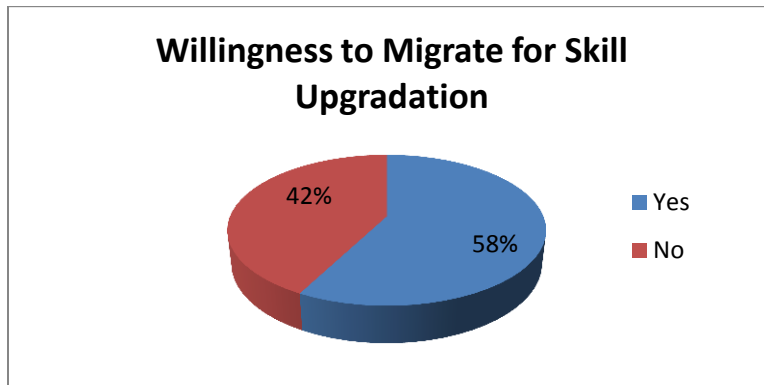
To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 54% of the general stream graduate category

students were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

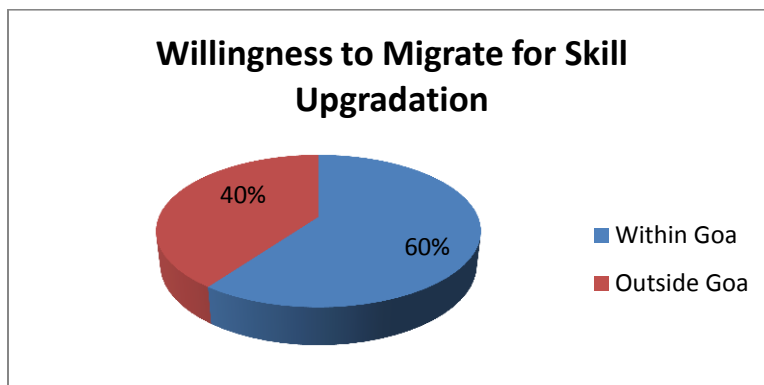


*Others include Family problems and unavailability of teachers.

3.1.3.2.3.3.2 Willingness to migrate for further Education/Training



More than half of the graduates were willing to migrate for skill up gradation. Out of which only 40% were able to migrate outside Goa for skill up-gradation.

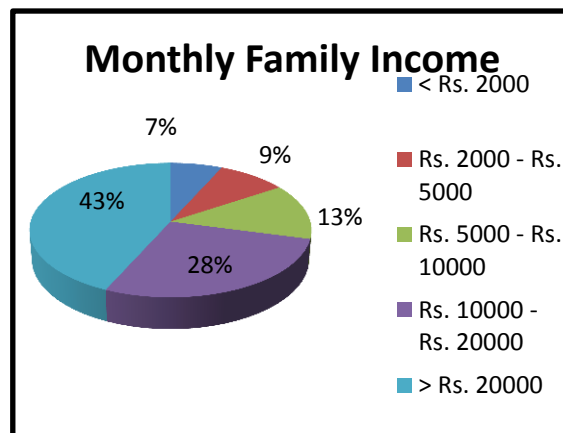
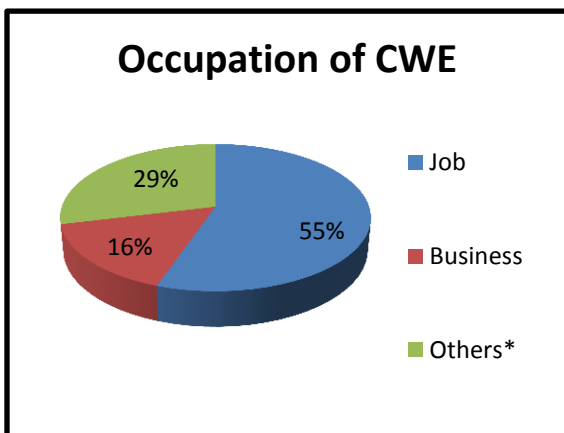
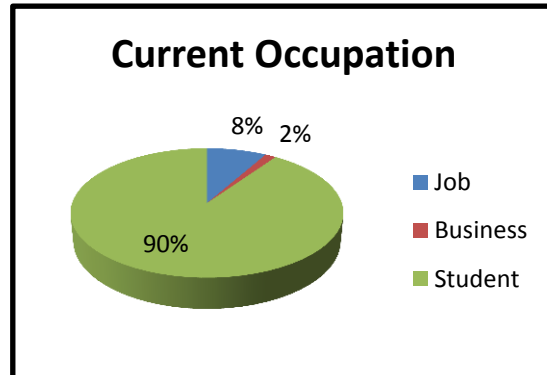
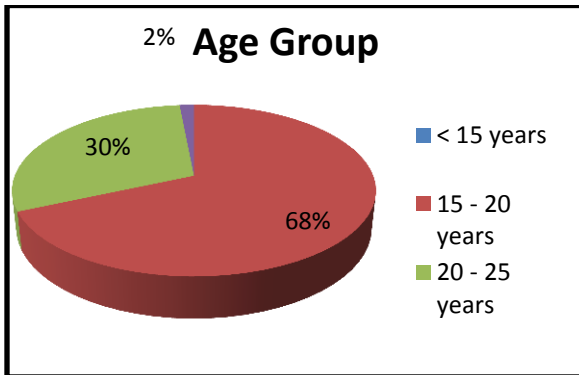


3.1.3.2.4 Technical Graduates

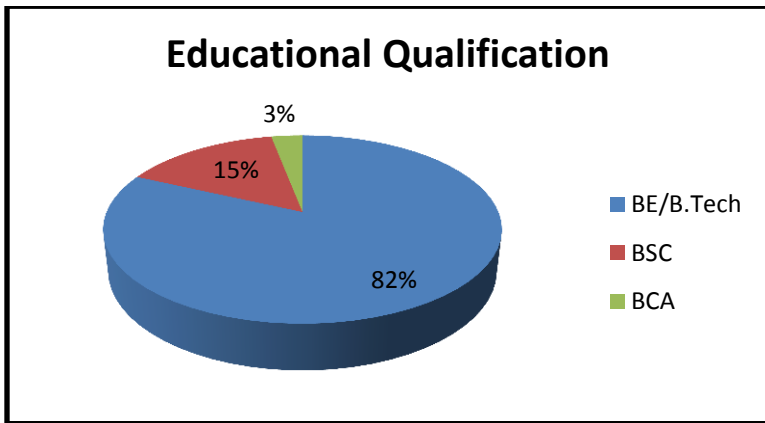
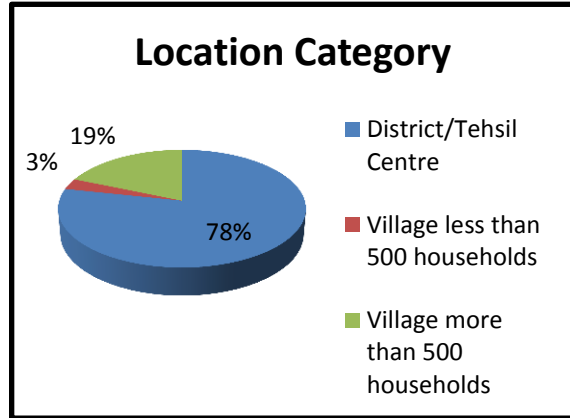
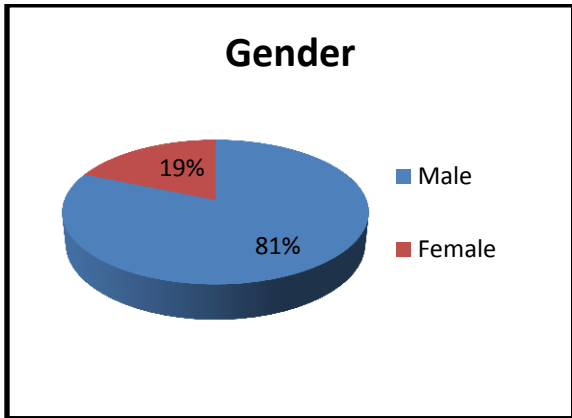
This category includes Professional & Technical Graduate College students e.g. Engineering, Medical etc. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.4.1 Profiling Data

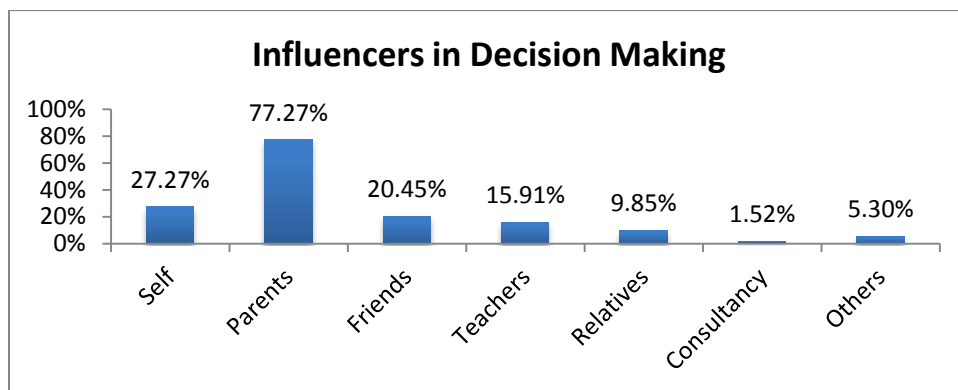
Here, majority of male students take admission at technical education so naturally gender wise the ratio of male student is higher as compared to female students. Most of students belong to average economical background as their monthly income is more then Rs.10000.



*Others include Retired, Farmer, Fisherman, Carpenter, etc.



3.1.3.2.4.1.1 Decision Making

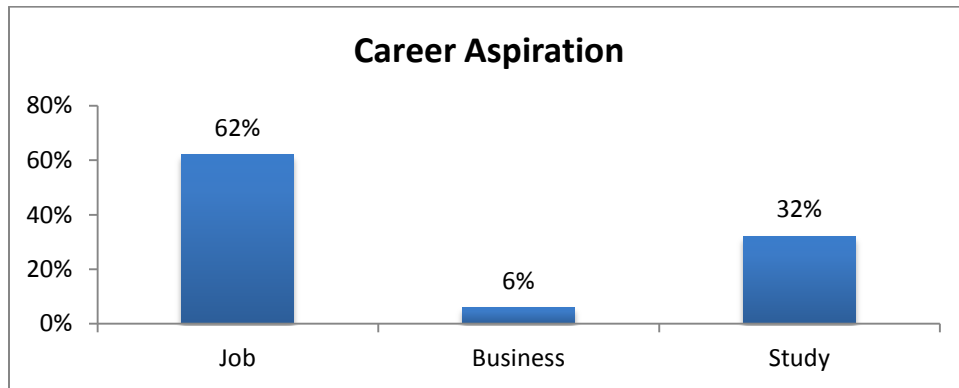


Again, parents have the highest influencing power on their child, here the category is technical graduates who are economically well off.

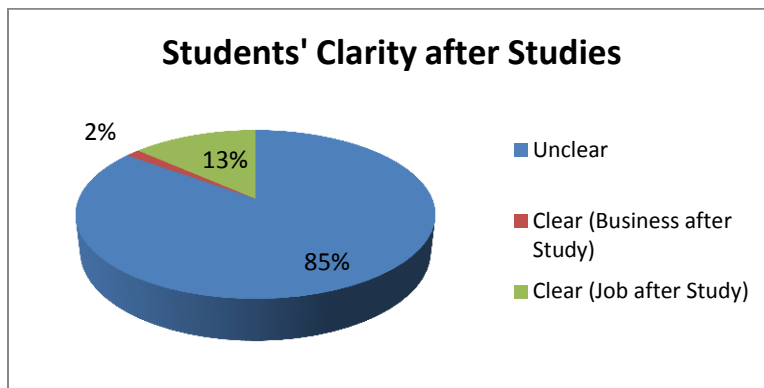
3.1.3.2.4.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.

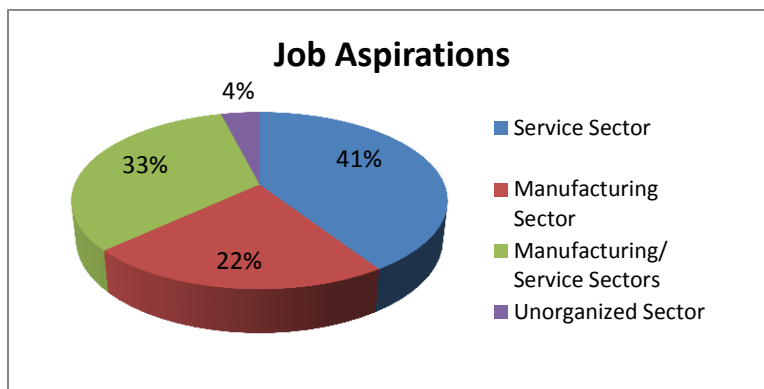
Here, in the category of technical students, majority of them were aspires for job. However, out of total 32% students aspire to study further either formal or vocational one.



Only 15% of the respondents were clear that what they want to do after completion of their study.

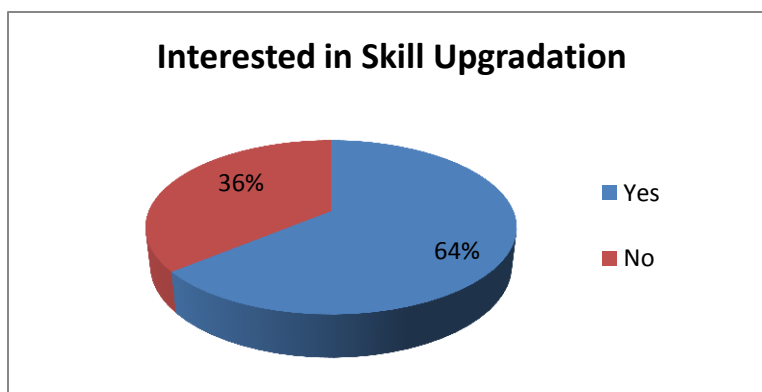


The below chart shows that majority of the interviewed students aspire to do job further in the service sector.



Service Sector	Manufacturing Sector	Unorganized Sector
Software Engineer	Mechanical Engineer	Singer
Hardware/ Networking	Civil Engineering	
Hospitality	Mining Industry	
Merchant Navy	Ship Building	

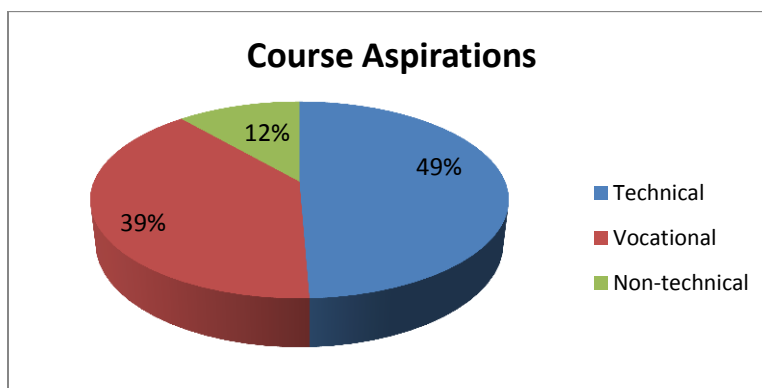
3.1.3.2.4.2.1 Interested in Skill Up-gradation



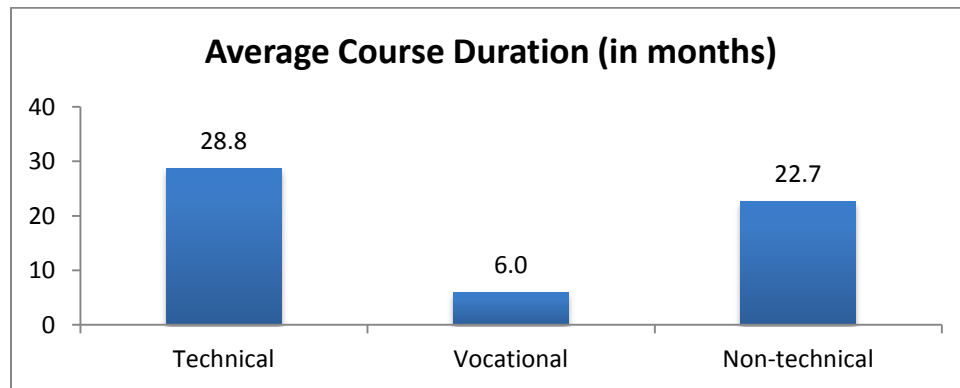
The graduates in this category have technical knowledge and 64% of them were interested in skill up-gradation.

3.1.3.2.4.2.2 Course Aspirations

The bifurcation for the courses is mentioned below which help up to know the percent of student interested in doing vocational course. Here 39% of them willing to undergo training of Vocational education.

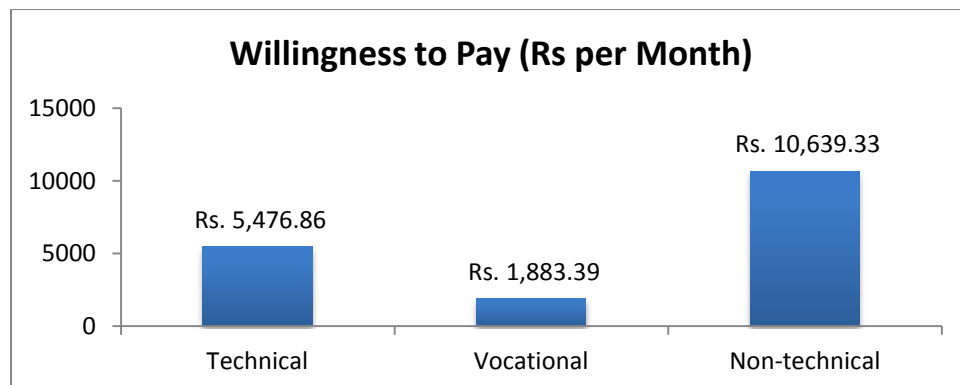


3.1.3.2.4.2.3 Average Course Duration for various Categories



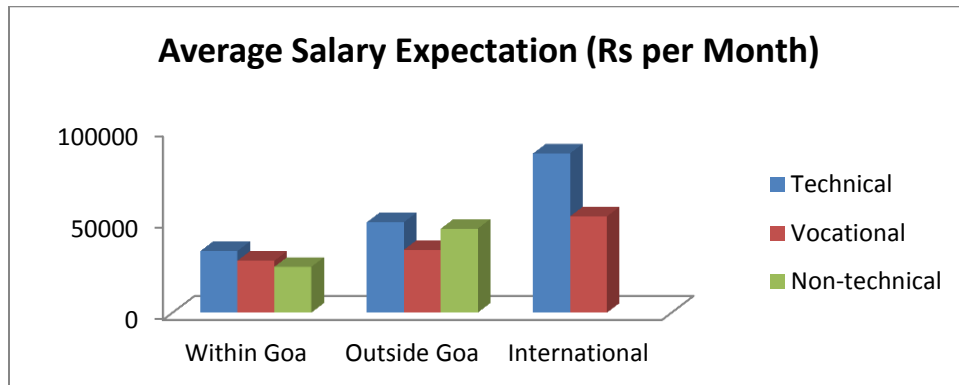
Technical graduates believe that the duration for vocational education would be of 5-6 months per course.

3.1.3.2.4.2.4 Willingness to pay for various Categories



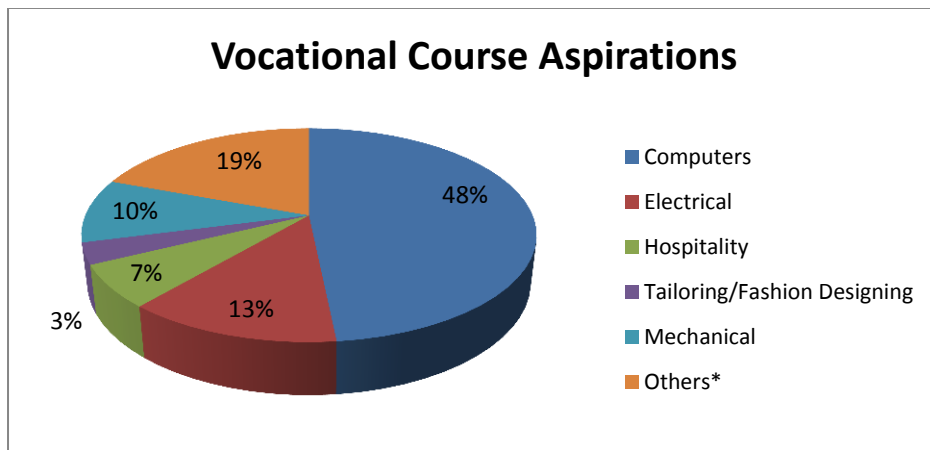
Here, the students are belongs to economically well off family due to which they are able to pay around Rs. 2000 per month for a course.

3.1.3.2.4.2.5 Average Salary Expectation for various Categories



The respondents were expecting a salary on an average of Rs.22000 within Goa while Rs. 30000 outside Goa for vocational education.

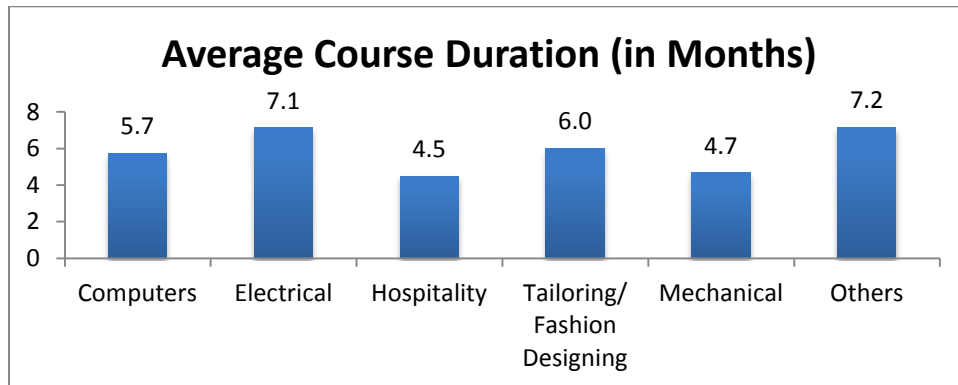
3.1.3.2.4.2.6 Vocational Course Aspirations



***Others include Photography, Banking Course, etc.**

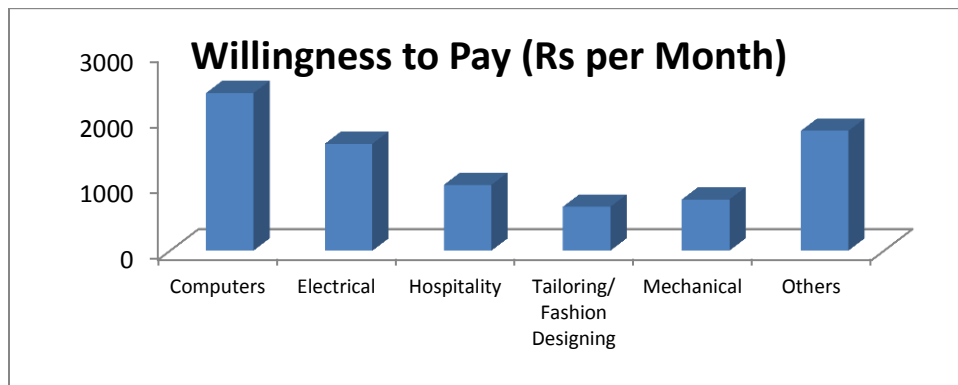
List of courses are mentioned in above graph which students aspire to undergo in vocational education. Again, Computer course is most preferable among the students, which is followed by Electrical and Mechanical courses.

3.1.3.2.4.2.7 Average Duration (Vocational Training)



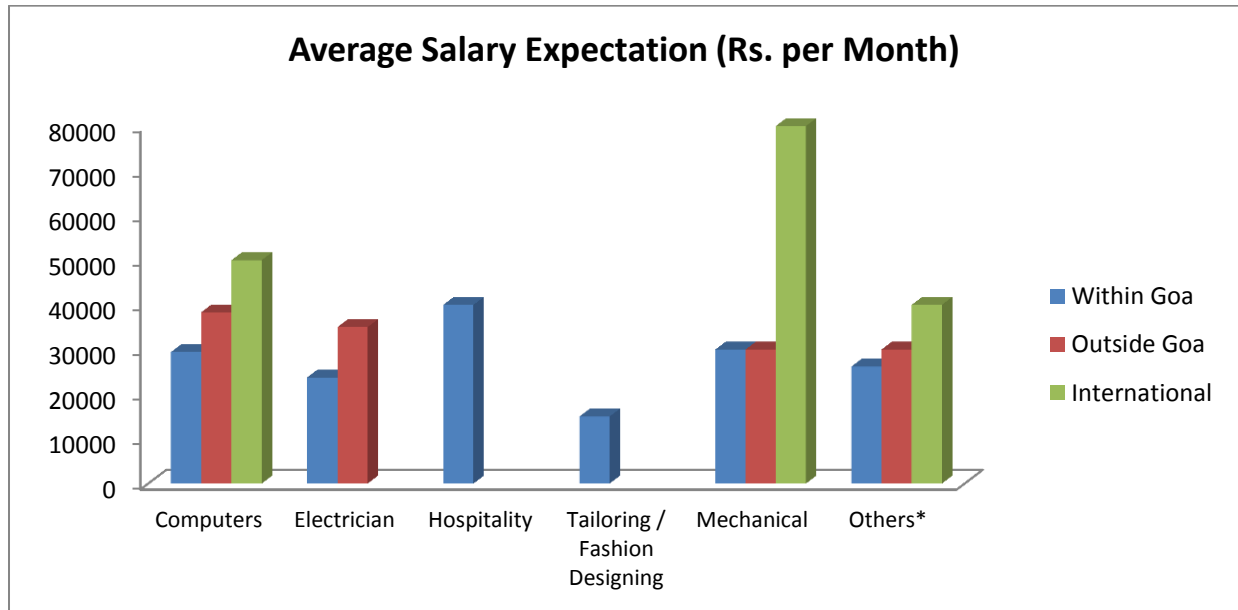
4-6 months is the preferable duration for the above listed courses as per the student we interviewed.

3.1.3.2.4.2.8 Willingness to pay for various Vocational Courses



For the Computer course students were willing to pay highest around Rs. 2500 per month according to students and only Rs. 500 they are ready to pay for the course of Fashion Designing/Tailoring.

3.1.3.2.4.2.9 Average Salary Expectation for various Vocational Courses

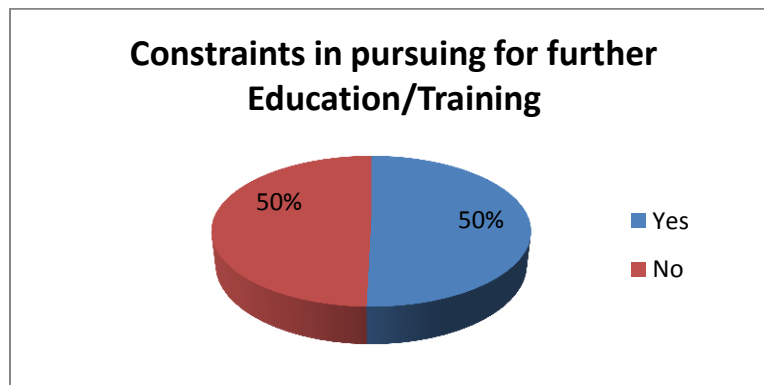


In case of within Goa Hospitality is the course for which students expects around Rs.35000 per month and for tailoring course they expects only Rs. 20000 per month.

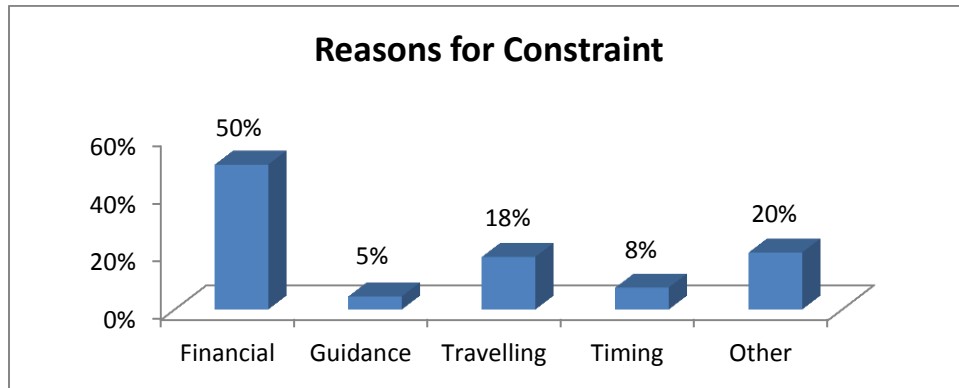
3.1.3.2.4.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.4.3.1 Constraints in pursuing for further Education/Training



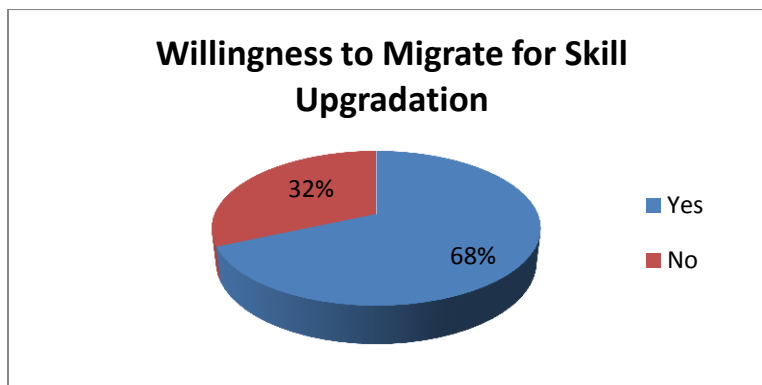
To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that only half of the technical graduate category students were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



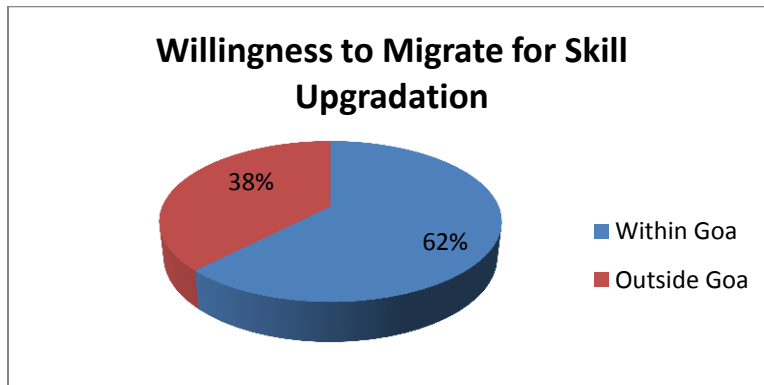
**Others include Stress, Weak in Studies, etc.*

Due to financial constraints majority of technical students are not be able to study further though they are willing to.

3.1.3.2.4.3.2 Willingness to migrate for further Education/Training



Among the total interviewed technical graduates, 68% of them were willing to migrate for skill up-gradation but only 38% of those were ready to move out from Goa for the same.

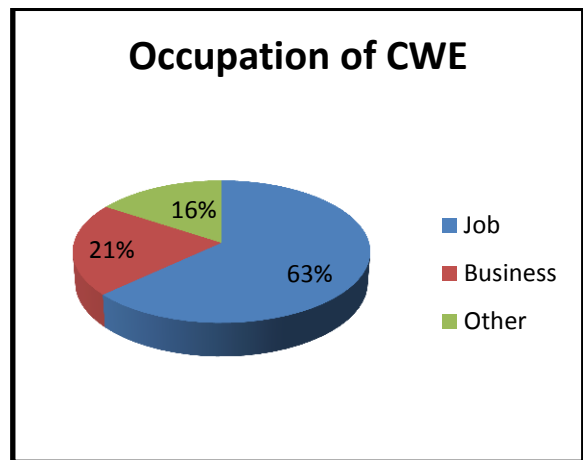
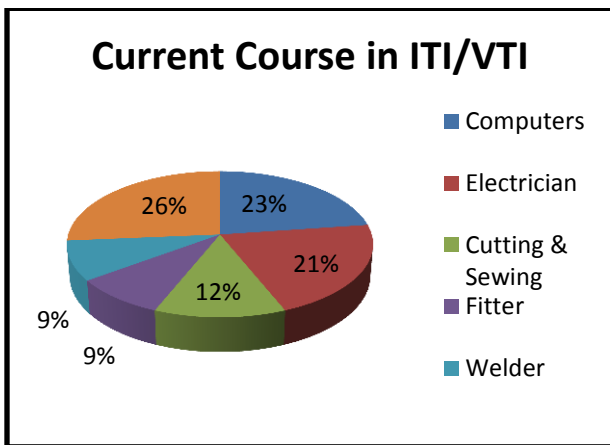
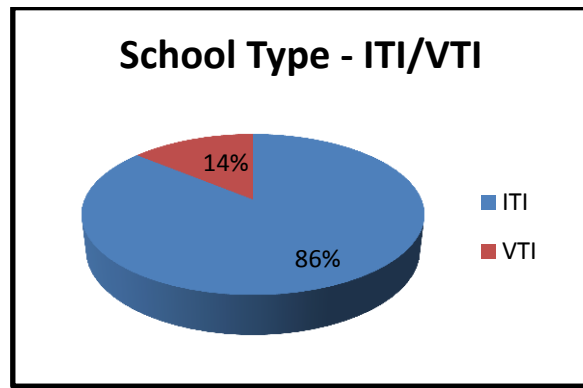
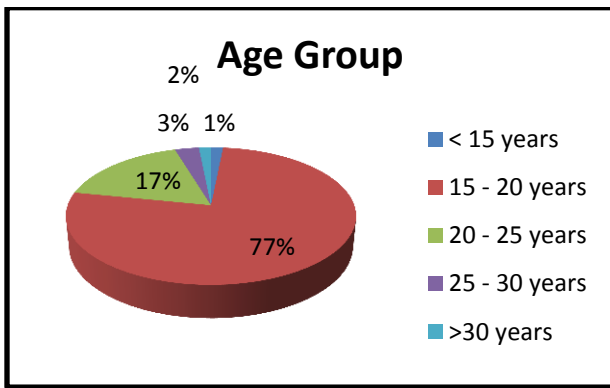


3.1.3.2.5 ITI/VTI Students

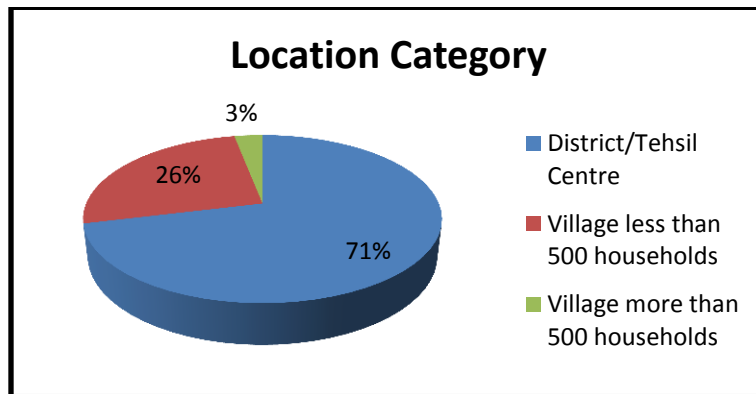
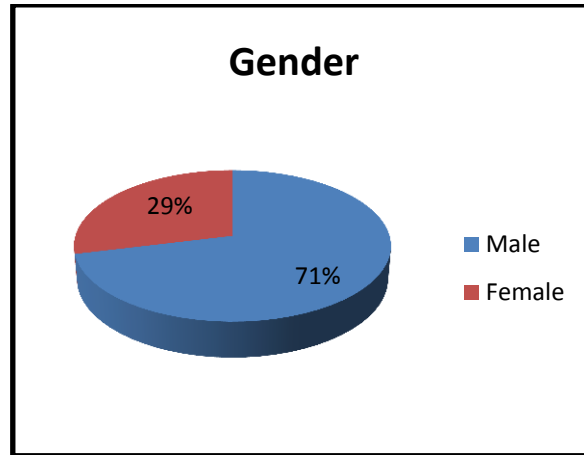
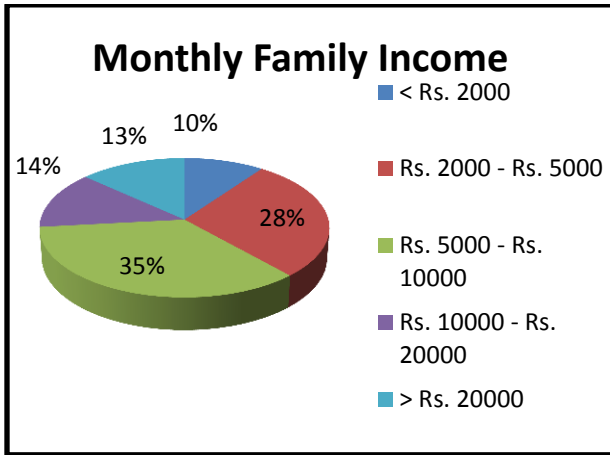
This section includes three categories: students who are currently studying at ITI/VTI, ITI/VTI pass outs looking for job and Alumni who are already working. The major areas we have covered are profiling of category which include educational and economical background of students with influencer's role in decision making of student's life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.5.1 Current ITI/VTI Students

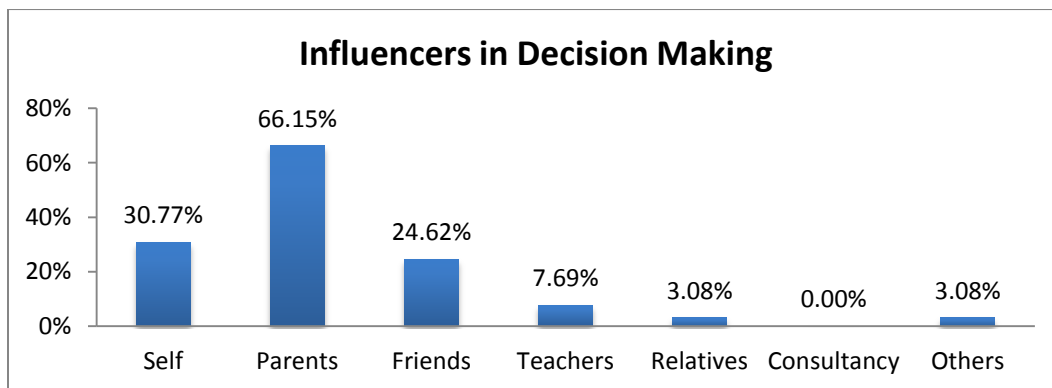
3.1.3.2.5.1.1 Profiling Data



*Others include Hotel Management, Plumber, etc.



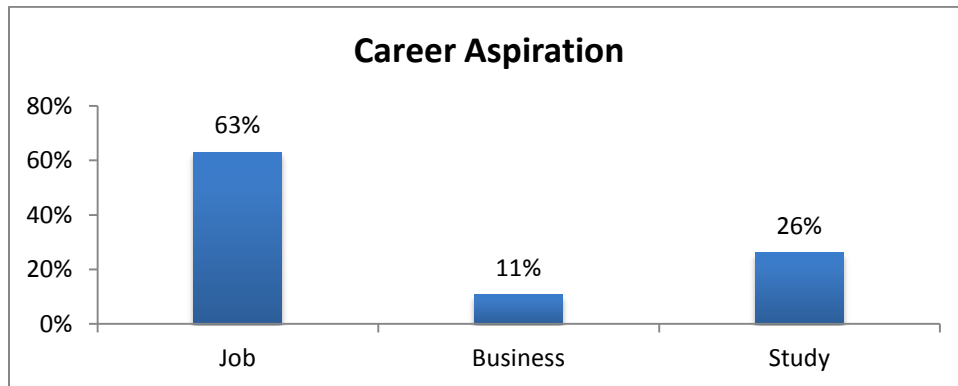
3.1.3.2.5.1.1.1 Decision Making



This category includes the students who are currently studying at ITI/VTI. Their family income is in the range of Rs.5000- 10000 per month. Here it is cited from the above graph that along with parents friends are also playing major role in influencing the students in making major decisions.

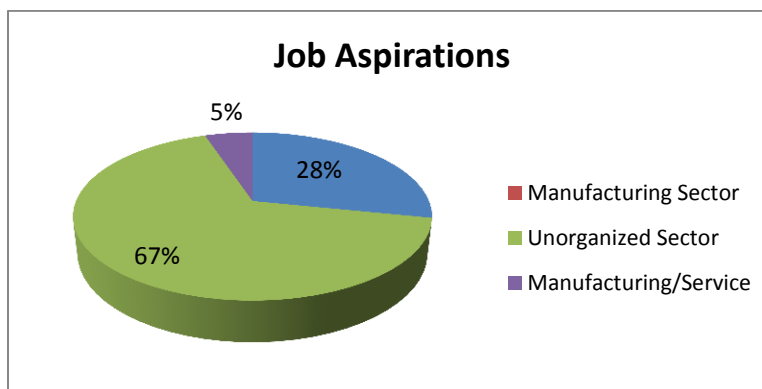
3.1.3.2.5.1.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.



Here as the students already taking training of vocational courses, only 26% of them are aspire for study further and majority of students wants to do job after completion of their training.

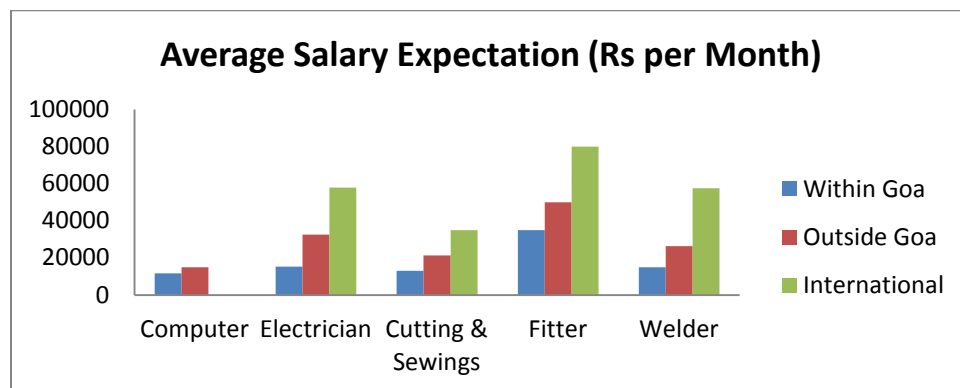
The below pie shows that majority of the students were wish to make their career in the field of unorganized sector like Electrician, Fitter, Welder etc. The list for the same is mention in the table below.



Service	Unorganized	Any Of Above
Banking	Electrician	Government Job
Hotel	Fitter	
IT	Welder	

Service	Unorganized	Any Of Above
Accountant	Cutting & Swings	
	Beauty Parlor	
	Sportsman	

3.1.3.2.5.1.2.1 Average Salary Expectation after Current Training

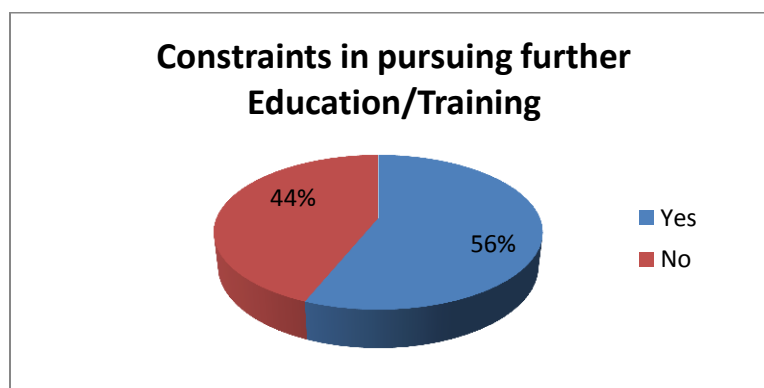


In category of current ITI/VTI students, the course of Fitter student expects highest salary of Rs.35000 within Goa and also outside Goa and internationally as well.

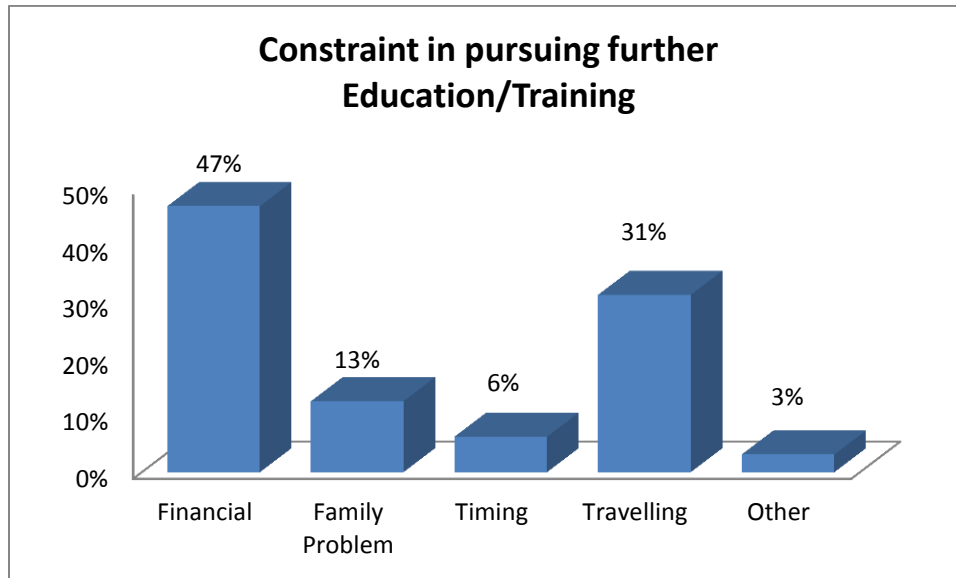
3.1.3.2.5.1.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.5.1.3.1 Constraints in pursuing further Education/Training



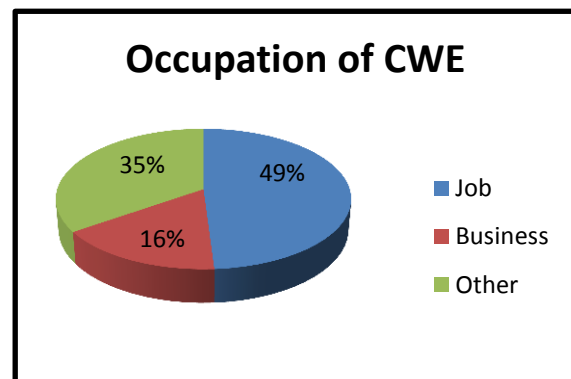
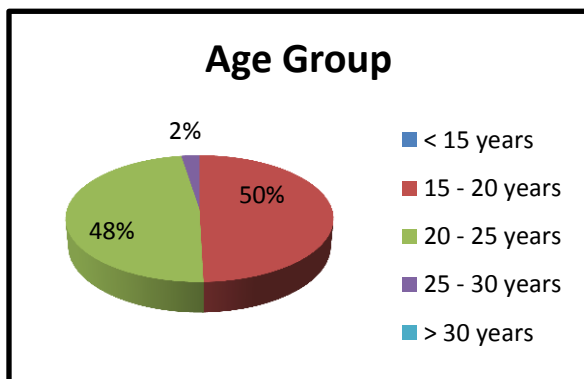
To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that more than half of the current ITI/VTI category students were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

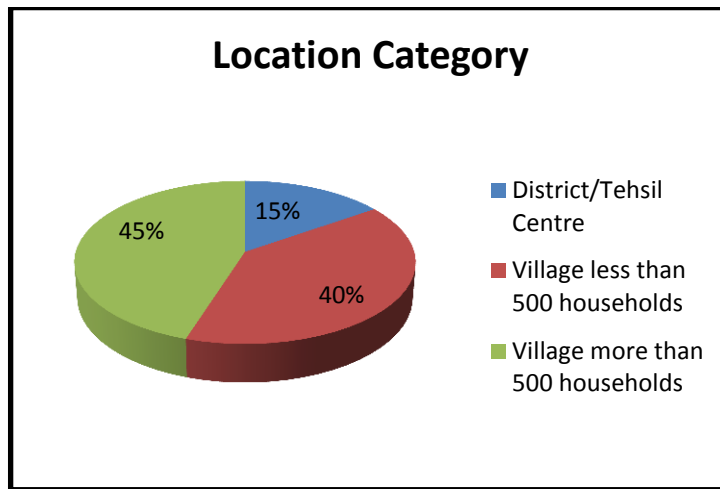
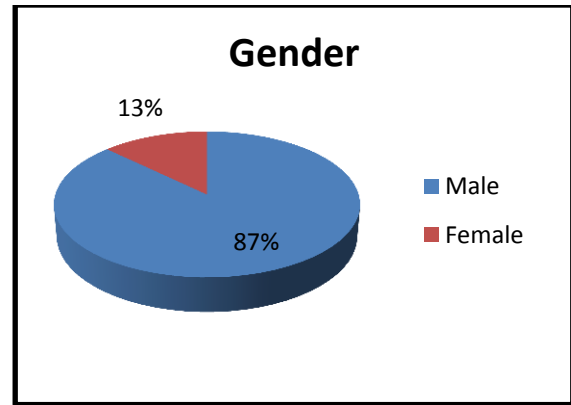
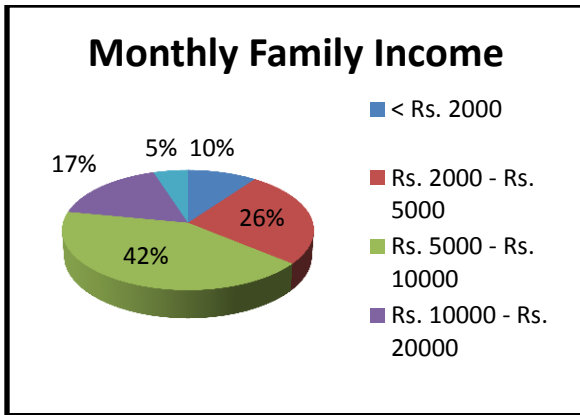


Again we found that financial problem is the major constraint for the ITI/VTI student which is followed by family problems and transportation issues.

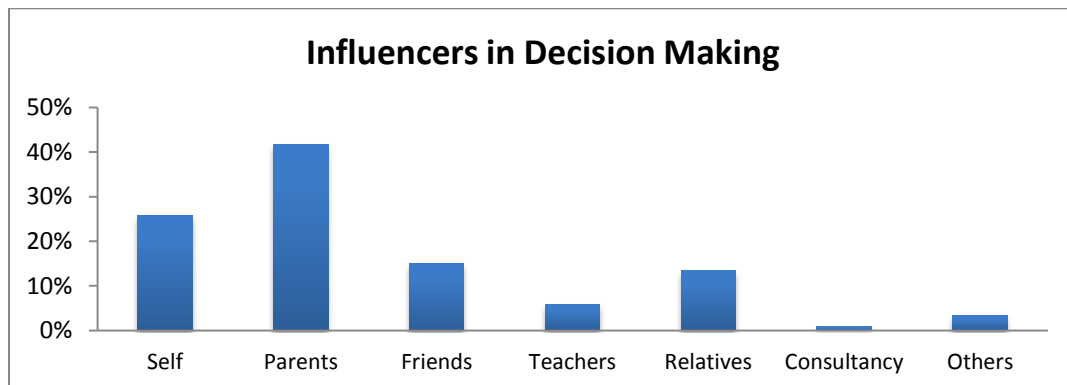
3.1.3.2.5.2 ITI/VTI Pass-outs looking for Job

3.1.3.2.5.2.1 Profiling Data





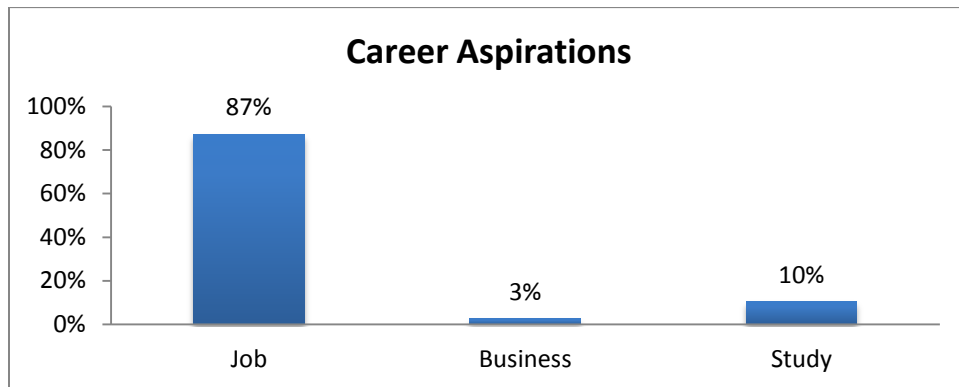
3.1.3.2.5.2.1.1 Decision Making



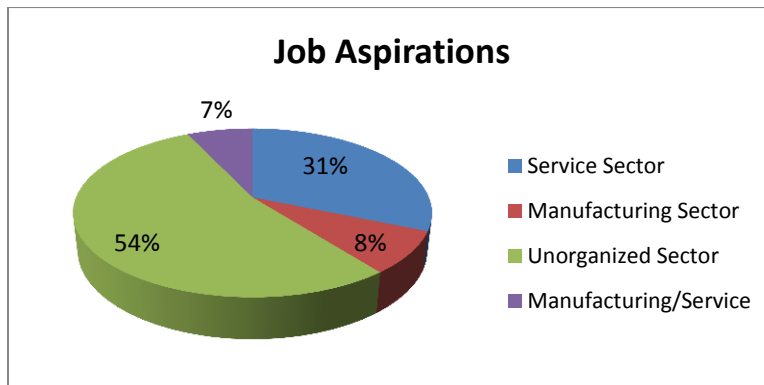
Herein, we found that majority of the students were influenced by their parents only with also 25% of the students take their decision of career by their own which is followed by friends and relatives.

3.1.3.2.5.2.2 Aspirations

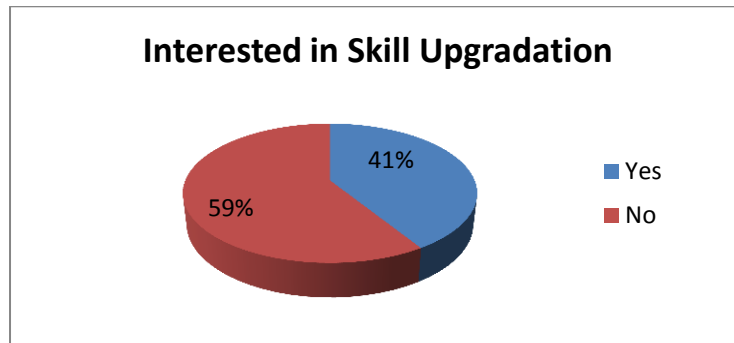
As the students already had taken training under ITI/VTI institute it is obvious that they would willing to do job further, below graph shows that 87% of the students were willing to aspire for job. Very few were aspiring for setting up the business while only 10% were wishing to go for study further.



Majority of the students in this category wish to make their career in the field of unorganized sector mainly in which they had accomplished training at ITI/VTI Institute.

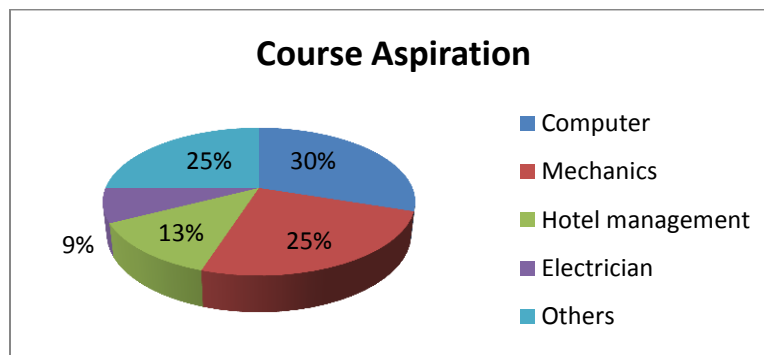


3.1.3.2.5.2.2.1 Interested in Skill Up-gradation



More than half of the students were not interested in skill up-gradation the reason is the same that they already taken training once.

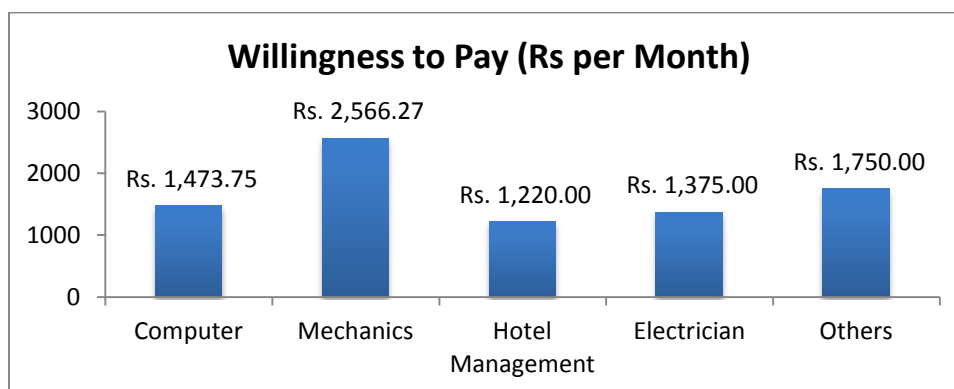
3.1.3.2.5.2.2.2 Course Aspirations



**Others include B.Com, Bartender*

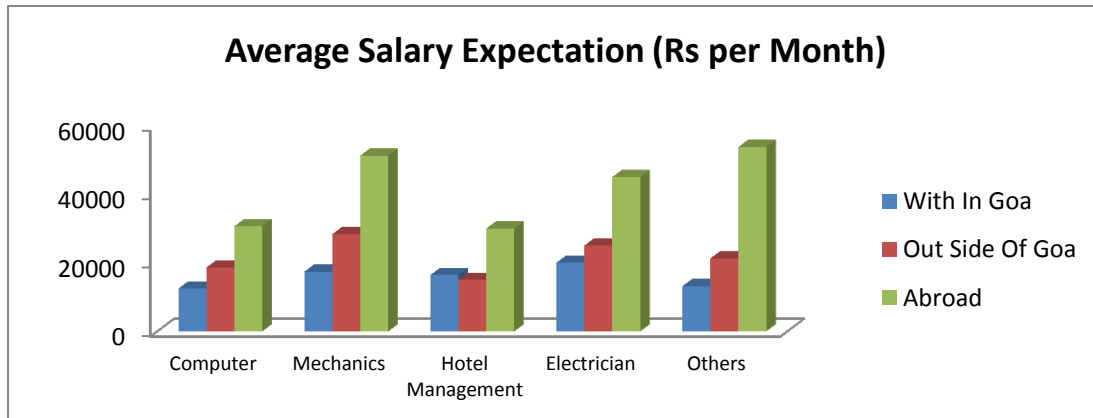
Computer and Mechanics are the two most preferable courses for taking vocational training. Also other few courses like Hotel management and Electrician aspired by the students.

3.1.3.2.5.2.2.3 Willingness to pay for various Vocational Courses



Highest willingness to pay for the course of Mechanics which is around Rs.2500 which is followed by computer courses i.e. Rs. 1400 per month.

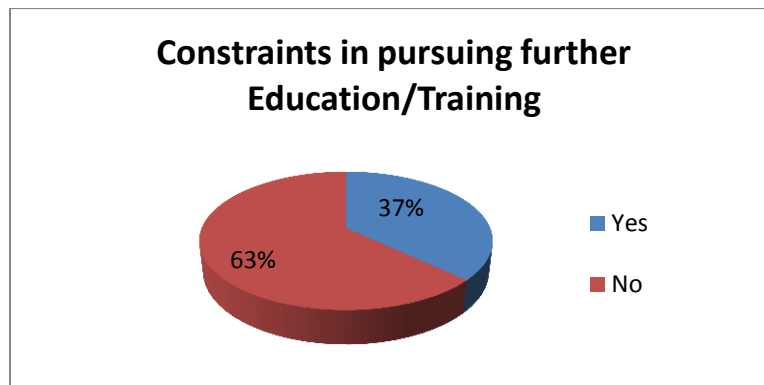
3.1.3.2.5.2.4 Average Salary Expectation for various Vocational Courses



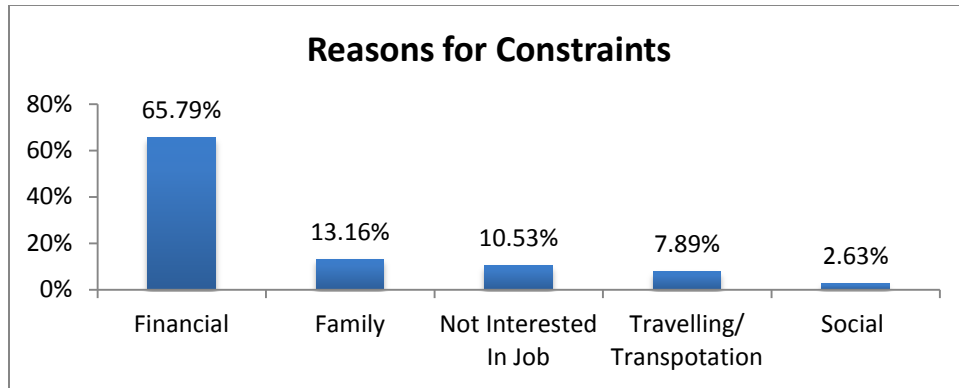
Students expect highest salary after completion of the course of Electrician course for within Goa and as well as outside Goa.

3.1.3.2.5.2.3 Constraints

3.1.3.2.5.2.3.1 Constraints in pursuing further Education/Training



To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that more than half of the Pass outs of ITI/VTI category students were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

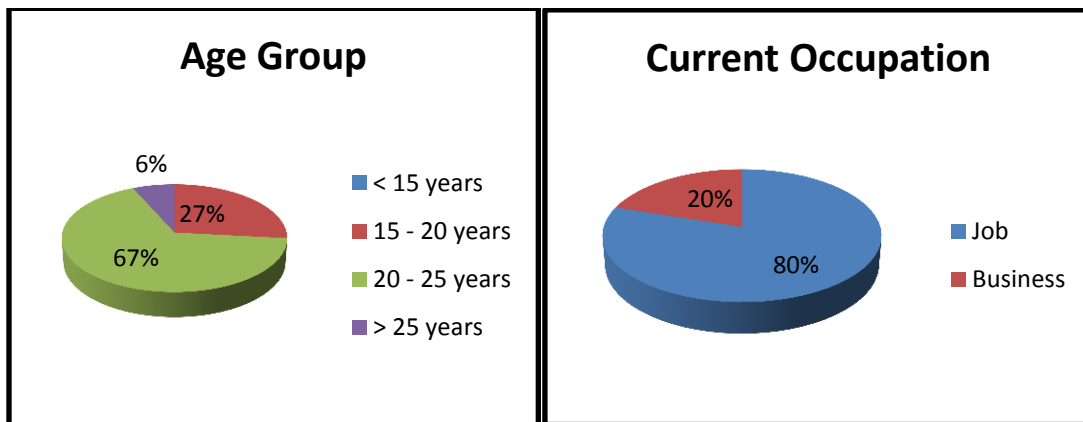


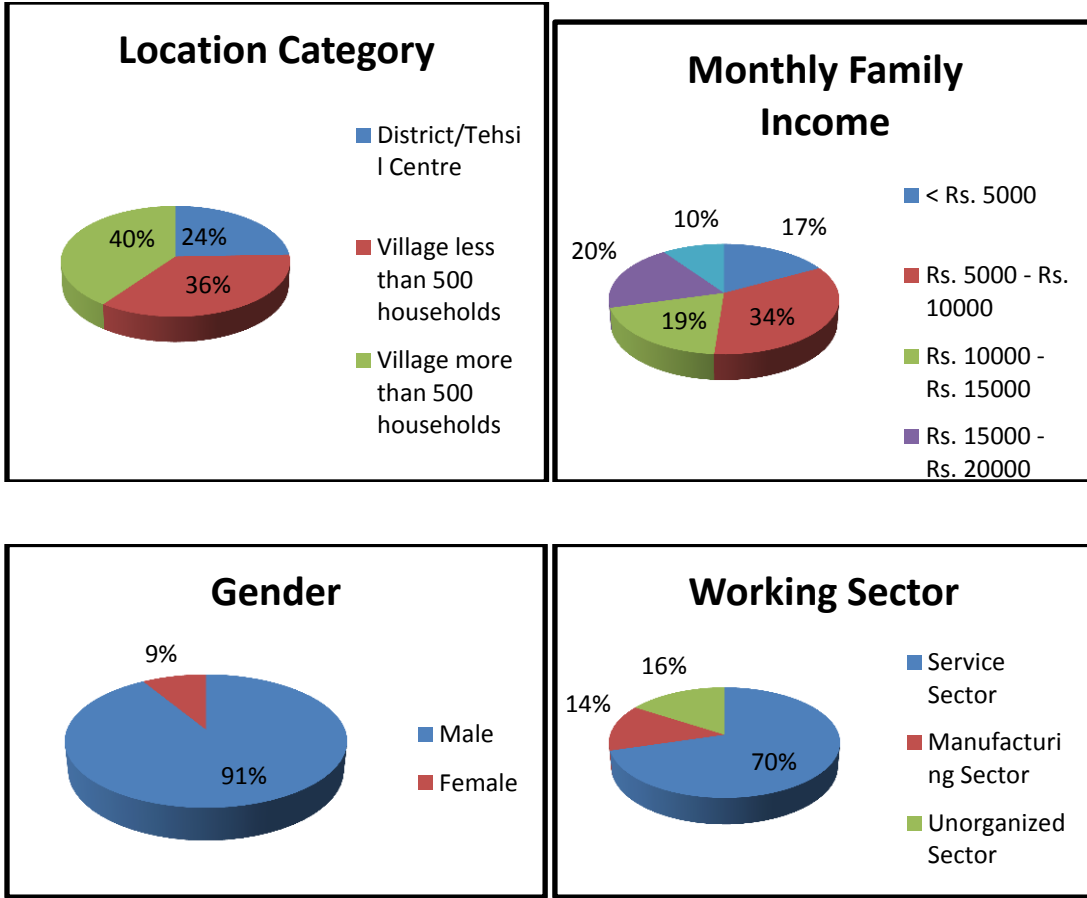
Here, it is infer from the above graph that students were majorly facing financial problems in perusing further education/training. The students in this category are looking for job as they already pass outs from the ITI/VTI thus this could also stop them to undergo further vocational training.

3.1.3.2.5.3 Alumni of ITI/VTI who are working

3.1.3.2.5.3.1 Profiling Data

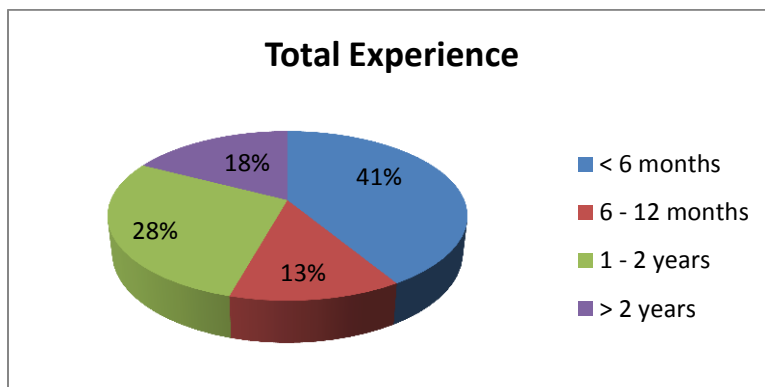
This section consists of the details about the respondents who are pass-outs of ITI/VTI and are also working at some sector. Below charts shows economical & educational background of the Alumni. Majority of them were in the age group of 20-25. 80% of them are doing job and also they are coming from average economical background.



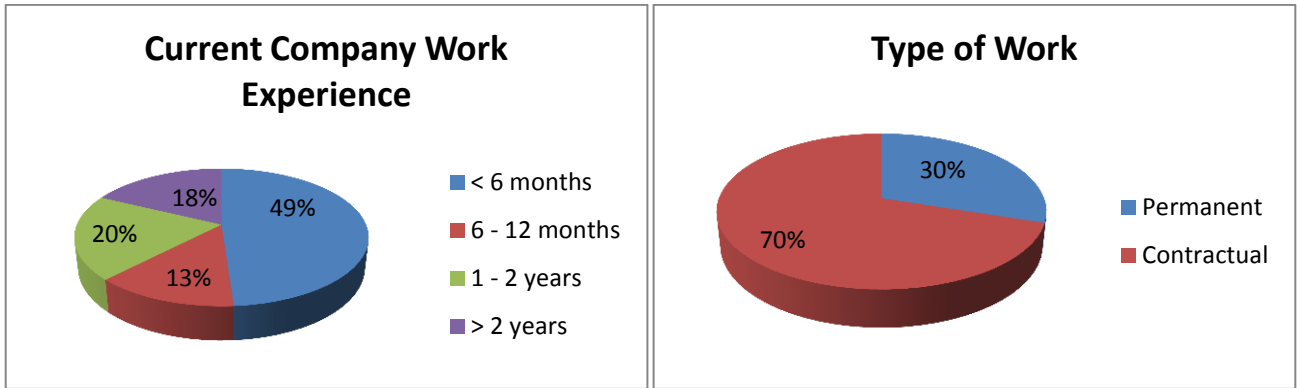


3.1.3.2.5.3.1.1 Work Profile

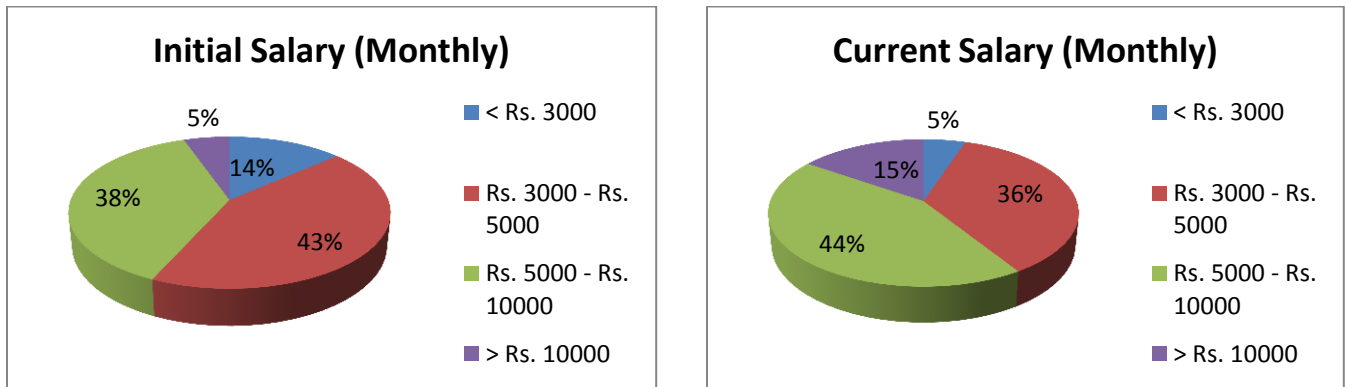
Here, 70% of the Alumni are working in the service sector. Majority of them were recent pass outs and so they have an experience of less than 6 month of working.



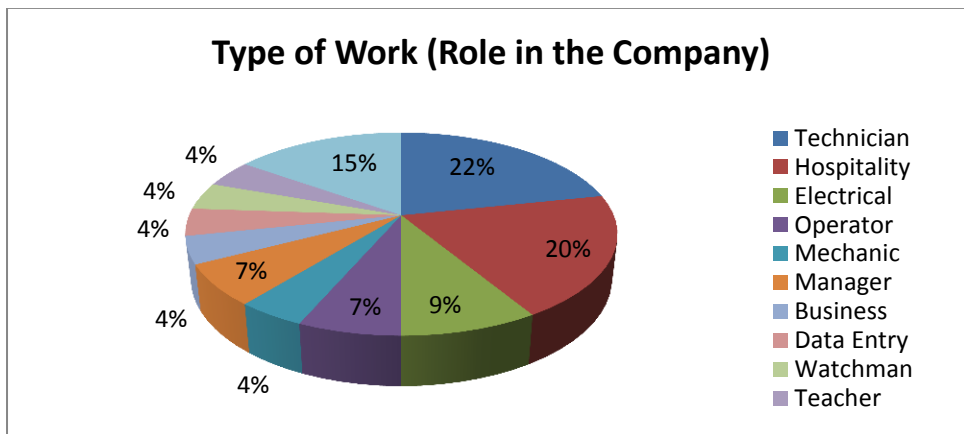
There are some respondents who have experience of working in more than one company & so below chart shows the response of experience of working in their current company.

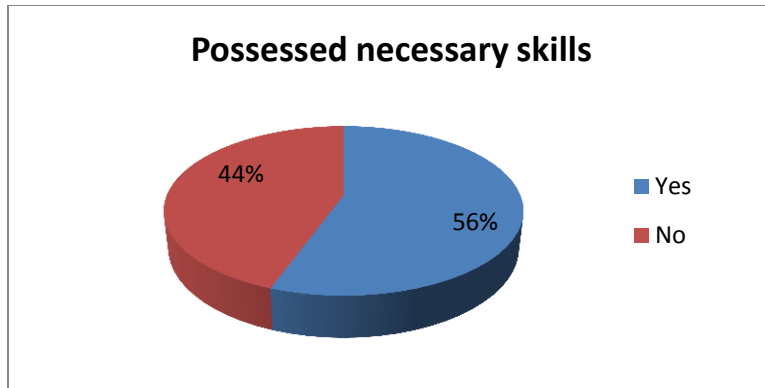


More than half of the respondents were working on contractual basis as only 30% of them were permanent employees. The initial salary of the Alumni was in the range of Rs. 3000 – Rs. 5000 majorly which is increased up to Rs. 5000 – Rs. 10000 in their current work place.

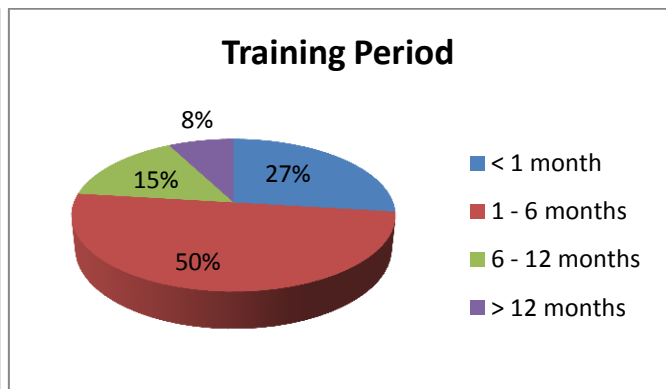
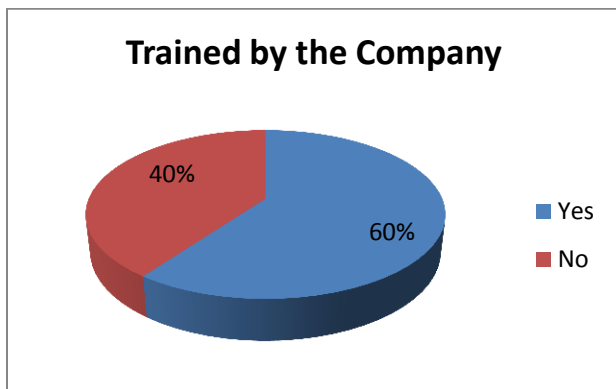


Inferring from the below pie chart, we come to know that the majority of Alumni of ITI/VTI are working in the field of Technician, Mechanic or Hospitality.



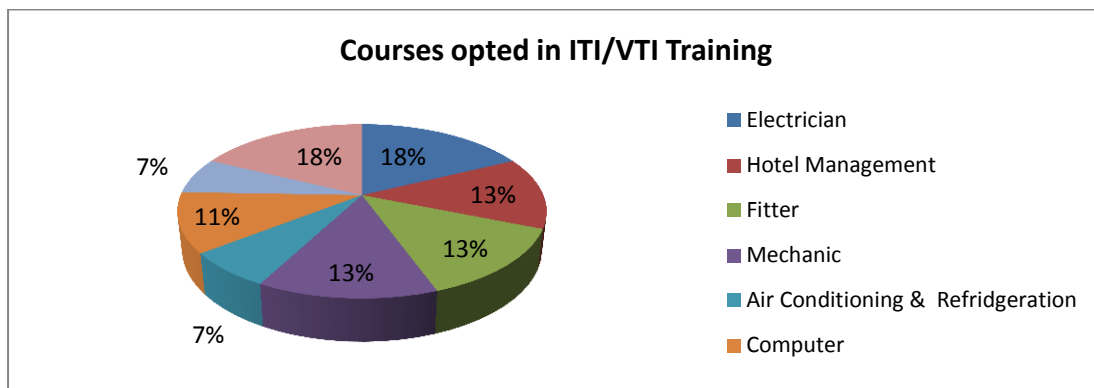


To gauge the knowledge of the Alumni we asked them whether they possess all the necessary skills which are required to them at their work place, here 56% of the students responded positively. Out of total only 60% said that they were trained by their respective company.



The company which provides training to their employees held training generally for 1 to 6 months at the time of joining of the fresher.

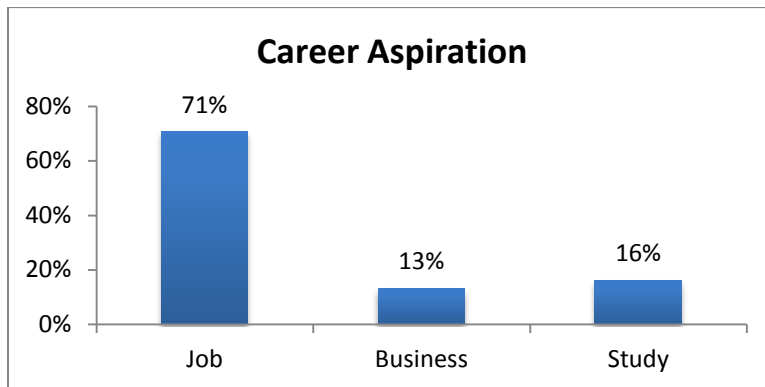
3.1.3.2.5.3.1.2 Education Profile



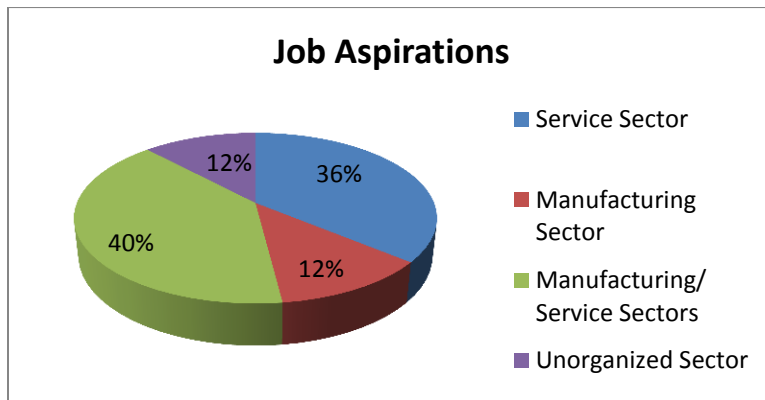
Most opted course from the Alumni of ITI/VTI who are currently working is Electrician which is followed by Hotel management, Fitter, Mechanic and Computer. Apart from that few of the students were also from the course of Air Conditioning & Refrigerator and Plumber.

3.1.3.2.5.3.2 Aspirations

Majority of the Alumni in this category would aspire for job further. Though they are currently working 20% of them would want to do study further.

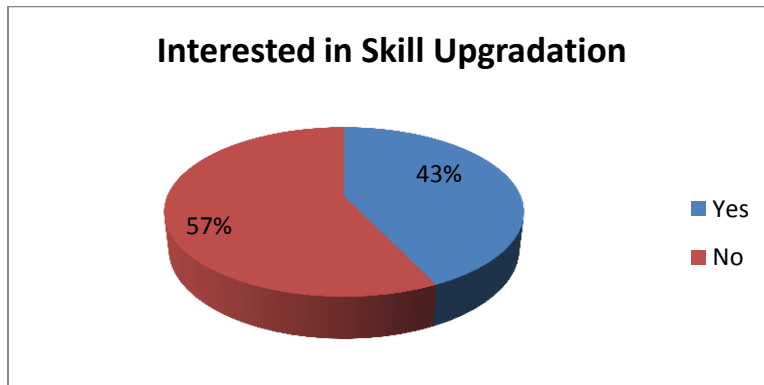


Below chart shows the sectors in which respondents interested to make their career. Majority of them would prefer to go for service sector.



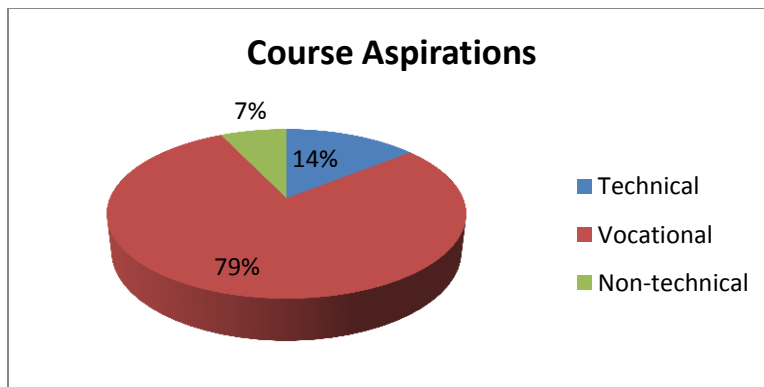
Service Sector	Manufacturing Sector	Unorganized Sector
Computer/IT	Fitter	Electrician
Teacher	Diesel Mechanics	Plumber
Hotel	Soldering	
Banking		

3.1.3.2.5.3.2.1 Interested in Skill Up-gradation



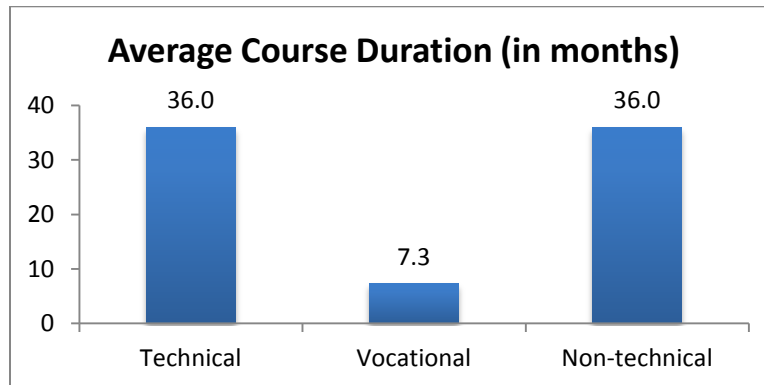
There are more than half of the Alumni who were not interested for skill up-gradation as all of them are currently working.

3.1.3.2.5.3.2.2 Course Aspirations



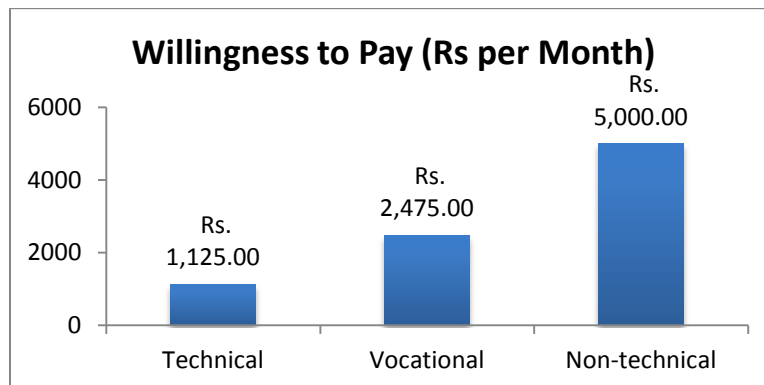
Strangely, we found that in the category of students who are already ITI/VTI passed out and though currently working, majority of them would aspire to for vocational courses.

3.1.3.2.5.3.2.3 Average Course Duration for various Categories



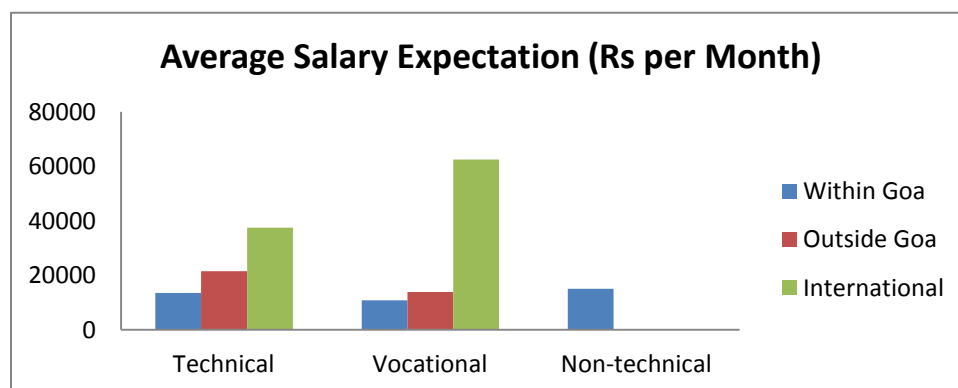
According to them the average duration for perusing the vocational course would be of around 7 months.

3.1.3.2.5.3.2.4 Willingness to pay for various Categories



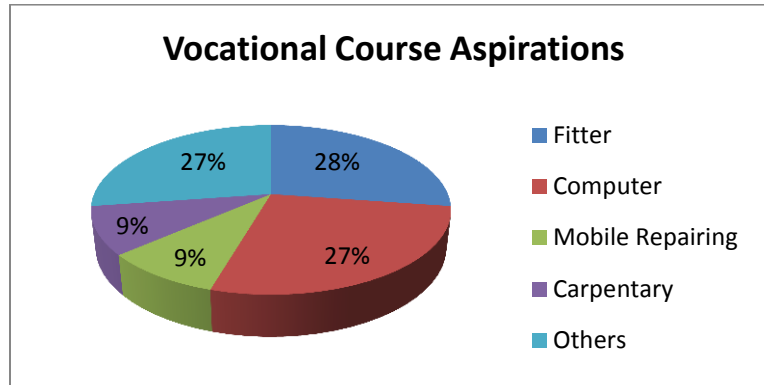
As the respondents in this category are economically well off and they are working also the willingness to pay for the vocational course is very high around i.e. Rs. 2500 per month.

3.1.3.2.5.3.2.5 Average Salary Expectation for various Categories



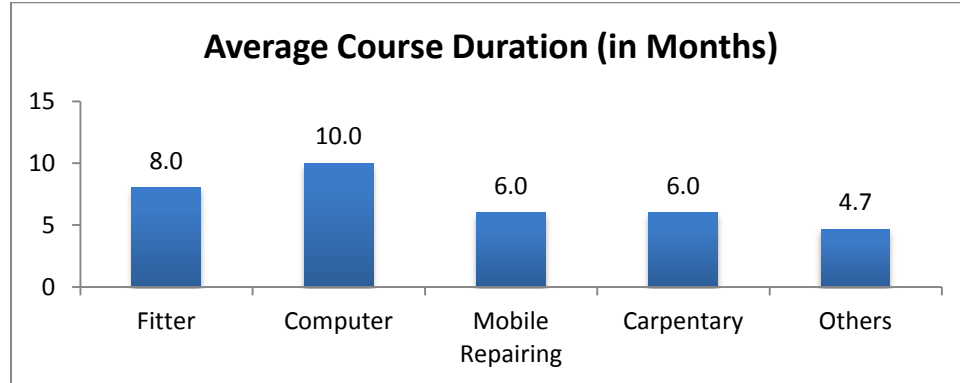
The Alumni expects a salary in the range of Rs.10000-Rs.15000 after completion of vocational courses in case of within Goa as well as outside Goa.

3.1.3.2.5.3.2.6 Vocational Course Aspirations



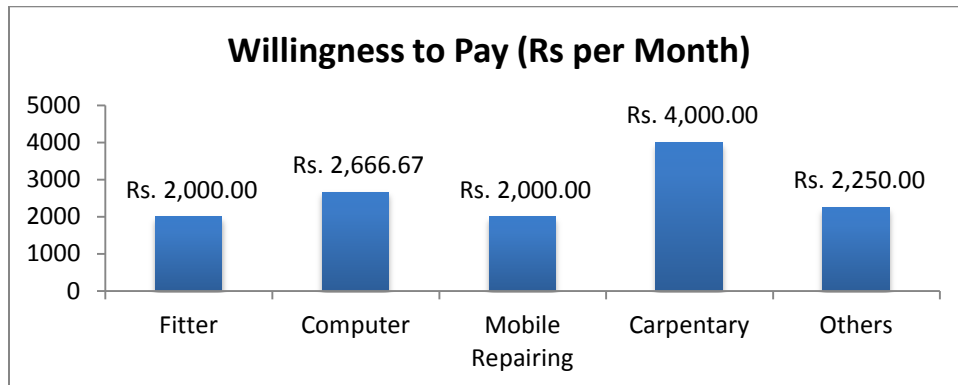
Fitter and Computer courses are the top most priority for the respondents as shown in the above pie chart also there are some other courses like Mobile Repairing and Carpentry are in demand.

3.1.3.2.5.3.2.7 Average Duration (Vocational Training)



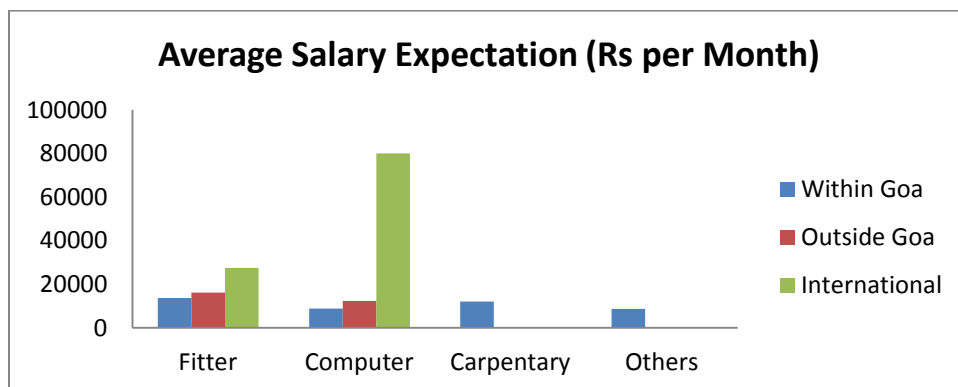
Students believe that training should be provided like Computer course should be offered for 10 months, Fitter for 8 months and Mobile Repairing and Carpentry for 6 months.

3.1.3.2.5.3.2.8 Willingness to pay for various Vocational Courses



The students in this category are ready to pay high amount approximately in the range of Rs. 2000 to Rs. 4000 per month per course. As explained earlier majority of the students are working on contractual basis so they aspire to the courses like Carpentry, Computer etc which are highly demanded in the market and due to which they are ready to pay higher for such courses.

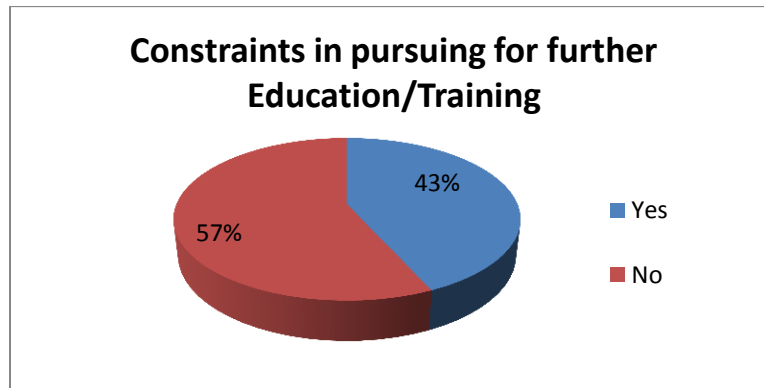
3.1.3.2.5.3.2.9 Average Salary Expectation for various Vocational Courses



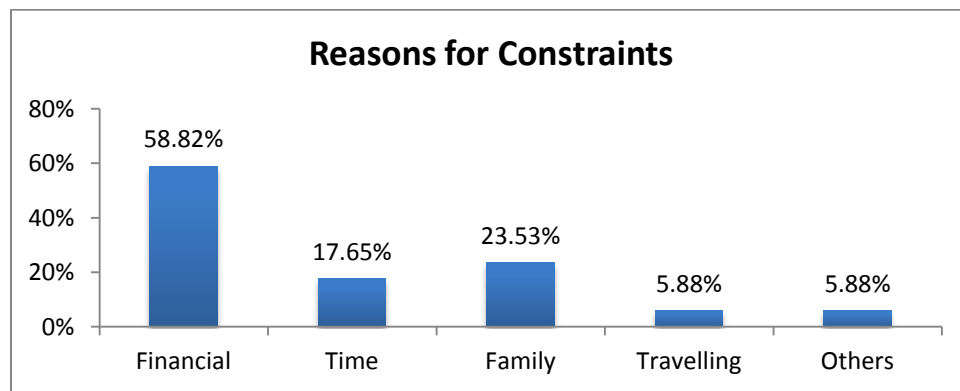
In case of within Goa respondents expect salary in the range of Rs.8000-Rs.15000 and very few of them have idea about salary provided at outside Goa and India.

3.1.3.2.5.3.3 Constraints

3.1.3.2.5.3.3.1 Constraints in pursuing for further Education/Training

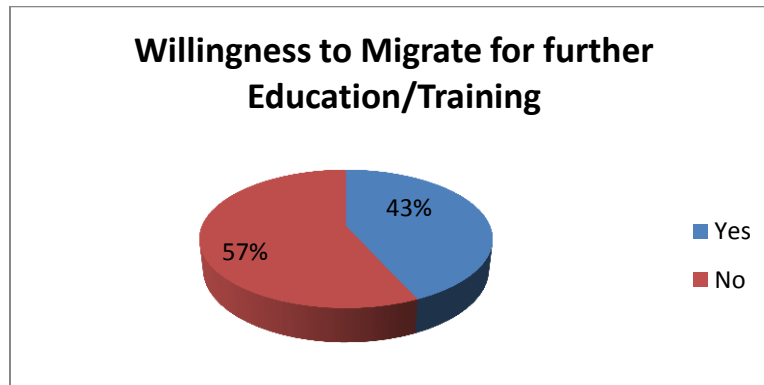


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that only 43% of the Pass outs of ITI/VTI category students who are already working somewhere were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



Here due to financial problem and also some family issues, respondents were facing constraints in taking vocational education further.

3.1.3.2.5.3.3.2 Willingness to migrate for further Education/Training



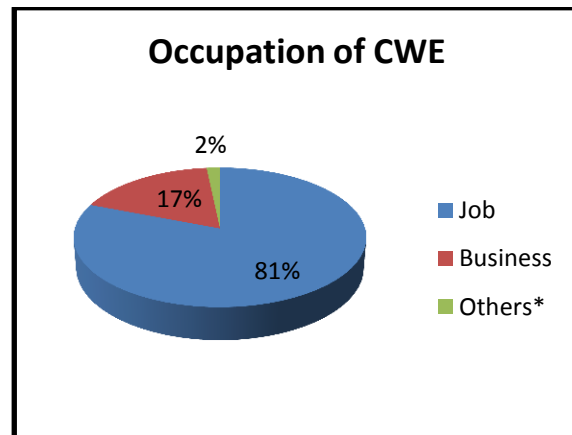
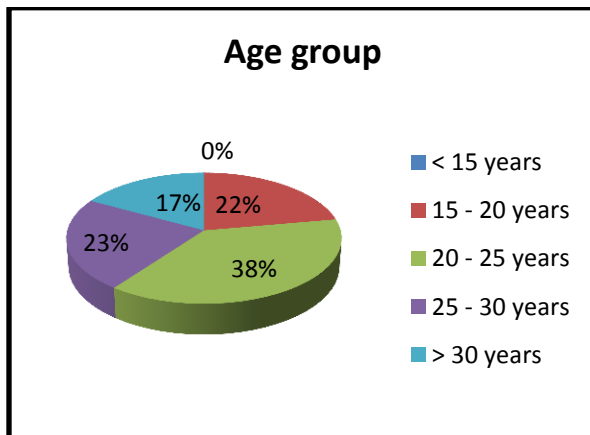
Again, few respondents were ready to migrate for further study. The reason for the same might be they are already working so majority of them would want to take training along with continuing their job. Thus, majority of them facing time constraint and not willing to migrate for the course.

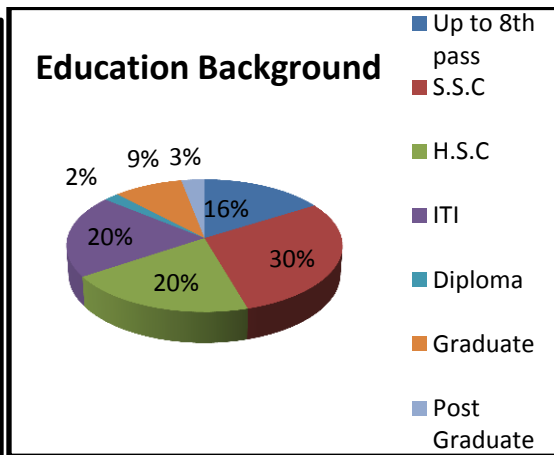
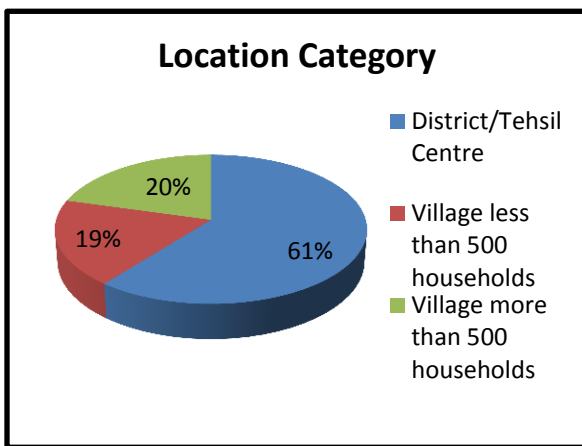
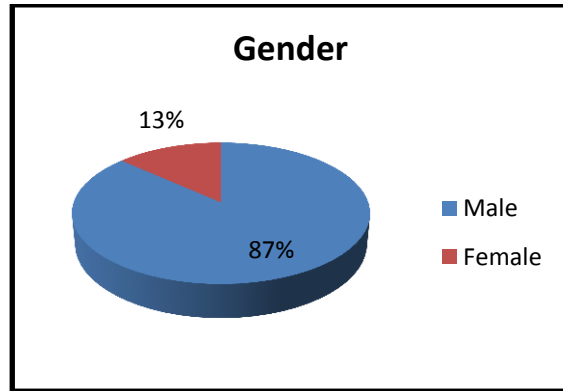
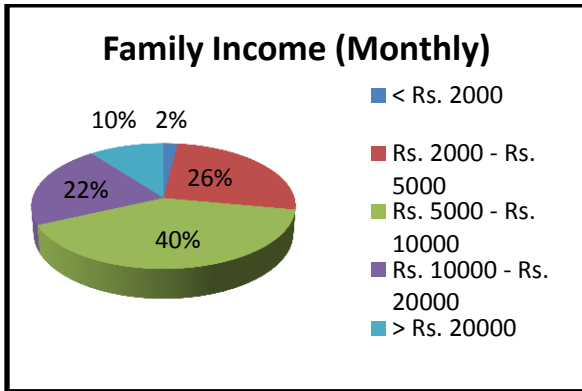
3.1.3.2.6 Workers Looking for Skill Up-gradation

This category includes the people who are already working but looking for skill up-gradation. The major areas we have covered are profiling of category which include educational, economical and work profile of people. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.6.1 Profiling Data

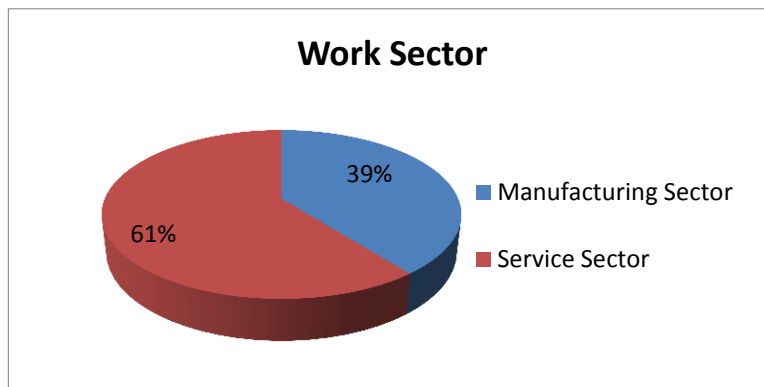
This category includes the people who are already working but looking for skill up-gradation. 80% of them are doing Job and very few of them have set up their business. They are falling in the category of average economical background as majority of their family income is in the range of Rs.5000- Rs.10000.



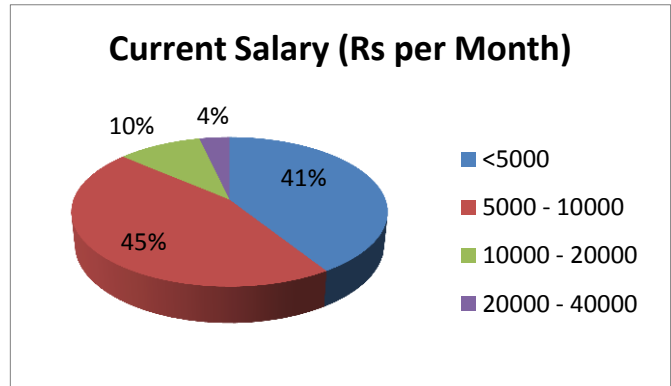
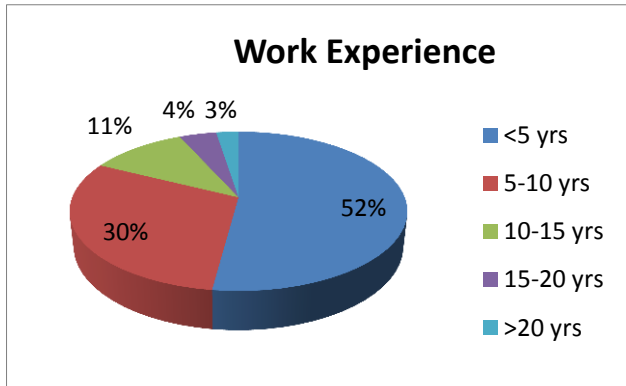


3.1.3.2.6.1.1 Work Profile

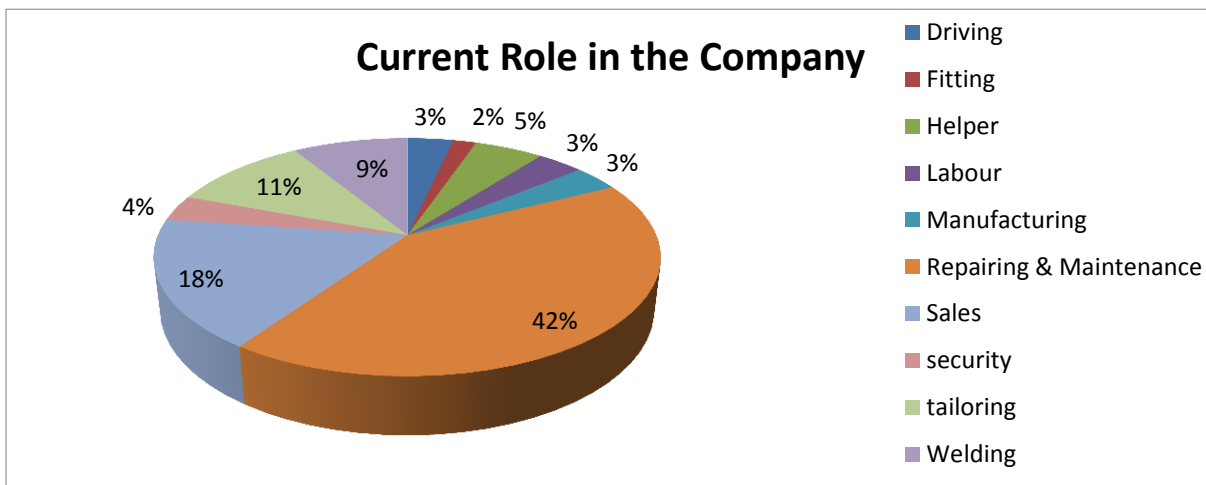
In this category, more than half of the respondents are working in service sector.



Majority of them have an experience of less than 5 years of working. Most of them have their current salary in the range of Rs. 5000 to Rs. 10000, as mention above the family income of most of them is also in the same range hence it can be said that the respondents were the chief wage earner of the family in most of the cases.

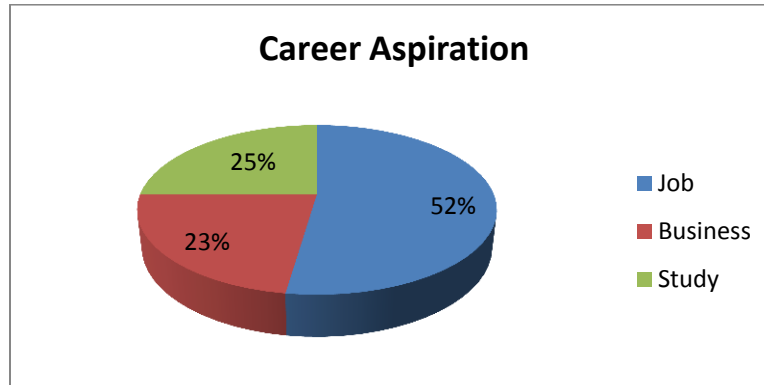


The below graph shows the field in which the respondents are currently working, we found that majority of them working in the company of Repairing and Maintenance, which is followed by Sales, Tailoring and Welding.

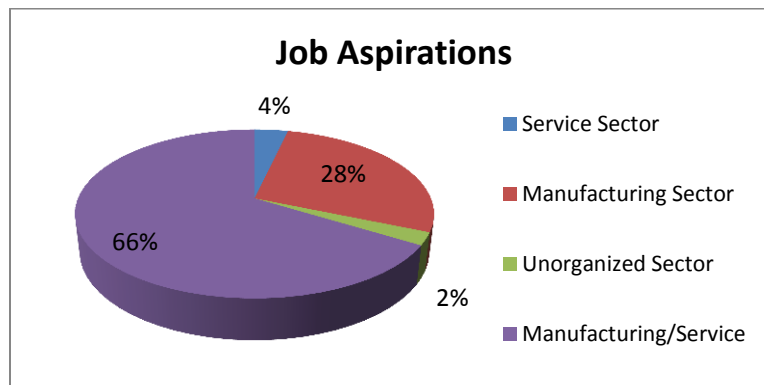


3.1.3.2.6.2 Aspirations

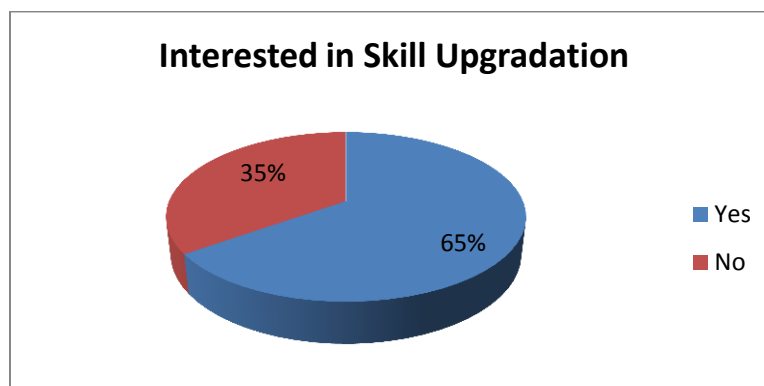
Herein, out of total 1/4th of the percent of respondent aspire to do study further either vocational or formal education.



The sector in which they are interested to make their career is shown below. Majority of them are ready to do work either in manufacturing or in service sector.

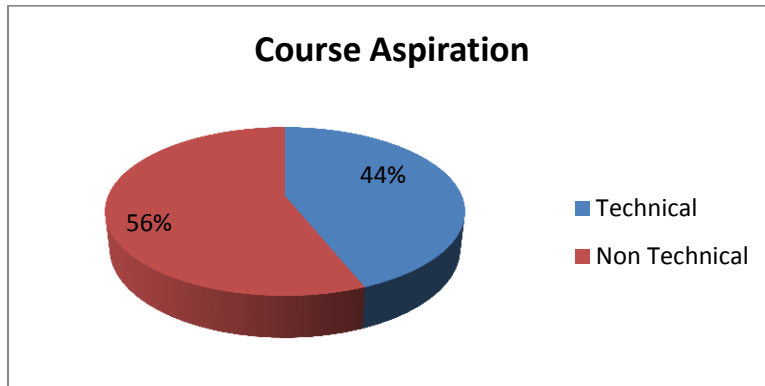


3.1.3.2.6.2.1 Interested in Skill Up-gradation



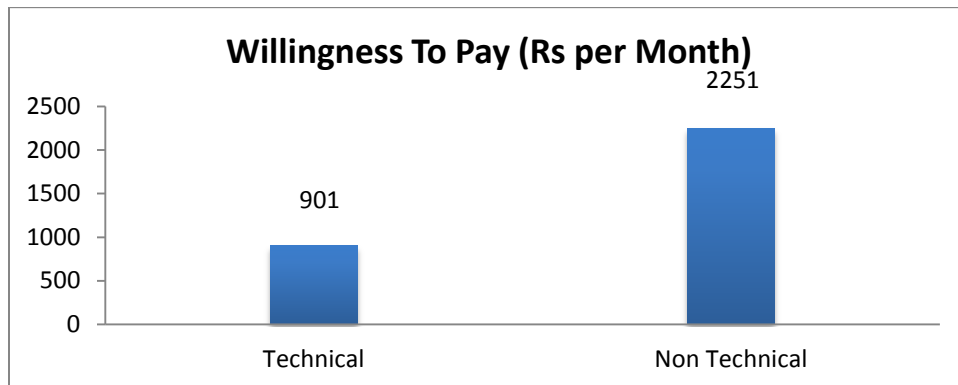
Above graph depicts that more than half of the respondents have shown their interest for skill up-gradation.

3.1.3.2.6.2.2 Course Aspirations



There could be a two possibility either none of them were interested in doing vocational course further or they might not aware about such kind of courses are available in the educational market. As most of them were want to do non technical course and rests were interested in doing technical courses.

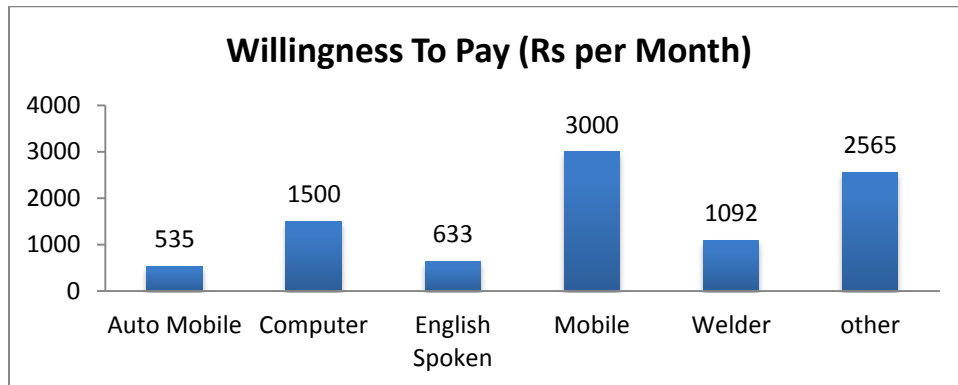
3.1.3.2.6.2.3 Willingness to pay for various Categories



Above graph shows the willingness to pay for the technical and non technical course in this category of respondents. Here respondents are ready to pay higher for the non technical courses.

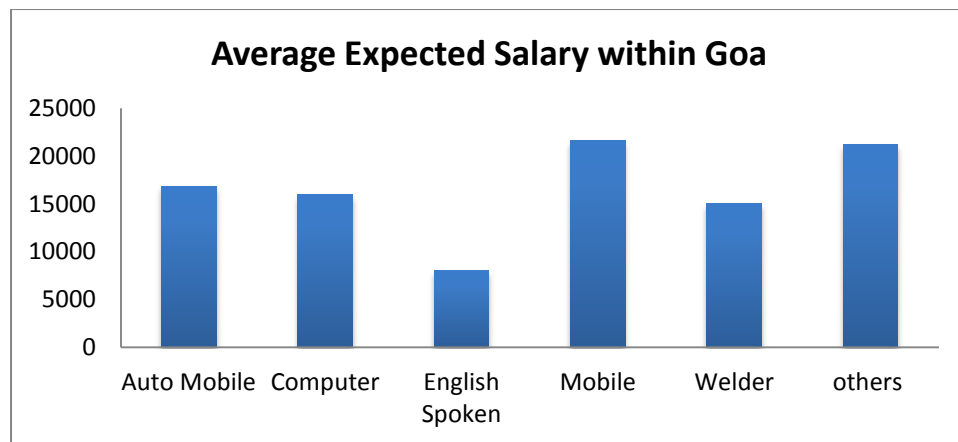
Students are ready to pay around Rs.900 per month for the courses like Mechanical, Electrician, Mobile repairing, Mining etc while they are willing to do courses like Tailoring, Sales and Marketing, Bed, English Speaking, Business Management, Journalism, Teaching etc in Non technical courses.

3.1.3.2.6.2.4 Willingness to pay for various Vocational Courses



As mentioned earlier, they might not be aware about the vocational courses & so by prompting we got the responses for willingness to pay for the vocational courses. Here we found that for the course of Auto mobile they are ready to pay around Rs. 500 while for course of Mobile Repairing they readiness to pay is around Rs.3000 per month.

3.1.3.2.6.2.5 Average Salary Expectation for various Vocational Courses

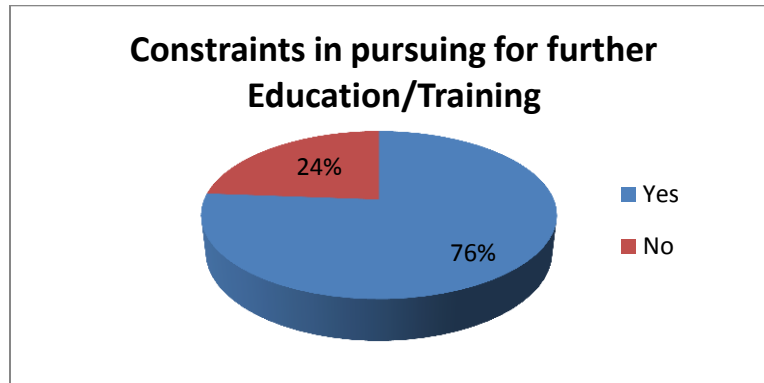


As the candidates were not having any idea about the pay packages provided at outside Goa and internationally they responded only for within Goa. In such a case, they expect highest salary after completion of the course of Mobile Repairing which is followed by Auto mobile, Computer course, Welder and lastly Spoken English.

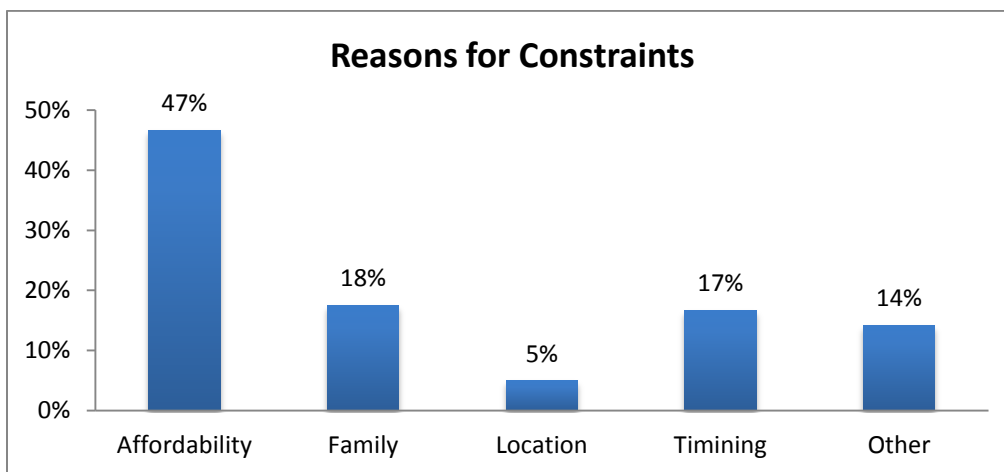
3.1.3.2.6.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.6.3.1 Constraints in pursuing for further Education/Training

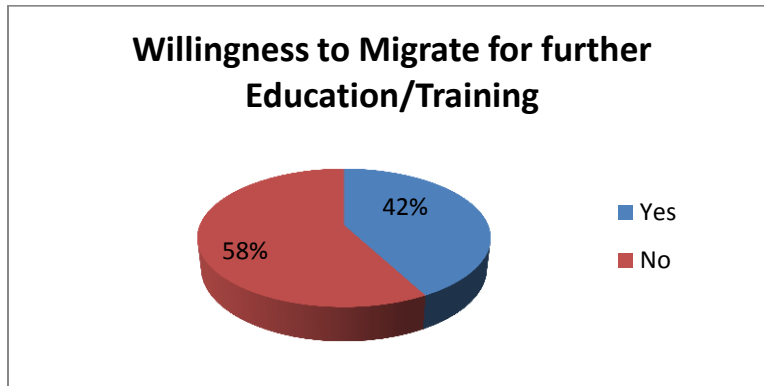


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that very high 76% of the workers looking for skill up-gradation category people were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



The major constraint faced by the respondents was un-affordability of the course. Due to high fees and their weak economical background some of them were unable to pay the fees for the course.

3.1.3.2.6.3.2 Willingness to migrate for further Education/Training



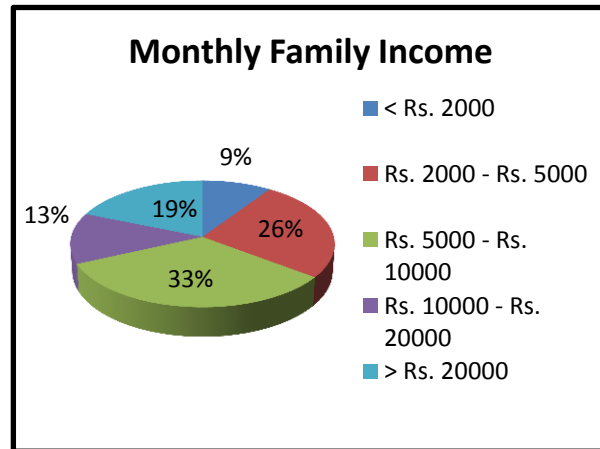
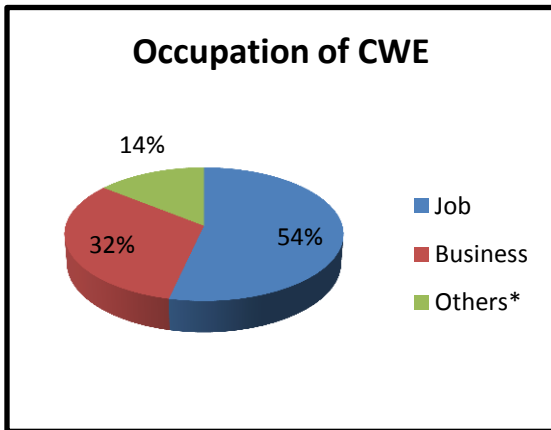
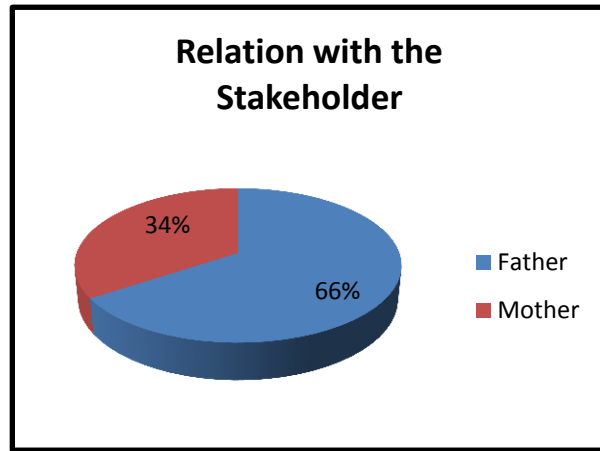
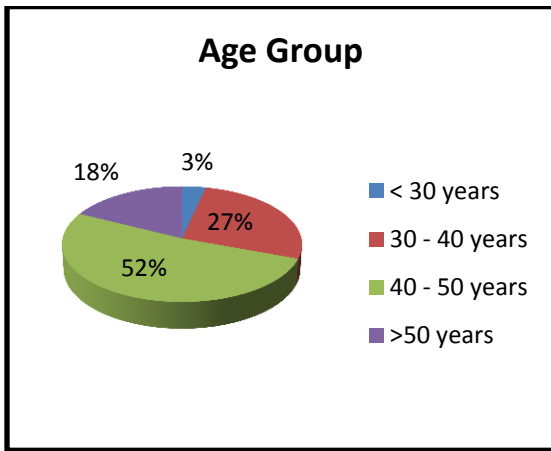
In case of migration, 58% of the respondent were not ready to migrate for the further training because of they are already working and for taking training they were not ready to leave their current job.

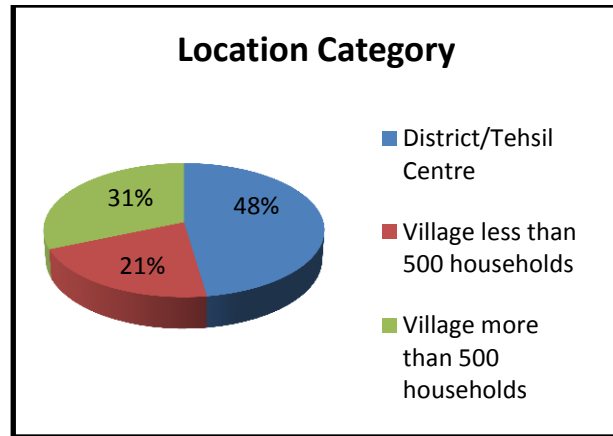
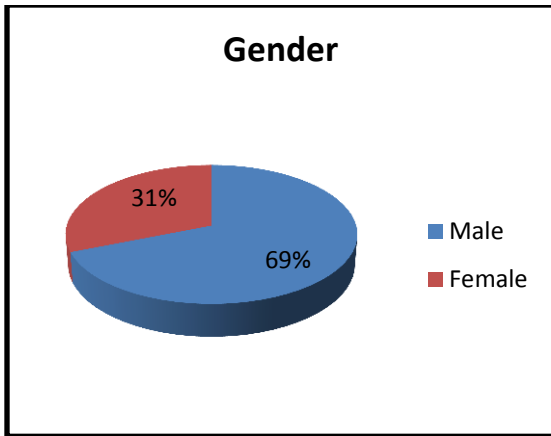
3.1.3.2.7 Parents

This category includes parents of all the above categories. The major areas we have covered are profiling of category which include background of parents with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.7.1 Profiling Data

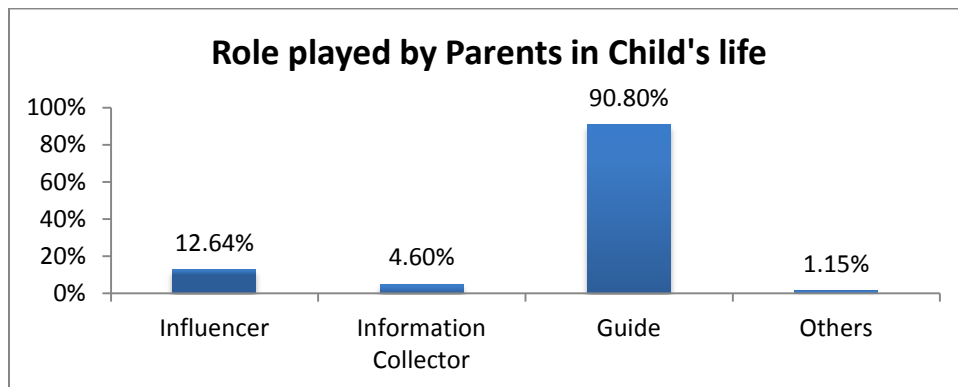
Most of the parents (more than 50%) are in the age group of 40-50 years.





3.1.3.2.7.1.1 Decision Making

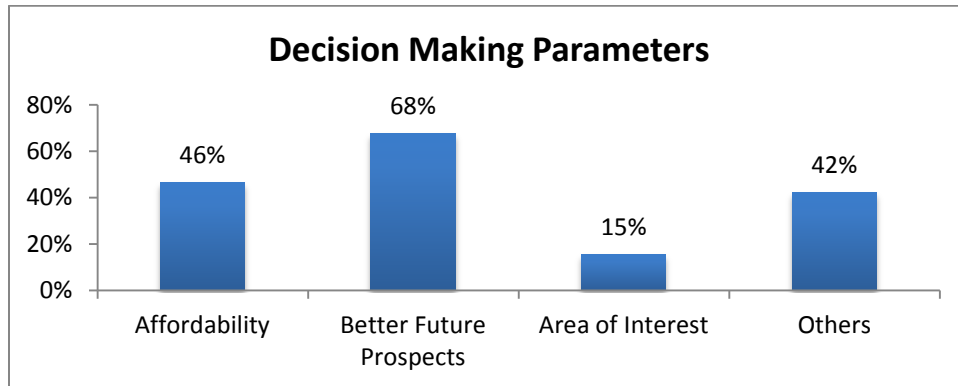
3.1.3.2.7.1.1.1 Role played by parents in their child’s life



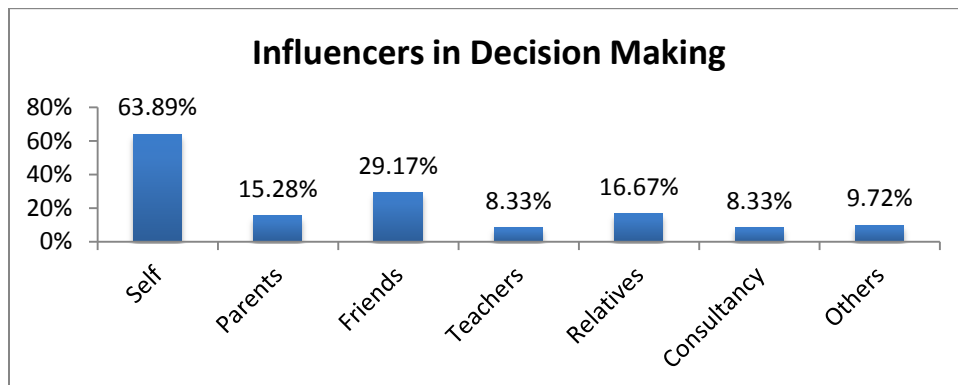
On asking about role played by parents in their child’s life, we found various responses like some parents said that they are only influencer for their child, other said that they collect the information for the institute or courses in which their students wants to make their career but majority of the parents play a role of Guide in the life of child’s career which can be proved by the above chart.

3.1.3.2.7.1.1.2 Decision Making Parameters in Child's Career

The most important decision making parameter while planning for their child's career is Better Future Prospects.



3.1.3.2.7.1.1.3 Influencers in Decision Making of the Child's Career

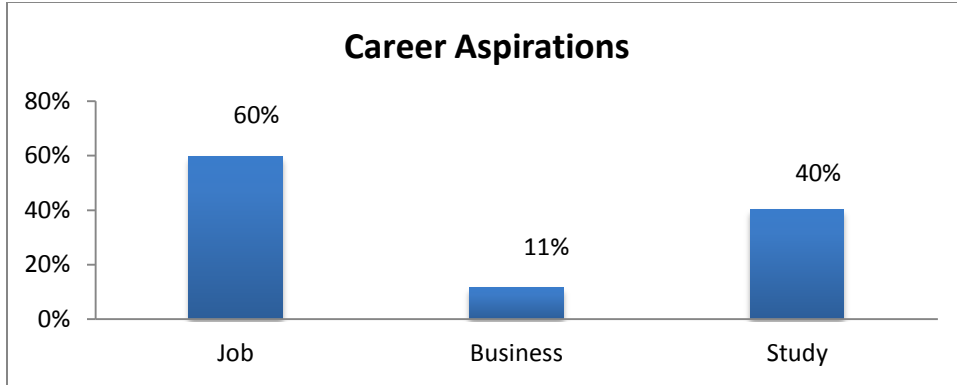


According to the majority of the parents, their children decide their study related or job related decision by their own. Some parents also said that their children sometime also influenced by their friends. Apart from that we also got responses in favor of relatives, teachers and consultancies that also play a minor role in child's career decision.

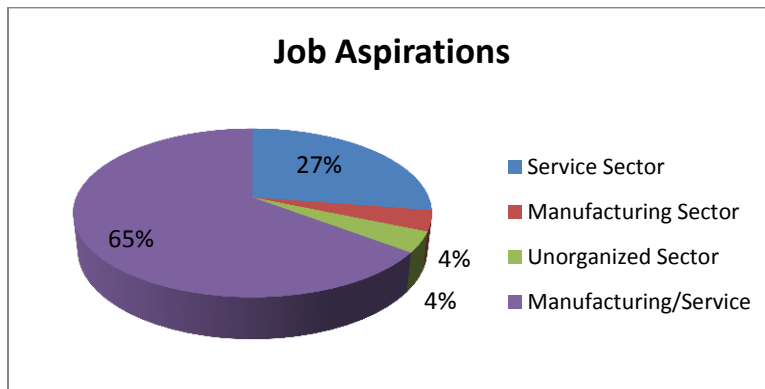
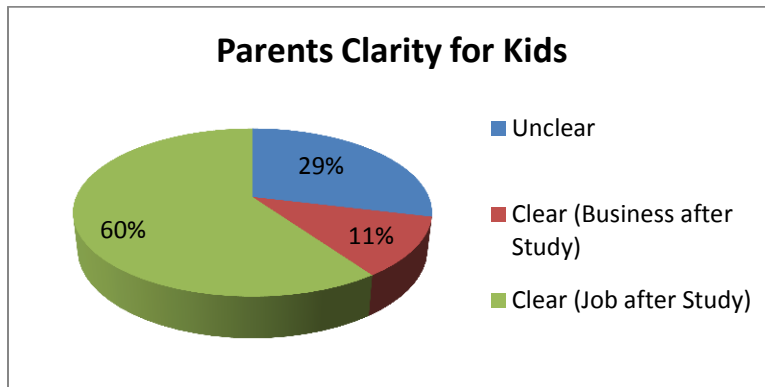
3.1.3.2.7.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.

Here, the ratio of parents aspire the job and study for their children is 60:40 which is shown in below pie chart.



60% of the parents were clear that they want their child to do job after completion of their current study while very few were want that their child to set up business either family business or any which interest their child most after completion of their study.



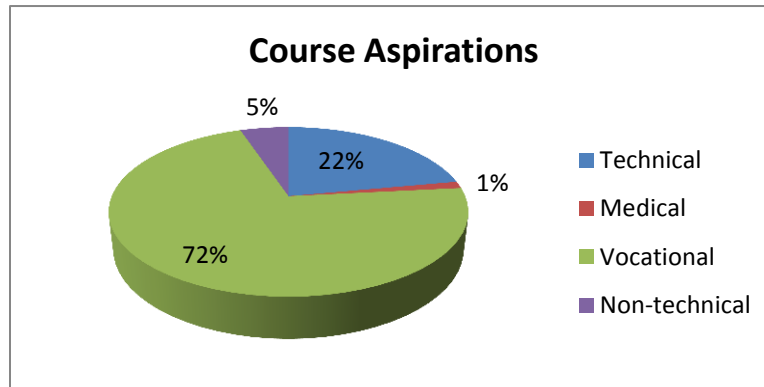
Above graph shows that the sectors in which parents were want their child to make their career in respective sector. Here, 65% of them were want their child to either go for manufacturing or go for service sector.

Service Sector	Manufacturing Sector	Unorganized Sector
Accounts	Fitter	Mechanic
Social Service		
Hospitality		

3.1.3.2.7.2.1 Interested in Skill Up-gradation

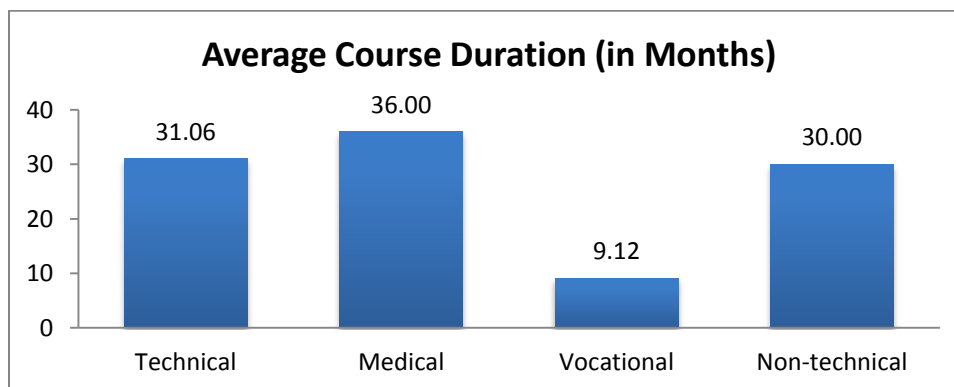
All the respondent parents were interested for Skill Up-gradation courses for their children.

3.1.3.2.7.2.2 Course Aspirations



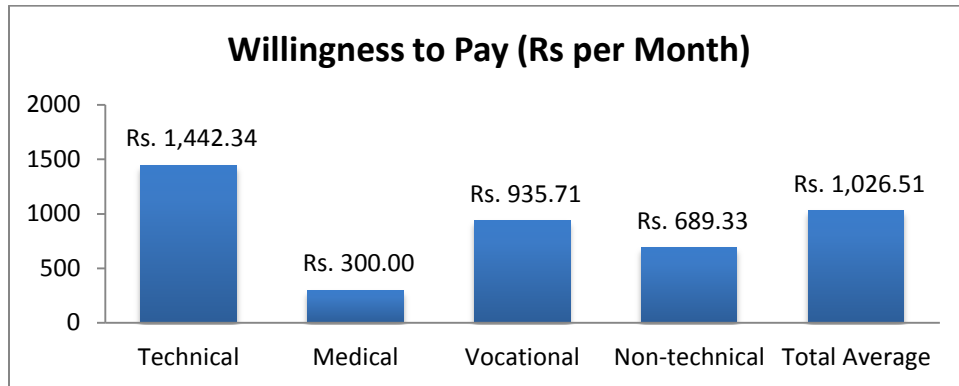
Here we found positive responses from the parents that 72% of them were aspire for their child to undergo vocational training. There were also a few parents who wish to make their child's career in the field of medical.

3.1.3.2.7.2.3 Average Course Duration for various Categories



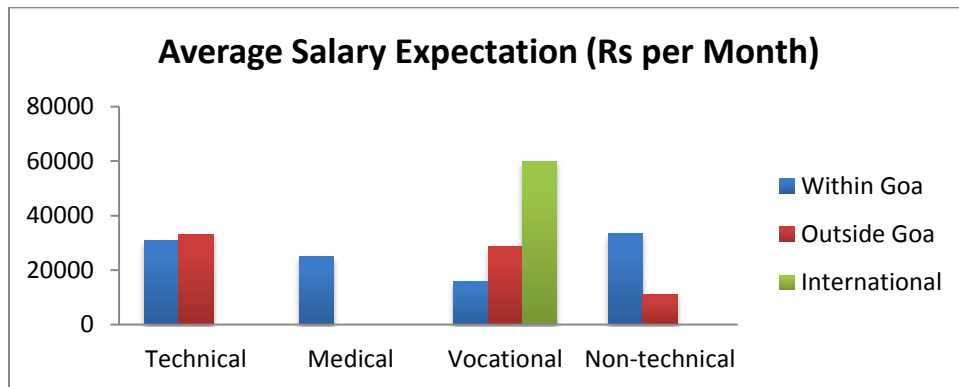
The parents feel that the average course duration for the vocational course would be of around 10 months.

3.1.3.2.7.2.4 Willingness to pay for various Categories



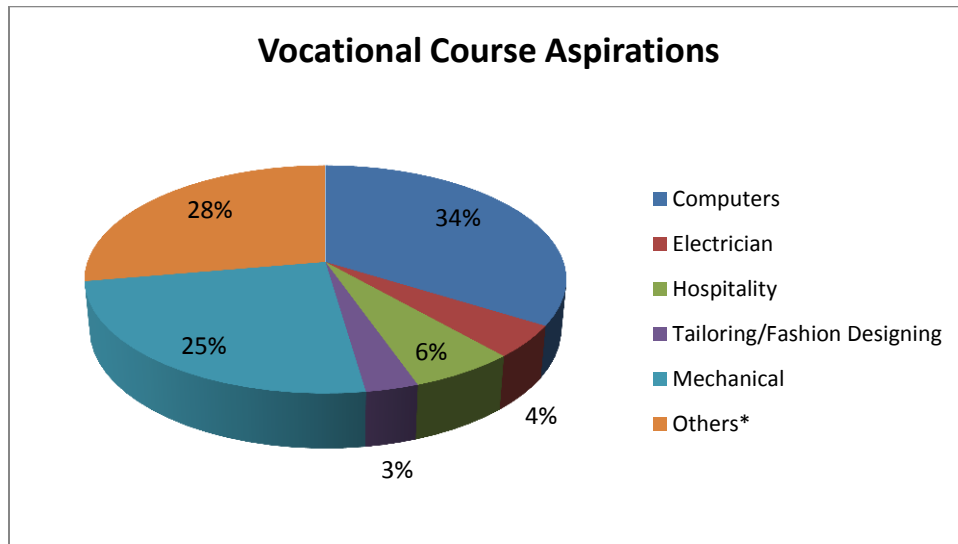
The parents were shown high interest in payment of the courses as compared to their students. Parents are ready to pay around Rs. 1000 for a vocational course.

3.1.3.2.7.2.5 Average Salary Expectation for various Categories



In case of within Goa parents expects high to low salary in the courses from Non-technical course, technical, medical and lastly vocational courses. Here, Non-technical courses include MBA, MCA, Interior Designing and Pharmaceutical. But in case of outside Goa parents expects around Rs. 28000 for their child's initial salary after completion of vocational training.

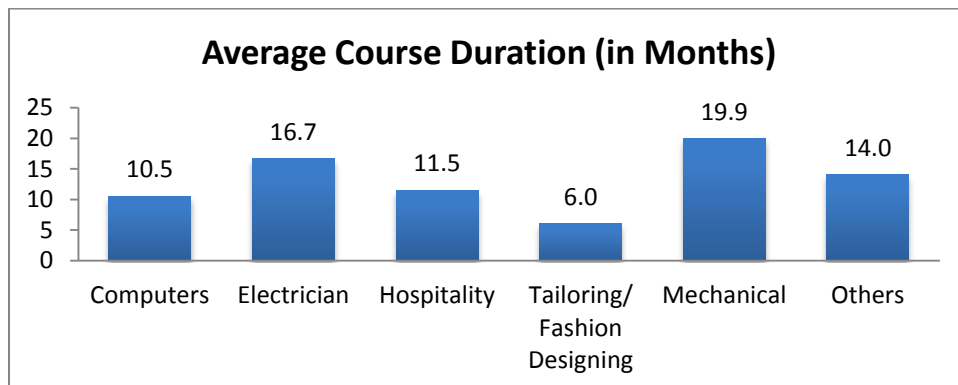
3.1.3.2.7.2.6 Vocational Course Aspirations



**Others include Dance and Art, Medicine, Mobile repairing, etc.*

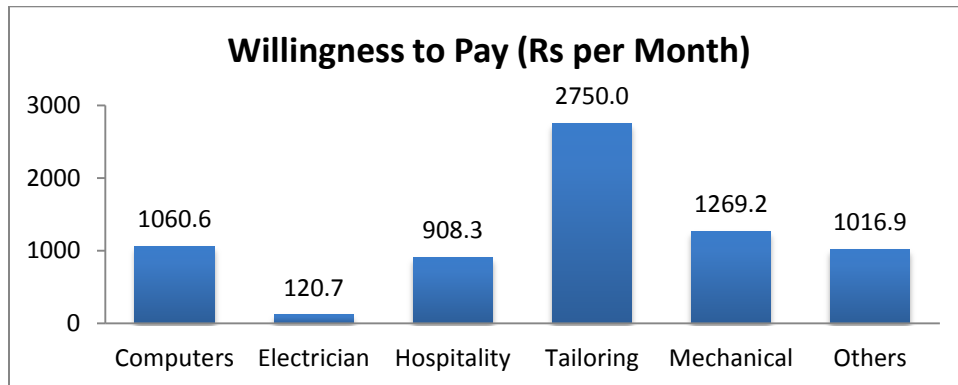
Computer is the highest preferable course from the list of all aspired courses according to the parents. There were also some aspired courses like Mechanical, Hospitality, Electrician, Tailoring etc.

3.1.3.2.7.2.7 Average Duration (Vocational Training)



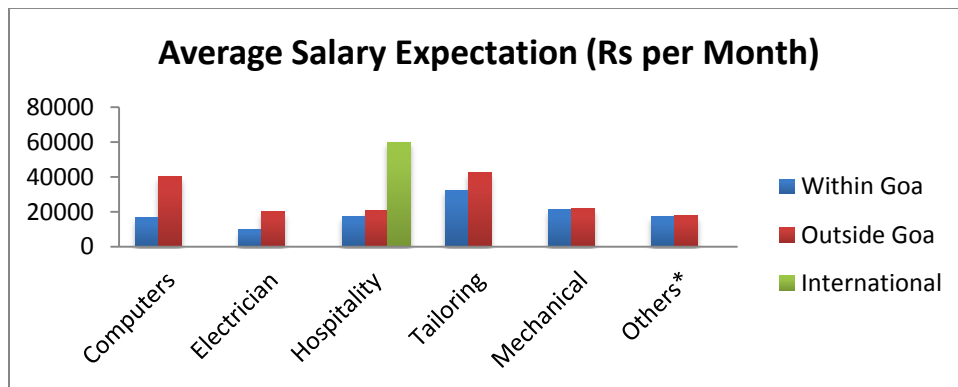
The parents believe that Institute should offer around 20 months for Mechanical, 16 months for Electrician, 12 months for Hospitality, 10 months for Computer course and 6 month for tailoring.

3.1.3.2.7.2.8 Willingness to pay for various Vocational Courses



Strangely, parents seem to be ready to pay higher fees for Tailoring course as compared to other courses. On an average they are able to pay in the range of Rs.100 to Rs.2000 for a course per month.

3.1.3.2.7.2.9 Average Salary Expectation for various Vocational Courses

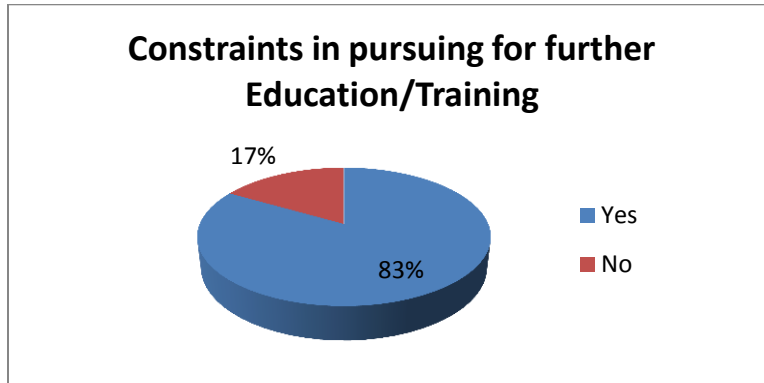


Tailoring is the course for which parents expect highest initial salary for their child within Goa. In case of outside Goa, they expect Computer course which get their child highest remuneration per month. Parents do not have much idea about the salary structure for the courses other than Hospitality internationally.

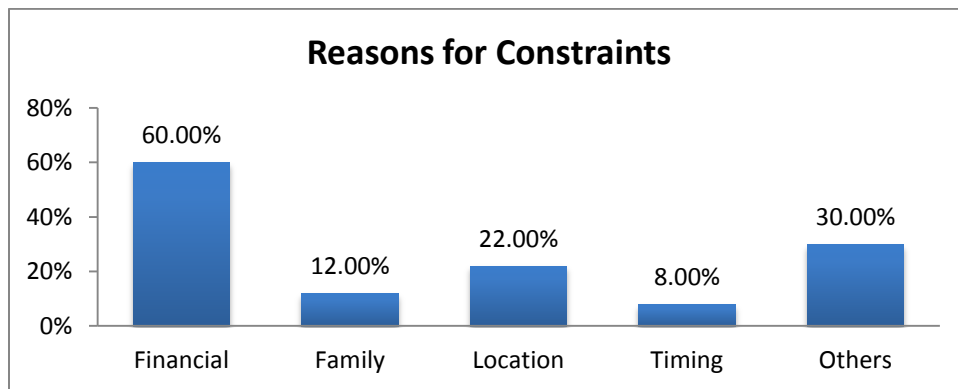
3.1.3.2.7.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.1.3.2.7.3.1 Constraints in pursuing for further Education/Training

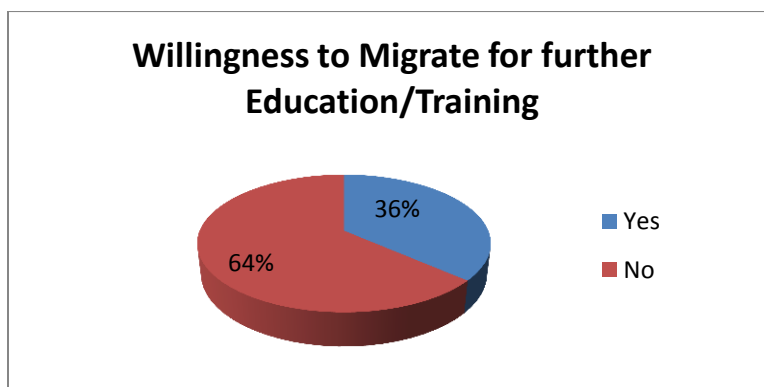


It is important to know the gaps which might coming in the way of student's education career so as NSDC come to know how to bridge the gaps and accordingly resolve the issues and provide quality education to the students of Goa and make them employable. Above graph shows that 83% of parents were facing constraint in providing their child further education.

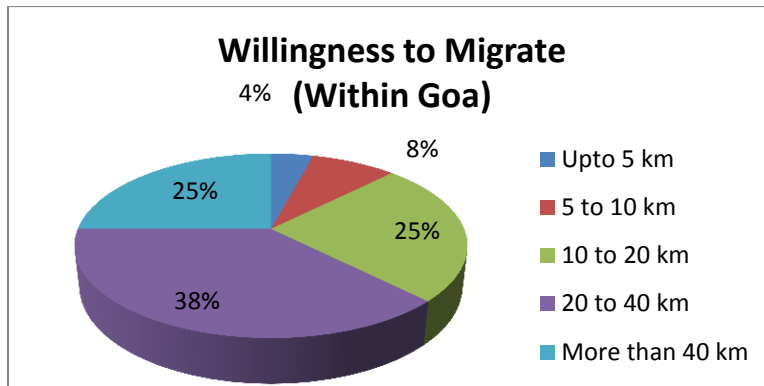


More than half of the parents were responded that due to financial constraint they are unable to provide further education to their child.

3.1.3.2.7.3.2 Willingness to migrate for further Education/Training



Only 36% of the parents were ready to move their child away from them for their further education or training. From them also only 38% parents were there who are ready to migrate their child up to 20 – 40 km which shown in the below graph.

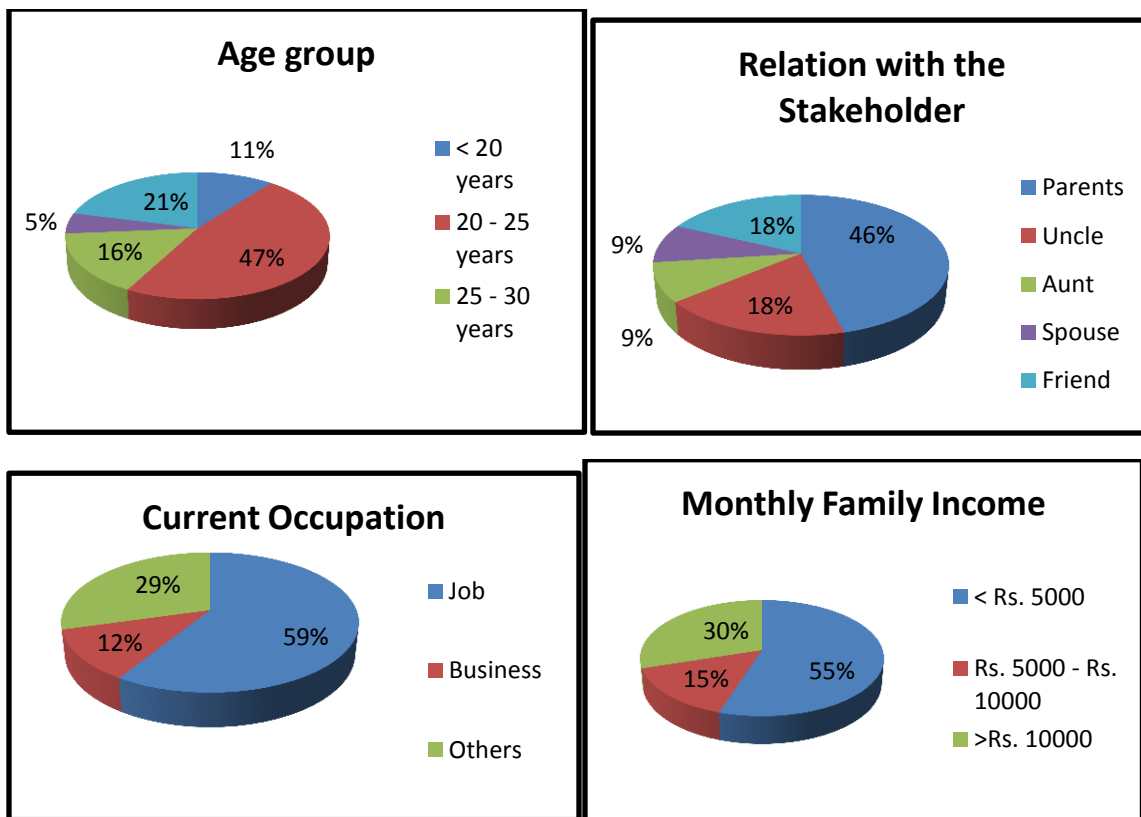


3.1.3.2.8 Influencers

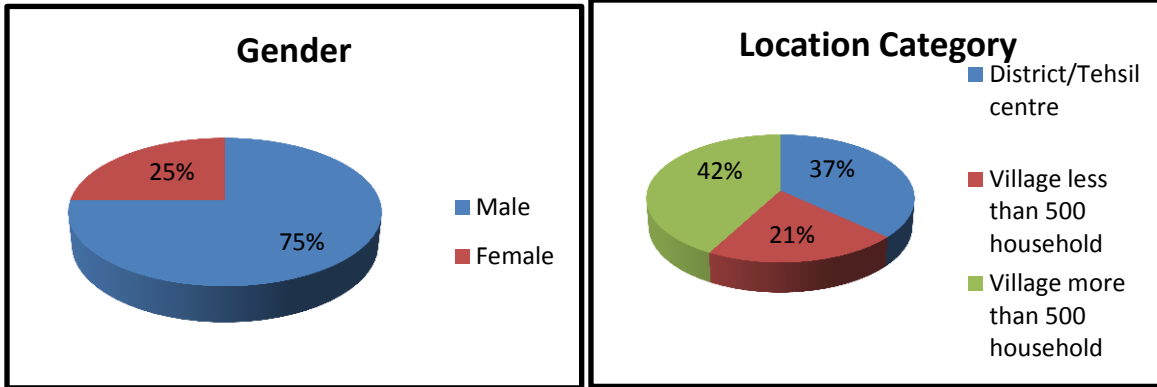
This category includes people who play role of influencer in major decision making in the life of student. The major areas we have covered are profiling of category which include economical background of people. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.1.3.2.8.1 Profiling Data

In this category we have covered those respondents who influencing in the decision of students' career decisions. Majority of the Influencers are in the 20-30 years age group, who are either the parents or relatives of the young stakeholders. About 20% are above 35 years of age.



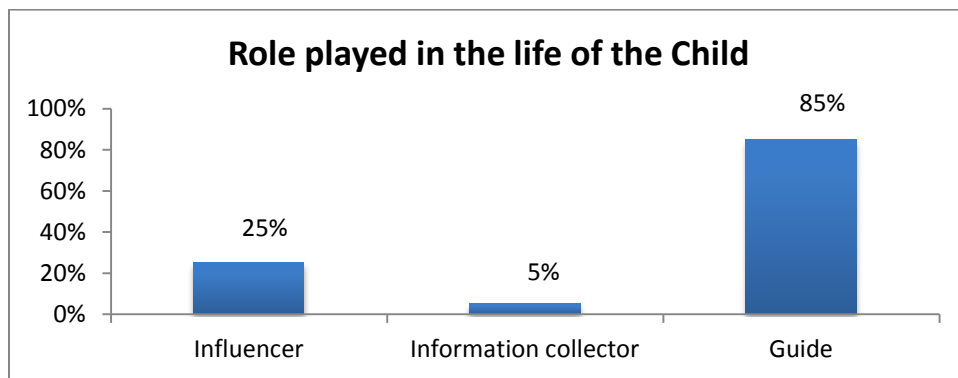
Others: Housewives and Retired*



3.1.3.2.8.1.1 Decision Making

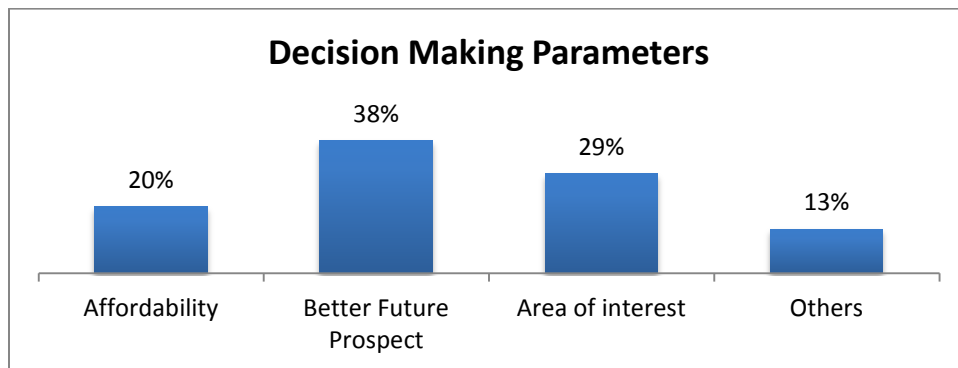
3.1.3.2.8.1.1.1 Role played in the life of the Child

Majority of the Influencers play the role of a guide in the life of their children. Only about 25% play the role of an Influencer and rests act as information collector.



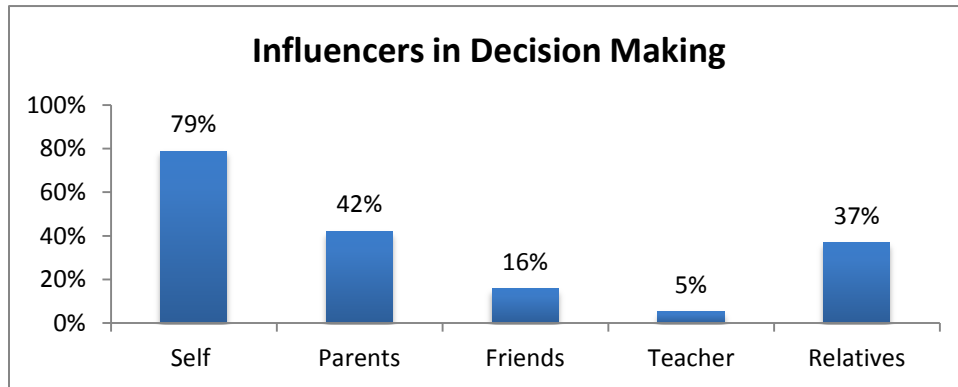
3.1.3.2.8.1.1.2 Decision making parameters in Child’s Career

The most important decision making parameter while planning for their child’s career is Better Future Prospects for their children. The child’s area of interest also plays a major role in deciding the career path for the children.



3.1.3.2.8.1.1.3 Influencers in Decision Making

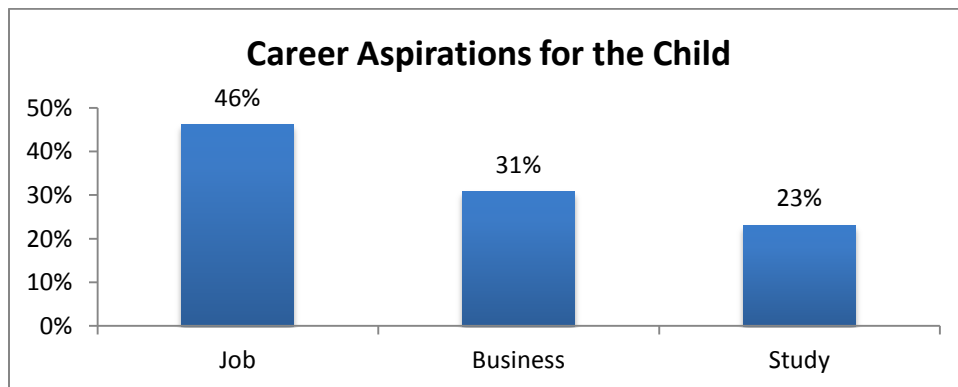
The major influencers in the stakeholders' life are the respondents themselves. More than 40% of the respondents think that the parents of the stakeholders are the influencers in making decision of their children.



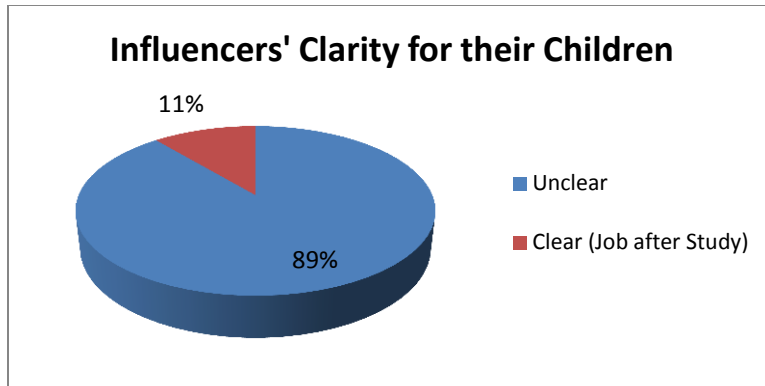
3.1.3.2.8.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.

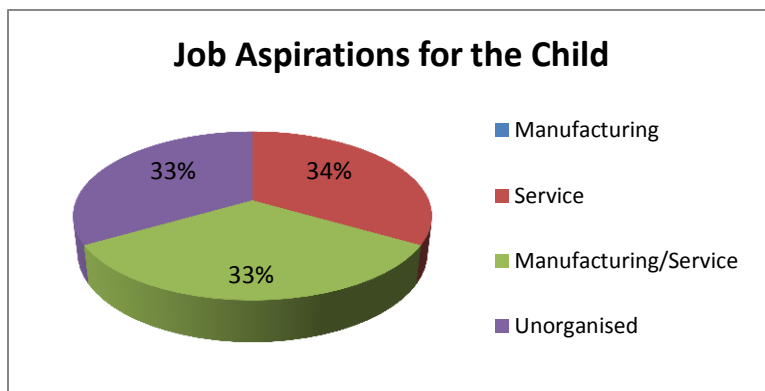
Half of the respondents have planned further studies for their child's career in the future. About 40% and 20% have planned for some Job and Business for their children, respectively.



About 10% of the influencers are very clear for their children that they are going to do a job after their studies.

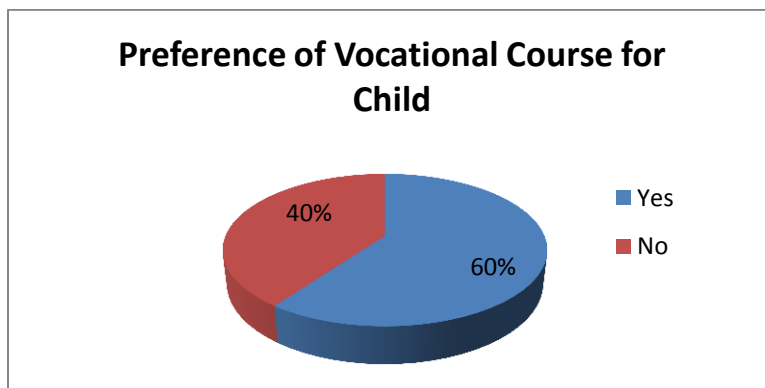


Influencers have below Job aspirations for the children's; here responses are equally divided in all the three categories.



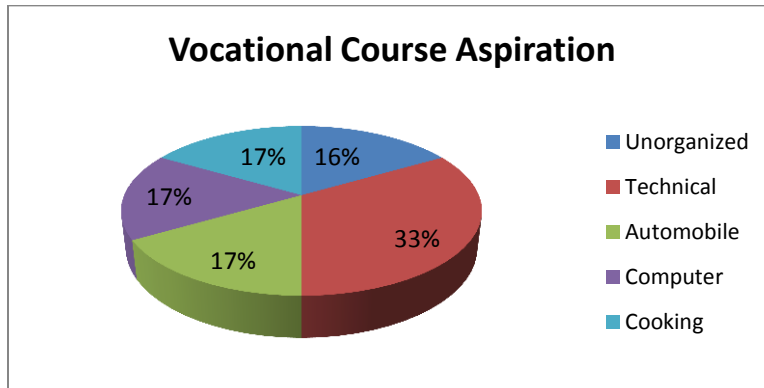
3.1.3.2.8.2.1 Interested in Skill Up-gradation

About more than half of the respondents prefer to go for a Vocational course for their child.

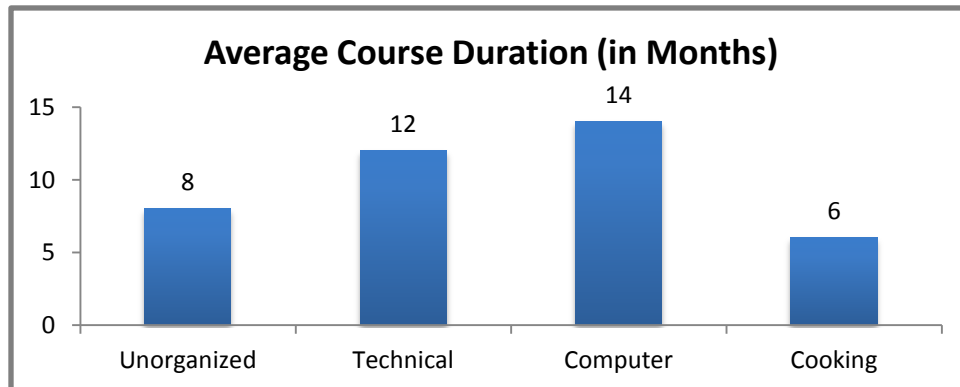


3.1.3.2.8.2.2 Vocational Course Aspirations

Majority of the influencer want the children to choose the course of technical field. There are also preferences for the other courses like Automobile, Computer and Cooking course. Apart from that 16% of the influencer's want their child to make their career in the field of unorganized sector.

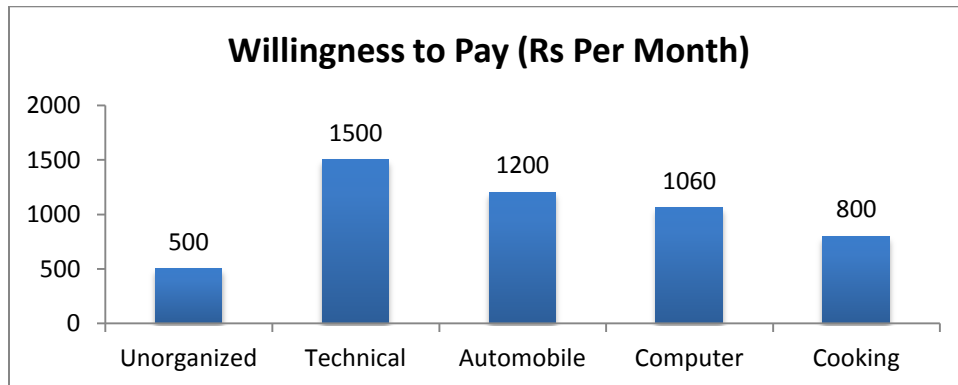


3.1.3.2.8.2.3 Average Duration (Vocational Training)

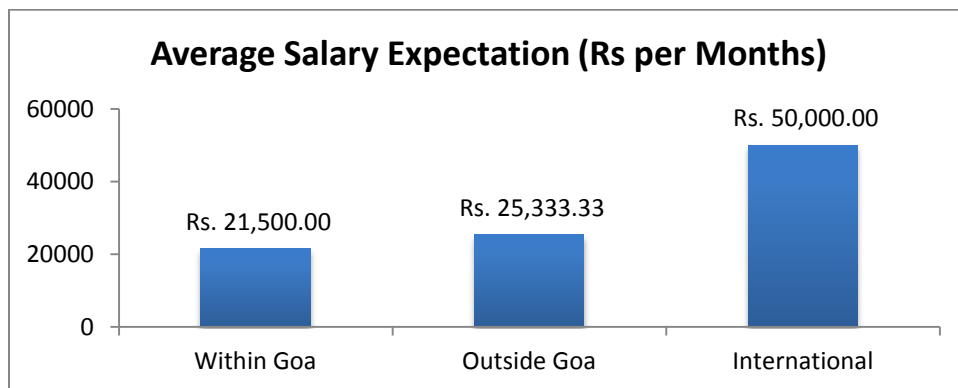


The students willing to do the course of computer for around 14 months while in case of cooking they want to do 6 month course.

3.1.3.2.8.2.4 Willingness to pay for various Vocational Courses



3.1.3.2.8.2.5 Average Salary Expectation



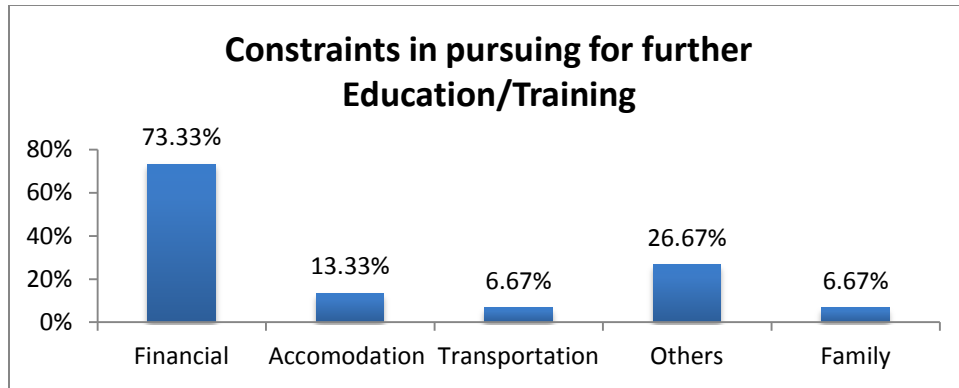
The influencer's expect a minimum salary of around Rs. 22000 within Goa and around Rs. 25000 outside Goa after completion of the vocational course of their child.

3.1.3.2.8.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

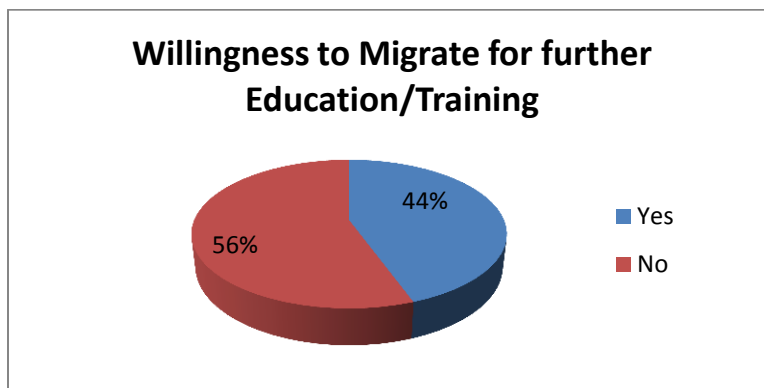
3.1.3.2.8.3.1 Constraints in pursuing for further Education/Training

All the respondents mentionthat the children they influenced faced certain constraints in pursuing for further education, of which more than 70% faced financial constraints.



3.1.3.2.8.3.2 Willingness to migrate for further Education/Training

In case of migration not many of the influencers want the children to move for taking further education or training.



3.1.3.3 Summary of Aspirations & Constraints

Table 50: Summary of Aspirations and Constraints

		Categories				
		Early School Drop-outs	10th/12th Drop-outs	Current 10th/12th Students	10th/12th Pass-outs	
Aspirations	Aspiration for Job	65%	67%	35%	37%	
	Aspiration to Study	25%	30%	59%	63%	
	Job - Specific Aspiration	Manufacturing	NS	NS	NS	7%
		Services	NS	NS	NS	83%
		Unorganized	NS	NS	NS	10%
	Study - Specific Aspiration	Vocational	71%	73%	65%	86%
		Technical	-	-	11%	-
		Non-Technical	-	-	24%	14%
	Most Aspired Course	Mechanic	Computer, Electrician	Computer, Mechanic	Computer, Hotel Management	
	Willingness to Pay - Most Aspired Course (Per Month)	Rs. 1,177	Rs. 995	Rs. 1050	Rs. 922	
Average Salary Expectation	Within Goa	Rs. 10,000	Rs. 12,000	Rs. 10k-15k	Rs. 15k-20k	
	Outside Goa	-	Rs. 21,500	-	-	
	International	-	Rs. 40,000	-	-	
Constraints	Financial Constraints Faced?	58%	74%	72%	63%	
	Willing to Migrate for Education?	53%	46%	60%	64%	
	Willing to Migrate Outside Goa for Education?	10%	25%	16%	21%	
General Remarks	47% drop-out due to financial reason	60% drop-out due to financial reason	-	-		

Source: Dexter Analysis

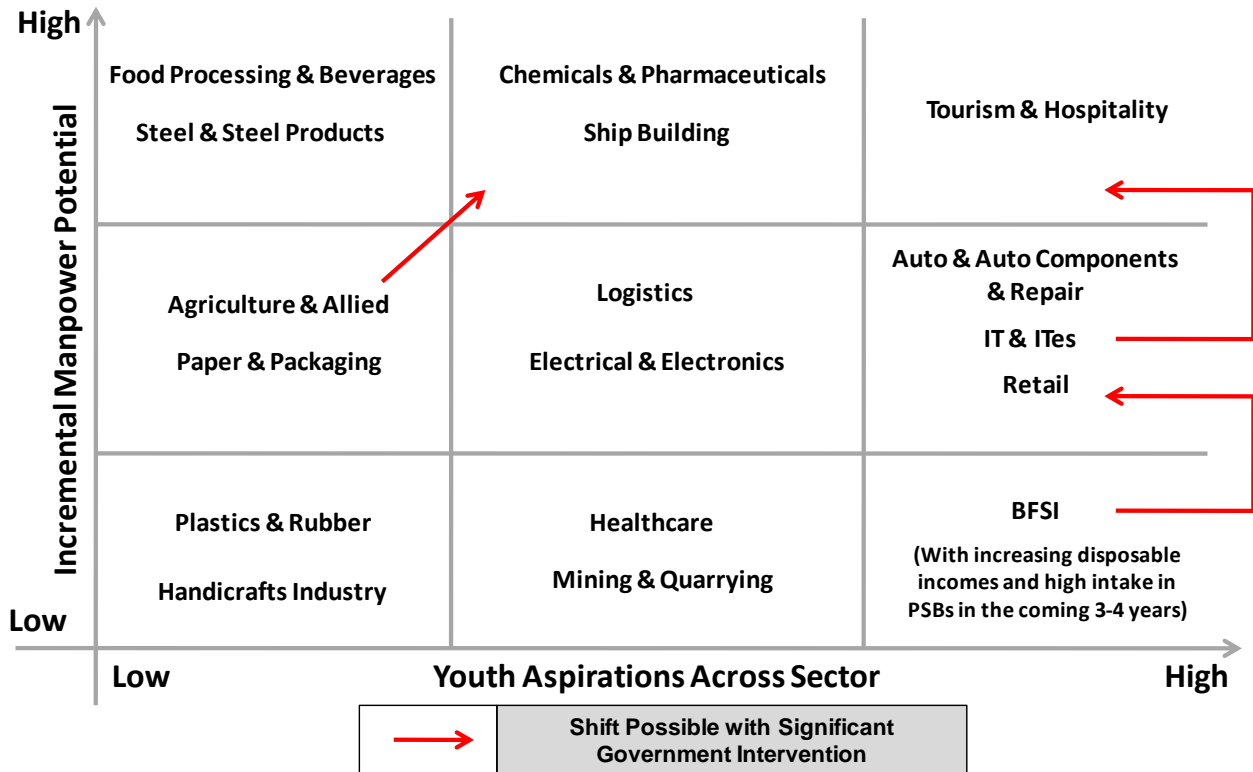
Table 51: Summary of Aspirations and Constraints

		Categories				
		General Graduates	Technical Graduates	ITI / VTI Pass-outs	Workers Looking for Skill Up-gradation	
Aspirations	Aspiration for Job		66%	60%	87%	-
	Aspiration to Study		26%	36%	10%	65%
	Job - Specific Aspiration	Manufacturing	20%	34%	15%	-
		Services	71%	66%	32%	-
		Unorganized	9%	-	53%	-
	Study - Specific Aspiration	Vocational	55%	None	-	-
		Technical	6%	Mostly	-	44%
		Non-Technical	39%	None	-	56%
	Most Aspired Course		IT, Hotel Mgmt	-	Electrician, Auto Repair, Hotel Management	Auto Repairing, Soft Skills
	Willingness to Pay - Most Aspired Course (Per Month)		Rs. 1900	-	-	-
	Average Salary Expectation	Within Goa	Rs. 15,000	Rs. 18,000	Rs. 12,500	-
Outside Goa		Rs. 30,000	Rs. 25,000	Rs. 18,500	-	
International		-	Rs. 49,000	Rs. 30,625	-	
Constraints	Financial Constraints Faced?		67%	59%	66%	47%
	Willing to Migrate for Education?		58%	68%	-	42%
	Willing to Migrate Outside Goa for Education?		40%	38%	-	-
General Remarks		-	-	-	Currently - 61% - SS, 39% - MFR	

Source: Dexter Analysis

After analyzing the youth aspirations as well as the potential to employ within an industry, Agriculture & Allied sector can be a major employer given that the aspirational value of the sector is elevated from low to a medium level driven by an active awareness level by the government sources. Also, it will depend significantly on the Government’s promotion of IT & ITes sectors to take it on a completely different higher growth plank. We found that Tourism and Hospitality sector is at the peak in Goa State which is due to high incremental manpower potential and high youth aspiration.

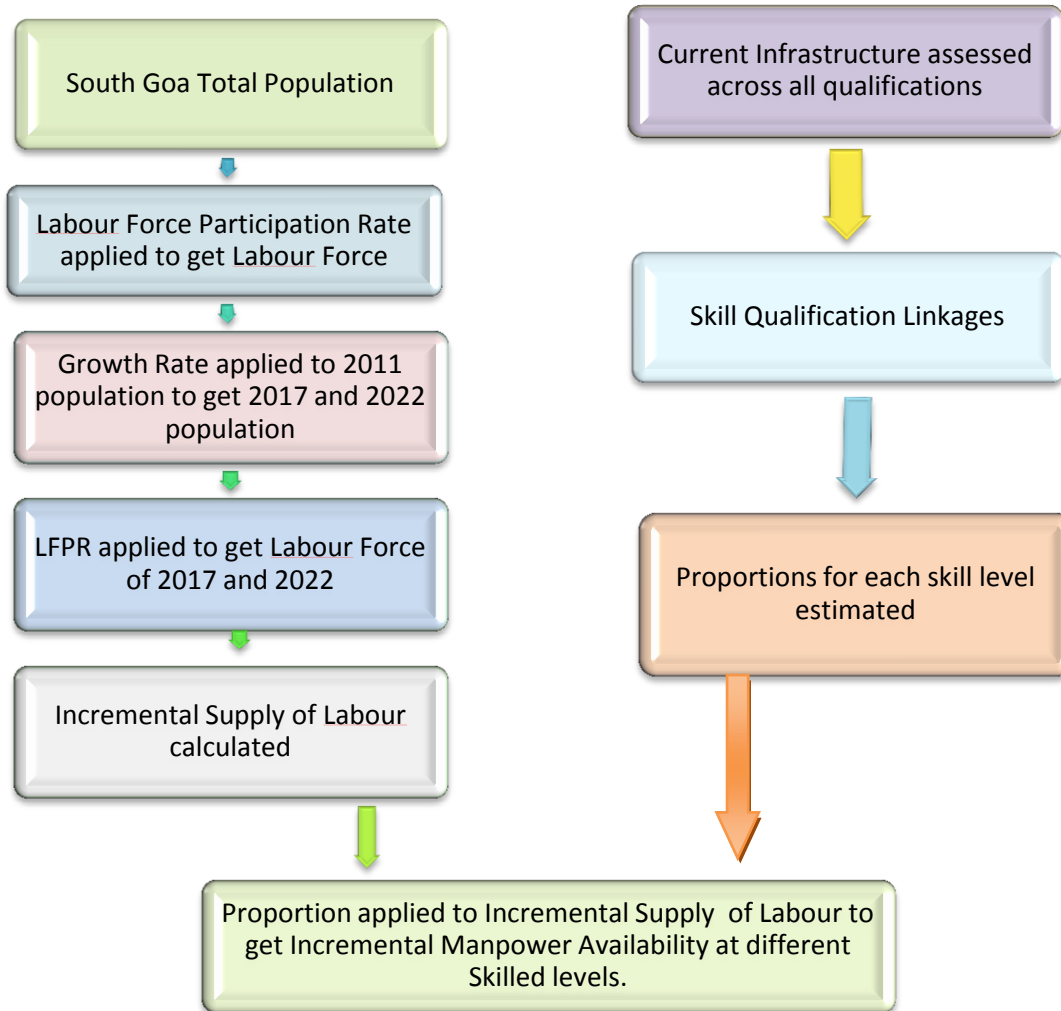
Figure 24: Youth Aspiration Mapping



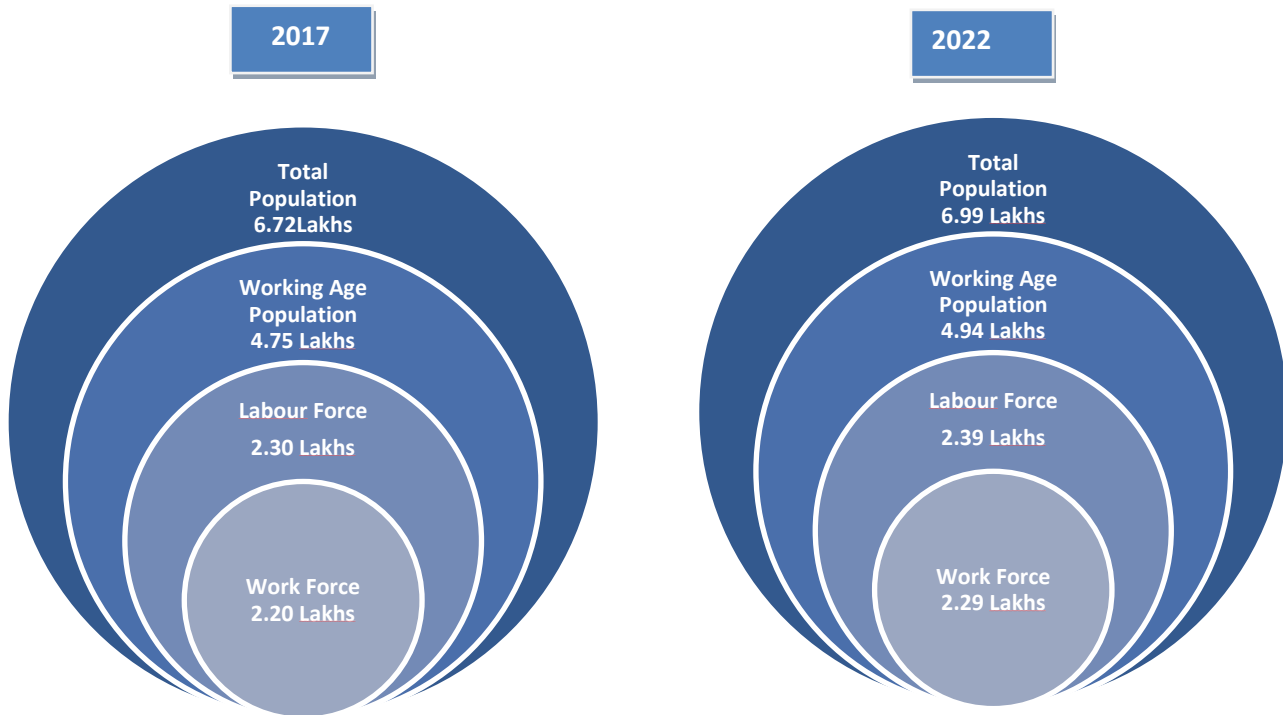
Source: Dexter Analysis

3.1.3.4 Incremental Skill Human Resource Availability Estimation

Figure 25: Incremental Human Resource Skill Availability Estimation



Source: Dexter Analysis

Figure 26: Incremental Human Resource Availability-South Goa for Year 2017 and 2022

Source: Dexter Analysis, NSS 66th Round, Census 2011

1.) From Census 2011, the total population of South Goa district is reported around 640537 in 2011. The decadal growth rate of population in the last decade i.e. 2001-2011 was 8.2%. So, assuming the same growth rate in the coming decade as well, we arrive as 2012 population.

2.) From NSSO 66th round, the Labour Force Participation ratio for Goa is 485 people per 1000 persons. This ratio when applied to the total population of South Goa gives us the current labour force available.

Table 52: Population and Labor Force of South Goa

	2012
Population	645789
Proportion of Population in the 15-59 years age group	456573
Labor Force	221438

Source: Census 2011, South Goa

3.) The growth rate for the 2001-2011 decade for Goa is reported around 8.2% in census 2011. Applying this growth rate to current population gives us the population of 2017 and 2022.

Table 53: Estimation of Population for the Year 2017 and 2022

Population	2012	2017	2022
	645789	672267	699830

Source: Dexter Analysis

4.) Labour Force Participation Ratios & Work Force participation Ratios are applied to 15-59 years working population of 2017 and 2022 to get Labour Force of South Goa in 2017 and 2022.

Table 54: Estimation of Population & Labor Force for the Year 2017 and 2022

	2012	2017	2022
Population	645789	672267	699830
Proportion of 15-59 in total population in persons (per 1000 persons) as per NSS 66th Round	707		
Working Age Population (15-59 years) in South Goa	456573	475293	494780
LFPR (in persons per 1000 persons in 15-59 years age group as per NSS 66th round)	485		
Labour Force Participation Ratio	221438	230517	239968
WPR (in persons per 1000 persons in 15-59 years age group as per NSS 66th round)	463		
Work Force Participation Ratio	211393	220060	229083
Incremental Labour Supply		9079	9451

Source: Dexter Analysis, NSS 66th Round

5.) Incremental supply of Labor is calculated for 2012-17 and 2012-22.

Table 55: Incremental Human Resource Availability of Labor

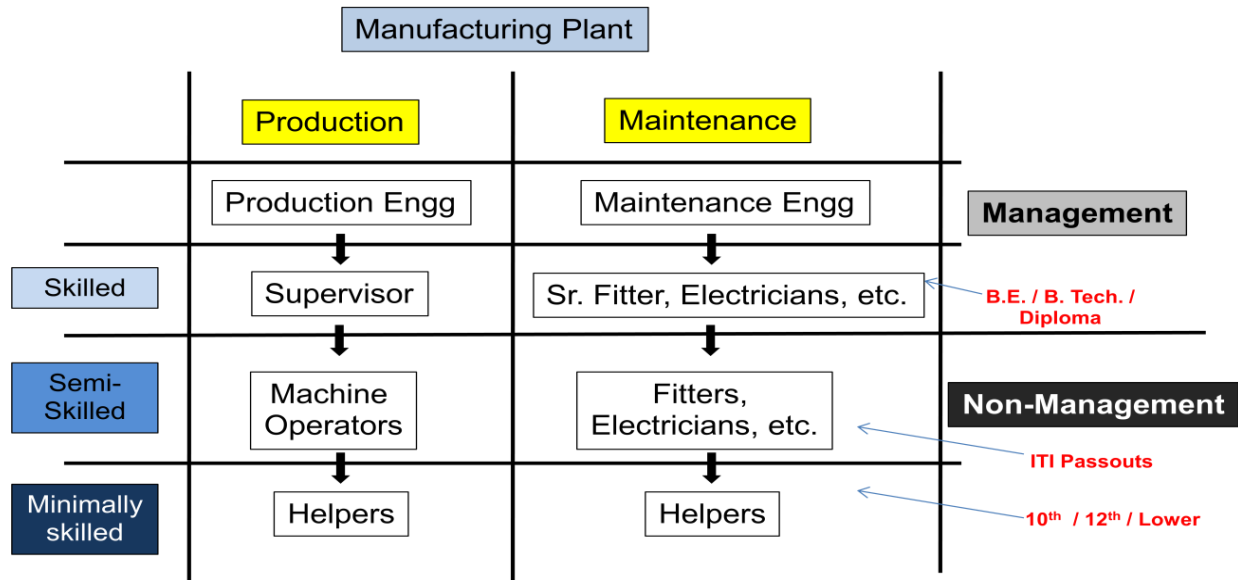
Incremental Human Resource Availability*	2012-17	2012-22
	9079	9451

*Incremental Human Resource Availability= Labour Force of 2017/2022-Labour Force of 2012.

Source: Dexter Analysis

6.) Industry wise skills are classified into 4 broad categories viz. Highly Skilled, Skilled, Semi Skilled and Minimally skilled depending on the nature and duration of the training and education received and the current training/higher education capacities are categorized to match the four levels. For Manufacturing, the qualification-skill linkage is explained below. For example, generally B.E/B.Tech graduates are employed at the highly Skilled Levels of Production Engineers, Shift in Charge, or Foreman etc.

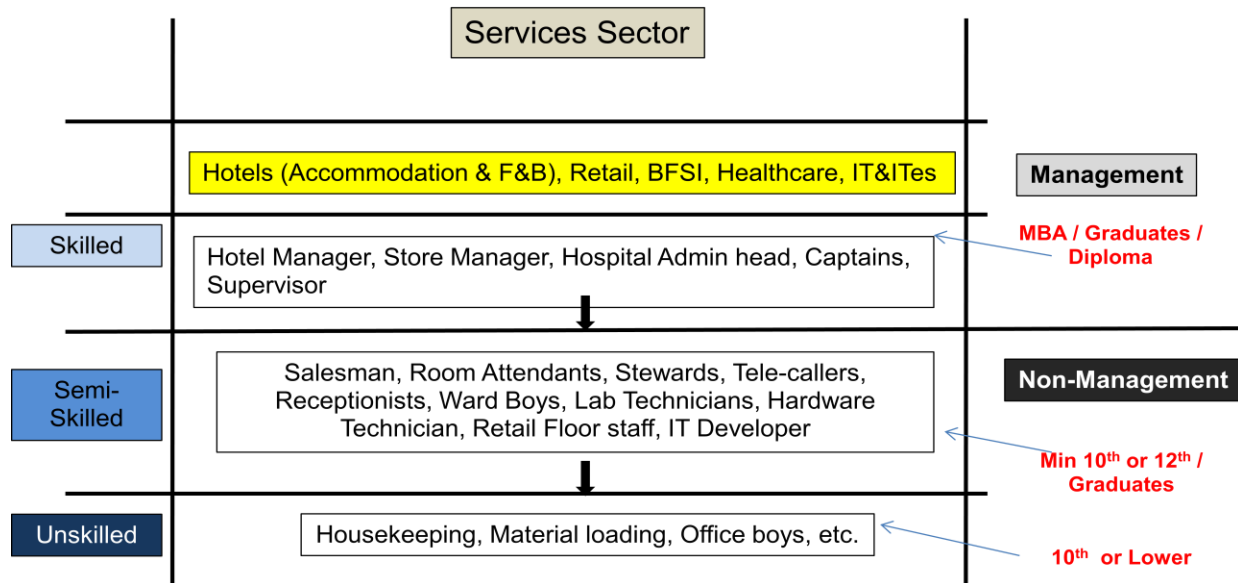
Figure 27: Department wise skill classification based on qualification of manufacturing sector



Source: Dexter Analysis

For Services, the qualification-skill linkage illustration is given below. For example persons employed in housekeeping like bellboys are 10/12th Dropouts or pass-outs.

Figure 28: Department wise skill classification based on qualification of service sector



Source: Dexter Analysis

The skill levels have been defined according to the following

Table 56: Skills – Qualifications Linkage

Skill Level	Educational Qualification
Skilled	Diploma Pass-outs, General Graduates, Engineering Degree, General Post Graduates
Semi Skilled	ITI Pass-outs, 10th and 12th Pass-outs
Minimally Skilled	Early School Dropouts, 10th/12th Dropouts

Source: Dexter Analysis

7.) Using the above skills-qualification linkages, we use existing infrastructure (10th/12th Dropouts, Pass-outs, ITI Pass-outs, General Graduates, Post Graduates) data to get proportions which are then applied to Incremental Supply to get Incremental Labour Supply at different Skill Levels.

Table 57: Skill wise incremental Human Resource Availability for 2012-2017

Skill Level	Proportions (Proportions derived from projected capacity additions across skill levels)	Incremental Supply
		(2012-17)
Skilled	0.28	2553
Semiskilled	0.51	4577
Minimally Skilled	0.21	1949
Total		9079

Source: Dexter Analysis

The same method was applied to get the Incremental Labour Supply at different skill levels for 2017-2022.

Table 58: Skill wise incremental Human Resource Availability for 2017-2022

Skill Level	Proportions (Proportions derived from projected capacity additions across skill levels)	Incremental Supply
		(2017-22)
Skilled	0.28	2653
Semiskilled	0.51	4765
Minimally Skilled	0.21	2029
Total		9451

Source: Dexter Analysis

3.1.4 Current Education & Training Setup

3.1.4.1 Primary & Secondary School Infrastructure

Out of the 1252 primary schools in Goa, 512 are located in South Goa. There are 186 middle level schools, 156 schools at secondary level and 33 schools at higher secondary level in South Goa district. The total enrollment in the district is 118236 students.

Of the total schools in Goa, maximum are concentrated in Salcete taluka alone. This was followed by Bardez and Ponda taluka. The lowest percentage of schools is in Canacona taluka. District wise distribution of schools and student enrollment is as follows:

Table 59: School Education Infrastructure and Enrollment, as on 2011-12

	Primary Schools		Middle Schools		Secondary Schools		Higher secondary Schools	
	Enrolment	Number	Enrolment	Number	Enrolment	Number	Enrolment	Number
Sanguem	3638	123	2845	23	2505	21	460	3
Canacona	2862	78	2232	22	2102	18	658	3
Quepem	5277	83	4476	20	3729	18	1511	4
Salcete	23489	148	16787	76	13165	65	6657	17
Mormugao	11362	61	7983	41	6653	37	2639	8
South Goa	46628	493	34323	182	28154	159	13420	35

Source: Educational Statistics at Glance 2011-12; Government of Goa

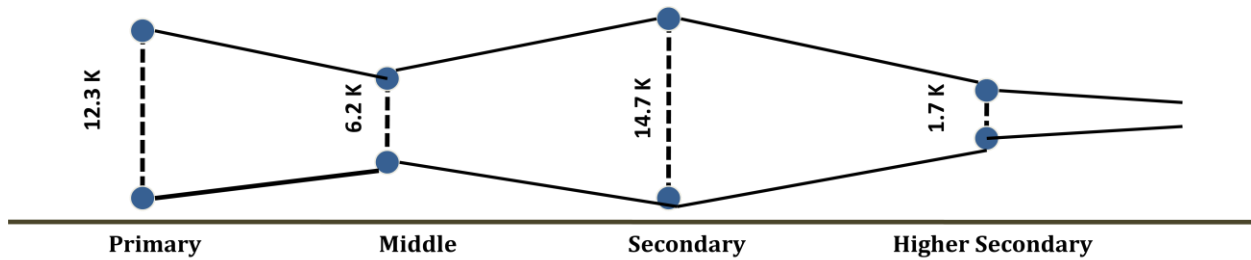
Table 60: Educational Institute and Enrolment of Student at South Goa

Institution	Number	Enrolment
Primary Schools	493	46,628
Middle Schools	182	34,323
Secondary Schools	159	28,154
Higher Secondary Schools	35	13,420
Arts, Science & Commerce Colleges	33	7,497
Polytechnics / Other Diploma Level	5	1,715

Institution	Number	Enrolment
Courses		
Engineering & other Professional Courses	6	760
ITIs, ITCs & Other Registered Training Institutes	25	1327

Source: Educational Statistics at Glance 2011-12; Government of Goa

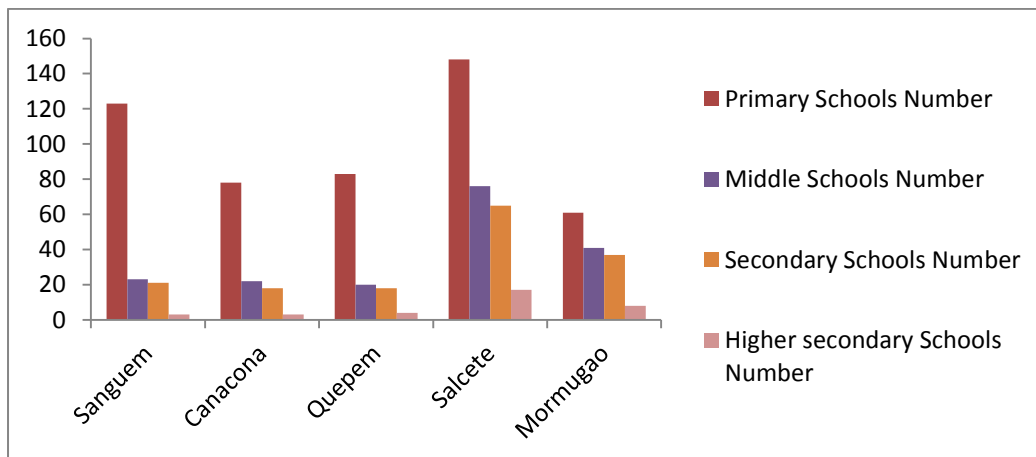
Figure 29: Drop-outs at Various Stages at South Goa



Source: Goa Education Statistics – 2011-12, Directorate of Education, Goa Government

By analyzing the above figure one should come to know that, the drop-out rate is higher at Primary and Secondary level at South Goa district. At these stages the major constraint could be financial constraint for studying further education.

Figure 30: Chart of number of schools in South Goa District



Source: Dexter Analysis

3.1.4.2 Higher & Technical Education Infrastructure

South Goa has colleges providing opportunities in science, commerce and law. There are 33 general colleges with 7947 enrolled students and 2 engineering colleges with intake capacity of 510 in South Goa. In addition there is an institute of law, school of hydrographic and an institute offering post graduate diploma in business administration. The details are enlisted in the table below:

Table 61: Number of students and Infrastructure of Higher and Technical Education

Colleges	Number	Enrollment
General	33	7947
School of Hydrographic studies	1	15
PGDM	1	45
Engineering	2	510
Law	1	160
Nursing	1	30

Source: Educational Statistics at Glance 2011-12; Government of Goa

3.1.4.3 Government & Private ITIs

For vocational training, South Goa district has a total of 24 Industrial Training Institutes (ITIs) / Industrial Training Centers (ITCs) as on 2011-12. Of these, four are Government ITI's and twenty are private ITIs. All the 24 ITIs together have a seating capacity of 2748 (1388 government +1360 private).

Table 62: List of number of ITI/VTI at South Goa district

Total Number of ITIs / Private Training Institutes (under HRDF)	25
Number of Government it is	4
Number of Private ITIs	3
Number of Private Training Institutes under HRDF	18
Total Seating capacity (Per Annum)	3400

Source: State Directorate of Craftmanship Training

In order to assess the current ITI infrastructure in the district, in department, interviews of the instructors have been conducted to understand their opinions and receive feedback on the current status of the ITIs. This has been done across all the government ITIs of the district.

ITI Margao:

Interview with an instructor revealed that most of the students that joined the ITI were from the urban middle and lower class, who have no specific constraints for education. As per him, the students join the institute because of its reputation, infrastructure proximity and employment assurance since the ITI Margao boasts of 100 percent placement in all trades. Further, the ITI also has good infrastructure and good instructors. However, the instructor strongly feels that there is a necessity to update the syllabus. He mentioned that stewards, electricians, fitters, welders and plumbers would be the most desired skills sets in future and though practical training is given in these trades, due to old syllabus, the type of training is not at par with the industry requirements.

Typically the students get placed with a salary up to Rs 6000 per month.

ITI Canacona:

Interview with the group instructor of this ITI revealed that the students joining the ITI are mostly from lower class families who are 10th or 12th dropouts facing financial problems. Most of these students prefer to do jobs though 30% of them get self employed.

As far as the placements are concerned, the students get placed with salary upto Rs. 5000 per month. 60 percent of the total fitter and mechanics get placed, 30 percent of the total electricians; 15 percent of COPA and 2 percent of cutting and sewing students get placed through campus recruitment. The instructor is of the opinion that the skills required in future would be mechanic diesel and electrical.

Although the institute considers practical exposure, quality education and good instructors as its strength, a major concern expressed by the instructor is the outdated syllabus. He strongly feels that there is a need to revamp the curriculum to make it in line with the current industry requirement. Further he also stresses that more practical training should be imparted to the students as the syllabus is focused more on theoretical concepts.

ITI Vasco:

Interview with the Principal, group instructor and mechanical instructor revealed that students enrolled in the different trades belong to lower and middle class. 90 percent of these students aspire to do job and 10 percent aspire to get self employed. Moreover, the opinion of the interviewed personnel has been that the students lack the awareness of courses being offered and the importance of education. This becomes a major challenge to the institute since they have to guide the potential students to take up technical education by conducting seminars and career counseling programs especially in rural areas.

In terms of placements, the interviewed people commented that the students get placed with an average salary of Rs 5000 per month and the highest salary can reach up to Rs 15000 per month. Further, they earlier had 100% placement record which reduced to 80% which they feel is because of the closing down of mining industry.

The ITI considers industry exposure and the quality of education as its strength but a concern expressed by the interviewed personnel is that of the skill gap mismatch between the demand and supply. As per their comments, students have no interest in pursuing vocational courses and thus ITI needs to develop 100 percent placement scenario to attract and retain the students.

ITI Cacora:

Interview with the Vice- principal and the placement coordinator the ITI revealed that most of the students in the ITI come from rural background and are belonging to lower class families. The religion of these students plays an important role in shaping their aspirations. As per the interviewed person's views, catholic students aspire to go abroad and most of the girls face family constraints to work or pursue further studies.

In terms of placement, the institute students get placed with salary between Rs 3000 to Rs. 5000. One thing to be noted here is that the institute does not have any partnership with the industry for its placements. Further, as per the interviewees comments, the placements have affected because of the closure of mining industry in the state.

The most desired skill sets that the industry would want in the future is electrician, COPA and cutting and sewing. However, the preference of students is to pursue skills like electrician, fitter and welder as mentioned by the interviewee. Further, it has also been stated that the syllabus needs to be revised as per the industry requirements.

3.1.4.4 Service Sector VTIs

Goan economy is primarily driven by service sector industries. It is thus important to assess the capacity and skill gaps prevailing in the industry. The government owned VTIs along with the courses offered and their capacities is tabulated below. These VTIs along with some private VTIs were visited to conduct in-department interviews with the faculties and principals to get their opinion on the current state of placements and student aspirations.

Detailed interviews revealed that most of the students joining service sector VTIs are the ones from middle class who have dropped out of their schools. The interviewees are of the view that most of these students aspire to go out of India and aim for the jobs just to get the experience certificates. The courses that are preferred by the students are office management, accountancy, Computer hardware and networking, Tally Programming, COPA, Stewards and nursing.

In terms of placements, courses offering jobs in airlines and hotel industries boast of 100% placements offering a package as high as Rs. 20000 per month depending on the skill of the candidate. Even in case of hardworking and networking courses the average salary is around Rs 6000 per month and can go up to Rs. 15000 a month.

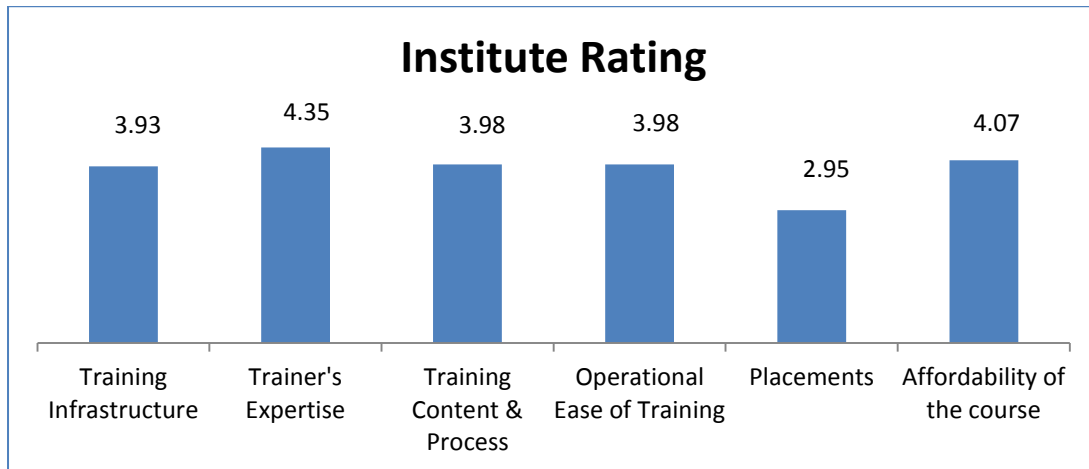
Through the interviews it has also been observed that although the quality of education being provided is good, there are few concerns which were reflected across all the opinions. Lack of awareness about the courses offered leading to job is prime concern. Majority of the students are not aware of the importance of these courses and thus the interviewees feel that students should be made aware about such courses from their school time. Further, the interviewees also feel that there is a major communication gap between the supply side and demand side. They feel the both the sides should be interlinked through proper communication channels to facilitate relevant learning and placements.

Further, while doing primary data collection, the students were asked to rate their institute infrastructure on six parameters: training infrastructure, trainer's expertise, training content and process, operational ease of training, placements and affordability of course. The students were further divided as alumni who are working currently, students who are currently studying at ITI/VTI and alumni who are still looking for job. The findings are as follows:

Working Alumni:

Institute rating has been done based on 5-point scale where 5: Very Good, 4: Good, 3: Neutral, 2: Bad and 1: Very Bad.

Figure 31 Institute rating by Alumni based on 6 factors



Source: Dexter Analysis

The graph depicts that the alumni feel the ITIs have good trainers who are well versed with the subject knowledge. Moreover, they also feel that course is quite cheap and affordable. What is worth noting is that the placement of the students is something which alumni feel should be improved.

Table 63: Trade wise Capacity in Government ITI/VTI

State Directorate of Craftsmanship Training					
	Courses	Trade wise Capacity			
		ITI Margao	ITI Canacona	ITI Vasco	ITI Cacora
Manufacturing Sector related Trades	Electrician	16	16	16	16
	Plumber	32	16	16	32
	Cutting & Sewing	32	16		16
	Fitter	16	16	16	16
	Electronic Mechanic	16	16	16	
	Mechanic(Refrigeration.& Air Conditioning)	16		16	16
	Mechanic(Diesel)		16		
	Welder		16	12	24
	Carpenter		16		
	Driver cum Mechanic		16		
	Wireman		16	16	16
	Automobile(BBBT)				96
Service Sector related trades	IT (BBBT)	96			
	Data Entry Operator	16			
	COPA	20	20	20	20
	Desktop Publishing Operator	16		16	16
	Hair & Skin Care	32			16
	Craftsman Food Production	16			
	Steward	16			
	Hospitality Management(BBBT)		96		

Source: Dexter Analysis

3.1.5 Skill Gap Analysis

3.1.5.1 Qualitative Skill Gap Analysis

Herein, we have taken 4 parameters on the basis of which we will look at the courses to be started in addition to the volumes analysis which we did in section 7.1.

Two of the parameters which we have here include demand side perspective. First describes about the immediate demand of that particular skill in the catchment region as a whole. Second indicates the long term demand for that particular skill in that region considering the future outlook of the industry and the degree of automation associated with that industry. So, primarily, all the high specificity and high volumes courses have very high immediate demand and expected high future demand as well.

Table 64: Qualitative Skill Gap Analysis of Manufacturing Sector

	Skill Wise Trade	Skill Demand	Relative Youth Aspiration	Available Trained Supply
Skilled	Electrical & Electronics– Degree / Diploma	H	VH	H
	Mechanical – Degree / Diploma	VH	H	H
Semi-Skilled	Fitter	VH	H	VH
	Electrician	VH	VH	H
	Mechanic Electronics / Instrumentation	VH	VH	H
	Welder	M	H	M
	Grinder	L	L	VL
	Machine Operator / Jr. Machine Operator	VH	L	M
	CNC Operator / Programmer	M	H	VL
	Painter	L	VL	VL
	Machinist	M	H	L
	Turner	M	M	L
	Mechanic Motor Vehicle	M	H	L
	Mechanic Diesel Engine / Generator	VL	L	L
	Draughtsman Civil	L	L	L
	Plastic Process Operator	L	VL	VL
	Storekeeper	L	L	VL
Unskilled	Helpers	H	VL	VL

Source: Dexter Analysis

Table 65: Qualitative Skill Gap Analysis of Service Sector

Service Sector	Trades	Skill	Relative Youth Aspiration	Available Trained Supply
		Demand		
Hospitality & Tourism	Room Attendants	VH	H	H
	Captains	H	VH	L
	Receptionists	M	H	H
	Bartenders	H	VH	L
	Spa Therapist	M	M	VL
	Sous Chef / Chef	H	VH	M
	Comee	H	M	H
	Stewards*	VH	H	VH
	Technicians	M	M	H
	Tourist Guide	M	H	L
	House Keeping (In House)	M	L	H
	Gardeners	L	VL	M
	Housekeeping (Common Area)	L	VL	M
	Kitchen Cleaner	M	VL	M
Transportation/ Logistics/ Warehousing and Packaging	Drivers	H	L	H
	Floor Supervisors	H	L	L
	Documentation Executive	L	M	M
	Customer Service	L	L	L
Real Estate / Construction	Masons	H	VL	L
Private Household Sector	Plumbers	H	M	L
	Electricians*	H	M	H
IT / ITES	IT / Computer – Degree / Diploma	M	VH	H
	Tele-callers	M	VH	M
Organized Retail	Floor Sales Staff	M	H	L
	Backend Assistant	L	L	L

VH – Very High, H- High, M – Medium, L - Low, VL – Very Low

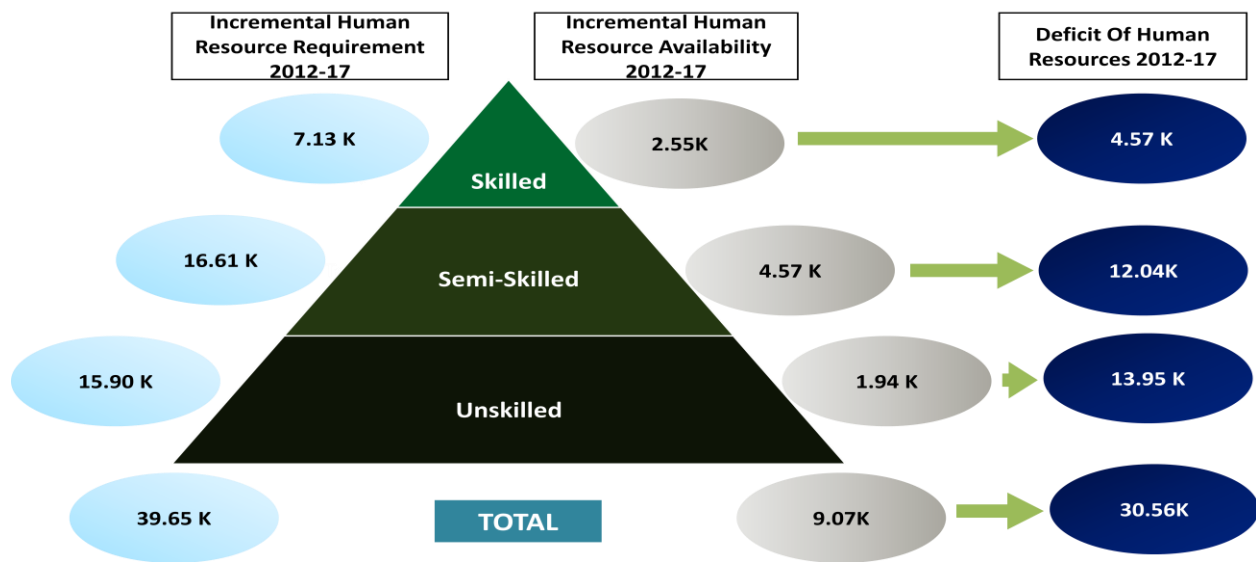
Source: Dexter Analysis

3.1.5.2 Quantitative Skill Gap Analysis

Here in, based on the demand and supply side estimation for the year 2012-2017 and 2017-2022, quantitative analysis has been calculated. The total demand for all the skill levels in all the three sectors Agriculture, Manufacturing and Service is 6290, 12163 and 21194 for the year 2012-2017 respectively and for the year 2017 - 2022 the total estimated demand is 6944, 15658 and 26714 respectively (Demand of Agriculture sector as per section 2.2.2.1, demand of Manufacturing sector as per 3.1.2.2.11 and demand of service sector as per 3.1.2.3.10). The incremental supply for the next 5 and 10 year is 9079 and 9451 as described in Table 60 and 61.

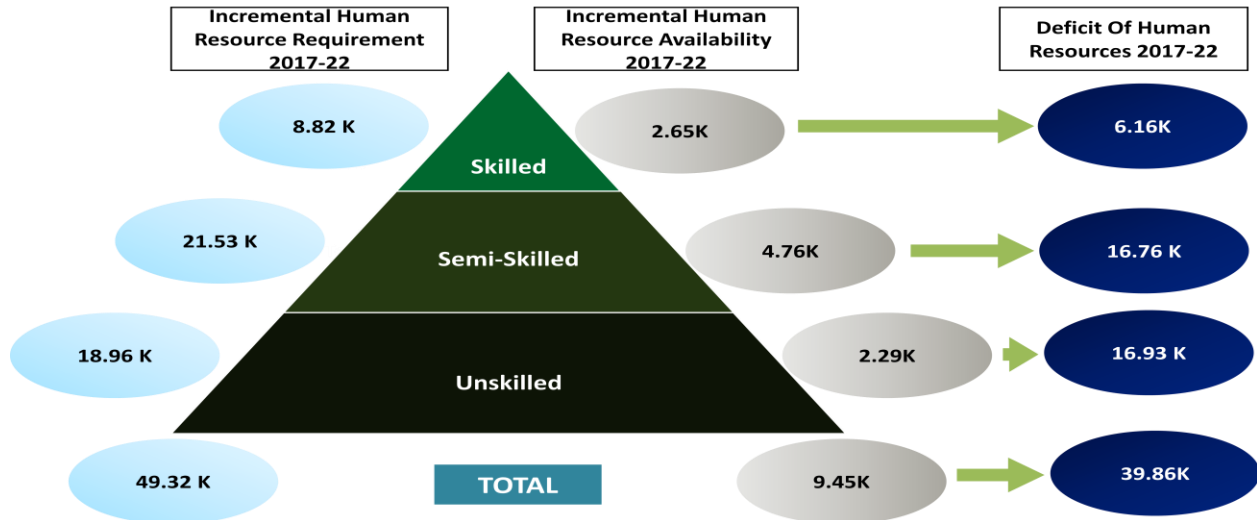
The below chart depicts the Skill Gap that exist at the all the levels at the South Goa district for the year 2012-2017 and 2017-2022.

Figure 32: Quantitative Skill Gap Analysis for the Year 2012-17



Source: Dexter Analysis

Figure 33: Quantitative Skill Gap Analysis – 2017-22



Source: Dexter Analysis

Table 66: Increase in Labour and Work force participation

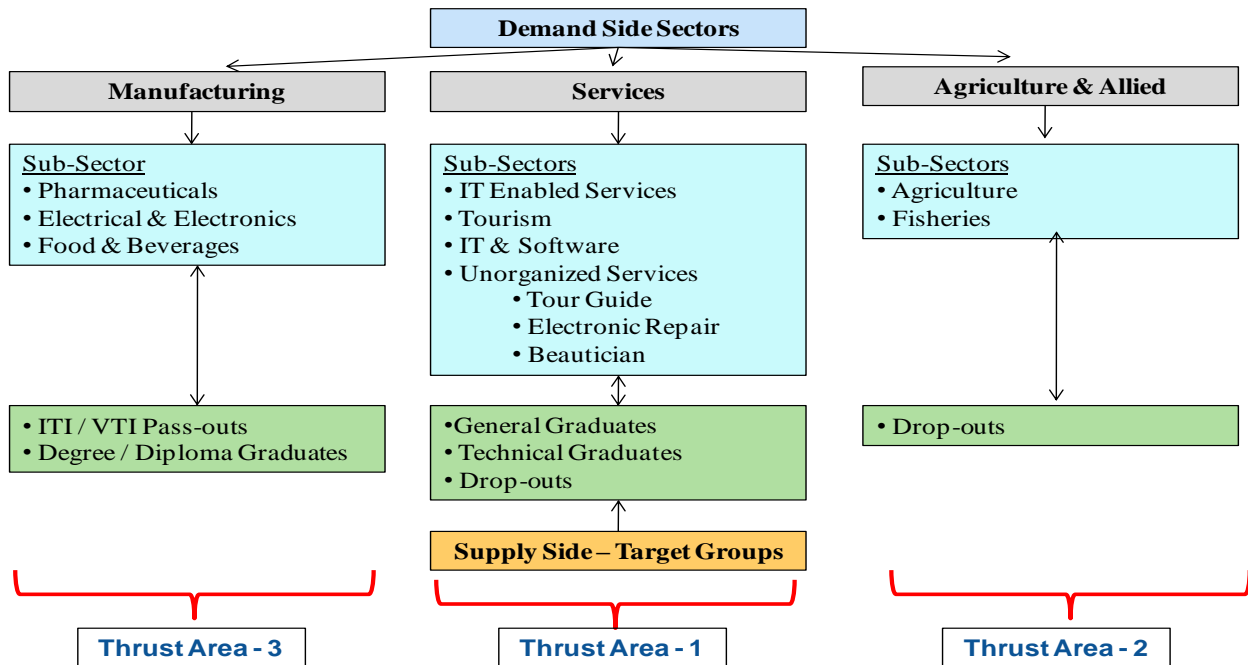
Goa		India Average
WPR as on 2009-10	463	583 (2009-10)
Total Work Force as on 2017	257192	
Total Working Age Population as on 2017	475293	
Desired WPR as on 2017	541	
Total Work Force as on 2022	312914	
Total Working Age Population as on 2022	494780	
Desired WPR as on 2022	632	

The above table depicts the scope of increase in Labour and Work force participation for the year 2017 and 2022. The work force participation rate is estimated to be 541 in coming 5 year and 632 for the year 2022. This numbers will helps NSDC to take decision based on need of capitalize the inward migration from states outside of Goa.

3.1.6 Recommendations

So, before we specify the recommendations, here is the decision map that will be guiding force which tries to map the Demand Side Sectors with Supply Side Target groups based on their attractiveness to fulfill the demand-supply gap:

Figure 34: Decision Map for Recommendations



Source: Dexter Analysis

Based on the Qualitative as well as Quantitative Skill Gap so conducted as above as well as the decision map, the following recommendations become relevant to each of the below mentioned stakeholders:

3.1.6.1 State Government

Capacity Additions / Modifications

So, since we understand that hospitality is going to be the key driver of growth for the district among the services sector alternatives and within manufacturing, across the sub-sectors, the skill types mostly remain common, we have enlisted the important trades / courses where capacity addition as well as modification is needed to address the quantitative gap.

Capacity Additions:

Hospitality Assistant, Banking Sales, Bartender, Mechanic Electronics, Hair & Skin Care, Automobile Overhauling / MMV, Electrician, Fitter, Food Production & Baker (Hospitality), Spa Therapist, BPO Executive, Retail - Floor Sales Staff are the key trades wherein the capacity addition steps need to be directed.

Capacity Reductions:

Draughtsman Civil is a course which has become obsolete due to its course structure. Additionally, in the context of the economic growth as foreseen in the district as well, the relevance of this course is reduced as well.

Focus on SDIS Implementation

Given the quantum of skill gap existent and the willingness to pay as well as migrate as seen earlier, MES courses should be the key drivers hereon. This also makes sense in the context of the fact that a significant target of vocational training in Goa will have to be school drop-outs considering their higher proportions. SDIS scheme, with focused skilling programmes is best suited to address this issue and bring the drop-outs in the mainstream employment arena.

Increase the aspirational value of Agriculture & Allied Industries

Since Agriculture and Allied industry is the key to providing alternative employment to a significant chunk which got unemployed from the mining sector, it is imperative to increase the aspirational value of the sector among the youth. For the same, it is recommended that the state runs dedicated awareness levels to glorify agricultural achievement through video recording of best practices and sharing through dissemination across the state

State Government should also promote rural unemployed youth training in trades like Coconut Plucking, Cashew farming & processing which are economically lucrative as well. In fact, this sector is receiving major importance under the Neturilm Model Village scheme which envisions all round development of a village to include areas like rural development (Gramin Vikas), skill development, infrastructure development, water and sanitation, dairy development, agriculture development and others.

Also, the above steps can be initiated in the hinterland for better and effective implementation and then move towards the coastal areas later on.

Performance Rating among the HRDF Private Training Institutes

In the manufacturing sector, the major concern has been the quality of the manpower available from HRDF institutes and to address this, mechanisms to improve the course content and structure will have to put in place. This can be driven through introduction of a performance rating system which will create a competitive landscape among the HRDF private training institutes. Key parameters which will trigger the improvement should include Trainer Skills & Placement Records. While the earlier one is the key intuitively identified cause, the latter measures the output and both the cause as well as the outputs should appropriately reflect in the rating system.

Introduce Multi-skilling Programs in Govt. ITIs

In the changing context of the nature of the manufacturing sector, increasing a worker is required to have multiple skills so that he can be assigned broader roles. E.g. Machines these days have a significant amount of automation which means a machine maintenance person should have an understanding of both basics of

electrical as well as electronics fields. So, it is important that course structure is made modular with a mix and match of multiple skills.

Mobility from Vocational Stream in Schools to ITI / ITC & Pvt. Training institutes

While the state government has already implemented vertical mobility from ITIs to the degree / diploma colleges, the same will have to be seamlessly integrated with Vocational stream students in the schools. This will significantly facilitate higher enrolment in vocational stream in schooling as well. Also, Manufacturing vis-à-vis Services screening to assess the candidate suitability will have to be introduced for better choice of courses linked to career plans or aspirations while entry into vocational stream in the schools. In fact, excellent parallels exist in other states like Gujarat where similar mechanisms have been implemented. Please find mentioned here under the brief description of the same.

Gujarat Case Study

Government aims to facilitate students of vocational courses to get admissions for higher education for which it had decided to upgrade two-year post-standard-VIII technical courses, taught at Industrial Training Institutes (ITIs), at par with standard-X, and three-year post-SSC diploma, taught at Polytechnic colleges, at par with standard-XII.

So, as per this norm, students completing two years ITI course after class X or its equivalent course, having passed NCVT or GCVT examinations would be treated at par with Gujarat Secondary Education Board or Gujarat Higher Secondary Education Boards standard XII or Gujarat Open School and could opt for higher courses.

Similarly, students who complete three year diploma courses in polytechnics after class X would be treated at par with class XII pass students. Also, since these students would have studied one year more than class XII students, they may be considered for exemption of a year's study in college with 40 credit points under choice-based credit system.

This upward mobility step has been received quite well and has resulted in the increased enrolments in the vocational training institutes across the state.

3.1.6.2 Industry

Involvement in Skill Development

Since industry is ahead of academia in terms of the skilling scenario, participative course structure design with better involvement of associations, through its sectoral councils, will have to be triggered for feedback on course curriculum. This will also reflect the need for internships and apprenticeships which can be brokered through the associations. Also, there is a need for direct involvement in skill development initiatives though as well coordinated CSR effort by the industry, especially the mining barons

Better coordination for enabling industry exposure

While the idea of industry – academia interface is well accepted, it is only the design and implementation of effective mechanisms that makes a difference. So, in context of the district, associations like TTAG or GCCI with

significant local appreciation should form an online portal for aggregating the internship demand from tourism and other sectors and partner with institutions. This will help remove asymmetry of information. The same should also be used for facilitating regular industry visits for trainers in the vocational training institutes

Acceptance of Occupational Standards & Wage Rate Revisions

With sector wise NOS being developed by Sector Skills Councils (SSC) PAN India, Goa can be a major contributor in the formation of the Tourism & Hospitality SSC given its varied and exhaustive sector presence in the state. Additionally, based on the currently widespread as well as potentially high growth sectors in the state, it can also play a very active role in the Logistics SSC, Retail SSC & IT / ITes SSC as well as BFSI SSC.

3.1.6.3 Training Providers

Improved Industry Interface

In case of the training providers as well, the service provider mindset has to set in with fundamental orientation to meet the needs of the industry. For the same, the Training & Placement Officers of the ITIs, especially the Government ITIs will have to be very proactive. Course structure modifications with mandatory internships / apprenticeships with better process adherence and higher weightage to them will have to be initiated.

The same is true for the trainers as well since in vocational education, practical touch of the training is what contributes the most to the learning experience. So, compulsory industry visits for the trainers every month will have to be mandated by the training providers.

Capacity Planning

Based on the key course level skill gaps identified which point towards the required course capacity additions, the institutes should realign their capacities to focus on the Tourism, IT / ITes, Pharmaceuticals, Logistics and Food Processing courses as well as other services sectors

Also to increase the reach and span of their coverage, they should cross-subsidize self-employment driven and agriculture and allied industry courses through above higher end courses.

Student Counseling

One of the major reasons why students lose interest in their career choice, especially in vocational stream wherein the courses are lot more focused, is the lack of understanding of how a particular study option translates into a career and accordingly a lifestyle. So, to reduce such instances, better engagement at school level to increase Vocational Stream enrollment is indeed required in the district. Also, Alumni -Guest Lectures to give students a practical picture of the industrial scenario can also be facilitated.

Awareness creation for Agriculture & Allied Industry Courses

As discussed earlier, the importance of agriculture and allied industry in creating local employment in the district cannot be undermined and so, the vocational training providers are best placed to spread the awareness about

benefits of systematic and scientific agricultural methods and how various vocational training would lead to the same. Also, innovative delivery models to increase the reach of vocational training in the internal areas should be experimented with.

3.1.6.4 NSDC

Spread Awareness about its initiatives

Since NSDC just has one training partner providing its services in the state and the partner too has just initiated the action recently, the awareness about NSDC's initiatives in the state is quite limited. So, active efforts on this front are required by the NSDC training partners in the state for engagement with associations and the government. In order to achieve this, Goa should also be included in the list of states where NSDC is planning to launch the marketing campaign.

Funding Initiatives

While further training partners can indeed be funded in the state in the Hospitality sector, it can also look at widening its network in other sectors like IT & ITes, Logistics, Pharmaceuticals & Food Processing.

Also, instead of new entrants in the state, NSDC can also look at supporting existing vocational training providers especially the Christian missionary run vocational training setups who are interested in funding and already offer variety of training programs. Also, agriculture and allied sector should be brought to its forefront for intervention by NSDC and the same can be done by promoting SHGs to take up vocational training with NSDC's financial support.

Sector Skills Council

There are some industries in the state, e.g. Hospitality and Mining which can act as major contributors in the process of forming the NOS relevant to them. A mechanism to include their inputs should be ensured.

Also, the SSCs should facilitate establishment of a testing setup for Skill Certification with local industry support across relevant sectors.

Co-ordination with State Government

It is important that there is no duplication of effort between the NSDC as well as State Government initiatives. So, accordingly, individual focus areas for skill development for NSDC and the state Government should be defined. Also, directional consideration of the status of progress of state initiatives should be incorporated while preparing a longer term intervention plan by NSDC for the state through its training provider network.

3.2 North Goa

3.2.1 Overview

North Goa is one of the two districts that make up the state of Goa, India. The district has an area of 1736 km², and is bounded by Sindhudurg and Kolhapur districts of Maharashtra state to the north and east respectively, by South Goa District to the south and by the Arabian Sea to the west.

Figure 35: Map Showing North Goa District



Much of the North Goa territories (Pernem, Bicholim, and Sattari) were under the Kingdom of Sawantwadi, Ponda was sometimes under the Sunda Kingdom or Marathas or Kingdom of Sawantwadi. Hence these territories were seen as safe haven for the Hindus who were living under continuous fear of the Portuguese Inquisition. Portuguese as part of their New Conquest conquered these territories in late 18th centuries. These territories then remain with the Portuguese till 1961 when it was annexed by India. Goa and two other former Portuguese enclaves became the union territory of Goa, Daman and Diu, and Goa was organized into a single district in 1965. On 30 May 1987, Goa attained statehood (while Daman and Diu remained a union territory), and Goa was reorganized into two districts, North Goa and South Goa.

In order to facilitate revenue administration, the entire geographical area of North Goa is sub-divided into Sub-divisions and Talukas. The North Goa District is divided into six talukas and four sub-divisions. Talukas are further subdivided into revenue circles and circles into revenue sazas. These sazas consist of compact revenue villages.

The District Administration is headed by the District Collector, headquartered at Panaji. There are 213 villages and 27 towns, out of which 7 are Municipal towns.

At the grass root level saza consists of a group of villages which is under charge of a Talathi. Circle inspector is in-charge of the group of sazas of that revenue circle. Mamlatdar is the head of Taluka revenue office. Dy. Collector & SDO is the head of the subdivision. District administration is headed by the Collector.

- Subdivisions :Panaji, Mapusa, Bicholim & Ponda
- Talukas :Bardez, Bicholim, Pernem, Ponda, Sattari & Tiswadi

3.2.2 Study of Industrial Scenario

3.2.2.1 Industrial Profile of the District

Out of 7,438 units in Goa State, 4,595 units are located in North Goa District.

Major Exportable Items at district are Iron ore, Pharmaceutical Formulations, Electronics and Communication Devices, Confectionaries, Passenger buses and Health & Hygienic Products. Apart from that district has 11 industrial estates and the dominated sectors are Pharmaceutical Industry, Metallic Industry, FMCG, Machinery manufacturing industries etc. The tourism sector is on a growth The service sector comprises of Hospitality sector, banking and education sector, apart from that there is also existence of high end retail outlets like Puma, Woodland, US Polo, Wills Lifestyle etc.

Large scale and public sector undertakings in the district are as follows:

United Breweries Ltd., Glenmark Pharmaceuticals Ltd., Madras Rubber Factory (MRF), Automobile Corporation of Goa Ltd., Honda, GKB Optmics, Goa Antibiotics and Pharmaceuticals Ltd., Crompton Greaves Ltd., Funkskool India Ltd., Sesa Goa Pvt. Ltd., Hytech Lenses Pvt. Ltd., Nestle India Ltd., Proctar & Gamble Hygiene & Health Care Ltd, A.W. Faber Castel Stationery Pvt. Ltd., Marico Ind. Ltd., Finolex Cable Ltd., Ranbaxy Laboratories Ltd., etc.

Major Exportable Items are as follows:

Iron ore, Pharmaceutical formulations, electronics and communication devices, confectionaries, passenger buses, health and hygiene products.

Mining is also an important industry in Goa employing thousands of people. The mining belt of Goa covers approximately 700 sq. km and is mostly concentrated in four talukas namely, Bicholim of North Goa district and the other 3 in south Goa district. Bicholim is famous for iron ore mining.

North Goa is also abundant in service enterprises which include Hotels and restaurants, tours and travel operators and medical tourism.

Table 67: Taluka Wise SSI Units in North Goa

Taluka wise SSI Unit		
Sr. No.	Taluka	SSI Unit
1	Pernem	202
2	Bardez	1397
3	Tiswadi	1098
4	Bicholim	446
5	Sattari	190
6	Ponda	1321
Total		4654

Table 68: Taluka Wise Large Scale Industrial Units

Taluka wise Large & MediumScale Unit		
Sr. No.	Taluka	Large Scale Unit
1	Pernem	2
2	Bardez	26
3	Tiswadi	11
4	Bicholim	15
5	Sattari	8
6	Ponda	38
Total		100

Source: http://www.goalpse.gov.in/publications/Economic_survey_2012-13.pdf

3.2.2.2 Manufacturing Sector

At North Goa district, there exist 11 Industrial Estate of which Kundaim, Tivim and Korlim are the three highly scattered area where around 150 - 300 companies are present. The sectors which dominated at those Industrial Estates are Pharmaceutical, FMCG, Iron & Steel, manufacturing of Machineries etc.

Pharmaceutical, Electrical and Food processing are the dominated industries at North Goa. Large companies are majorly established at 4-5 Industrial Estate existed at the State. A detailed interaction with the concern person of various companies in manufacturing sector has been carried out as a primary research.

The clusters in the catchment Area:

1. Chemical & Pharmaceutical
2. Electrical & Electronic Hardware
3. Food Processing
4. Metallic Industry
5. Paper & Packaging Industry
6. Automobile & Auto-Repair Service
7. Rubber, Petroleum, Plastic & Coal
8. Handicrafts
9. Shipbuilding & Construction
10. Miscellaneous

These are the sectors that largely constitute the manufacturing sector in the district. So, we have focused on mainly interviewing the companies in these sectors. Below mentioned table gives basic numbers of these industries.

Table 69: Number of Units of major sectors in Manufacturing of South Goa

Sector	No. of Units
Chemical & Pharmaceuticals	335
Electricals and Electronic Hardware	330
Food & Beverages	1116
Steel & Iron Products	802
Paper & Packaging	412
Rubber, Plastic Petroleum and Coal Products	394
Automobile/Auto Components	51
Handicrafts & Cottage	166

Now, we will get into detailed discussion about each of the above sectors in North Goa along with case studies to support our understanding of that sector in North Goa. The case studies are drawn to ensure coverage of

variations between small as well as large sizes industry in the district. However, in some cases, for the sake of confidentiality, we would refrain from divulging the details about the company.

CHEMICAL & PHARMACEUTICAL PRODUCTS

3.2.2.2.1 Chemical & Pharmaceutical Company

At North Goa, interviews had been conducted with few large and small players in Pharmaceutical market at Bicholim Industrial Estate, Bethoda Industrial Estate, Kundaim Industrial Estate, Madkaim Industrial Estae, Tivim Industrial Area and Pilerne Industrial Area. On an average majority of the employees belong to rural area at Chemical & Pharmaceutical Industry. The male female ratio at the industry is 62:41 at this sector in district. Apart form that,few Paint companies also covered in this category.

The focus areas of the companies are into manufacturing of drug, Ayurvedic products and providing coating solutions.

3.2.2.2.1.1 Sector Overview

At large company, HR Manager briefed us about the company details. The employee strength of the company is 480 of which 250 are at Management level, 130 are at Non-management level and 100 work on contract basis.

- Company's Production department has total 350 employees of which 170 work on management level and 180 work on non-management level. At high skilled level, company has 40 Managers and Department Heads, qualification require for that post is M.Pharm, M.Sc or Engineering. At skilled level, company has 100 people with B.Sc Chemistry, B.Pharm and Diploma Engineering background. They have 160 Fitters, Welders, Turners, Electricians and Refrigeration and Cooling Operator at semi skilled level and have 50 people working as Packaging, Loading, Unloading, Helpers and Sweepers. This department facing attrition of 10% at all the levels. Salary provided to employees is as per the Company policy to all the levels except unskilled level. At un-skilled level, the wages provided as per the Government of Goa.
- At maintenance department, 30 employees working, of which 10 are at management level and rest 20 are at non-management level. At high skilled level there are 5 Departmental Heads, Managers and Engineers with 10% attrition rate. At skilled level there are 5 Diploma Engineers with 5% attrition rate. There are 15 Electricians, Technicians and Mechanicals who are passed-out from ITI.
- Total 105 employees are working at various departments such as QA, QC, Finance, HR, Account, Security and Store department. At management level there are total 70 employees working and 35 at non-management level. 30 people working at high skilled level as Department Heads and Managers with degree of M.Pharm or M.Sc Chemistry. Company has 60 Supervisors, Office staff, QA/QC employees and Security heads at skilled level. In case of unskilled level there are 30 Helpers and Security men. The company is facing 10% attrition at this department.

The attrition is not seems to be a major problem, however overall attrition faced by the company is 10% for the large organization. The reasons mentioned by the HR Manger in respect of low attrition is due to good company payroll, high job satisfaction, provided facilities like transport, meals etc and good working culture. The growth rate expects by the company is 20% for high skilled category people, 30% for skilled category, 20% for semi skilled category and 10% for unskilled category. The major growth drivers are brand value, growing international market and inclination of export ratio.

One of the small companies in this sector has 37 employees of which 28 are on management level and rests 9 are on contractual basis.

- The production department of the company has 15 employees of which 8 are involved in management work and 7 are in non-management work. There is 1 Production Head at highly skilled category. At skilled level, company has 3 B.Pharm/B.Sc Chemistry with 10% attrition. At semi skilled category they have 4 Machine operators with 10% attrition rate and 7 Sweepers on contract basis. They provide salary as per the company policy and Goa Government minimum labour wages law to all the skilled category employees.
- Out of 6 employees working in Maintenance department, all of them are involved in management work. There are 4 Bio-tech Engineers at high skill category with 10% attrition and 2 Diploma Engineers at skilled category with having 10% attrition rate.
- There are total 16 employees working at QA, QC, HR, Store and Security departments. The company has 14 employees working on management level and other 2 are on non-management level. As far as skill category is concern, 7 Department heads and Managers are there with 10% attrition, 7 people are involved as QA, QC and Storekeeper with 10% attrition and 2 Security guards are on contract basis.

The company is facing overall attrition rate of 8-10% which is not a much issue for them, as said by Senior HR Officer. He replied negatively on the growth of human resource in coming future.

The Assistant and Personnel HR manager of one of the Paint Industries gave detail about all the departments of company. According to him, out of 200 employees, 50 are on Management level, 50 are on Non-management level and rest 100 are on contract basis.

- The Production department of the company has 145 employees, of which 25 are on Management level and rest are on Non-management level. The high skill category people include 25 Managers, Engineers, MSc Chemistry and HODs with 2% attrition. Company has 20 Supervisors and Diploma Engineers with 2% attrition. There are 30 employees at Semi-skill category such as Machine Operators, Instrument Control and Mechanics. The un-skilled category people include 70 Helpers, Sweepers, Packaging, Loading and Un-loading with 3% attrition rate. The company provides salary to employees at all the level based on company policy and the more than Goa Government minimum labour wages law.
- Company had 6 employees working at Maintenance department of which 1 is on Management and rests do work on Non-management level. The skill category people include only 1 Diploma Engineer and Semi-skilled category people include 5 Electricals, Mechanicals and Technicians passed out from ITI with 2% attrition rate.
- 48 employees are at Admin, HR, Account, Store, QC and Security department of which 24 are involved in Management work while 26 are involved in Non-management work. The high skill category people include 15 HODs, Managers, M.Sc Chemistry and B.E Chemical with 2% attrition. There are 20 Supervisors and Security Heads with 2% attrition and 15 Helpers and Security Guards again with 2% attrition rate.

The company is facing 2% overall attrition rate which is very negligible and not a major issue for the company as said by the HR manager. The reason for such a low attrition is that good salary package with facilities and also majority of the people are outsiders. As far as growth rate of human capital is concern, the HR responded that by looking at current situation, it's very difficult to predict future manpower growth due to uncertainty, the company faces major problems like local union create strike and which in term increase the cost and improper functionality.

3.2.2.2.1.2 Hiring Practices

Large company hired un-skilled category people such as Helpers, Sweepers, Gardener, Packaging, Loading and Unloading through consultants. All of them should be of 10th/12th Pass-outs. The employees at semi skilled category are recruited through direct walk in interviews and educational Institutes. The employees at this level recruits for the position of Machine Operator, Fitter, Boiler, Instrument & Control and Refrigerician with ITI Pass-out. Company gets Semi Skilled people through Educational Institutes for requirement of Electrician and Mechanics who are ITI pass-out. The Skilled people such as Supervisors and office staffs are hired through manpower consultancies and direct walk in interviews. All of them should have degree of B.Pharm, B.Sc Chemistry, Bachelor of Commerce or Diploma Engineering. Managers at High Skilled level are recruited through manpower consultancies and also through company websites. The qualification required for the same is MBA, M.Sc, Chemistry, M.Pharm and P.hd.

As far as soft skill of current employees is concerned, the company provides training of behavioral and development of soft skill to all the skill category employees. According to HR Manager, practical training is provided by them to all employees but the theoretical knowledge of them is not updated. Company prefers to hire male employees because of night shifts.

The un-skilled people at small scale companies such as Helpers, Sweeper and Security man are hired through direct walk in interview. For these category people educational qualification is not require, only willingness to work matters. The Semi-skilled operations category people hired through employee references who are Machine Operators and Fitters also technical category people like Electricians and Mechanics from ITI pass-outs are hired through direct walk in interviews and employee references. Along with the above mentioned sources the skilled category people hired through job portals. The position for which they recruited is QA, QC, Production and Supervisors with the qualification of B.Pharm or B.Sc Chemistry. At highly skilled category, managers are hired through job portals or directly from Head office with degree of MBA, M.Pharm, M.Sc Chemistry and Micro-biology. Male candidate is more preferable because they are more adjustable with culture and timing.

At paint Industry, un-skilled category people are hired through Contractors. The people hired for the work related to Helpers, Sweepers, Gardner, Packaging, Loading and Unloading for which no education is require instead only willingness to work is required. The semi-skilled operation and technical people are recruited through direct walk in interview and Educational Institute such as Farmagundi who are Machine Operator and Fitter who passed out from ITI and requirement of Electrician and Mechanics for technical field. The skilled category people are Diploma Engineers, Supervisors and Clerical Staff hired through ads giving in local newspaper and through online application form with the minimum qualification required is Diploma Engineers, and B.Sc Chemistry. Lastly, Company gets high skilled category people such as Managers, Engineers and HODs direct at Head office – Kolkata with the qualification of BE and MBA. Due to three shifts, company prefers male candidates.

3.2.2.2.1.3 Demand Side Skill Requirement

Table 70: Human Resource Requirement in Chemical & Pharmaceutical Industry

Chemical & Pharmaceutical Industry		
Category	2012-2017	2017-2022
Skilled	392	457
Semi Skilled	1490	1944
Minimally Skilled	434	566

Semi Skilled	Skilled
Fitters	B. Pharmacy / B. Sc. (Chemistry) – Production + QA
Electricians, Cooling Operator	Diploma Engineering
Welder, Turner	

Source: Dexter Analysis

3.2.2.2.1.4 Organizational Training Practice

SOP training, on the job and LMS training is provided by large pharmaceutical company. Induction training is provided to new employees and for others need based training is provided with batch size decided by top management. Training held for 2 to 5 days per year which depends upon the requirement of skill and techniques by the company. The training organized by company is both in-house as well as outsourced.

While small-scale company provides OJT and specific work training at GLC (Glenmark learning centre) which lasts for 2 days. The training held on monthly basis which is in-house as well as outsourced.

Paint Industry provide behavioral and skill development training through internal and external sources to all the skill level category employees. They provide need based training which held for 2 days per 6 months. Company provides OJT and also other safety and general training to employees.

ELECTRICAL & ELECTRONIC HARDWARE

3.2.2.2.2 Electrical & Electronic Hardware

There is an existence of few companies of Electrical & Electronic Hardware at Colvale Industrial Area, Kundaim Industrial Estate, Bicholim Industrial Estate and Tivim Industrial Area at North Goa district. At electrical and electronic hardware industry, the urbanization rate of human resources is 40%. The male female ratio is 77:22 at companies of this sector.

3.2.2.2.2.1 Sector Overview

At one of the large Electrical companies which focus on manufacturing of motors, generators, fans, pumps etc, Assistant HR Manager gave us a detail overview about the company. The company is having total 340 employees of which 17 are employed in management level, 103 in non-management level and 220 are employed on contract basis.

- Production department of the company have total 220 employees, out of which 8 work on management level while 208 works on non-management level. There are 42 Managers and Engineers at highly skilled level with 10% attrition, 37 Diploma Engineers and Supervisors at 10% attrition at skilled level, 108 people working as a Fitter, Turner, Electrician, COPA and Diesel Mechanics with again 10% attrition at semi skilled level and at un-skilled level there are 33 Helpers with only 5% attrition rate. The salary structure of the company is as per the Goa Government and Company Policy.
- At Maintenance department of the company only 9 employees working, of which 1 is at management level and the rests are on non-management level. At high skilled level there are 4 Engineers with 10% attrition rate. At skilled level there is only 1 Diploma Engineer with 10% attrition. There are 4 people working as Electrician and Mechanics at semi skilled level with 10% attrition.
- Total 111 employees working in different departments such as QC, Account, Admin, Store, BSR, security and Sweeper. Out of that 8 are doing management related work and rests 103 are doing non-management related work. At highly skilled category there are 15 Managers and Engineers with 10% attrition rate, 48 Supervisors, Office Staff, Diploma Engineers, Store keeper and Dispech Supervisor with again 10% attrition rate. Lastly, at un-skilled category there are 48 Helpers, Security men and Sweeper with 15% attrition rate.

Company is facing overall 10% attrition rate which is not much issue for them as said by Assistant HR Manager. The reason dictated for low attrition is that company provides good working culture, facilities and pay packages to their employees. The growth driver for this sector is increasing demand in local as well as international market due to which export is also growing.

At small scale industry we met HR Manager of the company, he informed us about the company that there are total 64 employees working, out of which 22 are at management level, 12 are at non-management level and 30 do work on contract basis.

- Production department of the company has 50 employees working from which 10 are at management level and 40 are at non-management level. There are 10 Department Heads, Managers, B.Tech and BE with 10% attrition rate at highly skilled category. At skilled category, 8 Diploma Engineers and Supervisors are there with 9% attrition rate. At semi skilled category, 15 workers such as Mechanics, Welders, Fitters, Painters, Turners, Hydrochloric and Diesel Mechanic with 10% attrition rate. Company has 17 un-skilled staff, includes Helpers, Security man and Sweeper with 15% attrition rate. The salary provided to all of them is as per the company policy and Goa Government minimum labour wages law.
- In Maintenance department, 3 employees are working of which 1 is at management level and 2 are at non-management level. At skilled category, 1 Diploma Electrical Engineer with no attrition rate and 2 Electricians and Mechanics with 10% attrition rate.
- There are 11 employees at F&D stores, from that 4 do management work and 7 do non-management work. There are 4 managers at highly skilled category with 10% attrition and 7 Supervisors at skilled category with 10% attrition.

The company is facing overall 10% attrition rate which is a major issue for them as said by the Manager but they try to quickly fill in the vacant places. The reasons for employees left the job are mainly because of high salary, good facilities and better opportunity. The major human resource growth driver is product demand in the market as the company is working based on order taking and contractual work. Hence, when company get orders they hired contractors and get the work done.

3.2.2.2.2 Hiring Practices

The large companies in Electrical sector hire the un-skilled category people such as Sweeper, Helper, Security Guards, Loading, Unloading, Packaging men etc through consultants. They look for willingness to work while hire these category people, irrespective of their education. The semi skilled category employees working at operation department such Fitter, Turner, Electrician, Diesel Mechanic, COPA and Welder are recruited through Educational Institute available at Bicholim and Palem and ads in local newspaper. All of them should be ITI pass out student. At technical department, semi skilled category employees such as Technician, Electrician and Mechanical are recruited through newspaper and educational institute at Bhonik. The company hired all the skill category people through employee references, consultants and local newspaper for the position of Supervisor and Diploma Engineers with qualification of Diploma Engineering and Commerce graduate. Managers and Engineers who are at highly skilled category are hires through Job portals and manpower consultancy with the degree of MBA or Engineering. Male are more preferred for factory work and also due to night shifts.

In case of small scale company, the un-skilled category people are hired on contract basis. They hired for the work related to Helpers, Sweepers and security men. The security men should know English. The semi-skilled people such as Machine operators, Fitter, welder and Instrument & Control are hired through contracts and by giving ads in local newspaper. All of them should be ITI Pass-outs. The skilled category people like Diploma Mechanical Engineers and Supervisors are hired through manpower consultancies with having Diploma Engineering as background. The un-skilled category people are hired through manpower consultancies. The positions for which they hired are Managers and Engineers with the qualification of BE Mechanical, ME Mechanical and MBA.

3.2.2.2.3 Demand Side Skill Requirement

Table 71: Human Resource Requirement of Electrical & Electronic Hardware Industry

Electrical & Electronic Industry		
Category	2012-2017	2017-2022
Skilled	214	250
Semi Skilled	992	1294
Minimally Skilled	214	279

Semi Skilled	Skilled
Electricians	Electrical – Degree, Diploma
Diesel Mechanic	Electronics – Degree, Diploma
Machinists, Fitter, Turner, COPA	

Source: Dexter Analysis

3.2.2.2.4 Organizational Training Practices

The company initially recruits people as an Aspirant (Trainee) and after probation period, based on performance, selection of employees has been done. The company provides induction, need based, on the job training and general training to their employees. Along with that, CNC and NCVC related training is held for those people who work on that machine and for others, need based training is provided. The company organize training depends upon the requirement. Company also provides skill development and practical training which could be either in-house or outsourced.

Small scale companies provide need based in-house training as well as out sourced it. They provide technical and practical training to engineers and their sub-ordinates. Apart from that, for new machines and other automation related training is provided by suppliers. The training is provided on daily basis.

FOOD & BEVERAGES

3.2.2.2.3 Food & Beverages

North Goa has presence of large number of manufacturing of food and beverages industries at Corolim Industrial Estate, Pilerne Industrial Estate, Tivim Industrial Area, Kundaim Industrial Estate and Madkaim Industrial Area. At Food manufacturing industry, majority of the human resources are from rural background. The focus area of companies covered in this Industry are manufacturing of cake, pastry, noodles and ice-creams. Along with that, there are some companies which are into bears, wine and scotch production. There are also few companies having business of wheat flour and spices.

3.2.2.2.3.1 Sector Overview

The HR Manager of the company briefed us about the various departments of the company. Total 350 employees are working at one of the large beer manufacturing company of which 7 are on management level and 143 are on non-management level. There are 100 people who worked on contract basis.

- Production department of the company have total 225 employees of which 2 are working on management level and 223 are working on non-management level. The company has 20 employees at highly skilled category which include Managers, HOD, M.Sc Chemistry and Engineers with 2% attrition. At skilled level category there are 30 Supervisors and Diploma Engineers with 1% attrition. There are 70 Fitters, Machine Operators, PLC Machine Operators, Cooling and Refrigeration and Boiler operators at semi skilled level and lastly, at un-skilled level the company has 105 people working as Packaging, Loading/Unloading, Helpers and Sweeper with 2% attrition rate.
- At Maintenance department there are 25 employees and from which 1 is working on management level and 24 are working on non-management level. At highly skill category, company have 4 HODs and Engineers, 6 Diploma Engineers at skilled level with 2% attrition and 15 Electricians and Mechanics who are passed out from ITI at semi skilled level with 2% attrition rate.
- There are 100 people working at the department of HR, Account, Finance, Store, Security and Office Staff. Out of which 10 are working on management level while 90 people are working on non-management level. At this level, there are 20 Managers, M.Sc Chemists and HODs working with 2% attrition rate. There are 35 employees working at skilled level such as Supervisors, QC people, Storekeeper and Security Head with 2% attrition rate. At unskilled category there are 45 Helpers and Security Guard with 2% attrition rate.

The salary provided to all the employees is as per the Goa Government and Company Policy. The overall attrition faced by the company is very low, only 2% which is not a big issue for the organization. There are various reasons for low attrition such as same locality, high job satisfaction and good salary. According to the Assistant HR Manager the company does not expect any growth rate in human resource in this sector in coming 5 -10 years.

At small scale company, we met one of the partners of the company which is into manufacturing of food, cake and pastry. The companies' employee strength is 18 of which 7 are on management level and rests 11 are on non-management level.

- Production department of the company has total 17 employees, 7 from them are working on management level and 10 are working on non-management level. One of the working partners is handling this department at highly skilled category. The skilled level category includes 6 office staff/Chief receptionists with 25% attrition rate. There are 10 Helpers and Sweepers working at un-skilled category with 40% attrition rate and the salary offered to them is as per the Goa Government minimum labour wages.
- In maintenance department, there is 1 Electrician with 40% attrition and his salary is as per the Goa Government minimum labour wages.

Overall company is facing 40% attrition rate which is a major issue and also prevails over a longer period of time as stated by the interviewer. The reason for higher attrition rate is that majority of the workers take training and then left the job. As far as human resource requirement is concern, company needs 2 people at highly skilled category, 10 at skilled category, 5 at semi skilled category and 12 at un-skilled category. The major growth driver in the sector is high demand and less supply in the market i.e. existence of less competitors to satisfy the demand of the customers.

3.2.2.2.3.2 Hiring Practices

The un-skilled category people such as Helpers, Sweepers, Gardener, Packing men, Loading and Unloading are recruited by the company through direct walk in interviews and consultants. The semi skilled category people at operations hires through direct walk in interview, employee reference, educational institute and local newspaper. The skills required are Machine Operator, Boiler, PLC machine operator, Fitter and Refrigerator & Cooling operator. All of them should be ITI pass out students. As far as technical is concerned, company gets people through local newspaper, educational institute and direct walk in interview for the work of Electrician and Mechanics with qualification of ITI pass outs. Skilled category people hire through employee reference, local newspaper and manpower consultancy for the position of Supervisors with qualification of Diploma Engineering or B.Sc Chemistry. However, at skilled level such as Managers, Engineers and HODs hires through employee reference with qualification of B.E, MBA Chemistry or M.Sc Micro biology.

Un-skilled and semi skilled people at small scale company are hired through employee reference. For semi skilled category, candidates are hired who have food preparation knowledge with qualification of 10th or 12th pass (Math and English). The Electricians at semi skilled technical, hired through employee reference with having basic knowledge of electrician and minimum 2 years of experience. For skilled category people bachelor of commerce or arts is required, company gets them again through employee reference only.

3.2.2.2.3.3 Demand Side Skill Requirement

Table 72: Human Resource Requirement of Food & Beverages Sector

Food & Beverages Sector		
Category	2012-2017	2017-2022
Skilled	415	484
Semi Skilled	1578	2060
Minimally Skilled	787	1027

Semi Skilled	Skilled
Fitter	Food Processing Specialist
Electrician / Electronics (Multi-skilling)	Electrical & Instrumentation Engineers in Maintenance
Cooling & Refrigeration, PLC Machine Operator, Boiler Operator	

Source: Dexter Analysis

3.2.2.2.3.4 Organizational Training Practices

The people work on contract basis are lacking at soft skill. Need based, on the job and general training is provided to the employees working in company which held monthly or yearly based on the requirement. They provide training both in house as well as outsourced.

The small scale company provides need based and on the job in-house training to all the employees.

IRON & STEEL PRODUCTS

3.2.2.2.4 Iron & Steel Products

At North Goa, the market for Metallic Industries is huge. Detailed interactions were undertaken at various industries. The industrial Estate where large companies of this sector situated are Madcaim Industrial Estate, Kundaim Industrial Estate, Bethoda Industrial Estate, Pilerne and Corlim Industrial Estate. Majority of the people belong to rural area in this industry. The workers who are outside Goa are majorly from Nepal, UP, Bihar and Belgium. This industry have male female ratio on an average 80:20.

3.2.2.2.4.1 Sector Overview

The Deputy HR manager of large organization gave us information about various departments of the company. According to him the company has total 725 employees of which 174 are working on management level, 184 working at non-management level and rests 366 people working on contract basis.

- There are total 398 employees working at Production department of which 49 at management level and rests 349 are at non management level. At highly skilled category company has 49 Managers, HODs and Engineers with 10% attrition rate. At skilled level, they have 60 Supervisors and Diploma Engineers with 15% attrition. There are 117 Fitters, Welders, Diesel Mechanics, COPA, Instrument & Control and Turners at semi skilled category people with 8% attrition. The companies has 250 employees on un-skilled level such as Helpers and Labour with 5% attrition rate and are offered Rs. 250 per day which is higher then Government of Goa labour minimum wages.
- At Maintenance department Company have total employee strength of 163, of which 27 are working on management level and 136 are on non-management level. At highly skilled category, company has 27 Department Heads, Managers and Engineers with 10% attrition, 30 Diploma holders with 8% attrition and 96 Helpers at un-skilled category with 20% attrition rate and are offered wages of Rs. 250 a day.
- Total 165 people working at departments of Store, HR, Admin, Dispech and office. Out of total, 100 employees working on management level and 65 working on non management level. At highly skilled category, company has 40 Department Heads and Managers with 12% attrition, 60 Clerks and Supervisors with 5% attrition and 65 Helpers with 10% attrition rate.

According to HR Manager, Company offer salary as per company policy and overall company is facing attrition of 18%. The attrition is a major issue for the company but they are able to quickly fill in the vacancies. As per him, attrition is higher at management level. He does not have any idea as far as growth rate of human resource in this sector is concern. The negative growth of mining industry directly affects their company as said by the HR Manager.

At small scale company, in Metal Industry the meeting was scheduled with HOD of Finance & Admin department, the focus area of the company deals in sheet metal parts, control panel fabrication, laser cut parts etc. The company has total employee strength of 86, of which 32 are on management level and 14 are on non-management level.

- In Production department, total 64 employees are working of which 4 are on management level and 60 are on non-management level. There are total 4 Managers at highly skilled category with 15% attrition, 8 Supervisors at skilled category with 20% attrition, 14 people working as a Fitters, Welders and Machine operators at semi skilled category. There are 38 employees working as Helpers, Housekeeping, loading and un-loading with 25% attrition rate. The salary provided to employees as per the company policy and Goa Government minimum labour wages law.
- The Maintenance department of the company has 4 employees, 1 do management work and 3 do non-management work at highly skilled category. There are 3 Electrical and Mechanical Diploma Engineers working with 20% attrition rate at skilled category.
- Out of 21 staff at engineering department, 16 are working at management level and 5 are working on non-management level. At highly skilled category, company has 12 Managers and Engineers with 20% attrition, 7 people working at skilled category with 10% attrition rate. Along with that 2 Helpers at un-skilled level with no attrition.

The company facing 20% attrition rate which is a major issue for them as said by the manager but they try to quickly fill the vacancies. The reason for such a high attrition is that, though very high demand, very less labour force is available and also due to salary differentiation in between large and small companies. The human resource requirement in coming years is 10% for highly skilled category, 15% for skilled category, 20% for semi and unskilled category.

3.2.2.2.4.2 Hiring Practices

The large companies do recruitment of un-skilled people such as Helpers, Labour, Driver, Loading and Unloading through contractors. As far as semi skilled category is concern for operations, company hires through Educational Institutions like Honda, Bicholim and SESA Goa ITI. At these level, people required are for the skills of Fitter, Welder, Turner, Diesel Mechanic, IC, COPA, Electrical, Boiler and Mechanical having qualification of ITI pass outs. The skilled category people are hired through local newspaper and educational Institutes like Polytechnic Colleges of Goa. The positions for which they hired are Supervisors, Mechanical Engineers and Electrical Engineers with the qualification of Diploma in Engineering or any commerce graduate. The company hires Managers, Engineers and HODs through Educational Institutes who are having degree of BE, B.Tech, MBA and Phd. As said by the HR Manager, male is more preferred because of more physical work required at the company.

At small scale company, the un-skilled category people such as House keeping, Security staff and Helper are hired through Consultants. For semi-skilled operation, people like Welder, Fitter, Turner and Machine operator, company gave ads in local newspaper (Navhind Times and Harald). The required educational qualification for them is ITI pass-out and also experienced candidate gets more priority. The skilled people are recruited by giving ads in newspaper and also through employee reference. The position for which they hired are Supervisor, Technician, Mechanical and Electrical Engineer, all of them are either Diploma Engineers or ITI pass-outs with experience of working. The highly skilled category people such as Managers are hired through employee references with the qualification of MBA.

3.2.2.2.4.3 Demand Side Skill Requirement

Table 73: Human Resource Requirement for Iron & Steel Sector

Iron & Steel Industry		
Category	2012-2017	2017-2022
Skilled	397	462
Semi Skilled	3291	4295
Minimally Skilled	1143	1491

Semi Skilled	Skilled
General Machine Operator / Machinist / CNC Operator	Fitter
Fitter	Electrician
Diesel Mechanic	Mechanic Electronics / Instrumentation
Instrument & Control	

Source: Dexter Analysis

3.2.2.2.4.4 Organizational Training Practices

The company provides need based and induction training to employees. The company organizes training either for 3 months, 6 months or 1 year based on requirement. They outsourced the training as well as provide in-house training.

According to HOD, the current human resource needs some training of behavior and soft skill. Along with that he added that employees are quite understandable, happy to work and motivated. The company provides need based in-house training. They provide OJT and other specific training to their employees. The training held on either 6 months or a year depends on the requirement.

PAPER & PACKAGING

3.2.2.2.5 Paper & Packaging

At North Goa, the cluster of paper and packaging companies situated at Corolim Industrial Estate, Kundain Industrial Estate, Pissurlem Industrial Estate, Mapusa Industrial Area and Tivim Industrial Area. The focus area of the companies are mainly printing, stamping, digital imagine, manufacturing of paper board cartoons, and manufacture of bottles and cabs for pharmaceutical products. The employees of companies of this industry are belongs to rural area in majority of the cases. The male female ratio at the companies is 70:30 on an average.

3.2.2.2.5.1 Company Overview

We interviewed one of the large scale companies of this Industry which focuses on printing and manufacturing of paper board cartoons. The HR Manager of the company informed that the employee strength is 245 of which 56 are working on management level, 94 working on non-management level and 95 people are working on contract basis.

- The Production department of the company has 160 employees of which 18 are on management level and 142 at non-management level. Company has 2 Managers at highly skilled category and 58 Supervisors, In-charge operators and Printer executives at skilled level with 5% attrition rate. Along with that there are 25 Fitter men and Trainee operators with 5% attrition at semi-skilled level and 73 Helpers at un-skilled level with 4% attrition rate. The company provides salary to all of them as per the company policy and Goa Government minimum labour law.
- Company has 13 employees working at Maintenance department of which only 1 is on management level. At highly skilled category, there is only 1 Manager with no attrition, 11 officers, in-charge and maintenance with 6% attrition rate at skilled category and only 1 GTM at semi skilled category.
- There are total 72 employees working at Admin, Dispech, Store, Account and Security department. Out of which 35 working on management level and 37 are working on non-management level. At highly skilled category, 15 Managers and Department Heads are there with 5% attrition. There are 20 Supervisors and officers at skilled level with 5% attrition and 37 Helpers, Security and Sweeper at 10% attrition rate.

The company is facing overall 6-8% attrition rate which is not a major issue. The reasons for people left the job are better prospectus, higher salary and good work culture at other places. The HR manager expecting 10% growth rate of Human capital at highly skilled category, 20% at skilled and semi-skilled category and 15% at un-skilled category. Increase the need of printed paper of good quality in the market leads to increase the demand of product is the major growth driver for the sector.

At small scale company of Paper and Packaging Industry in North Goa District, the appointment is fixed with Manager of the company. He told us about the detail information of the company. According to him the company has total 15 employees of which 2 are on management level and 13 are on non-management level.

There is only production department at the company where 2 Managers are at highly skilled level with 2% attrition rate, 3 Machine Operator at semi skilled level with 2% attrition rate with having salary of Rs.8000 and at

un-skilled level the company has 2 Housekeeping and 8 paper folding man with 2% attrition with the salary of Rs. 215 per day. Production department look after maintenance department.

Overall attrition rate the company facing is 2% which is not a major issue for the company. The reason for such a low attrition is good working culture.

3.2.2.2.5.2 Hiring Practices

Large scale company's HR Manager told us that un-skilled category people such as Sweeper, Helpers, Security guards and Loading/unloading are hired through contractors or consultants. At semi skilled operation people like Fitters, Turner, CNC Operator, Tool operator and Welder who are ITI pass-outs are hired through Vocational training Institutes and educational Institutes. The semi skilled technical people are Electrician, Mechanical and Instrument & Control are hired who are ITI pass-outs. The skill category people are recruited through employee references, manpower consultancies and ads in local newspaper. The people hired at this level for the skills like Supervisor and Diploma Engineers with qualification requirement of Diploma Engineering or Graduation in commerce. The company gets highly skill category people through manpower consultancies, and employee references, with the qualification of MBA and Engineering for the position of Managers and Engineers.

At small scale company, housekeeping and folding paper workers are at un-skilled category, hired through direct walks in interview. The semi skilled operation people such as Machine operators are hired through direct walk in interview, employee references and ads given in local newspaper. All of them must be ITI pass-outs.

3.2.2.2.5.3 Demand Side Skill Requirement

Table 74: Human Resource Requirement of Paper & Packaging Industry

Paper and Packaging Industry		
Category	2012-2017	2017-2022
Skilled	227	265
Semi Skilled	780	1017
Minimally Skilled	356	464

Semi Skilled	Skilled
Mechanic Electronics / Instrumentation	Mechanical – Degree / Diploma
Fitter	Electrical – Degree / Diploma
Printer Executive	

Source: Dexter Analysis

3.2.2.2.5.4 Organizational Training Practices

According to the manager of large scale company, to get an experienced candidate with good practical knowledge is very difficult in case of high skill people. They provide in-house training to their employees because of cost constraints which includes classroom sessions and on the job training. However, for semi skilled category, experienced candidates are easily found so their training cost is lesser then high skill category employees. Company provides SOP training to the employees, which lasts for a month.

Induction training provided at small scale company to labour for 2-5 days. Only in-house training is given to them.

AUTOMOBILE & AUTO-SERVICES

3.2.2.2.6 Automobile & Auto Services

The Repair & Service Industry is a male dominated one hence the male female ratio is 85:15 in the samples which we have covered. Majority of the employees are belonging to rural area. The visited companies in Auto repair and servicing are focuses on 2/4 wheeler.

Some of the medium and large scale companies of Repair Services are present at Bicholim Industrial Estate, Ponda and Tivim Industrial Estate.

3.2.2.2.6.1 Sector Overview

The Manager of the large scale company stated that there are total 45 employee staff, of which 3 are working on management level and rests 42 are working on non-management level.

- Production department of the company has total 14 employees of which 2 are on management level and rests 12 are on non-management level. The company has 2 Accountants and 4 people for clerical work at skilled category. The company provides them salary of Rs. 10000. There are 2 Store keeper at semi skilled category with the salary of Rs. 6000 and 6 Housekeeping and Security men at un-skilled category with the salary of Rs. 180 per day.
- The Maintenance department of the company has total 35 workers of which 2 are on management level and 33 are at non-management level. At skilled category, the company has 2 Supervisors with salary offered to them is Rs. 10000. At semi skilled category, there are 8 Welders and Mechanics with the salary of Rs. 8000 and 25 Helpers at un-skilled category people with the salary of Rs. 6000.

Company is not facing attrition at any of the skill category level and reason for no attrition is better facility provided by the company to their employees.

At small scale company, we met Sales Manager, he said that total employee strength is 14 of which 6 are on management level and rests 8 are at non-management level.

- The Production department has 6 employees and all are on management level. At skilled category, company has Cashier, Office Assistant, Sales Executive, Sales manager, Workshop cashier and Finance manager. The attrition at these levels is 2% and the company provides salary in the range of Rs. 6000-10000.
- 8 employees are working on Maintenance department and all of them are involved in non-management related task. At skilled category, there are 3 Workshop mechanics, 2 Helpers and 2 Washers, all of them with zero attrition and salary in the range of Rs. 6000-10000. The un-skilled category Helper is given Rs. 6000 per month.

Similar to large scale, small scale company also do not face attrition problem.

3.2.2.2.6.2 Hiring Practices

The recruitment at unskilled category people such as Housekeeping, Security and Helper is done through direct walk in interview. The early school drop-out can apply for the same but they must have knowledge of reading and writing. The semi skilled operation workers like Welder and Mechanic are hired through direct walk in interview, through employee references and by ads given in local newspapers (Navhind Times and Tarun Bharat) with the knowledge of Automobile repair and service. At semi skilled technical, company require Supervisors, which they gets through direct walk in interview, through employee references and by giving ads in newspaper. The skill category people are hired through employee references and ads in newspaper, the company hire for Accountant and Supervisor position with minimum qualification of graduate and also experience is mandatory.

Hiring Practices at small scale company is like recruitment of all skilled categories is done through ads given in newspaper such as Herald and Lokmatt and direct walk in interview. The recruitment happens of ITI/Diploma for semi-skilled workers and for skilled category candidate must be graduate of Finance or Economics.

3.2.2.2.6.3 Demand Side Skill Requirement

Table 75: Human Resource Requirement of Automobiles & AutoServices

Automobile & Auto-Services		
Category	2012-2017	2017-2022
Skilled	40	47
Semi Skilled	190	248
Minimally Skilled	111	144

Semi Skilled	Skilled
Welders	Diploma / Degree – Mechanical
Fitters	Instrumentation
Machinists / Turners	

Source: Dexter Analysis

3.2.2.2.6.4 Organizational Training Practices

The company provides outside training to their employee which lasts for a week. Also company provides these type of in-house need based training for employees which held on yearly basis.

The small scale company's Manager said that though they are satisfied with the current human resource but more improvement is required. The company held need based training for their semi skilled employees at Head Office-Delhi. The training lasts for a week which held on every half yearly.

RUBBER, PETROLEUM, PLASTIC & COAL

3.2.2.2.7 Rubber, Petroleum, Plastic & Coal

At North Goa, small and large number of units for Plastic Industry existed at the area such as Sattari, Kundaim Industrial Estate, Corlim Industrial Estate and Madkai Industrial Area. The company's major focus is into manufacturing of quality Elastic Tape, cellotape, plastic chairs and toys.

3.2.2.2.7.1 Sector Overview

The HR manager of one of the reputed large scale company provides information regarding their departments. Total employee strength is of 87 of which 25 are on management level, 35 are on non-management level and 27 are working on contract basis. The company has only 2 departments.

- The Production department of the company has 85 employees, of which 14 do management work and 71 do non-management work. At highly skilled category company has 10 Managers, GM, FM, HR and Engineers with 14% attrition and salary offered to them is in the range of Rs. 20000-50000. The skill category has 15 Supervisors, office staff with 10% attrition and the salary provided to them is in the range of Rs. 10000-25000. There are 42 Machine operators with 20% attrition and the salary offered to them is in the range of Rs. 9000-18000. At un-skilled category there are 20 Helpers, Housekeeping and Security guards with 5% attrition rate with the offered salary of Rs.6000-14000.
- At Maintenance department, there are only 2 people working and both are at non-management level. At skilled category, company has 2 ITI Technician and Electrician with the attrition rate of 5% and the salary offered to them is in the range of Rs. 10000-20000.

The HR Manager stated that company is facing 12% attrition on overall basis, which is not a major issue for them. The reasons for low attrition mentioned by him are good working condition, good salary, other benefits and involvement of less physical work. The expected growth rate for the highly skilled category people are 2%, 5% for the skilled category, 10% for semi skilled category and 5% for un-skilled category. The major growth of the industry is due to market expansion in near future.

We also visited one of the small scale companies in Industry, Admin and Purchase manager informed us about the company. According to him the company has total 42 employees of which 5 work on Management and rests work on Non-management level.

- The Production department of the company has 34 employees of which 4 do management work while 30 do non-management work. At highly skilled category, company has 4 Production and HR managers with Rs.35000 salary, 15 Supervisors, Admin, office level and Accountants at skilled level category with the salary of Rs. 30000, at semi-skilled category there are 13 operators with 1% attrition and salary offered to them is Rs. 8000 and at un-skilled category, there are 4 Helpers with the salary of Rs. 8000.
- At Maintenance department, company has 5 employees working of which 1 is at management level and 4 are on non-management level. At highly skilled category, there is only 1 maintenance manager with the salary of Rs. 35000, there are 3 Electricians, Mechanics and Engineers with the

salary of Rs. 30000 and 2 Electrician technician and Mechanic technician with 1% attrition and the salary of Rs. 8000 per month.

- The Engineering department has only 3 employees, 1 at management and 2 are at non-management level. There is 1 Quality Manager with the salary of Rs. 35000 at highly skilled level and 2 technicians with Rs. 8000 salary at semi skilled category.

The company does not have much issue with attrition of human resource. The reason for low attrition is employees are satisfied with company structure and organizational behavior. The company expects around 10% growth rate at skilled category, 20% at semi skilled category and 10% at un-skilled category.

3.2.2.2.7.2 *Hiring Practices*

The large company which we visited hires un-skilled category people such as House keeping staff, Security staff and Helpers through Consultants or contractors. The semi-skilled category people are recruited through Educational Institute and through employment exchange for the post of Machine Operator with minimum qualification of ITI or 10th/12th pass or having experience in the same field. The semi skilled technical Supervisors are also hired through employment exchange and by giving ads in local newspaper. The skilled category supervisors are hired through employment exchange, supervisor and by giving ads in local newspaper with the qualification of any graduation or ITI pass-outs with experience. The highly skilled category people are hired through manpower consultancy and local newspaper for the post of Managers and Engineers with the qualification of MBA, BE or B.Tech.

The hiring practices at small scale companies for un-skilled category people is done through direct walk in interviews for Helpers, Housekeeping and Security. The candidate should be at-least literate for this skill. The semi-skilled operation category people like Supervisors are hired through direct walk in interview, through employee references and by ads given in local newspapers such as Navhind Times and Gomentak. The ITI/VTI pass-outs can apply for this position. At semi-skilled technical, company has Electrician, Mechanic, Engineer, Electric Technician and Mechanic technician with minimum qualification is either 10th/12th/ITI pass-out are hired through ads given in local newspaper. At skilled category, people recruited through employee references and ads in newspaper. The position for which candidates applied at these category are Supervisor, Accountants, Admin and Office level worker with minimum qualification as graduation and experience in related field. The high skilled category people such as Production Manager, HR Manager, Quality Manager and Maintenance Manager are hired through ads given in newspaper.

3.2.2.2.7.3 Demand Side Skill Requirement

Table 76: Human Resource Requirement of Rubber, Petroleum, Plastic and Core Sector

Rubber, Petroleum, Plastic & Core Industry		
Category	2012-2017	2017-2022
Skilled	199	232
Semi Skilled	843	1100
Minimally Skilled	316	412

Semi Skilled	Skilled
Injection Molding Machine Operator, Machinist	CIPET – Degree / Diploma or Rubber Technologist
Fitter	Mechanical – Degree / Diploma
Electrician, Technician	Electrical – Degree / Diploma

Source: Dexter Analysis

3.2.2.2.7.4 Organizational Training Practices

The large scale company provides both need based and induction based training. The company organizes OJT, safety training and other training related to new technologies. The training is provided as per requirement to the trainees and fresher, which lasts for a week. The training program organizes on either monthly or half yearly. The company provides in-house training and also sometime out sourced it.

At small scale company, need based training is provided for employees. The training provided by company is internal as well as they out sourced it.

HANDLOOM & COTTAGE INDUSTRY

3.2.2.2.8 Handloom & Cottage Industry

3.2.2.2.8.1 Sector Overview

Factory Manager of one of the small scale industry briefed us about the departmental information of the organization. As per him currently company has 45 employees working of which 4 are working on management level while rests are on non-management level at Colava Industrial Estate. The urban rural ratio at the company is approximately 10:90 of which majority of them are female workers.

- Production department of the company have 4 employees working at management level and the rests at non-management level. There are 2 Accountants with 5% attrition rate at skilled level with the salary of Rs. 15000. The company has 24 Tailor with 10% attrition rate and Rs. 6750 salary at semi-skilled level. The un-skilled category of the company has total 16 Helpers with 10% attrition rate with the salary of Rs. 6450.

Overall, company is facing 7% attrition rate and reason for the people leaving the job is timing problem, salary issues and transportation as mentioned by the company's factory manager. Company is expecting high human resource growth rate in coming 5 years.

3.2.2.2.8.2 Hiring Practices

The un-skilled and semi-skilled category people are hired through employee references and by giving ads in local newspaper such as Lokmat. Tailors are come under semi-skilled category. The company is providing more preference to female over male during recruitment.

3.2.2.2.8.3 Skill Requirements

Table 77: Human Resource Requirement of Handloom & Cottage Industry

Handloom & Cottage Industry		
Category	2012-2017	2017-2022
Skilled	76	89
Semi Skilled	115	151
Minimally Skilled	308	402

Semi Skilled	Skilled
Handicraft Weavers / Artists	Handicraft Designers
Machine Operators	

Source: Dexter Analysis

3.2.2.2.8.4 Organizational Training Practices

Company is providing on the job training to their employees and they are satisfied with the behavior of current staff.

SHIP-BUILDING INDUSTRY

3.2.2.2.9 Ship-building Industry

3.2.2.2.9.1 Sector Overview

At North Goa district, existence of shipping companies is very less as compared to South Goa. South Goa has a huge shipping business due to many beaches, especially at Vaso da gama, availability of port make a huge difference in shipping business. Apart from that there are certain medium and small construction companies are present at Panjim.

3.2.2.2.9.2 Hiring Practices

Here, at small shipping companies minimally skilled people are recruited via walk in interview. The highly skilled and skilled category people are recruited through employee references and ads in local newspaper. Majorly, company hires graduate people for skilled category.

3.2.2.2.9.3 Skill Requirements

Table 78: Human Resource Requirement of Shipbuilding & Construction

Shipbuilding Industry		
Category	2012-2017	2017-2022
Skilled	26	30
Semi Skilled	157	205
Minimally Skilled	118	154

Semi Skilled	Skilled
Welders	Diploma / Degree – Mechanical
Fitters	Naval Architects
Machinists / Turners	Instrumentation

Source: Dexter Analysis

3.2.2.2.9.4 Organizational Training Practices

Small Scale Company does not provide any kind of training to their employees. But in case of medium scale companies, they provide training of fitting and welding to their new employees.

3.2.2.2.10 Miscellaneous

There is also existence of few companies of other Industries which are covered under miscellaneous category. This category includes various Industries such as FMCG, optical and lens manufacturing, Cement Industry, Perfume making companies, Glass & Fiber manufacturing companies, Printing and Lock part manufacturing companies. There are large number of optical and lens manufacturing companies at district out of above all.

3.2.2.2.10.1 Sector Overview

The HR manager of one of the FMCG companies gave us all departmental detail about the company. According to him company's total employee strength is 228. Company is divided into two teams: Core team and Support team.

- There are total 175 employees at Core team wherein 7 Managers are at highly skilled category with 2% attrition, 122 technical staff includes Engineers, ITIs and Diploma with 2% attrition and 35 people working for packaging, loading/unloading, warehousing and security with 2% attrition. The salary provided to all the employees as per the company policy.
- At Support group, there are 125 people working, out of which only 7 are at management level and rest 118 works at non-management level. At highly skill category Company have 7 Managers with 2% attrition, 38 technical staff with 2% attrition and 80 contractors with 2% attrition with the salary more then Goa Government minimum labour wages.
- Company has 8 people on leadership position with 2% attrition.

The overall attrition faced by the company is 2% which is negligible as said by the HR Manager. The reason for low attrition is high salary, good benefits provided like transportation and meal and best in class facilities and infrastructure provided by the company. The growth rate of manpower in near future is 15% as far as semi skilled category is concern. The growth drivers for this sector are high demand and also due to expansion of the field.

We met the HR Manager of one of the large Optical companies. Company focuses on lens manufacturing. The company has total 450 employees of which 50 are on Management level and 310 are on Non-management level while 90 are working on contractual basis.

- At Production department company has 300 employees from which 20 works on Management level and rest 280 work on Non-management level. The Highly Skilled category of the company has 20 Managers and Engineers with 5% attrition. There are 30 Diploma Engineers and Supervisors at Skilled category with 8% attrition. Company has 150 Machine Operators, Fitters, AC Repairers and Technicians with 5% attrition and 100 Helpers, Loading and Packing men with 5% attrition. The salary provided to all of them as per the company policy and Goa Government minimum labour wages.
- There are 52 employees working at maintenance department of which 5 are on Management level and 47 are on Non-management level. This department is having 5 Diploma Engineers at Skilled

level with 5% attrition rate, 45 Mechanical and Electrical ITI pass-outs with 8% attrition rate and 2 Helpers with no attrition at un-skilled level category.

- Rests of the departments like QC, Admin, HR, Account and Store have total 98 employees. From the total 25 are working on Management level while rests 73 are on Non-management level. Company has 25 Managers, Engineers, M.Sc Chemists and M.Sc Physics at above all departments with 5% attrition. At Skilled level, 30 QC/Admin Staff and Clerical Staff/ Supervisors with 4% attrition rate. There are 45 Helpers and Security men at Un-skilled level with 5% attrition. The salary provided to all of them is as per the Goa Government minimum wages and union wages.

Company is facing overall 5-8% attrition rate in Human Resource. As per HR manager, the attrition is not a major problem for them. The reason for the same is they got local people easily and due to labour union and their interference, company unable to retrench the manpower, because of high salary and lastly also due to good working condition. The growth rate of Human Resource in Highly Skilled and Unskilled level is 10% expected while in case of Semi Skilled and Skilled category the expected growth rate is 20%. The major growth drivers are increase in exports, local demand and expansion of the business.

3.2.2.2.9.2 Hiring Practices

Large FMCG Company hires unskilled category people through contractors or consultants. These people are hired for the kind of work related to Helpers, Sweepers, Packing man, Loading and Unloading; all of them should be 10th pass-outs. People at semi skilled category both for operation as well as technical are hired through Educational Institutes (ITIs) situated at Farmagudi, Sesa Goa, Margao, Bicholim, Honda and Hubli (Karnataka). They are recruited for the task related to Fitter, Turner, Electrician and Machine Operator. The Skilled category people such as Diploma Engineers, Supervisors and Clerk are recruited through National Newspaper and manpower consultancies. The qualification required for the same is commerce graduation or diploma engineers. At Highly Skilled category, people are hired through Educational Institutes such as IIT and manpower consultancies for the position of Managers or Engineers or Specialist. All of them should having degree of either MBA, M.Tech, B,Tech or BE.

Female candidates are preferable for technical work with the degree of Diploma in Electrical, Electronics and Technician.

Optical company recruits Un-Skilled level workers such as Packing men, Helpers, Sweepers and Security men through contractors, no specific qualification required for that. The Semi Skilled category people like Machine operator, Fitters and Diesel Mechanic both for operation and as well as technical are hired through employee references and local newspaper. The qualification required for the manpower is certification of the course of Fitter, Machine operator, Mechanic and Refrigeration and Air Conditioning. In case of technical people they mostly prefer to hire ITI pass-out students. They gave advertisement in local newspaper to get the skilled people and also through employee references recruitment happens for Supervisors, Diploma Engineers, Office Staff and Clerical staff. The qualification required for the same is graduates, diploma engineers or graduations in commerce. In case of High Skilled category people Managers and Engineers, recruitment is done through ads in national newspaper, employees references and job portals like Naukari.com. All of them should have degree of either BE, B.Tech, MBA, M.Sc Chemistry or M.Sc Physics.

Company is looking for male candidates because of night shifts and physical hard work is required. Also company is more dependent on specialized manpower from Mumbai, Bangalore and Chennai.

3.2.2.2.9.3 Demand Side Skill Requirement

Table 79: Human Resource Requirement of Miscellaneous

Miscellaneous		
Category	2012-2017	2017-2022
Skilled	316	367
Semi Skilled	1729	2256
Minimally Skilled	1064	1388

Semi Skilled	Skilled
AC Repair	M.Sc Chemistry
Fitter	M.Sc Physics
Technician	Electrical & Mechanical –ITI Pass out

Source: Dexter Analysis

3.2.2.2.9.4 Organizational Training Practices

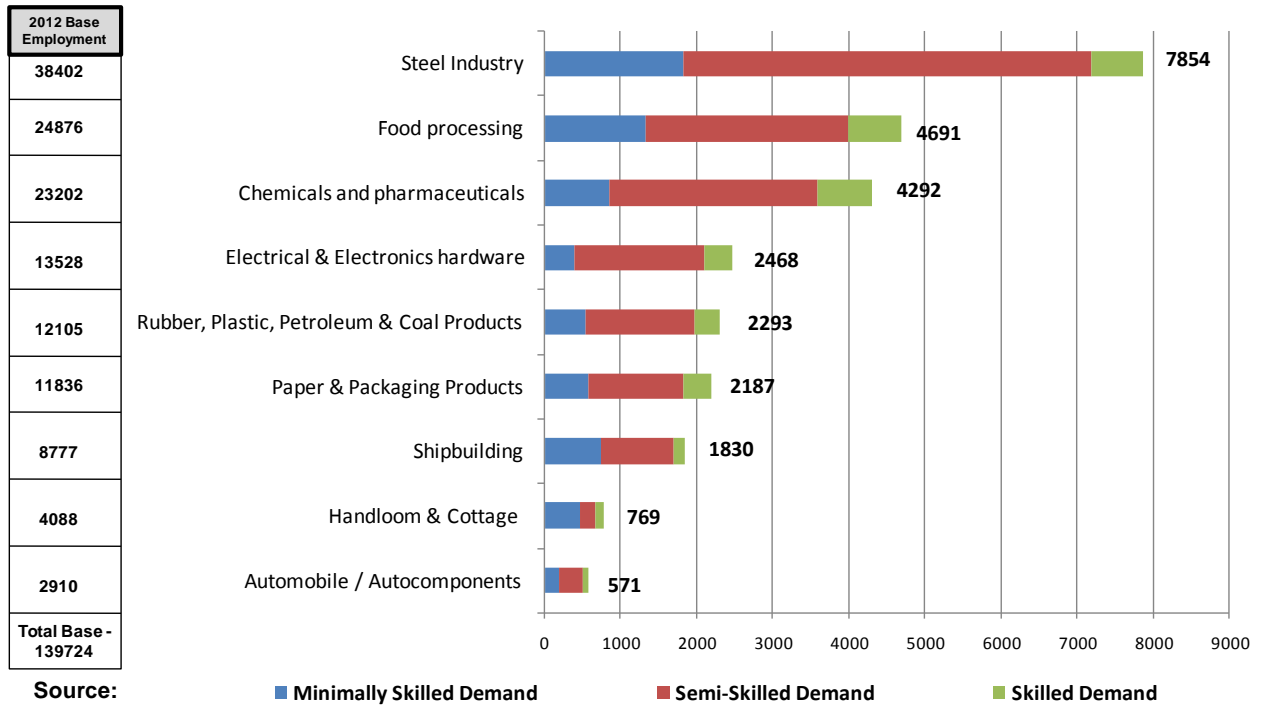
Large FMCG company provide OJT, classroom training, general and specific training to their employees. They provide in-house and as well as out sourced training. The training provided for personality grooming, presentation skill, communication skill, behavioral training, Basic Computer (MS Office) and understanding of English. As they have majority of the work related to Automation and all related documentations are in English language.

One of the large companies of lens manufacturing provides in-house training; they conduct personality development, behavior and soft skill development programs for their employees. They also organize seminar which is conducted by outsiders. They provide practical as well as theoretical training because the nature of this industry is different and also employees are getting opportunity to go outside state or country for learning new skill and production technique. Company provides need based training to Aspirants and employees. Sometimes OJT is also provided to employees. The training held for 6 month or a year depends on the requirement.

3.2.2.2.11 Incremental Human Resource Requirement in Manufacturing Sector

Now, when we add up the skill requirements for 2012-17 as well as 2017-22 for all the above manufacturing sectors, the total skill demand across the 3 skill levels in the manufacturing sector stand as follows:

Figure 36: Incremental Human Resource Requirement in Manufacturing Sector for the Year 2012-2017



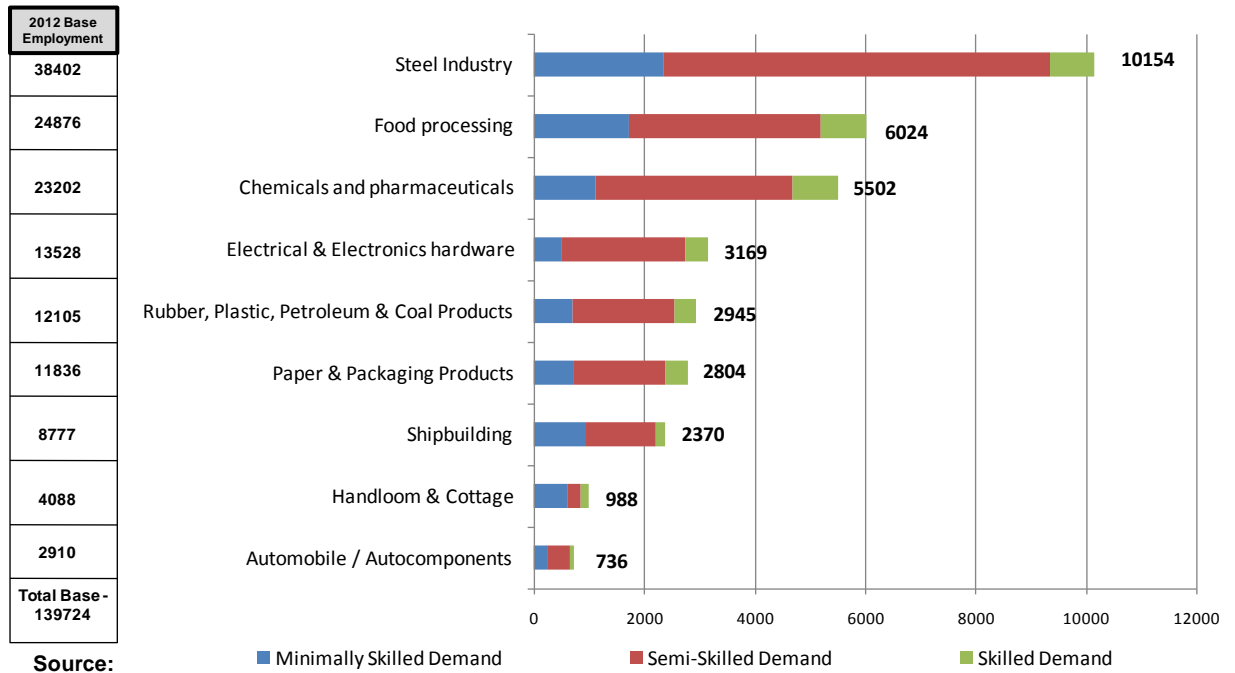
Source: Dexter Analysis

Table 80: Incremental Human Resource Requirement in Manufacturing for the Year 2012-17

Skill Level	Demand – Manufacturing
	(2012-2017)
Skilled	2302
Semiskilled	11164
Minimally Skilled	4848
Total	18315

Source: Dexter Analysis

Figure 37: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22



Source: Dexter Analysis

Table 81: Incremental Human Resource Requirement in Manufacturing for the Year 2017-22

Skill Level	Demand – Manufacturing
	(2017-2022)
Skilled	2681
Semiskilled	14569
Minimally Skilled	6327
Total	23578

Source: Dexter Analysis

3.2.2.3 Services Sector

North Goa is a district where the ratio of foreign tourist is higher as compared to South Goa. Higher presence of 5-Star Hotels and also beaches at a district and hence Hospitality dominated the service sector. Panaji is a capital of state of Goa which is a head-quarter of North Goa and also is one of the major points of attraction among the tourists.

The key industrial cluster in this district includes:

1. Tourism, Hospitality & Travel
2. Educational Institute
3. Real Estate
4. Banking
5. Retail
6. Transportation/Logistic/Warehousing & Packaging
7. IT/Software&IT enabled services

These are the sectors that constitute largely of the huge companies in the district. So, the focus has mainly been laid on interviewing companies in these sectors.

HOSPITALITY

3.2.2.3.1 Hospitality

At North Goa district, as it the main centre of tourism activities there are large number of hotels, restaurants, spa and resorts with the various facilities like accommodation, salon, gymnasium, spa etc. The existence of large numbers hospitality industries is at Calangate, Baga, Candolim and at Panaji, where excluding Panaji all are beach destination and Panaji are well appreciated for Back water activities. Majority of the human capital at Hotels are from urban area and male candidate are more as compared to female one. Grand Hyaat, Marriott, Taj Vivanta, Hilton are some of the famous international hospitality chains. Major large player has presence in both the district or have the expansion plan in coming years. Density of large as well as small is way high then the normal tourist destination. As Goa is the famous destination for Film & Advertisement shooting indirectly it help the Industry to grow.

3.2.2.3.1.1 Sector Overview

Some of the prominent player types in this sector in this region are as follows:

- 5-star & 3-star deluxe hotels
- Other star hotels
- Smaller hotels and lodges
- Spa

Here, we met the HR Manager of The Grand, a five star hotel in Goa. The hotel stands with a total strength of 210 employees of which 30 are in managerial level and 180 employees are in non-management level of the total strength in the hotel, 60% employees are the local residents of Goa. The sex ratio amongst the employees was observed around 90% males and 10% females.

- Accommodation department consists of Front Office & Housekeeping. Total employees in Front Office are 12. Similarly Housekeeping consists of 30 employees in which 4 Housekeeping Supervisors, 14 Room attendant, 16 Room Boy, 10 executive House keeper rest other Staff and they monthly paid of Rs. 5000-10000
- F&B Department consists of F&B Service and F&B Production. F&B service has 50 employees and F&B production has 45 employees. In F&B production & service, they have the following hierarchy:
 - The Manpower structure in F&B are Comee3 - 10 -> Comee2 - 10 -> Comee 1 - 3 -> DCOP - 5 -> CDP - 6 -> Sous Chef - 4 -> Junior Executive Chef - 5 -> Sr. Executive Chef - 1 -> Executive chef - 1 rest helpers
- In F&B Production:-Here salary structure of employees sous chef, CDP, DCDP, are monthly income is up to Rs. 10000-20000 and comee-1, comee-2, comee-3 and they get RS. 10000-15000.

We met one of the three starResorts named Highland Beach Resort at North Goa where Personnel officer briefed us about all the details of company. He mention that Resort has 220 rooms with total 183 employees, of which 16 are on management level and rests 167 are on non-management level.

- F&B Production and Service department of the company is having 72 employees. Out of which 10 are on management level while rest do non-management work. There are 8 people who are at Front office from which 1 Manager and 2 Executives. Apart from that there are 1 F&B Manager, 2 F&B Executives, 2 Chefs and 2 Restaurant Manager at highly skilled category. The company does not face attrition at this department. The salary provided to them is Rs. 15000-20000. At skilled category, there are 4 Captains, 19 Comee 1, Comee 2 and Comee 3 and 5 Front office assistant with 0 attrition rate and salary offered to them is in the range of Rs. 7000-10000. There are 19 Stewards at semi skilled category with very low 2% attrition rate with salary of Rs.7000-8000 per month. Also they have 15 utility staff at un-skilled category with 2% attrition with salary of Rs.5000-7000 per month.
- Unit-2 consists of 37 people at Housekeeping, 20 at Maintenance, 20 at Gardener and 24 at Security. At management level, there are only 2 employees and rests 99 are at non management level. There are 1 Housekeeping Manager and 1 Engineer at highly skilled category with salary in the range of 15000-20000. At skilled level 2 Housekeeping Supervisors, 1 Garden Supervisor, 1 Security officer and 3 Security Supervisors are present with salary in the range of Rs. 7000-10000. The semi skilled level has 2 Attendants, 4 Plumbers, 7 Electrician, 1 Telephone operator, 1 TV Mechanic and 1 Painter with salary of Rs.8000 per month. Lastly, un-skilled category has 20 room-boys, 7 pool-boys, 9 Sweepers, 10 Gardener, 5 General Helpers and 20 Security Guards with 2% attrition and Rs.5000-7000 offered to them per month.
- There are 5 Accountants, 2 HR and 3 Storekeeper at Unit-3 of which 4 are at management level and rests are at non-management level. The high skilled category covers 1 A/c Manager, 1 A/c Executive, 1 HR manager and 1 Store Manager with the salary of Rs.15000-20000. The skilled category people involve 3 Account Assistants, 1 HR Assistant and 2 Store Assistants with the salary of Rs. 7000-10000 per month.

The Hotel is facing overall 2% attrition rate which is negligible for them as said by the Personnel Manager and also majorly at unskilled category. The reason for low attrition is that they provide all the facilities to the employees with reasonable salary to free breakfast, lunch, dinner, accommodation, uniform and service charge which is 10% of sale (around Rs. 500 – 1000 per month). All these benefits make employees more responsible, honest and loyal to their work. The growth rate expected by them in terms of Human Resource is 30% at all the categories. The major growth driver for manpower is that Resort is going to expand their operation in coming 10 years down the line.

Apart from that the, Chief Operation officer of one of the small scale Hotel briefed us about all the skill categories at departmental level. They have total 42 employees working at Hotel of which 9 are on management level and 33 are on non-management level.

- Unit-1 of Hotel includes F&B Service, Production and Front office staff. Out of total 19 working at this Unit, 6 are on management level and 13 are on non-management level. At highly skilled level company has 2 Executives, 1 Restaurant manager, 1 Comee and 1 chef with 20% attrition rate and salary provided to them is in the range of Rs. 20500 to 60000. At skilled category, there are 2 Front office Assistant and 3 Cook with 20% attrition rate and with the offered salary Rs. 12500 to 20500. There are 8 stewards with 20% attrition with the salary of Rs.7500-12500.

- Housekeeping and Maintenance department includes in Unit-2 of which 2 are on management level and 14 are on non-management level. At highly skilled category, there is 1 Housekeeping manager and 1 Engineer with 20% attrition and salary is in the range of Rs. 20500-6000. The Skilled category includes 2 security officers with the 20% and the salary of Rs. 12500-20500. At Semi-skilled category there is 1 Electrician and 1 Plumber with 20% attrition and Rs.7500-12500 salary. The un-skilled category include 7 Room boys, 1 Gardener, 1 Sweeper and 1 pool-boy with 20% attrition and the offered salary to them is in the range of Rs. 5500-7500.
- Accounts and Purchase department counts in Unit -3, where the total working employees are 7 of which 2 are on management level and the rest 5 are on non-management level. There is 1 Account Manager and 1 Purchase Manager with attrition of 20% and the salary offered to them is in the range of Rs. 20500-6000. The skilled category includes 1 store manger and 3 Account managers with attrition rate of 20% and the salary of Rs. 12500-20500. At semi skilled category, there is 1 Store manager with 20% attrition and the salary of Rs. 7500-12500.

The company is facing overall 20% attrition rate which is a major issue for them but they quickly fill in the gap. The reason for the same stated by Officer is that as the Goans are lazy people and also wants to make money faster, due to which they switch over to other job even though they get negligible increment. So the Hotel managers apply the tactical strategy that in off season they ask many of their employees to leave. The Officer expects the growth rate is 25% for the coming 5 years for all the skill category levels. As far as growth drivers are concerns they responded that they are looking forward to improve current attrition problem and upgrade their quality with loyal employees.

3.2.2.3.1.2 Hiring Practices

The un-skilled category people such as Room-boys, Housekeeping, Utility, Gardner, Pool-boys, Sweepers and general Helpers are hired through direct walk in interview, through employee reference and ads in local newspaper (Navhind Times). All of them should be of 10th pass-out. The semi-skill and Skill level category employees are hired through the same source. The workers in semi-skilled category are Stewards, Storekeepers, Securities, Painter, Housekeeping Supervisors and Garden Supervisor with the minimum qualification of 12th pass-out with good command over English language and also experienced candidate is given more priority. The people at technical field such as Plumber, Electrician, Technician, Telephone operator, Attendant and TV mechanic; all of them were ITI or VTI pass outs. The posts for Skilled category are Assistant, Front office Assistant, Accountant, Storekeeper, Cook, Comee 1, Comee 2, Comee 3, Supervisor, Captains, security officer and Store Assistant with Graduation or work experience. The Highly Skilled category people hired through direct walk in interviews and through employee references for the position of F&B manager, Account Manager, Chef, Purchasing manager, Store manager, Store manager, front office manager, executive, Account executive, front office executive, F&B Executive, Restaurant manager, HR manager and Engineers with management degree and experienced candidates are more preferable.

The priority is given to females for the post of Front office Assistant, Account Assistant and Sweepers.

The small scale Hotels do recruitment of unskilled category workers such as Gardner, Pool-boy and Sweeper through direct walk in interview and by giving ads in newspaper (Navhind Times) with minimum qualification of 12th pass. They recruit semi skill operation people through manpower consultancies such as Sai Consultancy and

also by ads in newspaper for Security men, Stewards and Housekeepers. For this category candidates should have experience and good communication skill with diploma education qualification. However, work performance matters more than degree. The semi-skilled technical category requires some diploma with experience of Plumber and Electrician. At Skilled category recruitment happens through manpower consultancy and ads in newspaper with minimum qualification of graduation with practical knowledge. The post require for the same is front office assistant, Accountant, Storekeeper, Cook and Purchase Assistant. The high skill category involves Front office staff, Restaurant Manager, Accountant Manager, Engineer, Chef, Purchase manager and Front office Executive with qualification of PGDM or MBA with experience.

3.2.2.3.1.3 Skill Requirement

Table 82: Human Resource Requirement of Hospitality Sector

Hospitality Sector		
Category	2012-2017	2017-2022
Skilled	9448	12105
Semi Skilled	12155	16261
Minimally Skilled	2812	3936

Minimally Skilled	Semi Skilled	Skilled
Gardeners	Stewards	Room Attendants
Kitchen Cleaner	Room Housekeeping	Captains
Common Area Cleaners	Comee	Chefs, Sous Chef

Source: Dexter Analysis

3.2.2.3.1.4 Organizational Training Practices

As per the Manager, they are satisfied with the current employees as they are well trained, experienced and loyal which results in better performance. Resort provides OJT to Housekeeping and F&B department employees. The in house training lasts for 3-6 months depend upon the requirement.

The small scale Hotels provide both need based as well as induction based training to their staff. They provide in-house training which lasts for 3 hours and organized on half yearly. They also provide training in form seminar which focuses on future prospects.

EDUCATIONAL INSTITUTES

3.2.2.3.2 Educational Institutes

At North Goa, the main educational Hub is Panaji, where impact of Tourism reflects in the type of education provided and aspired for. Entire educational sector is dominated by Hospitality related and management education. Goa University, Goa Medical College, Institute of Hotel Management (IHM), Goa Institute of Management (GIM), Goa Engineering College etc were the nationally acclaimed Institutes and all of them has the presence in North Goa which makes it an important destination for Education within Goa as well as bordering district. Vocational educational centers also have good presence in North Goa. Mapusa and Farmagudi are also emerging as an educational center for the North side of the North Goa district.

3.2.2.3.2.1 Sector Overview

The Large and medium size Institutes covered by our Research team. Where, one of the large scale Institutes has total 152 staff of which 49 are on management level and 104 are included in non-management staff. Among teaching staff 10 are on contract basis and 47 among non teaching are on contract basis.

- The Unit 1 includes 56 teaching staff and all are on non-management level. At highly skilled category there are 56 Professors with the salary as per the UGC norms or Goa Government.
- The Unit 2 includes 47 teaching staff and all are on non-management level. The skilled category people include 1 Head Clerk, 1 Accountant and 4 ADC. The Semi-skilled category people include 8 Lab Assistants, 1 Technician, 1 Store keeper, 3 Junior Programmers, 1 Collector, 1 Junior Stenographer, 2 Library Attendants and 4 Laboratory Attendants. There is 1 Sweeper, 1 Gardener and 2 Watchmen at un-skilled category.
- Unit 3 of the Institute includes 49 employees; all are at management level such as 5 are at IT department, 10 at Administration, 5 for Tiger Studio, 13 for Sports, 2 for Tiger's Co-operatives, 6 at State department, 7 Support Services and 1 principal. All of them are at highly skill category.

The Laboratory Assistant gave detailed overview of the Large scale Institute. According to him there is a negligible impact of attrition on Institute. The reason behind such a low attrition rate is that anybody hardly wants to leave a government job either he is on contract basis or he gets better opportunity but this happens rarely.

At small scale Institute, Principal informed us about department details. They have total 86 employees of which 51 are teaching staff and doing management task while 33 are non-teaching staff and doing non-management work. Among non-teaching staff, 13 were on 1 year contract basis and 31 teaching staff were on contract basis.

- Unit 1 includes teaching staff, strength of which is 53 and all are on management level. The highly skill category include 16 Commerce Professors, 7 Economics and Banking staff, 2 Mathematics and Statistic professor, 1 English, 2 for Law, 1 IT Professor, 1 Geography and EVS, 8 for BCA, 5 for BBS and 4 for M.com. The Skilled category includes only 1 Sports teacher and semi skilled category include 1 IT lab Assistant, 3 BCA Lab Assistant and 1 Librarian. The salary provided to them is as per UGC or Goa Government norms.

- 15 Non-teaching office staff includes in Unit 2 of which 14 are on management level and 1 is on non-management level. The highly skilled category people include only 1 principal and skilled category includes 14 Administration department people, Accountant and Clerk.
- There are total 14 employees which includes 8 Peons and 10 Sweepers at Unit 3.

The Institute do not face attrition rate. The reason for zero attrition is that hardly very few employees left the job and those who left are on contract basis and in entire 1 year.

3.2.2.3.2 Hiring Practices

One of the large Institute of North Goa, recruit unskilled employee by giving ads in national university newspaper and local newspaper such as Navhind Times and Gomantak. The un-skilled category includes Peons, Sweeper, Gardener and Watchmen, all should be minimum 10th pass. The Semi-skill operation people are library Attendants, laboratory Attendants, Junior Stenographer and Collectors. The skilled category are hired through the same source for the post of Head Clerk, Lab Assistants, Accountants, Technicians, Store keeper, Junior Programmer, UDC and ADC. The highly skill category include only Professors.

The un-skilled category people at small scale Institute are hired through employment exchange and ads given in local newspaper Navhind Times and Gomantak. The requirement of peons and Sweepers with 10th passes qualification. The semi skilled staffs such as Librarian and Lab assistant are hired through National and local newspaper ads, the qualification require for the same is as per PR and Goa Government rule or criterion. The skilled category includes office department and account department staff and the highly skilled category people are Professors. The recruitment of all category people is happens through the same source.

3.2.2.3.3 Skill Requirement

Table 83: Human Resource Requirement of Education Institute

Educational Institute		
Category	2012-2017	2017-2022
Skilled	185	234
Semi Skilled	88	115
Minimally Skilled	349	474

Minimally Skilled	Semi Skilled	Skilled
Sweeper	Lab Assistant	Head Cleark
Peon	Stenographer	Accountant
	Professors	Principal

Source: Dexter Analysis

3.2.2.3.2.4 Organizational Training Practices

The Institute provides induction training to all the new joiners and it is organize just before one day of session starts. They held training on yearly basis.

The small scale Institute does not provide any kind of training for their staff.

REAL ESTATE

3.2.2.3.3 Real Estate

Goa is over looked as an investment as well as tourist destination by other specially North Indian and Mumbai people. It is famous for luxury apartments and Villas. Porvorim is emerging as a place where real estate is active. It emerges that Hinterland real estate is developing some of the Government department is also promoting Hinterland development.

3.2.2.3.3.1 Sector Overview

The manager of one of the small scale company informed us enough about the organization. As per him the total employee strength is 19 of which 1 are on management level, 10 are on non-management level and rest 8 are on contract basis.

- Maintenance department of the company have total 11 employees working, of which 1 is at management level and rests are on non-management level. At highly skilled category there is 1 Manger with Rs.15000 salary. At skilled level, there are 2 Accountants with Rs. 10000 salary and 1 Salesman with Rs.12000 salary. The semi-skilled category includes 1 Receptionist with Rs. 8000 salary and 2 Clerical Staff with Rs. 10000 salary. There are 4 office boys with Rs. 6000 salary at un-skilled category people.
- Another Unit consists of 8 working employees all of them are on non-management level. The semi-skilled category includes 2 Electricals with salary of Rs. 350 per day, 4 Painter with Rs.400 per day and 2 Security men with Rs.325 per day.

For the company, attrition rate is not an issue as it is zero percentage. The reason for no attrition is most of the people are satisfied with organization structure.

The small scale company in Real Estate Industry has 11 out of which 1 on management level and rest 10 are on non-management level.

- There are 2 employees at Purchase and Sales department, both are on non-management level. At skilled category there is 1 Purchase manager with Rs.15000 salary and 1 Sales Manager with Rs. 15000 salary.
- Account department of the company has 2 employees both are on non-management level with Rs. 20000 salary.
- Unit 3 of the company includes, 8 employees of which 1 is on management level and the rest are on non-management level. At highly skill category there is 1 manager, 1 Receptionist at semi-skilled category with Rs. 7000 salary, at un-skilled category there is 1 Security man and 4 drivers.

Overall they are facing zero attrition. So it is not a much issue for them.

3.2.2.3.3.2 Hiring Practices

The company hires un-skilled category people such as Office boys by giving ads in local newspaper like Navhind Times with 10th pass out. The Semi-skilled category people like Clerk, Receptionist, Electrical, Painters and Security men are hired only who have qualification of 12th pass out with some experience. The skilled category people are hired only throes who have degree of B.Com graduate for the post of Sales and Accountant. The highly skilled category Managers are hired with the degree of B.Com and have experience.

The small scale Real Estate Company recruits un-skilled category people such as Driver and Security men through direct walk in interview and by ads giving in local newspaper. The candidate should be experienced enough for the post. They give ads in Herald and Navhind Times. Receptionist comes in Semi-skilled category and hired through ads given in newspaper and direct walk in interview with minimum qualification of 12th pass out. For semi skilled technical category diploma civil is require for maintenance work. For skilled category require Accountants, Purchase manager and Sales manager with Graduation in B.Com. The highly skilled category requires Manager with experience in the same field.

3.2.2.3.3.3 Skill Requirement

Table 84: Human Resource Requirement of Real Estate Sector

Real Estate		
Category	2012-2017	2017-2022
Skilled	230	254
Semi Skilled	690	762
Minimally Skilled	3679	4061

Minimally Skilled	Semi Skilled	Skilled
Gardeners	Receptionists	Accountant
Housekeeping	Security Guard	Domain Experts
Electrical		

Source: Dexter Analysis

3.2.2.3.3.4 Organizing Training Practices

In majority of the cases, Real Estate companies do not provide internal training to their employees.

BANKING, FINANCIAL SERVICES & INSURANCE

3.2.2.3.4 BFSI

For entire Goa Panaji is the epicenter of all the Banking and finance related services. For the state majorly all the main branches are located in Panaji only.

At North Goa Taluka wise numbers of Banking Offices are shown in below table:

Table 85: Taluka Wise Number of Banks at North Goa district

Taluka	2011-12
Bardez	137
Bicholim	27
Pernem	22
Ponda	65
Satari	11
Tiswadi	120

Source: Economic Survey 2012-13

3.2.2.3.4.1 Sector Overview

One of the famous and reputed large scale Bank has employee strength of 25 of which all are working on management level. The Sr. Divisional Sales Manager of the Bank said that male female ratio is like 90:10 and they hired 100% skilled human resource, all from urban area.

- The finance department has 6 employees working at skilled level. It includes 1 Senior Divisional Manager, 3 Business Development Manager and 2 Support Staff, all with 10% attrition.
- At Agency department, 2 units are working with total 13 employees. The high skilled category includes 1 Deputy Senior Agency Manager. Company has 10 Unit Manager at skilled level and 2 Support Staff at minimally skilled level. The attrition rate faced by each of skilled levels is 10%.
- Meaning Processing Centre (MPC) has 3 employees who work for different posts. 1 Assistant Manager and 2 Executives are there with 10% attrition rate.

The company is facing 30% attrition rate on overall basis which is a moderate issue for their organization. In reason of employee left the job, the Divisional Sales Manager response that these people are the ones who can

not able to cope up with the performance level of the company. The expected human resource growth rate for the company is 25% in coming 5 years and 55% in coming 10 years.

The Banks which we visited are situated at the Panjim, Goa. The Bank has total 11 employees all of them are working on Management level.

- Unit 1 consists of total 5 employees of which 1 FMG Head, 2 are Clearing Officer and 2 are Cashier Service Officer. At Skilled category level there is 1 FMG with 2% attrition and Rs. 15000 salary, 1 Clearing Officer with 2% attrition and Rs. 15000 and 3 Cashier with 2% attrition with Rs. 15000 salary.
- There is only 1 employee working at operation department with 2 % attrition and Rs. 15000 salary.
- Sale department of the company has 5 employee, all are on management level. At skilled category company has 2 employees for direct sale with 2% attrition and Rs. 15000 salary, 3 are branch sales manager with 2% attrition and Rs.15000 salary.

Though overall attrition faced by the company is 10%, the attrition problem is not at all serious concern for the company. The reason for the same is good facilities provided by the company, good work-culture and also the company is employ-centric as said by the Manager of the company. As far as human resource growth rate is concern, the company Manager expects 50% growth rate in coming years as they are planning to open new branches.

3.2.2.3.4.2 *Hiring Practices*

Large Banking Organization hires skilled category people through Job portals such as Naukri.com and Newspapers such as TOI, Tarun Bharat and Navhind Times. Apart from that they also recruit through personal references and contacts of high profile people. The minimum qualification require for the company is graduate with specialization in Marketing and along with that minimum of 1 year field experience.

In case of Banking Industry, majorly they don't hire un-skilled, semi-skilled and highly skilled category people; they only recruit skilled category people. The HR recruits skilled category people through employee reference and direct walk in interview. The requirement for MBA qualified person who is from finance background and have a banking experience.

3.2.2.3.4.3 Skill Requirement

Table 86: Human Resource Requirement of BFSI Sector

BFSI Sector		
Category	2012-2017	2017-2022
Skilled	173	219
Semi Skilled	59	77
Minimally Skilled	59	110

Minimally Skilled	Semi Skilled	Skilled
Floor Staff	Cashier	Divisional Manager
Business Development Manager		

Source: Dexter Analysis

3.2.2.3.4.4 Organizational Training Practices

Large Bank provide induction based in house training to their employees. Along with that they also provide OJT and the duration of the training is 1 week with approximately Rs. 40000 training cost.

The small scale Bank provides OJT to their employee which lasts for 1 week. The training which conducted by Bank is in-house and induction based which costs Rs.4000 to the organization.

RETAIL SECTOR

3.2.2.3.5 Retail

North Goa has a presence of Retail sector in a limited area which is either at taluka centre or beach side. Panjim & Mapusa are the area where organized retail is present. There is only one Retail shopping mall present in North Goa and very few hyper marts. As far as organized retail is concern there are multi branded and single brand readymade outlets, grocery stores, electronics shops both Branded single brand and multi branded stores and shops. As Goa is famous for beach tourism there many unorganized retail store which is present near the famous beaches. In organized retail, majorly local Goan works who are mostly from urban areas.

3.2.2.3.5.1 Sector Overview

The assistant HR of the large shopping mall briefed us about the various departments of the company. Entire mall has employed around 200 people out of them 60 to 70 people are employed for company work and some other business area within Retail mall. Company involved few things like overall mall maintenance, management and also they have a restaurant within Food court.

- In Administration section majorly people falls in the High Skilled to Skilled category. It has the division Sales & Marketing wherein one person each work as a Marketing Manager, Assistant Manager, Event Coordinator and customer executive. Human resources, Finance, Information Technology etc are the other section where people who are highly skilled to skilled are employed. Typically works of them are of management. As the administration section also looks after the overall group's (It also have different company from construction to manufacturing and from trading to real estate) function so the exact number of people are employed for specific Retail is difficult to estimate. This section see very less attrition below 2%
- Housekeeping department is outsourced where 10 people work.
- Maintenance department has 5 to 6 people all are skilled to highly skilled people. There are one supervisor, one maintenance in-charge and rest others are Assistant electrician who are generally GTM. It doesn't have any attrition.
- One restaurant which is owned by Group Company has around 40 people wherein it is further breakup into F&B – Services, F&B – Production and overall management. Within Management there are one manager, one assistant manager and one supervisor who are skilled to higher skilled people. In F&B – Service One Manager is there for overall management and direct dealing with customers there are also 10 stewards. In F & B – Production there are one senior Chef and four chef de partie (CDP) they are higher skilled to semi skilled. In utility there are four people who are unskilled. Restaurant faces issue of attrition in the Skilled, Semi skilled and unskilled people which is overall at 10-15%.

Salaries were not disclosed as per the company policy. Attrition is less because of the fact that it is the largest mall and maximum people are employed is from Goa. According to Assistant HR Manager the company expects good growth as the retail sector is overall growing in Goa and now people prefer the place where their all shopping needs are fulfilling.

The store manager of the small scale Retail outlet informed us about the organization. Out of total 7 employees, 1 is on Management level and rests 6 are on Non-management level.

- The Admin and Staff department has total 7 employees of which 1 is on Management level and rests 6 are on Non-management level. At Highly Skilled category there is 1 Manager with the salary in the range of Rs. 35000-4000. The Skilled category people include 1 Fashion Consultants with the salary of Rs. 10000-12000. The Semi-Skilled category people include 2 Front Desk employees with the salary of Rs.2 10000-12000.

The overall attrition rate faced by the company is 1% and which is moderate issue for the Store. The reason for employee left the organization is better opportunity at some other place. The Manager expects 40% growth rate in human resource at highly skilled category.

3.2.2.3.5.2 Hiring Practices

The Minimally skilled people such as housekeeping, security staff as it is outsourced to some agency so they don't involved in recruitment process. It is completely on Contractor to provide people. Utility people of the Restaurant they get from the direct walk-in's and internal references. The semi skilled category people at different section hires from direct Walk-in, Manpower consultancy, through internal references and through advertisement in local newspaper. As far as technical people like ITI's and Mechanical or Civil Engineers are concerned they get it from the same route from where they are getting semi skilled people. Now a day they are also focusing on recruiting from colleges of Goa the students who are doing BBA and Basic graduation courses. However for the skilled and highly skilled workforce hiring Newspaper and Internal references are used.

The company hired people through employee reference, manpower consultancy and word of mouth. For Unskilled category they require sales people which have experience in the same field. At Semi-Skilled operation category front-desk and maintenance people are required. The Semi-Skilled technical category includes electrician candidates with experience. Managers are required at skilled category with degree of 12th pass.

3.2.2.3.5.3 Skill Requirement

Table 87 Human Resource Requirement of Retail Sector

Retail Sector		
Category	2012-2017	2017-2022
Skilled	225	236
Semi Skilled	449	472
Minimally Skilled	1573	1653

	Semi Skilled	Skilled
Loader / Un-loader	Front Desk Operator	Fashion Consultants
	Customer Executive	Marketing Manager
		Event Co-coordinator

Source: Dexter Analysis

3.2.2.3.5.4 Organizational Training Practices

Each of the fresh people was given induction where Organizational structure, company policies and do's and don'ts, safety and roles and responsibilities are shared by the HR and the HOD's. Telephone atiquate training is given to the people who handles customer relation desk. There are other training which is on job training and it is basically learnt while on the Job which is given by HOD's and senior people from the related department. After every 6 months fire & safety training is given. All the training is inhouse. As Goa people are better on communication skills there are no major communication skill which is lacking but there are area where fresh people have to work is attitude, understanding of the client need

The company provide need based and induction based training to their employees. Although the training they provide is in-house only and it lasts for 3 days.

TRANSPORTATION/ LOGISTICS/ WAREHOUSING & PACKAGING

3.2.2.3.6 Transportation/Logistic/Warehousing & Packaging

3.2.2.3.6.1 Sector Overview

A small logistic company located on Verna Industrial area in this Industry. Service Executive provides the required information about the company. The company has total 6 employees of which 1 is on Management level and rests 5 are on Non-management level.

- At Operation department, logistic company has 2 employees, both are on Non-management level. At High Skilled category, there is only 1 Senior Executive and 1 Junior Executive at Skilled category with no attrition.
- The Import department of the company has 2 people working 1 is on Management and the other is on Non-management level. Senior Executive at High Skilled category and Junior Executive at Skilled level category.

As per the Manger, company does not face attrition issue. In case of human resource growth, they expects 5% growth rate in highly skilled category people. The only growth driver mentioned by them is Government policies.

3.2.2.3.6.2 Hiring Practices

The small scale logistic company gets skilled and highly skilled category people through direct walk in interview, through employee reference and by giving ads in local newspaper (Navhind Time and TOI). The requirements for the skills are of Senior and Junior Executives for Operations, Exports and Imports. The minimum qualification require at this category is graduation.

3.2.2.3.6.3 Skill Requirement

Table 88: Human Resource Requirement of Logistic Industry

Logistics		
Category	2012-2017	2017-2022
Skilled	74	95
Semi Skilled	728	949
Minimally Skilled	465	632

Minimally Skilled	Semi Skilled	Skilled
Loader / Un-loader	Truck Drivers	Operations Supervisor
	Crane Operators	Customer Service Executives
	Storage & Warehousing Executives	Operations Managers

Source: Dexter Analysis

3.2.2.3.6.4 Organizational Training Practices

The small scale companies in Logistics do not provide their employees any kind of internal training.

INFORMATION TECHNOLOGY & IT ENABLED SERVICES

3.2.2.3.7 IT and ITes

3.2.2.3.7.1 Sector Overview

At North Goa, we met few medium and small scale companies in IT industry at Punjim. The HR manager of the large scale company informed us that there are 71 employees of which 2 are on Management level and other 69 are on Non-management level.

- At HR department, there are 2 employees working of which both are on Management level and at Skilled category.
- At operation department, company has 40 employees working of and all of them are on Non-management level. At skilled category the 40 operators are working with the attrition rate of 3%.
- There are 29 people at Tele-caller and other departments. At Skilled category there are 28 people and 1 security men at un-skilled category with no attrition rate.

According to the HR Manager of the IT company, the overall attrition rate is 2% which is very negligible and not a serious issue for the company. Due to better opportunity sometimes employee left the job. They expects 100% human resource growth rate at skilled category and the reason for the major growth driver is employee satisfaction mentioned by the HR manager.

The HR manager of the small scale company said that company has total 55 employees of which 5 are on Management level and rest 50 are on Non-management level. The security men are on contract basis.

- Development and Support department of the company has 3 Management level employees and rests 44 Non-management level employees. The skilled category has 45 developers with 2% attrition and Rs. 10000 salary.
- The HR, Admin and Operation department has only 2 employees working at Management level. At skilled category company has 1 HR manager with 2% attrition and Rs. 15000-20000 salary and 1 operation manager with 3% attrition and salary in the range of Rs. 15000-20000.
- Company has 5 people working at Security department. At un-skilled category company has 1 Security men with no attrition and salary in the range of Rs. 15000-20000. There are 2 Housekeeping with 2% attrition and 2 Driver at 2% attrition rate.

For the small scale IT company the attrition is not a major concern. The HR manager expects 20% growth rate for highly skilled category in terms of human resource. The growth drivers could be stability and strength of employees and number of projects they get in coming 5 years.

3.2.2.3.7.2 Hiring Practices

The large scale IT company hired un-skilled category people through employee reference, job portals and by giving ads in local newspaper (Navhind Times). Security men fall under unskilled category and should have 12th pass as a minimum qualification. The skilled category includes HR and Tele-caller with 12th pass and for HR position MBA is require.

At small scale IT company the un-skilled and skilled category employees are hired through employee references, consultancies and by giving ads in National & Local newspapers. The un-skilled category people involve Security men, Housekeeping and Drivers. The skilled category involves developer, IT support, HR, Admin and Operations with minimum qualification of graduation.

3.2.2.3.7.3 Skill Requirement

Table 89: Human Resource Requirement of IT and ITes Industry

IT & ITes		
Category	2012-2017	2017-2022
Skilled	146	188
Semi Skilled	182	243
Minimally Skilled	198	269

Minimally Skilled	Semi Skilled	Skilled
Housekeeping	Technician	Software Developer
Driver		HR Manager

Source: Dexter Analysis

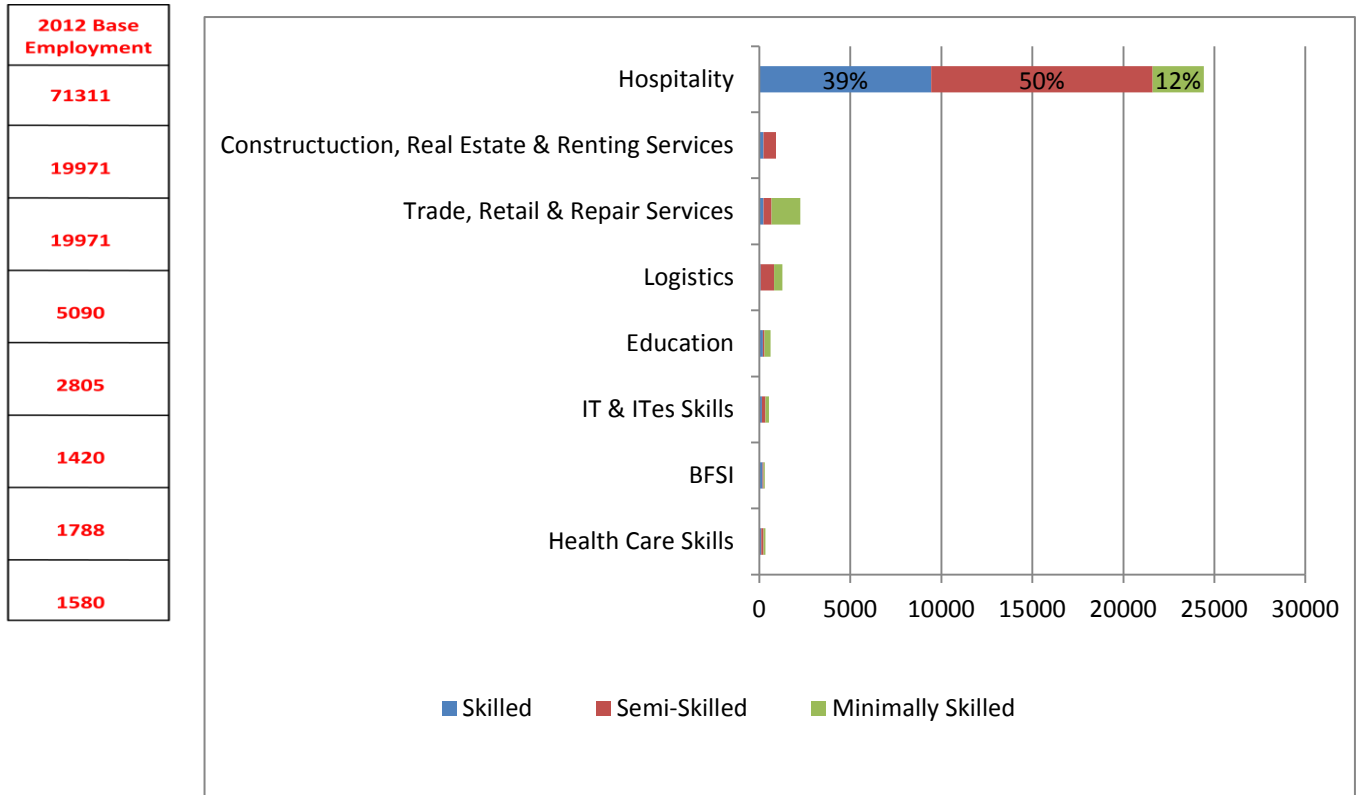
3.2.2.3.7.4 Organizational Training Practices

The IT Company provides both induction and need based training to their employees which could be either in-house or outsourced. The training lasts for 4 days and the target audience depends on the situation.

3.2.2.3.8 Incremental Human Resource Requirement in Services

The graph and table below shows the numbers estimated for each of the skill category in the service sector of Industrial scenario for the year 2012-2017 and 2017 -2022.

Figure 38: Incremental Human Resource Requirement in Service Sector for the Year 2012-17



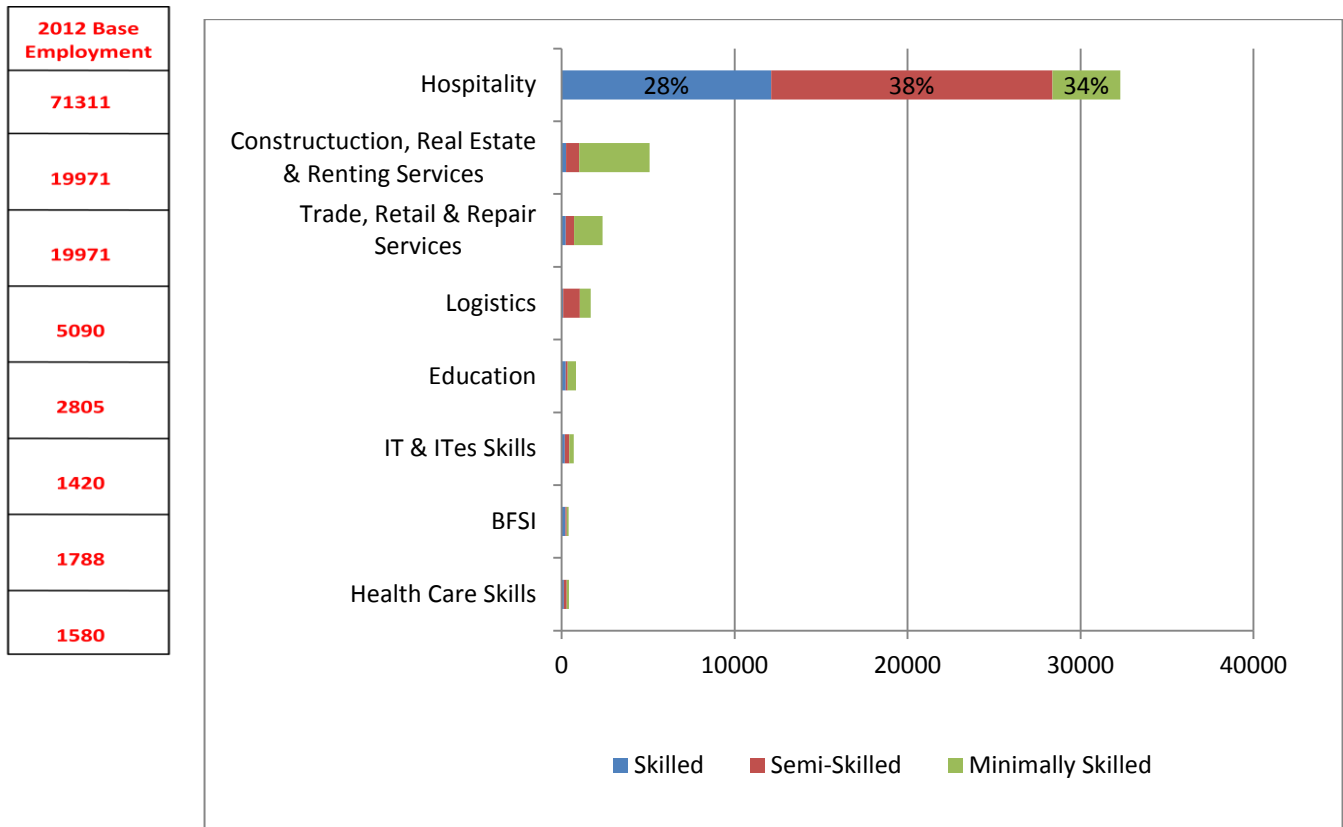
Source: Dexter Analysis

Table 90: Incremental Human Resource Requirement in Service Sector for Year 2012-2017

Skill Level	Demand – Services (2012-2017)
Skilled	10610
Semiskilled	14642
Minimally Skilled	9707
Total	34960
Total Base	126905

Source: Dexter Analysis

Figure 39: Incremental Human Resource Requirement in Service Sector for Year 2017-2022



Source: Dexter Analysis

Table 91: Incremental Human Resource Requirement for Service Sector for 2017-2022

Skill Level	Demand – Services (2017-2022)
Skilled	13492
Semiskilled	19235
Minimally Skilled	11821
Total	44547
Total Base	126905

Source: Dexter Analysis

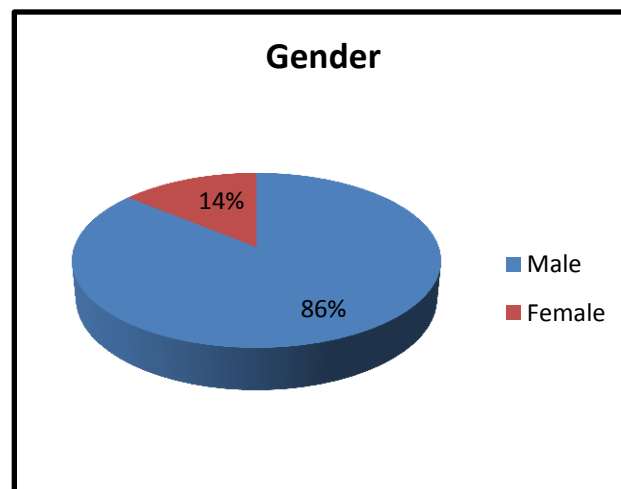
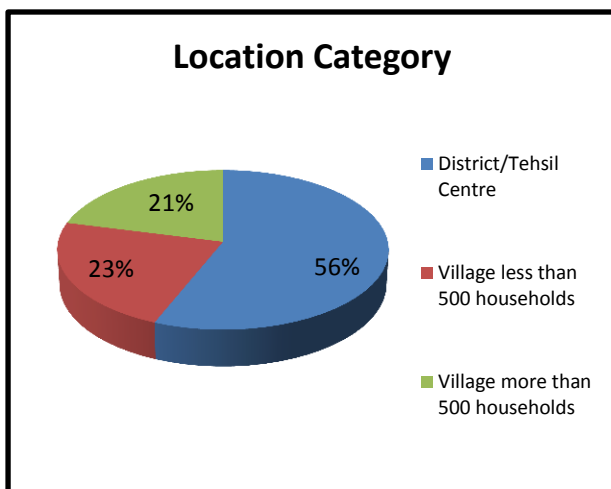
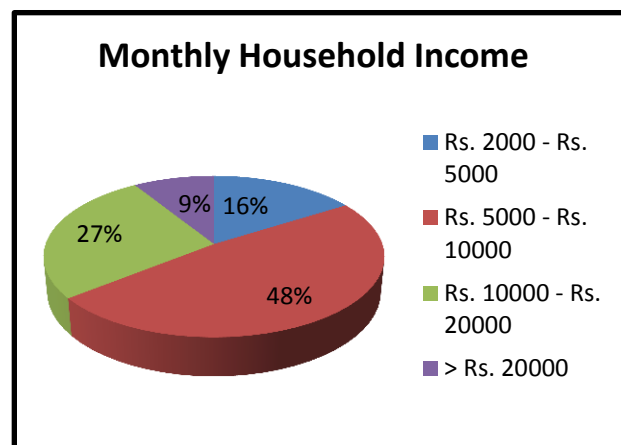
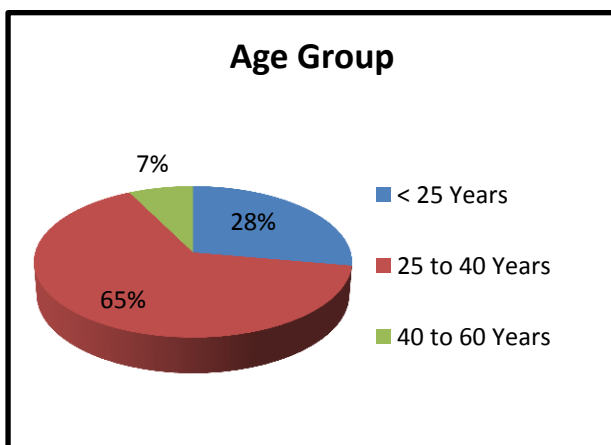
3.2.2.4 Unorganized Sector

The people who are into Self Employed category are interviewed in this section. This category includes people doing work related to Mobile Repairing, Automobile & Consumer goods Repairing, Beautician, Driver, Tailoring, Handicraft, Life guard etc.

3.2.2.4.1 Profiling Data

This section is divided in to two parts: It starts with the background of the respondent category and followed by work profile of the individuals.

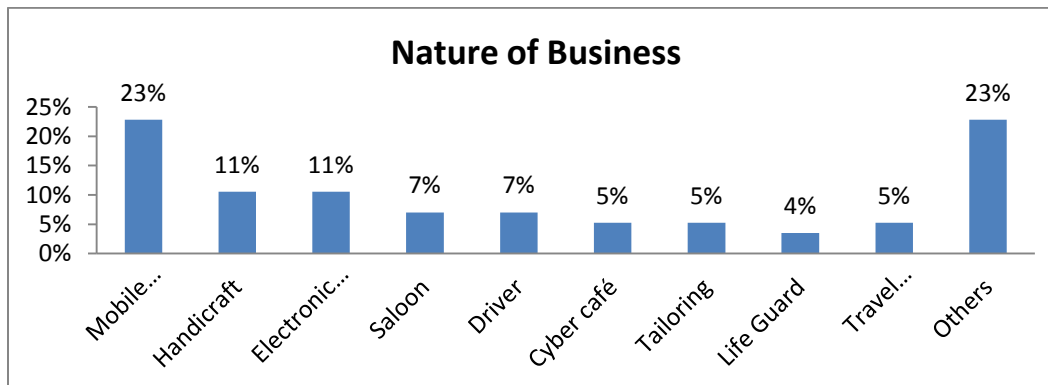
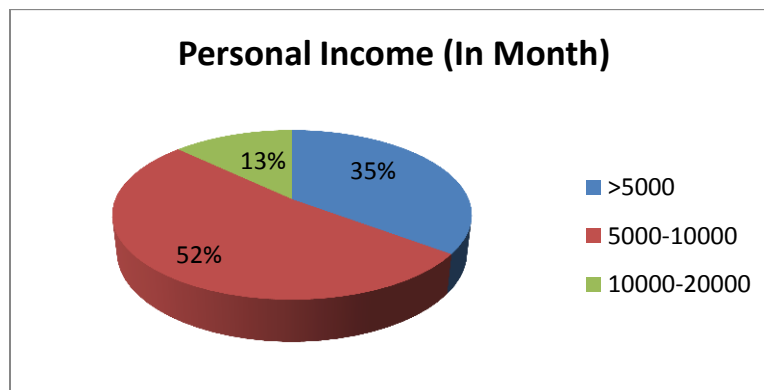
3.2.2.4.1.1 Background



Self Employment is a male dominated sector because of kind of businesses in this category such as Driver, Auto Repairing, Mobile & Consumer goods repair, life guard etc as mentioned above. However, as many famous beaches are located in North Goa such as Calaguate, Baga, Anjuna, and Miramer beach. Females are doing work especially in Handicraft as there is healthy demand from the tourist, other business area are Beautician etc.

3.2.2.4.1.2 Work Profile

Here, Majority of respondents earns in a range of Rs. 5000 to 20000 monthly. They are involved in diverse area of self employment related with service sector only. Mobile & Electronic repair, sales & services emerges as one of the common among respondent covered. Handicraft, Saloon (Beauty), Life guard, Travel agent & Guide are directly related with Tourism Industry which shows impact of tourism to some extent in self employment business. Other Businesses involved Bakery, Computer technician, Engraving, Laptop repair, Plumbing, Sales, Auto Mechanic, Photo editing, Shops of grocery, vegetable, and sweets.



3.2.2.4.2 Skills required to run a Business

There are mainly two kind of skills required to run any business successfully. The skills are Technical and Soft Skills. We also ask the person in charge related to current employees' lacking skill.

Table 92: Business Wise Skill Requirements – Self Employment

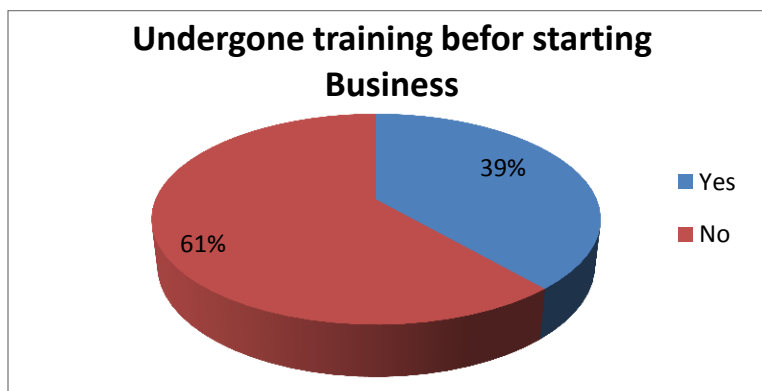
Kind of Business	Additional Issue	Required Technical Skill	Required Soft Skill
Beauty, Hair & Spa	They lacks in product, Hair style, Hair cutting, New massages knowledge and shaving	How to cut Hair, Bleach, Wax, Facial, Hair Straitening, Manicure , Pedicure, Massage, Saving, etc	Customer Behavior and How To Deal With Customers, Kindness, Politeness, Smile whenever required
Tailoring	Design Cloths	How to run Tailoring machine	Kind behavior with customers, understanding & fulfilling their needs
Driving	Knowledge of Taxi and Local areas	How to drive a vehicle and to know the Rules And Regulations	People Handling skills
Tour & Travel	-	Knowledge about an area and History of any particular place, Computer Knowledge	Customer handling Skills, Good English, Communication skill, Behavior, How to satisfy customer
Mobile repairing	Trained Certified person, Theory as well as Practical knowledge is missing	How to handle device correctly, Electronics, Boards and clip, current supply, Assembling & knowledge about tools, for servicing hardware, Computer knowledge & Circuits Repairs	Respectful behavior & dealing with customer, Sales pitch and Behavior aspects
Laptop & Mobile Repairing	New Technology	Knowledge about Hardware & android phones, handling and knowledge about mobile applications	Kind behavior with customers
Handicraft	-	Knowledge about Handicraft & Clean work, updated with fashion	Creativity, innovativeness, patience, Efficiency
Others			
Electronics & computers	-	Electric repairing	Behavior with customers
IT I	Programming	Mobile software and hardware	Cell phone flashing software
Photography	-	Photo shop	Good quality photo, time management
Swimming	Some of them don't have proper way to swim in sea.	Swimming and life saving techniques	communication with people in beach and help them if any injuries
Art & craft	they all don't have proper knowledge about gear and engine	Handling and knowledge about the gear pattern and breaks	-
Diesel mechanic and welding	-	Rescues, welding & driving, proper Handling boat's and jeep in sand	-
TV LCD Plasma repair	-	Basic computer and fault finding in short time, to open any device	-

Kind of Business	Additional Issue	Required Technical Skill	Required Soft Skill
		or close in proper way without making damages, Diagram knowledge about mother board	
Plumbing	-	Threading and How to Connect two line in a single way of pipe or should know the length of building & way	Way to Communicate with workers and customers
Electronics	-	They should know how to check Voltage effected	Communication skill is missing

Source: Dexter Analysis

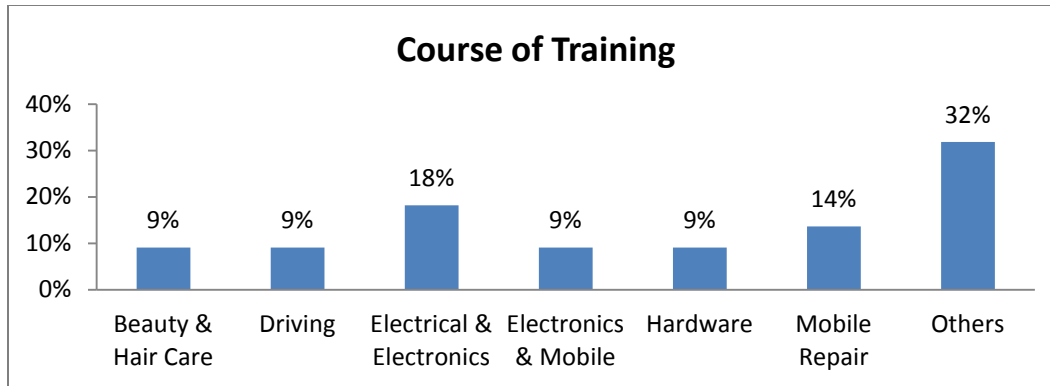
3.2.2.4.3 Training Experience

The respondents in this category people have an experience of running business, 39% of them are already undergone training before starting up their own business.

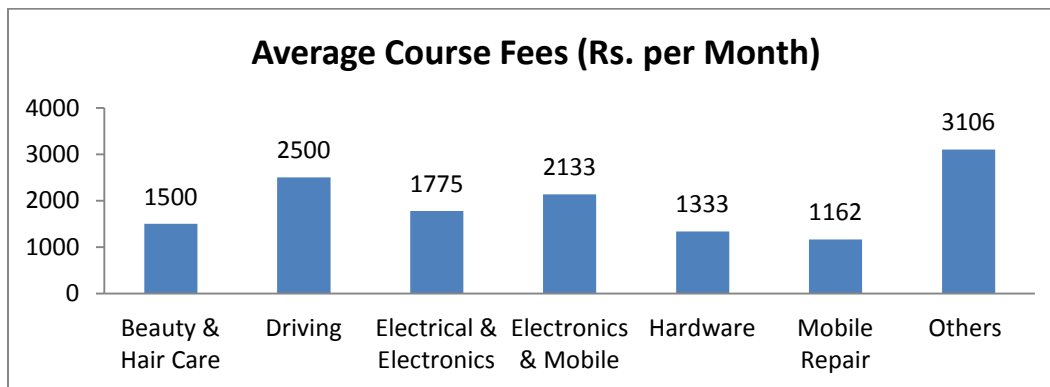
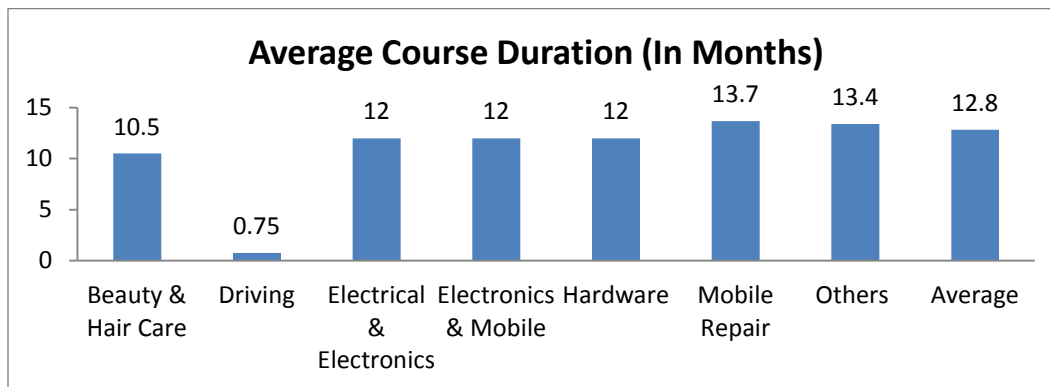


The institutes from where respondent gets training are Jan Shiksan Sansthan, Mumbai, Aptect Computers, Mustyfund high school, Alfen driving school, HND FS panjim, Azad electronics, Jetking, Mast Naukri, Omogh Communication, GVM, National Institute of Water Squads, ITI – Mapusa, Art of Femina and People high secondary school.

Below chart shows courses for which respondent's who undergo training. It depicts more people had done technical course like Electrical, Electronics, Mobile Repair, Hardware & Driving. Few also had done Beauty & Hair care courses. Apart from that other courses are Boat Operator & life saving techniques, Diploma in electronics, dual audio instrumental, TV repairs, Diploma in Training, Laptop training, Sales & Marketing, BCA and Auto Mechanic.

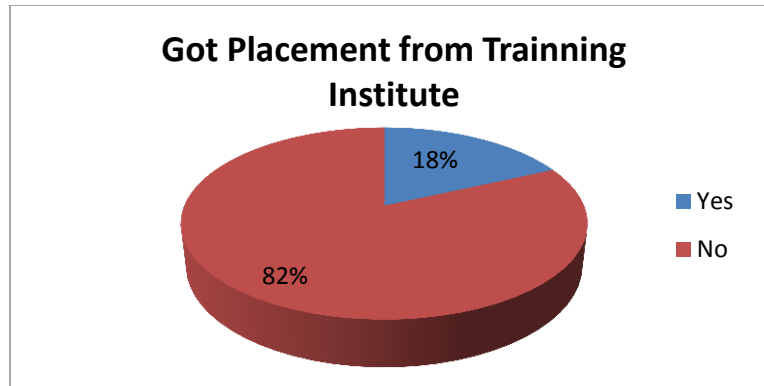


Here, for Beauty & Hair course respondent paid Rs. 1500 monthly for the training period of 10-12 months. Similarly for the driving course respondent spent less than a month and paid Rs. 2500 as a whole. Average training month is around 12 to 13 months and average fees paid for the month is Rs. 2000. Driving is the course where respondent's training period is less than a month.



3.2.2.4.3.1 Placement scenario

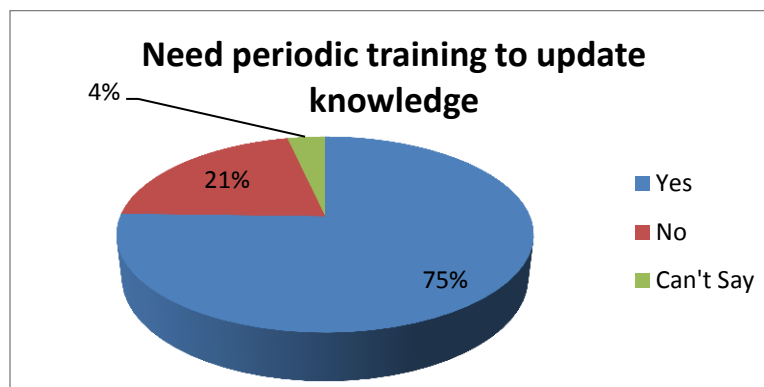
The placement scenario of the Institutes from which the respondent's get trained is shown below. Merely 18% of the people who had taken training got placement from the respective Institute.



For the mobile repairing course average salary respondents get after completion of course is around Rs. 5000 and in Beauty related courses placement was around Rs. 6000 which is same in the case of Electric and Electronics courses. Respondent who had done Mobile repairing, Beautician and Electrical & Electronics courses are currently earning monthly Rs. 15000, Rs. 8000 & Rs. 8000 respectively.

3.2.2.4.4 Requirement of Periodic training to update knowledge

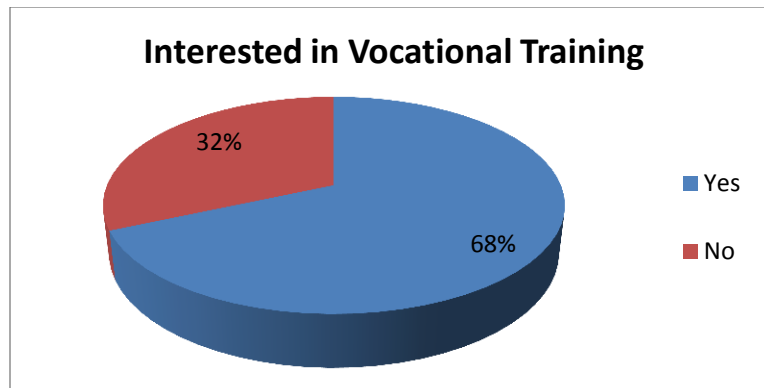
Here we got positive response as 75% of the respondent said that there is a need of periodic training for updation of their knowledge in respective field. Though few people didn't answer anything



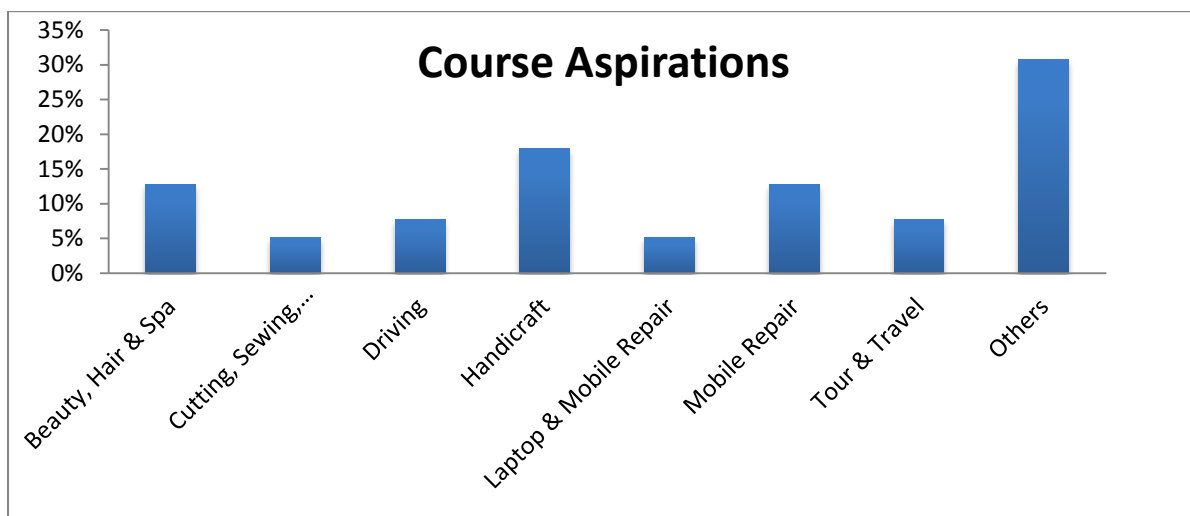
On asking the sources for knowledge updation, we come to know that majority of the people update their knowledge by watching TV, News channels, reading newspaper/magazines and also through Internet, some by visiting fairs and exhibition which is common across North Goa region such as Baga & Anjuna flea market. Few also said by friends or the competitor who are same business. Some responses were that through customer and their demand and importantly through experiences.

3.2.2.4.5 Aspiration for Vocational Training

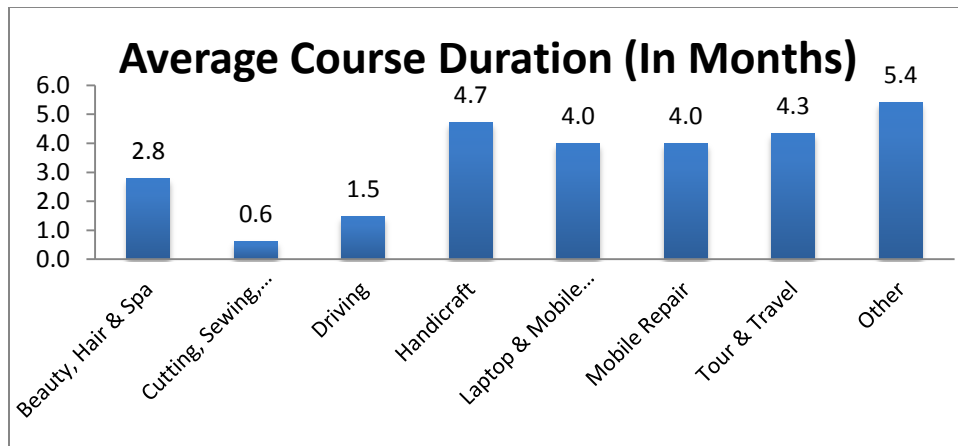
In majority of the interviews, people showed their interest in doing vocational training further though some of them already undergone training earlier.



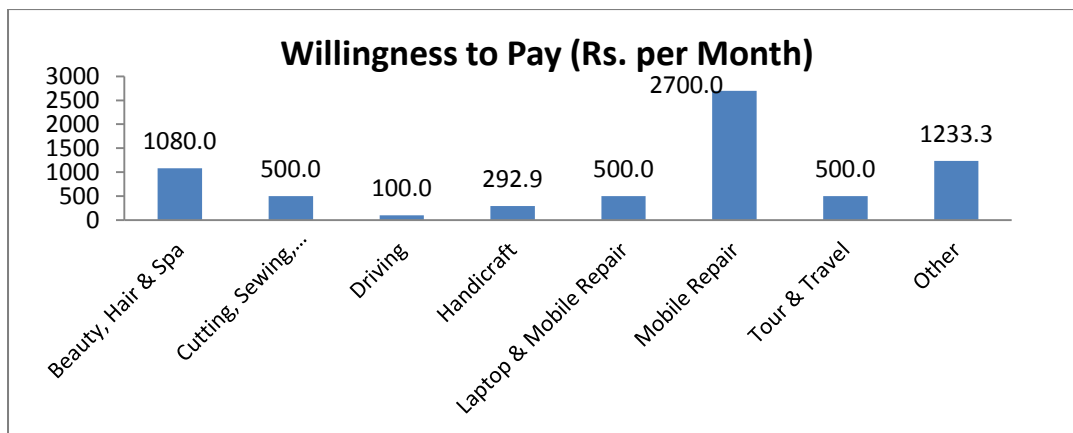
Courses for which they aspired to do vocational courses are mentioned below. Majority of the respondents want to undergo the course of Mobile & Laptop repairing and also Beautician & tailoring sort of. Driving, Tour & Travel and Handicraft are the courses which has direct relevance with Tourism sector. Few of them are also interested for the course of Electronics & computer, Photography, Hotel maintenance, Motor mechanic, Swimming, Art & craft, Welding, Plumbing, Consumer durables repair and any courses which can and value to their business.



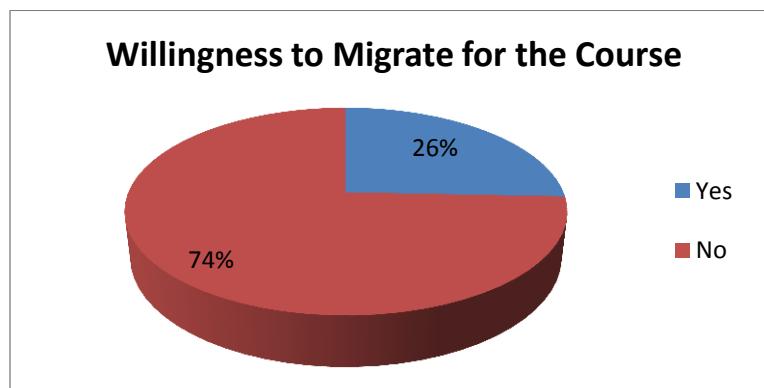
As they are already busy with their business they are willing to spend maximum duration of 6 months, very less for the courses like driving and Cutting, Sewing & Embroidery. Tour & Travel also emerges as the area where respondent wants to further up skill. On an average they are ready to give around 4 months for the courses.

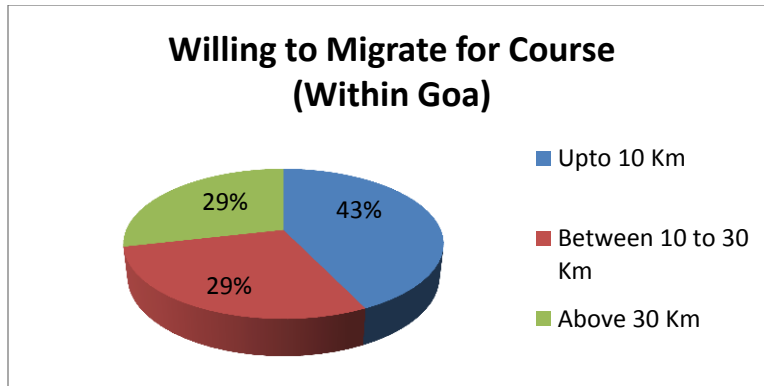


Below graph shows the readiness to pay per month for the listed courses. They are ready to pay in the range of Rs.100 to Rs. 2700 on an average. Some were also seeking no course fees. On an average Rs.1000 is the amount which respondent are willing to pay.

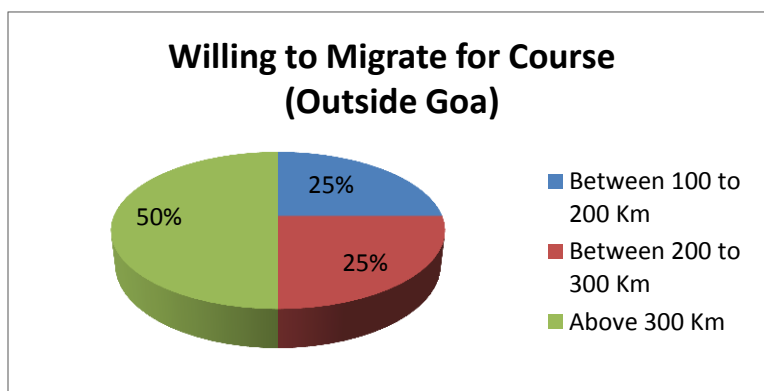


At North Goa district the willingness to migrate for the training of course is very less only 26%. Out of those who are willing to migrate 43% of them willing to migrate only up to 10 Km within Goa. Around 29% of people are willing to migrate till 30km whereas some are readily to go up to 30 Km. Major Cities in which people wants to migrate within Goa are Mapusa and Panjim.



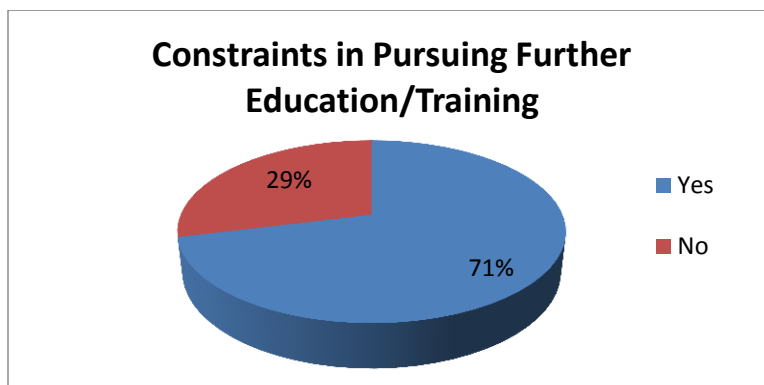


In case of outside Goa, most of them were willing to migrate above 300 Km and the most preferable places for migration outside Goa are Banglore, Mumbai and Belgaum.



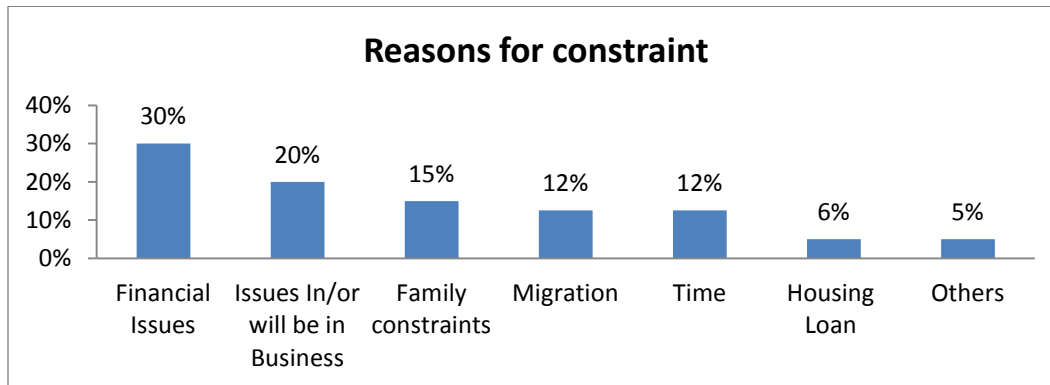
3.2.2.4.6 Constraints

Majority of the self employed category people were facing constraint for undergoing vocational course at district.



Below graph depicts that financial problem is a major issue the respondents are facing. Other than that as all are running business, another major constraint is if they join vocational course then how would they taking care of

their current business. Family problems, migration, timing, housing loan, contract work, chances of shifting of customer to others are the issues which resist them to join vocational course.



3.2.3 Supply Side Study

3.2.3.1 Demographic & Socio-economic profile of North Goa

In 2011, North Goa had population of 817,761 of which male and female were 417,536 and 400,225 respectively.

Out of the total North Goa population for 2011 census, 60.25 percent lives in urban regions of district. In total 492,720 people lives in urban areas of which males are 253,139 and females are 239,581. Sex Ratio in urban region of North Goa district is 946 as per 2011 census data. Similarly child sex ratio in North Goa district was 908 in 2011 census.

Average literacy rate in North Goa district as per census 2011 is 90.21 % of which males and females are 94.19 % and 86.02 % literates respectively. In actual number 403,617 people are literate in urban region of which males and females are 216,072 and 187,545 respectively.

As per 2011 census, 39.75 % population of North Goa districts lives in rural areas of villages. The total North Goa district population living in rural areas is 325,041 of which males and females are 164,397 and 160,644 respectively. In rural areas of North Goa district, sex ratio is 977 females per 1000 males. If child sex ratio data of North Goa district is considered, figure is 915 girls per 1000 boys.

Table 93: Comparison of South Goa district with the Goa State on different demographic parameters

Indicator	Year	Goa	North Goa
Population, No.	2011	1.46 Mn	818,008
Decadal growth rate of population, %	2001-11	8.23%	7.84%
Urban population as a percentage of total population, %	2001	62.17%	60.28%
Sex ratio, No. of females per 1000 males	2011	973	963
Population density, per sq. km.	2011	394	471
Literacy rate, %	2011	88.70%	89.57%

Source: Goa Senses 2011, South Goa, 2011

Demographics

Table 94: Demographic and Socio-economic profile of North Goa District

Sr. No.	Item	Reference Period	Tiswadi	Bardez	Pernem	Bicholim	Sattari	Ponda	North Goa
1	Area (Sq. Km.)	2001	213.57	263.97	251.69	238.8	489.46	292.78	1,736.00
2	Total population	2001	160,091	227,695	71,999	90,734	58,613	149,441	758,573
3	Density per Sq. Km.	2001	750	863	286	380	120	510	437
4	Total No. of households	2001	35,492	51,392	14,967	18,811	12,036	31,431	164,129
5	Male population	2001	81,311	116,405	37,064	46,707	29,880	77,135	388,502
6	Female population	2001	78,780	111,290	34,935	44,027	28,733	72,306	370,071
7	Rural population	2001	55,019	94,250	62,386	53,647	50,696	100,826	416,824
8	Urban population	2001	105,072	133,445	9,613	37,087	7,917	48,615	341,749
9	No. of main workers	2001	53,212	72,661	20,869	28,907	16,576	49,965	242,190
10	Main workers participation rate to total population (%)	2001	33.24	31.91	28.99	31.86	28.28	33.43	31.93
	i) Male participation rate (%)	2001	48.85	48.26	43.55	48.67	41.82	50.02	47.84
	ii) Female participation rate (%)	2001	17.12	14.81	13.54	14.03	14.2	15.75	15.22
11	Birth rate (per 1,000 population)	2009 (P)	-	-	-	-	-	-	15.54
12	Death rate (per 1,000 population)	2009 (P)	-	-	-	-	-	-	8.59
13	Infant mortality rate (Infant deaths per 1,000 live births)	2009 (P)	-	-	-	-	-	-	23.81

Source: Directorate of Planning, Statistics and Evaluation, Goa (2010) Goa at a Glance – 2010. Available from: <http://www.goadpse.gov.in/publications.htm>

Education Profile

Table 95: Educational Profile of North Goa district

Sr. No.	Item	Reference Period	Tiswadi	Bardez	Pernem	Bicholim	Sattari	Ponda	North Goa
1	Total literacy rate (percent)	2001	84.95	85.54	80.76	83.77	76.35	82.87	83.52
2	Male literacy rate (percent)	2001	90.54	90.28	89.45	91.53	86.02	90.09	90.05
3	Female literacy rate (percent)	2001	79.17	80.61	71.57	75.57	66.33	75.14	76.99
4	Rural female literacy rate (percent)	2001	75.57	81.18	71.08	72.33	63.87	73.03	73.8
5	No. of primary level schools	2009-10	98	147	102	104	118	171	740
6	No. of middle level schools	2009-10	48	63	38	34	31	44	220
7	No. of secondary level schools	2009-10	41	55	32	27	22	43	258
8	No. of higher secondary level schools	2009-10	12	11	4	6	3	13	49
9	No. of colleges/university for general education (Arts, Science & Commerce)	2009-10	4	3	1	2	0	3	13
10	No. of colleges for professional education	2009-10	14	0	0	0	0	5	19
11	No. of institutions for vocational/technical education (pre-metric level)	2009-10	4	2	0	0	0	0	6
12	No. of I.T.I's	2009-10	3	1	1	2	1	1	9
13	No. of schools for professional education (post-metric level)	2009-10	2	2	0	1	0	0	5
14	No. of students at primary stage (I to IV)	2009-10	14011	16474	4131	6266	3995	9863	54740
15	No. of students at middle stage (V to VII)	2009-10	8793	11103	2932	4677	3408	7750	38663
16	No. of students at	2009-10	7127	8700	2770	3774	3102	6257	31730

Sr. No.	Item	Reference Period	Tiswadi	Bardez	Pernem	Bicholim	Sattari	Ponda	North Goa
	secondary stage (VIII to X)								
17	No. of students at higher secondary stage (XI & XII)	2009-10	3504	4606	989	1991	982	3491	15563
18	No. of students in colleges/university for general education	2009-10	3163	3456	270	1379	0	1901	10169
19	No. of students in colleges for professional education	2009-10	3180	0	0	0	0	2759	5939
20	No. of students in vocational/technical education (pre-metric)	2009-10	953	521	0	0	0	0	1474
21	No. of students in I.T.I's	2009-10	434	385	121	428	316	483	2167
22	No. of students for professional education (post-metric)	2009-10	993	191	0	510	0	0	1694
23	No. of libraries (private) aided	2009-10	3	4	16	11	12	9	55
24	No. of libraries (government) aided	2009-10	5	8	4	3	5	4	29

Source: Directorate of Planning, Statistics and Evaluation, Goa (2010). Goa at a Glance – 2010. Available from: <http://www.goapse.gov.in/publications.htm>

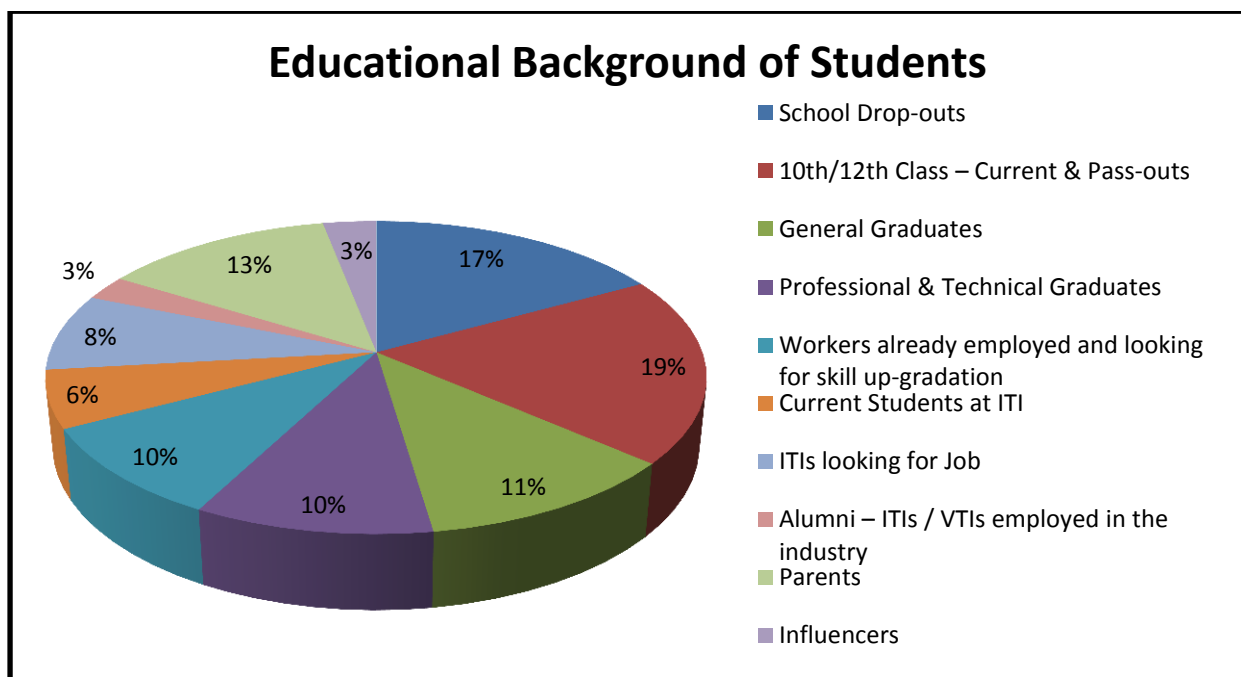
3.2.3.2 Aspirations & Constraints of various target groups

On the supply side, we spoke to people from all sorts of backgrounds. The potential students for a skills school can be any of the following –

- School Drop-outs
 - Early School drop outs
 - 10th /12th Drop outs
- 10th/12th Class Students
- General stream Graduates
- Technical Graduates
- ITI Pass-outs
 - Current Students
 - Pass outs looking for job
 - Alumni
- Workers already employed and looking for skill up gradation
- Parents
- Influencers

In the following sections, we have summarized the outcome of our interactions of people from each of this category in terms of their aspirations, willingness to migrate, expected income and constraints.

Figure 40: Educational Background of the Interviewed Students



Source: Dexter Analysis

The chart above gives a rough idea of the division of the interviews that we conducted on the supply side.

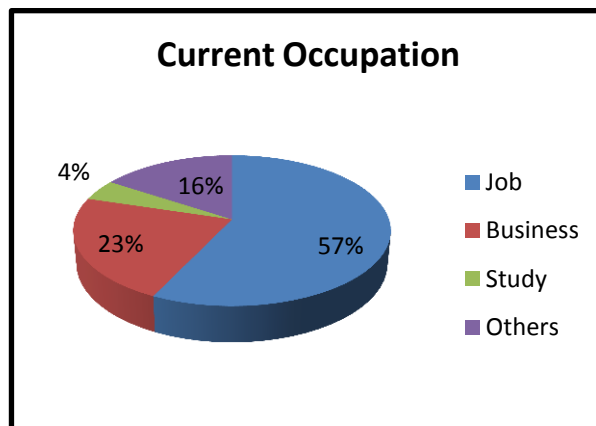
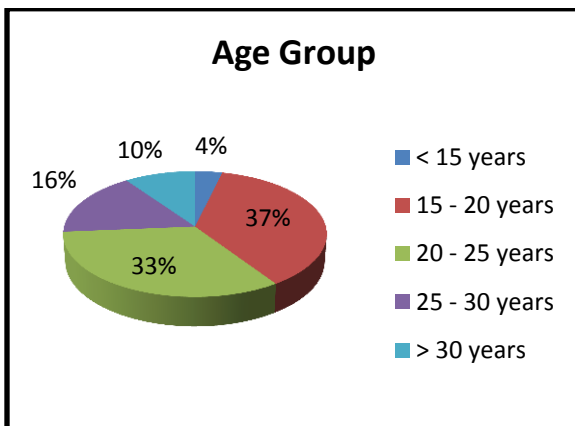
3.2.3.2.1 School Drop-outs

This category includes early school drop outs and 10th/12th Class drop outs. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

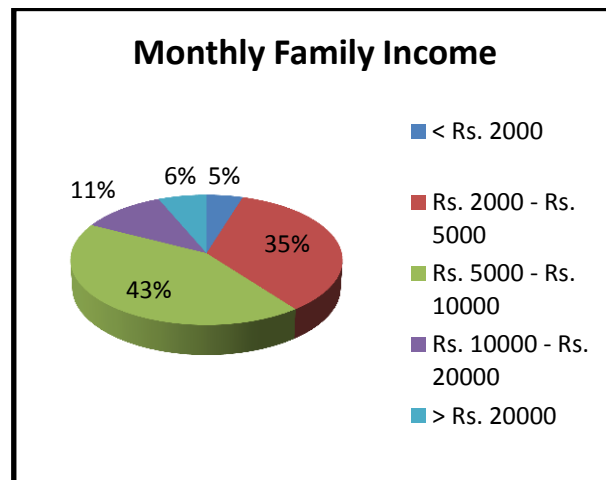
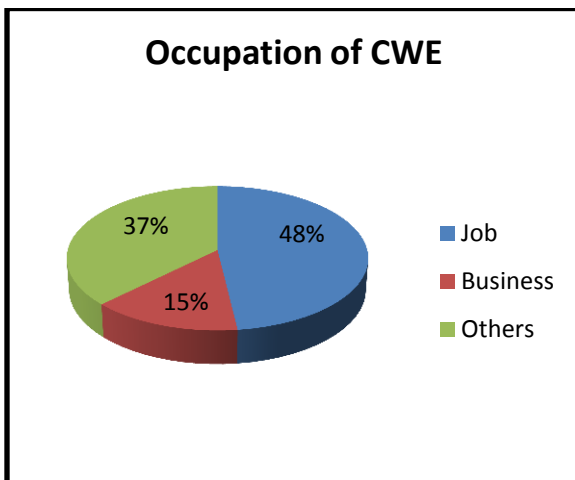
3.2.3.2.1.1 Early School Dropouts

At this category we interviewed those people who dropped out during their schooling before 10th standard at North Goa district. Majorly students had completed their study till 5th or 8th class.

3.2.3.2.1.1.1 Profiling Data

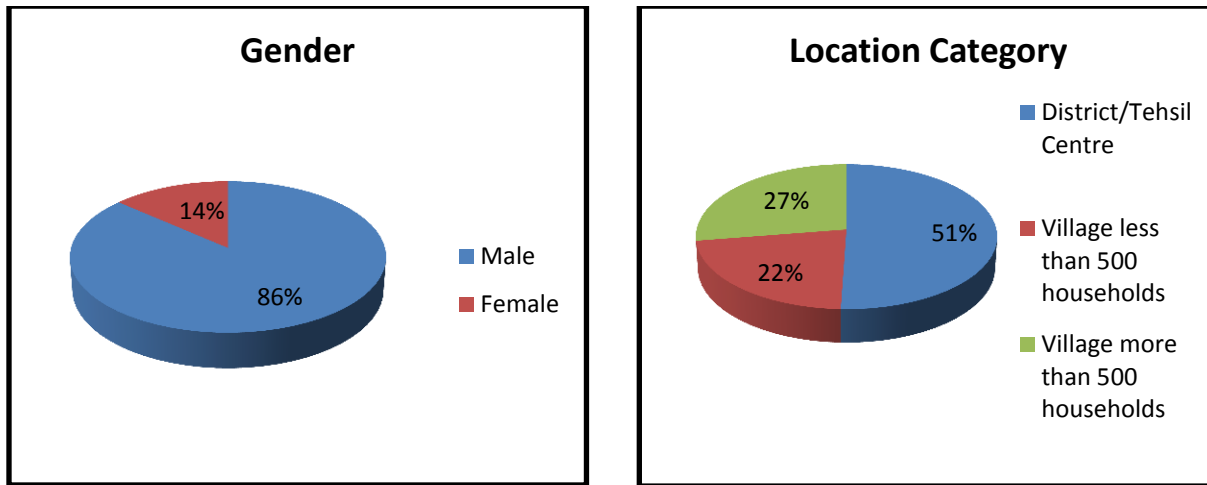


**Others include Housewife, Unemployed, Daily-worker and Farmer*



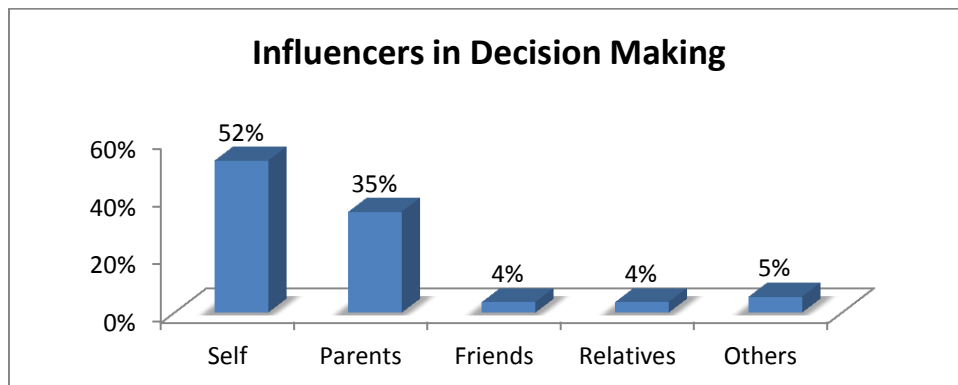
**Others include Tailor, Contractor, Farmer, Mechanic, Pilot*

Majority of respondents in this category are currently doing job and also some have start up their own business. The graphs shows that this category people are from weak economical background and 51% are from District/Tehsil Centre.



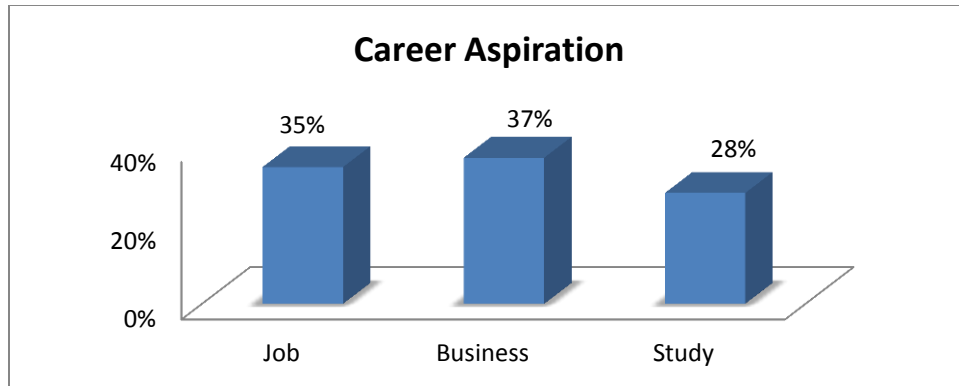
3.2.3.2.1.1.1.1 Decision Making

Majority of the decisions in the life of early school drop-outs are influenced by them selves. However, around 35% of the respondents were influenced by parents followed by friends and relatives.

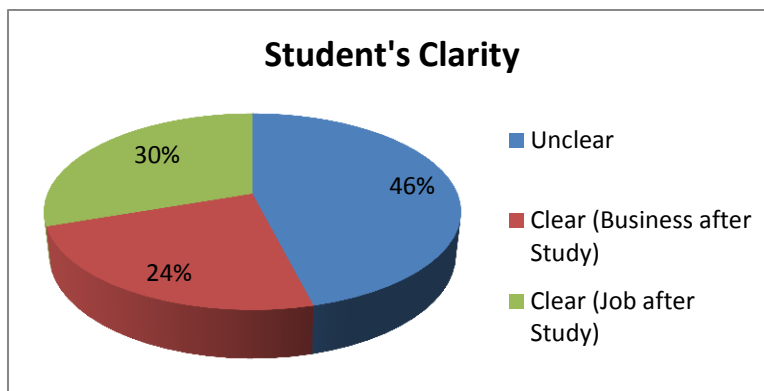


3.2.3.2.1.1.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.

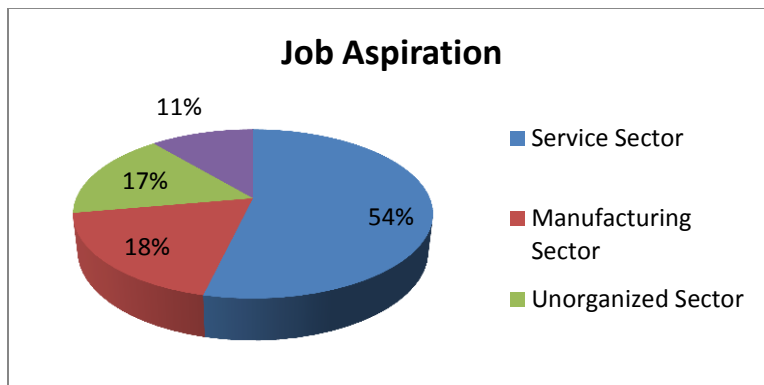


Positively, 28% of early school drop-outs who have left their schooling for any reason wish to do further study if they will to get chance.



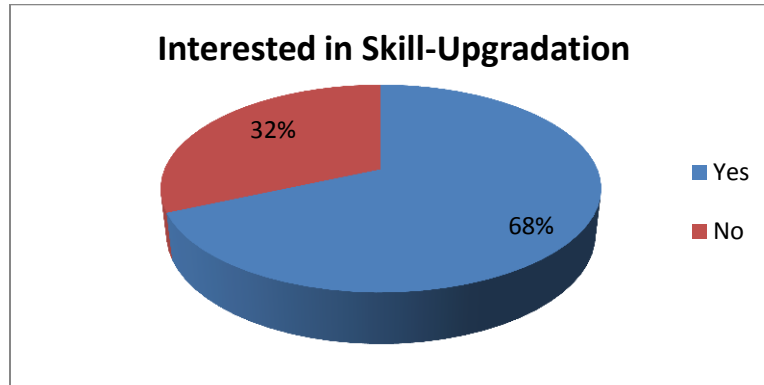
As the respondents are early school drop outs, they do not have that much knowledge about market scenario and also they are not much visionary for their career which can be proved by the above pie, majority of the respondents were unclear about their future career decision.

Very few students were aspiring to do job in the manufacturing sector as compared to service sector while there were also 17% students who want to work in unorganized sector.



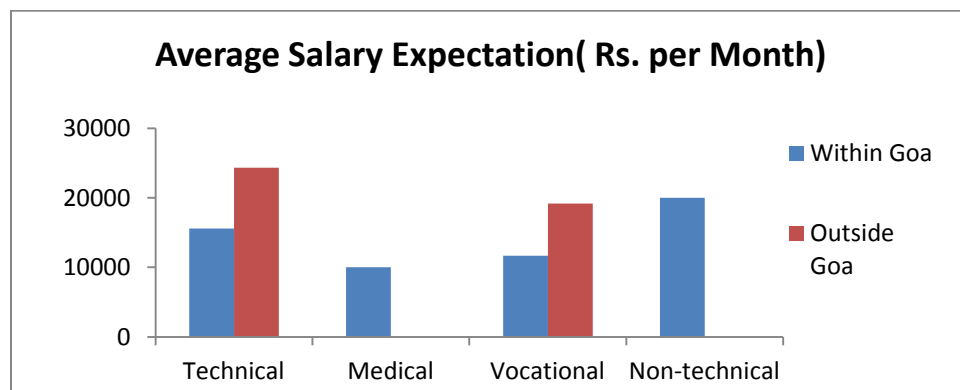
3.2.3.2.1.1.2.1 Interested in Skill Up-gradation

Here, the below graph shows that how many respondents in this category are interested for up-gradation of skill.



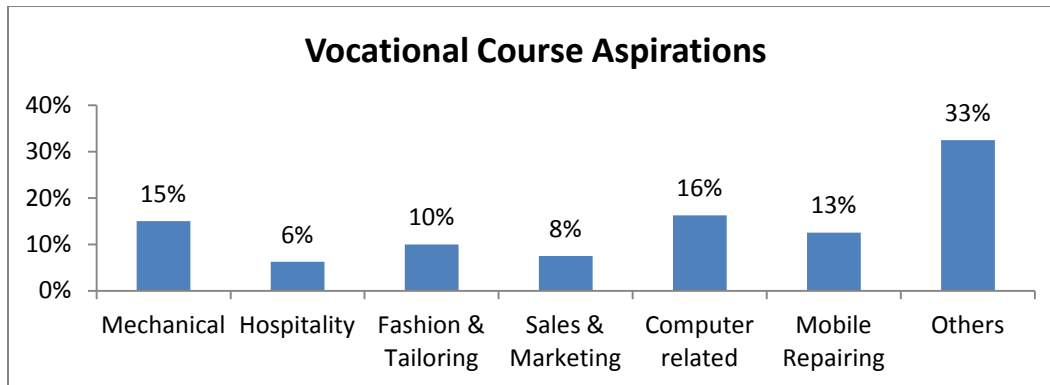
Majority of students interested in Skill up-gradation were aspiring to undergo vocational training.

3.2.3.2.1.1.2.2 Average Salary Expectation



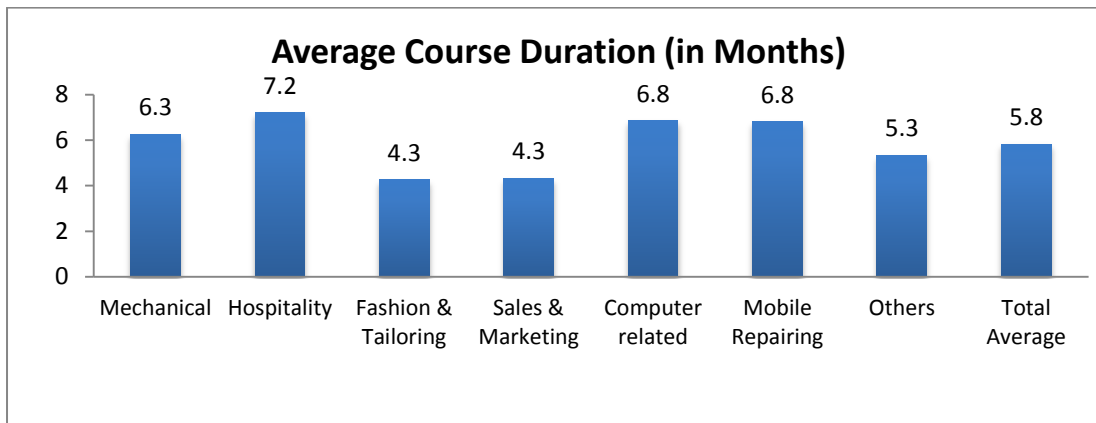
On asking the salary expectation after taking vocational training the students responded that they expect salary around Rs.15000 within Goa and majority of the students expect a salary in the range of Rs. 20000 - 25000 outside Goa.

3.2.3.2.1.1.2.3 Vocational Course Aspirations



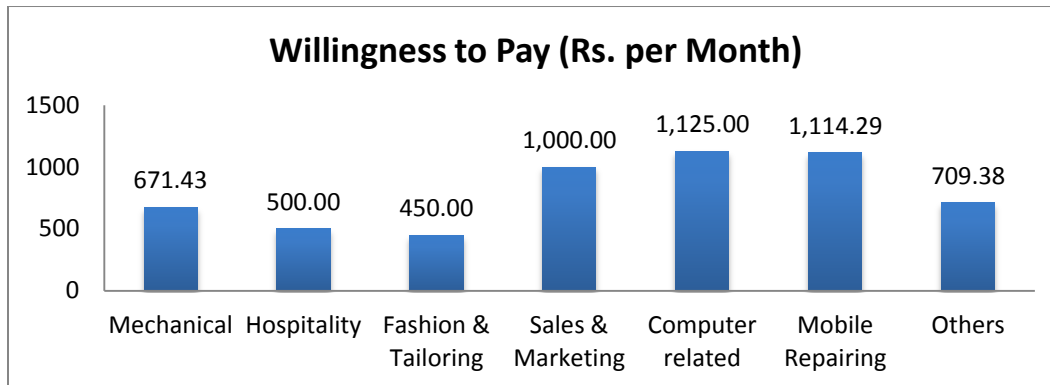
Many students aspire to undergo training for the course of Mobile Repairing, Mechanical and Computer related course. Other includes Beautician, Driving, English Courses, Food Processing and Banking etc.

3.2.3.2.1.1.2.4 Average Duration (Vocational Training)



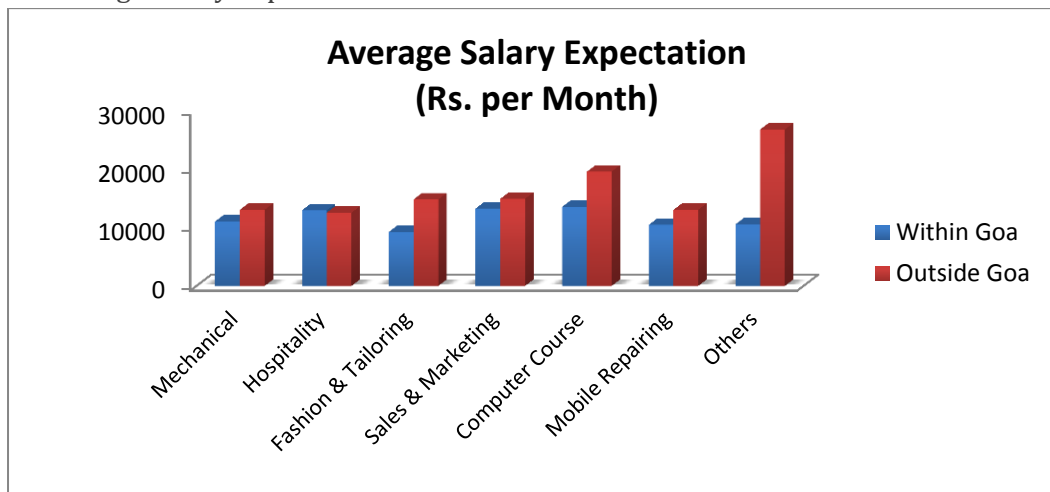
Above pie shows average duration for undergoing training for various vocational course they aspire to do in future. For the course of Mechanical, Computer and Mobile Repairing, student's aspiration is for 6 month.

3.2.3.2.1.1.2.5 Willingness to pay for Courses



From all the aspire courses, Computer is the one for which students are ready to pay highest amount which is followed by Sales & Marketing, Mobile Repairing and Mechanical.

3.2.3.2.1.1.2.6 Average Salary Expectation



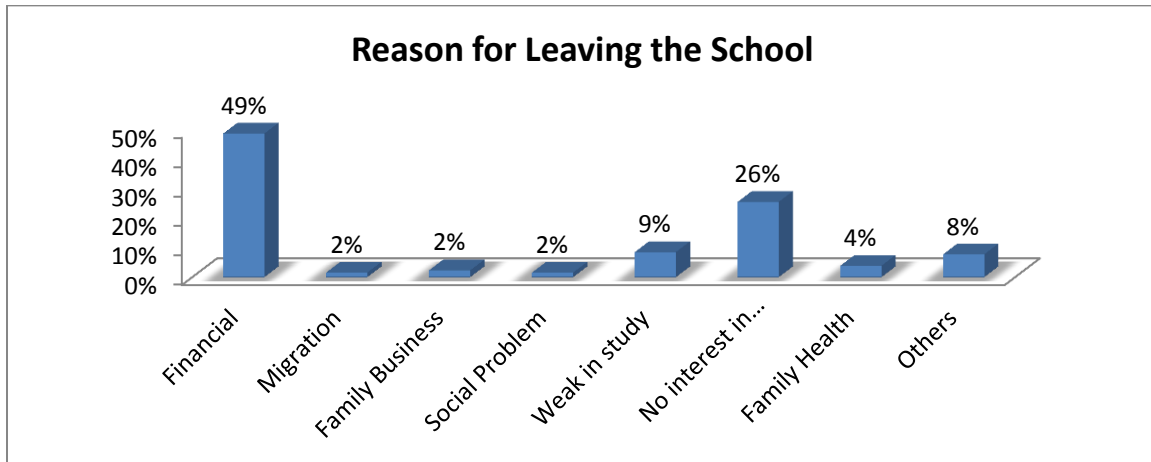
We also ask the students about their salary expectation after taking vocational training, the students who aspire for Computer course expect highest salary in both the cases within and outside Goa.

3.2.3.2.1.1.3 Constraints

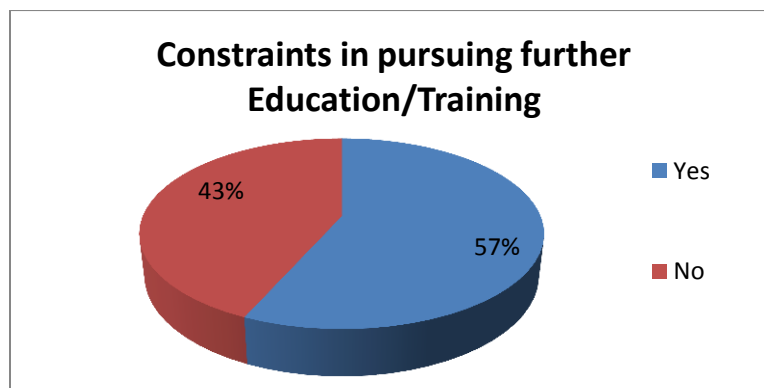
This section includes the reasons for which student left their education, constraints faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.1.1.3.1 Reason for leaving School

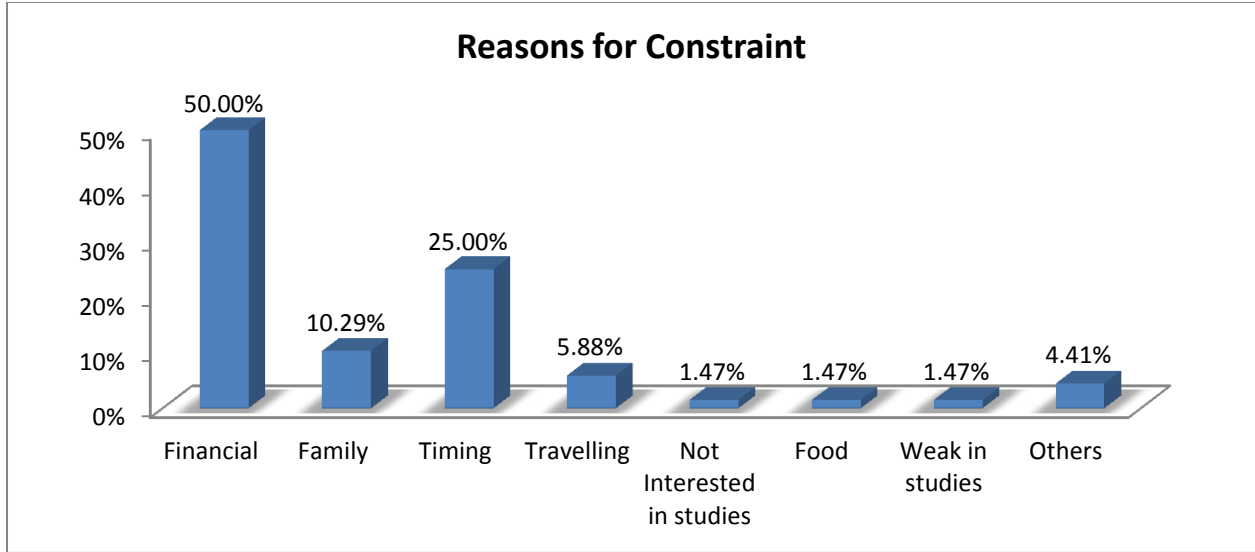
Here, this category include the students who dropped out before 10th Class, thus the reason for leaving the school would be important factor to know so as to understand the constraints better. We found out that half of the students left their school as they were facing financial problem. Others problems includes family problems like no parents, family responsibility etc.



3.2.3.2.1.1.3.2 Constraints in pursuing further Education/Training

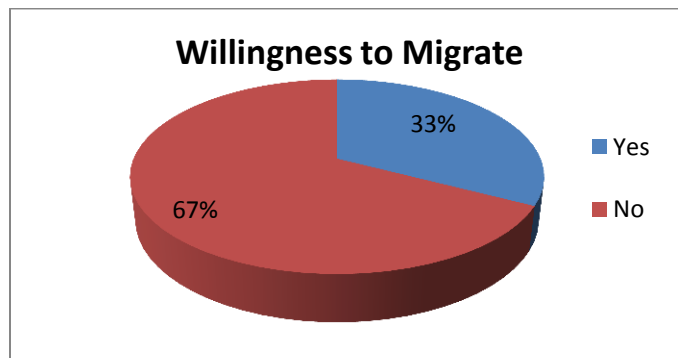


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 57% of the early school drop outs were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

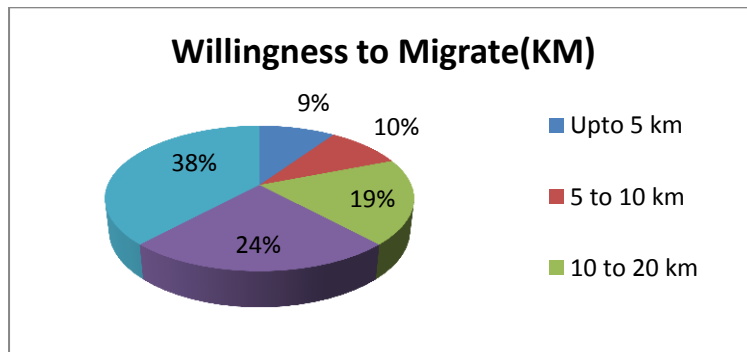


3.2.3.2.1.1.3.3 Willingness to migrate for further Education/Training

In this section, student’s willingness to migrate for training has been described. At north Goa district, out of total early drop out students, majority are not willing to migrate for taking training.



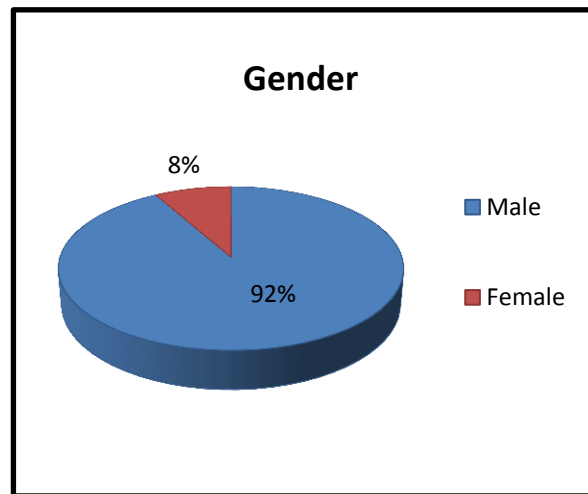
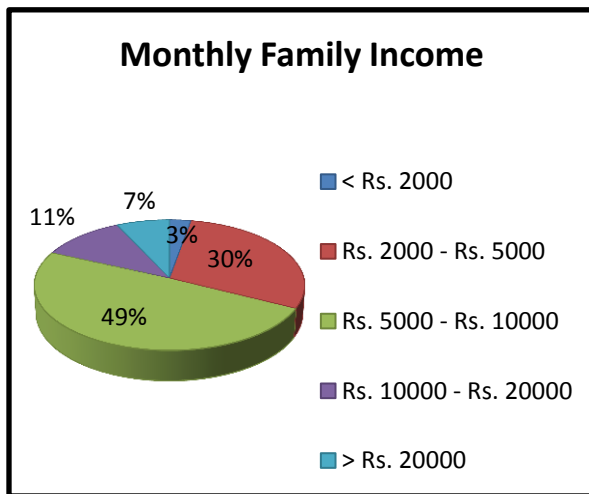
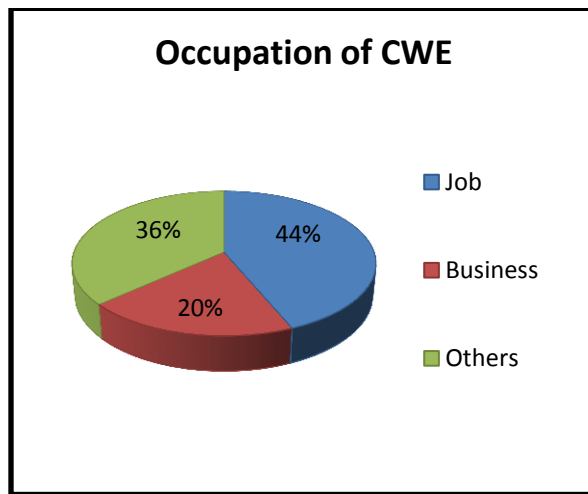
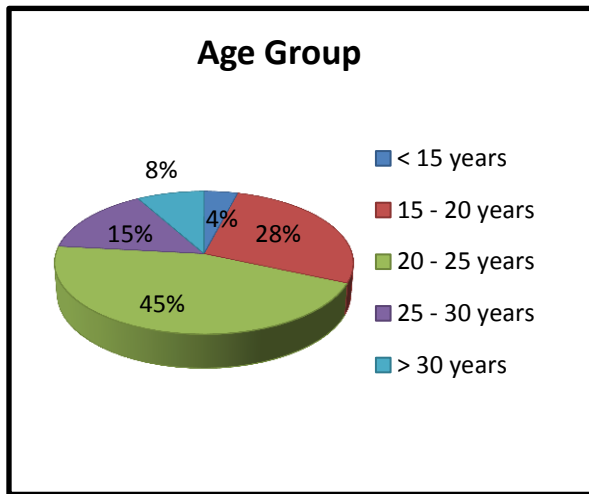
Out of those who willing to undergo training, most of them were only willing to migrate within Goa. Most of the students were ready to migrate up to 20 to 40 Km which shows in the below pie chart.

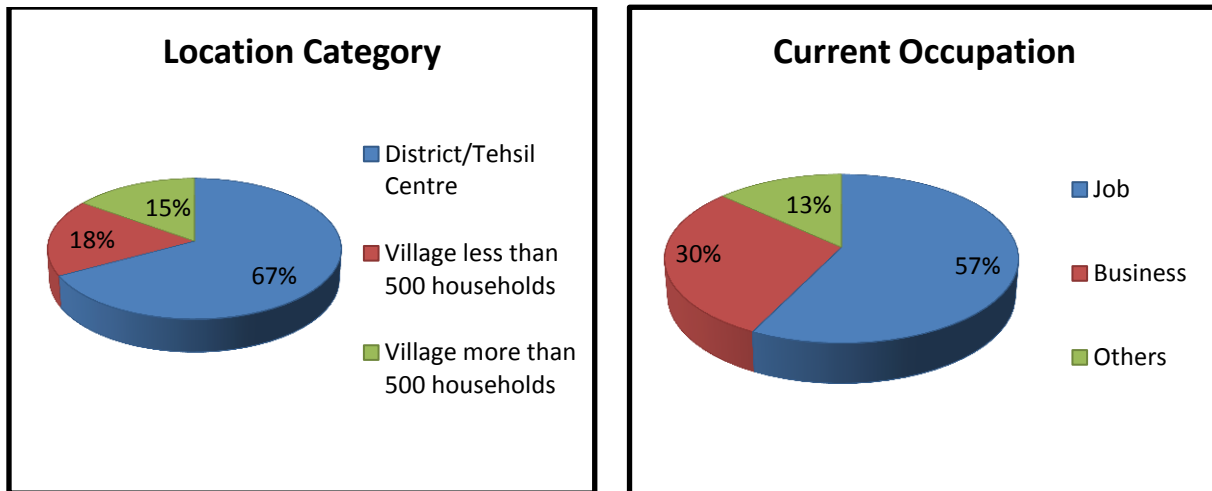


3.2.3.2.1.2 10th and 12th Drop outs

This category includes the respondents who left their schooling either in 10th or 12th class due to some reason. This section helps to understand the background of students, their aspirations and constraints faced by them for perusing further education.

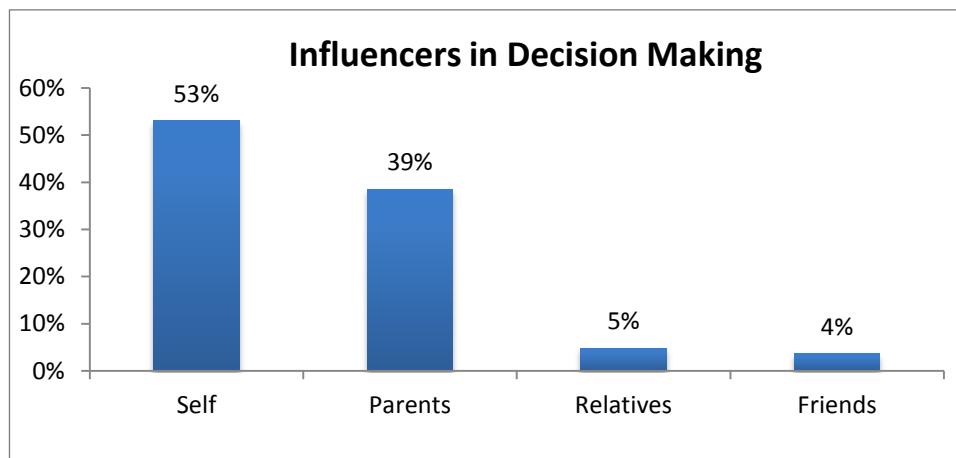
3.2.3.2.1.2.1 Profiling Data





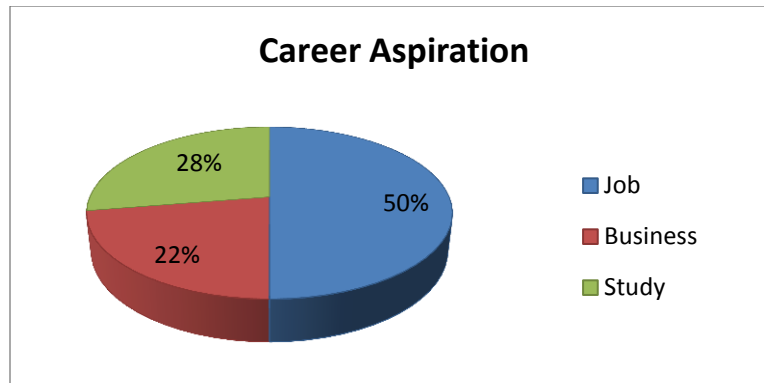
Here the above graphs generates that the most common occupation of CWE is job, while the large number of people belongs to average economical background with the highest location category is District/Tehsil Centre .

3.2.3.2.1.2.1.1 Decision Making

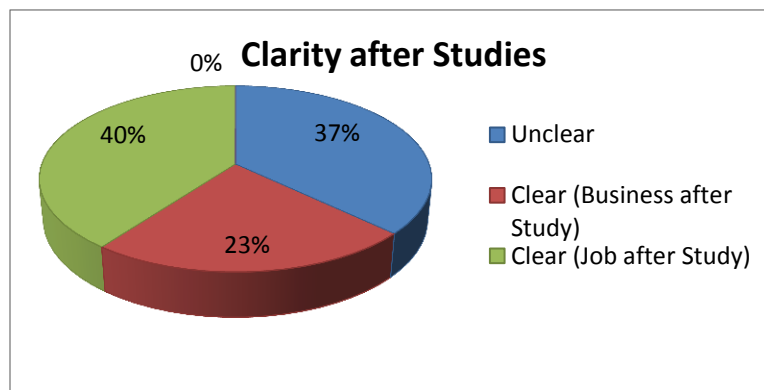


Large number of students has been influenced by themselves in making their decisions for the career they want to opt for, while some are also depended on their parents to choose their career and accordingly very few rely on their relatives & friends for the enhancement of their career.

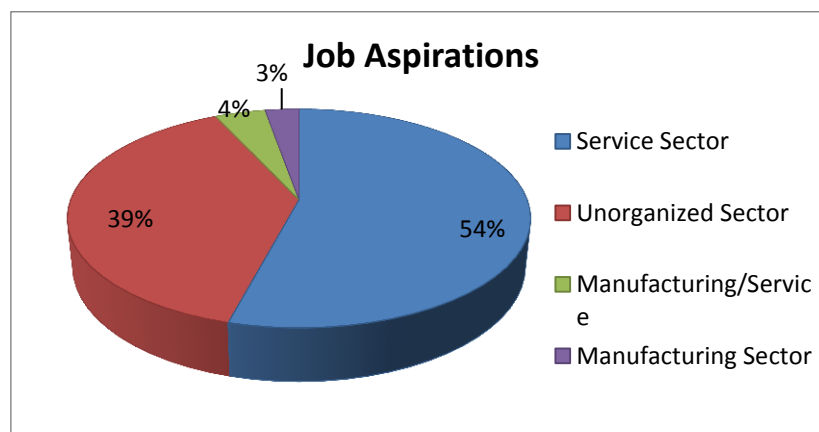
3.2.3.2.1.2.2 Aspirations



Majority of the North Goans in this category aspire to do job, while the other most are interested for further study and also 22% wants to enter in to business.



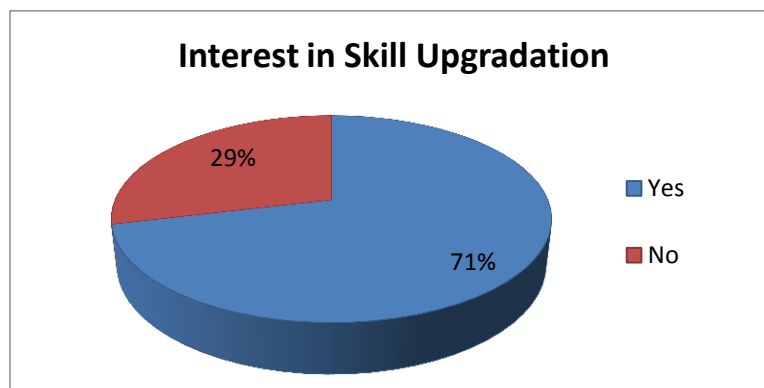
Here, from above chart we can see that most of the students want to go for a job while some others want to enter in a business and remaining are not clear about what they want to do.



Majority of the students aspire to be in service sector and strangely very few want to be in manufacturing sector and apart from that many were interested to make their career in unorganized sector.

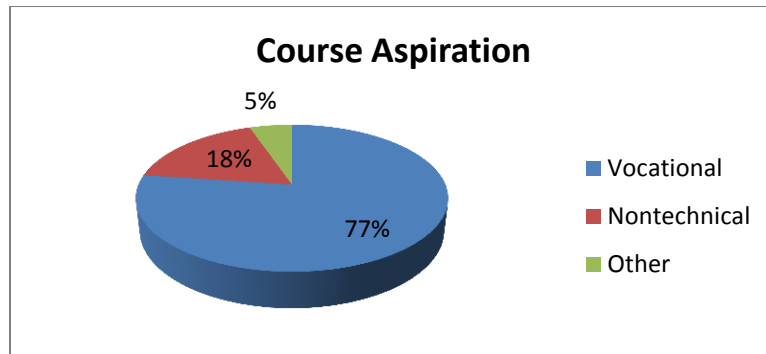
Service Sector	Manufacturing Sector	Unorganized Sector
Stewards	Electrical Engineering	Driving
Hotel Management	Mechanical	Tailor
Teaching	Motor mechanic	
Police Service	Auto mobile	
Medical		
Chef		
Reception		
Banking		
Computer		
Government Jobs		

3.2.3.2.1.2.1 Interested in Skill Up-gradation



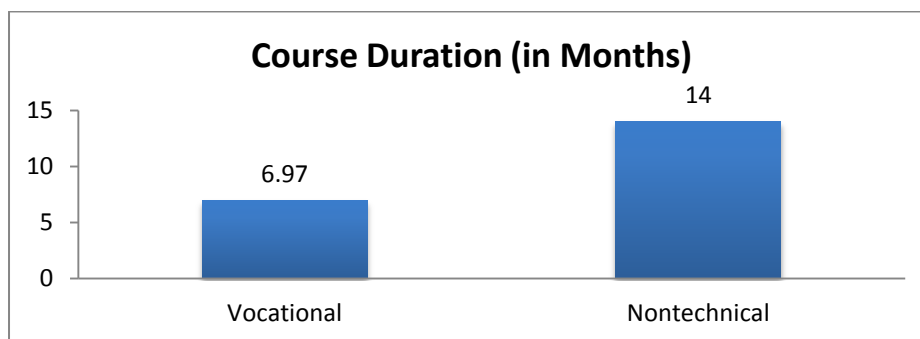
More than half of the students are very much interested to upgrade their skill as they were drop-outs. Apart from that majority of them would want to upgrade their skill and knowledge in the same field in which they are currently working.

3.2.3.2.1.2.2 Course Aspirations



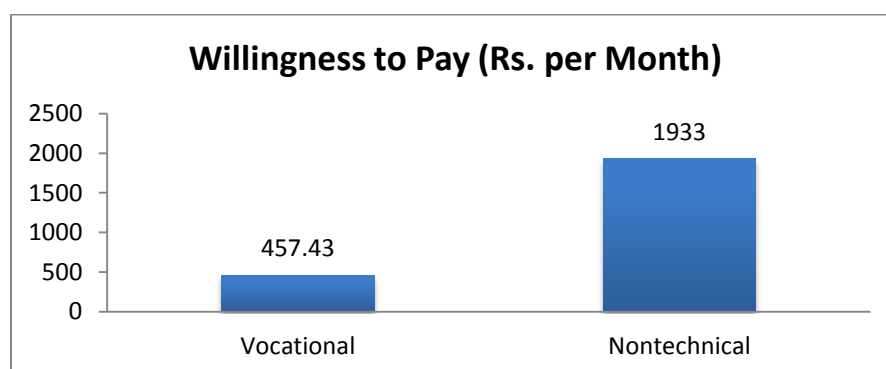
Most of the students are aspired for vocational courses while very few want to go for non-technical course. Here, non-tech courses include B.B.A, B.Com and Arts.

3.2.3.2.1.2.3 Course duration



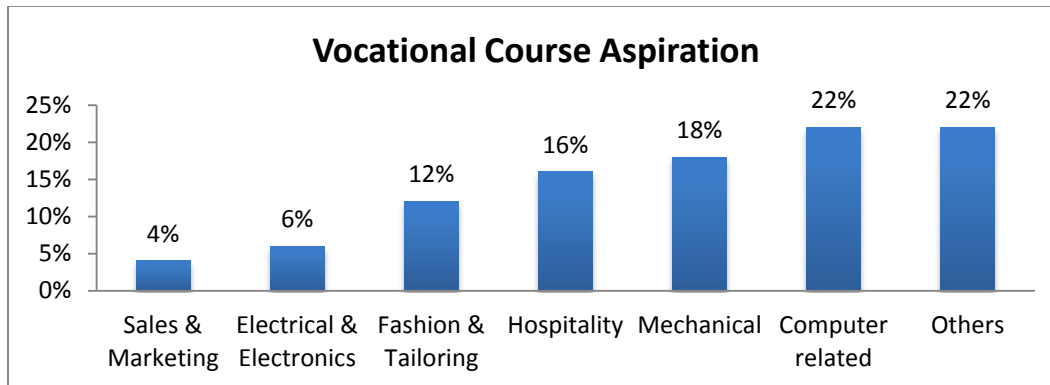
Students want to pursue non-technical course for around 1 to 1.5 year and as far as vocational courses is concern they wish to spend around 6-7 months.

3.2.3.2.1.2.4 Willingness to pay



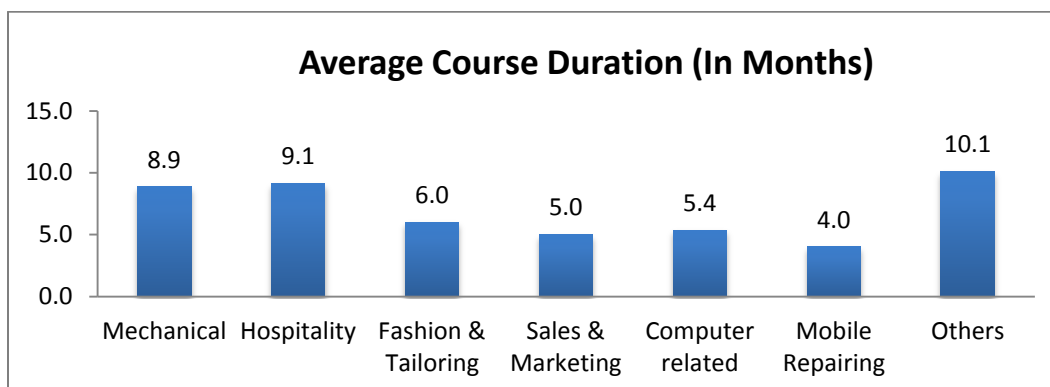
Here the respondents are ready to spend around Rs. 2000 per month for non-technical course while approximately Rs 450 per month for vocational course.

3.2.3.2.1.2.2.5 Vocational Course Aspirations



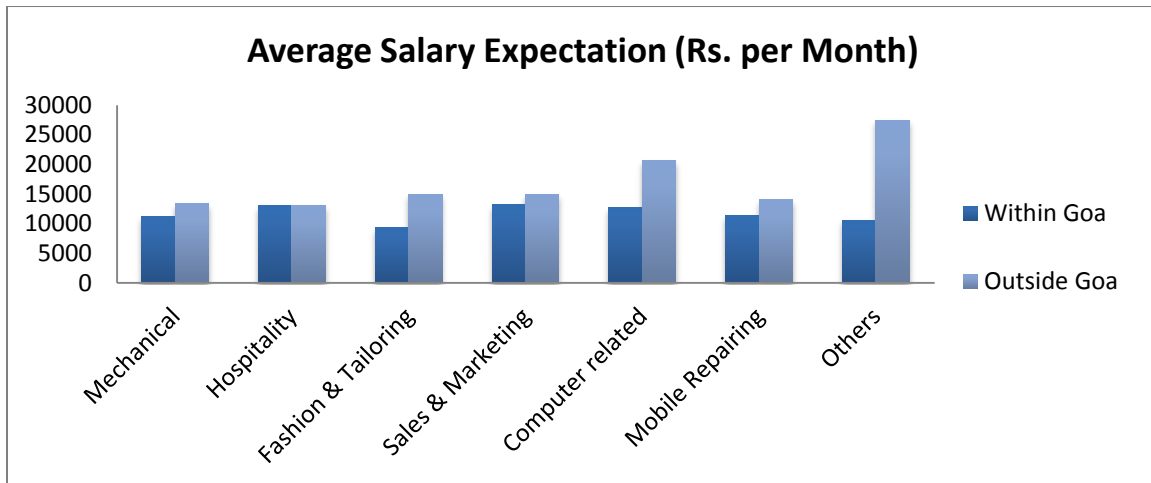
The most preferable vocational courses among the respondents are Computer related course and Mechanical which are followed by Hospitality, Tailoring, Electrical and Sales and Marketing. Specifically in Hospitality majority of aspirants wish to join steward training course. Apart from that, some students wish to join courses like Mobile Repairing, Automobile course, fitter and electrician.

3.2.3.2.1.2.2.6 Average Duration (Vocational Training)



Here, the respondents are willing to spend approximately 9 months for Hospitality, 8 for Mechanical and accordingly for other courses shown in above pie.

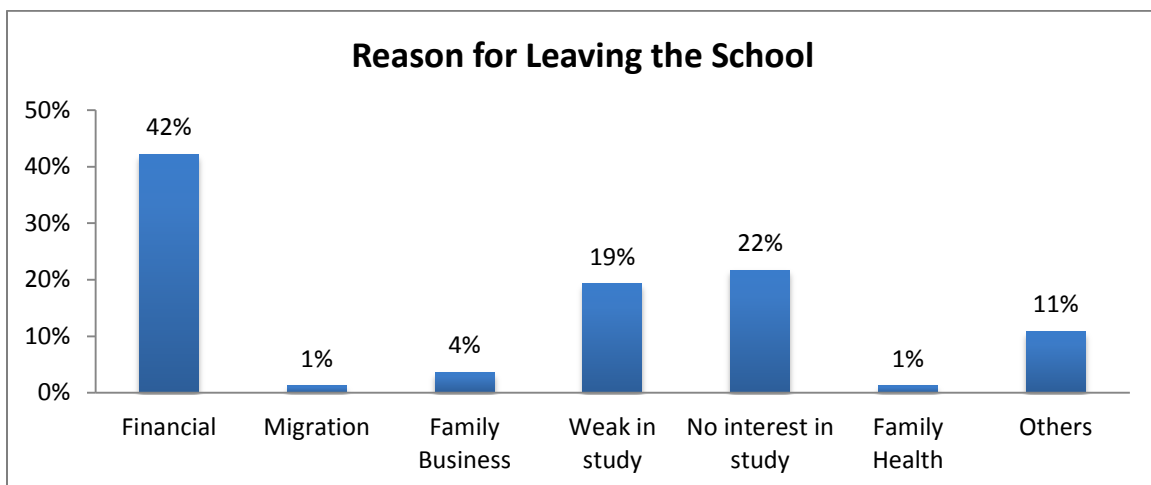
3.2.3.2.1.2.2.7 Average Salary Expectation



In case of within Goa, respondents are expecting salary of around Rs. 10,000 and around 25,000 in case of outside Goa.

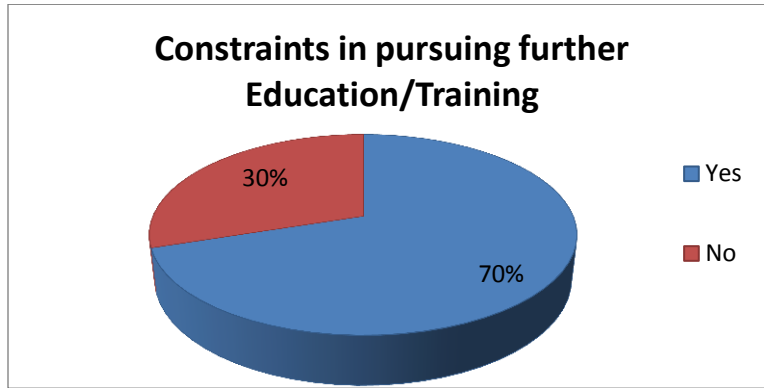
3.2.3.2.1.2.3 Constraints

3.2.3.2.1.2.3.1 Reason for leaving School

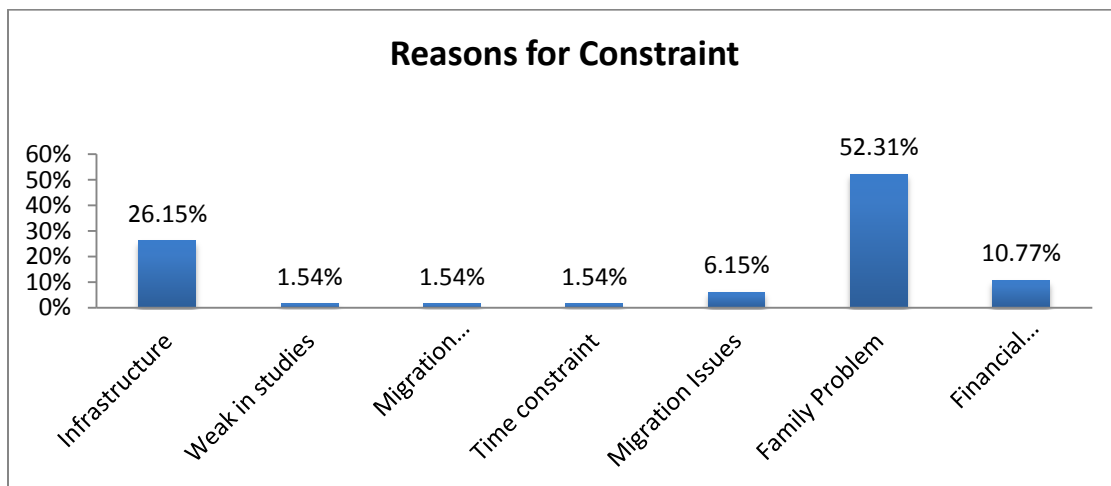


Large number of students has become dropped out due to financial problem, while some are not interested in study and some are dropped out as they were weak in studies and remaining due to other problems like migration, family business, family health, family responsibilities etc.

3.2.3.2.1.2.3.2 Constraints in pursuing further Education/Training

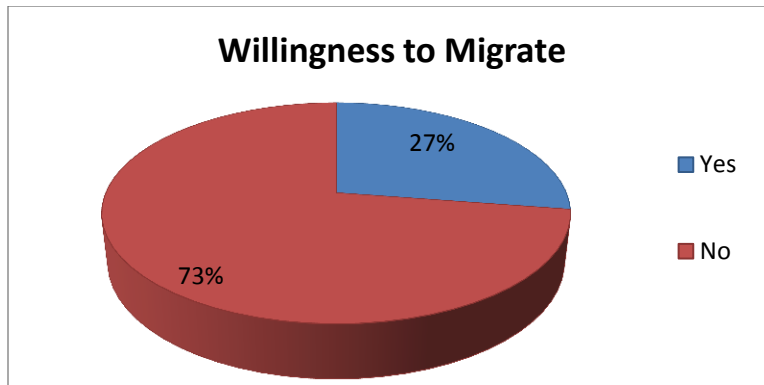


Here more than average percent of respondents are bounded with constraints in case of undergoing further education.

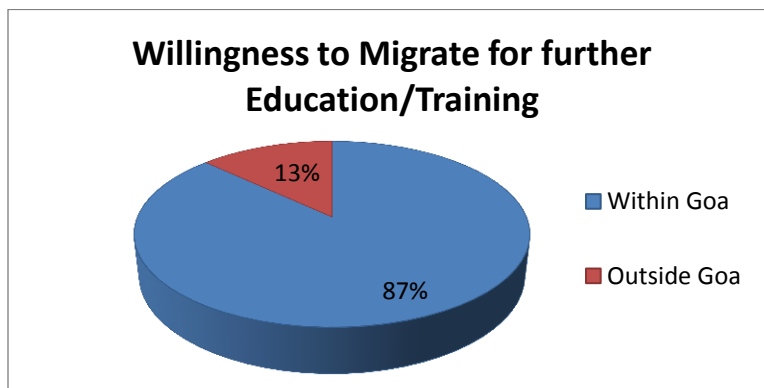


Herein, the above graph depicts that the major constraints for perusing study further or taking further training are family problems and money problem apart from that few were facing constraints like transportation problem, timing problem, infrastructure etc.

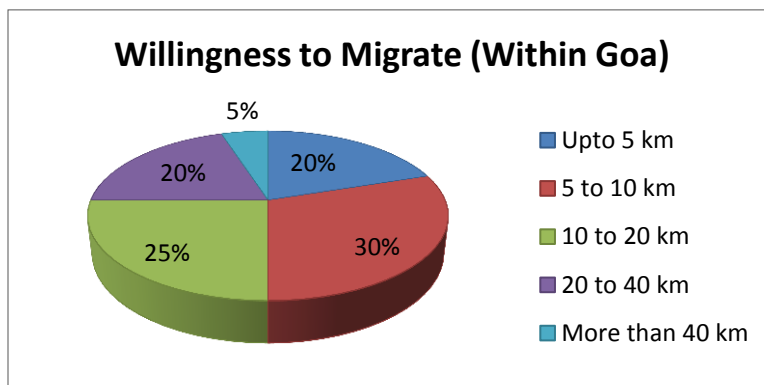
3.2.3.2.1.2.3.3 Willingness to migrate for further Education/Training



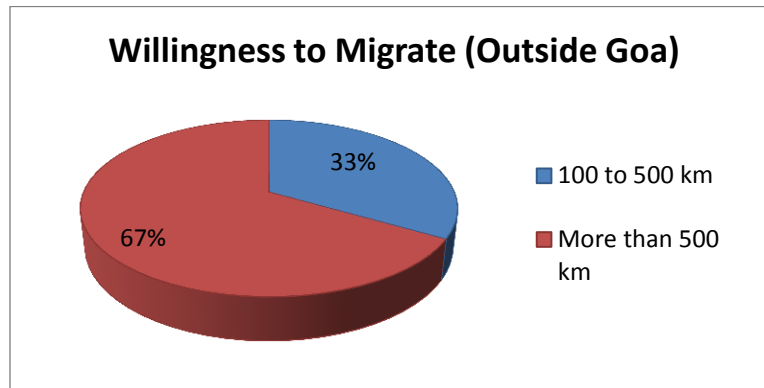
Very few, only 27% are ready to migrate for undergoing further education or taking up any training at North Goa.



Out of those respondents who are ready to migrate, majority of them are limited to within Goa only while very few are ready to migrate outside Goa.



Out of those who are ready to migrate within Goa, majority can migrate up to 10 km and very few respondents can migrate up to more than 40km.

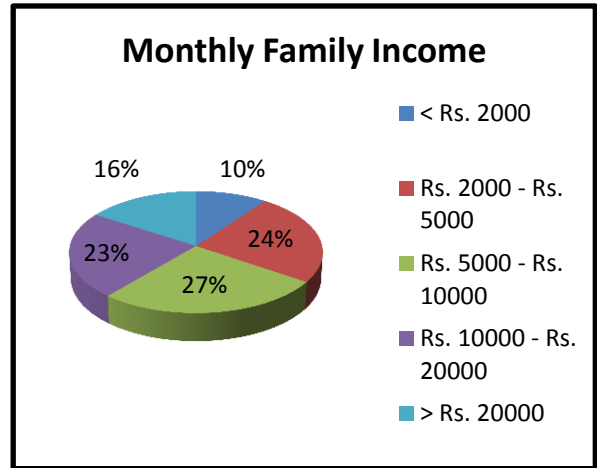
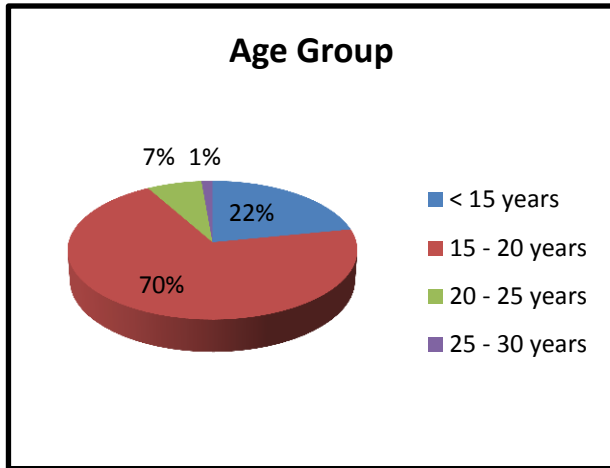


In case of outside Goa, majority of the respondents are ready to migrate more than 500 km while few are willing for migrate up to 100 to 500 km.

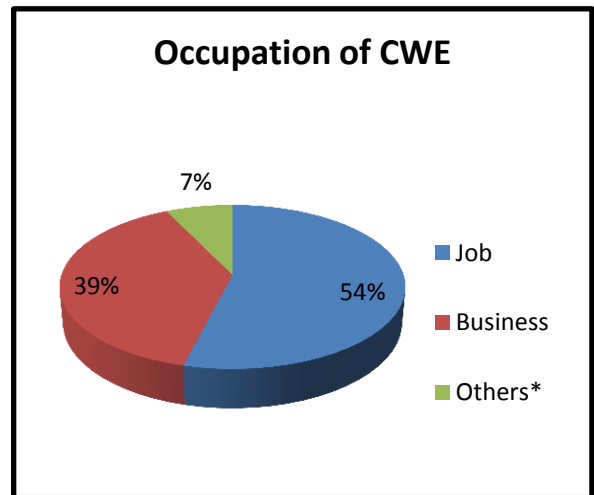
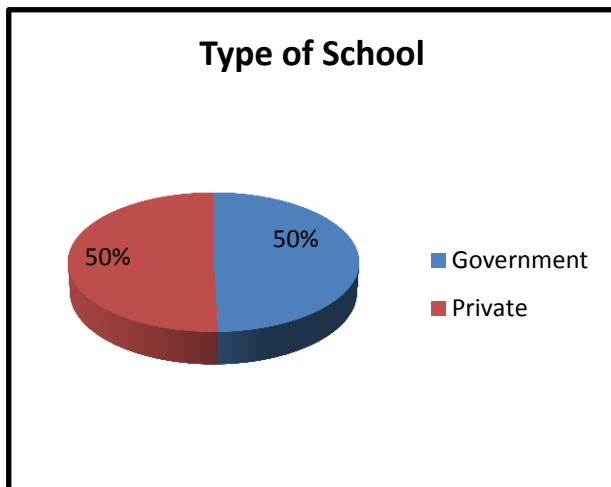
3.2.3.2.2 10th / 12th Students

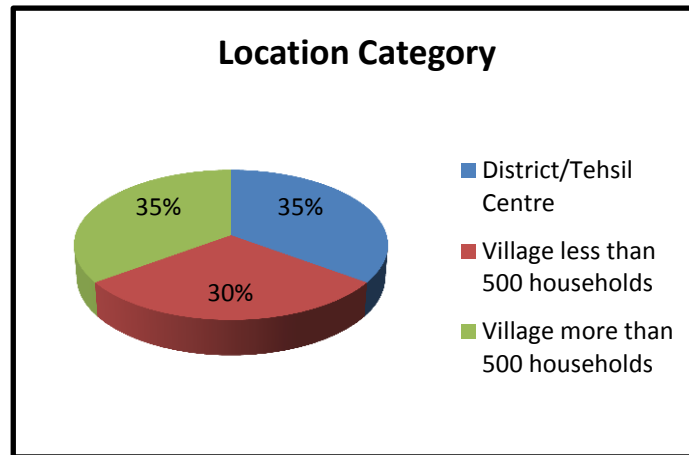
This category includes students who are currently studying at 10th/12th and 10th/12th pass-outs, who do not go for further study and joined job market. The major areas we have covered are profiling of category which include educational and economical background of students with influencer's role in decision making of student's life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.2.1 Current 10th/12th Students



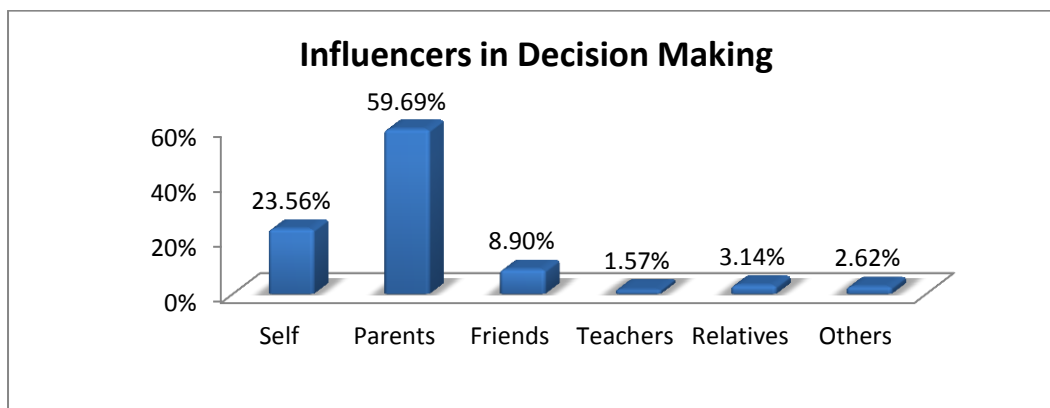
3.2.3.2.2.1.1 Profiling Data





While talking about the profiling of students of current 10th/12th class, they are coming from economically weak background and majorly falls in the age group of 15 to 20 years and are belongs to job class category.

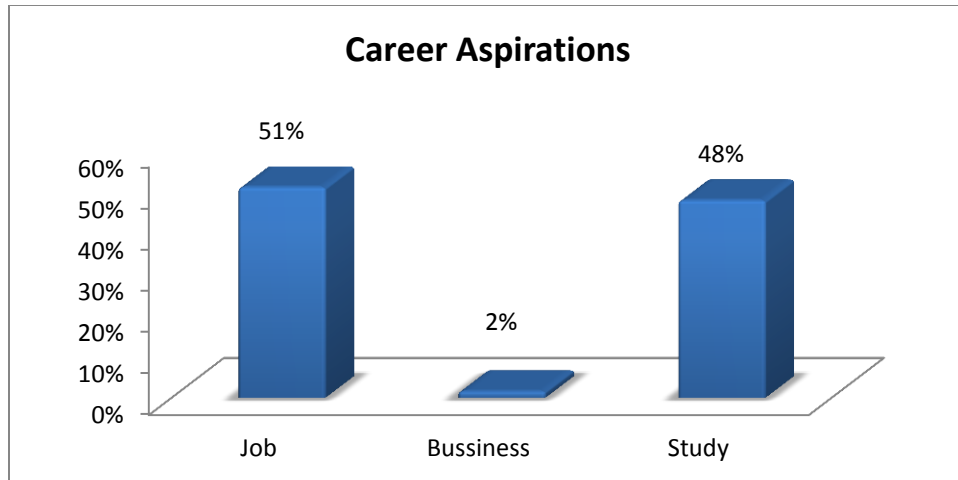
3.2.3.2.2.1.1.1 Decision Making



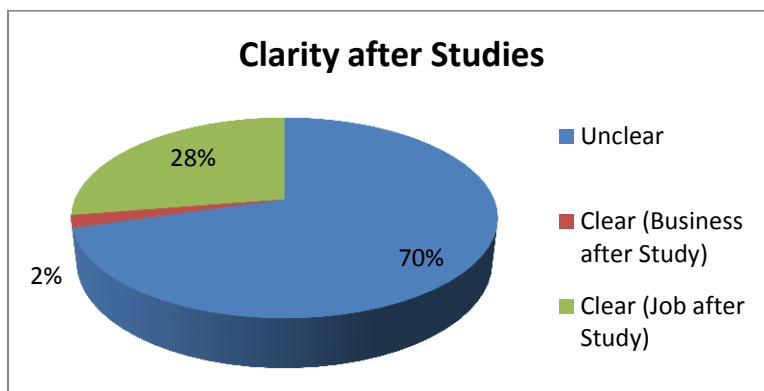
Herein, parents play an important role in decision making of students' career who is currently studying in 10th/12th Class. In this category, we found none of the students were influenced by consultancies in taking their decisions.

3.2.3.2.2.1.2 Aspirations

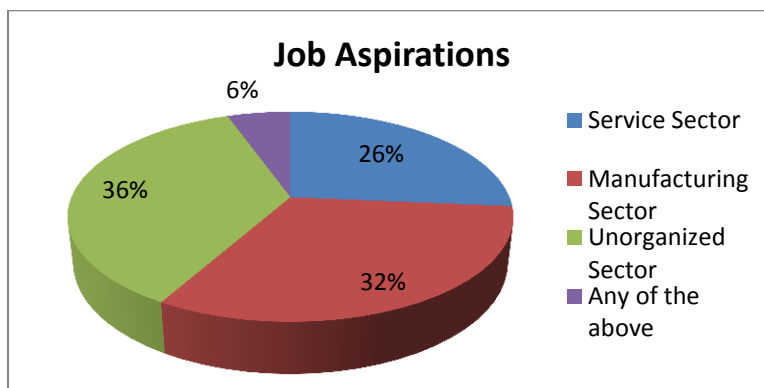
Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course.



In this category we found most of the students, 51% of them were aspire to do job in future and other most wants to make their career through future studies in their respective fields.

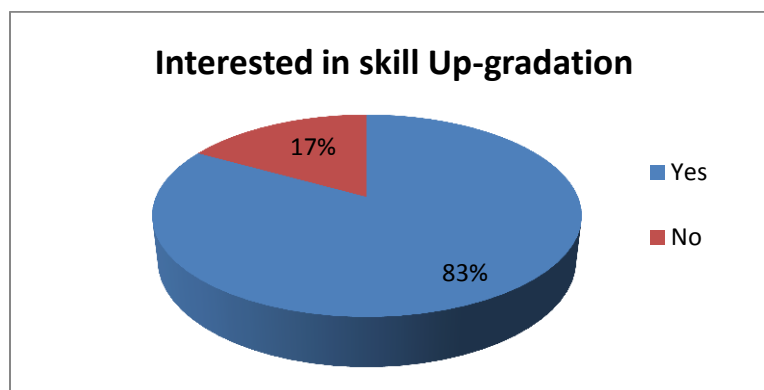


Here, very few current students of 10th/12th Class were clear about their future whether they want to do business after completion of their study or job after study. The field in which students aspire to do job further is mention below.

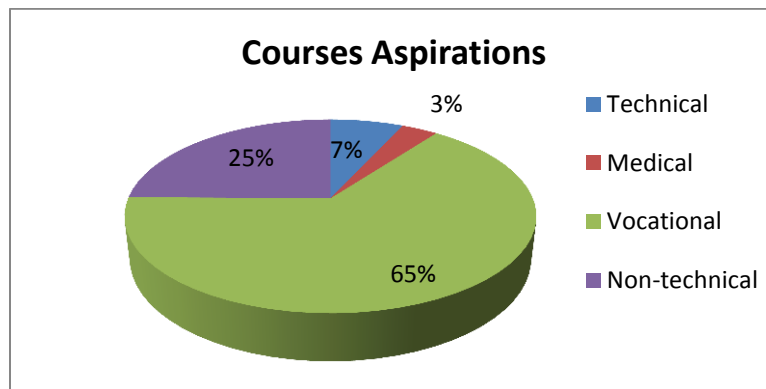


Service Sector	Manufacturing Sector	Unorganized Sector
Engineering	Boiler Attendants	Plumber
Hospitality	Carpentry	Mobile Repairing
Nurse	Civil Engineering	Petrol Pump
Teaching	Fitter	Artist
Police Service	Production Line	
Medical	Mechanical	
Chef	Electronics	
Bar Tender	Auto mobile	
Banking		
Computer		
Theatre Play		
Government Jobs		
Ward Boy		

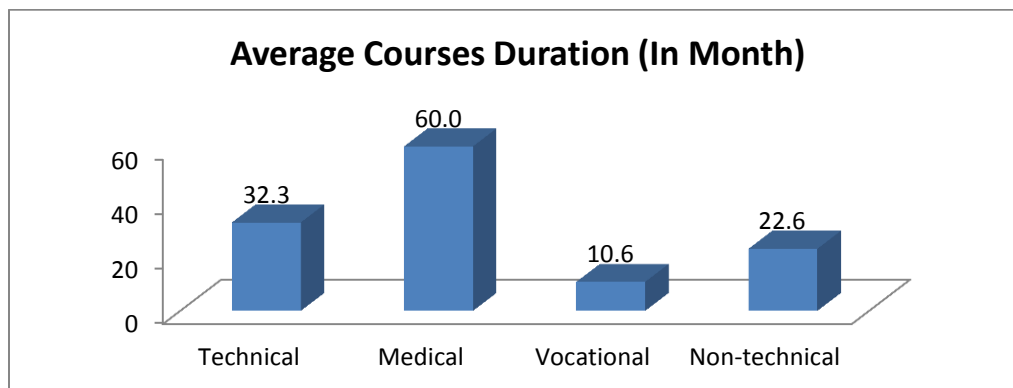
3.2.3.2.2.1.2.1 Interested in Skill Up-gradation



Herein, the students who aspire to study further, we also asked the respondents further that weather they are interested in taking technical, non-technical, medical education or vocational one. We got positive response as majority of the students were aspire for taking vocational education which can be proved by below pie chart.

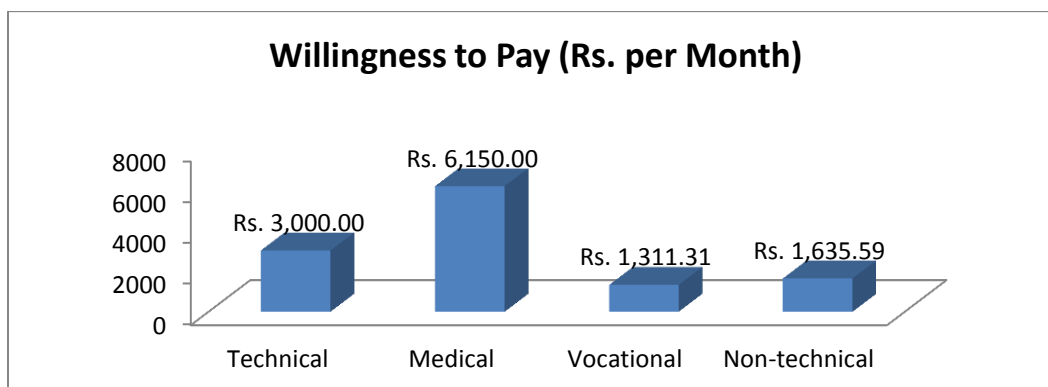


3.2.3.2.2.1.2.2 Average Course Duration

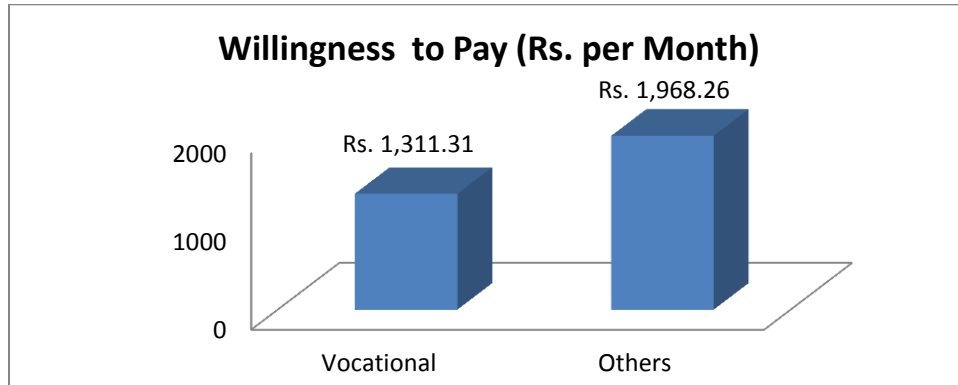


The respondents mention that vocational course should be of around 10 months. They are ready to spend highest for Medical course as against technical and Non- Technical course.

3.2.3.2.2.1.2.3 Willingness to pay

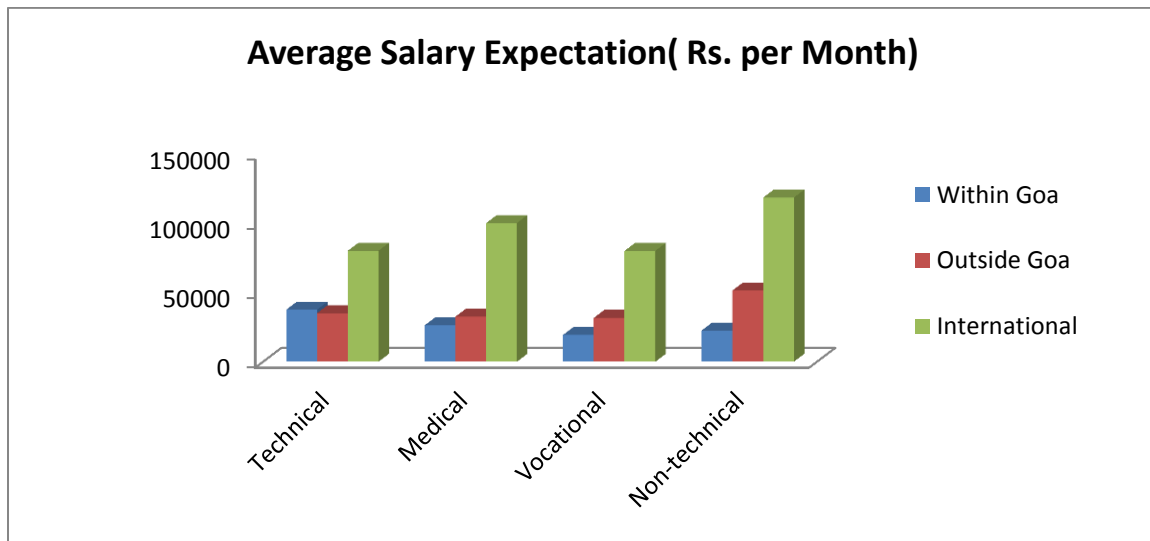


The students in this category are willing to pay in the range of Rs. 500 to Rs. 1000 for undergoing vocational education. Here students are ready to pay higher for Medical course as against other courses.



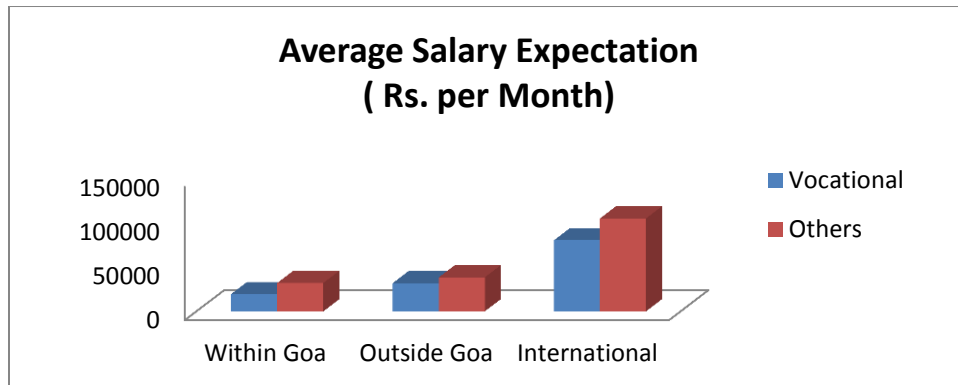
Herein, The 10th/12th students who wish to undergo for Vocational education are willing to pay around Rs. 1300 which is nearly similar to the non-technical aspirant's readiness to pay.

3.2.3.2.2.1.2.4 Average Salary Expectation for various categories



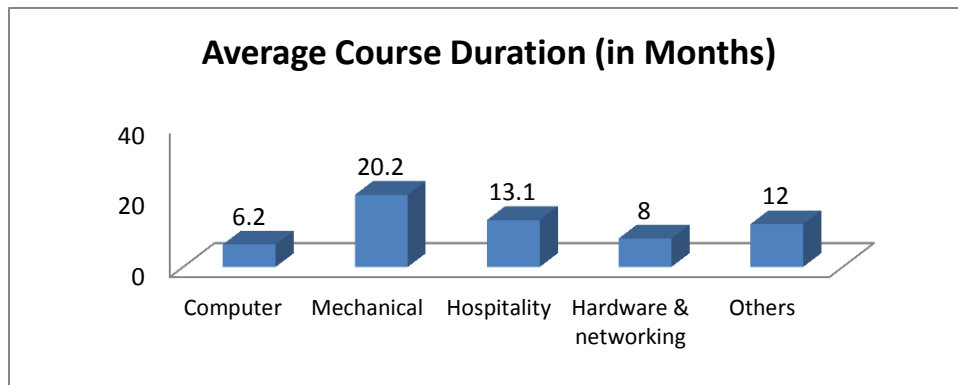
The students who are currently studying at 10th/12th expect salary less than Rs. 20000 for the course of vocational education within Goa but expectation is highest at International level.

3.2.3.2.2.1.2.5 Vocational Course Aspirations



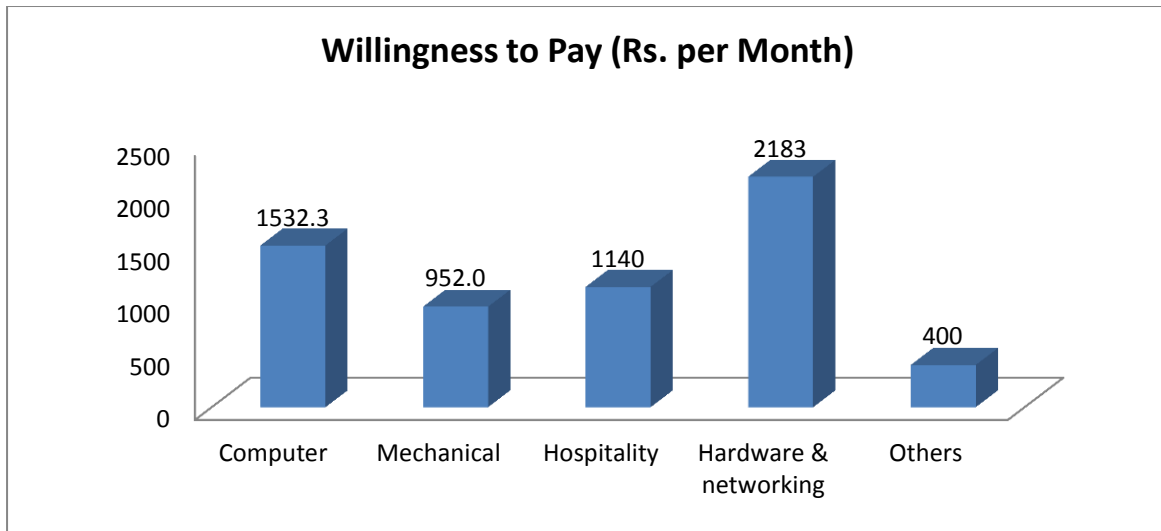
Out of students who aspire for taking vocational education, their salary expectation is less than 20,000 within Goa as compared to other courses and more expectation from outside Goa.

3.2.3.2.2.1.2.6 Average Duration



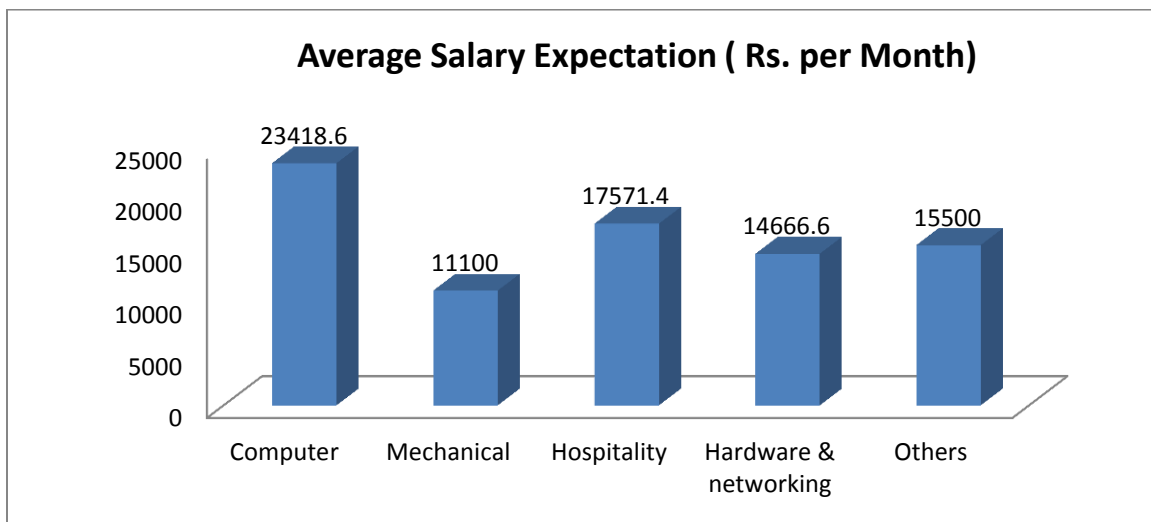
For the course of Mechanical and Hospitality, students need more time for undergoing training as compared to other courses which is around 1.5 to 2 year.

3.2.3.2.2.1.2.7 Willingness to pay for various Vocational Courses



Herein, among all the vocational courses which students willing to do, Hardware & networking and Computer are the two for which the readiness to pay is higher than other courses. The reason they believed that duration for these courses is longer than other courses and also due to high future demand.

3.2.3.2.2.1.2.8 Average Salary Expectation for various Vocational Courses

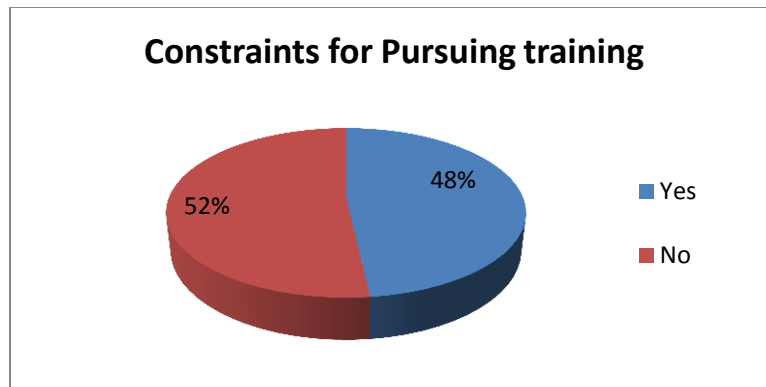


Here in this case, Computer and Hospitality are the courses for which students expect higher Salary because of the reason that service industry has better opportunity and high future demand than any other courses.

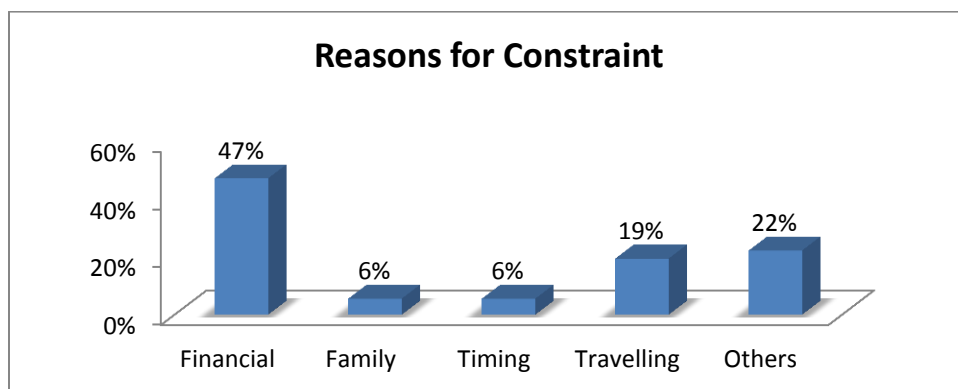
3.2.3.2.1.3 Constraints

This section includes the reason for which student's left their education, constraint faced by the Students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.1.3.1 Constraints in pursuing further Education/Training

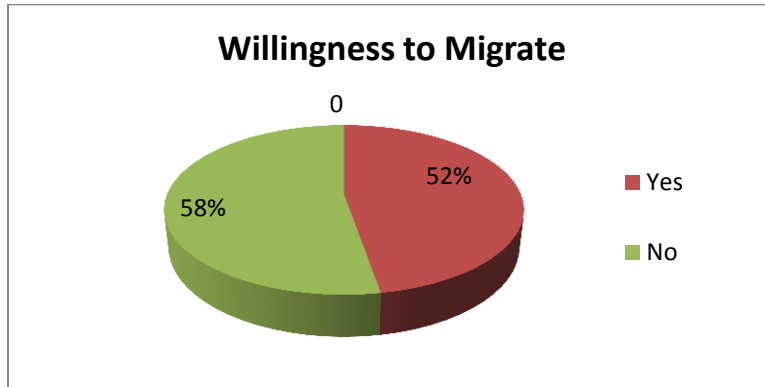


To know the constraints in the life of students for taking up further education we ask the respondents their views on certain parameters. Above pie chart shows that 48% of the current 10th/12th Class category students were having constraints in pursuing further education or taking vocational training. The reasons for the same are cited below:

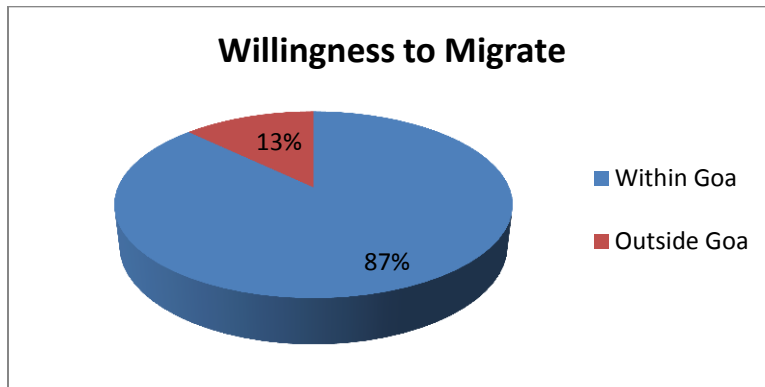


Herein, up to half of the students were facing financial problem in pursuing further education or taking any kind of training, the reason for the same could be they are from weak economical background.

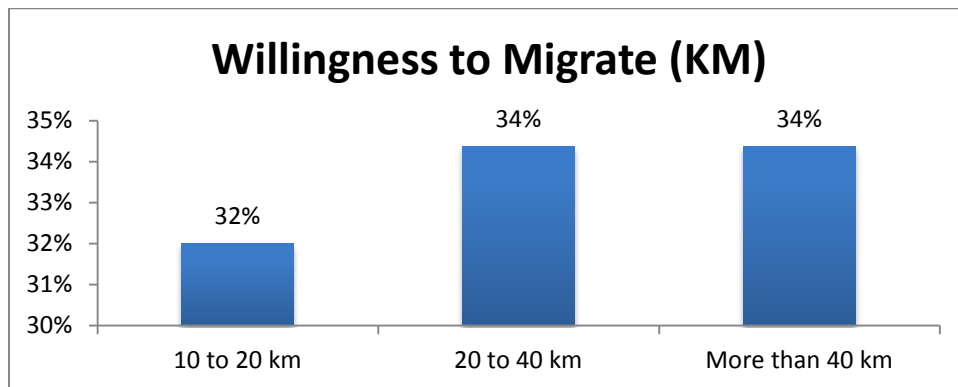
3.2.3.2.2.1.3.2 Willingness to migrate for further Education/Training



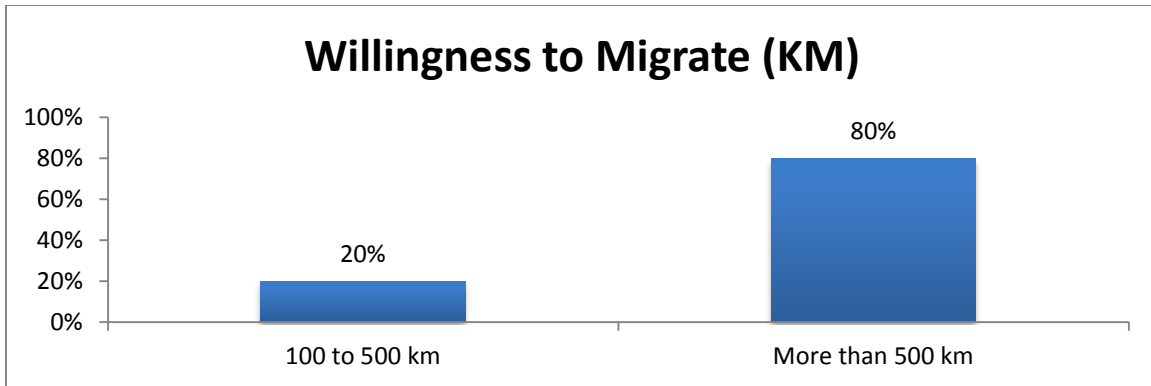
Here, we got quite positive response on willingness to migrate for skill up-gradation as majorly almost half of the students are ready to migrate for further education and training.



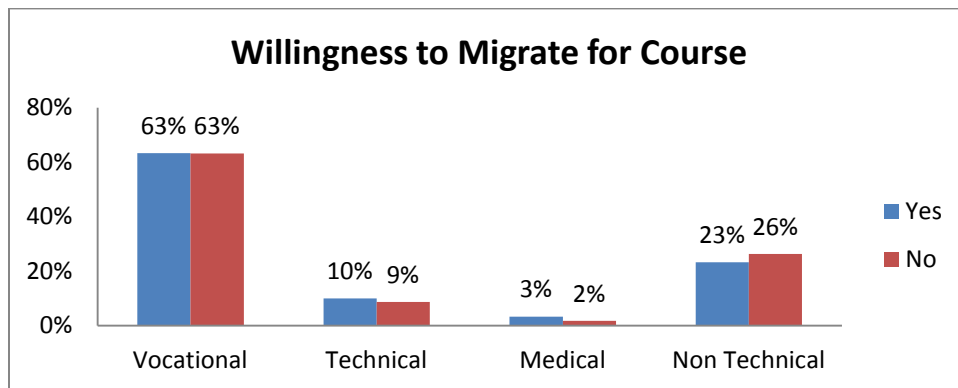
As we seen Positive response from current 10th/12th students for readiness to migrate for skill up gradation, majority of the students willing to migrate within Goa for future education and training.



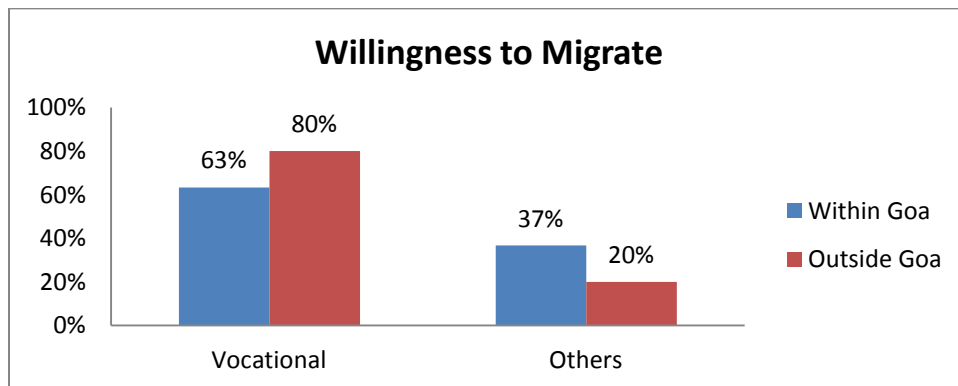
In case of migration, majority of the students were able to move up to 10 to more than 40 Km within Goa.



Here, current student's willingness to migrate outside Goa is 100 to more than 500 Km, reason cited here is that they are not much willing to migrate for outside Goa.



In this category we seen most of the student's willingness to move or migrate for Vocational Studies and Trainings as compared than any other courses.

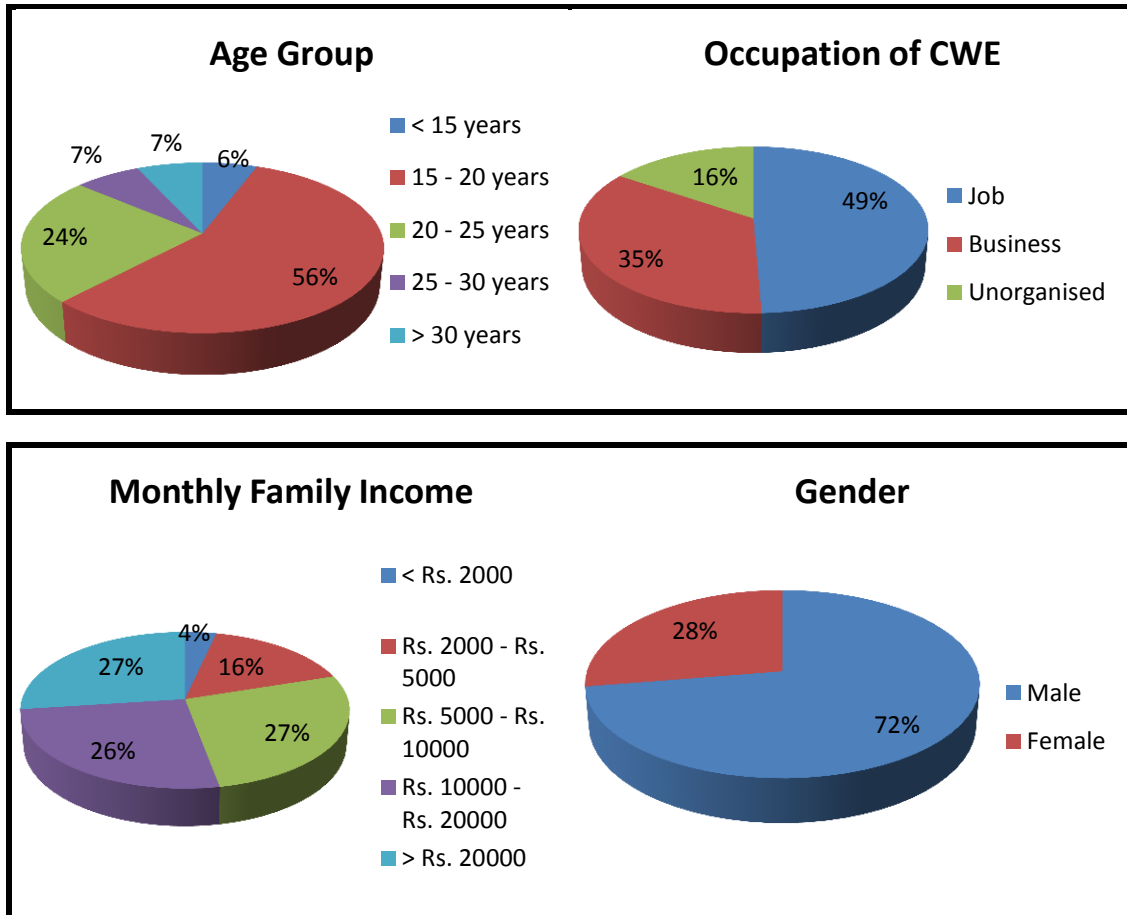


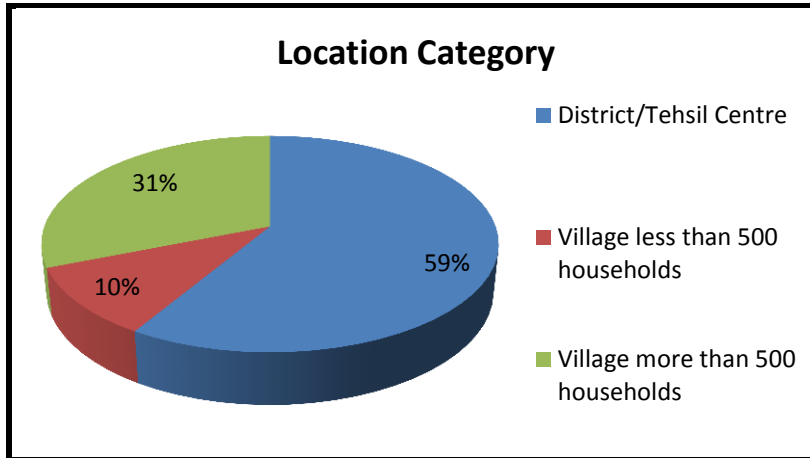
Herein, we found that the students in this category are more willing to migrate within Goa as compare to outside Goa, the reason for the same could be they might facing some constraints in migrating outside Goa.

3.2.3.2.2.2 10th/12th Pass outs who do not go for further studies and join job market

Herein, the respondents in this category we have interviewed are 10th/12th Pass outs who do not go for further studies and join job market.

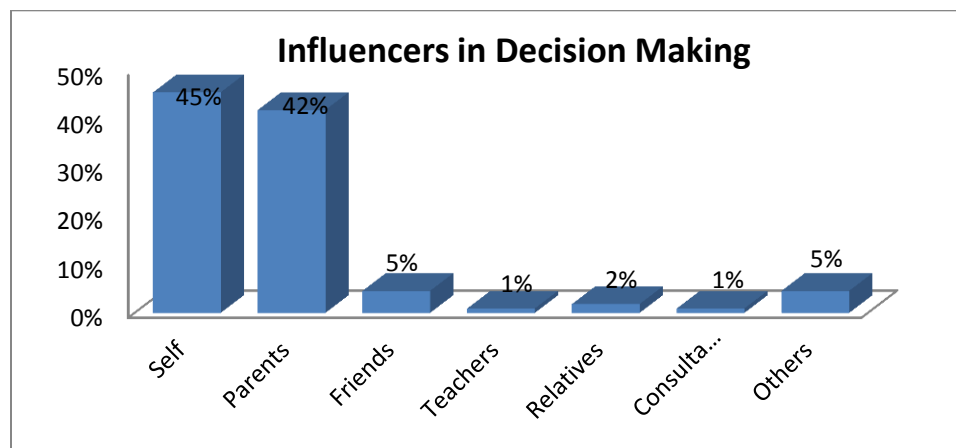
3.2.3.2.2.2.1 Profiling Data





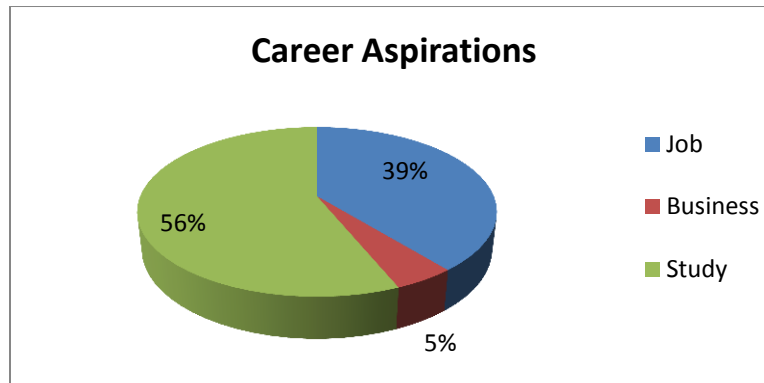
By analyzing the background of the student, one should come to know that this category students who had completed study only till 10th or 12th class are majorly belong to economically well off families and most of them are from service class family.

3.2.3.2.2.1.1 Decision Making

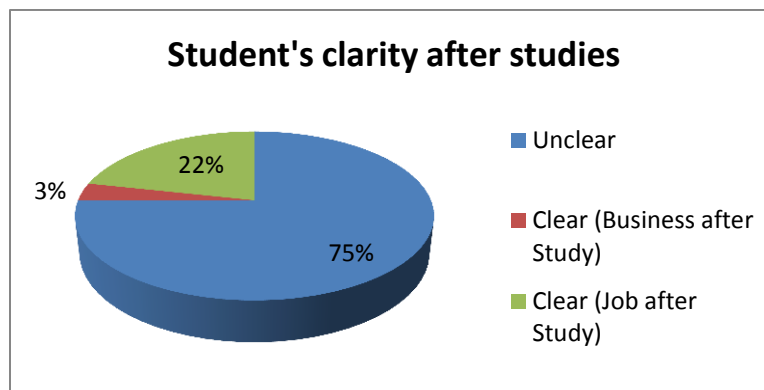


Here, graph shows that higher percent of the respondents were self decision maker while 42% respondents are highly influenced by their parent, which is followed by friends, relatives, teachers and consultancies.

3.2.3.2.2.2 Aspirations

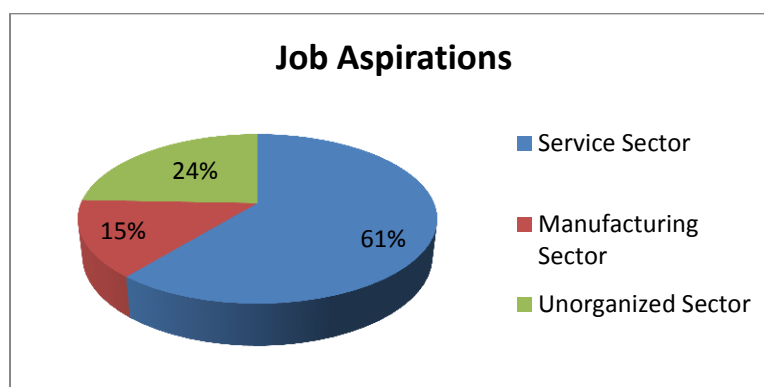


By looking at the career aspiration of students, positively 56% of them are interested in doing study further and also some wants to aspire for job.



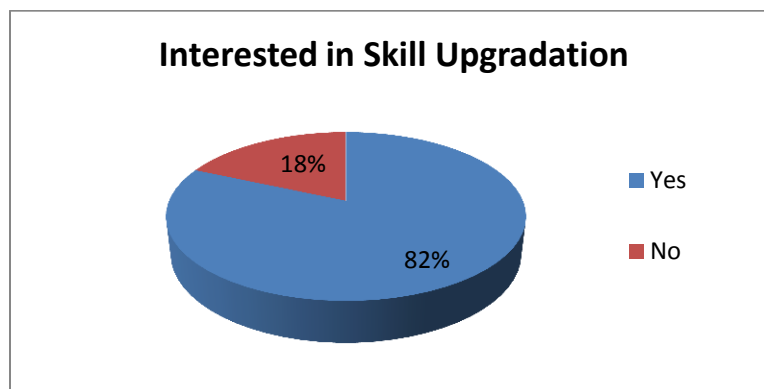
Similar to the above category, this category also has majority of the students who were unable to decide their future plan up till now, only 25% were clear about their career plan.

Majority of the pass outs of 10th/12th Class aspiring to join service sector in future.



Service Sector	Manufacturing Sector	Unorganized Sector
Police Service	Wood factory	Sports person
Doctor	Automobile Engineer	Mechanic
Banking	Chemical Engineer	Agriculture
Chef	Mechanical Engineer	
Play theatre	Electrical	
Computer Engineer		
Nurse		
IT		

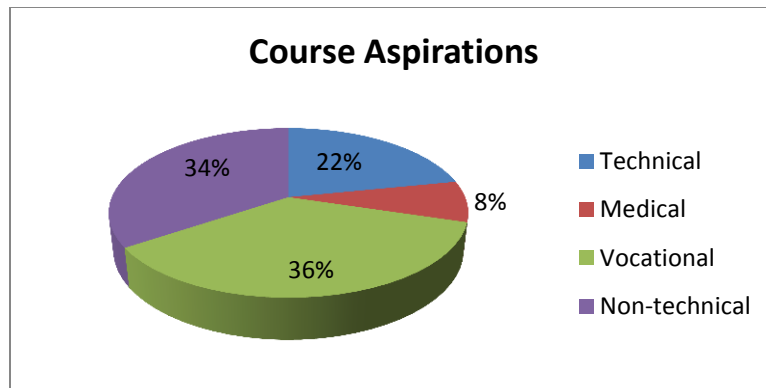
3.2.3.2.2.2.1 Interested in Skill Up-gradation



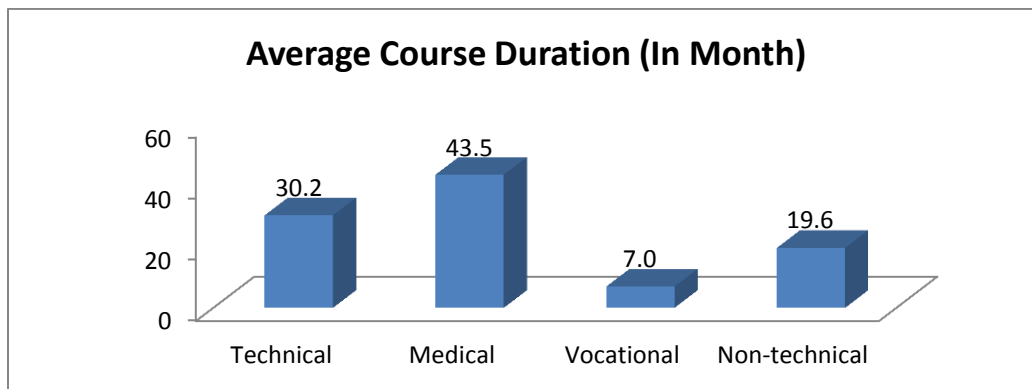
Here we got response towards more positive side as 82% of the pass outs were interested in skill up-gradation.

3.2.3.2.2.2.2 Course Aspirations

Out of those Students who aspire for study further, we ask for bifurcation in field of study. We got highly positive response for Vocational education. However, there were also quite a few students who wish to go for technical and medical education.

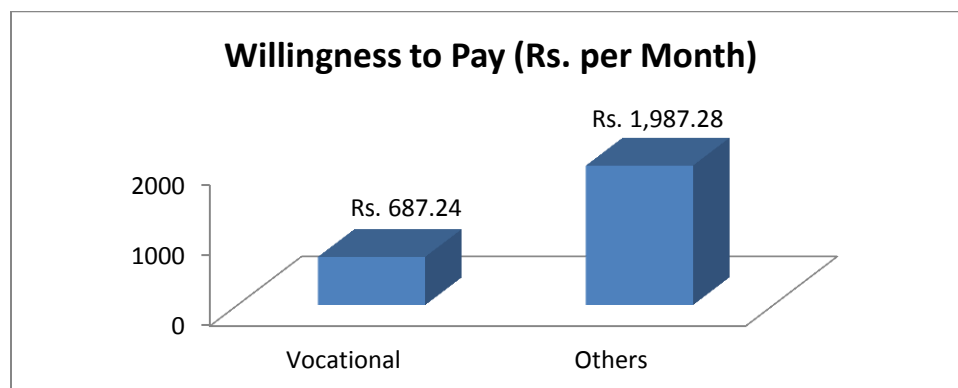


3.2.3.2.2.2.3 Average Course Duration for various Categories



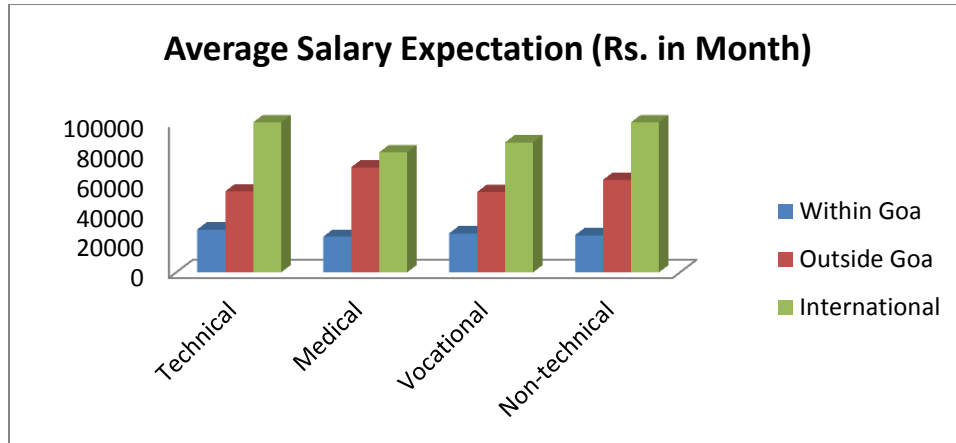
For vocational course, 7 months would be enough time for pursuing training according to the pass out students.

3.2.3.2.2.2.4 Willingness to pay for various Categories



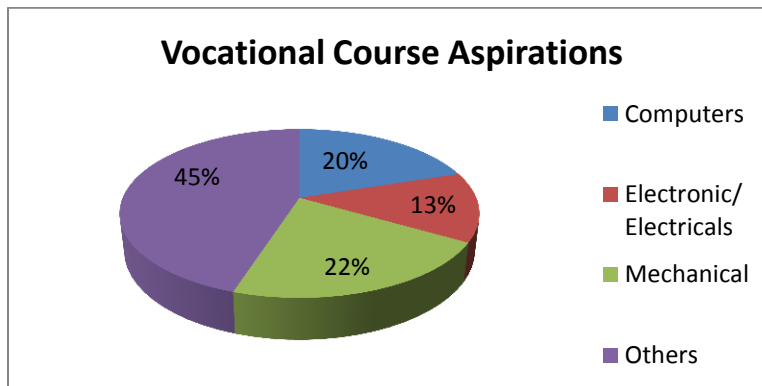
Here the students were ready to pay up to Rs 680 per month for the vocational courses.

3.2.3.2.2.2.5 Average Salary Expectation



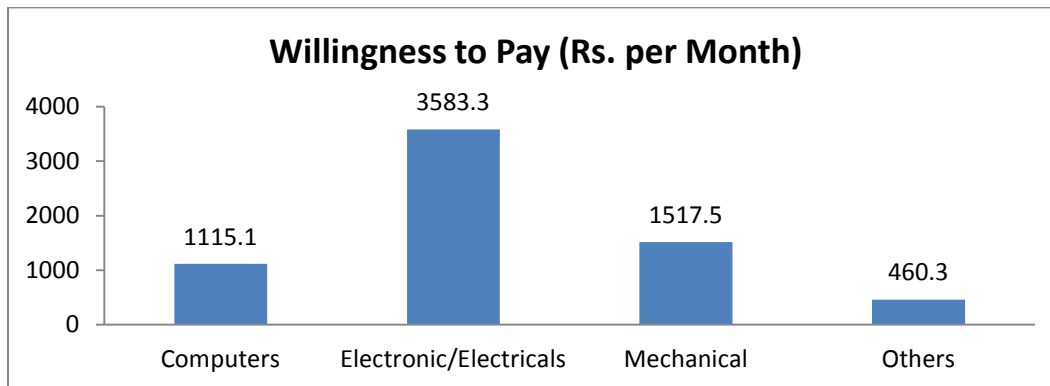
As far as salary expectation within Goa is concern, respondent's expectation is nearly same for all courses but in case of outside Goa, aspirants of Medical student's expectation are high. On international level, they expects around Rs. 1,00,000 after completion of vocational course.

3.2.3.2.2.2.6 Vocational Course Aspirations



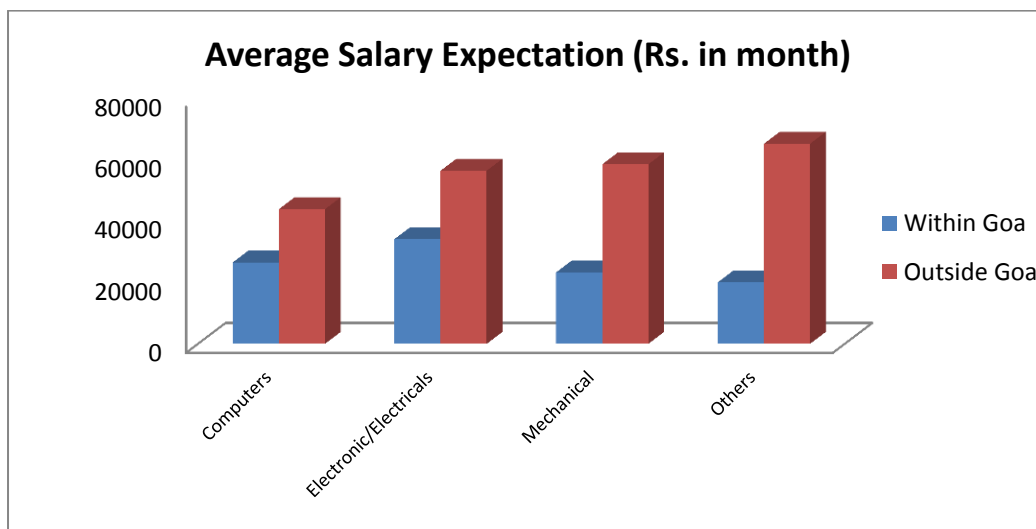
Apart from aspirants of Computer, Electrical and Mechanical Courses, there were also some who aspire for the course of beautician, mobile repairing, Tailoring, stretching & crafting, fashion designing and lectureship.

3.2.3.2.2.2.7 Willingness to pay for various Vocational Courses



Electronics or Electrical and Mechanical courses are the two for which students willing to pay is higher around Rs. 3583 and Rs.1517 per month respectively.

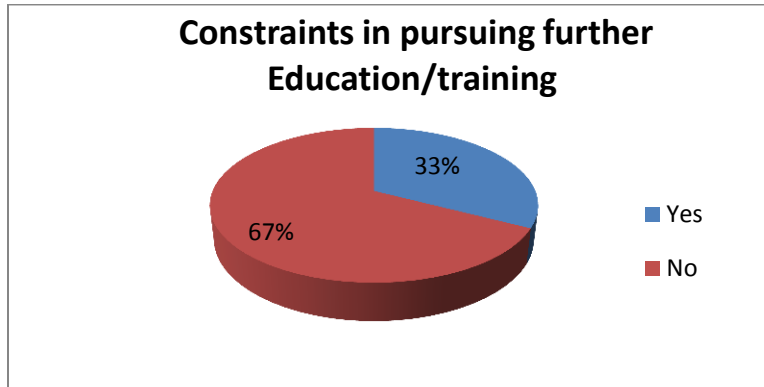
3.2.3.2.2.2.8 Average Salary Expectation for various Vocational Courses



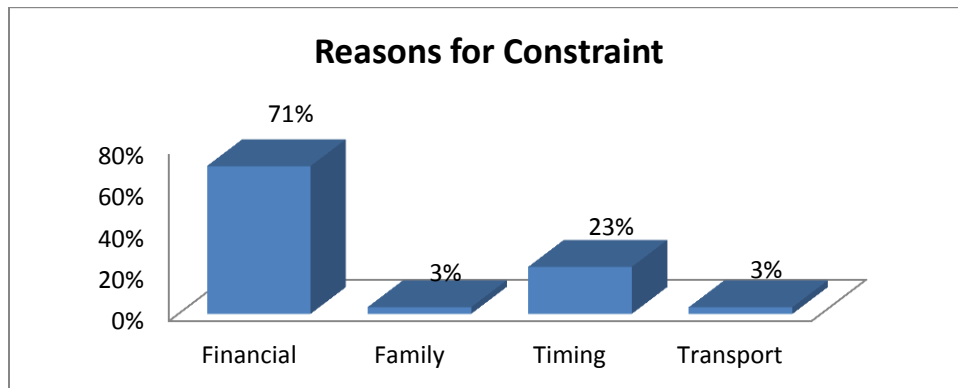
Here, for vocational courses student's readiness to pay is up to Rs 40000 within Goa and up to Rs. 70000 outside Goa.

3.2.3.2.2.3 Constraints

3.2.3.2.2.3.1 Constraints in pursuing further Education/Training

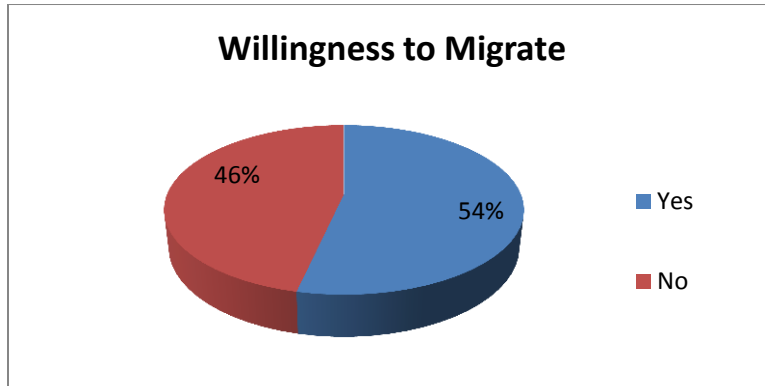


Above pie chart shows that not much of the pass outs of 10th/12th Class category students were having constraint in pursuing further education or taking vocational training. The reasons for those who have constraints same are cited below.

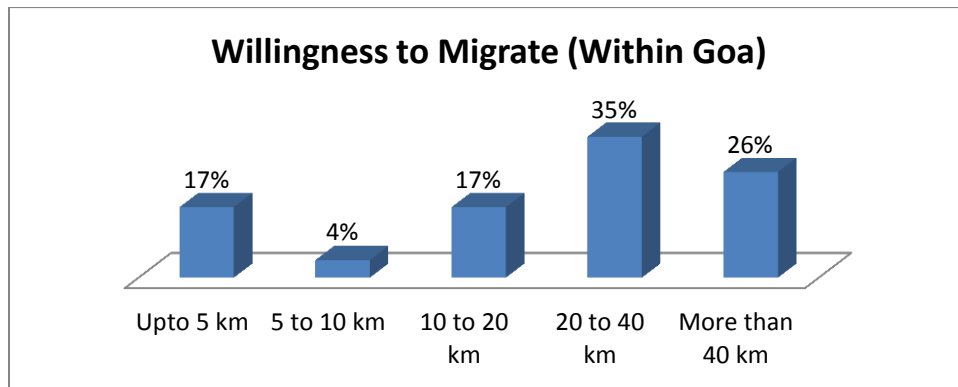
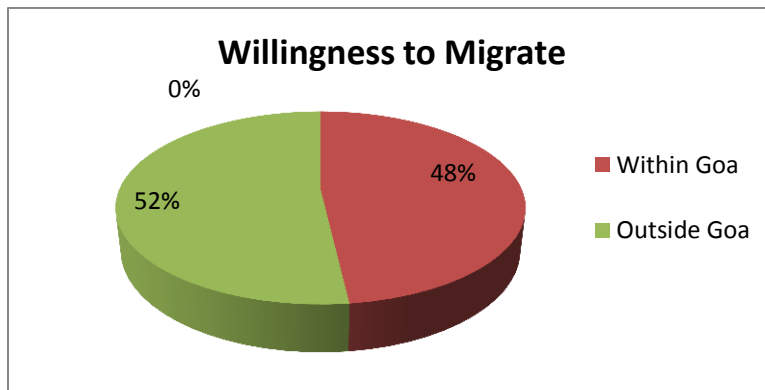


Same as above mentioned categories, financial issue is the major concern for the students of this category which is followed by timing problem, family problem and transportation problem.

3.2.3.2.2.3.2 Willingness to Migrate further Education/Training



More than half of the pass outs are willing to migrate to upgrade their skill, of which 48% are ready to migrate only within Goa.

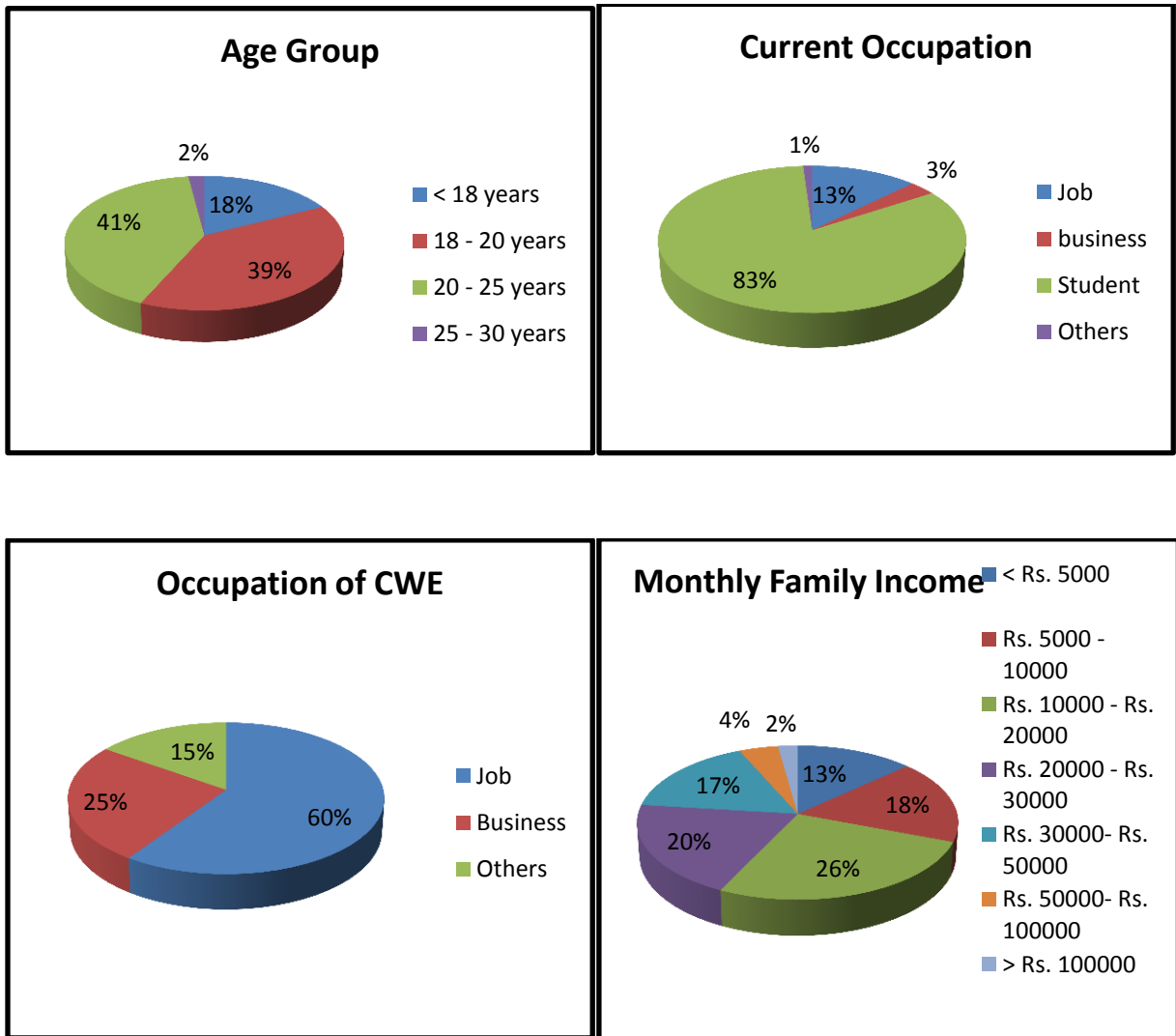


In case of within Goa majority of the respondents are willing to migrate up to 20 to 40 Km from their respective location, while 26% of the students were willing to migrate more than 40 km which is shown in the above graph.

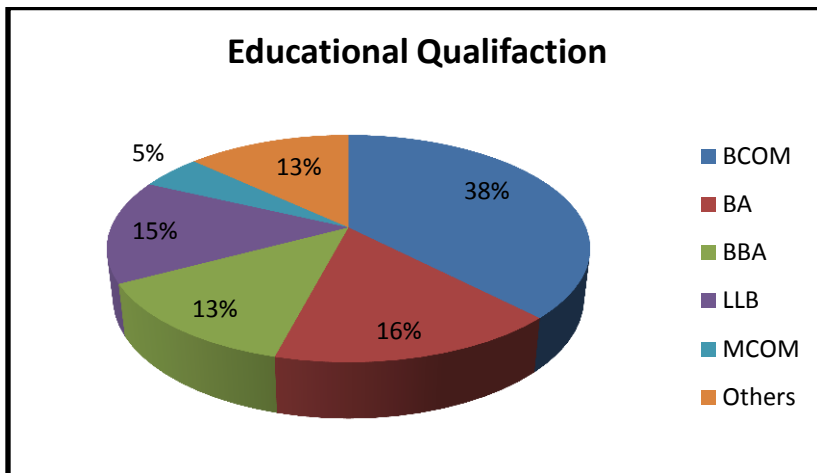
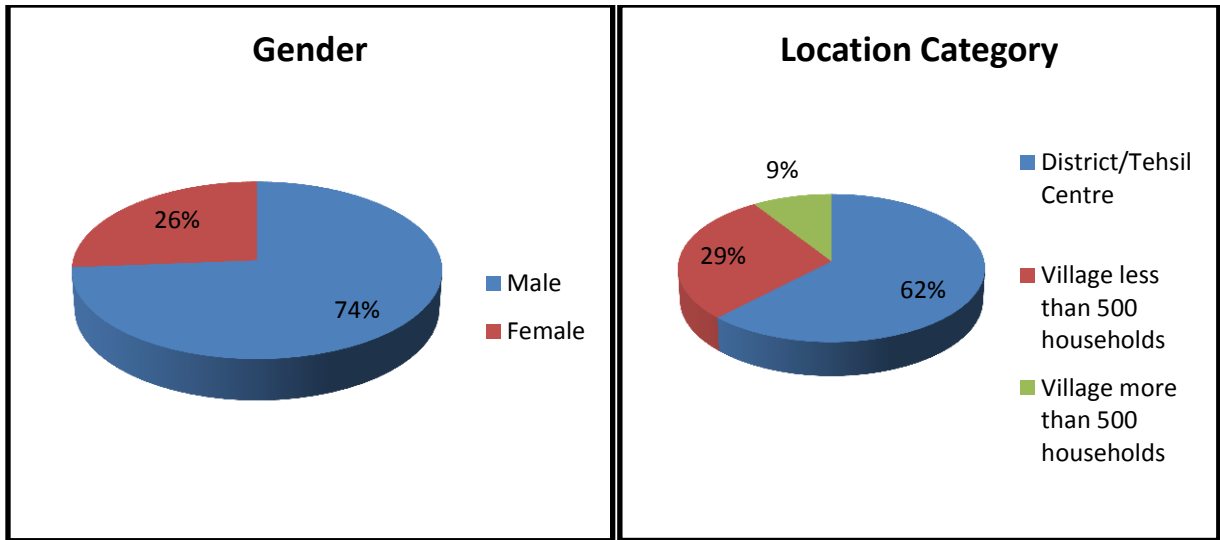
3.2.3.2.3 General Stream Graduates

This category includes general college graduate students. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.3.1 Profiling Data

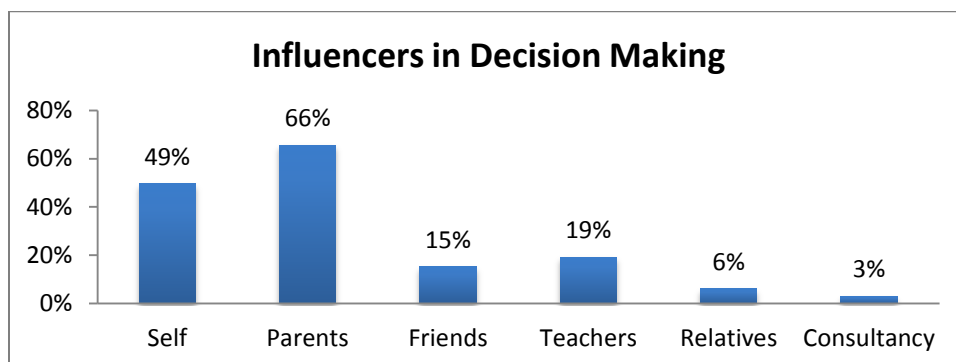


Other: Farmer, Fisherman, Housewives*



Majority of the respondents covered in this category are belongs to economically well families. This category includes non technical graduates; majority of the student’s perusing M.Com, BA and LLB. Apart from that there are also some students of B.Com and BBA.

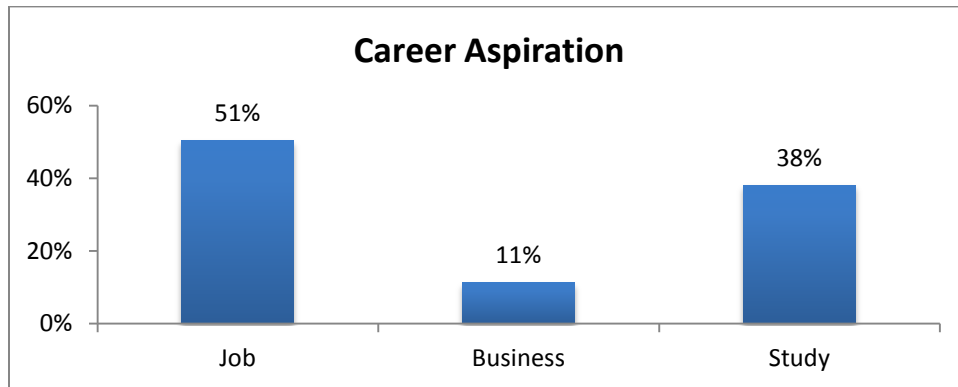
3.2.3.2.3.1.1 Decision Making



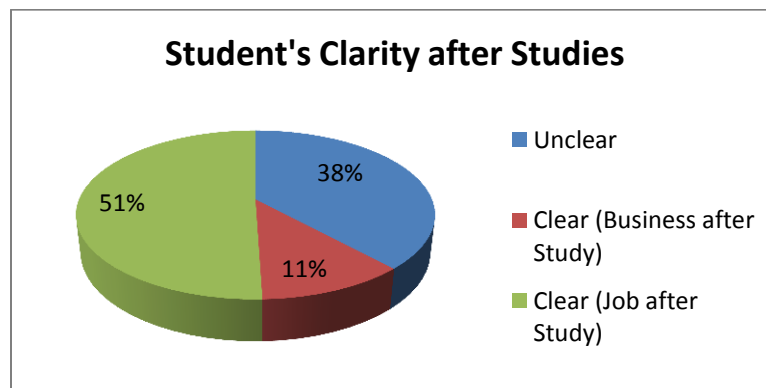
The graduates in this category are majorly influenced by their parents followed by teachers and friends apart from self. The influencer help students in taking their decisions regarding choice of future study, field of job and other important decisions of life.

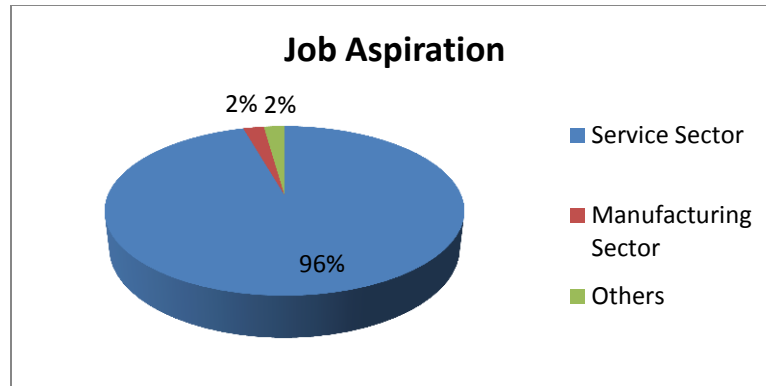
3.2.3.2.3.2 Aspirations

This section includes student's aspiration whether they want to do job, business or study after completion of their current study. This section also includes the willingness of respondents for undergoing skill up-gradation and the courses in which they aspire to do vocational study.



Here, majority of the respondents aspire for job after their study while the good point is that 38% of the respondents wish to study further. The below graph depicts that majority of the students were clear about their career option.

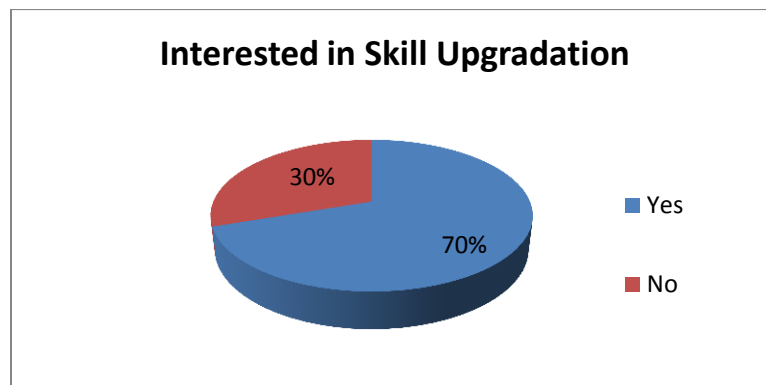




The above graph shows that nearly about all the non technical graduates are aspired to join job in service sector. Very few would want to join manufacturing sector. The table below shows the field in which they aspire to join.

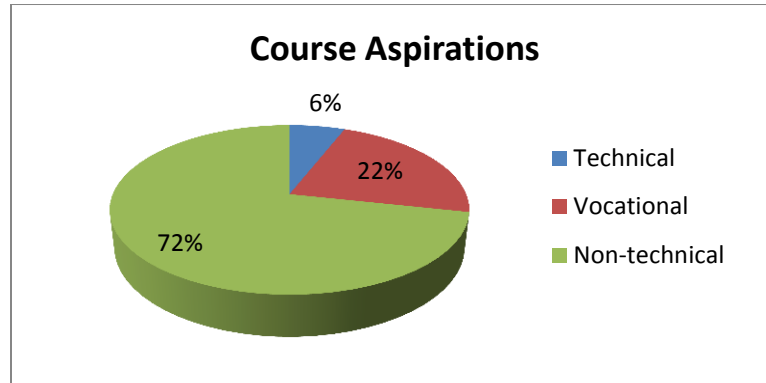
Service Sector	
Hotel Industry	Lawyer
Medical	Teacher
CA	Military
Software Developer	

3.2.3.2.3.2.1 Interested in Skill Up-gradation

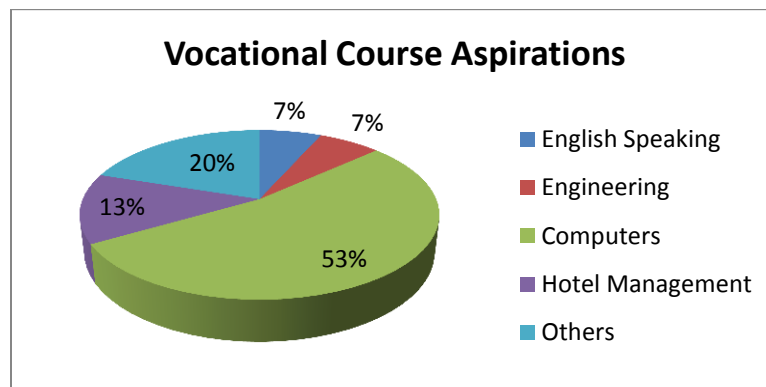


Majority of the students show their interest in skill up-gradation of which 22% of the students are interested in doing vocational course further.

3.2.3.2.3.2.2 Course Aspirations

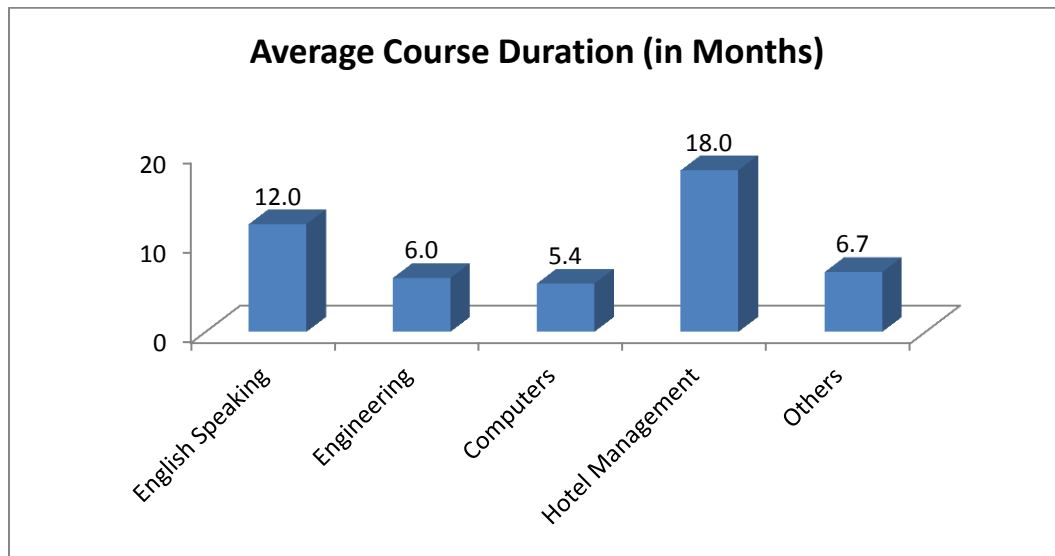
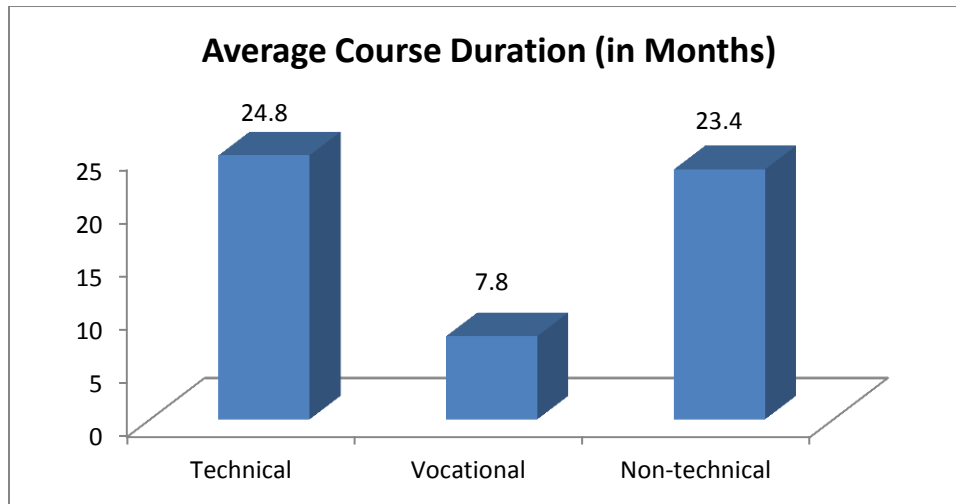


From those who showed their interest in doing vocational course, here are the courses in which they would want to undergo training. The most aspired courses among the listed are Computer and Hotel Management. The reason for increasing aspiration of these courses could be the growth of digitalization and increase the number of tourist in the state. Other in below graph includes bag making and tourist course. Very few students aspire for courses such as Electrician and Mechanic which is included in Engineering related course category.



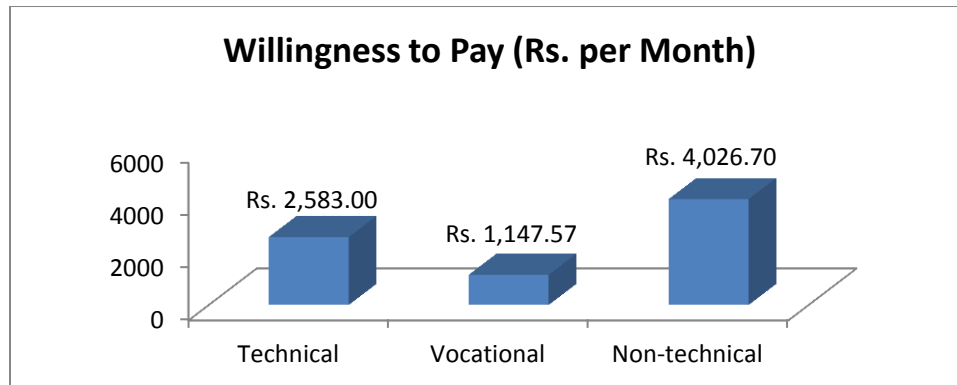
As this category includes the graduate students, the awareness level is much high as compare to the above category students. For technical and non-technical course, their readiness to spend is around 2 year and for vocational course it is of 6 month.

3.2.3.2.3.2.3 Average Course Duration for various Categories

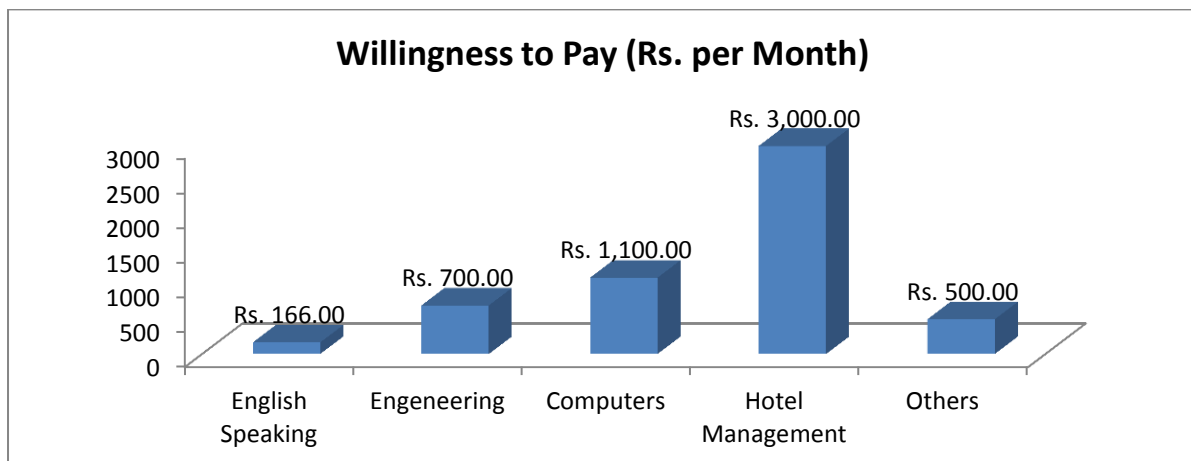


For the course of Hotel management, students ready to spend around 18 months and for English Speaking 12 months on an average.

3.2.3.2.3.2.4 Willingness to pay for various Categories

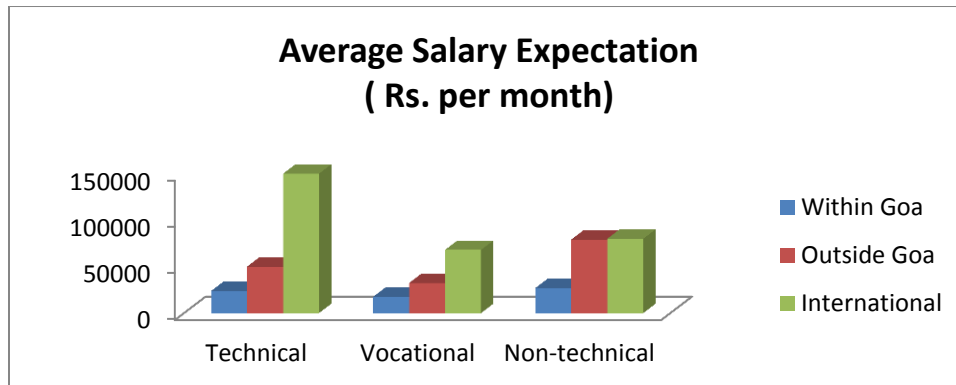


Here, the students willing to pay is highest for non-technical course and for vocation training they are ready to pay Rs.1100 for the course per month as majority of them are coming from economically well off families. Here, the reason for high willingness to pay for non-technical course as compare to technical course is higher due to they are already pursuing the technical course so here they aspired for the master in their current course.

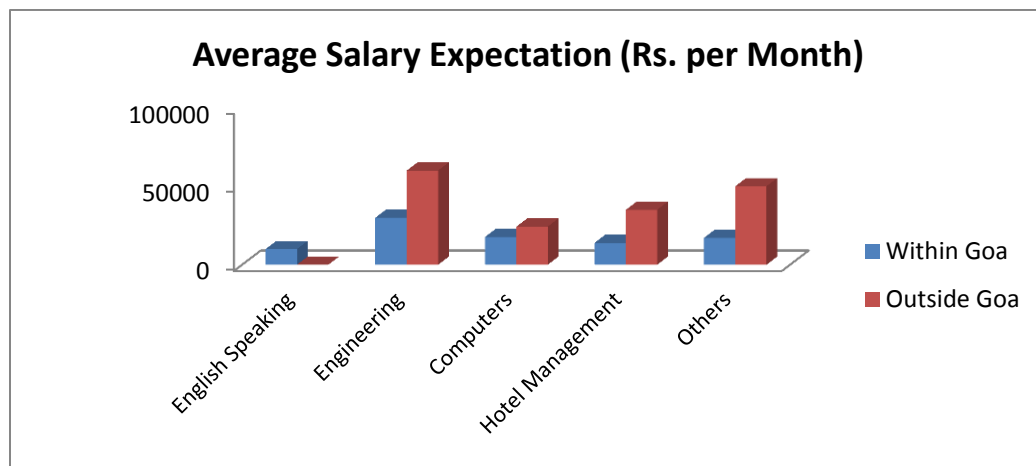


For the Hotel Management course, students are ready to pay highest and also for the engineering related courses like Electrician, Mechanical expected fees are mention above.

3.2.3.2.3.2.5 Average Salary Expectation for various Categories



After completion of the vocational training, students expect a salary of Rs. 20000 within Goa and nearly around Rs.40000 outside Goa.

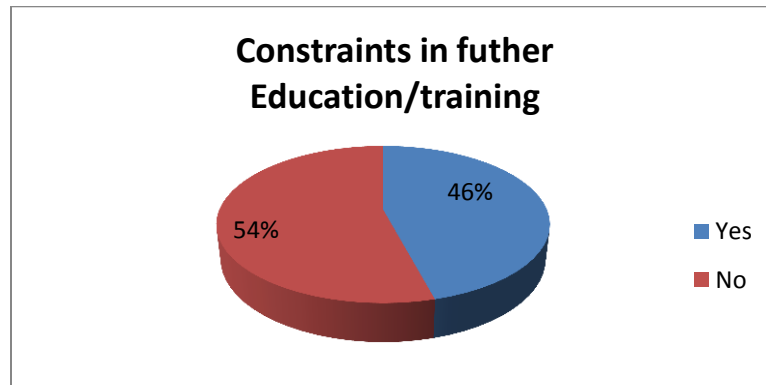


As far as vocational courses are concern, Engineering (Mechanic/Electrician), Computer and Hotel Management are the courses for which the salary expectation is higher then other courses.

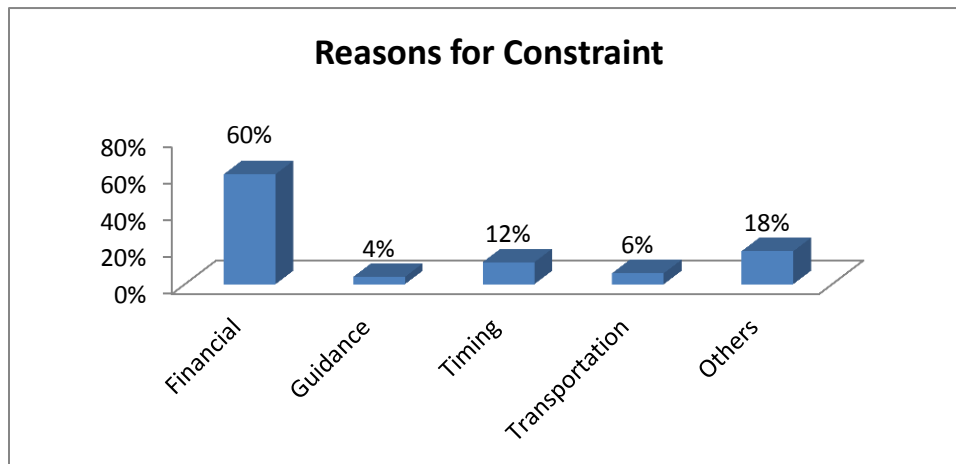
3.2.3.2.3.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.3.3.1 Constraints in pursuing further Education/Training



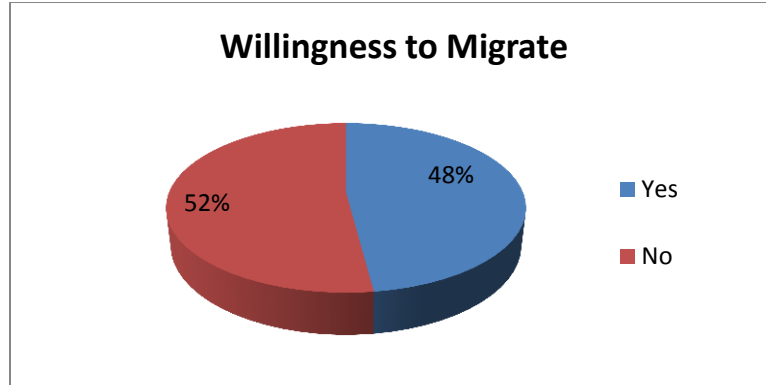
The above pie chart shows that constraint is faced by 46% of the graduates of North Goa district and reasons for the same are shown below. Strangely, though the graduates are coming from wealthy families, majority of them mentioned financial reason for constraint.



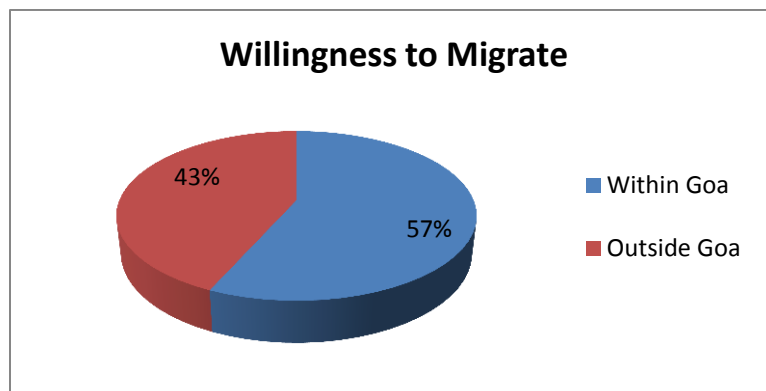
Other reasons for constraint include stress, family problem, unavailability of teachers and average quality of education. Apart from that timing is also a major reason for not taking training under vocational education.

3.2.3.2.3.3.2 Willingness to migrate for further Education/Training

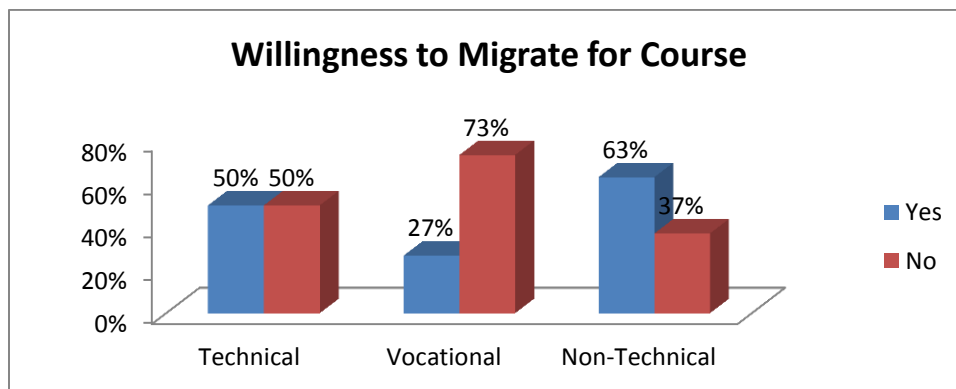
This section includes the willingness for the students in case of migration for taking vocational course or further education. Along with this, it also contain the constraints faced by the students in taking further training and reasons which resisting the students in pursuing further education.

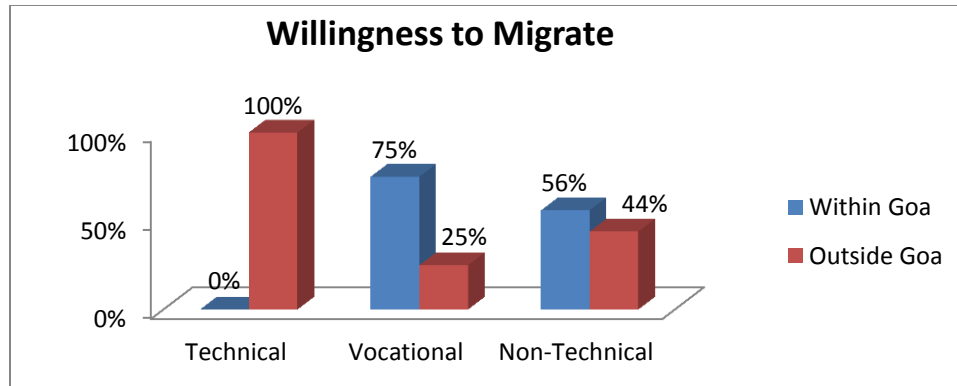


More than half of the respondents are not willing to migrate for the course and from those who wish to migrate, majority of them are ready to migrate only within Goa.



The below graph depicts that students who aspire to do non-technical course further are majorly willing to migrate and as far as vocational course is concerned, few students wish to migrate.





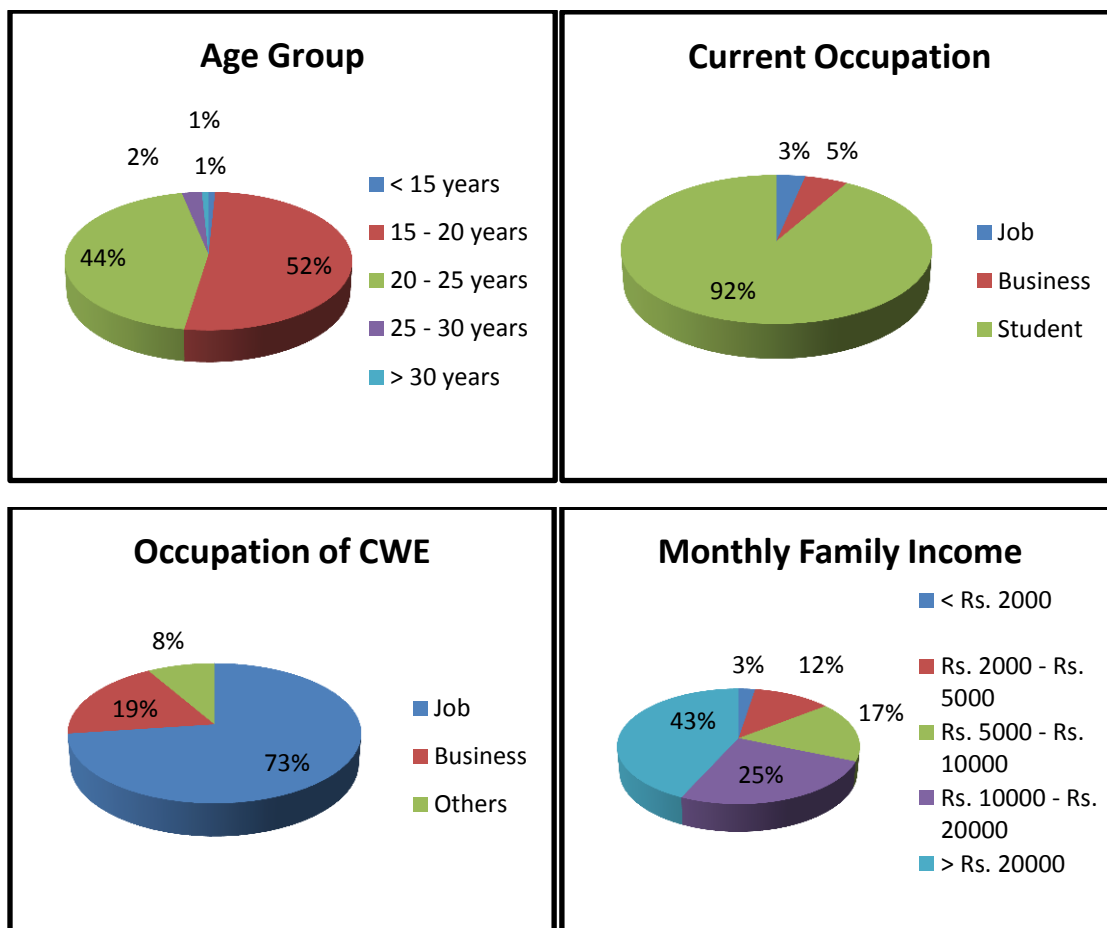
Again, willingness to migrate within and outside Goa is highest for the technical and non-technical aspirants as far as outside Goa is concern.

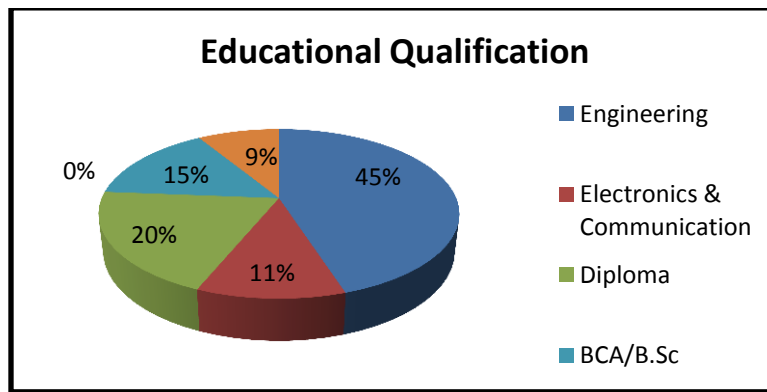
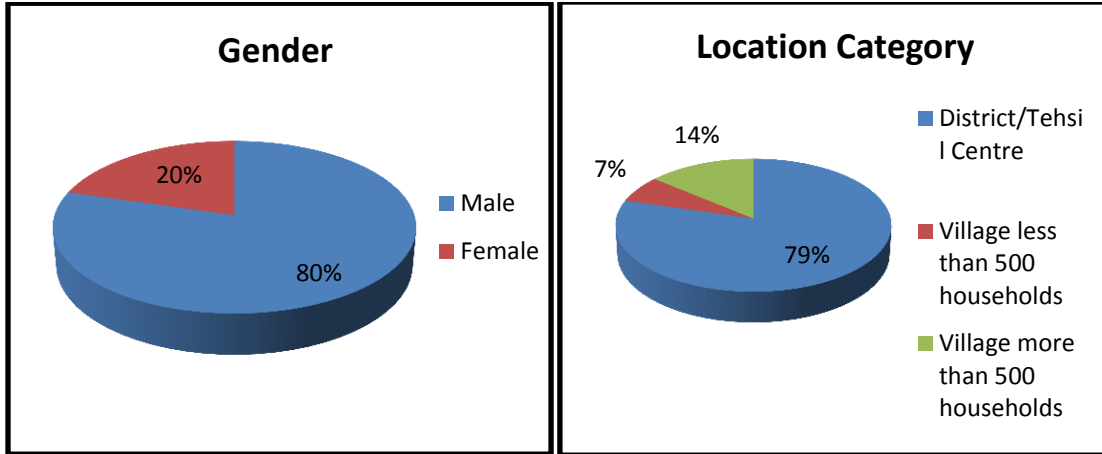
3.2.3.2.4 Technical Graduates

This category includes Professional & Technical Graduate College students e.g. Engineering, Medical etc. The major areas we have covered are profiling of category which include educational and economical background of students with influencer's role in decision making of student's life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.4.1 Profiling Data

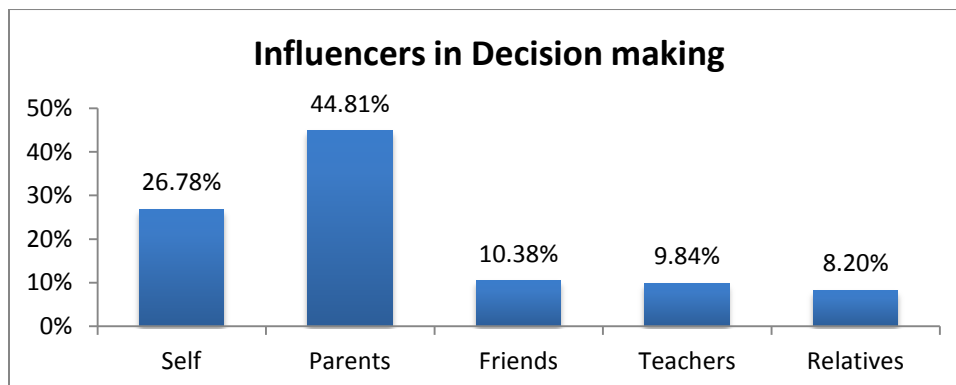
The technical graduates are coming from economically well off families as majority of their monthly family income is more than Rs. 20000. Very few of the students are working along with studying. Majority of the male candidates are hired for technical related work hence large strength of male candidates at technical category students covered.





Majority of the respondents are coming from families who belong to job class category. Here 45% of the students are perusing BCA or B.Sc while others include MBA and other professional courses.

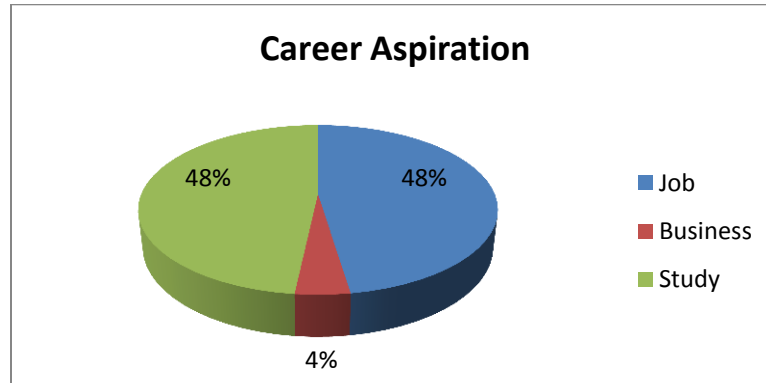
3.2.3.2.4.1.1 Decision Making



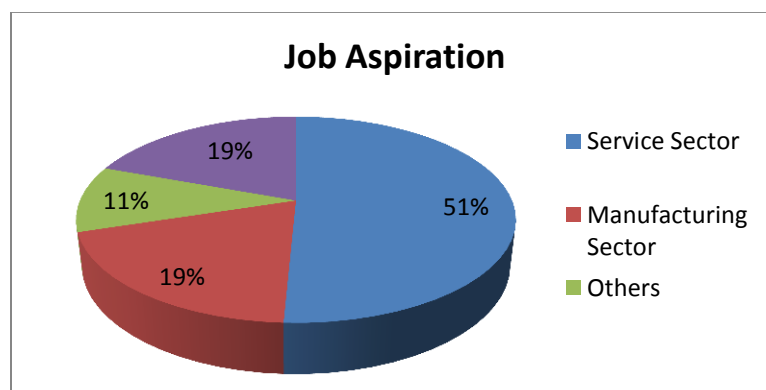
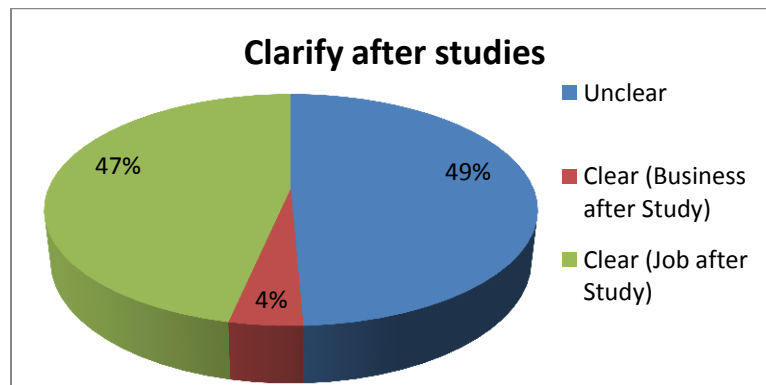
Again similar to non-tech graduates, these category students' major decisions are influenced by parents and are followed by teachers. Friends and relatives also play a role in making career related decisions of the respondents.

3.2.3.2.4.2 Aspirations

Very few of the respondents are aspired for setting up their own business after completion of their current study. Apart from that, half of the students aspire for job and half aspire for study further.



Nearly half of the respondents were clear about their future plan, what they have to do after their current study.

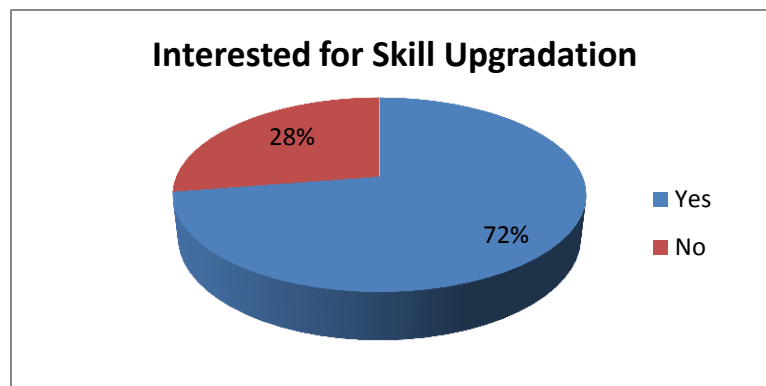


Herein, the above chart interprets that half students were interested in doing job further in service sector. The table shows interested filed of student in service, manufacturing and unorganized sector.

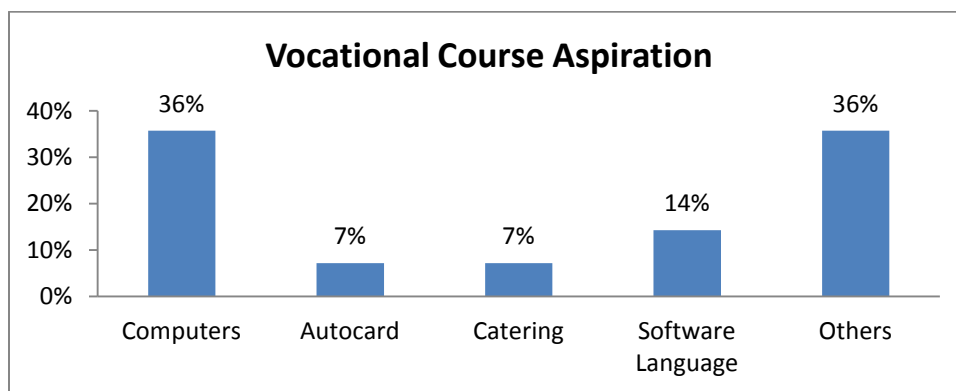
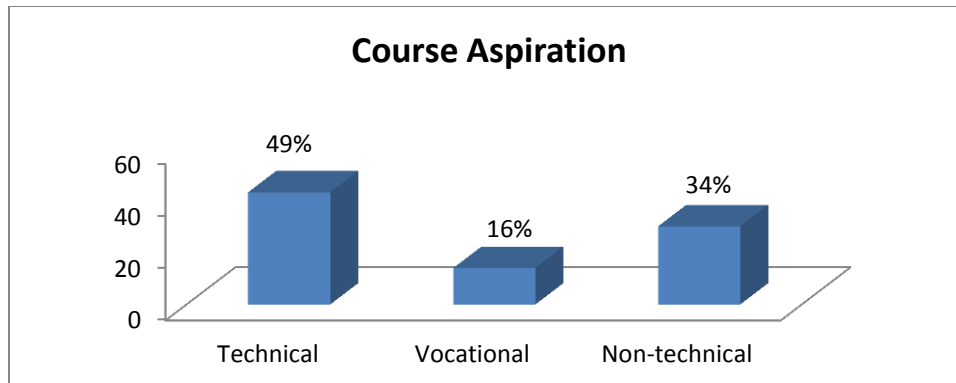
Service Sector	Manufacturing Sector	Unorganized Sector
Maintenance department	Mechanical Engineering	Singer
Government job	Civil Engineering	R & D
Hospitality	Ship Building	
Military	Chemical Industry	
Software Engineers	Hardware Engineering	
Supervisor job		
Teaching		
Computer Programming		
IT software Engineer		

3.2.3.2.4.2.1 Interested in Skill Up-gradation

Positively, more than half of the respondents were interested in skill up-gradation. Out of those who interested for skill up-gradation, only 16% of the students show their willingness for undergo vocational training.

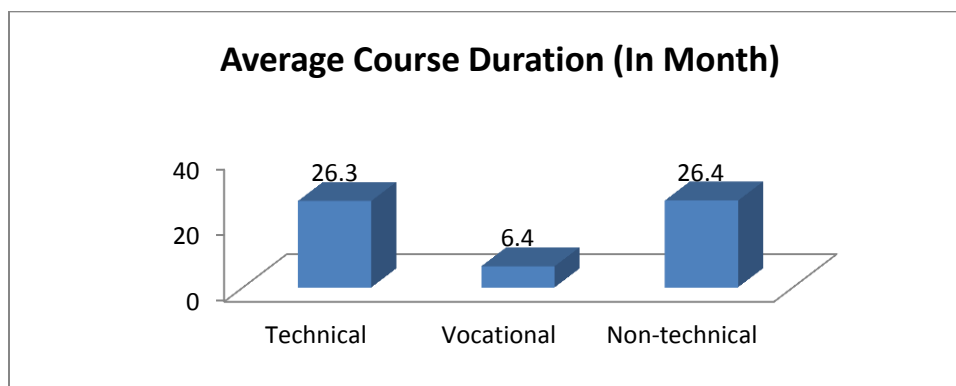


3.2.3.2.4.2 Course Aspirations

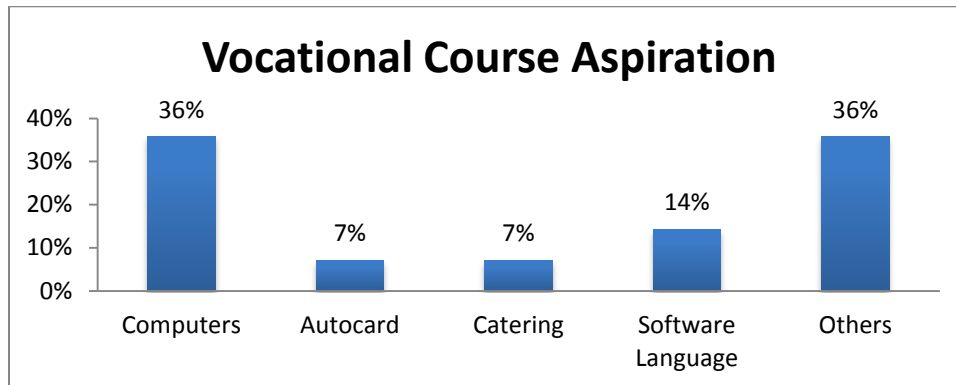


Out of all vocational course aspirations, computer course is most preferable one. Here, other includes Mobile Repairing, PLC, Automation and Marine course.

3.2.3.2.4.2.3 Average Course Duration for various Categories

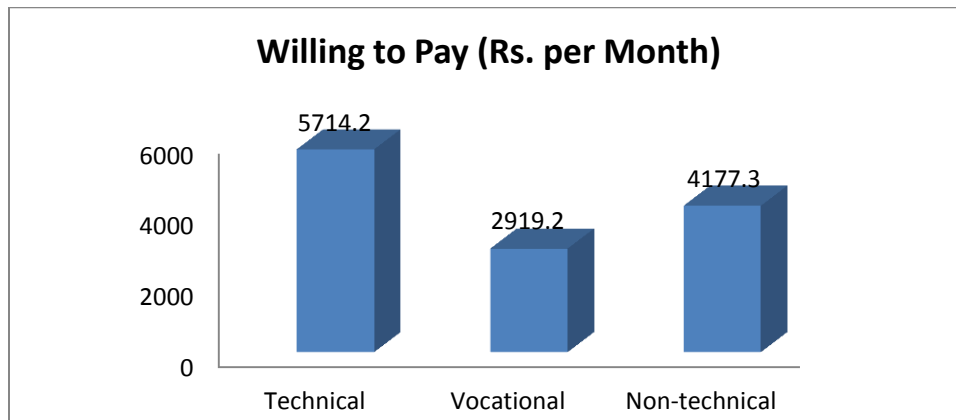


Average duration for the course is expected of 6 month per course for vocational training. Whereas, students expects 2 years for the technical and non-technical courses.

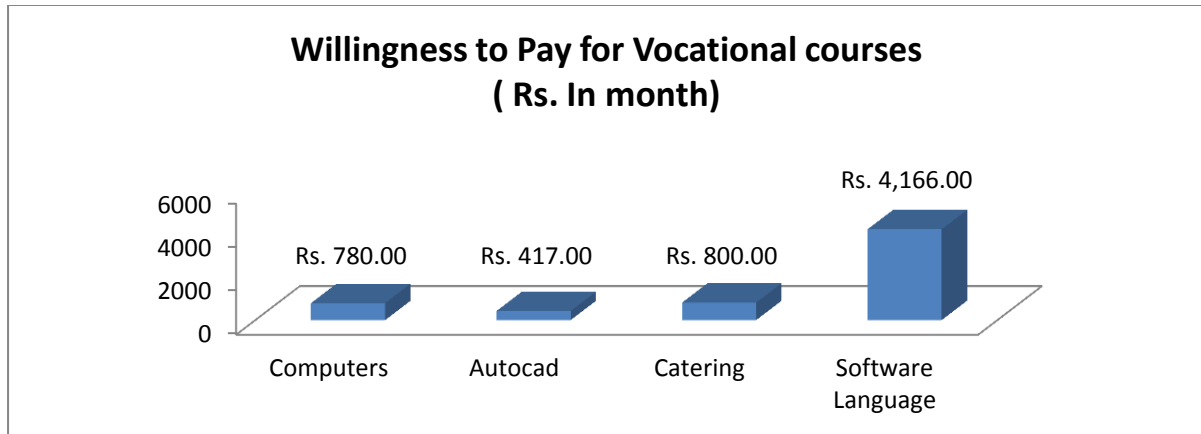


As far as vocational course is concern, software course is one of the highest preferable among students; they aspire to learn different software languages. Apart from that Computer course is most preferable and Auto-cad and Catering are the courses which also demanded among technical graduates.

3.2.3.2.4.2.4 Willingness to pay for various Categories

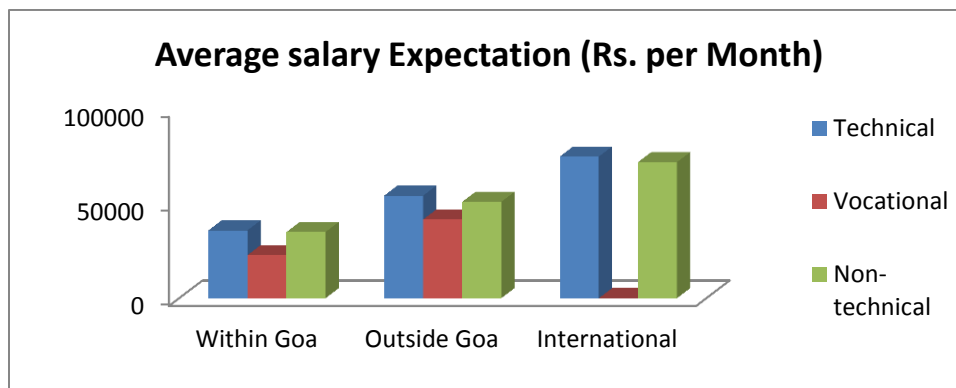


As the students belong to very high economical background their readiness to pay for the course is higher which is shown in above chart. For vocational course, students are ready to pay around Rs. 3000 per course per month.

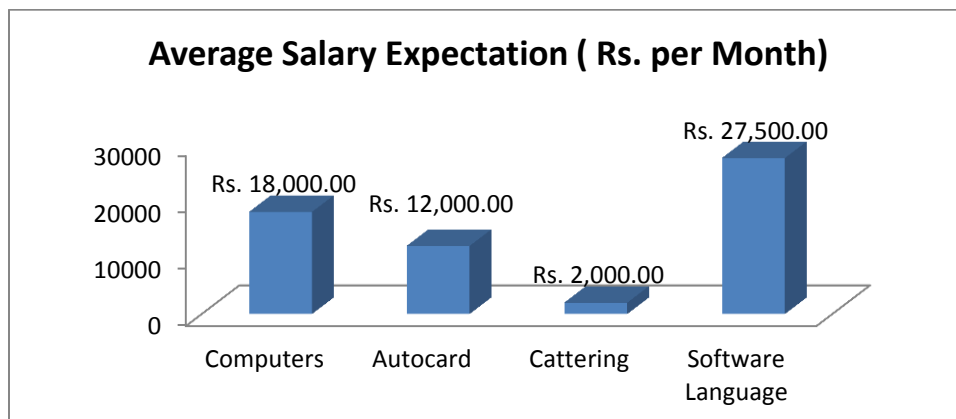


From the listed vocational courses, software is the one for which student's willingness to pay per month is highest nearly Rs. 4000. The readiness to pay for other courses is like Rs. 780 for Computer course, Rs. 417 for Auto-cad and Rs. 800 for Catering.

3.2.3.2.4.2.5 Average Salary Expectation for various Categories



The technical graduates expects around Rs. 20,000 for vocational course within Goa and Rs. 40,000 outside Goa. While they do not have any idea about the salary package provided to vocational certified students at International level.

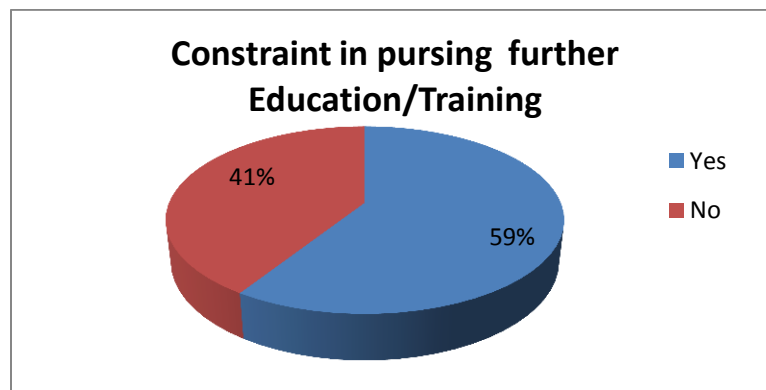


The above chart shows student's salary expectation for vocational courses within Goa. Students are ready to pay highest to lowest for the below courses: Software Languages, Computer Course, Auto-Cad and Catering. Much of the students were unaware about the salary provided to vocational trained people outside Goa.

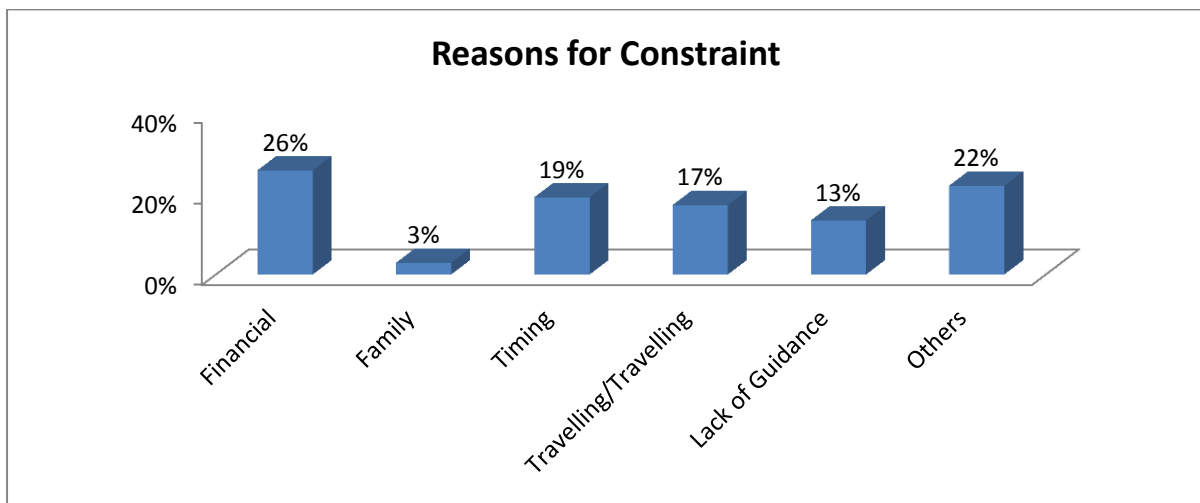
3.2.3.2.4.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.4.3.1 Constraints in pursuing for further Education/Training

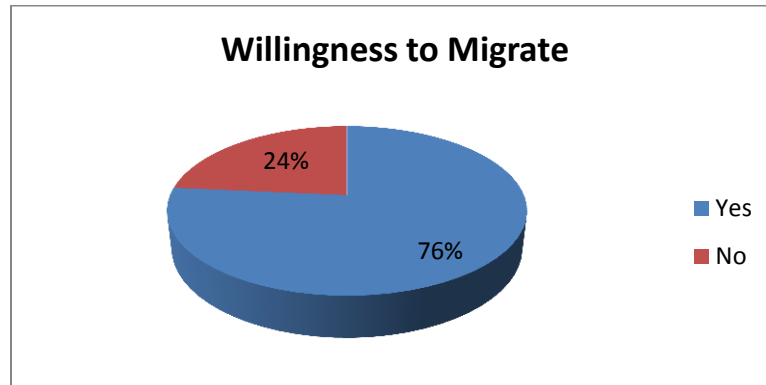


The above chart interpret that majority of the students are facing constraint in taking further training or any education. The below chart represent the reasons of constraints faced by students. Primarily students face financial constraint, other than this timing, transportation, lack of proper guidance and family problems are also some of the issues which resist student for taking further education.

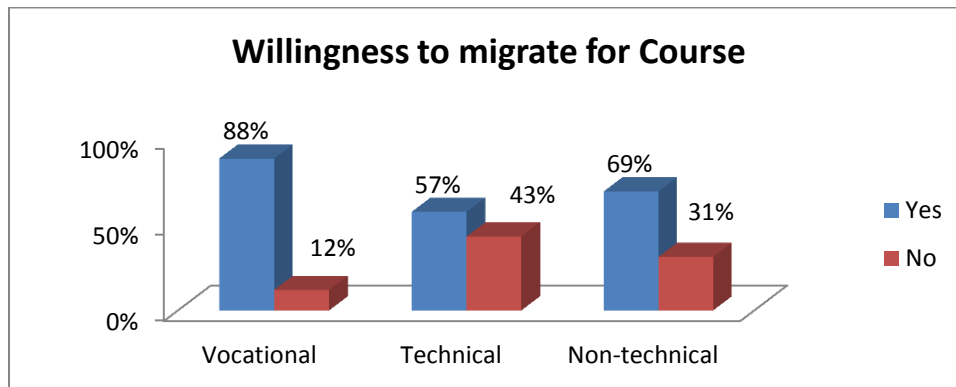


This section contains information regarding whether students face any problem in studying further or taking training further.

3.2.3.2.4.3.2 Willingness to migrate for further Education/Training



After analyzing the above chart we come to know that majority of the students are facing constraints in studying further.



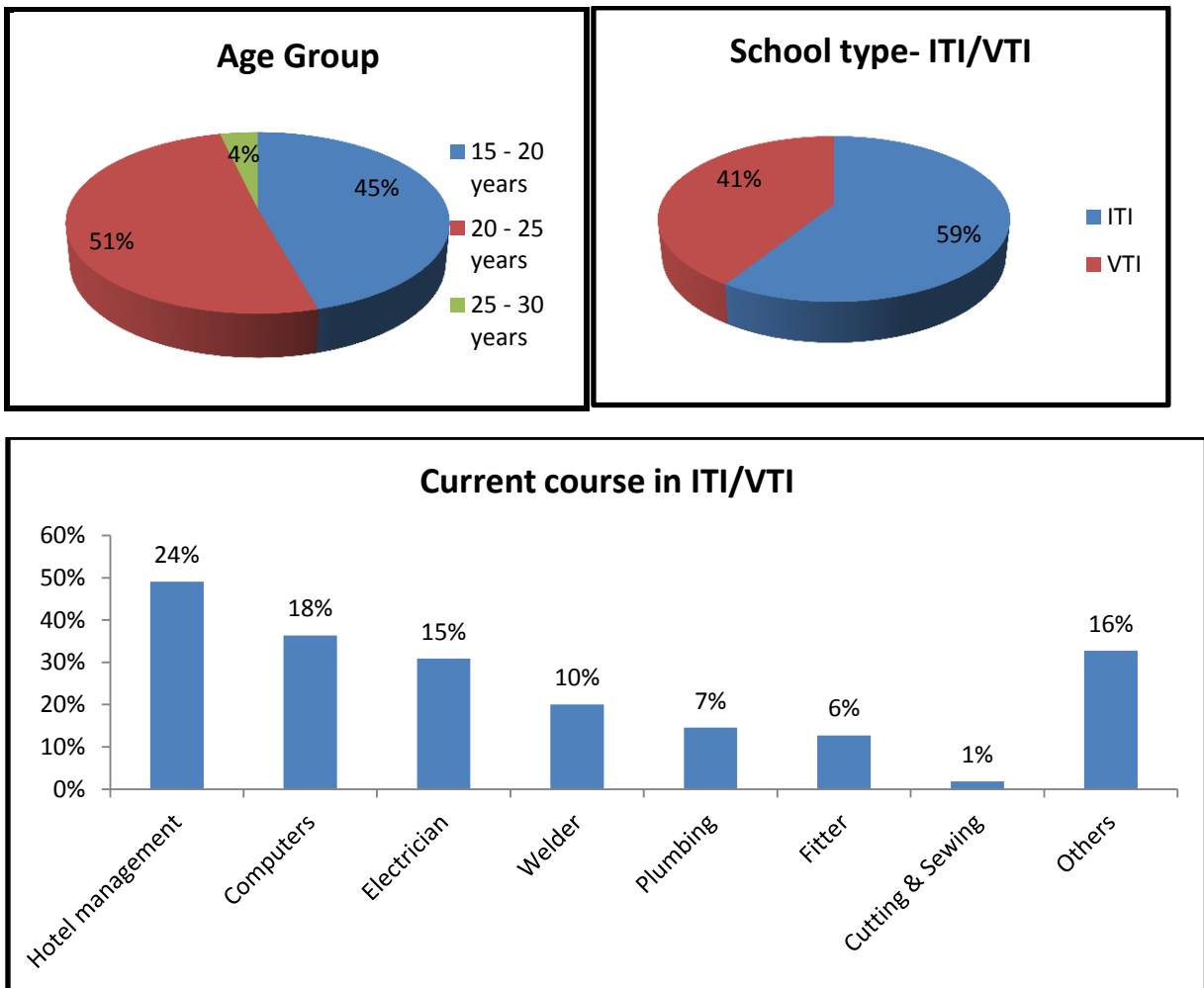
Most of the students are willing to migrate for the vocational course but majority of them only willing to migrate within Goa.

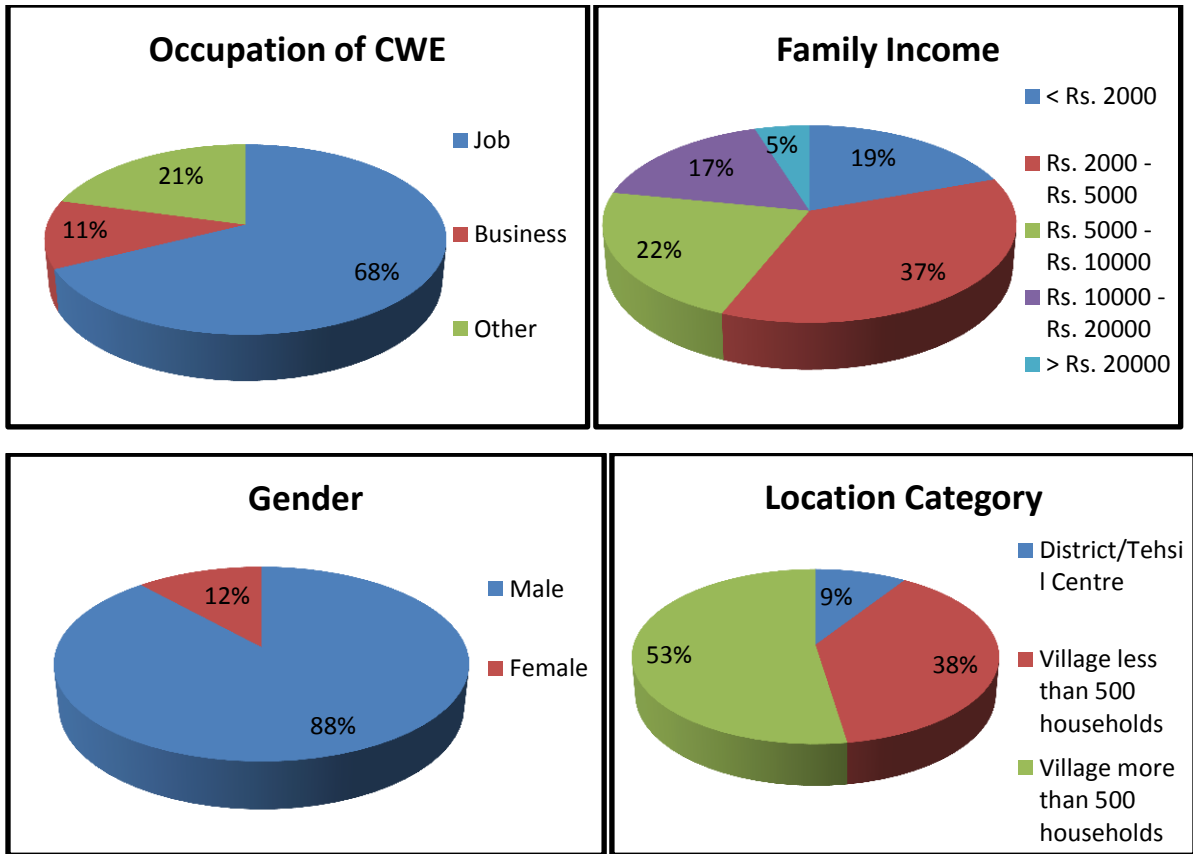
3.2.3.2.5 ITI/VTI Students

This section includes three categories: students who are currently studying at ITI/VTI, ITI/VTI pass outs looking for job and Alumni who are already working. The major areas we have covered are profiling of category which include educational and economical background of students with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.5.1 Current ITI/VTI Students

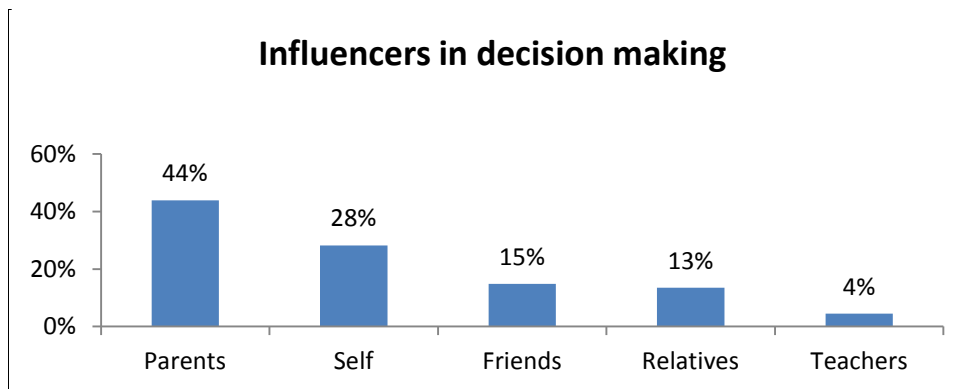
3.2.3.2.5.1.1 Profiling Data





The students of current ITI/VTI are belong to weak economical background and are from job class family. The students which we met are currently doing course of Hotel Management, Computer course, Electrician, Welder, Fitter and Cutting & Sewing.

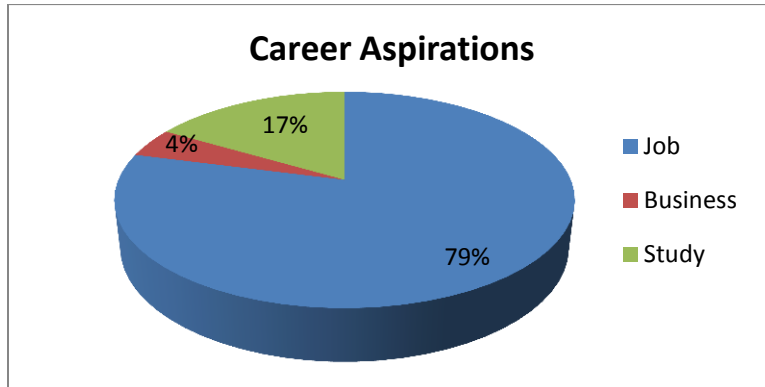
3.2.3.2.5.1.1.1 Decision Making



Here above graph shows, parents are playing major role in influencing the students in making major decisions. Apart from that, friends, relatives and teachers are also playing major role in making decision.

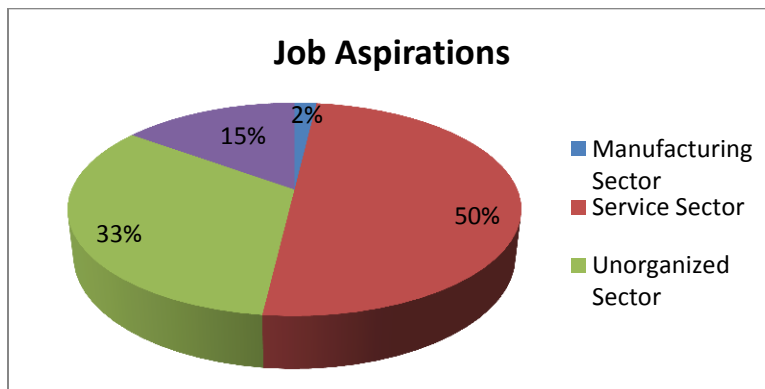
3.2.3.2.5.1.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that, courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course is also mentioned.



Here as the students already taking training of vocational courses, only 17% of them are aspire for study further, most of the students wants to join job after completion of their training and only 4% would like to do business.

The below pie shows that majority of the students were wish to make their career in the field of service sector. The list for the same is mention in the table below.

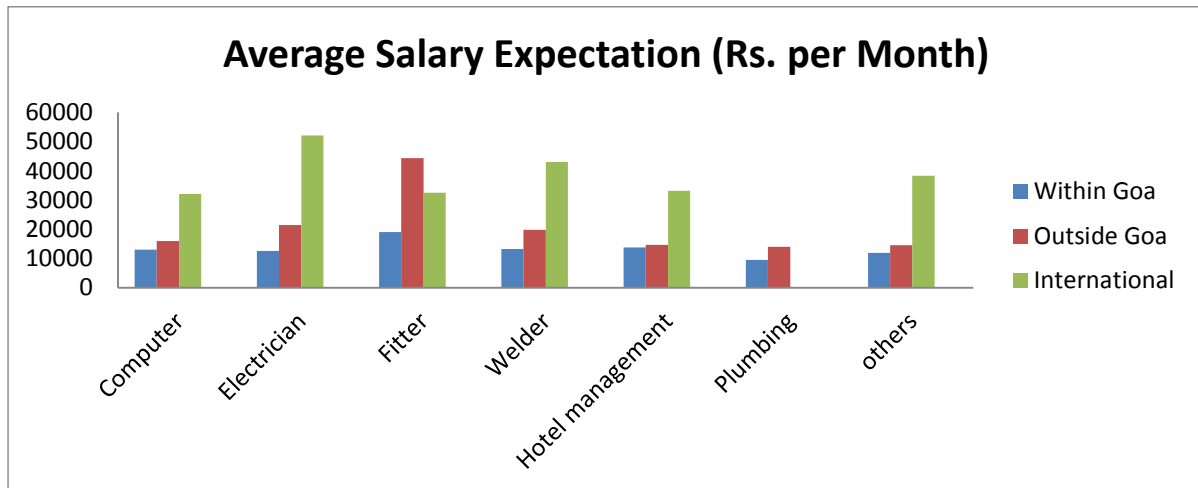


Strangely, only 2% are wishing to do job in manufacturing sector at North Goa district and also that is in the field of mining, food production and Tyre Company.

Manufacturing	Service	Unorganized
Mining	Computer Related	Fitter
Tyre Company	Hotel Management	Sewing
Food Production	Govt. Job	Welding
Electrician	Police	Housekeeper

Manufacturing	Service	Unorganized
RAC Technical		Technician
		Plumber

3.2.3.2.5.1.2.1 Average Salary Expectation after Current Training

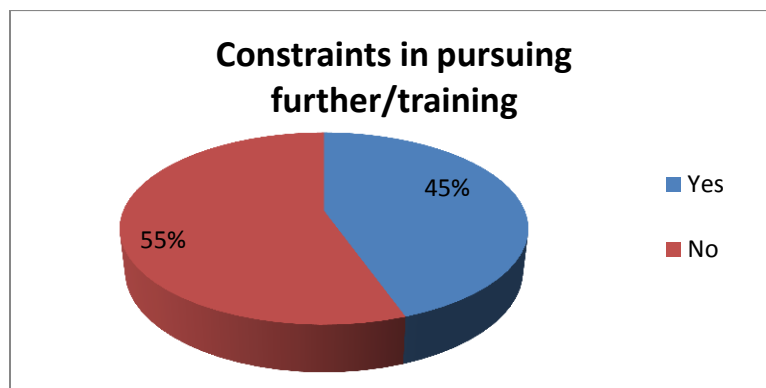


In category of current ITI/VTI students, the course of Fitter students expects highest salary of Rs.19100 within Goa and also outside Goa their expectation is Rs. 44000 and at international level, expectation is Rs. 32500.

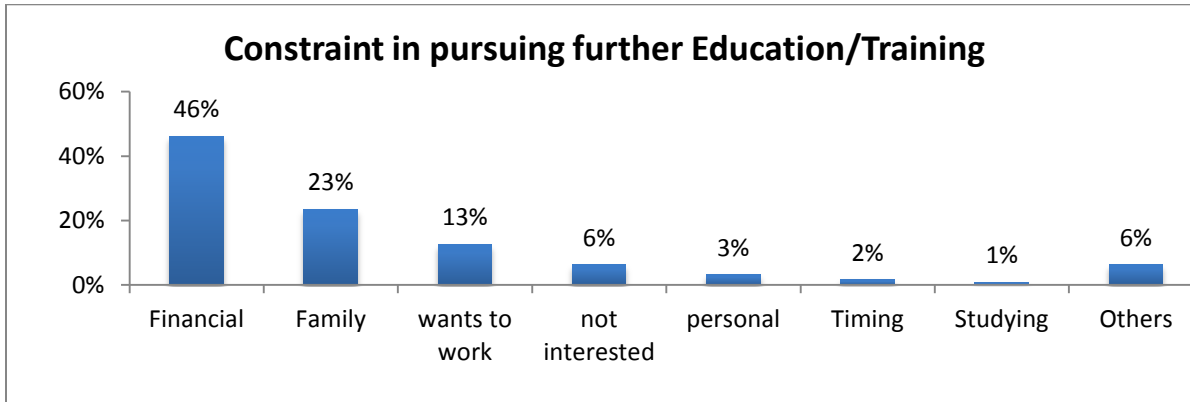
3.2.3.2.5.1.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.5.1.3.1 Constraints in pursuing further Education/Training



Above pie chart shows that more than half of the current ITI/VTI category students were not facing constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



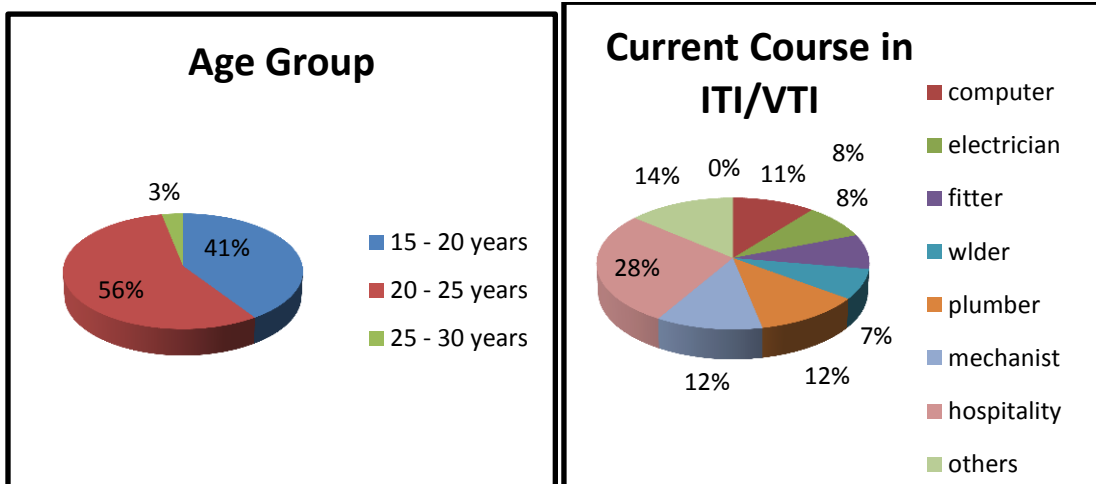
Here we found that financial problem is the major constraint for the ITI/VTI student which is followed by family problems and others issues as mentioned above.

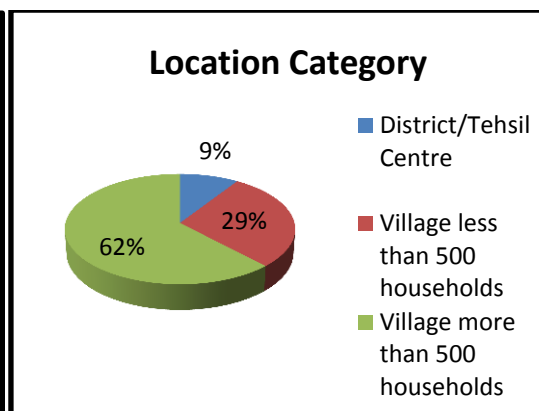
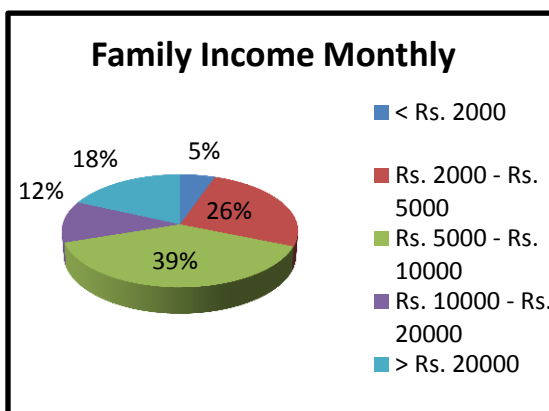
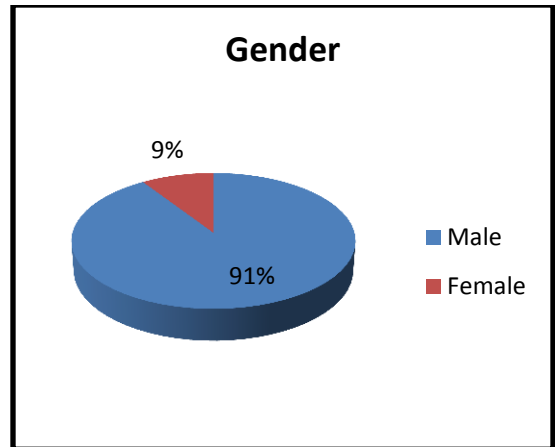
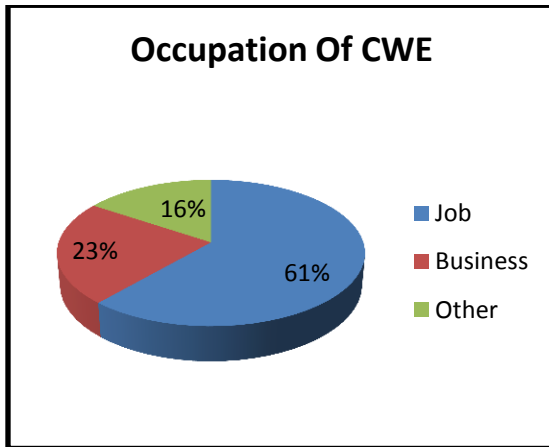
3.2.3.2.5.2 ITI/VTI Pass-outs looking for Job

The second section of ITI/VTI students is ITI/VTI pass outs.

3.2.3.2.5.2.1 Profiling Data

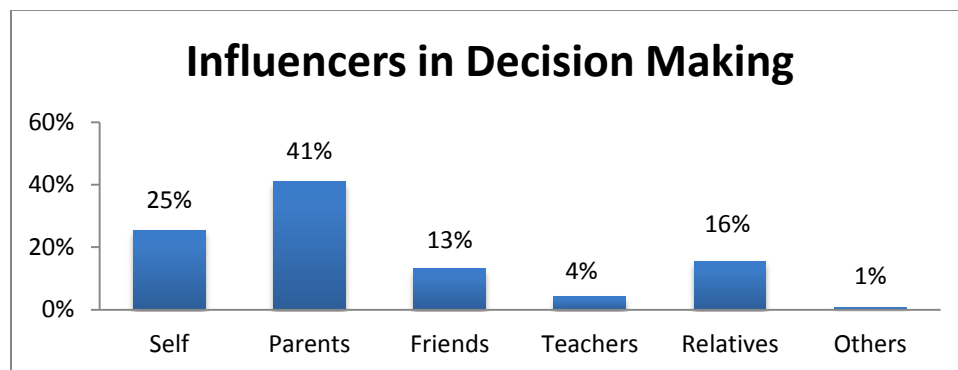
Majority of the students are passed out from the Goa - local ITI, most of them are passed out from I.T.I PANJIM, I.T.I Formagudi, ITI Pernem and many other local ITI.





The students who passed out from ITI/VTI are from average economical background and the students of Hospitality Management are majorly covered in this category followed by other vocational courses.

3.2.3.2.5.2.1.1 Decision Making



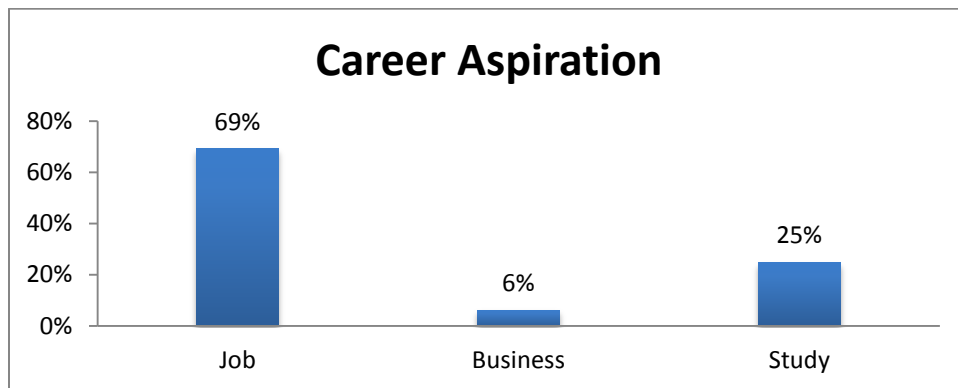
This category includes the students who are completed their training at ITI/VTI. Majority of their monthly family income is in the range of Rs. 2000 - 10000. Here we can understand from the above graph that along with

parents, friends and relatives are also playing major role in influencing the students in making major decisions for their career.

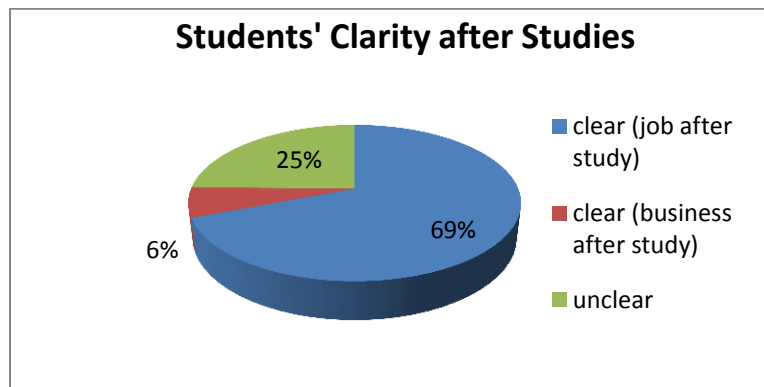
3.2.3.2.5.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses those students aspiring to pursue, willingness to pay for the course and salary expectation after completion of the course with respect to the location i.e. within the Goa outside the Goa and abroad.

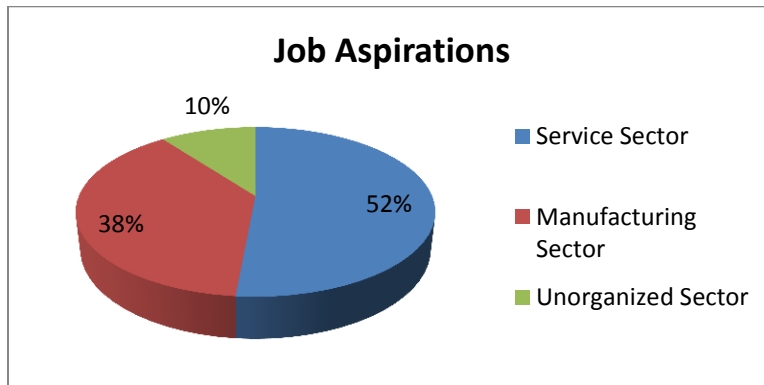
Here, in the category of ITI/VTI passed students, majority of them were aspires for job. However out of total, 25% students aspire to study further either formal or vocational one and 6% of students wants to do business in their career.



Out of total interviewed, 75% of the respondents were clear that what they want to do after completion of their study either job or business.

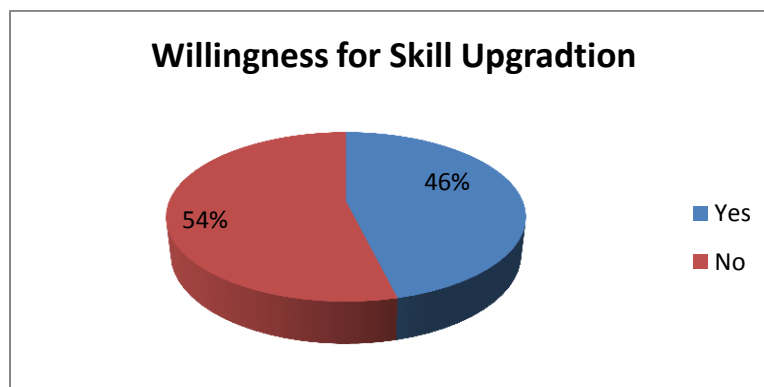


The below chart shows that most of the interviewed students aspired to do job in the Service sector.



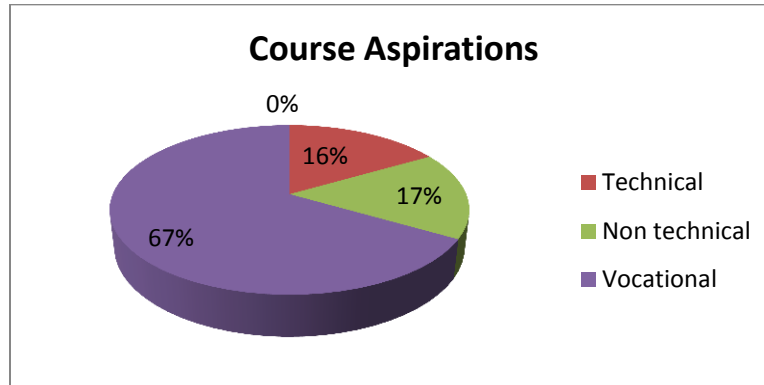
Service Sector	Manufacturing Sector	Unorganized Sector
Government job	Electrician	Data entry operator
Hotel Industry	Technician	
	Machinist	
	Welder	
	R.A.C	
	Maintenance job	

3.2.3.2.5.2.2.1 Interested in Skill Up-gradation



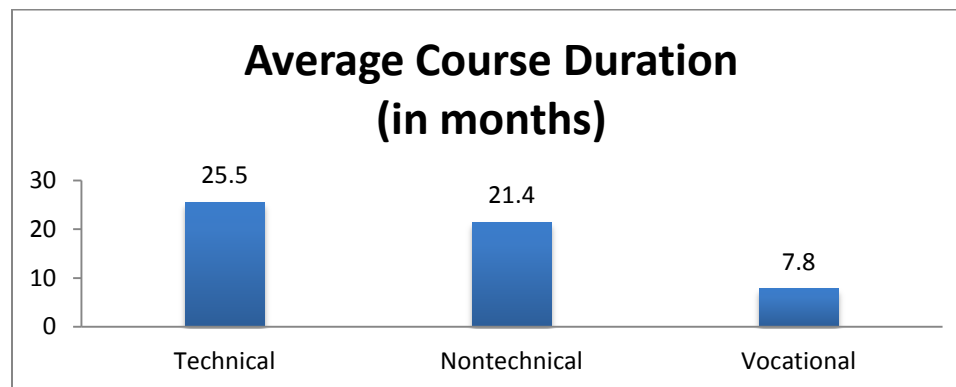
The Pass outs students in this category have technical knowledge and 46% of them were interested in skill up-gradation and rest are not because they want to earn money and start working with industry for the better survives.

3.2.3.2.5.2.2 Course Aspirations



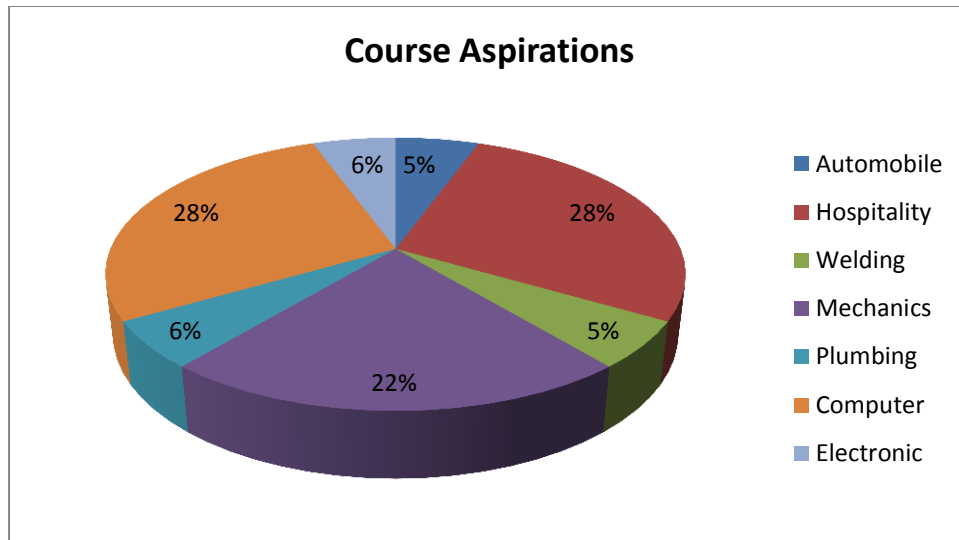
Strangely, we found that in the category of students who are already ITI/VTI passed out and though currently working in the industry, majority of them would aspire for vocational courses.

3.2.3.2.5.2.3 Average Course Duration for various Categories



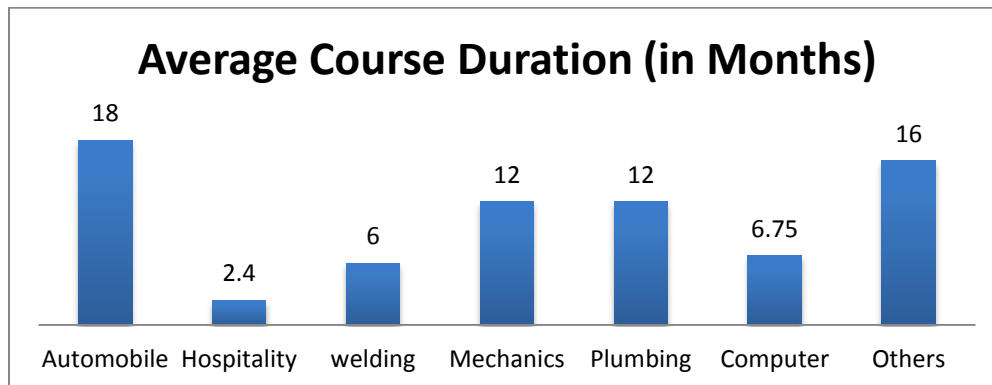
According to respondents, the average duration for perusing the vocational course would be of around 8 months.

3.2.3.2.5.2.4 Vocational Course Aspirations



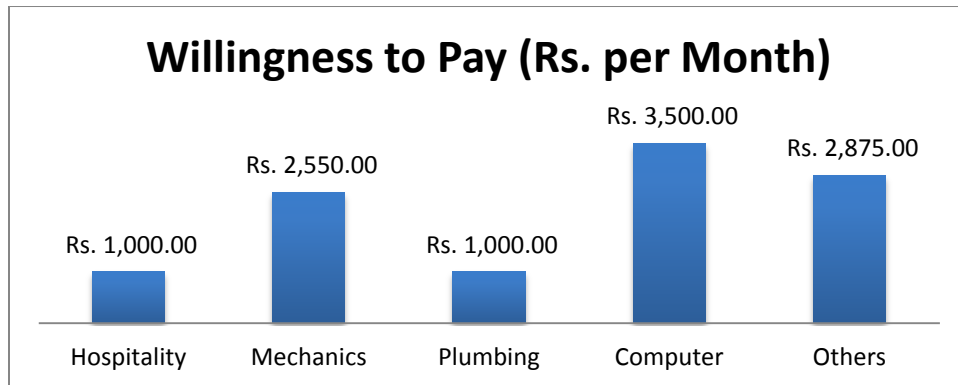
Hospitality, Mechanics and computer courses are the top most priority for the respondents as shown in the above pie chart.

3.2.3.2.5.2.5 Average course duration for various Vocational Courses



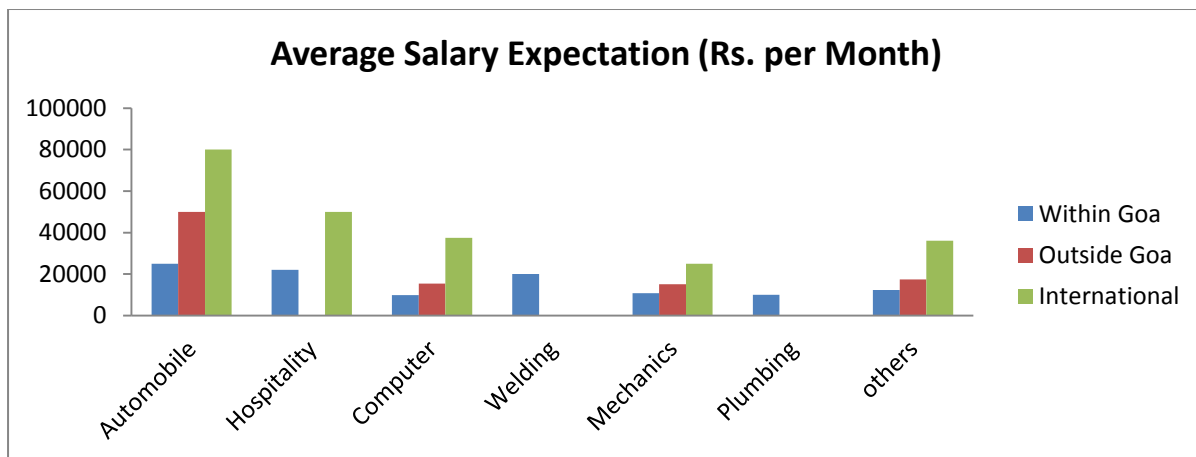
Students believe that training provided by Institute for the duration like Automobile course should be offered for 18 months, Mechanics and Plumbing offered for 12 months and so on like others which are mentioned in the chart above.

3.2.3.2.5.2.2.6 Willingness to pay for various Vocational Courses



The students in this category are ready to pay the amount approximately in the range of Rs. 1000 to Rs. 4000 per month per course. Computer and Mechanics are highly demanded in the market and hence their readiness to pay for such courses is higher.

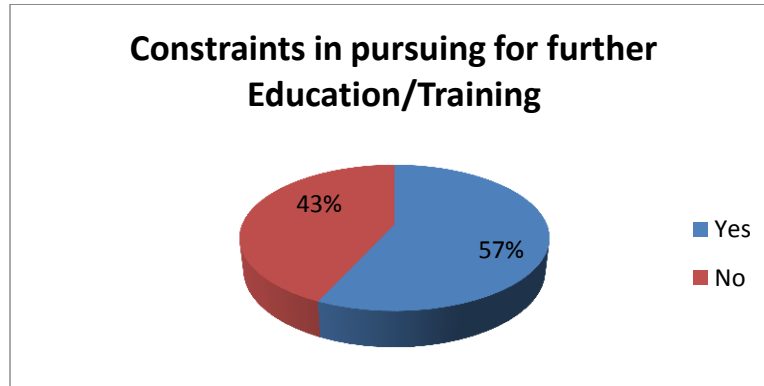
3.2.3.2.5.2.2.7 Average Salary Expectation for various Categories



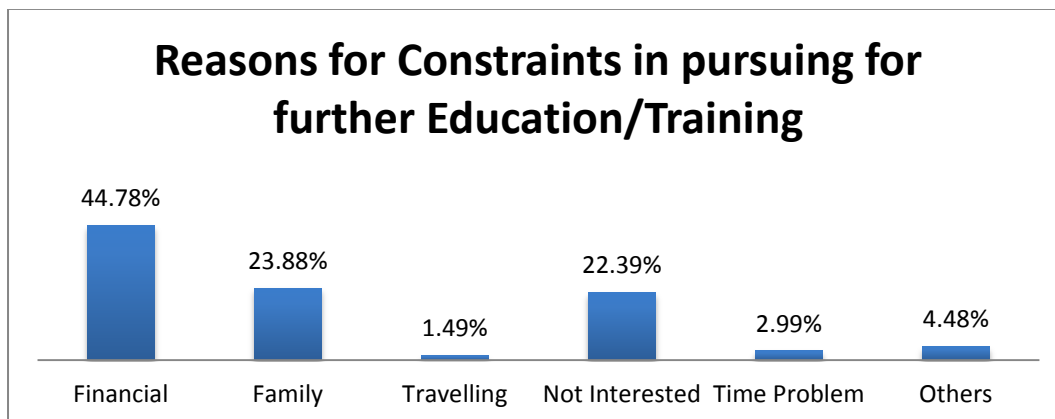
The Alumni expects a salary in the Automobile sector in the range of Rs. 20000 within Goa and in outside Goa they expects near around Rs. 50000 and at International, around Rs. 80000 after completion of vocational course. Similarly, same with the other courses in case of within Goa as well as outside Goa. We can cite from the above graph. Here, other includes Food carving, Bakery course, Hardware Course, RAC and Beautician.

3.2.3.2.5.2.3 Constraints

3.2.3.2.5.2.3.1 Constraints in pursuing further Education/Training

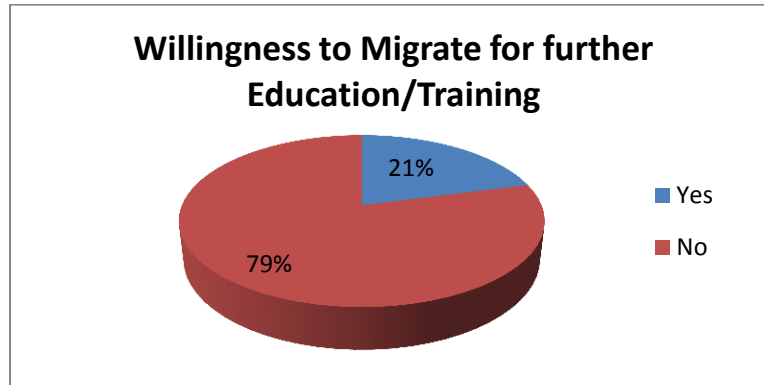


To fulfill the major objectives of skill gap study, it is essential to know the potential of students of the people who are willing to take vocational training. Above pie chart shows that 57% of the pass-outs of ITI/VTI category students who are already working somewhere were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



Here due to financial problem and also some family issues, respondents were facing constraints in taking vocational education further.

3.2.3.2.5.2.3.2 Willingness to migrate for further education/training



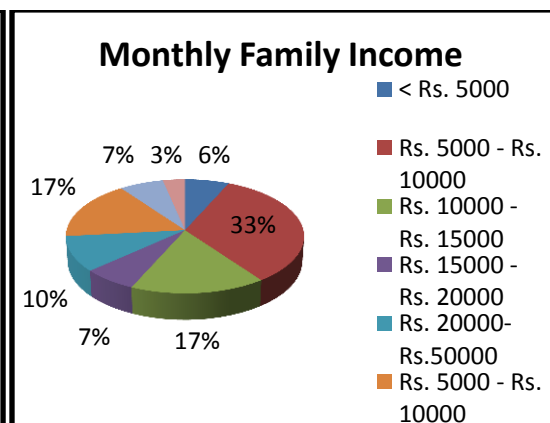
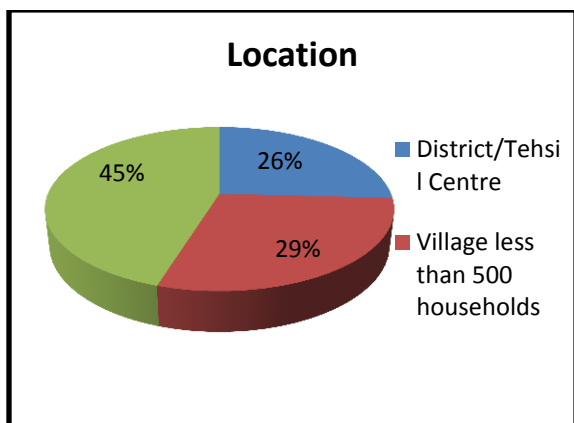
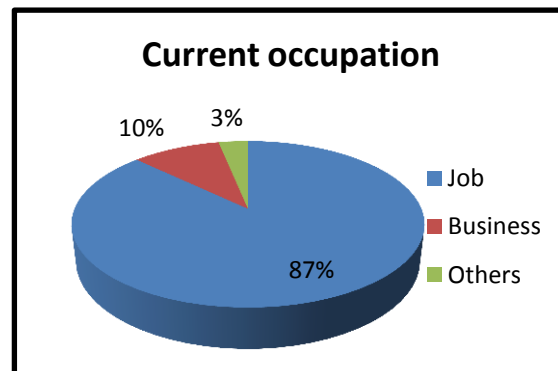
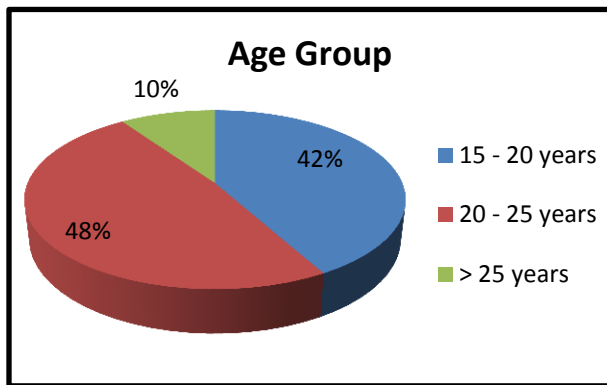
We can see from the above pie chart, respondents were majorly not ready to migrate for further study. The reason for the same might be they are already working so majority of them would want to take training along with continuing their job. Thus, majority of them facing time constraint and not willing to migrate for the course.

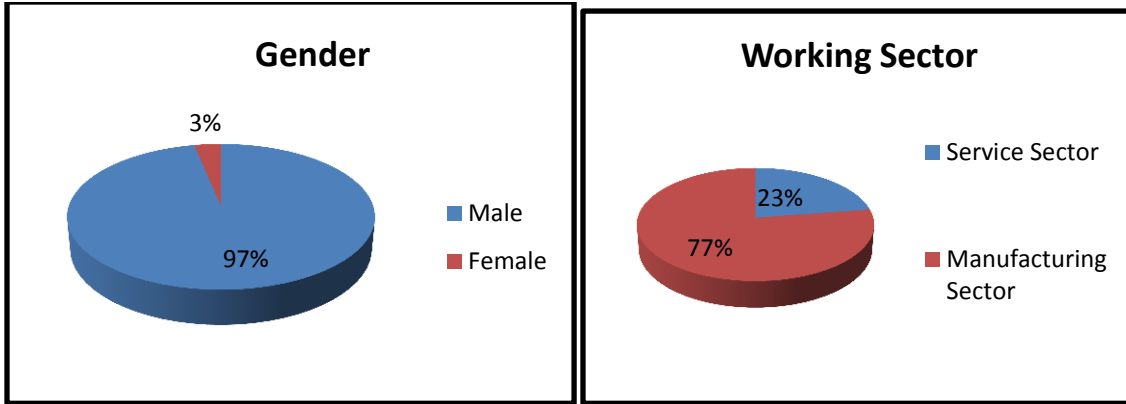
3.2.3.2.5.3 Alumni of ITI/VTI who are working

Third section of ITI/VTI category includes respondents who are Alumni of the ITI/VTI and are currently working at Industry.

3.2.3.2.5.3.1 Profiling Data

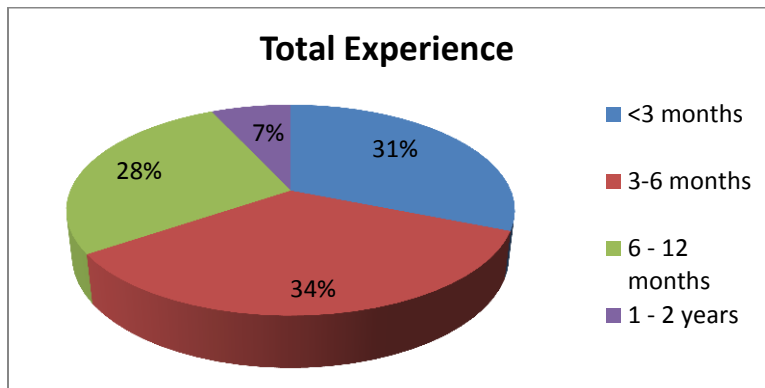
This section consists of the details about the respondents who are pass-outs of ITI/VTI and are also working at some sector. Below charts shows economical and educational background of the Alumni. Majority of them were in the age group of 20 to 30 years. Out of total 87% are doing job.



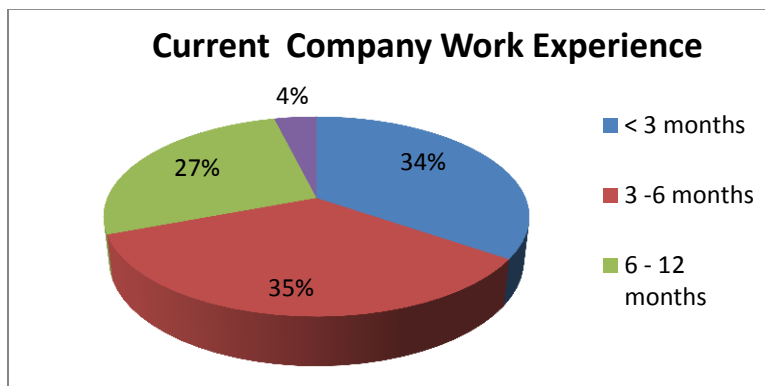


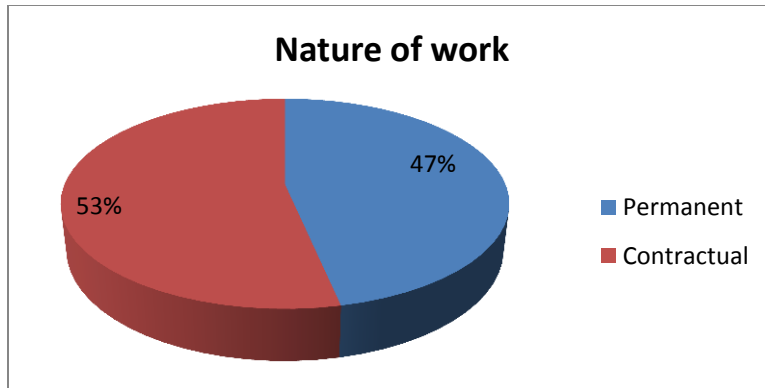
3.2.3.2.5.3.1.1 Work Profile

Here most of them are working in a manufacturing industry. Most of them have an experience of 3 to 6 months of working.

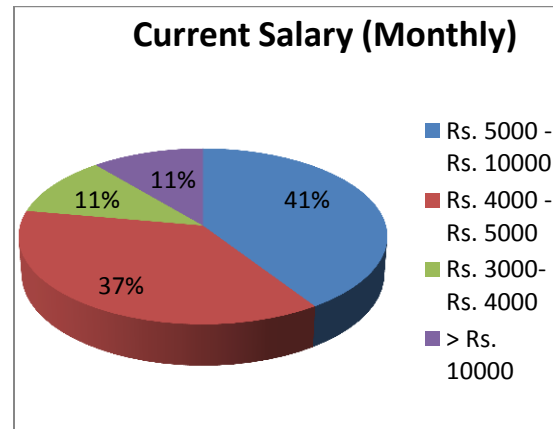
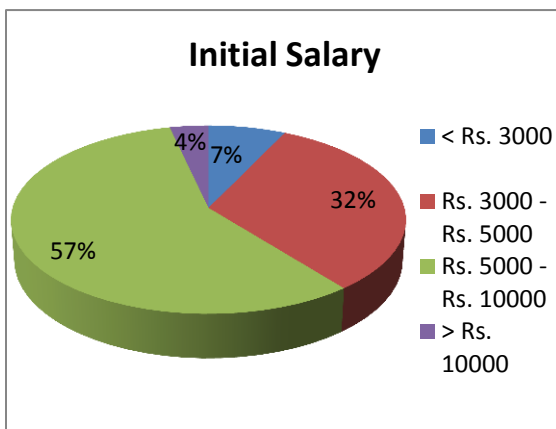


Below chart shows the responses of experience of working in their current company, majority of respondents have experience of working less then 3 months and 3-6 month in their current company.

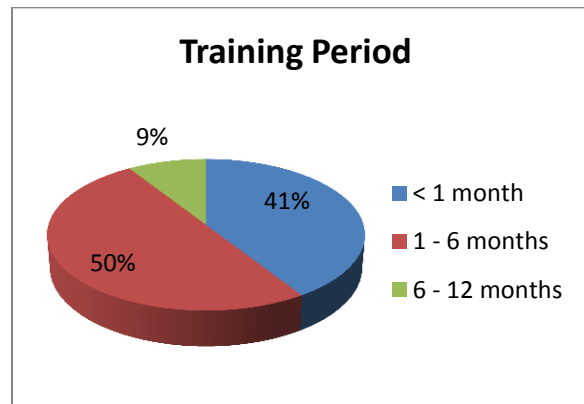
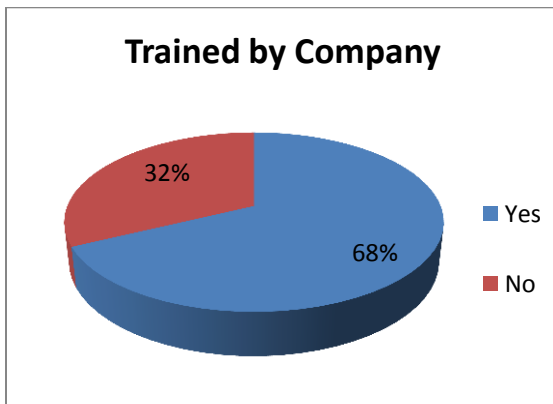
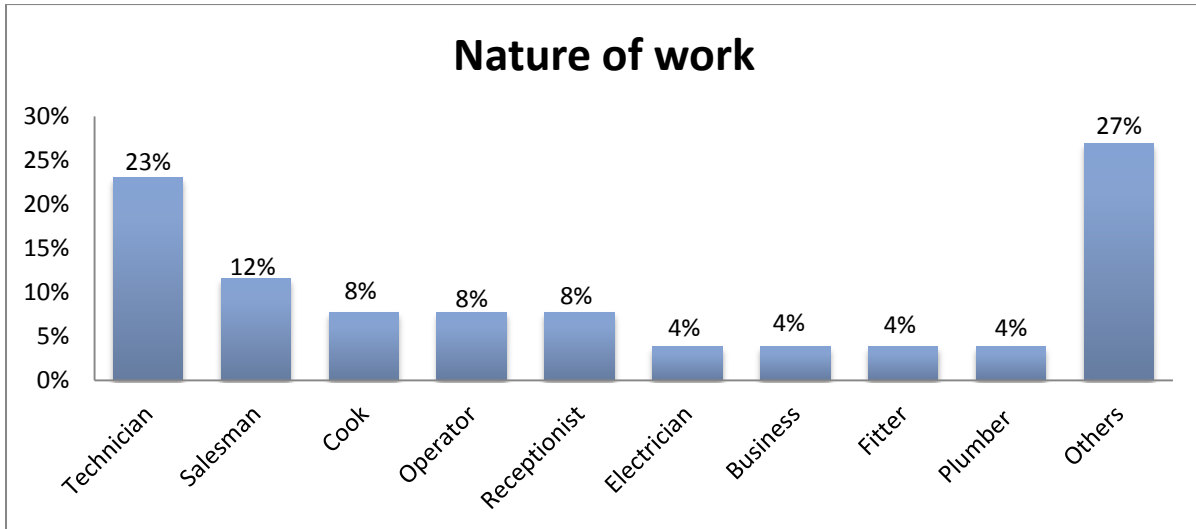




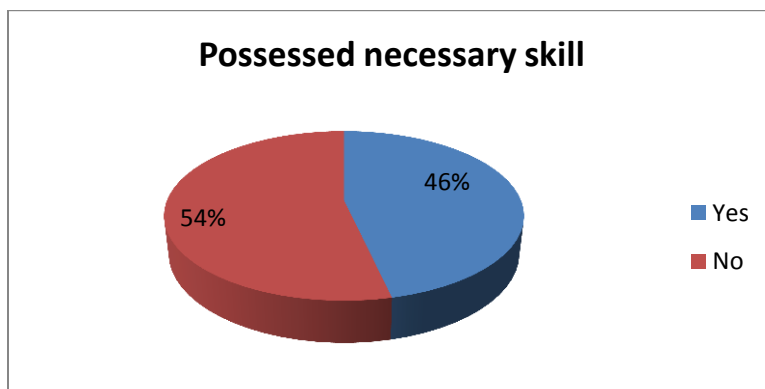
More than half of the respondents are working on contractual basis as only 47% of them were permanent employees. The initial salary of the Alumni was in the range of Rs. 5000 – Rs. 10000 majorly, which remains same in their current work place.



Inferring from the below pie chart, we come to know that the majority of Alumni of ITI/VTI are working in the field of Technician, Salesman, Cook, Receptionist and Operator. 27% are showed in others which includes Quality checker, Room attendant, Fire fighter, Supervisor, trainee dealer, Engineer and Auditors.

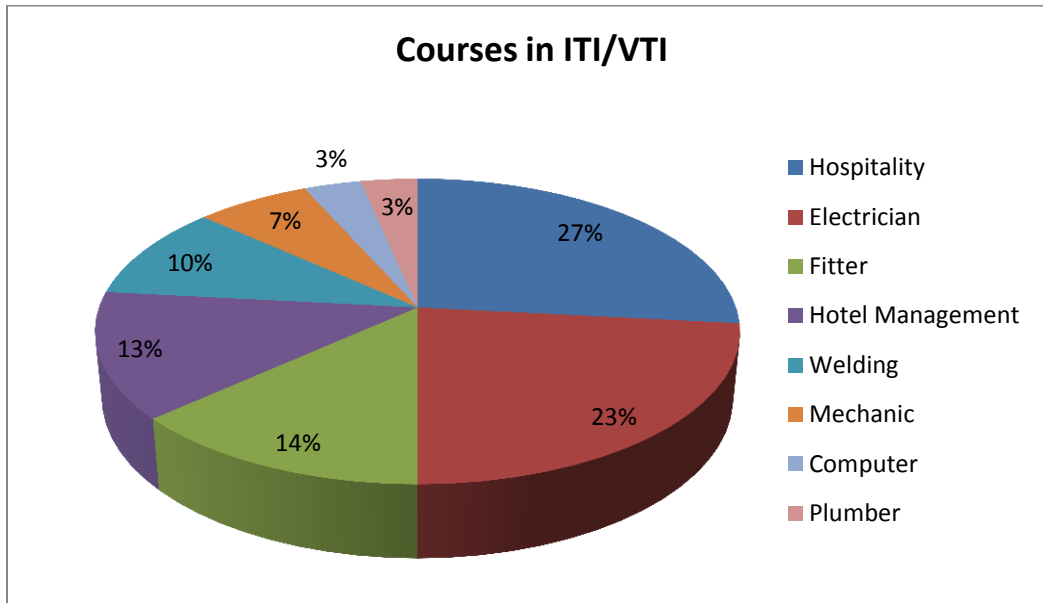


Most of them were trained by the company for which the training period is of 6 months in most of the companies.



To gauge the knowledge of the Alumni we asked them whether they possess all the necessary skills which required to them at their work place at the time of joining, here 46% of the students responded positively.

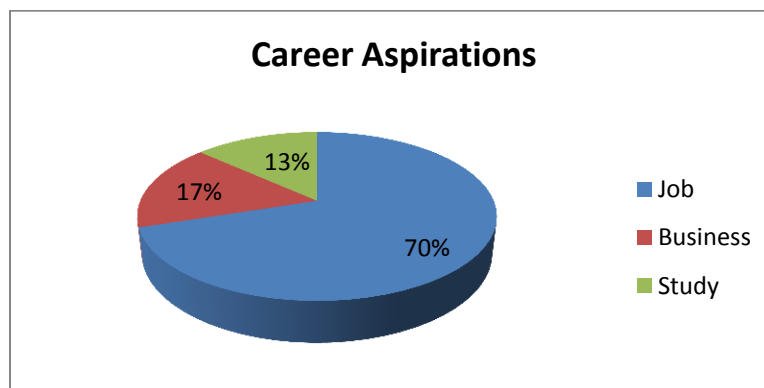
3.2.3.2.5.3.1.2 Education Profile



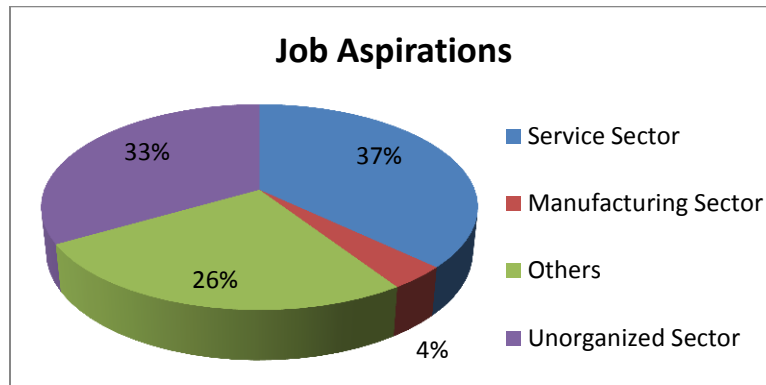
Most opted course among the Alumni, who are currently working, is Hospitality as Goa is a tourist place. Hence, there is a huge potential for the particular sector. Apart from them, few students adopt Electrician, Fitter, and Welding courses at the Institute.

3.2.3.2.5.3.2 Aspirations

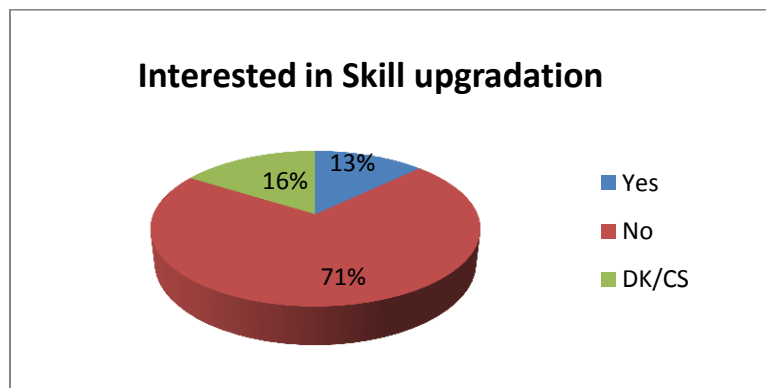
Majority of the Alumni in this category are aspiring for a job further. Though they are currently working, 17% of them would want to do business and 13% would like to do study further.



Below chart shows the sectors in which respondents interested to make their career. Majority of them would prefer to go for service sector and very few would like to join manufacturing sector.

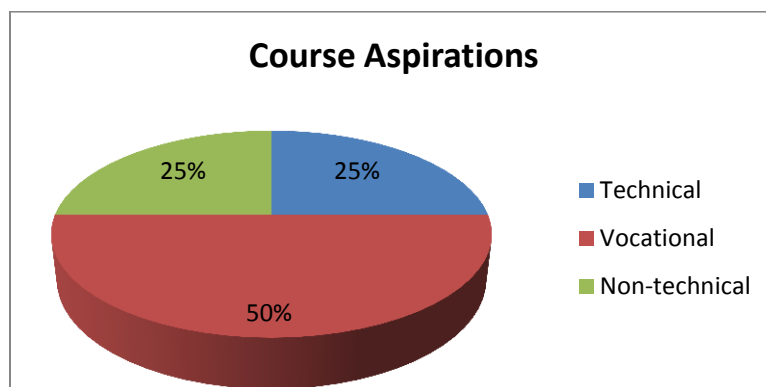


3.2.3.2.5.3.2.1 Interested in Skill Up-gradation



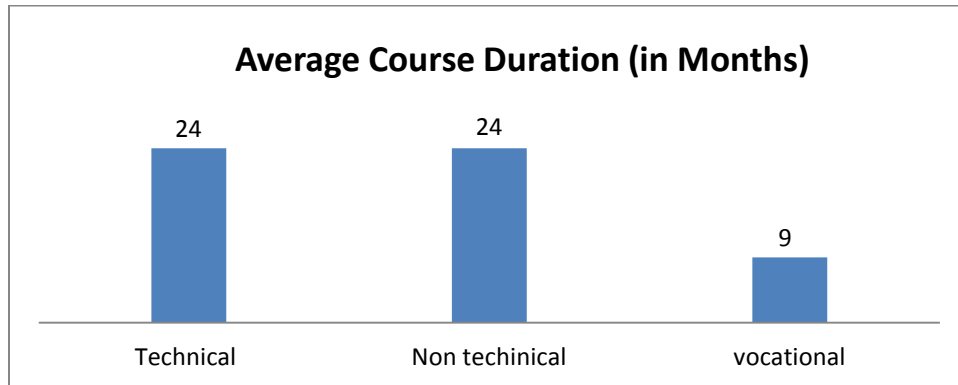
Many of the Alumni who are not interested to up-grade their skills as all of them are currently working and only 13% had shown their interest in skill up gradation.

3.2.3.2.5.3.2.2 Course Aspirations



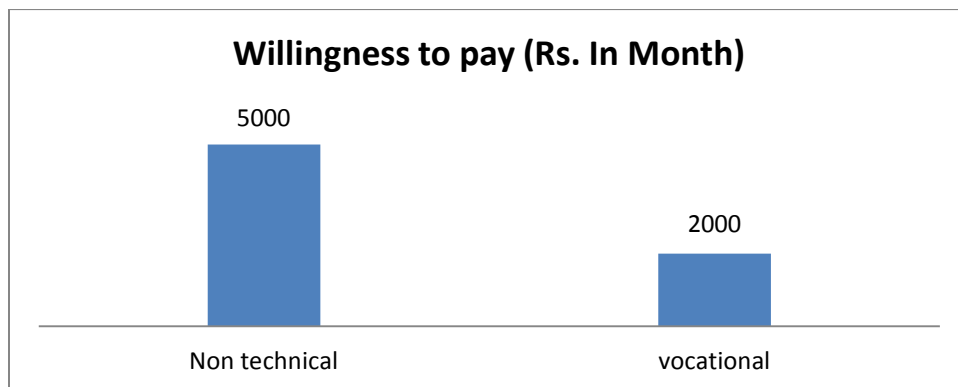
Out of those who interested in further skill up-gradation, we found that in the category of students who are Alumni of ITI/VTI and though currently working, half of them would aspire to undergo vocational courses.

3.2.3.2.5.3.2.3 Average Course Duration for various Categories



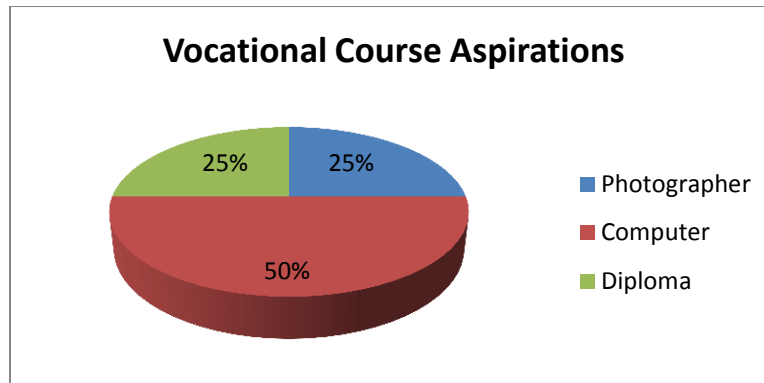
According to them, the average duration for perusing the vocational course would be of around 9 months and 2 years for technical as well as non-technical courses.

3.2.3.2.5.3.2.4 Willingness to pay for various Categories



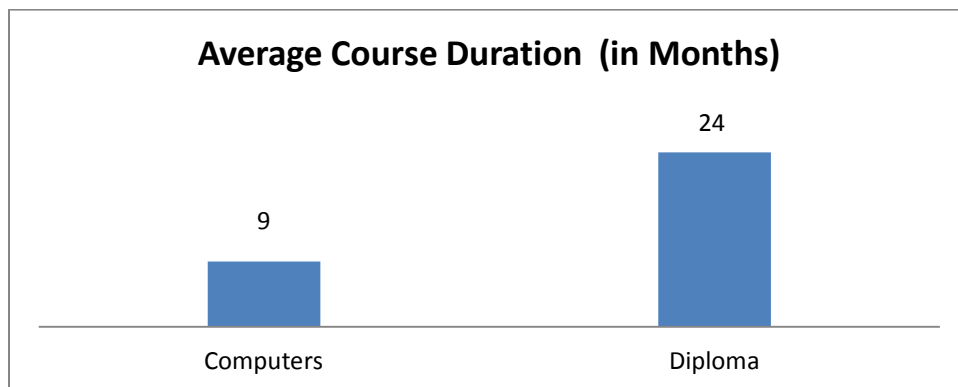
Here Non technical respondent are willing to pay up to Rs. 5000 per month and Vocational respondents can pay up to Rs. 2000 per month. Technical course aspirants do not have any idea about fee structure.

3.2.3.2.5.3.2.5 Vocational Course Aspirations

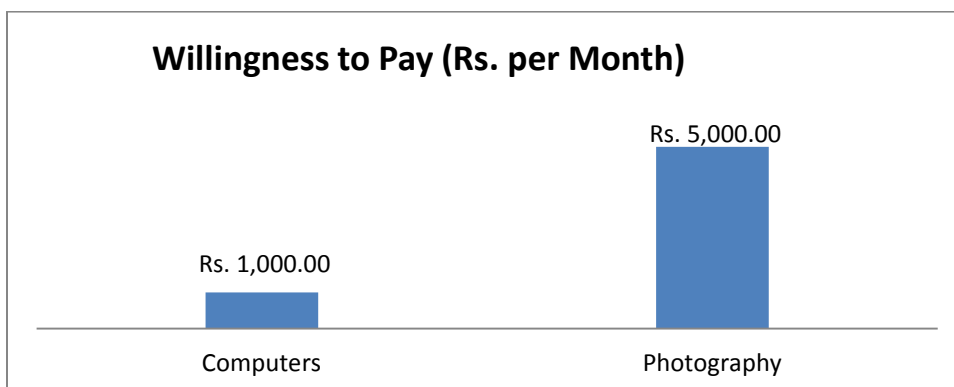


Photography and Computer courses are the top most priority for the respondents as shown in the above pie chart also there are some other student who would like to go for the diploma.

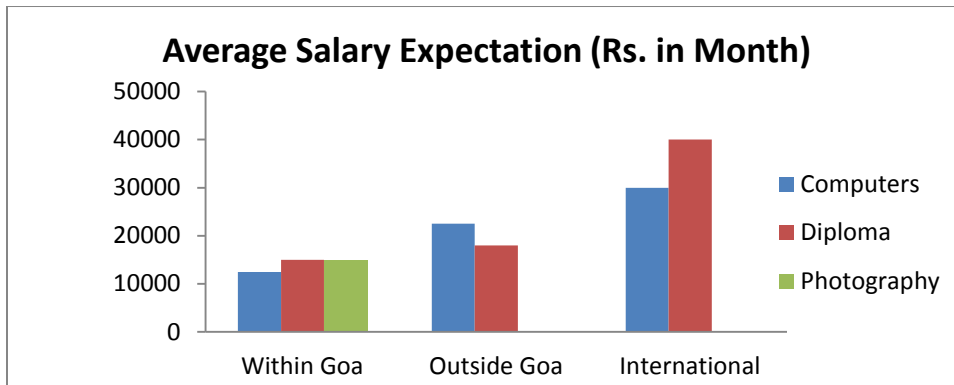
3.2.3.2.5.3.2.6 Average Duration (Vocational Training)



Students believe that training should be provided like Computer course should be offered for 9 months and for diploma it should be of around 2 year.



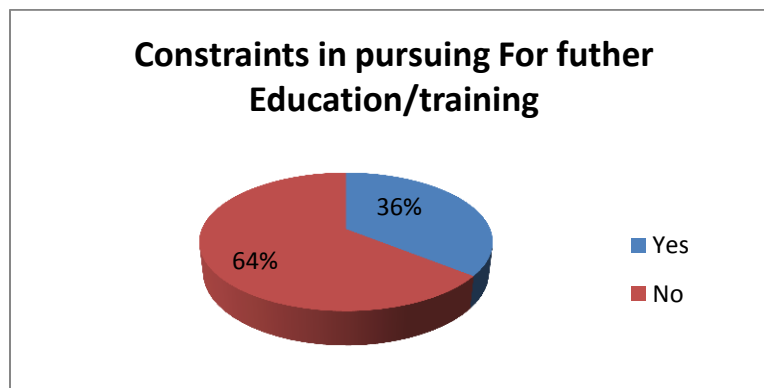
3.2.3.2.5.3.2.7 Average Salary Expectation for various Categories



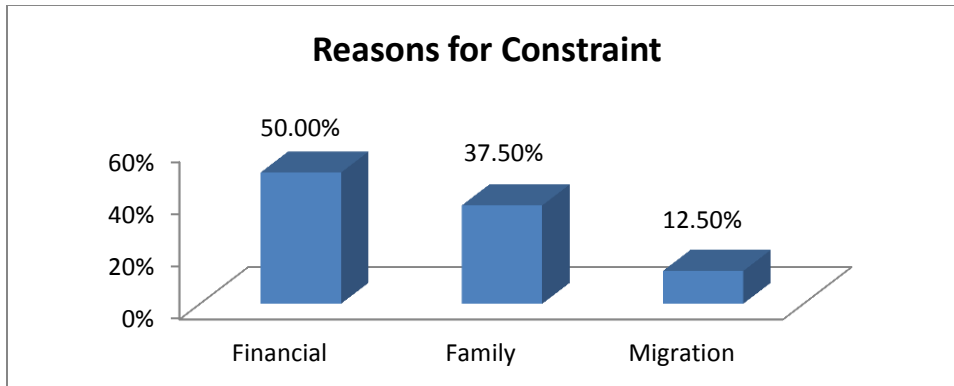
In case of within Goa, respondents who would like to take computer as courses expect salary of Rs. 12500 and their expectation outside Goa is Rs. 22500 and at international level, expectation is Rs. 30000. Diploma student's expectation within Goa is Rs. 15000, outside Goa is Rs. 18000 and at the international level it is Rs. 40000 and those students who would like to take photography as a course their expectation within the Goa is Rs. 15000, these respondents don't have idea how much salary they can get outside Goa and on international level.

3.2.3.2.5.3.3 Constraints

3.2.3.2.5.3.3.1 Constraints in pursuing for further Education/Training



Above pie chart shows that only 36% of the working Alumni having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:



Herein, majorly due to financial problem and family issues, respondents were facing constraints in taking vocational education further.

3.2.3.2.5.3.3.2 Willingness to migrate for further Education/Training

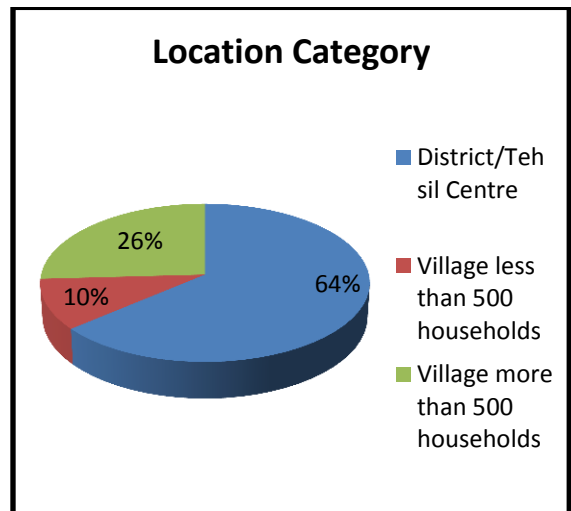
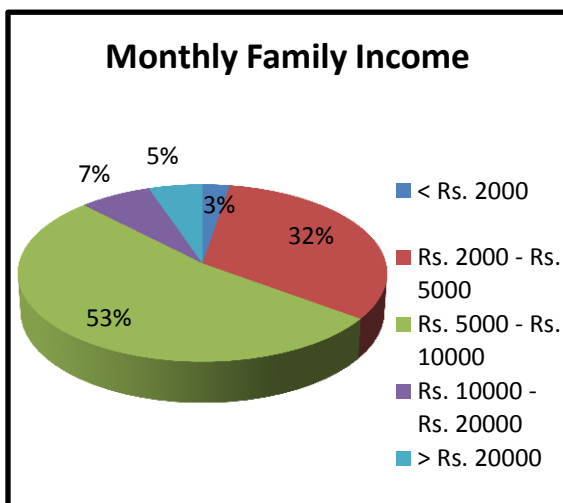
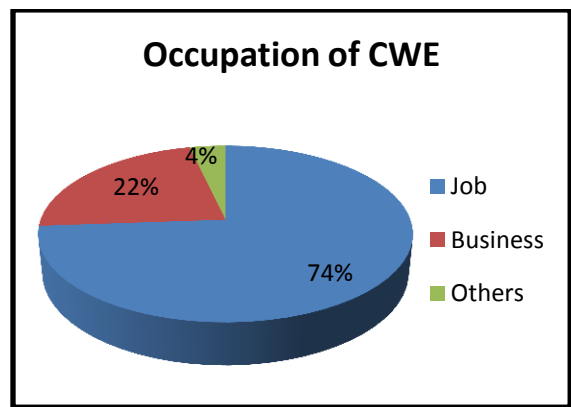
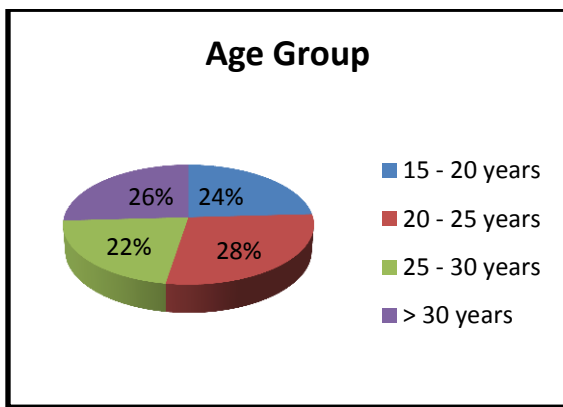
No one likes to migrate outside Goa because they are facing certain constraints.

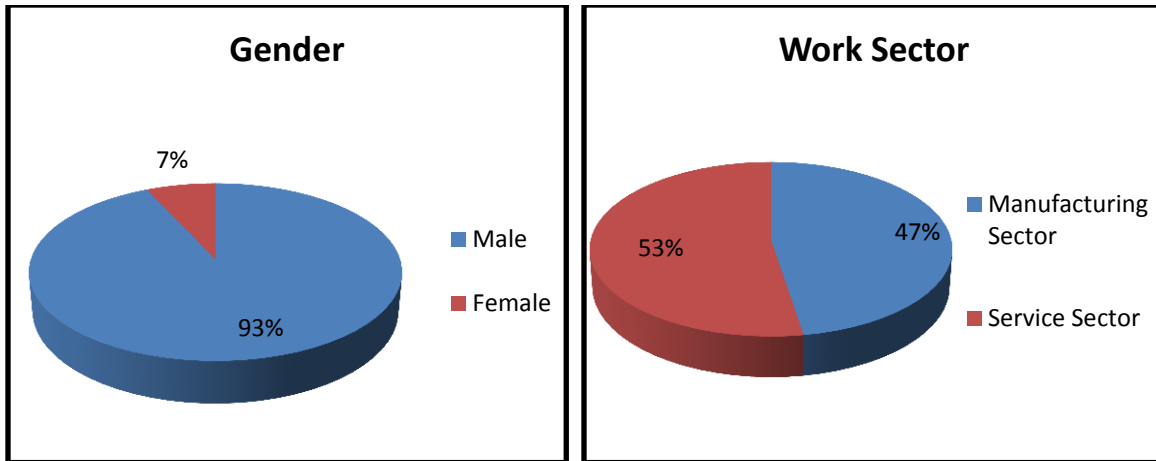
3.2.3.2.6 Workers Looking for Skill Up-gradation

This category includes people who are already working but looking for skill up-gradation. The major areas we have covered are profiling of category which include educational, economical and work profile of people. Along with that, we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.6.1 Profiling Data

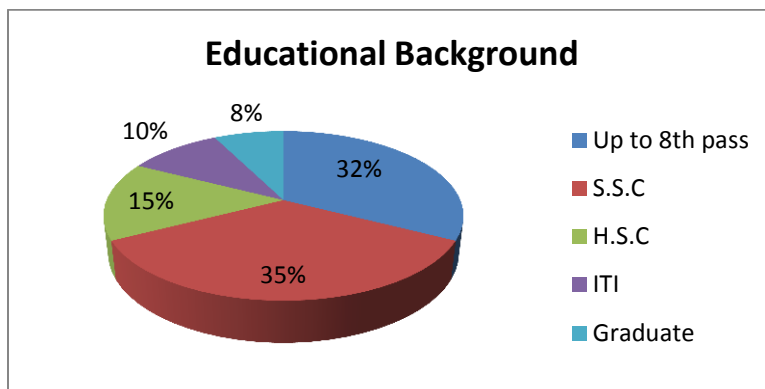
Approximately 75% of respondents are doing Job and very few of them have set up their own businesses. They are falling in the category of average economical background as for majority them monthly family income is in the range of Rs.5000 - Rs.10000. Most of them are currently working in service sector at North Goa district.



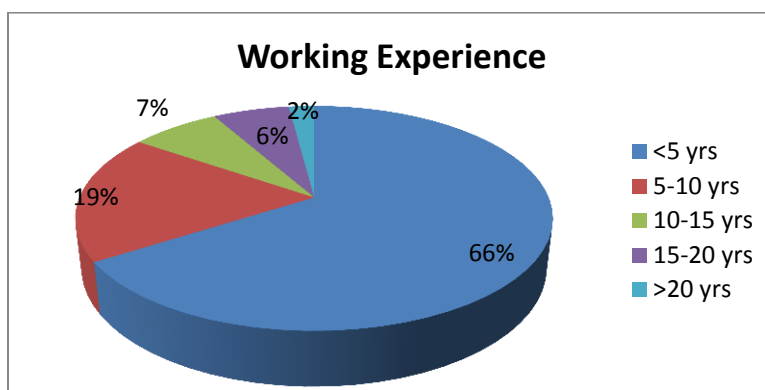


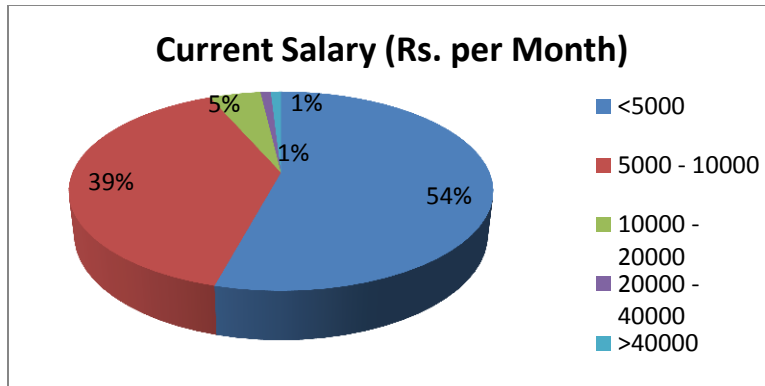
3.2.3.2.6.1.1 Work Profile

In this category, as per their educational background most of the respondents are either S.S.C or early school drop outs.

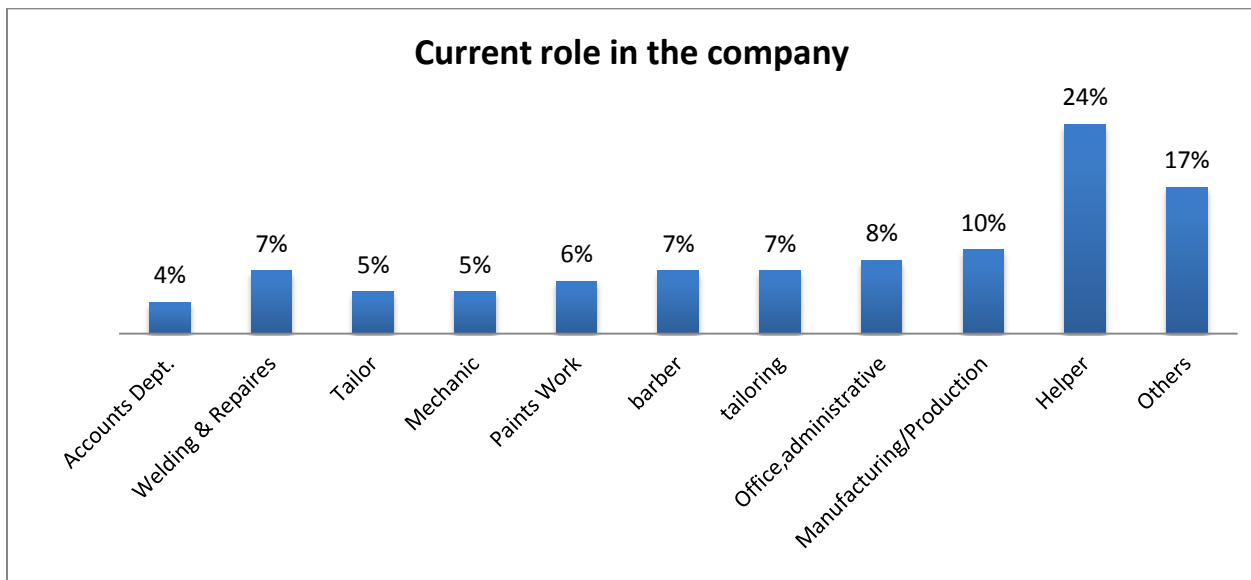


Majority of them have an experience of less than 5 years of working. Most of them have their current salary in the range of Rs. 5000 to Rs. 10000, as mention above the family income of most of them is also in the same range hence it can be said that the respondents were the chief wage earner of the family in most of the cases.



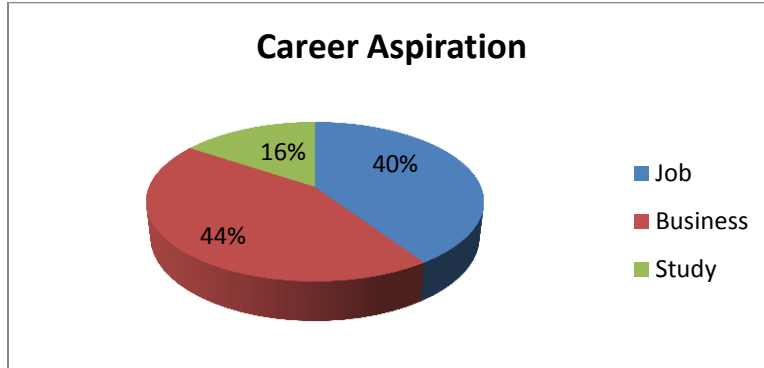


The below graph shows the field in which the respondents are currently working, we found that majority of them working in the company as helper.

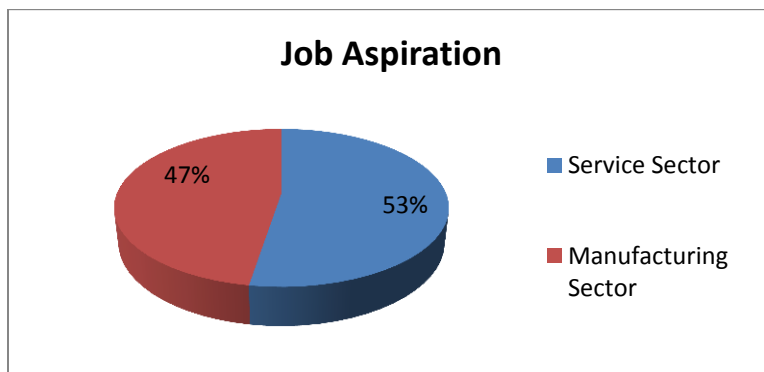


3.2.3.2.6.2 Aspirations

Herein, out of total, very few of the respondents aspired to do study and 84% of them are aspired for job or own business.

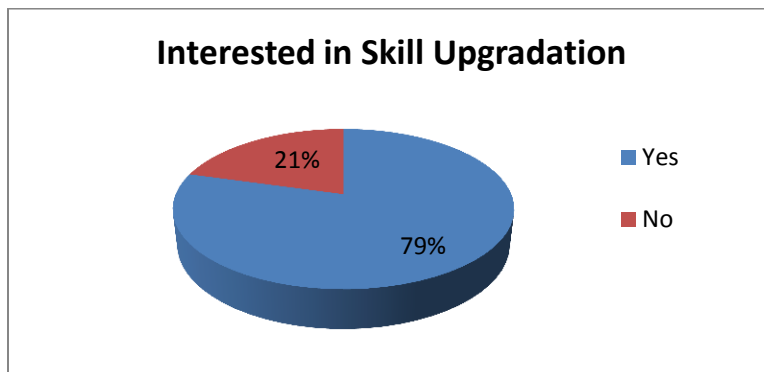


The sector in which they are interested to make their career is shown below. Almost equally response is given by respondents for the service sector and manufacturing sector.

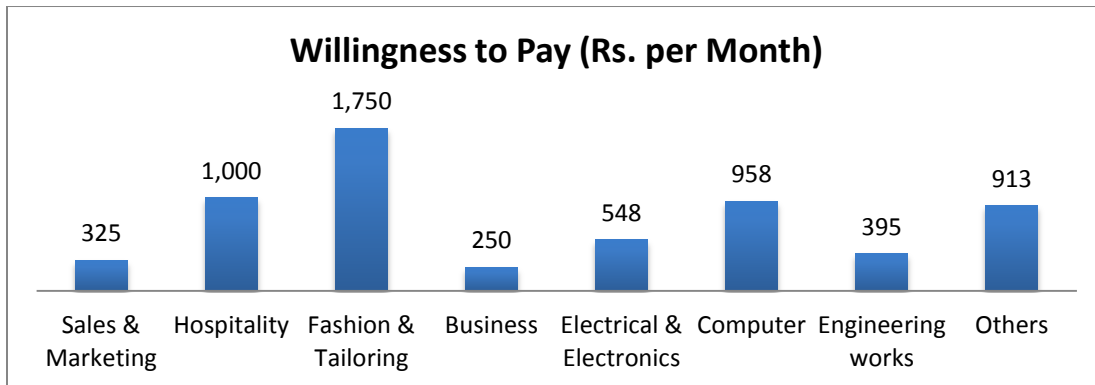


3.2.3.2.6.2.1 Interested in Skill Up-gradation

About more than half of the total respondents are interested for skill up gradation.

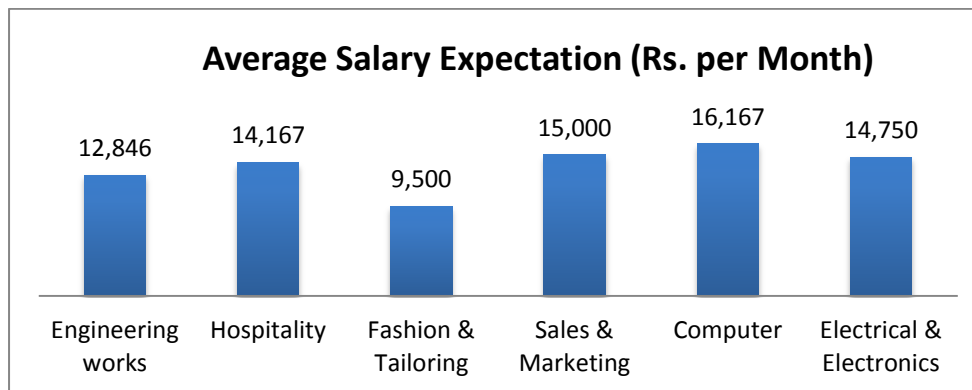


3.2.3.2.6.2 Willingness to pay for various Vocational Courses



Here, we got the responses for willingness to pay for the vocational courses. We found that for the course of fashion & Tailoring, willingness to pay is highest and for the hospitality related course willingness is quite high because of Goa tourism and job scope. Along with that willingness for computer related course is also very high as the requirement of computer operator is increasing day by day.

3.2.3.2.6.2.3 Average Salary Expectation for various Vocational Courses

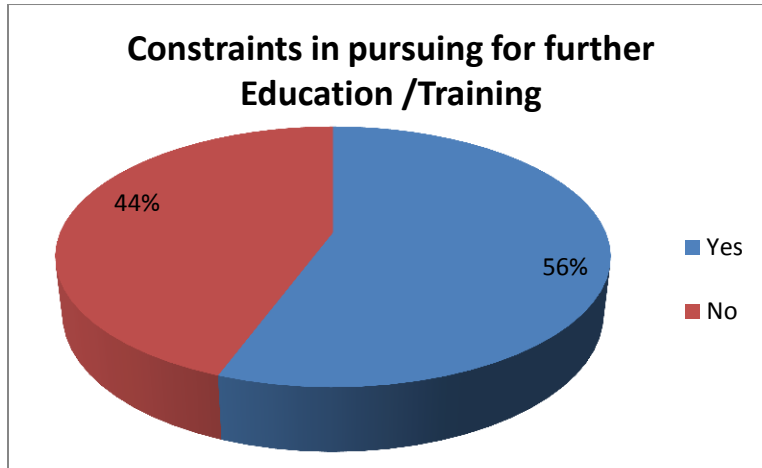


As the candidates were not having any idea about the pay packages provided at outside Goa and internationally, they responded only for within Goa. In such a case, they expect highest salary after completion of the course of Computer which is followed by Sales & Marketing, Electrical & Electronics, Hospitality and so on.

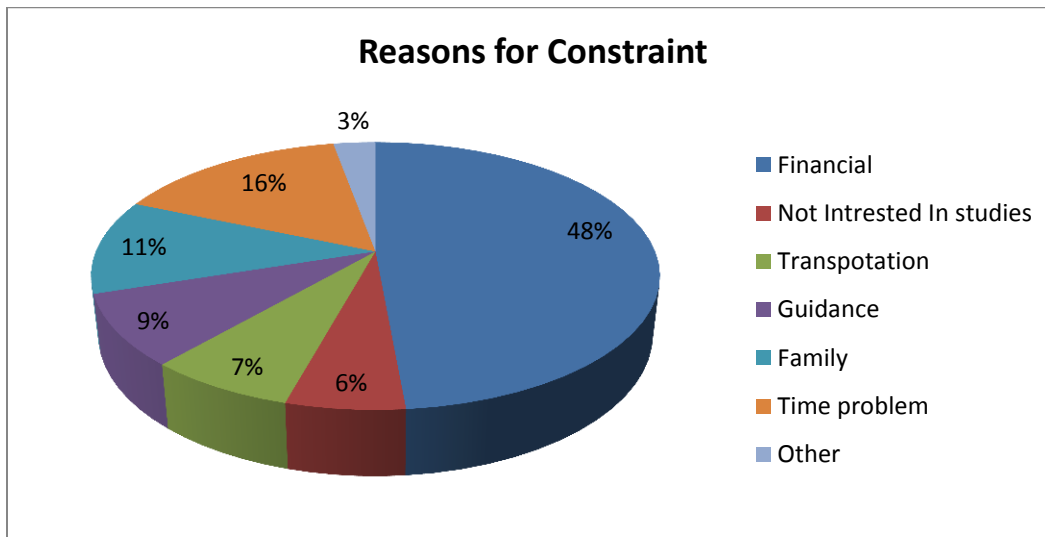
3.2.3.2.6.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.6.3.1 Constraints in pursuing for further Education/Training

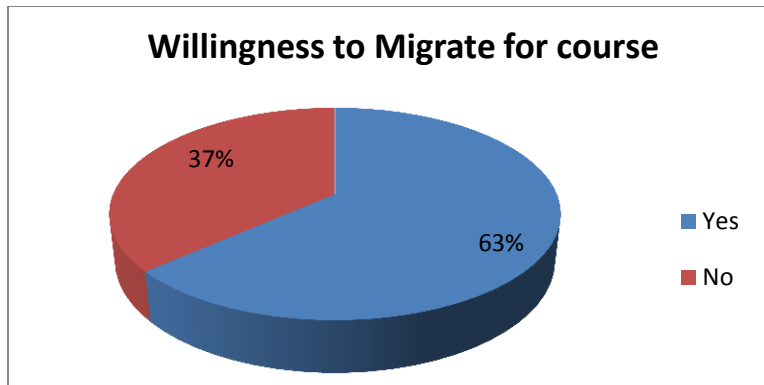


To fulfill the major objectives of skill gap study, it is important to know the strength of the people who are willing to take vocational training. Above pie chart shows that 56% of the workers looking for skill up-gradation category were having constraint in perusing further education or taking vocational training. The reasons for the same are cited below:

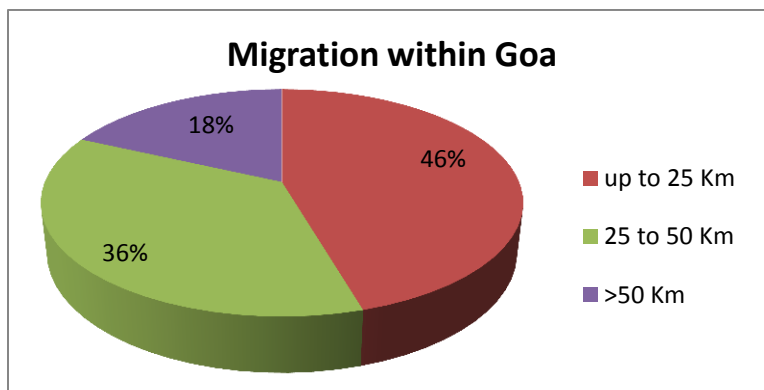


The major constraints faced by the respondents are un-affordability of the course. Due to high fees and their weak economical background some of them are unable to pay the fees for the course.

3.2.3.2.6.3.2 Willingness to migrate for further Education/Training



In case of migration, 63% of the respondent are ready to migrate for the further training because of they are interested for the skill up gradation but most of them are not ready to migrate more than 50 km.

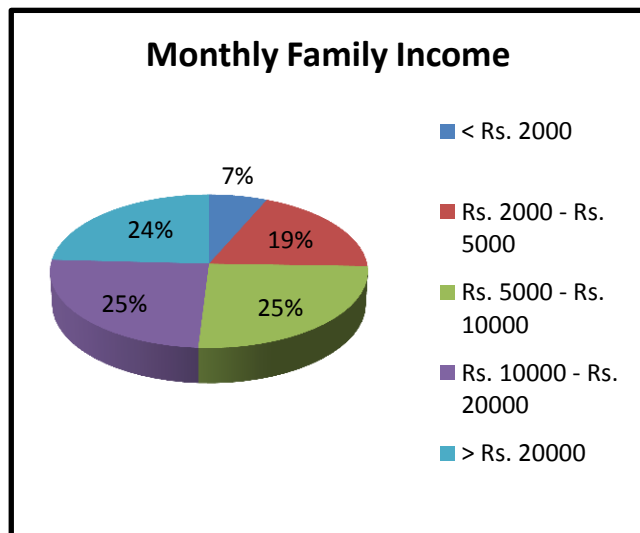
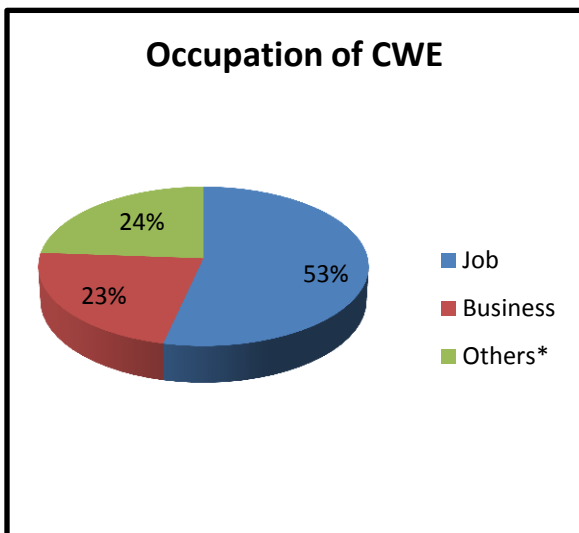
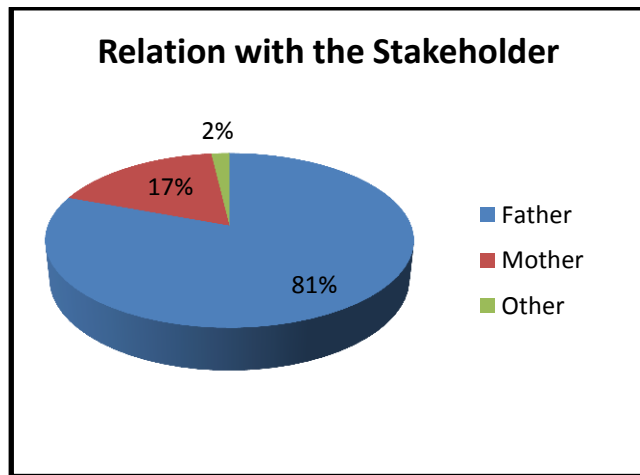
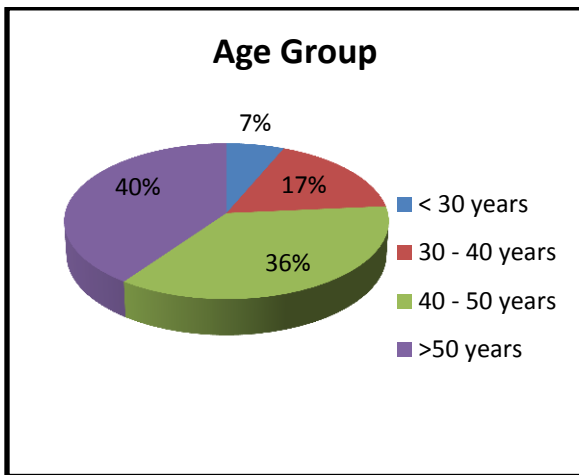


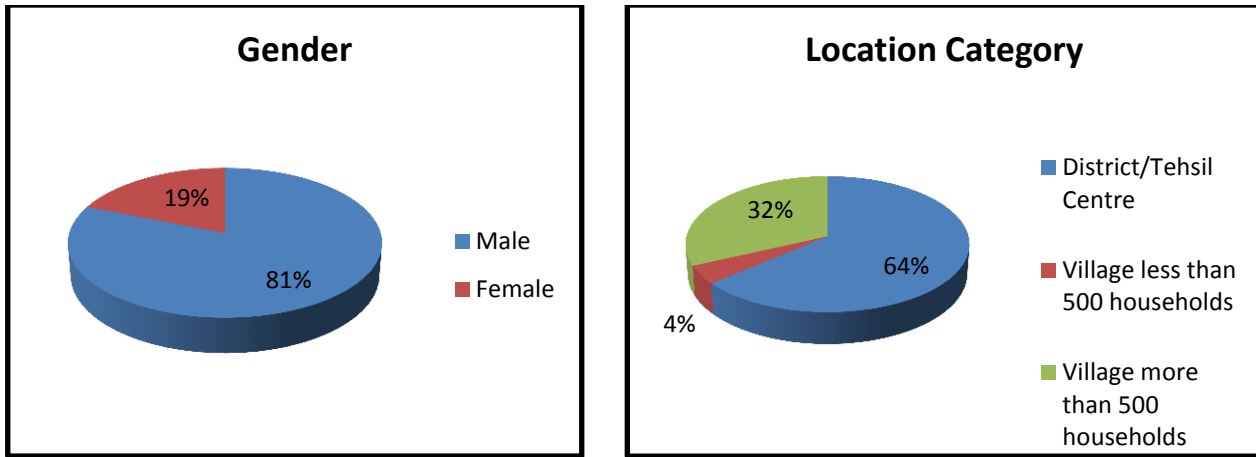
3.2.3.2.7 Parents

This category includes parents of all the above categories. The major areas we have covered are profiling of category which include background of parents with influencer’s role in decision making of student’s life. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.7.1 Profiling Data

Most of the parents are in the age group of above 40 years and are doing job currently.

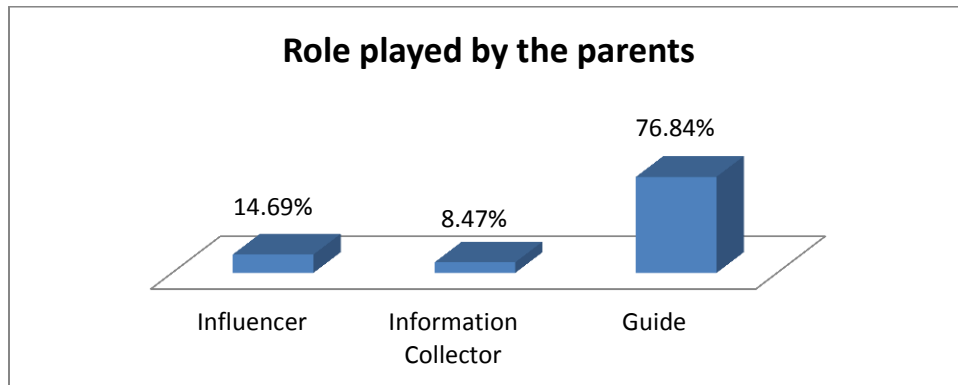




Here, most of them are coming from Taluka or District center and are coming from middle class families whose monthly family income is in the range of Rs. 5000 to 15,000 and family’s source of income is services in any organization.

3.2.3.2.7.1.1 Decision Making

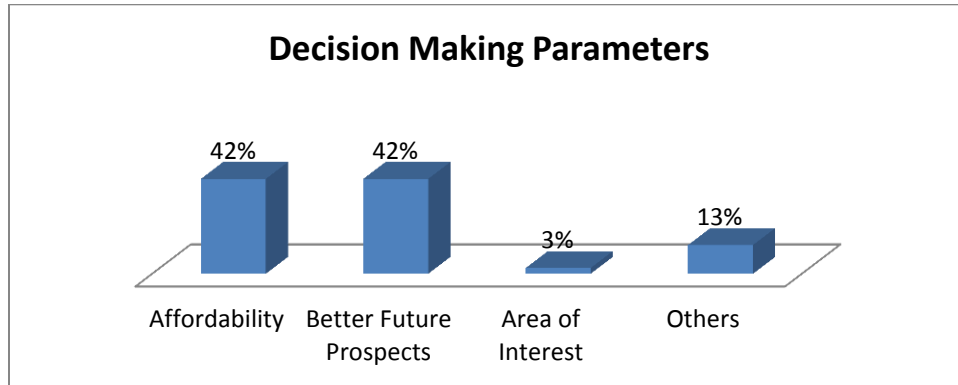
3.2.3.2.7.1.1.1 Role played by parents in their child’s life



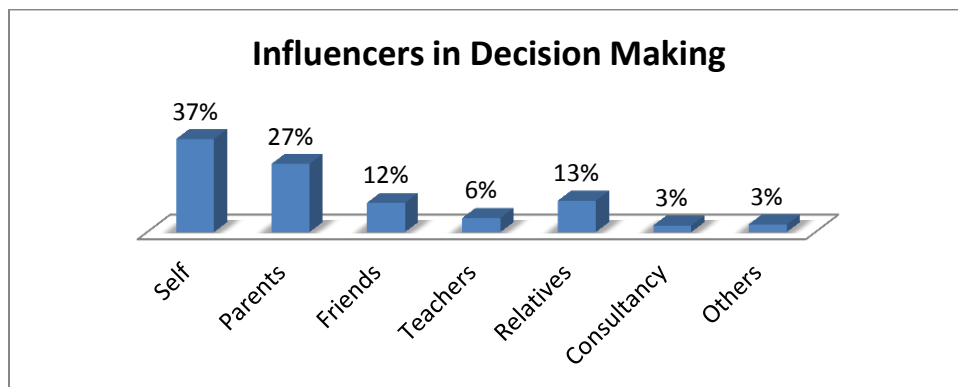
On asking about role played by parents in their child’s life, we found various responses like some parents said that they are only influencer for their child, other said that they collect the information for the institutes or courses in which their students wants to make their career but majority of the parents play a role of Guide in the life of child’s career which can be proved by the above chart.

3.2.3.2.7.1.1.2 Decision Making Parameters in Child's Career

The most important decision making parameter while planning for their child's career is better future prospects and affordability of the course fee.



3.2.3.2.7.1.1.3 Influencers in Decision Making of the Child's Career

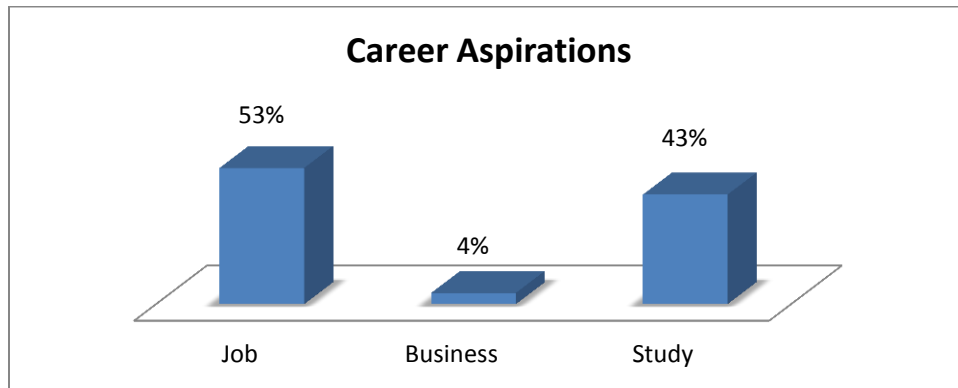


According to the majority of the parents, their children decide their study related or job related decision by their own. Some parents also said that their children sometime also influenced by their Relatives and friends. And some parent also believed that they have major role in decision making for their child's. Apart from that we also got responses in favor of teachers, consultancies and any other's that also play a minor role in child's career decision.

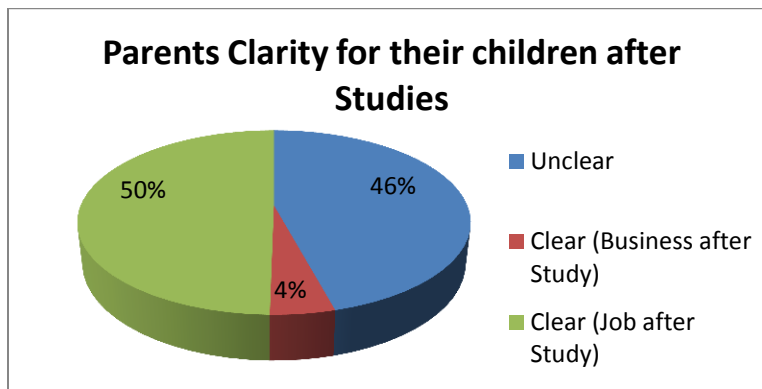
3.2.3.2.7.2 Aspirations

Here, this section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, readiness to pay for the course and salary expectation after completion of the course is also mentioned.

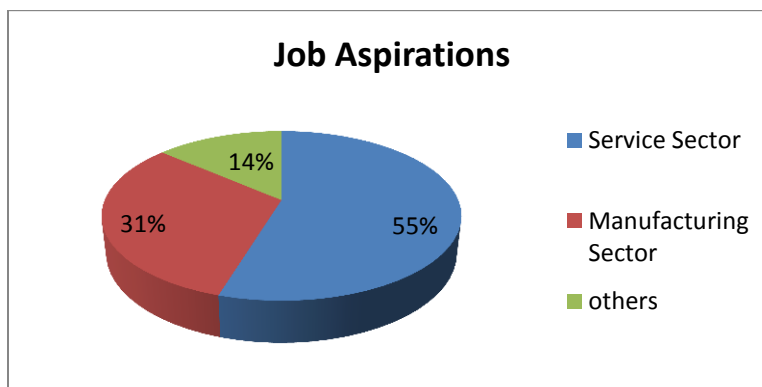
Here, the ratio of parents aspire the job and study for their children is 60:40 which is shown in below pie chart.



53% of the parents were clear that they want their child to do job after completion of their current study while very few were want that their child to set up business may be family business and apart from that 43% interested their child to study further after completion of their current study.



Majority of parents over 50% of them were clear about their child's career after studies to join job market or set up any business.

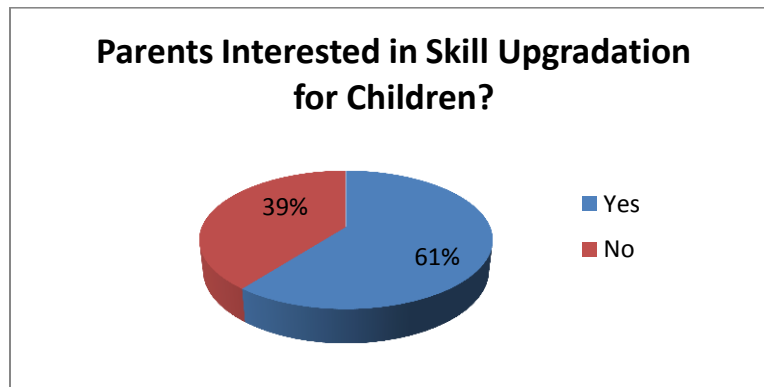


As earlier said that the sectors in which parents were want their child to make their career in respective sector. Here, 55% of them were want their child to either go for Service sector or go for Manufacture sector.

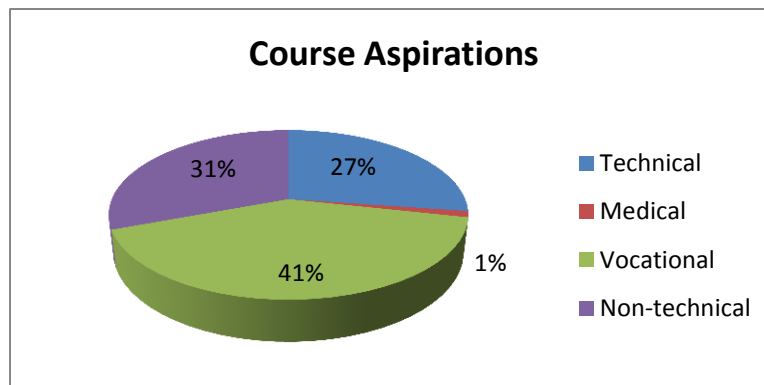
Service Sector	Manufacturing Sector
Accounts	Fitter
Social Service	Mechanic
Hospitality	

3.2.3.2.7.2.1 Interested in Skill Up-gradation

Majority of the parents were interested for Skill Up-gradation courses for their children.

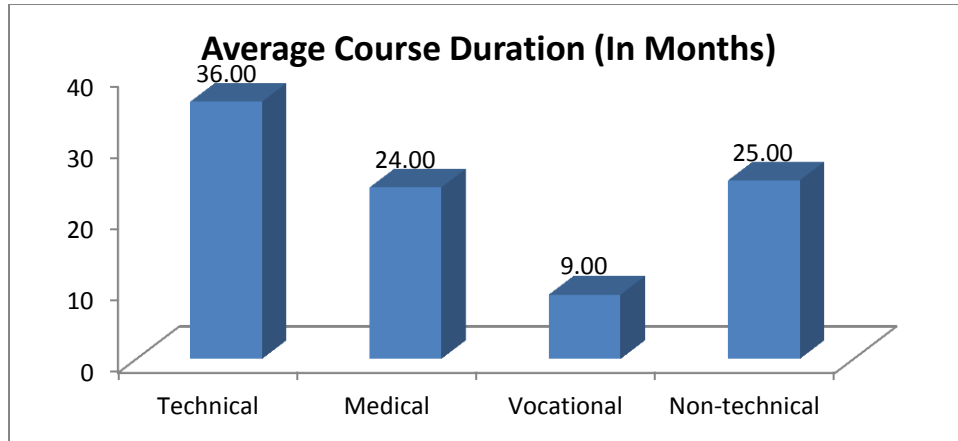


3.2.3.2.7.2.2 Course Aspirations



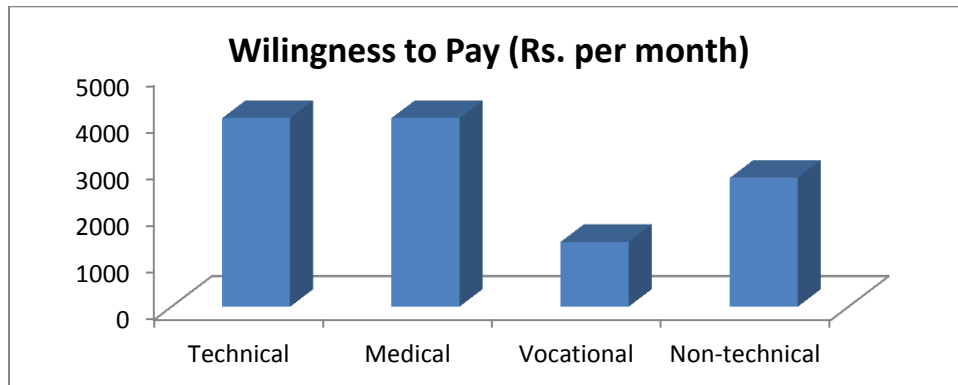
Here, we found positive responses from the parents that 41% of them were aspire for their child to undergo vocational training. There were also a few parents who wish to make their child's career in the field of Technical and Non-technical Courses.

3.2.3.2.7.2.3 Average Course Duration for various Categories

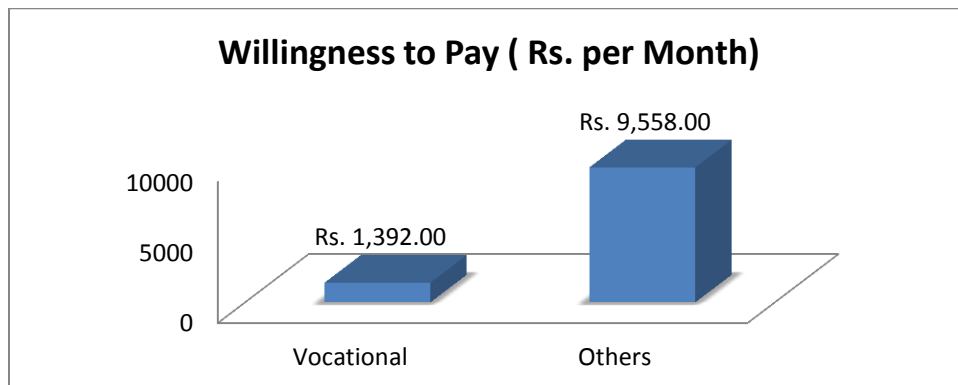


The parents feel that the average course duration for vocational course would be of around 9 months .

3.2.3.2.7.2.4 Willingness to pay for various Categories

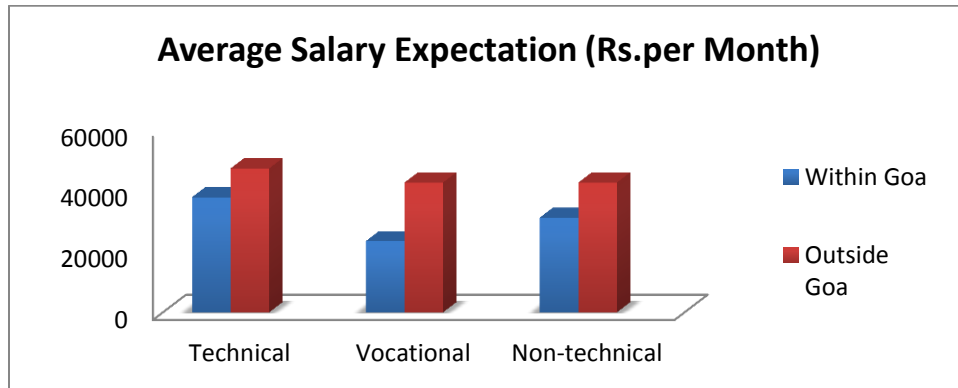


Here, the parents were shown high interest in payment of the courses as compared to their students. Parents are ready to pay around Rs. 1300 per months for a vocational course.

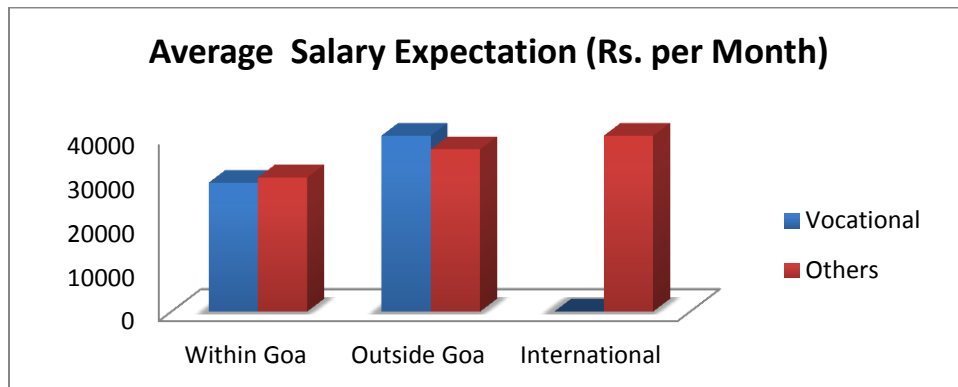


The Parents were ready to pay Rs. 1000 per months for a vocational course as compare to other courses.

3.2.3.2.7.2.5 Average Salary Expectation for various Categories

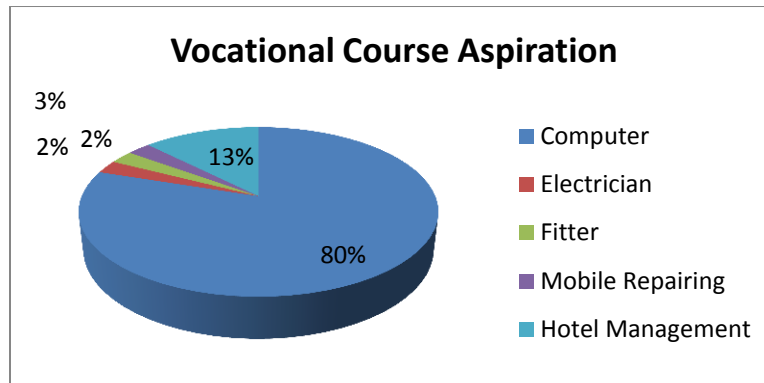


In case of within Goa, Parents expects average salary in the courses of Non-technical course, technical and lastly vocational courses. Here, Non-technical courses include MBA, MCA, Interior Designing and Pharmaceutical. But in case of outside Goa parents expectation is high.



Here, we found that Parents expectation for their child within Goa is around Rs. 30000 and in case of outside Goa, the expectation is up to Rs. 40000.

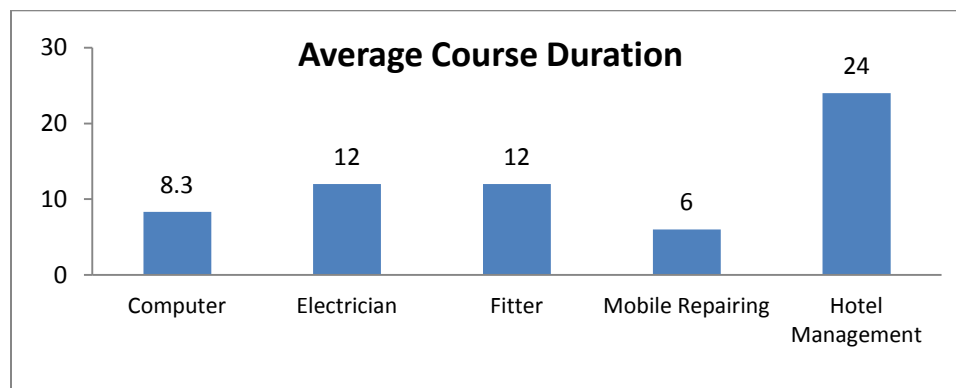
3.2.3.2.7.2.6 Vocational Course Aspirations



Computer is the highest preferred course from the list of all aspired courses according to the parents and Hotel Management is the second most aspired course

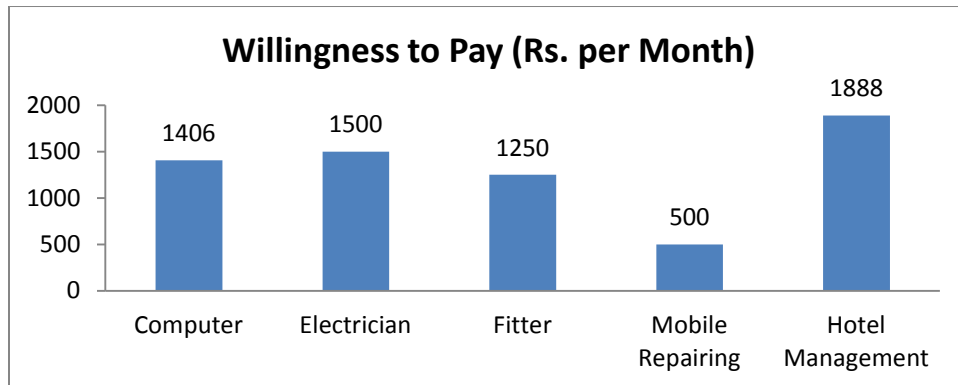
Majority of the parents are aspiring for Computer and Hospitality courses for their Child's career because they believe that these courses have high market demand in future and some parents also aspiring for Mobile Repairing, Electrical and Fitter courses in vocational educations for their child.

3.2.3.2.7.2.7 Average Duration (Vocational Training)



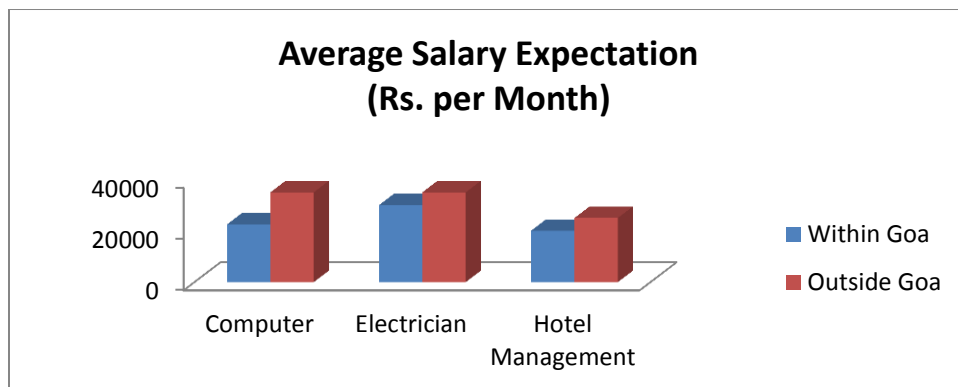
Parents believe that Institute should offer courses in the following pattern: 8 months for computer course, 12 months for Electrician and Fitter, 6 for Mobile repairing and 2 years for Hotel Management courses.

3.2.3.2.7.2.8 Willingness to pay for various Vocational Courses



Strangely, parents seem to be ready to pay higher fees for Hotel Management, Electrician and Computer course as compared to other courses. On an average they are able to pay in the range of Rs.500 to Rs.2000 for a course as per month.

3.2.3.2.7.2.9 Average Salary Expectation for various Vocational Courses

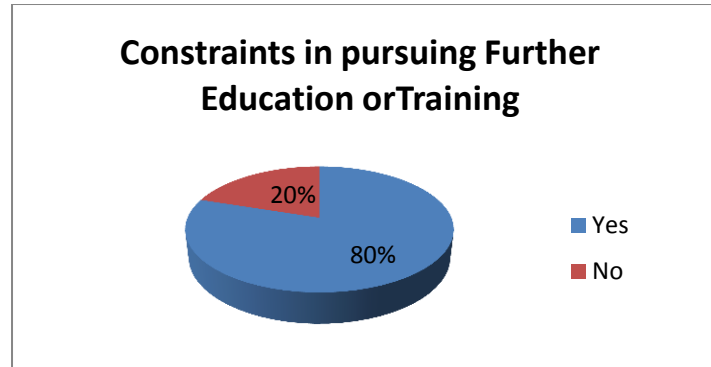


Electrician is the course for which parents expect highest initial salary for their child within Goa. In case of outside Goa, they feel Computer and Electrician course gets their child highest remuneration per month. Parents do not have much idea about the salary structure for the courses other than Computer and Electrician internationally.

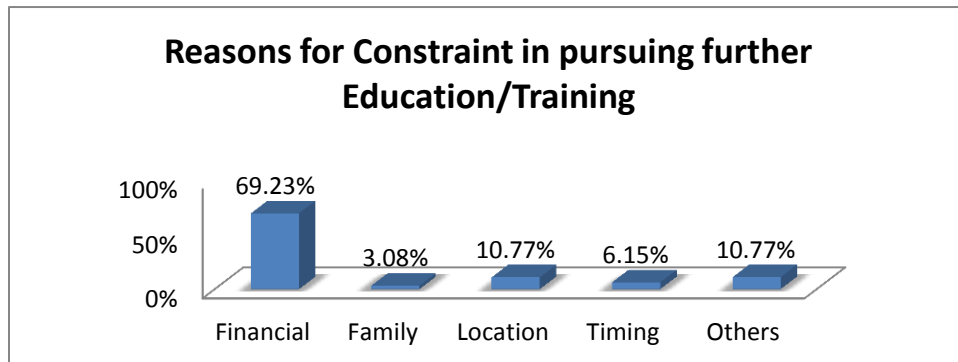
3.2.3.2.7.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

3.2.3.2.7.3.1 Constraints in pursuing for further Education/Training

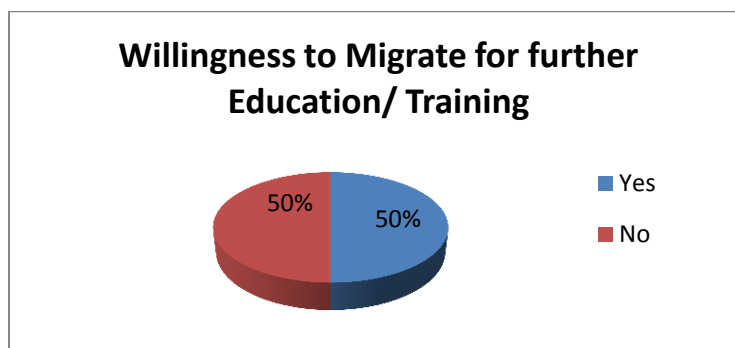


It is important to know the gaps which might come in the way of student's education career so that NSDC come to know, how to bridge the gaps and accordingly resolve the issues and provide quality education to the students of Goa and make them employable. Above graph shows that 80% of parents were facing constraint in providing their child further education.

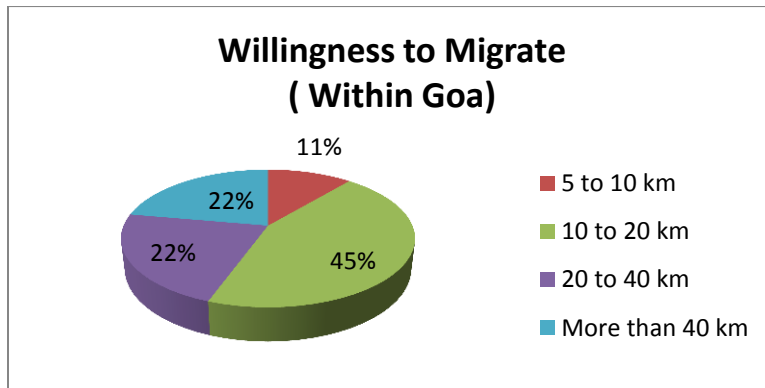


More than half of the parents were responded that due to financial constraint they are unable to provide further education to their child other than this family issue, location and timings are other parameters constraints in pursuing future education and training.

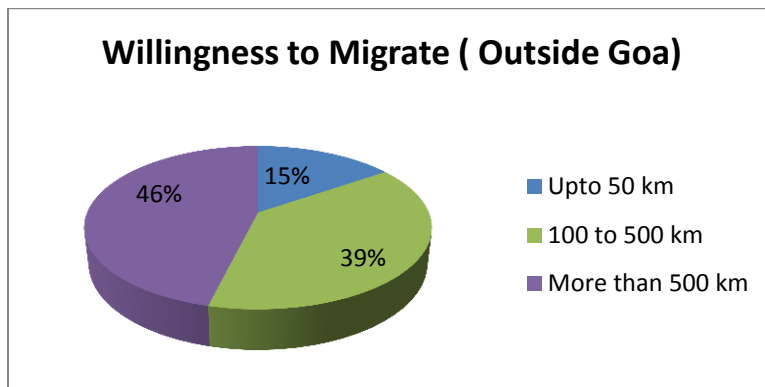
3.2.3.2.7.3.2 Willingness to migrate for further Education/Training



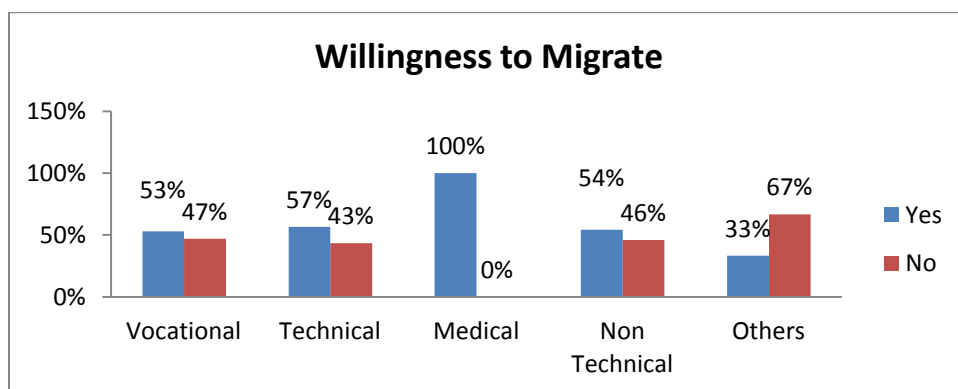
Here, unexpected result found, 50% of the parents were ready to send their child away from them for their further education or training. Amongst them only 38% parents were ready to migrate their child up to 20 – 40 km from their respective location which shown in below graph.



Majorly parents agree to the migration of their child for further education till 10 km in district.



The above chart depicts that parents are ready for their child’s migration of more than 500 km in case of further education.



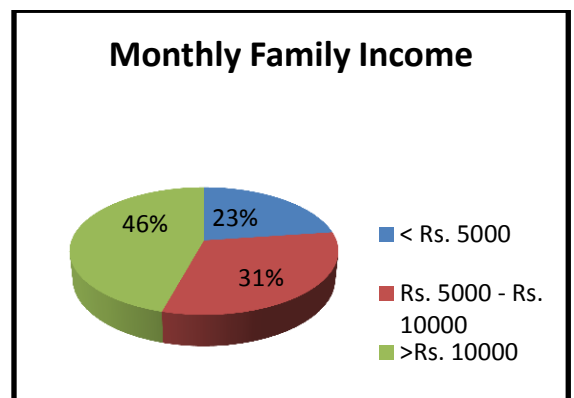
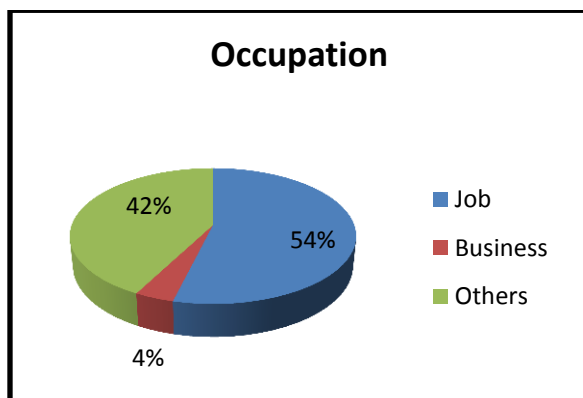
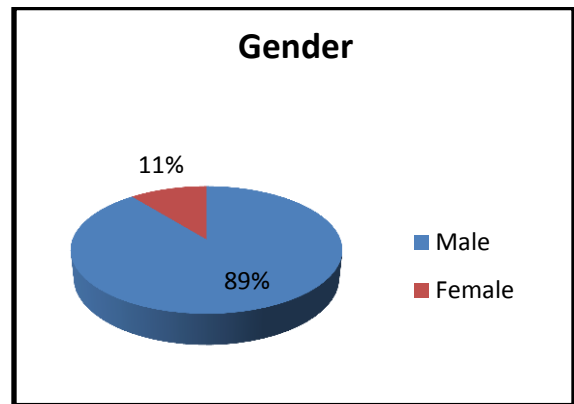
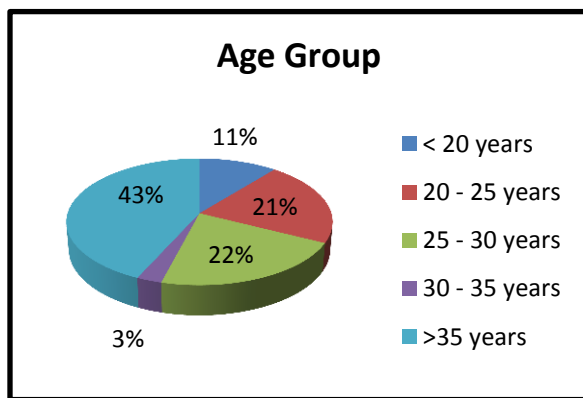
Here, we found clearly that the parents are ready to send their child for Vocational education is at greater distant than any other academy courses like technical or non-technical course. Here, other includes course of Singing, Dancing, Personality Development and Sports.

3.2.3.2.8 Influencers

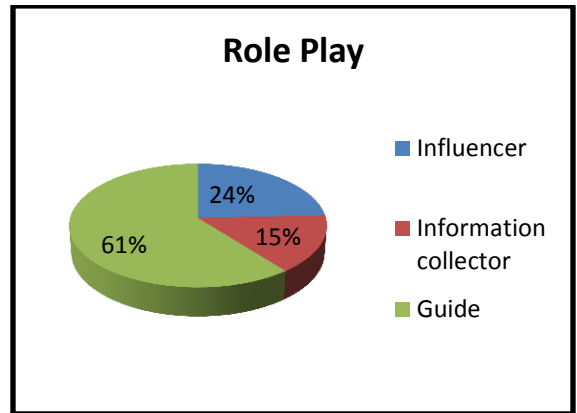
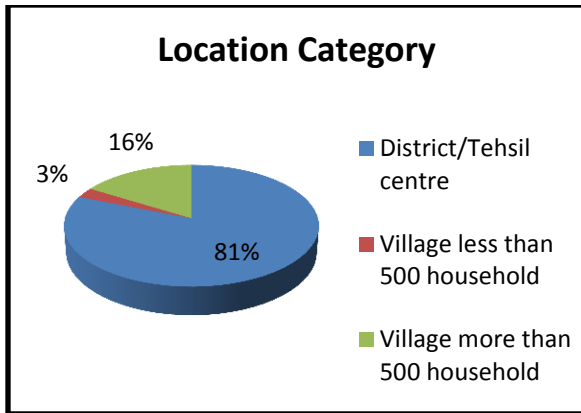
In the category of influencer we talk to those people who play a major role for decision making in the life of student. The major areas we have covered are profiling of category which include economical background of people. Along with that we have covered aspirations and constraints of the students for perusing further education or training.

3.2.3.2.8.1 Profiling Data

In this section we have covered those respondents who influencing in the decision of students' career. Majority of the Influencers are in the age group of above 35 years, who are either the siblings or relatives of the young stakeholders. More than 50% respondents are doing job and mostly from district or tehsil centre.



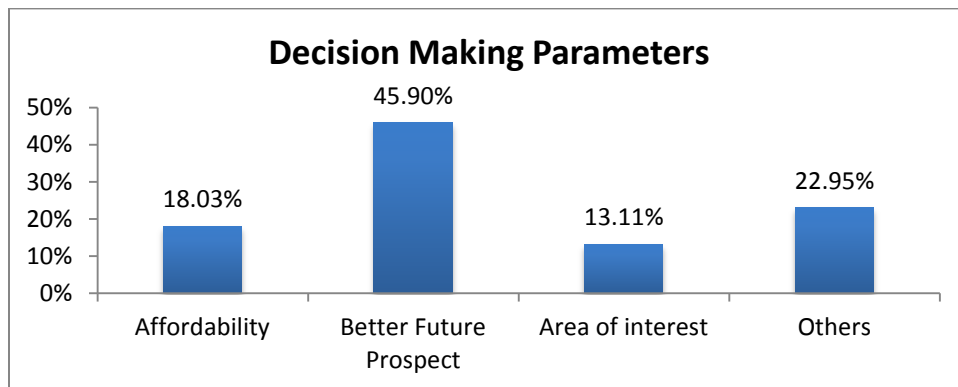
* Other Includes Driver, Self Employed etc.



3.2.3.2.8.1.1 Decision Making

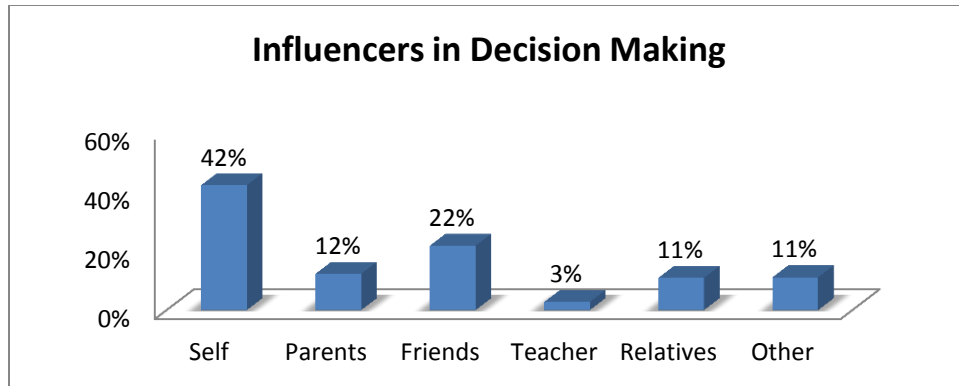
3.2.3.2.8.1.1.1 Decision making parameter for influencers

The most important decision making parameter while planning for their child’s career is better future prospects and affordability of the course.



3.2.3.2.8.1.1.2 Influencers in Decision Making

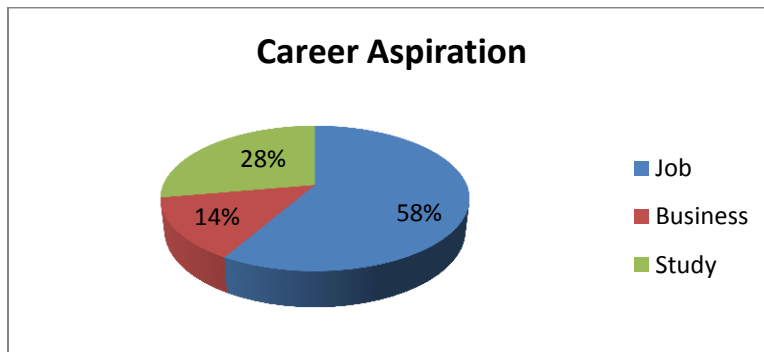
More than 40% of influencers in the stakeholder’s life are the respondents themselves and second most of the respondents think that the friends of the stakeholders are the influencers in making decision of their children. Other Includes Wife, Son etc.



3.2.3.2.8.2 Aspirations

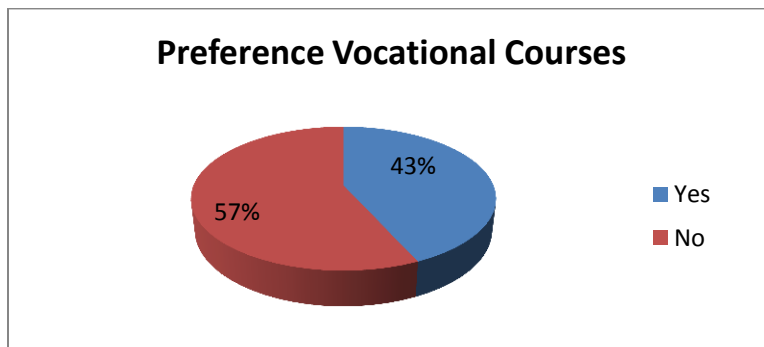
This section includes career aspiration of the students and the field in which they are interested to make their career. Along with that courses which students aspiring to pursue, willingness to pay for the course and salary expectation after completion of the course.

More than half of the respondents have planned further job for the child's career in future.

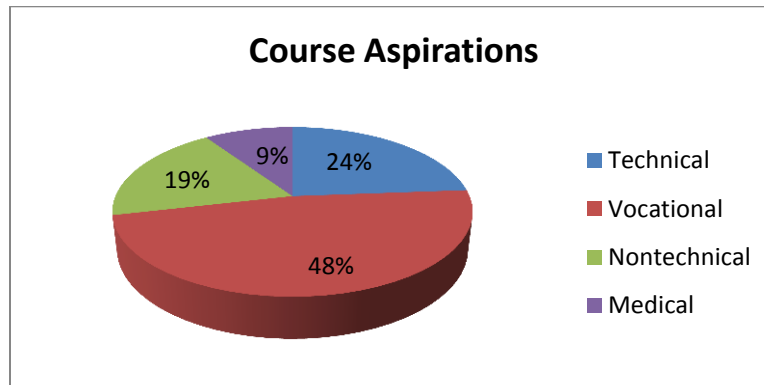


3.2.3.2.8.2.1 Interested in Skill Up-gradation

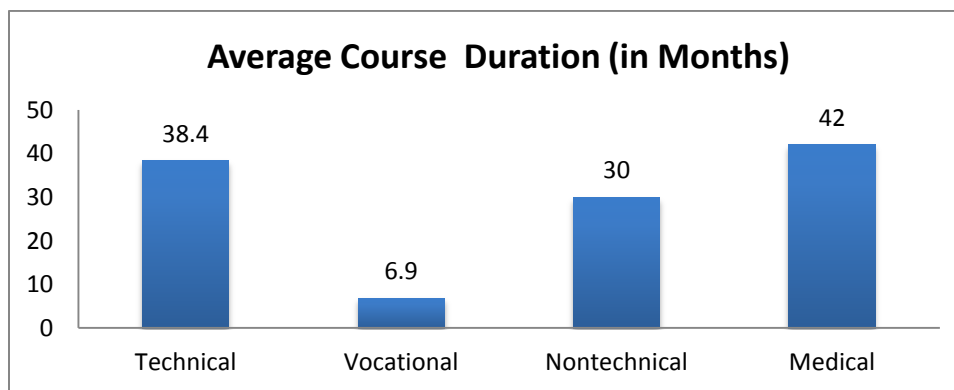
Here, nearly about half of the influencers prefer to go for a Vocational course for the child.



The below pie represents that respondent prefer vocational courses like computer, mobile repairing and automation etc.

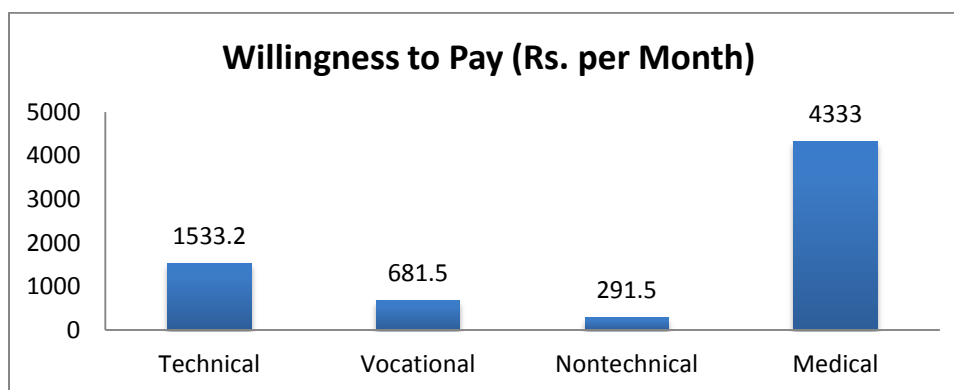


3.2.3.2.8.2.3 Average Duration (Vocational Training)



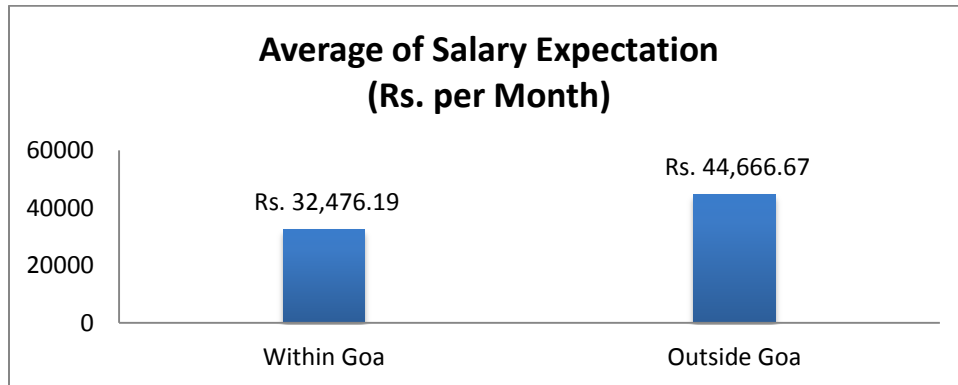
The influencer's willingness for their child to do vocational course for 6-7 months and for technical, non-technical and medical courses is around more than 3 years.

3.2.3.2.8.2.4 Willingness to pay for various Vocational Courses



Influencer's are ready to pay around Rs. 650 per month for vocational course and for medical they are ready to pay highest nearly around Rs. 4000 per month.

3.2.3.2.8.2.5 Average Salary Expectation



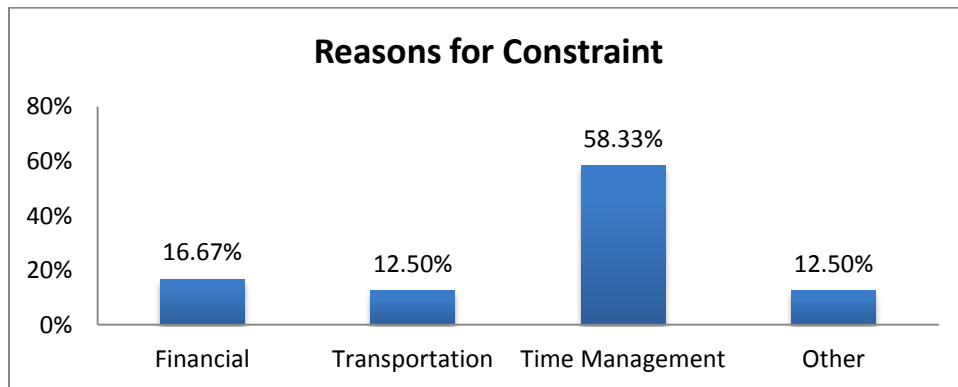
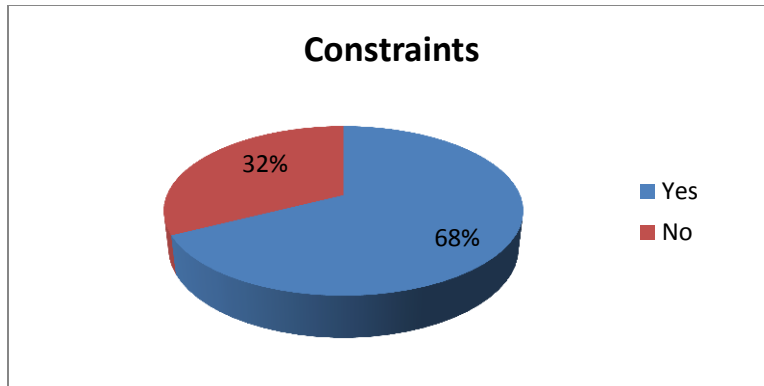
The influencer's expect a minimum salary of around Rs. 32000 within Goa and around Rs. 44000 outside of Goa after completion of the vocational course of their child. The expectations go high about 50000 in case of international job.

3.2.3.2.8.3 Constraints

This section includes the reason for which student left their education, constraint faced by the students for further education or undergoing training and willingness to migrate for course.

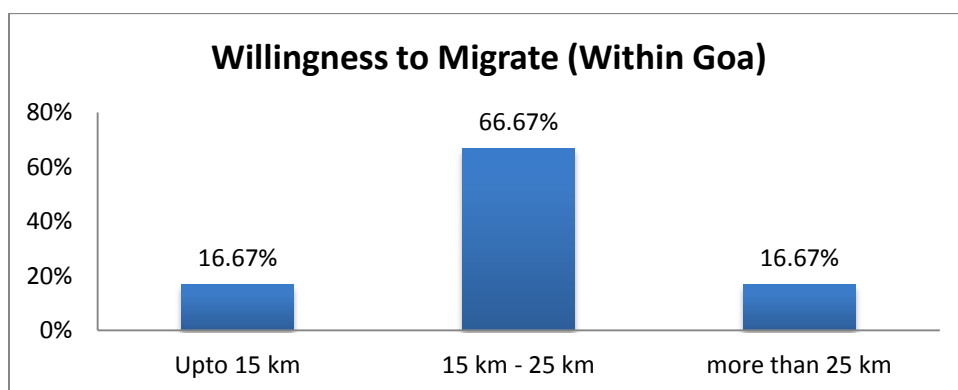
3.2.3.2.8.3.1 Constraints in pursuing for further Education/Training

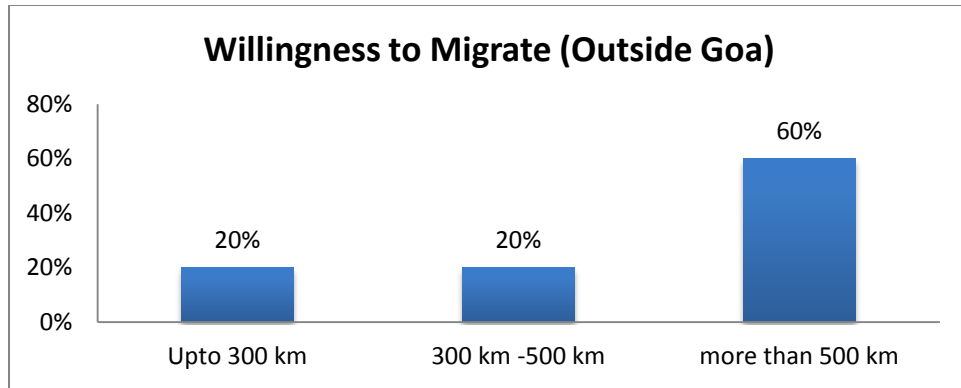
Most of the respondents mention that the children they influenced faced certain constraints in pursuing for further education. More than half respondents said that time management is a major constraint face by the child at the time of study.



3.2.3.2.8.3.2 Willingness to migrate for further Education/Training

In case of migration within Goa more than 65% of influencers were ready to send their child away from them for their further education or training up to 15 km-25 km. And in case of outside of Goa 60% of influencers were ready to migrate more than 500 km.





3.2.3.2 Summary of Aspirations & Constraints

Table 96 Summary of Aspirations and Constraints

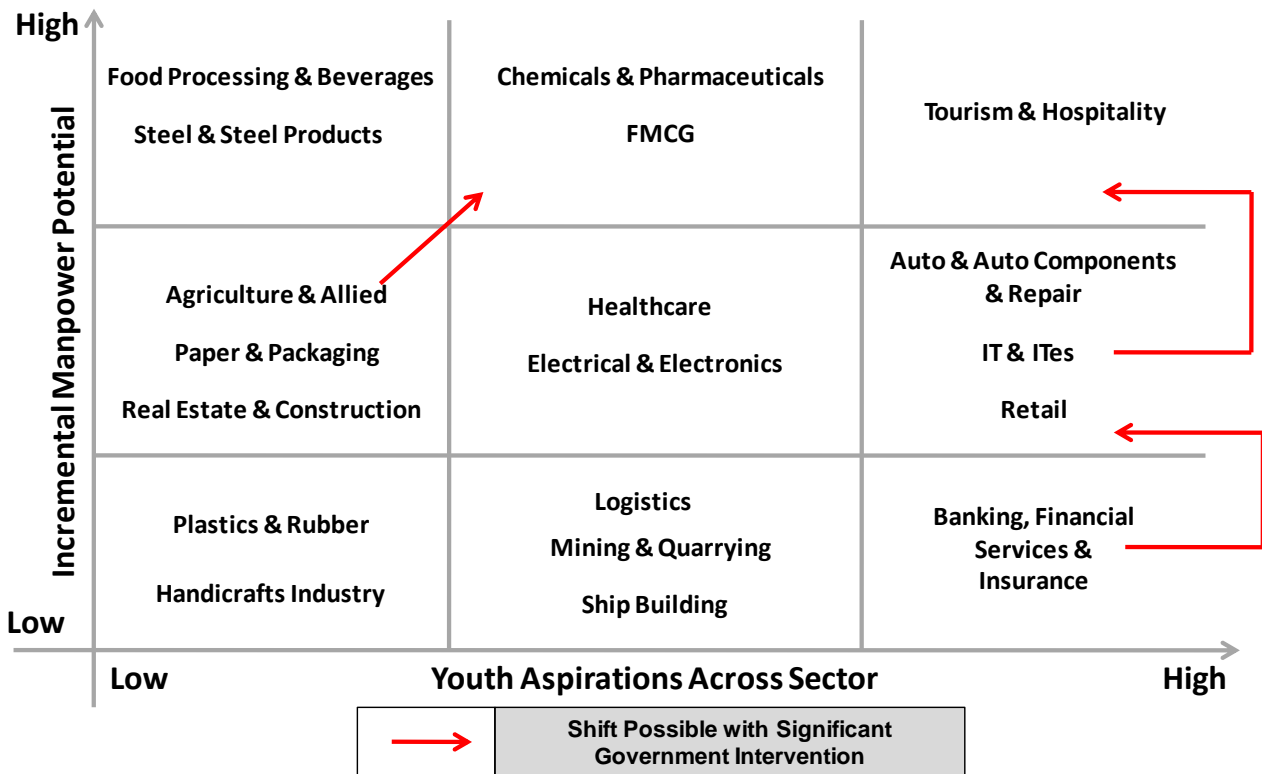
		Categories				
		Early School Drop-outs	10th / 12th Drop-outs	Current 10th / 12th Students	10th/ 12th Pass-outs	
Aspirations	Aspiration for Job		35%	50%	51%	39%
	Aspiration to Study		28%	28%	48%	56%
	Job - Specific Aspiration	Manufacturing	18%	3%	32%	15%
		Services	54%	54%	26%	61%
		Unorganized	17%	39%	36%	24%
	Study - Specific Aspiration	Vocational	56%	77%	65%	36%
		Technical	41%	-	7%	22%
		Non-Technical	3%	18%	25%	34%
	Most Aspired Course		Computer, Mechanical, Mobile Repairing	Computer, Mechanical, Hospitality	Computer , Auto mobile, Hospitality	Mechanical, Computer, Electronic
	Willingness to Pay - Most Aspired Course		846	700	1250	2500
	(Per Month)					
	Average Salary Expectation	Within Goa	14320	13347	19372	21194
Outside Goa		21,750	20833	31682	41068	
International		-	-	80,000	127000	
Constraints			50%	11%	47%	71%
	Willing to Migrate for Education?		67%	73%	52%	46%
	Willing to Migrate Outside Goa for Education?		-	13%	10%	52%
General Remarks			42% drop-out due to financial reason	-	-	

		Categories				
		General Graduates	Technical Graduates	ITI / VTI Pass-outs	Workers Looking for Skill Up-gradation	
Aspirations	Aspiration for Job		51%	48%	79%	40
	Aspiration to Study		38%	48%	17%	16%
	Job - Specific Aspiration	Manufacturing	2%	19%	2%	47%
		Services	96%	51%	50%	53%
		Unorganized	2%	19	33%	-
	Study - Specific Aspiration	Vocational	22%	51%	43%	84%
		Technical	6%	49%	57%	9%
		Non-Technical	72%	None	None	7%
	Most Aspired Course		Computer, Hotel Management, English Speaking	Computer, Software Language, Auto card	Hospitality, computer, Mechanics	Computer, English Spoken, Retail
	Willingness to Pay - Most Aspired Course (Per Month)		1150	1800	2300	700
	Average Salary Expectation	Within Goa	315	25000	13322	11684
Outside Goa		504	54340	20686	19,167	
International		746	75862	38550	-	
Constraints			60%	26%	45%	48%
	Willing to Migrate for Education?		52%	76%	21%	63%
	Willing to Migrate Outside Goa for Education?		43%	18%	-	16%
General Remarks						

Source: Dexter Analysis

After analyzing the youth aspirations as well as the potential to employ within an industry, Agriculture & Allied sector can be a major employer given that the aspirational value of the sector is elevated from low to a medium level driven by an active awareness level by the government sources. Also, it will depend significantly on the Government’s promotion of IT & ITes sectors to take it on a completely different higher growth plank. We found that Tourism and Hospitality sector is at the peak in Goa State which is due to high incremental manpower potential and high youth aspiration.

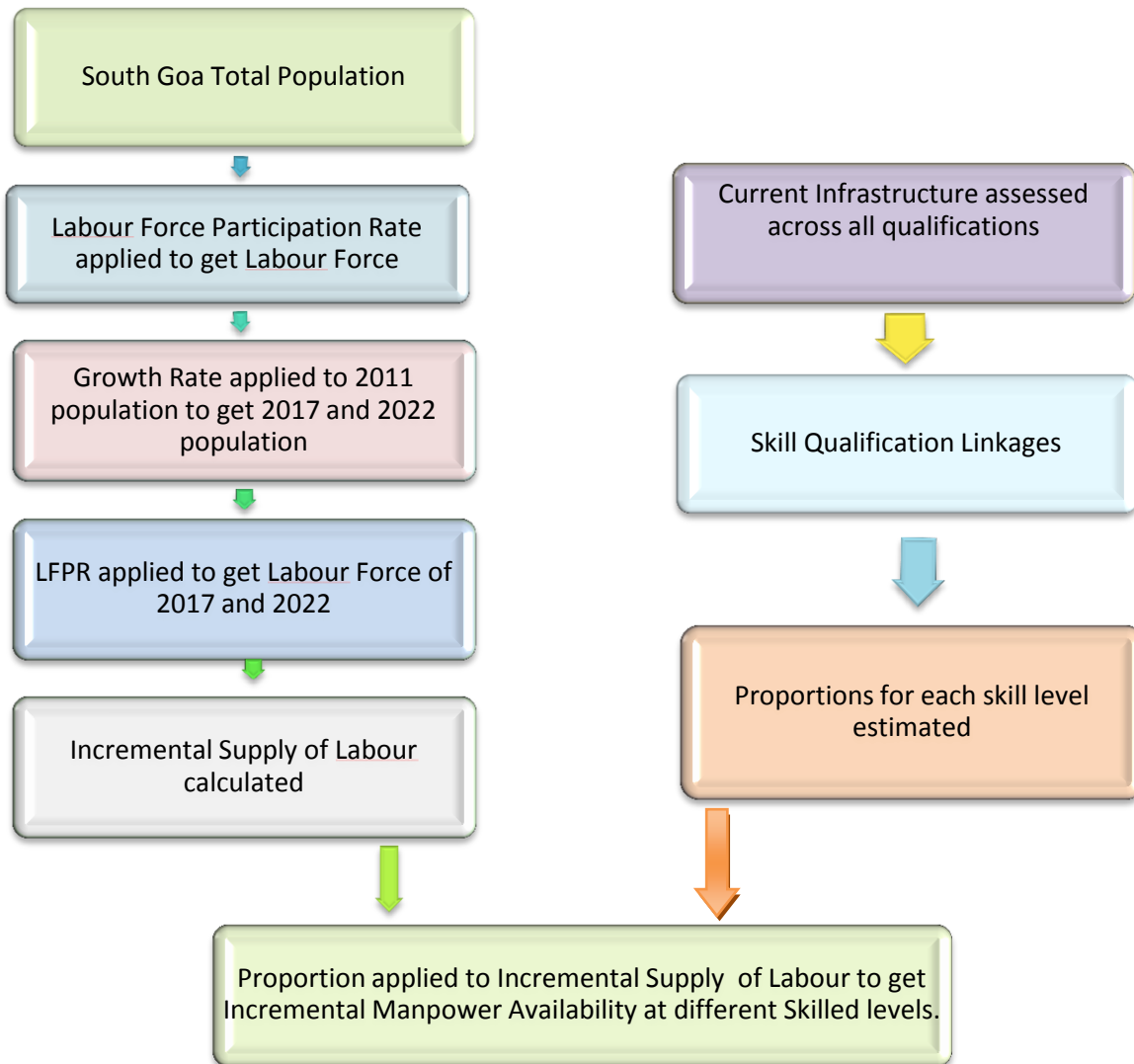
Figure 41: Youth Aspiration Mapping



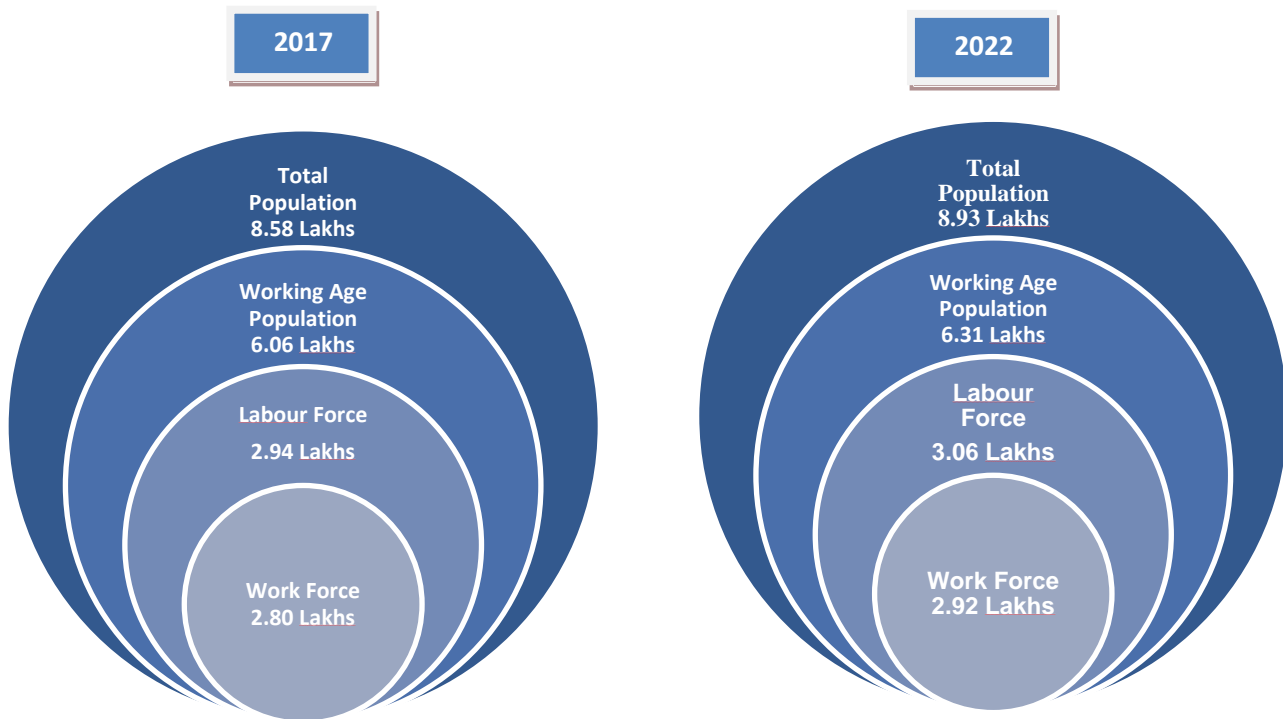
Source: Dexter Analysis

3.2.3.3 Incremental Skill Human Resource Availability Estimation

Figure 42: Incremental Human Resource Skill Availability Estimation



Source: Dexter Analysis

Figure 43: Incremental Human Resource Availability-North Goa for Year 2017 and 2022

Source: Dexter Analysis, NSS 66th Round, Census 2011

1.) From Census 2011, the total population of North Goa district is reported around 824467 in 2011. The decadal growth rate of population in the last decade i.e. 2001-2011 was 8.2%. So, assuming the same growth rate in the coming decade as well, we arrive as 2012 population.

2.) From NSSO 66th round, the Labour Force Participation ratio for Goa is 485 people per 1000 persons. This ratio when applied to the total population of North Goa gives us the current labour force available.

Table 97: Population and Labor Force of North Goa

	2012
Population	824467
Proportion of Population in the 15-59 years age group	582898
Labor Force	282705

Source: Census 2011, South Goa

3.) The growth rate for the 2001-2011 decade for Goa is reported around 8.2% in census 2011. Applying this growth rate to current population gives us the population of 2017 and 2022.

Table 98: Estimation of Population for the Year 2017 and 2022

Population	2012	2017	2022
	824467	858270	893459

Source: Dexter Analysis

4.) Labour Force Participation Ratios & Work Force participation Ratios are applied to 15-59 years working population of 2017 and 2022 to get Labour Force of South Goa in 2017 and 2022.

Table 99: Estimation of Population & Labor Force for the Year 2017 and 2022

	2012	2017	2022
Population	824467	858270	893459
Proportion of 15-59 in total population in persons (per 1000 persons) as per NSS 66th Round	707		
Working Age Population (15-59 years) in South Goa	582898	606797	631675
LFPR (in persons per 1000 persons in 15-59 years age group as per NSS 66th round)	485		
Labour Force Participation Ratio	282705	294296	306363
WPR (in persons per 1000 persons in 15-59 years age group as per NSS 66th round)	463		
Work Force Participation Ratio	269882	280947	292466
Incremental Labour Supply		11591	12066

Source: Dexter Analysis, NSS 66th Round

5.) Incremental supply of Labor is calculated for 2012-17 and 2012-22.

Table 100: Incremental Human Resource Availability of Labor

Incremental Human Resource Availability*	2012-17	2012-22
	11591	12066

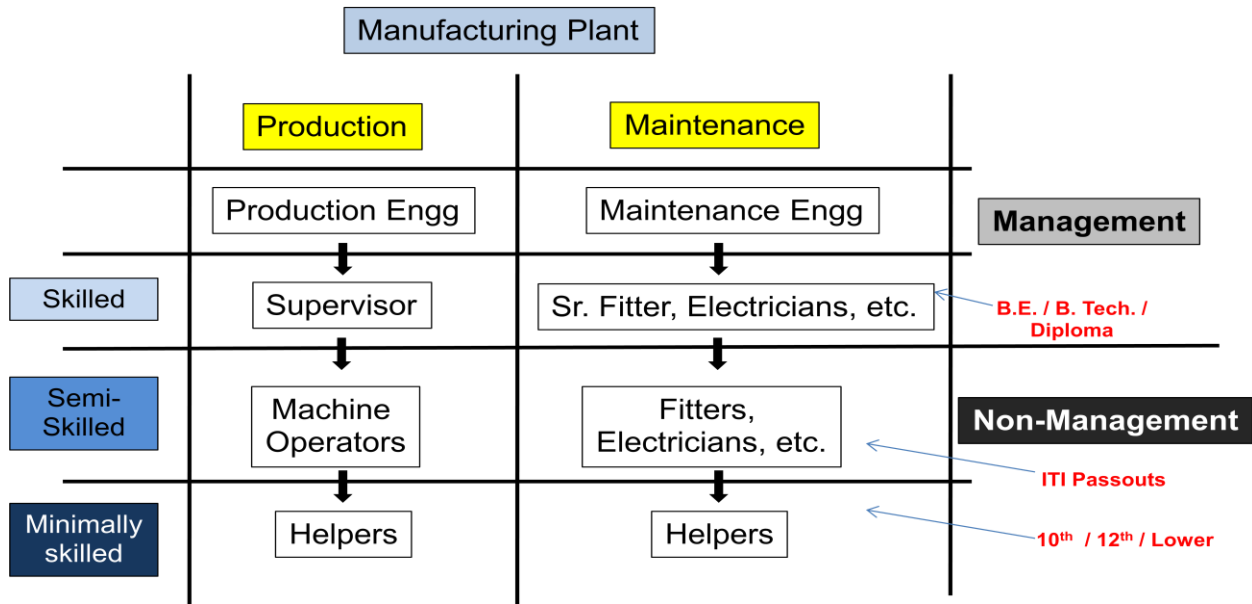
*Incremental Human Resource Availability= Labour Force of 2017/2022-Labour Force of 2012.

Source: Dexter Analysis

6.) Industry wise skills are classified into 4 broad categories viz. Highly Skilled, Skilled, Semi Skilled and Minimally skilled depending on the nature and duration of the training and education received and the current training/higher education capacities are categorized to match the four levels. For Manufacturing, the

qualification-skill linkage is explained below. For example, generally B.E/B.Tech graduates are employed at the highly Skilled Levels of Production Engineers, Shift in Charge, or Foreman etc.

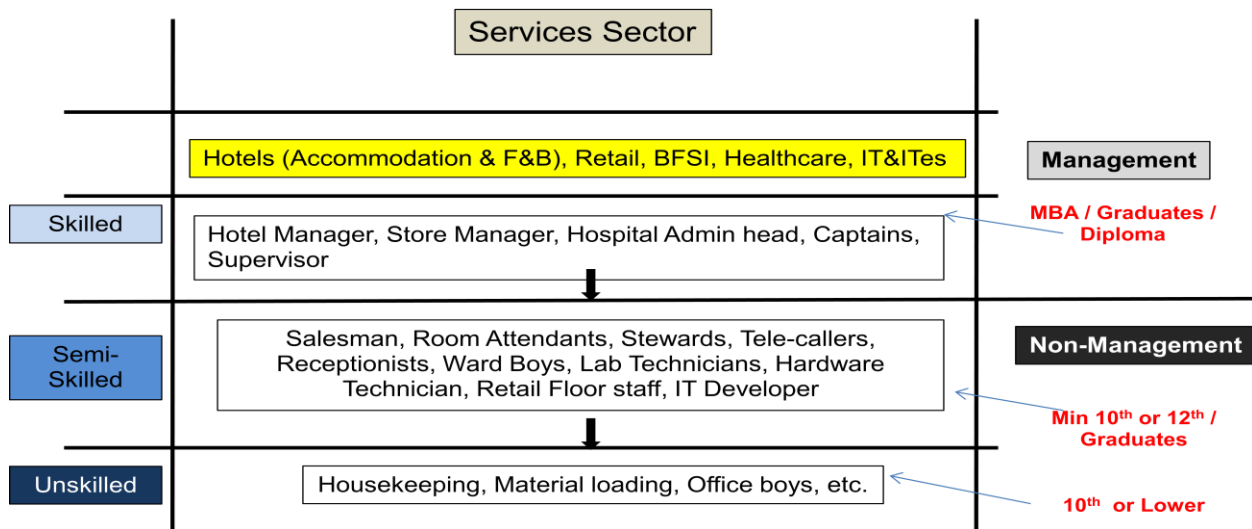
Figure 44: Department wise skill classification based on qualification of manufacturing sector



Source: Dexter Analysis

For Services, the qualification-skill linkage illustration is given below. For example persons employed in housekeeping like bellboys are 10/12th Dropouts or pass-outs.

Figure 45: Department wise skill classification based on qualification of service sector



Source: Dexter Analysis

The skill levels have been defined according to the following:

Table 101: Skills – Qualifications Linkage

Skill Level	Educational Qualification
Skilled	Diploma Pass-outs, General Graduates, Engineering Degree, General Post Graduates
Semi Skilled	ITI Pass-outs, 10th and 12th Pass-outs
Minimally Skilled	Early School Dropouts, 10th/12th Dropouts

Source: Dexter Analysis

7.) Using the above skills-qualification linkages, we use existing infrastructure (10th/12th Dropouts, Pass-outs, ITI Pass-outs, General Graduates, Post Graduates) data to get proportions which are then applied to Incremental Supply to get Incremental Labour Supply at different Skill Levels.

Table 102: Skill wise incremental Human Resource Availability for 2012-2017

Skill Level	Proportions (Proportions derived from projected capacity additions across skill levels)	Incremental Supply
		(2012-17)
Skilled	0.30	3490
Semiskilled	0.49	5736
Minimally Skilled	0.20	2365
Total		11591

Source: Dexter Analysis

The same method was applied to get the Incremental Labour Supply at different skill levels for 2017-2022.

Table 103: Skill wise incremental Human Resource Availability for 2017-2022

Skill Level	Proportions (Proportions derived from projected capacity additions across skill levels)	Incremental Supply
		(2017-22)
Skilled	0.30	3633
Semiskilled	0.49	5971
Minimally Skilled	0.20	2462
Total		12066

Source: Dexter Analysis

3.2.4 Current Education & Training Setup

3.2.4.1 Primary & Secondary School Infrastructure

Though the state of Goa has recorded 87.40 percent literacy and a high attainment level, the need of the hour is to reinforce its educational policy towards bridging regional and gender gaps, reducing the drop-out rate, emphasizing skill development and vocational programmes to curb unemployment, improving quality of education, infrastructure development in schools, orientation of teachers, computer integrated education and up-gradation of libraries.

The following table displays schooling infrastructure present in North Goa. Total 921 schools are present in North Goa which includes privately aided, privately unaided, and government schools that comprises of schools run by education department, schools run by local bodies and tribal and social welfare department. The distribution is as follows:

Table 104: Number of Private Aided, Unaided and Government Schools at North Goa

	Pvt. Aided	Pvt. Unaided	Government
Primary	112	42	599
Secondary	124	7	42

Source: Education Statistics at Glance 2011-12

Out of these 921 schools, 777 are present in rural areas and the remaining 145 are in urban area.

At school level in Goa, there are 1766 schools of them primary are 1227, middle 73, high schools 380, higher secondary are 86. There are almost 60% on average schools are of government and government aided.

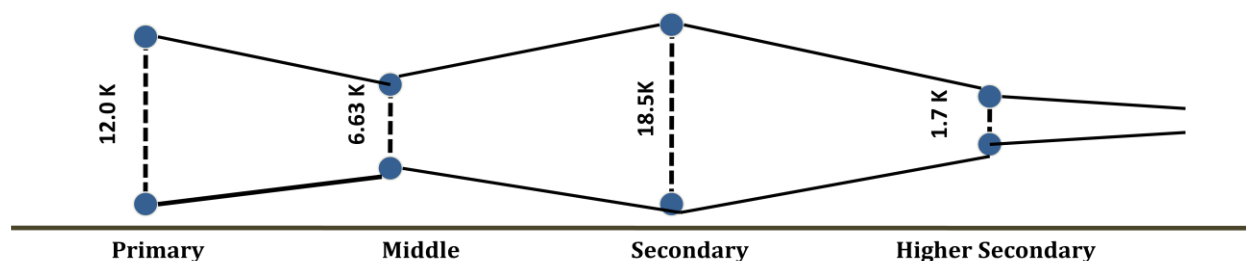
Table 105: School Education Infrastructure and Enrollment, as on 2011-12

	Primary Schools		Middle Schools		Secondary Schools	
	Enrolment	Number	Enrolment	Number	Enrolment	Number
Pernem	3929	97	3244	41	2836	32
Bardez	16440	148	12237	65	9774	54
Bicholim	6128	102	4618	34	4289	27
Sattari	3761	117	3389	29	3196	22
Tiswadi	12547	102	9731	49	8110	43
Ponda	10773	168	8321	44	6696	43

	Primary Schools		Middle Schools		Secondary Schools	
North Goa	53578	734	41540	262	34901	221

Source: Educational Statistics at Glance 2011-12; Government of Goa

Figure 46: Drop-outs at Various Stages of North Goa



Source: Goa Education Statistics – 2011-12, Directorate of Education, Goa Government

Similarly as South Goa, North Goa district also has higher number of students who left the School in between at Primary and Secondary level of education.

Table 106: Capacity as per the Faculty of XI and XII class

Sr. No.	Faculty	Management	XI			XII			Total
			Total	Boys	Girls	Total	Boys	Girls	
1	Arts	Government	571	226	345	478	176	302	1049
		Government Aided	2869	934	1935	2455	700	1755	5324
2	Commerce	Government	687	398	289	408	219	189	1095
		Government Aided	4402	2255	2147	4376	2132	2244	8778
3	Science	Government	733	389	344	489	264	225	1222
		Government Aided	3146	1581	1565	3058	1528	1530	6204
4	Vocational	Government	457	301	156	375	254	121	832
		Government Aided	2758	1971	787	2500	1697	803	5258
	Total	Government	2448	1314	1134	1750	913	837	4198
		Government Aided	13175	6741	6434	12389	6057	6332	25564

Source: Educational Statistics at Glance 2011-12; Government of Goa

3.2.4.2 Higher & Technical Education Infrastructure

For technical education, North Goa has 8 ITIs giving providing employable skills to the population. Moreover there are 58 institutes in north Goa including government colleges, private colleges, and institutes providing education in arts, science, commerce, engineering and other professional courses.

In Goa there are approx more than 25 registered Higher and Technical Educational institutes of them they have student's capacity more than 9000 of each batch for graduation and there are more than 600 student capacity for post graduate courses in Goa for Professional education.

Table 107: Enrollment at Higher & Technical Education

	Course	Enrollment of Students
Non-Professional education	B.Com	8500
	B.Sc	2465
	B.A	4730
	M.Com	411
	M.A	523
	M.Sc	459
Professional Education	B.C.A	1324
	B.B.A	891
	B.T.T.M	147

3.2.4.3 Government & Private ITIs

At North Goa district, there are 6 Government ITIs and the highest admitted trainees in the course of Computer Operator and Planning Assistant (COPA), Electrician, Hospitality Management and Automobile out of around 41 trades in the year 2012-13.

Under Vocational Education in Goa there are some more than 20 institute registered providing education to student in there, of which there are private as well as government institutes are there and both are almost same in ratio. Student capacity of these institutes is of 8000+ students yearly for different kind of courses.

3.2.4.3.1 Government ITI/VTIs

For vocational training, South Goa district has a total of 14 Industrial Training Institutes (ITIs) / Industrial Training Centers (ITCs) as on 2011-12. Of these, Six are Government ITI's and eight are private ITIs. All the 14 ITIs together have a seating capacity of 2748 (Government private).

Table 108: List of Number of ITI/VTIs at North Goa

Total Number of ITIs / Private Training Institutes (under HRDF)	9
Number of Government it is	6
Number of Private ITIs	3
Total Seating capacity (Per Annum)	2748

Source: State Directorate of Craftmanship Training

In order to assess the current ITI infrastructure in the district, in department, interviews of the instructors have been conducted to understand their opinions and receive feedback on the current status of the ITIs. This has been done across all the government ITIs of the district.

ITI Ponda:

In interview, instructor revealed that they get students through references and try to get student through counseling for which they are spreading awareness. They came from mixed background mostly from the lower class and 10th dropout. Most of them go for job and only from refrigeration and air-condition go for self business. According to him, syllabus should be revised; it should be based on new technology available in industry and for this industry should also support them. Study module should be such that so student can easily grasp or understand it.

For placement he told that the placement get varies from trade to trade like fitter-100%,electrician-80%,turner-80%, Computer &mechancial-40% with the average salary of Fitter-5000 to 6000 ; turner-15000 to 16,000 , computer mechanical-6000 to 8000/ Months.

ITI Pernem:

In interview, Instructor of ITI told us that the students are coming from lower middle class. Most of them are aspire to do job and many of them have constrains and they wont study further. According to him they have the advantage of being situated in industrial area. Further he told that Industry required professional and the pass out from ITI's don't have professional skills and also industry people don't take them as experts, they considered as labors. So there is gap both the side and apart from this students are not taking interest in study. Further he added that they want full fledge infrastructure which is not available to ITI's and new technology based instruments which are used by industries so that students can learn what currently is going on.

Typically the placements are good with 100% electrician, 75%-COPA, 40% of them goes in different field like hotel manager's or waiter with the average salary of 4000 to 5000/- month.

ITI Sattari:

In interview with instructor, he revealed that only 80% of total intake capacity is being utilized. He also told that some students left the ITI after one year without completing the course because of which the dropout ratio has been increased. They are conducting seminars for spreading awareness about it. Many of the students are coming from rural and urban area from middle class mostly 10th and 12th dropouts. They also told that there is transportation problem at this ITI so they want to improve this. Apart from this, the quality of education, counseling for career is provided over here which is a strength of the institute.

They have 100% placement with the average salary of 4000 to 5000 Rs. per month.

ITI Bicholim:

In interview with instructor, he revealed that they have full utilization of all intake capacity. Their institutes are of well furnished 8 classrooms and individual lab for each trade. The students coming to these ITIs are from mixed crowd from lower middle class and mostly from 10th pass or dropouts. All of them are willing to do job. Good infrastructure and good expert trainer and quality education are strengths of their institute. He also told that as industry is hiring students on contract basis so students are also not taking such courses as a career development. He further told that implementation of new technology is necessary.

They have 70% to 80% placements and the average salary is 6000/- a month.

ITI Panjim:

In interview with instructor, he revealed that there is full utilization of all intake capacity and each trade has separate classroom and labs with sufficient trainers. They get students from Advertisements & Local Newspaper and seminars or counseling conducted in schools and colleges. The problem they are facing is the trainer at institute is from govt. employment exchange. For all trades students are coming from upper middle class family. They have major intake in Hospitality industry because in hospitality students get higher salary package. He told that as many mining sites are being closed which affects the placements. Further he added that the syllabus is not as per the needed by Industry and there is very less awareness about vocational courses.

ITI Mapusa:

In interview, principle told that they mainly get students from Advertisements, counseling. Mostly students are coming from the urban area. According to her students only need certification so mostly students are not going for the advance course which can help them in their career. Further she told that the syllabus is not up to expectation of Industry people so syllabus should be revised and new technology which are used by industry should be provided at ITI. The average placement is around Rs. 5000-6000 a month and they are having 100% placement.

3.2.4.3.2 Service Sector & Private Institutes

Montfort

Sr. No.	Trade	Capacity
1	Fitter	20
2	Electrical	20
3	Electronics	20
4	Fabrication	20
5	COPA	20
Total		100

In interview with instructor of ITI Montfort, instructor told that students coming to this institute are mostly 10th dropouts and coming from urban and rural area's middle and lower class. According to him, students join this institute because of reputation of the institute and from the reference of others. Each trade has single classroom and workshop, with 10 faculty full time and 2 part-time. According to him, the little bit change is required in syllabus and which is in process of change, further he told that they provide value based and quality based education.

He also told that student should be updated about new technology and they should undergo the training program by which they can enhance their skills.

Typically the average salary student get through placement at institute is INR 8000 to 9000 per month.

Frankinn Institute of Air Hostess & Hospitality

Sr. No.	Trade	Capacity
1	AHTM	35
2	ICM	35
3	FPGDAGS	35
Total		105

In interview center head told us that they 3 trade with seating capacity of 35 and they are operating twice a day, with two classroom, one lab and faculty member one full time and one part time. He said students coming to institute are mostly 12th pass out or graduates. According to him 80% of admitted crowd got placed which can be further bifurcated as 30% in Hospitality and 70% in aviation. He also said that right now placement scenario

are down because there is no as much vacancies as in past and also the current scenario in Industry like many good airlines are not able to pay the salary.

Right now they are facing financial problem so that they can not hire more manpower. Apart from this, the institute's strengths are quality of education, better opportunity to fly, good facilities and good infrastructure. Typically the students got placed and get the initial salary of Rs. 20000/- to Rs 30000/- per month.

GESTO Culinary & hospitality, Mapusa

Sr. No.	Trade	Capacity
1	AHAP	81
2	ICTP	81
3	DIHM	81
4	DICA	81
5	Hospitality and Culinary	81
Total		405

In interview, center head told us that they have good infrastructure with 5 class rooms and a lab with 15 fulltime trainers. They mostly get students through advertisement. Mainly students are coming from rural area and from middle class. Good brand value, quality education is strength of their Institute. Cooking and hospitality is the most desire value courses. The placement scenario is good they have 100% placement with the salary of Rs. 4000 to 6000/- per month.

ACE Computer Education

Sr. No.	Trade	Capacity
1	TALLY	100
2	BASIC COMPUTER	40
Total		140

In interview, the instructor told that they have good infrastructure and intake capacity is utilized fully. Most of students are coming are from arts and commerce background and from lower middle class. Many of them are coming through advertisement. The average placement is of Rs. 7000 to Rs. 8000 a month. And the placement is around 80%. According to him if government gives funding to institute so they can make so that they can provide better education and better services.

IMS CAD Center

Sr. No.	Trade	Capacity
1	Auto Motor design Software	24
2	3D Molding	24
3	Auto-cad	24
Total		72

In interview with instructor they told us that basically we have 66.66% utilization of our intake capacity. Mostly students are coming to this institute because of seminar conducted by them. Many of the students are from middle class and few are mechanical engineers.

Jetking, Panjim

Sr. No.	Trade	Capacity
1	Hardware Networking	16
2	JCHNE	16
3	JCHNP	16
Total		48

In interview with instructor they told us that they have 80% utilization of their intake capacity, and having 4 class room and lab with 8 trainer full time and 2 part time. The students came to institute through workshops and seminar conducted. The students coming to institute are 60% from Urban and 40% from Rural, most of them are coming from upper middle class. The strength of their institute is Quality of education and best trainer experts, good brand value in market and responses also. According to him, more technical equipment's and knowledge is needed in this field that all experts must know and passes on to the students also. And placement is 100% with the average package of Rs. 7000 to 8000.

NIIT

Sr. No.	Trade	Capacity
1	Hardware	12
2	Software	12
3	Banking	12

Sr. No.	Trade	Capacity
4	Networking	12
Total		48

In interview with instructor, he revealed that the utilization of intake capacity is 100%. Students coming to institutes are from mixed background (urban and rural). The major challenge is many students are coming from poor background. As NIIT is the brand so it's their strength. He also told that if students can get scholarship for this course so it can create good opportunity for many students. The placement is 100% for all trade and Baking trade has average package of 25000 while rest of trade has 12000 to 16000 per month.

Balchandra Technology

Sr. No.	Trade	Capacity
1	Hardware and Networking	30
2	DTP Office practice	30
3	Tally	30
4	IT&E-Commerce	30
5	Web designing	30
6	MCITP	30
7	ECNM	30
8	Auto-cad	30
Total		240

In interview with center head, he told us that they have full utilization of their intake capacity. Mostly students are coming to institute through advertisement and counseling given to them. Many of the students are coming from the urban area from upper middle class. The strength of the institute is the students are not being unemployed after going through training. According to him mindset of the students should be changed regarding vocational education and proper counseling should be given. The placement at institute is 100% and the average package is Rs. 4000 to 8000 per month.

Table 109: District Wise trade Capacity of North Goa

State Directorate of Craftsmanship Training							
Courses	Trade wise Capacity						
	ITI Ponda	ITI Pernem	ITI Sattari	ITI Bicholim	ITI Panji	ITI Mapusa	
Manufacturing Sector related Trades	Electrician	32	16	16	16	16	16
	Plumber		16	32	12	20	
	Cutting & Sewing		16	16	32		
	Fitter	16		16	16	16	
	Electronic Mechanic	16		16			16
	Driver cum Mechanic		16				
	Production and Manufacturing (BBBT)						96
	Motor Vehicle Mechanic					16	16
	Machinist	12			12		
	Turner	12		16			
	Fabrication		96				
	Mechanic(RAC)	16		16			
	Stenography				20		
	Instrument Mechanic	16		21			
	Draughtsman	32			20		
	Mechanic(Diesel)				16	16	16
	Welder	24	96	12	12	20	
	Electrical BBBT				96		
	Wireman				16		
	Automobile(BBBT)	96		92			
Service Sector related trades	IT (BBBT)	16					16
	COPA	40	40	21	20		40
	Desktop Publishing Operator			16			
	Hair & Skin Care						16
	Hospitality Management(BBBT)					96	

Source: Dexter Analysis

3.2.5 Skill Gap Analysis

3.1.5.1 Qualitative Skill Gap Analysis

Herein, we have taken 4 parameters on the basis of which we will look at the courses to be started in addition to the volumes analysis which we did in section 7.1.

Two of the parameters which we have here include demand side perspective. First describes about the immediate demand of that particular skill in the catchment region as a whole. Second indicates the long term demand for that particular skill in that region considering the future outlook of the industry and the degree of automation associated with that industry. So, primarily, all the high specificity and high volumes courses have very high immediate demand and expected high future demand as well.

Table 110: Qualitative Skill Gap Analysis of Manufacturing Sector

	Skill Wise Trade	Skill	Relative Youth Aspiration	Available Trained Supply
		Demand		
Skilled	Electrical & Electronics– Degree / Diploma	H	H	VL
	Mechanical – Degree / Diploma	H	VH	L
Semi-Skilled	Fitter	VH	H	H
	Electrician	H	H	VH
	Mechanic Electronics / Instrumentation	M	VH	H
	Welder	M	M	H
	Grinder	L	VL	VL
	Machine Operator / Jr. Machine Operator	H	L	VL
	CNC Operator / Programmer	M	VL	VL
	Painter	VL	L	VL
	Machinist	L	VL	M
	Turner	M	VL	M
	Mechanic Motor Vehicle	M	L	L
	Mechanic Diesel Engine / Generator	H	L	M
	Draughtsman Civil	VL	VL	M
	Plastic Process Operator	VL	VL	VL
	Storekeeper	M	L	L
Unskilled	Helpers	H	M	VL

Source: Dexter Analysis

Table 111: Qualitative Skill Gap Analysis of Service Sector

Service Sector	Trades	Skill	Relative Youth Aspiration	Available Trained Supply
		Demand		
Hospitality & Tourism	Room Attendants	M	M	L
	Captains	L	H	L
	Receptionists	H	H	VL
	Bartenders	VL	M	L
	Spa Therapist	VL	VH	VL
	Sous Chef/Chef	H	H	M
	Comee	H	M	H
	Stewards	H	M	L
	Technicians	H	H	H
	Tourist Guide	M	H	L
	House Keeping (In House)	VH	L	M
	Gardeners	L	L	M
	Housekeeping (Common Area)	H	M	VL
	Kitchen Cleaner	L	L	VL
Transportation/ Logistics/ Warehousing and Packaging	Driver	H	H	VL
	Floor Supervisors	VH	L	L
	Documentation Executive	L	L	VL
	Customer Service	M	M	L
Real Estate / Construction	Masons	L	VL	L
Private Household Sector	Plumbers	VL	H	H
	Electricians	M	H	M
IT / ITES	IT / Computer – Degree / Diploma	M	VH	H
	Tele-callers	M	L	M
Organized Retail	Floor Sales Staff	H	L	L
	Backend Assistant	H	M	H

VH – Very High, H- High, M – Medium, L - Low, VL – Very Low

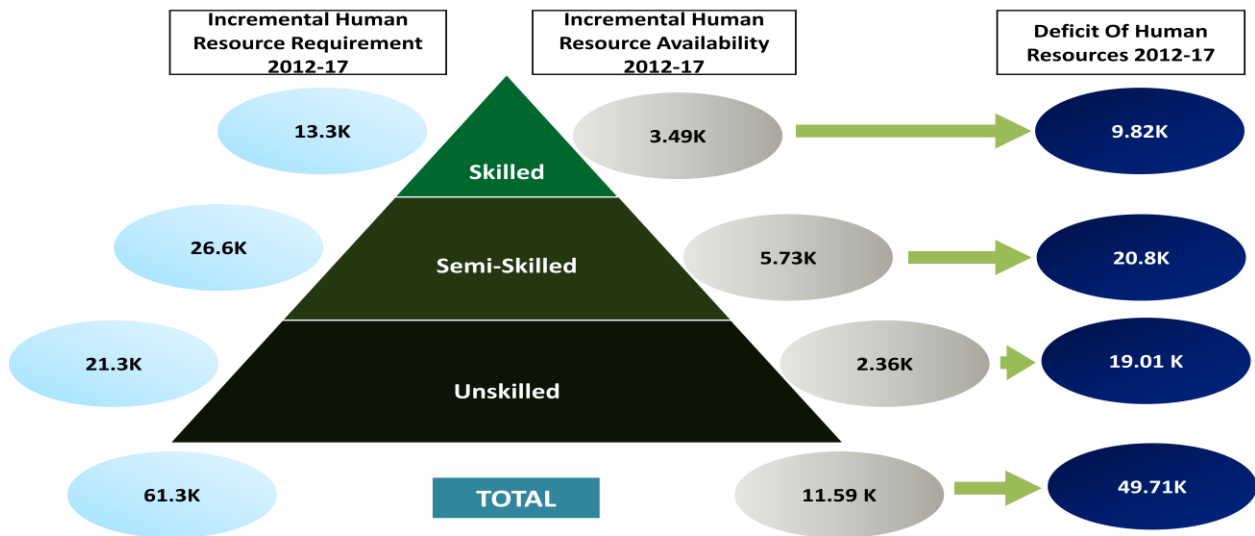
Source: Dexter Analysis

3.2.5.2 Quantitative Skill Gap Analysis

Here in, based on the demand and supply side estimation for the year 2012-2017 and 2017-2022, quantitative analysis has been calculated. The total demand for all the skill levels in all the three sectors Agriculture, Manufacturing and Service is 8030, 18315 and 34960 for the year 2012-2017 respectively and for the year 2017 - 2022 the total estimated demand is 8866, 23578 and 44547 respectively (Demand of Agriculture sector as per section 2.2.2.1, demand of Manufacturing sector as per 3.2.2.2.11 and demand of service sector as per 3.2.2.3.10). The incremental supply for the next 5 and 10 year is 11591 and 12066 as described in section 3.2.3.3).

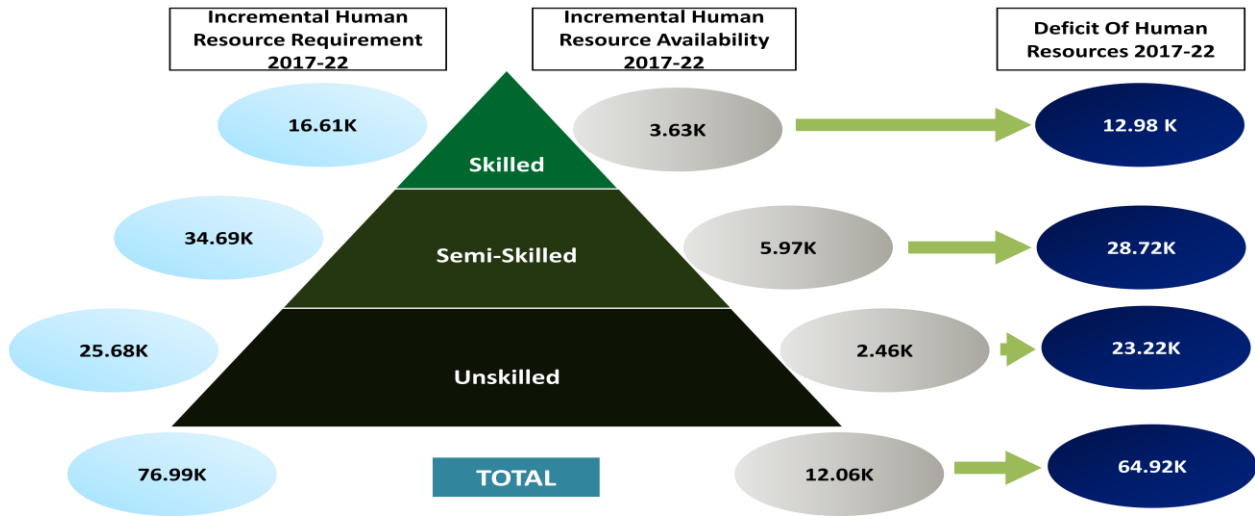
The below chart depicts the Skill Gap that exist at the all the levels at the North Goa district for the year 2012-2017 and 2017-2022.

Figure 47: Quantitative Skill Gap Analysis for the Year 2012-17



Source: Dexter Analysis

Figure 48: Quantitative Skill Gap Analysis – 2017-22



Source: Dexter Analysis

Table 112: Increase in Labour and Work force participation

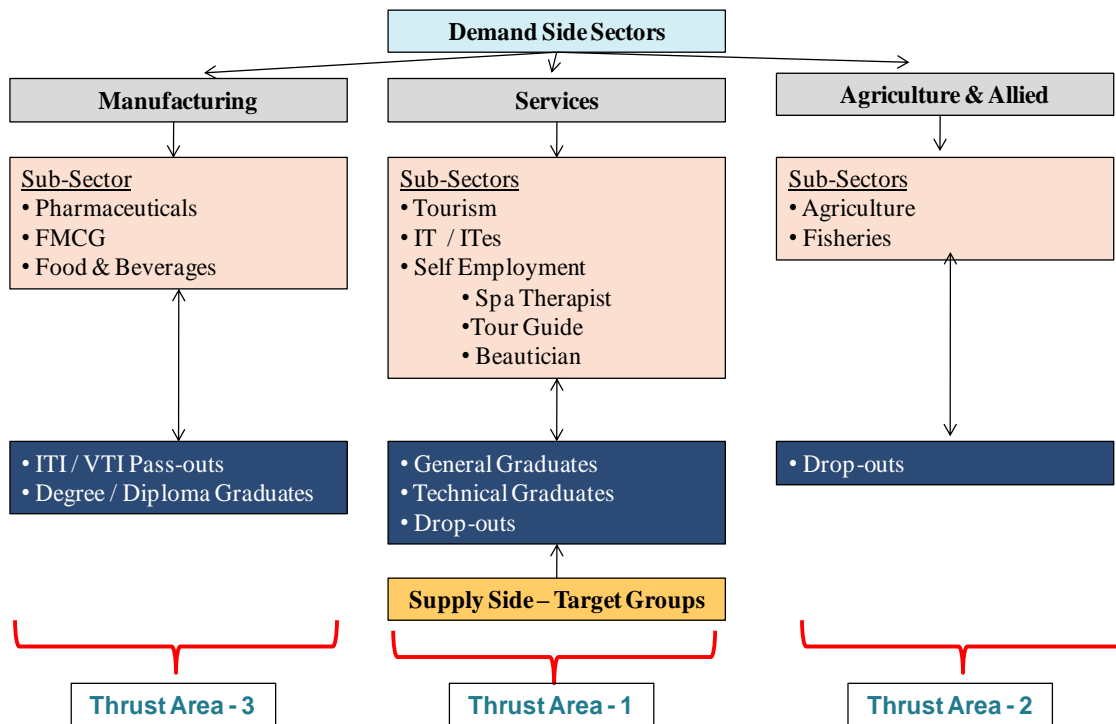
Goa		India Average
WPR as on 2009-10	463	583 (2009-10)
Total Work Force as on 2017	331522	
Total Working Age Population as on 2017	606797	
Desired WPR as on 2017	546	
Total Work Force as on 2022	407240	
Total Working Age Population as on 2022	631675	
Desired WPR as on 2022	645	

The above table depicts the scope of increase in Labour and Work force participation for the year 2017 and 2022. The work force participation rate is estimated to be 546 in coming 5 year and 645 for the year 2022. This numbers will helps to take decision based on need of capitalize the inward migration from states outside of Goa.

3.2.6 Recommendations

So, before we specify the recommendations, here is the decision map that will be guiding force which tries to map the Demand Side Sectors with Supply Side Target groups based on their attractiveness to fulfill the demand-supply gap:

Figure 49: Decision Map for Recommendations



Source: Dexter Analysis

Based on the Qualitative as well as Quantitative Skill Gap so conducted as above as well as the decision map, the following recommendations become relevant to each of the below mentioned stakeholders:

3.2.5.1 Government

Capacity Additions / Modifications

Herein, the scenario of key drivers of growth in services in North Goa is the same as South with Hospitality ruling the roost. Within manufacturing as well, some the most demanded skills are the more generic ones useful across sectors. So, below, we have enlisted the important trades / courses where capacity addition as well as modification is needed to address the quantitative gap.

Capacity Additions:

Hospitality Assistant, Banking Sales, Food Production & Baker (Hospitality), Steward, Bartender, Spa Therapist, BPO Executive, Retail - Floor Sales Staff, Automobile Overhauling / MMV, Electrician, Mechanic Electronics, Fitter, Banking Front Desk Operator (FDO), General Tradesman (Hospitality), etc. are the trades where significant capacity addition is required to address the imminent gap at the semi-skilled level. These capacity additions will mainly have to be done at the Government ITIs as well as the HRDF institutes provided the latter recommendation of rating among the HRDF institutes to ensure better quality of delivery are ensured.

Focus on SDIS Implementation

Given the significant need of specialized skills in the hospitality sector as well as pharmaceuticals sector in the district, the role of SDIS scheme will be pivotal. Also, a large number of school drop-outs as a part of the incremental human resource available for employment also indicate the importance of this scheme's successful implementation in the larger context.

Constitution of a Hospitality Sector - Skill Development Nodal Agency

Given the presence of Hospitality sector in the district and the expected growth not just in the North Goa but also in the South Goa districts, widespread mushrooming of institutes with training in Hospitality sector has occurred in the last few years. Ensuring the quality of delivery, while enabling an integrated and practical approach to hospitality functions is required in the training institutes to facilitate effective skilling.

Performance Rating among the HRDF Private Training Institutes

HRDF institutes have their significant presence in the North Goa as well. In fact, in addition to them, multiple educational institutions like the Christian missionary run institutes also run multiple courses across formal as well as vocational streams. So, standardization its quality is an important need for addressing the key pain points of the industry. This can be driven through introduction of a performance rating system which will create a competitive landscape among the HRDF private training institutes. Key parameters which will trigger the improvement should include Trainer Skills & Placement Records. While the earlier one is the key intuitively identified cause, the latter measures the output and both the cause as well as the outputs should appropriately reflect in the rating system. A baseline study to understand the current state of affairs on these broad areas to define the key tracking indicators should be conceived.

Increase the Aspirational Value of Agriculture & Allied

Since Goa is immensely gifted with natural resources compared to other states, the potential of Agriculture and Allied industry in employing the local youth is also very high. However, the important issue to be tackled here before this materializes is the aspiration value of this sector in the minds of the youth. For the same, it is recommended that dedicated awareness campaigns to glorify agricultural achievement through video recording of best practices and sharing through dissemination across the state be done. Also, rural unemployed youth training in trades like Coconut Plucking, Cashew farming & processing needs to be promoted. Also, the

implementation of the same needs to take a priority in Hinterland since its receptivity to such measures is higher and then it can be taken to the coastal areas.

Promote CoE courses

Given the clustered presence of some sectors in the North Goa district, it is required that the CoE courses with special focus on some sectors like Hospitality need to be promoted more. For better learning and development facilitation, the local industry is also open to allow CoE type course students for OJT training.

Mobility from Vocational Stream in Schools to ITI / ITC & Pvt. Training institutes

While the state government has already implemented vertical mobility from ITIs to the degree / diploma colleges, the same will have to be seamlessly integrated with Vocational stream students in the schools. This will significantly facilitate higher enrolment in vocational stream in schooling as well. Also, Manufacturing vis-à-vis Services screening to assess the candidate suitability will have to be introduced for better choice of courses linked to career plans or aspirations while entry into vocational stream in the schools.

3.2.5.2 Industry

Involvement in Skill Development

North Goa has the presence of most of industry associations which have been very active in addressing issues of multiple nature pertaining to their respective industry. Be it the apex industry associations like CII or GCCI or industry specific associations like TTAG or Goa Mineral Ore Exporters' associations, industry is increasingly becoming sensitive to the issue of skill development faced by the state. While discussions on multiple forums have happened along these lines, the role of the industry in participative course structure design with better involvement of associations, through its sectoral councils, will have to be triggered for feedback on course curriculum. This will also reflect the need for internships and apprenticeships which can be brokered through the associations.

Facilitation of Practical Learning

Since one of the major issues faced by the industry and especially manufacturing industry is the quality of the manpower available to them, it has to play a major role in facilitating practical learning to the ITI students. So, regular industry visits is a good starting point to the industry. It can also be subordinated with "Train the Trainer" program because it is only when the trainers are exposed to the latest technology and its practical aspects, that the students will become aware about the same as well. Also, mid-term internships should be inherent to the structure of industry and its mechanism to encourage industry – academia interface. One of the specific actionable suggested by the industry given its closely knit structure in the state and the activeness levels of the related associations, was to launch an online portal aggregating the internship demand from tourism and

other sectors and partner with institutions. This will help remove asymmetry of information between the industry and academia as well.

Acceptance of Occupational Standards & Wage Rate Revisions

With sector wise NOS being developed by Sector Skills Councils (SSC) PAN India, Goa can be a major contributor in the formation of the Tourism & Hospitality SSC given its varied and exhaustive sector presence in the state. Additionally, based on the currently widespread as well as potentially high growth sectors in the state, it can also play a very active role in the Logistics SSC, Retail SSC & IT / ITes SSC as well as BFSI SSC.

3.2.5.3 Training Providers

Trade Selection & Capacity Planning

Based on the key course level skill gaps identified which point towards the required course capacity additions, the institutes should realign their capacities to focus primarily on the Tourism sector followed by Retail, IT / ITes, Pharmaceuticals and Food Processing courses. In fact, institutes should also look at developing niche courses in Tourism space in upcoming areas like Eco-tourism, Medical-Tourism, etc. Also, there's an increasing aspiration among the youth tending towards self-employment and so courses aimed at the same should be started. Such courses would also enable the institutes to broad base their impact to target groups which are way below the mainstream employment radar.

Improved Industry Interface

The degree of activeness as observed among the multiple Government and Private Vocational Training Institutes to extend themselves and increase ties with the local industry, needs to improve. This can enable continuous updation of knowledge on the part of the trainers while ensuring better exposure for the students.

Student Counseling

One of the major reasons why students lose interest in their career choice, especially in vocational stream wherein the courses are lot more focused, is the lack of understanding of how a particular study option translates into a career and accordingly a lifestyle. So, to reduce such instances, better engagement at school level to increase Vocational Stream enrollment is indeed required in the district. Also, Alumni -Guest Lectures to give students a practical picture of the industrial scenario can also be facilitated.

3.2.5.4 NSDC

Spread Awareness about its initiatives

Since NSDC just has one training partner providing its services in the state and the partner too has just initiated the action recently, the awareness about NSDC's initiatives in the state is quite limited. So, active efforts on this front are required by the NSDC training partners in the state for engagement with associations and the government. In order to achieve this, Goa should also be included in the list of states where NSDC is planning to launch the marketing campaign.

Funding Initiatives

While further training partners can indeed be funded in the state in the Hospitality sector, it can also look at widening its network in other sectors like IT & ITes, Logistics, Pharmaceuticals & Food Processing.

Also, instead of new entrants in the state, NSDC can also look at supporting existing vocational training providers especially the Christian missionary run vocational training setups who are interested in funding and already offer variety of training programs. Also, agriculture and allied sector should be brought to its forefront for intervention by NSDC and the same can be done by promoting SHGs to take up vocational training with NSDC's financial support.

Sector Skills Council

There are some industries in the district, e.g. Hospitality and Mining which can act as major contributors in the process of forming the NOS relevant to them. A mechanism to include their inputs should be ensured.

Also, it should facilitate establishment of a testing setup for Skill Certification with local industry support across relevant sectors.

Co-ordination with State Government

It is important that there is no duplication of effort between the NSDC as well as State Government initiatives. So, accordingly, individual focus areas for skill development for NSDC and the state Government should be defined. Also, directional consideration of the status of progress of state initiatives should be incorporated while preparing a longer term intervention plan by NSDC for the state through its training provider network.

4. ANNEXURES

4.1 List of Government Officials met in Goa

Sr. No	Department	Name	Designation
1	Director of Industries, Trade & Commerce	Biju Naik	Assistant Director (Admin)
2	Director of Industries, Trade & Commerce	Srinet Kotwale	GM DIC
3	Directorate of Agriculture	Mr Olavio Fernandes	Dy. Director
4	Secretariat	Shri. Parimal Rai	Under Secreatry, Medical Services
5	EDC Limited	Carlos D A De Sa	General Manager
6	Directorate of Fisheries	Dr. Smt. Shamila Monteiro	Director
7	Department of Tourism	Ms Pamela Mascarenhas	Deputy director
8	Department of Tourism	Ganesh Teli	officials of tourism department
9	Directorate of Craftsmen Training	J. Caldeira	Asst. Director (Trg.)
10	Employment Exchange, South Goa	Shri Rajay Naik	Employment exchange officer
11	Employment Exchange, North Goa	S. A. Gavankar	Employment exchange officer
12	Travel and Tourism Association of Goa (TTAG)	Francisco de Braganca	Chairman
13	Department of Education	Shri. Anil V. Powar	Additional Incharge, Education Director, Adult Education
14	Mines and Geology	Shri Prasanna Acharya	Director
15	Commissioner, Labour and Employment	Kum. F. Rodrigues	Commissioner
16	Women and Child Development	Mr. Mahadev	Deputy director, Admin
17	Rural development	S. V. Naik	Director
18	Rural development	M/s. Vidya Nayak	Asst. Project Officer, Sattari Block
19	Department of Health Services	Dr. Jose D'Sa	Chief Medical Officer
20	Department of Health Services	Dr. Preetam Naik	State Programme Manager, NRHM
21	Department of Health Services	Mr. Shripal Arlekar	Superintendent, Admin
22	Goa State Infrastructure & Development Corporation	Mr. Dilip Joshi	Manager (Engineering)
23	Town and Country Planning	Shri. Puttaraju	Chief Town Planner
24	Technical Education	Shri Vivek Kamat	Director
25	Craftsman Training	Shri Aleixo F.da Costa	State Director
26	Higher Education	Shri. Bhaskar G. Nayak	Director

4.2 List of Stakeholders Covered in South Goa

List of companies covered in the Manufacturing Sector in South Goa:

Table 113: List of Industries covered in manufacturing sector

Manufacturing Sector			
South Goa - Small & Micro Industry Names		South Goa - Medium & Large Industry Names	
Ultraflex India	Dynamic Technofabs	Zypher Medical Product	Nicomet industries Ltd
Arshi Bakery	GMI Zarhak Modular Pvt. Ltd	Orchid Pharmaceuticals	Sagar Feed and food processing industries
Fun Cream Food India Ltd	Goldy Sheet Metal Press component	Lupin	Abbott
Britacel	Goa Paper and Board Converters Pvt. Ltd	Siemens Ltd	IFB Industry Ltd
Vergo Pharmaceutical Research	Yunca	Model Infra corporation Pvt. Ltd	Caculo Group of company
Neucon Pharmaceutical Pvt. Ltd	T S Mistry	Shree print and pack	Launderaids
Vinka industries	Chokshi Laboratories Ltd	Commscope	Tulip Diagnostics Ltd
Quality Idlers Rollers	Everest Enterprises	Sunriser Electromelit	JIMCAP
Machino-Tech engineering Works	CABE Springs & Fasteners India Pvt. Ltd	Shirdi Steel Re- roller	Birla Furukawa
Plastic export Zundert(India) Pvt. Ltd	Dazzler Confectionary Company	Global Ispat Ltd	Indico Remedies Ltd
Siva System	Netsch	John Distilleries Pvt. Ltd	Sanofi India Ltd
Dullops Ice-cream	Lankhorst Euronete India Pvt. Ltd	Topline Writing Instruments Pvt. Ltd	New Millennium Bakers
Target Innovation	Nestor Pharmaceuticals Ltd	ABS Electroplaters(I) Pvt. Ltd	Cipla
Anupum Insulating Industry	Unistar Pipes Pvt. Ltd	Gemini Distilleries (Goa) Pvt. Ltd	Reliance Power
Goa Carbon Ltd	Silicon Cortech Pvt. Ltd	Blue cross laboratories Ltd	Zuari Industries
Western Beverage	PAM Synthetics	Wyeth Ltd	Chowgule & Co. Pvt. Ltd.
Goa Roller flour mills Pvt. Ltd	Bavaria Motors Works (Workshop)	Putzmeister Concreate Machine Pvt. Ltd	Salgokar Mining
Protex Systems	Laminex	Finolex Cable	Marine Electricals
Umicore Anadyeya India Pvt. Ltd	Glynwed Pipe system Pvt. Ltd	Titan-Time Products Ltd	
Goa Medicare devices Pvt. Ltd	Electro Controls	Maa Durga Enterprise Ltd	

List of companies covered in Services Sector in South Goa

Table 114: List of Industries covered in service sector

Service Sector			
South Goa - Micro and Small Industry Names			South Goa - Medium & Large
Martins Corner	Sapphire Comfort	Sesha	Apollo Hospital
Silver Sands Beach Resort	Hotel Avenue	Fedx	Grace Hospital
Graciano Cottages	Supreme Hotel	Kamat Hotel	Alila Hotels and resorts
Lotus Resort	Hotel HQ	Ice & Spice	Majorda Beach Resort
Tarikaas Sea Breeze	Jyoti Plaza	Nanutel	Joecons Beach Resort
Colva Kinara	Hotel Amigo	Hotel Woodland	Taj Exotic
Raymonds Outlet	Soul Vacations	Hotel Panchsheel	Ramada
Swad	Golden Palm	Margao Residency	Digisol
Levi's	Om Shiv Hotel	Hotel Poonam	Smartlink Network System Ltd
Lotus Inn	The Byke Old Anchor	Saaz	Persistent Solutions
Martin's Corner	Mustafa Collection	Travel Smith Adventure	Royal Palm
Navtara Restaurant	Creative Capsule Infotech India Pvt. Ltd	Meenaxi Restaurant	Emerald Palms
Longuinhos	BiG G	Blue Heaven	The Zuri White sand Resort
Atithi Restaurant	Bata Outlet	Shagun Hotel	Radisson Blue
Venice Garden	Woodland Outlet	Cool & Spice	Dona Silvia
Green View	Kotak Mahindra Bank	Shri Balaji Restaurant	Hotel Fidalgo
Udipi Restaurant	Bajaj Allianz	IFFCO-TOKIO	First European Pvt. Ltd
Saranga	Classic Hospital	Beyond looks Salon & Day Spa	Padre Conceicao College of Engineering
Ocean Spa & Salon	NE Technologies INC	Avinash Carrier Pvt. Ltd	Royal Orchid
DHL			Beleza Resort

List of Institutes covered in South Goa

Table 115: List of ITI/VTIs covered in South Goa District

Enabler's Information				
Sr No.	Name of Respondent	Name of Institute	Designation	ITI/VTI
1	Minal A Kani	MICE (Manipal Institute of Computer Education)	Senior Faculty	VTI
2	Philips Almida	Frankfin Institute of Air Hostess and Hospitality	Center Head	VTI
3	Javed Xec	DIGICOM Computer Education	Center Head	VTI
4	Namdev Naidu	Agnel Vocational Training Institute and Industrial Training Institute	Project & Center Head	VTI
5	Mayur	Jetking	Manager & Center Head	VTI
6	Mr.Rajander/ Nilesh Gawaskar/ Mr. Rau	Government ITI ,Vasco	Principal/ Group Instructor/ Mechanical Instructor	ITI
7	Adwin Marcas	InfoTech Computer Education	Center Head	VTI
8	Vivek Rane	Governments ITI, Margao	Instructor	ITI
9	Sushil kumar	Governments ITI, Cancona	Group Instructor	ITI
10	S. M. Gaokar/ Manoj G N Kaurade	Government ITI, Cacore	Vice Principal/ Placement Officer	ITI

4.3 List of Stakeholders Covered in North Goa

List of companies covered in the Manufacturing Sector in North Goa

Table 116: List of Manufacturing Industries covered at North Goa

Manufacturing Sector			
North Goa - Small & Micro Industry Name		North Goa - Medium & Large Industry	
Churi Electromech	Ajanta Medicals Pvt. Ltd.	Shaiv distilleries pvt.ltd	Goa glass fibre Ltd
Montana Confectioners Pvt Ltd.	Goa Paints & Allied Products pvt. Ltd.	Simchem Pvt Ltd	P & G
Jeevan Rekha Enterprises	Rututek Enterprises	CG-PPI Adhesive Products Limited	Sigma Laboratories Limited
Estela Ice Bank	Fiemench Perfumes (India) Pvt. Ltd.	Hitek Brass Ltd.	Sandu Pharmaceuticals LTD.
Damodar Coach Crafts Pvt. Ltd	Petals Innovative machines Pvt. Ltd.	Goa Invescast Limited	Cartini India Limited
Indus Cama	Metal Fabrik India	Sesa goa ltd. (pig iron plant)	Nebula Home products
Natekor Agro	Richa polyplast (P) Ltd.	Pyro electric instrument goa pvt. Ltd.	Crompton & greaves Ltd.
Swanson Plastics (India) Pvt. Ltd	Goldfield Fragnances Pvt. Ltd.	Essel Propack	Berger-Becker Coatings Pvt. Ltd.
Menezes Kamco Foods Pvt Ltd.	Nanora Distileries	Ranbaxy	New Visoin printing services
Vaishali foods	Glenmark Pharmaceuticals Ltd.	Encube Ethicals Pvt. Ltd.	Manohar Packaging Private Limited
Eco Plastic industries	Carasid	Geno Pharma	Censer Electrical
Mahalaxmi Industries	NHB Agro Industries Pvt. Ltd.	Centaur Pharma	Amit Capaciters Pvt Ltd
Shriji Polymers (I) Ltd. Unit (III)	Barreto Service Center (Tata Motors)	Tata Consultancy services	Alcon Aakash Manufacturing Company Pvt. Ltd
Churi Industries	Vicco	Diebold india pvt ltd	FTH motors
Tiger	Dynaquip Engineers	GKB Hi tech lenses pvt ltd	Micro interconnexion
Potrivit Distilleries	Sunshine Electric Co.Pvt.Ltd	GKB Ophthalmics Ltd.	Funskool
Sonatapes Pvt. Ltd	Sunprint Ink Industries	GKB Vision Ltd.	Teracom
gurukrupa autoworld	Danieal eng works	Chemstols	Syngenta
Aplhagam coating solution pvt.ltd	Samanth shipyard	Putzmeister India Pvt. Ltd.	Maruti Suzuki (Dealer)
Quadars Motor Pvt Ltd (sukzki)	Vilanova Constructions Pvt Limited	Hindustan Unilever limited	Cebon Apparel Private Ltd.
Pavan Packging	Leela Distilleries	Berger Paints India Limited	Crompton Greaves
Sonam Industries	Omkar	United Breweries Limited	Goa Ispat Limited
Rajasthan Food	Pai Kane group	Zydus cadila healthcare	

products	ltd
Lafarze India Pvt Ltd	

List of companies covered in the Service Sector in North Goa

Table 117: List of Service Sector companies covered at North Goa

Service Sector			
North Goa - Small & Micro Industry Name		North Goa - Medium & Large Industry	
Le seasons beach resort	Awesome Salon & Spa	Wrangler	Padre Conceicao College of Engineering
John Karthik Dine in Bar and Rest.	Marquis Beach Resort, Goa	Vintage Hospital	VVM's Shree Damodar College of Commerce & Economics
Cactus Hotel and Restraunt	Palms n Sands Restaurant & Bar	Tucker Infocom Services Pvt Ltd.	Smt.Parvatibai Chowgule College Of Arts & Science
Puma	The Clematis	BIS(bombay intelligence security)	Country inn
Woodland	Kotak Mahindra Bank LTD	Sis security and intelligence servives (India) limited	The grand
Divar Hotel	DR BATRA's Positive Health Clinic Pvt.Ltd.	Madkaikar Realtors Pvt. Ltd.	Dempo Pharmacy college Goa
Udupi liberty hotel	Akbar Travels of India Pvt.Ltd.	Victor Exotica	Prabhu Constructions
Pritam udupi hotel	FLAMBEE	Magnum Resorts. Managed by SKM, Greens & resort pvt ltd.	Hotel Aroma
Hotel Popular	Jazz	Highland Beach Resort	Vivanta Taj
Café Real Pvt. Ltd.	Tina's Resto & Pub	Phoenix Park inn Resort	The O Hotel
Titan Eye	Vyom Travels	SBI LIFE INSURANCE CO.LTD	De Coracao
Valentine's Retreat	DHL	Aditiya Builders (Real Estate Developers)	WILLS LIFESTYLE
The blu aubergine	Avinash carrier pvt. Ltd.	Godwin Hotel	SA apparels
Food Palace	NE Technologies Inc.	Aditiya Builders (Real Estate Developers)	Panjim Inn
Carmel Hotel	Creative capsule infotech India Pvt. Ltd	First European Pvt. Ltd.	Hotel La Capitol
Aldeia santa rita	The Sapphire Comfort Hotel	Indismart Woodbourne Resort	Hilton
Café Jazz	Nanutel hotels,(banquet Hall)	Grand Hyatt	
Fidalco(spa,salon,gym)	SNIP SPA & SALON		
Cinnabar	US Polo Assn		
Bom Sucesso	Moti Mahal		

List of Institutes covered at North Goa

Table 118: List of Institutes covered at North Goa

Enabler's Information				
Sr. No.	Name of Respondent	Name of Institute	Designation	ITI/VTI
1	Mr.Prem Sagar	Mont fort	Voice Principle	ITI
2	Naraen kurtaran	ITI ponda	Group Instructor	ITI
3	Gislaim Desouza's	ITI pernem	Instructor	ITI
4	S.V.Saluka	Honda Sattari ,ITI	Center head	ITI
5	M.Desuza	Bicholim ITI	Principle	ITI
6	Mr.Deepak D Joshi	Government ITI,Panjim	Principle	ITI
7	Mrs.Shital Desai	GovernmentITI Mapusa	Principle	ITI
8	Mr.Kisher Denkar	Frankfinn instute of air hostess & hospitality	Admin & center head	VTI
9	Santosh Bale	ACE Computer education	Center head	VTI
10	Jai	IMS CAD center	Faculty	VTI
11	Mamita Nayak	Jetking panjim	Center head	VTI
12	Shiv Prashad Reedy	GESTO Culinary & hospitality	Principle	VTI
13	Denial Gonzalves	NIIT	Center head	VTI
14	Nikhil	Balchndra technology	Center head	VTI



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