

Quality of Work Life in the IT Sector in Kerala

Thesis

Submitted to the University of Calicut

For the Award of the Degree of Doctor of Philosophy in Commerce

Under the Faculty of Commerce and Management Studies

By

REMYA P R

Under the Supervision of

Dr. A.K.SARADA

Professor



**DEPARTMENT OF COMMERCE AND MANAGEMENT
STUDIES**

UNIVERSITY OF CALICUT

NOVEMBER 2016

DECLARATION

I, Remya P R, hereby declare that this thesis entitled “**Quality of Work Life in the IT Sector in Kerala**” is a bonafide record of research work done by me under the guidance and supervision of Dr. A.K.Sarada, Professor, Department of Commerce and Management Studies, University of Calicut. I further declare that no part of this thesis has been submitted for the award of any degree or diploma in this University or any other Universities earlier.

Remya P R

Place: C U Campus

Date:



DEPARTMENT OF
COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT

Grams : UNICAL
FAX : 0494-2400269
Phone : 0494-2400297
CENTREX :7363
Email: dcms_unical@yahoo.com

Dr. A.K.SARADA
Professor

CERTIFICATE

This is to certify that this thesis entitled “**Quality of Work Life in the IT Sector in Kerala**” is a bonafide record of research work carried out by **Mrs. Remya P R**, under my guidance and supervision for the award of Ph.D Degree of the University of Calicut and no part of this thesis has been presented before this University or any other Universities for the award of any degree, diploma or other similar title of recognition.

She is permitted to submit the thesis to the university.

Dr A.K.SARADA
(Supervising Teacher)

Place: C U Campus

Date:



DEPARTMENT OF
COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT

Grams : UNICAL
FAX : 0494-2400269
Phone : 0494-2400297
CENTREX :7363
Email: dcms_unical@yahoo.com

Dr. A.K.SARADA

Professor

CERTIFICATE

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Dr A.K.SARADA
(Supervising Teacher)

Place: C U Campus

Date: 30-06-2017

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Inscribed to
My Dearest Husband, Binoy V R!
and
My Family

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List of Abbreviations

1. IT – Information Technology
2. ITES – IT Enabled Services
3. QWL – Quality of Work Life
4. ES – Employee Satisfaction
5. ET – Employee Turnover
6. QWLS – Quality of Work Life Scale
7. AFC – Adequate and Fair Compensation
8. WE – Working Environment
9. OC – Organizational Communication
10. AMY – Autonomy of Work
11. ED – Employee Development
12. TLS – Total Life Space
13. FT – Fair Treatment
14. AM – Attitude of Management
15. JS – Job Security
16. WA – Welfare Activities
17. TR – Adequate Training
18. RAA – Recognition and Appreciation
19. WS – Work Stress
20. WLIB – Work Life Imbalance
21. HP – Health Problems
22. EC – Economic Conditions
23. WPR – Workplace Relations
24. NIC – National Industrial Activity Code
25. NASSCOM – National Association of Software and Services Companies
26. BPM – Business Process Management
27. GDP – Gross Domestic Product
28. CAGR – Compound Annual Growth Rate
29. BFSI – Banking Financial Services and Insurance
30. SMAC – Social, Mobility, Analytics and Cloud
31. KSITIL – Kerala State IT Infrastructure Limited
32. STPI – Software Technology Parks in India
33. SEZ – Special Economic Zones
34. SPSS – Statistical Packages for Social Sciences
35. EFA – Exploratory Factor Analysis
36. CFA – Confirmatory Factor Analysis
37. SEM – Structural Equation Modelling

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Chapter 1

Introduction

1. 1 Introduction

The organisations have become highly competitive in the global and knowledge based economies. As a result, the organisations realised human resources as the most important asset. The growth, development, efficiency and effectiveness of an organisation, to a large extent, depend on how effectively the human resources are managed. Competent, skilled and efficient human resource is an essential input for running an organisation profitably. The human resource is not homogeneous; rather it is more heterogeneous since the human beings differ in skills, knowledge and psychology. The human resources can be viewed as highly strategic in nature and crucial in achieving the corporate objectives since its recognition as a legitimate business unit is increasing day by day.

The Information Technology (IT) sector is largely characterised by the revolution of the technological innovations and the globally competitive need for innovation of new products and processes. The knowledge based organisations, largely the Information Technology (IT) based organizations, employ the minds of the human resource rather than hands since the minds have unlimited potential. The two important assets of the Knowledge economy are knowledge assets and intellectual capital. Knowledge assets comprise of the stock of knowledge and capabilities of a nation while the intellectual capital consists of the structural capital and the human capital. The structural capital primarily relates to the information technology. The human capital covers the human resources and the stake holders that include distributors, suppliers, and customers of an organisation. The knowledge economy includes up to date knowledge, skilled and educated human resource, continuous research and development, investment in information technology and infrastructure (Malhotra, 2003) (Neena Malhotra).

The major strength of Information Technology (IT) industry lies in its human resources. The human resources play a pivotal role in the success of the IT industry and hence it needs to concentrate on its so called intellectual capital for enhancing its growth. The Indian software industry has undergone a tremendous growth over the past decades and is on a developmental trajectory towards becoming an important growth centre in the global software industry. It will touch the sky when all software companies realize the worth of its human resources.

Human resource is a term used by many organisations to describe the combination of traditionally adopted administrative personnel policies in relation to the employees' performance, their productivity, their relations and the resource planning of the organisation. With the changing scenario, these concepts were also developed with the organisation. Modern analysis accentuates that human beings are no more “commodities” or “resources”, but are creative and social beings that can make remarkable contributions to the organisations or to the civilization as a whole.

Human resources from various points of view are

1. National point of view – the knowledge, skills, creative abilities, talents and aptitudes obtained in the population.
2. Individual point of view – total of the inherent abilities, acquired knowledge and skills as represented in the talents and aptitudes of its employees.
3. Cultural and social point of view – influences the human behaviour in workplaces and provides distinct value to them.
4. Economic point of view – perceived as a form of capital and needs further investment whereby production is acquired.
5. Psychological point of view – human resources require a particular psychological environment and the core essence of this environment is motivation.

Modern management has realized that the human factor is the most important of all factors of production. The inadequacy of human resources may result in the disparagement in all other factors of production. Many societies have developed and became wealthy using the potentialities of their human resources who have the drive for creativity, ingenuity and the spirit of enterprise. McGregor has stated that the effectiveness of the organisations can at least be doubled if their managers are able to discover how to tap the unrealised potentials present in their human resources. The human resources can grow and develop their potential in the long run, if they are properly organised and motivated and hence the value of human resources cannot be depreciated.

1.2 Quality of Work Life

Diverse workforce, long working hours, work stress, work life imbalance etc are considered as the peculiar features of the IT industry. This new diverse workforce demands certain prerequisites such as higher order thinking skills, better working environment, promising career, attractive compensation packages etc. To achieve this, the traditional job design needs to be enriched or by providing the humanized job, the workers' higher needs, skills, etc can be satisfied thereby making them better employees and managing their personal life. This redesigning of job can better be viewed as an aspect of Quality of work life.

People have divergent views with regard to what really is the quality of work life. Quality of work life, in simple words, refers to the favourableness or unfavourableness of a total work environment for people. It expresses a special way of thinking about people, their work, and the organization in which their careers are fulfilled. Further, it emphasizes on providing a more humanised work environment for the employees working in an organisation.

Quality of work life refers to the degree of satisfaction an employee derives from his work depending on the extent to which he feels motivated, valued, rewarded etc. It is concerned with the extent of the relationship between an employee and the organisational factors prevailing in that working environment. Many studies have revealed that the organisation should provide working environment conducive to satisfy the needs of the workers. It mainly involves the work related aspects like work environment, wages and working hours, incentives and benefits, career development, etc, which are directly related to the motivation and satisfaction of the workers.

Quality of work life symbolizes all the organisational inputs aimed at promoting employee satisfaction, which in turn, enhances overall organisational effectiveness. Bureaucratization or rule orientation and adherence to traditional management styles hinder the promotion of quality of work life which in turn negatively affects the quality of life as well. The quality of work life has gained deserved prominence in the organizational behaviour as an indicator of the overall human experience in the work place. It refers to the relationship between the

worker and his environment, adding the human dimension to the technical and economic dimensions within which the work is normally viewed and designed. It comes from understanding and then fully meeting, the needs of all your employees, now and into the future and doing so with continual improvement in efficiency and effectiveness.

Quality of work life can be conventionally defined as those perceived important personal needs which an individual tries to satisfy by working in an organization. Incorporate growth and security as important personal needs of an individual, inter alia, can be considered as the basic conceptual criteria for quality of work life. The possibility of furthering one's career within an organization has been identified as one of the important criteria for quality of work life. Although common quality of work life strategies gives more emphasize on job redesign, formation of autonomous work groups and worker participation in management, there exist wide differences among the pioneers in this area as to what should be constructed as quality of work life factors. Richard Walton (1979) explained the process of quality of work life with the help of eight dimensions namely adequate and fair compensation, safe and healthy working conditions, immediate opportunity to use and develop human capacities, opportunity for continued growth and security, social integration in the work organization, constitutionalism in the work organization, work and total life space and social relevance of work life (Bhattacharya, 2002).

The American Society of Training and Development defines the Quality of work life as “a process of work organizations which enables its members at all levels to actively participate in shaping the organization's environment, methods and outcomes. This value based process aimed towards meeting the twin goals of enhanced effectiveness of organization and improved quality of life at work for employees”. According to this definition, quality of work life is a process of work organisation designed to enhance the effectiveness of an organisation and improve the quality of work life of its employees.

1.2.1 QWL and Human Resource Management

Quality of work life is concerned with the improvement of the existing salary, working conditions, individual development etc. There is a general

misunderstanding that improvement in quality of work life costs much to the organisation. But in contrast, increases in quality of work life lead to increased productivity but up to a certain level. After a certain level worker's productivity does not increase proportionately even though quality of work life increases.

Improved quality of work life leads to improved performance. Performance implies not only the physical output of the employees, but also their attitude towards co-workers in solving the job related problems, in creating cohesive working atmosphere etc. Thus we can see that all personnel related activities are related to the quality of work life.

The effects of various human resource activities on the quality of work life are shown in the table 1.1.

Table 1.1 Effect of HR activities on the Quality of Work Life

HR Activity	Effect on the Quality of work life
Job Analysis	Analysing the job in such a way that human needs like freedom, autonomy, challenging work etc can be satisfied.
Selection	Selecting the right man in the right place which satisfies his needs for reward (motivation), interesting work etc
Job Enrichment	The higher order needs like pride, ego of the employees are satisfied here.
Job Evaluation	It implies equitable wages to the workers without any discrimination based on race, sex etc.
Safety and Health	Safe and healthy work environment are needed for the employees and thus contributes to the quality of work life.
Equal Employment Opportunities	The rights of the minority workers are ensured here.
Reward System	Adequate rewards are to be given for the work done by the employees and individuality of incentive systems and benefits are to be ensured.
Grievance Procedure	Employees dignity and rights are ensured and protected and thereby contributes to the quality of work life.

Source: (Santosh Gupta, 2005); (Dessler).

1.3 Significance of the Study

India's IT sector has become the backbone of companies around the world. With the advancement in technology, the world is now opened up for the IT professionals who had the vast opportunity to bridge the gap between the huge untapped market and its customers along with innovation. For surviving in this industry, they must look forward for opportunities for creating and developing the products before anyone else do. Hence the IT organizations had to face cut throat competition for their survival.

The IT companies must consider the human aspects of their employees and need to understand that there is no substitute for the word 'quality' and hence implement programmes that add to the work life quality of their employees. Moreover, these programmes can make the employees committed and satisfied in their jobs and helps to retain them in their current jobs. Quality of work life in IT industry influences the job satisfaction, job involvement and employee turnover to a greater extent as compared to other industries.

The workforces of the IT sector are supposed to work long hours to fulfil the projects assigned to them. They undergo huge work stress during such period of time since they have to complete the project within the stipulated time. The employees working in this sector have to work even late at night and female employees too are not exempted from this. Besides, the employees are constantly suffering from the health problems which are adversely affecting their personal life. The employees working in this sector are reported to have an imbalance between their work and family life. These all factors may lead to the turnover of the employees working in the IT sector since it has now become a common phenomenon in this sector.

In order to achieve maximum employee satisfaction, the IT companies have to maintain the cordial working environment and efficient organizational structures and sophisticated technologies as well. As a matter of fact, with growing awareness of the work force, they realized about the importance of humanization of work. It is this humanization of work which has made Quality of Work Life a more relevant concept. Quality of work life is gaining importance as there are

evidences that reveal about dissatisfied employees very often leaving from their jobs. Moreover the poor quality work life was adversely affecting their health, causing mental stress and ultimately leading them to unbalancing their work family life. On the contrary, the satisfied employees have better health and stay longer with a commitment towards their organization.

The present study tries to analyse the effect of quality of work life on employee satisfaction and employee turnover among the IT sector employees in Kerala and was intended to throw a light upon the extent of the level of the work life quality among the employees working in this sector. This study also aims at revealing the various problems faced by the employees in their workplaces and whether it influences the employee satisfaction and results in the employee turnover. Further, it intends to give suggestions which will help the IT companies in improving their employees' work life quality in their workplaces and to minimise the turnover among the employees working in the IT sector in Kerala.

1.4 Statement of the Problem

Today the IT organisations have to retain their best talented employees to maintain their sustainability and productivity since the market has become highly competitive and there is an increasing demand for the IT professionals everywhere. It is this recognition that makes human resources an inevitable part of an organisation. Considering the IT sector where workload is assumed to be higher, there arises the importance of this study. The IT employees are supposed to have higher work stress, imbalance between work and family life, and health problems. So it becomes essential to identify the extent of the level of quality of work life among the IT sector employees. To accomplish effective performance of the workforce, an organization should ensure its working environment to be safe and cordial along with the quality of work life of their employees.

It is in this context, the present study Quality of work life in the IT sector in Kerala; seek answers to the following questions

- What is the extent of the level of work life quality attained by the employees working in the IT sector in Kerala?

- What is the level of employee satisfaction among the IT sector employees in Kerala?
- Does the quality of work life have an effect on employee satisfaction and employee turnover?
- Does the employee satisfaction have an effect on the turnover of employees in the IT sector in Kerala?
- Do the demographic variables influence the quality of work life, employee satisfaction and employee turnover among the employees working in the IT sector in Kerala?

1.5 Scope of the Study

The present study analyses the extend of the level of Quality of work life among the IT sector employees working in the Technopark Trivandrum, Infopark Kochi and Koratty, and Kinfrapark, Malappuram in Kerala. The study further investigates the relationship between quality of work life, employee satisfaction and employee turnover and examines the effect of quality of work life on the employee satisfaction and employee turnover among the IT sector employees in Kerala. The IT employees identified for the study includes the software engineers, senior software engineers, business analysts, team leaders and software architect. Based on the scope, the following objectives of the study were formulated.

1.6 Objectives of the study

1. To assess the extent of the level of quality of work life of the IT sector employees in Kerala.
2. To examine the extent of the level of employee satisfaction among the IT sector employees.
3. To identify the extent of employee turnover among the IT sector employees in Kerala.
4. To examine the relationship between quality of work life and employee satisfaction among the IT sector employees.

5. To explore the relationship between quality of work life and employee turnover among the IT sector employees.
6. To examine the relationship between employee satisfaction and employee turnover among the IT employees in Kerala.
7. To identify the influence of quality of work life on employee satisfaction and employee turnover.
8. To study the influence of demographic variables on the quality of work life among the IT employees.
9. To examine the influence of demographic variables on the employee satisfaction among the IT sector employees.
10. To study the influence of demographic variables on the employee turnover among IT sector employees in Kerala.

1.7 Hypotheses Framed

1. There is no significant relationship between quality of work life and employee satisfaction among the IT employees.
2. There is no significant relationship between quality of work life and employee turnover among the IT employees.
3. There is no significant relationship between employee satisfaction and employee turnover among the IT employees.
4. Demographic variables do not influence the quality of work life among the IT sector employees.
5. Demographic variables do not influence the employee satisfaction of the IT employees.
6. Demographic variables do not influence the employee turnover among the IT employees.

1.8 Operational Definitions

Quality of Work Life refers to the quality of work environment or work situation an employee faces while he works or operates in an organisation.

Employee Satisfaction means the satisfaction an employee derives out of his work or job in an organisation.

Employee Turnover refers to the employees leaving the organisation where he works.

IT Company means a company registered under the Registrar of Companies, Kerala before 1st January 2015 and engaged in the Software Publishing, Consultancy and Supply classified under Group 722; Class 7221, 7229; Subclass 72211, 72212, 72213, 72214, 72291, 72292, 72293, 72294, 72295; as provided by NIC- 2004 (explained in Appendix I) and which is operating in the Technopark Trivandrum, Infopark Kochi and Koratty, and Kinfrapark Malappuram.

Large IT Company means a company having a paid up capital of above Rupees 50 lakh.

Medium IT Company means a company having a paid up capital between Rupees 20 lakh and 50 lakh.

Small IT Company means a company having a paid up capital below Rupees 20 lakh.

IT employees refers to the software engineers, senior software engineers, business analysts, team leaders and software architects working with the selected IT companies in Kerala.

1.9 Conceptual Model

The conceptual model of the study is as shown below:

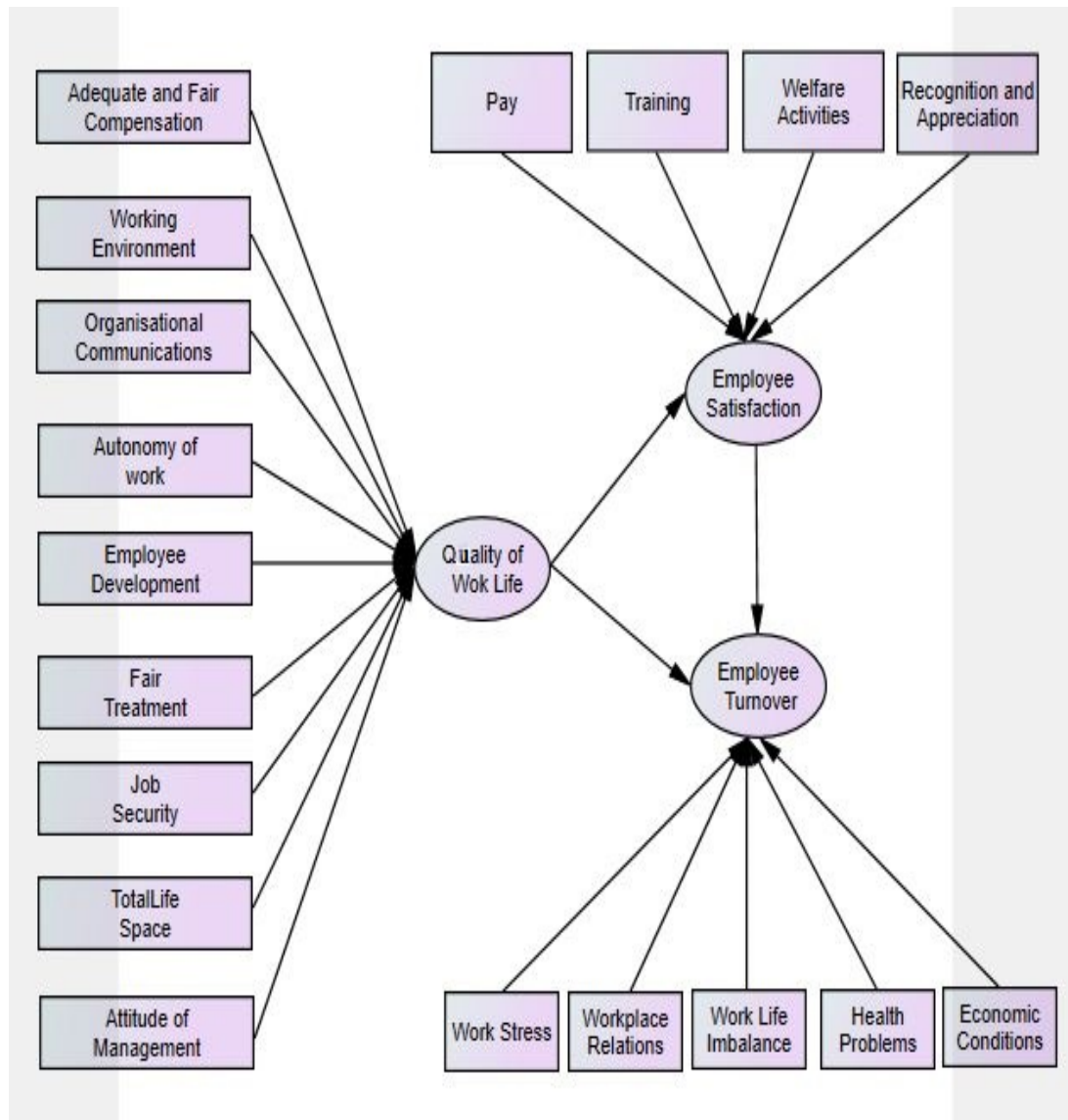


Fig 1.1: Conceptual Model of the Study

1.10 Research Design

The present study is descriptive in nature. It is descriptive as well as analytical since it assesses the extent of the level of quality of work life and employee satisfaction, examines the relationship between quality of work life, employee satisfaction and employee turnover based on the inferences drawn from the analysis of the primary data gathered from the respondents of the study. SPSS 20, MS Excel and Warp PLS 4.0 are used for analysing the data.

1.11 Research Methodology

The study deals with the quality of work life of employees working in the IT sector in Kerala. The methodology used in the study is presented as follows

1.11.1 Sources of Data

Both the primary and secondary data were used for the study.

1.11.1.1 Secondary Data

Secondary data were gathered from journals, theses, magazines, books, websites etc. Various reports published by NASSCOM, Economic Review and IT policies published by the Government of Kerala were also used for the study. Online journals and theses served the main source of information for the study. Websites of NASSCOM, TechnoPark, InfoPark and KinfraPark were also referred.

1.11.1.2 Primary Data

Primary data were collected directly from the software engineers, senior software engineers, business analysts, team leaders and software architects working in the TechnoPark Trivandrum, InfoPark Kochi and Koratty, and KinfraPark Malappuram in Kerala. To get a meaningful insight into the problem identified, discussions were held with the experts in the IT sector, academicians, HR managers and various employees working in the IT companies. A pilot study was conducted to identify the variables, their relationships, the attitude of the employees, the nature of the responses etc. A well designed structured questionnaire was the tool used for collecting the primary data.

1.11.2 Sample Design for Primary Data

The respondents in the study were the employees working in the IT sector in Kerala. The Multi-Stage Sampling using the non- probabilistic method was used for the selection of respondents in the IT sector.

1.11.2.1 Defined Population

Based on the objectives of the research, the target population identified for the study consisted of the entire group of employees working in the IT companies which were registered under the Companies Act with the Registrar of Companies,

Kerala. A total of 311 registered IT companies were found operating in the different IT parks in Kerala. Since the study was confined to the state of Kerala, the employees working in the registered IT companies operating in the different IT parks in Kerala was the defined target population.

1.11.2.2 Sample Frame

The IT companies which were established before 1st January 2015 and engaged in Software Publishing, Consultancy and Supply classified under Group 722; Class 7221, 7229; Subclass 72211, 72212, 72213, 72214, 72291, 72292, 72293, 72294, 72295; as provided by NIC- 2004 were selected for the study. The number of IT companies which were registered before 1st January 2015 and pursuing the business as prescribed by NIC- 2004, and which were operating in the Technopark, Infopark and Kinfrapark were found to be 201. The IT employees working in these registered IT companies operating in the Technopark Trivandrum, Infopark Kochi and Koratty, and Kinfrapark Malappuram were taken as the sample frame from which the sample had to be selected.

1.11.2.3 Sampling Technique

The Multi-Stage Sampling using the non-probabilistic method was used for selecting the employees working in the IT sector in Kerala. The whole of Kerala was divided into three regions: north, south and central. On the basis of the year of the establishment, the Technopark (established in 1990) was selected from the southern region, Infopark (established in 2004) was selected from the central region and Kinfrapark (established in 2003) was selected from the northern region.

1.11.2.4 Sample Size

The sample size for the study was determined based on the following statistical formula:

$$n = \frac{Z^2 \times \sigma^2}{e^2}$$

Where, n= Size of the sample

Z= Standard Variate at a given confidence level (1.96 for 95% confidence level)

e = Acceptable error (the precision limit is assumed as 0.12)

$$n = \frac{(1.96)^2 \times (1.43)^2}{(0.12)^2}$$
$$= 545.5339$$

This is rounded to **546**

After applying this formula, the sample size derived for the study is 546 which were proportioned in the ratio of the types of IT companies operating in the Technopark Trivandrum, Infopark Kochi and Koratty, and Kinfrapark Malappuram.

1.11.2.5 Sample Selection

For collecting the primary data, the multi- stage sampling using the non-probabilistic method was used.

Stage 1 - In this stage Stratified Sampling was used to categorise the IT companies under NIC code “72: Computer and Related Activities” registered under the Companies Act with the Registrar of Companies, Kerala. From the list of 311 IT companies registered and operating in different IT parks in Kerala, the IT Companies were categorized on the basis of the following criteria:

- i) IT Companies registered before 1st January 2015 was selected.
- ii) IT Companies engaged in Software Publishing, Consultancy and Supply classified under Group 722; Class 7221, 7229; Subclass 72211, 72212, 72213, 72214, 72291, 72292, 72293, 72294, 72295; as provided by NIC- 2004 were categorised (described in Appendix I).
- iii) The IT companies operating in the Technopark Trivandrum; Infopark Kochi and Koratty; Kinfrapark Malappuram were then categorised as a strata. 137 IT companies operating in the Technopark was identified as strata. Similarly 53 IT companies operating in the Infopark were stratified and 11 IT companies operating in Kinfrapark were also categorized as strata.
- iv) On the basis of the Paid-up Capital, the researcher then classified the IT companies as Small IT companies, Medium IT companies and Large IT companies. For the purpose of the research, the researcher had classified the IT

companies into three. The criteria for classifying the IT companies are given in the table 1.2.

Table 1.2 Classification of the IT Companies

Paid-up Capital	Types of IT Company
Above 50 Lakh	Large IT Company
Between 50 Lakh and 20 Lakh	Medium IT Company
Below 20 Lakh	Small IT Company

Source: Primary Data

Thus the number of small, medium and large IT companies operating in the Technopark, Infopark and Kinfrapark is given in the table 1.3.

Table 1.3 Number of the IT Companies Categorized

Types of IT Company	Technopark	Infopark	Kinfrapark	Total Number of Companies
Large IT Company	26	3	1	30
Medium IT Company	12	2	-	14
Small IT Company	99	48	10	157
Total Number of Companies	137	53	11	201

Source: Primary Data

Stage 2 - The sample size in each stratum was decided probability proportional to sample size. The sample size derived for the study is 546 which is proportioned on the basis of the small, medium and large IT companies operating in each of these three IT parks (546 in the ratio of 30: 14: 157). The table 1.4 shows the sample size of employees in each stratum.

Table 1.4 Sample Size of the IT Employees in Each Stratum

Types of IT Company	Technopark	Infopark	Kinfrapark	Total Employees
Large IT Company	71	8	3	82
Medium IT Company	33	5	-	38
Small IT Company	269	130	27	426
Total Employees	373	143	30	546

Source: Primary Data

Stage 3 - Judgement Sampling method was used here for collecting the data from the sample respondents since the opinions of the experts in the IT sector were sought by the researcher. The list of employees working in the selected IT companies was not disclosed to the researcher and hence opted judgement sampling. From the Technopark, data were collected from 373 employees (approximated to 375) using the judgement sampling. Similarly 143 (approximated to 145) employees were identified from Infopark and 30 employees were selected from Kinfrapark using judgement sampling method.

Table 1.5 Selection of Sample Respondents from Each Stratum

Designation of the IT Employees	Technopark			Infopark			Kinfrapark	
	L	M	S	L	M	S	L	S
Software Engineer	30	9	118	5	3	75	2	15
Senior Software Engineer	20	11	80	5	3	30	2	10
Business Analyst	4	3	18	3	1	10	-	-
Team Leader	6	5	24	1	1	5	-	1
Software Architect	10	8	30	1	1	6	-	1
Total	70	36	270	15	9	126	4	27
Total respondents from each Park	376			150			31	
Grand Total	557							
L refers to Large IT company, M refers to Medium IT company and S refers to Small IT company.								

Source: Primary Data

The designation wise distribution of the IT employees is shown in the table 1.5. From the Technopark, 70 employees from 10 large IT companies, 36 employees from 6 medium IT companies and 270 employees from 21 small IT companies were collected. 15 employees from 2 large IT companies, 9 employees from a medium IT company and 126 employees from 13 small IT companies were collected from the Infopark. Similarly 4 employees from a large IT company and 27 employees from 5 small IT companies were collected from Kinfrapark. The details of the companies from which data collected are shown in the Appendix II.

1.11.3 Tools for Data Collection

Primary data were collected from the IT sector employees in Technopark, Infopark and Kinfrapark. For the purpose of collecting data, all the three IT parks were visited personally. The respondents were approached both officially and personally to get the response.

A Structured Questionnaire was the tool administered for collecting primary data from the respondents. A draft of the questionnaire was made initially incorporating all the objectives of the study. The questionnaire was prepared after discussing with the academicians, various experts and HR managers in the IT field. Likert's five dimensional scaling technique ranging from 'Strongly Agree to Strongly Disagree' was used to measure the responses.

The questionnaire was comprised of four parts: the first part related to the Quality of Work Life, the second part dealt with the Employee Satisfaction, the third part measured the Employee Turnover and the fourth part concerned the Demographic Profile of the respondents.

The final questionnaire consisted of 82 close-ended questions out of which 41 statements related to quality of work life, 16 statements related to employee satisfaction and 25 statements related to employee turnover. The responses to all the statements in the Quality of work life scale and Employee satisfaction scale was made on the Likert's five point scale ranging from (1= Strongly Disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree and 5= Strongly Agree). To reduce response bias, questions numbered 2 and 56 were negatively worded.

The responses collected were scored reversely on these items to determine the results.

The Employee turnover scale was comprised of 25 statements out of which 21 statements were negatively worded measuring the five variables of the employee turnover. The responses to all the statements were made on the Likert's five point scale ranging from 1 to 5 (1= Strongly Agree, 2= Agree, 3= Neither Agree nor Disagree, 4= Disagree and 5= Strongly Disagree). The questions numbered 77, 78, 79 and 82 were positively worded and hence scored in reverse order. The final questionnaire is shown in Appendix III.

1.11.4 Pilot Study and Pre- Test of Instrument

The questionnaire was pre- tested among 60 employees working in the Infopark Kochi and Koratty during the period January 2015 to February 2015. On the basis of the feedback received from the respondents, the researcher then modified the layout and wordings of the questionnaire for the main study. The questionnaire thus modified after pilot study was administered among the respondents in the main study.

1.11.5 Variables identified in the Study

The variables used in this study are briefly discussed in the table 1.6.

Table 1.6 Variables used in the Study

Variables	Sub variables used	Brief Description of Sub variables
Quality of Work Life	1. Adequate and Fair Compensation	Income is fair and up to the level of effort taken by the employee.
	2. Working Environment	Working environment of the job is safe and good.
	3. Organizational Communication	Employee receives correct information about the work.
	4. Autonomy of Work	Employee has freedom to take decisions regarding their jobs.
	5. Employee Development	Opportunities for the development of the employees.
	6. Fair Treatment	Employees are treated equally.

Variables	Sub variables used	Brief Description of Sub variables
	7. Job Security	Satisfied with the job security.
	8. Total Life Space	Balance between the work and family life.
	9. Attitude of Management	Attitude and the policies of management towards the employees.
Employee Satisfaction	1. Pay	Benefits in addition to the salary.
	2. Adequate Training	Appropriate and adequate training.
	3. Welfare Activities	Activities provided by the organization to motivate their employees.
	4. Recognition and Appreciation	Recognition of good work and appreciating the employees on achieving their work.
Employee Turnover	1. Work Stress	Stress faced by the employee at work.
	2. Workplace Relations	Relationship with other employees at workplace.
	3. Work Life Imbalance	Imbalance between personal and work life.
	4. Health Problems	Health problems due to the work.
	5. Economic Conditions	Conditions of the economy affecting the employee's work.
Demographic Variables	1. Age	Age of the Employee.
	2. Gender	Male or Female Employee.
	3. Designation	Job role in the company.
	4. Education	Educational Qualification of the employee.
	5. Monthly Income	Income an employee earns in a month.
	6. Marital Status	Married or unmarried employee.
	7. Work Experience	Experience in the present company.

Source: Primary Data

Table 1.6 reveals that the quality of work life is identified using the nine variables, employee satisfaction is estimated using four variables and employee turnover is determined using five variables. The demographic variables identified in the study include age, gender, designation, work experience, education, monthly income and marital status of the IT employees.

1.11.6 Validity

Validity refers to the ability of an instrument to measure what it is supposed to measure. It means the extent to which the measure adequately reflects the real meaning of the concept studying (Kumar, 2011). In quantitative research, there are three types of validity

1. Face and Content Validity
2. Concurrent and Predictive Validity and
3. Construct Validity.

All these types of validity of the scale developed for the present study are discussed in detail in the 5th chapter of this report.

1.11.7 Reliability Test

The reliability of an instrument indicates the extent to which the instrument yields the same results on repeated trials. If a tendency of consistency was found on repeated measurements, it can be referred to as reliability. External reliability was measured using the test retest method. If the two tests produce the same results, which mean the studied variable does not fluctuate greatly overtime, the scale is said to be reliable. Internal reliability was used to indicate the homogeneity of the items in the scale to measure the construct. The Cronbach's alpha coefficient and the composite reliability (which was used to measure the overall reliability of a collection of heterogeneous but similar items) were used in the study to assess the reliability of the scale. The Cronbach's alpha is an index used for measuring reliability associated with the variation accounted for by the true score of the underlying construct. The following table 1.7 shows the reliability of the scale developed for the study:

Table 1.7 Reliability analysis of the Scale

Scale	Variables	Cronbach's Alpha Value	Composite Reliability Value	No: of Item	Sl. No. in the Questionnaire
Quality of Work Life Scale	Employee Development	0.869	0.896	9	18 - 26
	Fair Treatment	0.855	0.902	4	27 - 30
	Total Life Space	0.852	0.901	4	31 - 34
	Autonomy of Work	0.830	0.874	7	11 - 17
	Attitude of Management	0.752	0.843	4	35 - 38
	Working Environment	0.717	0.840	3	5 - 7
	Organizational Communication	0.669	0.820	3	8 - 10
	Job Security	0.643	0.791	3	39 - 41
	Adequate and Fair Compensation	0.603	0.766	4	1 - 4
Quality of Work Life Scale (Overall)		0.849	0.883	41	
Employee Satisfaction Scale	Recognition and Appreciation	0.800	0.865	5	50 - 54
	Welfare Activities	0.720	0.820	5	45 - 49
	Pay	0.704	0.818	3	42 - 44
	Adequate Training	0.697	0.751	3	55 - 57
Employee Satisfaction Scale (Overall)		0.732	0.805	16	
Employee Turnover Scale	Work Life Imbalance	0.855	0.890	7	58 - 64
	Work Stress	0.856	0.893	6	65-67, 73-75
	Health Problems	0.848	0.892	5	68 - 72
	Economic Condition	0.736	0.852	3	76 - 78
	Workplace Relations	0.709	0.771	4	79 - 82
Employee Turnover Scale (Overall)		0.818	0.876	25	

Source: Primary Data

The composite reliability ranged from 0.751 to 0.902 and the Cronbach's alpha coefficient was ranged from 0.603 to 0.869 as seen in the table 1.7. According to Field (2005) the values between 0.7 and 0.8 of Cronbach's alpha are acceptable values of consistency. The generally agreed upon lower limit for Cronbach's alpha value is 0.7 (Straub, Boudreau and Gefen 2004), though it may decrease to 0.6 (Hair et al 2009) in the case of exploratory research. Here the Cronbach's alpha values were all above 0.6 and hence conclude that the scale is reliable. The generally accepted threshold of the composite reliability was above 0.7 (Fornell and Larcker 1981) and here all the values were above 0.7. A more conservative approach to verify reliability was that one of the two coefficients should be equal or greater than 0.7 (Eappan, 2014). The reliability of the scale was thus ensured since the above criterion was met.

1.11.8 Tools for Analysis

The data were analyzed using SPSS 20. Descriptive statistics like mean, standard deviation and percentages were used in the study for measuring the primary data collected. Both exploratory factor analysis using the principal component analysis and confirmatory factor analysis through structural equation modelling using Warp PLS 4.0 was done to finalise the variables of the study and to validate the same.

Based on the quartile deviation value of the variables quality of work life, employee satisfaction and employee turnover, the variables were categorized into three levels – low level, moderate level and high level. The level of quality of work life, employee satisfaction and employee turnover among the male and female employees, among the various designations of the employees, among the three types of the IT companies and among the three IT parks were further estimated. Besides, the research model was tested through the Structural Equation Modelling using the Warp PLS 4.0 and the mediation effect of the variable employee satisfaction on the relationship between quality of work life and employee turnover was analyzed.

The Spearman's rank correlation coefficient was used to measure the relationship between quality of work life, employee satisfaction and employee turnover; and also with their respective dimensions. The Kruskal- Wallis H test and

Mann-Whitney U test was used to describe the relationship of demographic profile of the respondents with the quality of work life, employee satisfaction and employee turnover. Tabulated data were presented in a simplified manner using the diagrams and graphs.

1.12 Period of the Study

A period of five years was taken to complete this study. The primary data were collected from the IT sector employees working in the Technopark Trivandrum, Infopark Kochi and Koratty, and Kinfrapark Malappuram from March 2015 to September 2015.

1.13 Limitations of the Study

The study faced the following limitations:

1. The IT companies which were not registered under the Registrar of Companies, Kerala were not considered for the study and hence the major IT companies like Infosys, TCS etc were not covered under the study.
2. The employees working in the IT sector were included in the study and those working in the ITES were excluded from the study, although they have a significant role in this sector.
3. The study only covered the software engineers, senior software engineers, business analysts, team leaders and software architects. The other categories of IT employees like managers, chief executive officers, etc were not covered under the study.
4. The response rate of the questionnaire was moderate since the IT companies were reluctant to provide information needed for the study.
5. The non probabilistic sampling technique was used for selecting the respondents since the list of employees were not provided by the IT companies.
6. The majority of the data collected for the research were qualitative in nature and the scaling techniques were used to quantify them. Hence the limitations of the scaling techniques were applied to the study too.

1.14 Scheme of Chapterisation

The entire study is presented in seven chapters and is described as follows.

Chapter 1: Introduction. This chapter begins with the introduction to the study, followed by Quality of work life, QWL and HRM, the significance, scope, objectives, hypotheses, operational definitions, research design, methodology, validity, reliability, tools for analysis, limitations of the study and scope for further research.

Chapter 2: Review of Literature: Quality of Work Life, Employee Satisfaction and Employee Turnover. This chapter details a comprehensive review of studies associated with the quality of work life, employee satisfaction, employee turnover and IT sector and finally identifies the research gap.

Chapter 3: Quality of Work Life, Employee Satisfaction and Employee Turnover - A Theoretical Overview. This chapter describes the theories relating to Quality of work life, its meaning and definitions, the evolution of QWL, QWL in India, importance, variables of quality of work life, Employee satisfaction – its meaning and definitions, its importance, its variables, Employee turnover – its meaning and definition, the causes of employee turnover, its impact on organization and its variables.

Chapter 4: Information Technology (IT) Sector - A Brief Overview. This chapter explains the theories relating to Information Technology (IT), IT industry in India, growth of IT sector in India, Impact of IT sector on Indian economy, IT sector in Kerala, IT parks in Kerala – Technopark, Infopark and Kinfrapark.

Chapter 5: Relationship between Quality of Work Life, Employee Satisfaction and Employee Turnover – An Analysis. This chapter is concerned with the analysis of quality of work life, employee satisfaction and employee turnover. The development of Quality of work life scale, Employee satisfaction scale and Employee turnover scale and the validation of these scales is done in this chapter. The overall quality of work life, its levels, overall employee satisfaction and its levels, overall employee turnover etc are analysed. The relationship

between quality of work life and employee turnover is estimated keeping employee satisfaction as a mediator variable.

Chapter 6: Demographic Variables with Quality of Work Life, Employee Satisfaction and Employee Turnover. This chapter presents the analysis of demographic variables like age, education, gender, marital status, work experience, etc with quality of work life, employee satisfaction and employee turnover.

Chapter 7: Findings, Conclusion and Suggestions. This chapter deals with the findings, conclusions and recommendations of the study.

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Chapter 2

Review of Literature: Quality of Work Life, Employee Satisfaction and Employee Turnover

2.1 Introduction

The present chapter is concerned with a comprehensive review of related studies based on quality of work life, employee satisfaction and employee turnover. Various studies relating to the quality of work life, employee satisfaction and employee turnover have been reviewed by the researcher. The review of literature enabled the researcher to identify the most appropriate variables related to the quality of work life, employee satisfaction and employee turnover used by different researchers in various other sectors. This review of literature further facilitated the researcher to identify the research gap related to the study.

The present chapter is categorized into four sections. Section A presents the studies relating to the quality of work life. Section B details the studies relating to the employee satisfaction. Section C shows the various studies relating to the employee turnover and Section D exhibits the various studies undertaken in the IT sector.

Section A

This section explains the studies relating to the quality of work life undertaken by researchers of different sectors within India and outside India. All the studies were carefully examined by the researcher and the objectives, related methodology, findings and suggestions of the studies were consolidated and presented as under.

2.2 Studies relating to the Quality of Work Life

(Sirgy M J, 2001) studied quality of work life based on need satisfaction and spill over theory and defined it as employee satisfaction with a variety of needs through activities, resources and outcomes resulted from participation in the work place. They suggested that the quality of work life should be measured in terms of employees' needs and identified seven dimensions of needs which include health and safety needs, economic and family needs, social needs, esteem needs, actualization needs, knowledge needs and aesthetic needs.

(Georgia Pomaki, 2002) investigated the factors predicting quality of work life and pointed out that work conditions, described in theoretical models (as the

Job Demand-Control-Social support model, the Effort-Reward Imbalance model and the Vitamin model) were treated as the important predictors of wellness/health outcomes. The research revealed that within Motivational Systems theory, personal goals help employees direct and organize behavior. A summary of studies investigating the relationship between personal goals and wellness/health outcomes among employees were discussed in this study. The research pointed out that although the Job Demand-Control-Social support model, the Effort-Reward Imbalance model and the Vitamin model have been successful in predicting wellness/health consequences, they mainly concentrated on the impact of work environment on the individuals and not on the way employees defined their work environment in terms of their personal goals and expectations. Hence more attention should be paid on the appraisal and attainment of goals and the choice of the appropriate goal level.

(Johnsrud, 2002) studied the impact of quality of work life on the performance or retention among the faculty members. Various studies relating to the topic were framed into three groups: those describing and exploring differences in the quality of work life, those determining the impact of work life on attitudes and those attempts to explain behavioral outcomes. The study suggests that in order to improve the performance and retention of faculty and administrative staff, the colleges and universities should identify and address the issues relating to the employees.

(Elisaveta, 2005) investigated the relationship between quality of work life and satisfaction with a definite job attributes with regard to job contents and work environment among the employees of SKOPJE. The quality of work life is explained based on the tendencies for humanization of work environment and democratization of work relations. Correlation analysis revealed significant associations among quality of work life and satisfaction with a larger number of studied job attributes. The total job satisfaction was proved as a strong determinant in the variance of quality of work life. The study points out the need for a subsequent improvement of job attributes and their permanent adjustment to individual characteristics in order to achieve a higher productivity in the organization.

(Serey, 2006) in his study observed quality of work life as an absolute and best method of meeting the contemporary work environment which includes opportunities to exercise a person's talents and capacities, to face challenges and situations for independent initiative and self direction, activities thought to be worthwhile by the individuals involved, an activity where the overall goals are to be achieved by the role of individuals and a sense of taking pride in what an individual does and in doing it well.

(Pierre Martel J, 2006) presented a historical overview of the concept of quality of work life. A new definition of quality of work life was suggested in this study due to the lack of consensus concerning the results that have been developed which is similar to the concept of quality of life which had faced the same conceptualization and definition problems. A new definition of quality of work life was suggested and the measuring instrument was the quality of working life systematic inventory (QWLSI) that resulted there was presented in this study.

(G Nasl Saraji, 2006) studied the quality of work life among the hospital employees in Tehran University of medical sciences to provide an insight into the positive and negative attitudes of their quality of life. Stratified random sampling method was used to select the respondents from the nursing, supportive and paramedical groups. The study revealed that majority of the employees was dissatisfied with their occupational health and safety, income, and inadequate time to spend with family. The study further indicated that their work was not interesting and were dissatisfied and that the work life quality of the employees was poor. The suggestions include providing more training and education to managers on quality of work life issues and also viewed quality of work life should be a comprehensive program designed to improve the employees' satisfaction.

(Hsu M Y, 2006) examined the quality of working life among the nurses in Taiwan, in their study about the dimensions of the hospital nurses' quality of working life. The dimensions of quality of work life identified included socio-economic relevance, demography, organizational aspects, work aspects, human relations aspects and self actualization. Various issues like managing shift work within the demands of family life, accommodation, support resources, and nurses' clinical ladder system and salary system were also given emphasis in this study.

The results indicated that human relationships, job value and self actualization were significant aspects of nurses' quality of work life. The study further revealed that the quality of work life for nurses meant keeping a good balance between work and personal life and the job should offer them an adequate salary, a suitable work load and should be located near their homes.

(Susan J Harrington, 2006) examined the relationship between quality of work life, professional isolation and organization's cultural values among the telecommuters and non telecommuters. The researcher argued that the culture may affect the implementation and success of telecommuting arrangements. Similarly, the increased isolation and independence of a virtual worker may affect the culture among the workers and create an organizational subculture. The findings indicated that lower levels of hierarchical values were found among the telecommuters compared to their non telecommuting peers while higher levels of hierarchical values were associated with quality of work life and less professional isolation within telecommuters suggesting that managers should ensure procedure and outcome based measures to aid the telecommuter and foster mutual understanding.

(Wichit, 2007) studied the quality of work life and its relationship with demographic factors, job characteristics and organizational environment among the bus drivers in Bangkok. The study pointed out that bus drivers had a moderate level of quality of work life and the organizational environment, job characteristics and age had a positive relationship while work duration had a negative relationship with the quality of work life. The study indicated that jobs should be improved to encourage bus drivers to perceive the value of job performed which will lead to the improvement of their work life quality.

(Khani A, 2008) explored the nurses' quality of work life in Iran since they had suffered from the higher demands of the profession and of the workload and underpay. The quality of nursing work life tool used in the study included work life/ home life, work design, work context and work world. The study indicated that the salaries were inadequate and the workload was too heavy for the nurses. Further the respondents had little energy left after work and were unable to balance their work and family lives and stated that rotating schedules negatively affected

their lives. The study suggested implementing discretionary employee benefits programs to enhance the work life quality of nurses.

(Hanita Sarah Saad, 2008) studied the employees' perception of their quality of work life in a private university in Malaysia. Ten variables were used to measure quality of work life and tested their relationship with job satisfaction. The test revealed that each of the quality of work life variable on its own is a salient predictor of job satisfaction. The study suggested that other dimensions of job satisfaction, especially on the intrinsic rewards and key performance indicators or the performance evaluation criteria should be used while doing the future research on job satisfaction in other areas.

(Boonrod, 2009) examined the level of quality of work life and its relationship with job characteristics, organizational climate, organizational commitment and job satisfaction among the professional nurses at Phramongkutkiao in Bangkok. The study revealed that the nurses had a moderate level of quality of work life and the personal factors like age, status, education, position etc had no relationships with the quality of work life. The job satisfaction was positive and related at a high level to quality of work life while the other factors were positively but moderately related to quality of work life. The multiple regression analysis indicated that nurses associated negative factors with job characteristics and positive factors with the job satisfaction, organizational commitment and organizational climate among the factors affecting quality of work life. The study revealed that nurses having better quality of work life are more likely to stay in their positions and provide better nursing care.

(Kalayanee Koonmee, 2009) examined the association between institutionalization of ethics, quality of work life and employee job related outcomes among the human resource managers in Thailand. The quality of work life scale developed by Sirgy et al which represented a need satisfaction approach to quality of work life based on Maslow's needs hierarchy theory was used to measure quality of work life in this study. The survey results revealed a positive relationship between implicit form of ethics' institutionalization and both lower order and higher order aspects of quality of work life. It further indicated that the implicit form of ethics institutionalization and the two aspects of quality of work

life had positive impacts on the three employee job related outcomes: job satisfaction, organizational commitment, and team spirit. The study suggests that ethics institutionalization positively influences quality of work life which in turn may enhance job satisfaction, organizational commitment and team spirit.

(Kiam-Sam Hong, 2010) examined the relationship of quality of work life with work commitment, work stress and work satisfaction among teachers in Malaysia. The finding revealed that the respondents' quality of work life was moderate and the work commitment, work stress and satisfaction were not significantly correlated. The study suggested that the work life quality of the teachers should be improved to ensure that students gained maximum benefits of teaching and learning practices in the classrooms.

(Ebrahim Kheradmand, 2010) investigated the relationship between quality of work life and job performance among the employees of Dadevarz Jooya Company in Iran. Walton's eight dimensions of quality of work life was used for measuring the employees perception of quality of work life and the seven dimensions of job performance developed by Hersey and Goldsmith was used for measuring job performance. The study revealed a positive relationship between quality of work life and job performance and exhibited optimism concerning the potential of quality of work life in enhancing the performance of employees and organizations, as quality of work life is found to significantly reduce absenteeism, minor accidents, grievances and quitting. Further the study suggested developing an updated information system in the company in order to obtain accurate information which is a necessity for making proper decisions.

(Seyed Ali Akbar Ahmadi, 2011) studied about the paradigm of managerial coaching for promoting work life quality among the Government offices in Iran. The study analyzed the effect of managerial coaching, for developing human resources, by means of learning and development through open communications, team procedures, valuing people to task, the acceptance of ambiguity and development of facilities on the quality of work life. The study indicated that the managerial coaching had a significant effect on the quality of work life and valuing individual to task was the major factor in determining the

managerial coaching behaviour and further suggested that managers should listen to their staff carefully and respect them.

(Umar Nazir, 2011) examined the effect of office harassment on the quality of work life of the employees while job stress and organizational commitment were identified as mediators among the bank employees in Pakistan. Female employees were the main respondents in this study. Office harassment was identified as independent variable which comprised of gender harassment and generalized workplace harassment. The employees' quality of work life was identified as the dependent variable affected by the office harassment. The result indicated that the organizational commitment had mediated the relationship between office harassment and quality of work life while job stress did not mediate the relationship. Besides, there existed an inverse relationship between office harassment and quality of work life. The study further suggested for conducting similar research among those sectors where women work under traditional roles settings.

(Behzad Shahbazi, 2011) investigated the relationship between quality of work life and the performance of the department chairpersons in universities. Proportional stratified sampling method was used in this study. The results indicated that quality of work life had a positive relationship with performance and revealed that developing human capabilities, constitutionalism, total life space and social integration predicted the performance of the employees. Further, it suggested that there was no significant difference between the quality of work life of department chairpersons who were having a higher level concerning quality of work life dimensions.

(Islam, 2011) undertook a study on Quality of work life to find out the causes of attrition in the Insurance sector in India taking ICICI Prudential Life Insurance Limited as a sample. The researcher identified eight factors for the attribute and developed a model based on the factors affecting the attrition in the insurance industry. All the variables had highest value to their corresponding factors and concluded that attrition in the insurance sector was due to the ignorance of the people about the facts of insurance as they think it as an expense rather than an investment and hence the sales personnel in the insurance sector faced great

difficulties to sell their products in the market and failed to achieve their targets and resulted in attrition.

(Rafidah Abdul Aziz, 2011) studied the relationship between work and non- work variables; and quality of work life among the librarians in government academic libraries in Malaysia. Job involvement, work role conflict, work time and schedule inflexibility were identified as work variables and family involvement and family conflict were assessed as non-work variables. 130 employees participated in the study. The results indicated a significant positive relationship between all the work related and non-work related variables with the quality of work life and these variables determined the quality of work life among the employees.

(Ayesha Tabassum, 2011) in their study revealed that a significant difference existed between the local private and foreign commercial bank's employees perception over quality of work life and the factors relating to quality of work life. They further suggested that transforming the workplace proactively using a combination of well designed quality of work life initiatives will yield competitive advantage as it will increase job satisfaction of the employees which will motivate them to perform in superior way, leading the organizations and their stakeholders to a better future by yielding the expected outcome.

(Seyeed Mohammad Mirkamali, 2011) investigated the influential factors of quality of work life and examined the perception of faculty members regarding the quality of work life in Tehran and Sharif Universities. Walton's eight dimensions of quality of work life were used in the study. The results indicated that the professors had a fairly unfavorable quality of work life and no significant difference between the levels of quality of work life among the faculties of both universities was found. Of the eight dimensions, a noticeable difference was found only between social integration and cohesiveness among the professors of both universities. The study concluded that by changing and improving quality of work life factors, job satisfaction can be improved and thereby developing the organizations.

(Masoud Porkiani, 2011) examined the relationship between quality of work life and employee aggression along with the demographic variables among the employees working in the copper industry in Iran. The components used to measure quality of work life were, job security, justice and equality, salaries and allowances, skill improvement opportunities, employee participation in decision making etc. Results showed that there was a relationship between quality of work life and aggression. The statistical results indicated that the two variables of quality of work life and aggression are independent of the demographic variables while they are related regarding the job title. The study revealed that the conditions of the working environment which result in meeting the material and spiritual needs of people represents the quality of work life and such an environment should be ensured since it is in this environment that the employees could feel possession, self direction, responsibility and self respect.

(Mohammed Hadi Asgari, 2011) in their study investigated the relationship between quality of work life and organizational commitment among the Melli Bank staff in Iran. Walton's quality of work life and Allen- Meyer's organizational commitment were used in this study. The findings of the study indicate that as the quality of work life increases, the organizational commitment increases too.

(Flavy Lasrado, 2011) conducted a cross cultural evaluation of the contemporary workplace and its managerial implication and studied whether the usage of the Information and communication technologies had an impact on the quality of work life among the knowledge workers in universities in UAE. The work force diversity had an impact on the job design and productivity, which had risen to a strategic issue in the organizations employing global workforce. The study was addressed to investigate the perception of quality of work life among the workforce that is global in its composition and to examine the factors affecting the quality of work life- with the help of Kano model of customer satisfaction. A list of possible actionable interventions by management was segregated by demography (nationality and gender) was generated. The study revealed that quality of work life and information and communication technologies were positively correlated even if the information and communication technologies appeared decades back.

(Alireza Ghasemizad, 2012) investigated the relationship between spiritual leadership, quality of work life, job satisfaction and productivity among the principals and teachers in Kerman high school in Iran. The data were collected from 270 respondents using simple random sampling method. The spiritual leadership is assessed using seven aspects, quality of work life using seven factors, job satisfaction using two factors and productivity using seven factors. The findings revealed that a significant positive relationship existed between spiritual leadership and quality of work life; spiritual leadership and productivity; spiritual leadership and job satisfaction; quality of work life and productivity; and quality of work life and job satisfaction. The variable quality of work life was found to have higher proportion in predicting productivity than spiritual leadership and job satisfaction.

(Hamid Zare, 2012) made an attempt to develop a model for quality of work life in their study relating to determine and prioritize criteria and scales of quality of work life. Field survey was done to collect data from experts using questionnaires. Analytic Hierarch Process model and expert choice software were used to analyze the data and the identified aspects of quality of work life in terms of its importance were job content, work life balance, social factors and economic factors.

(Zeynel, 2012) examined the effects of work motivation on the quality of work life of the employees working in the banking sector. 120 employees participated in the survey and questionnaire was the tool administered for data collection. Factor analysis, regression analysis and differences test were applied in the study. A significant relationship was found between motivation and quality of work life in the study. The study suggested that work motivation increases the employee's job concern and by raising the quality of work life, the organizational efficiency can be increased.

(Sarina Muhamad Noor, 2012) in their research studied about the quality of work life among factory workers in Malaysia and investigated the relationship among job satisfaction, job involvement and job security towards quality of work life. Quality of work life scale was adapted from Sirgy et al (2001) while a short version of the Minnesota satisfaction scale was used for the job satisfaction

aspects. The job involvement scale was adapted from Kanungo (1982) and job security scale was adapted from Oldham, Kulik, Stepina and Ambrose (1986). The study revealed that all these factors have significant relationship with the quality of work life and job satisfaction is found to have more priority in explaining the relationship with the quality of work life. They were of the opinion that the management should appreciate the notion that employees with higher commitment and positive work attitude contribute to the firm's success.

(Dr Mohammed Kazem Emadzadeh, 2012) examined the quality of work life and its components among the primary school teachers in Iran. The components of quality of work life were studied based on the demographic variables and the result indicated that the work life quality of the teachers was less than the average. Besides, the female teachers were found to have a higher work life compared to the male teachers and no difference was found between single and married teachers on quality of work life. The study suggested that sufficient attention need to be given to the teachers' quality of work and favorable conditions for work should be provided to them.

(S M Moghimi, 2013) studied the relationship between organizational justice and quality of work life among the employees working in Qom Province public organizations. Distributive justice, procedural justice and interactional justice were used as the dimensions of organizational justice while 15 dimensions were used to assess the quality of work life. Data was collected from 264 employees using the stratified sampling method. The findings indicated that organizational justice and its components had a significant positive relationship with the quality of work life of the employees.

(Mina Mahmoudi, 2014) studied the relationship between quality of work life and productivity among the Education teachers in District 12 of Tehran. The quality of work life was identified using four dimensions while seven dimensions were used to assess the labor productivity. Simple random sampling method was used to collect responses from 132 employees. The findings revealed that the quality of work life and productivity among the employees were lower than the average. Besides, a direct relationship was found between quality of work life and

productivity which implied that an increase in quality of work life will lead to an increase in productivity among the employees.

(Kanten, 2014) investigated the effects of quality of work life on proactive and prosocial organization behaviors among the private hospital employees in Istanbul. The study was comprised of proactive and prosocial behaviors as part of positive organizational behaviors and one of the organizational determinants of these behaviors is stated as quality of work life. The proactive behaviors were examined in terms of organizational oriented proactive behaviors; coworkers oriented proactive behaviors and individual proactive behaviors whereas prosocial behaviors were identified in terms of role-prescribed prosocial behaviors, extra-role prosocial behaviors and cooperation. An exploratory and confirmatory factor analysis and the structural equation modeling were done in this study. The study observed that quality of work life affects employees co-worker oriented and individual proactive behaviors and extra-role prosocial behaviors while it has no effect on employees' organizational oriented proactive behavior, role prescribed and cooperation prosocial behaviors.

(Chao Chih Yang) conducted a case study to investigate the relationship between leadership behavior of the principal and quality of work life among the teachers in a high school in Taiwan. The leadership behavior was examined using the components of task oriented, relationship oriented and personal example lead, while quality of work life is measured using the four components of formal/material, formal/mental, informal/material and informal/mental. The t test, one way ANOVA, Pearson product-moment correlation, and stepwise regression were used in this study. The study revealed the relationship between leadership behavior and quality of work life was positive and the perspectives of teachers were positive in leadership behavior of the principal and the quality of work life themselves.

(Noushin Kamali Sajjad, 2014) studied about the relationship between quality of work life and organizational commitment among the customs employees of Iran/ Guilan province. Walton's eight dimensions of quality of work life and Allen and Meyer's three facets of organizational commitment were used in this study. A conceptual model of the quality of work life and organizational

commitment was examined using the SEM analysis. All the dimensions of quality of work life except growth and security are correlated to the organizational commitment. A regression analysis was also done to confirm the relationship between quality of work life and organizational commitment among the customs employees.

(Afsar, 2014) undertook a comparative study about the impact of quality of work life on organizational commitment among the academicians working for state and foundation universities in Turkey. The study revealed that the quality of work life has a positive impact on the affective and normative commitment while it has a negative impact on the continuance commitment among the academicians working for both the state and foundation universities.

(H Farid, 2015) studied the relationship between quality of work life and organizational commitment among the lecturers in a Malaysian public research university. Correlations of organizational commitment with the dimensions of quality of work life and quality of work life with the dimensions of organizational commitment were examined. The study revealed a high significant relationship between quality of work life and organizational commitment.

(M L Monga, 1981) conducted an exploratory study about the quality of work life's influence on the individual and organizational health of the Public sector in India and also to prioritize the determinants of quality of work life. Perception of the members about the various organizational parameters determined their commitment towards their organization and work. The study revealed that the quality of work life in the public sector was poor and there existed a gap between the managers' expectation and the actual and that this gap seemed significant for all the determinants of quality of work life and that the socio- personal- work related factors could not influence the perception of work life. The study further revealed that there was too much bureaucratization, rule-orientation and adherence to traditional management styles.

(Chandran, 2007) examined the Quality of work life among employees working in the major conventional industrial estates in Kerala. The industrial estate programs and their effect on SSI units were reviewed. Walton's eight dimensions

were used in the study to measure quality of work life. Multi- stage random sampling technique was adopted for the data collection. The study classified quality of work life of industrial estate employees into two: QWL1 and QWL2. All the dimensions were found to have significant roles in the QWL1 while safe and healthy working condition was only found to have a major role in QWL2 while the other factors had minor role towards QWL2.

(Dhar, 2008) investigated the quality of work life among the bus drivers in Pune and studied the factors that had led to an imbalance causing road accidents there. In-depth interviews and naturalistic observation method were used for data collection. The study revealed that the increased road traffic and increasingly tight running schedule had added pressure to the burden felt by the bus drivers and hence it became necessary for the bus operators to improve the workplace practices to reduce job stressors and provide a better work environment for the bus drivers. Moreover the concerned authorities were required to formulate initiatives that safeguard drivers against work stress so that the quality of work life could be improved leading to better transport services and a reduction in the rate of accidents.

(Reena, 2009) studied the extent and levels of Quality of work life and Occupational stress among the Library professionals in Kerala and further examined the relationship between quality of work life and occupational stress. Proportionate stratified sampling method was used in the study. The findings indicated that the majority of the library professionals were having high quality of work life and lower level of occupational stress. Besides, a significant association was found between occupational stress and three independent variables which included size of the library with regard to the number of employees, age and involvement of IT applications. The study was concluded recommending the constitution of Work assessment committees for evaluating the performance of the employees and for appreciating such performances.

(Mu Subrahmanian, 2010) investigated the constructs of quality of work life among the Textile and Engineering employees in TamilNadu. The constructs used in the study included job satisfaction, compensation, human relation, working condition, grievance, competency development, stress, wellbeing etc. The study

revealed that the quality of work life in the engineering industry is better than the textile industry and pointed out that factors like training and development, human relations, work environment, work schedule and counselling needed more attention. The study concluded that the administrators must address the problems by enacting the recommendations with sufficient modifications that seemed fit for their organizations.

(Lokanadha Reddy M, 2010) discussed that quality of work life consisted of opportunities for active involvement in groups working arrangements or problem solving that were of mutual benefit to employees or employers, based on labor management cooperation. The dimensions of quality of work life identified in this study included health and wellbeing, job security, job satisfaction, competence development and the balance between work and non- work life. The study suggested adopting techniques like job redesign, flexible work schedule, participative management, etc to improve the work life quality of an average worker in India.

(Pranee, 2010) studied about the quality of work life for sustainable development and discussed that the strategies and measures adopted in the organizations were mainly focused on satisfying the lower needs of employees like security, safety and welfare measures improving job contents, participation and responsibilities in the decision making process. Besides, the quality of work life issues addressed the factors like high motivation, morale, cooperation and healthy industrial relations in the study.

(SabariRajan A, 2011) examined the extent to which quality of work life influences the organizational performance among the employees of public and private sector banks in Dindigul. Quality of work life was identified using 21 components and was correlated with the perceived quality of work life of both the banks which indicated a significant relationship. A perfect positive correlation was found between the perceived quality of work life and the perceived performance among the employees in both the sector. The study concludes that the performance of an organization can be improved only when the human resources are satisfied with their higher quality of working life.

(Meghana, 2011) explored the direct linkage between performance in growth and profitability and quality of work life, which is a substitute for internal service quality in the service profit chain model. An adhoc approach was employed to test if quality of work life was indeed an important factor for a company's growth and profitability and facilitated an indirect evaluation of the service profit chain model with its internal service quality and growth and profitability elements. The study indicated that the service organizations that accentuated quality of work life were found to have better sales, asset growth and return on asset growth compared to other similar firms. The study concluded that strategies introduced for strengthening human resources could have a positive chain effect on the service organizations' financial performance.

(Dr M Jeyarathanam, 2011) analysed the quality of work life and studied the relationship between productivity and quality of work life among sugar mill employees. Twenty three factors were used to measure the employees mind set affecting the quality of work life. A multiple regression analysis was done to evaluate the influence of factors that determined the quality of work life on productivity. The findings indicated that there existed a fair relationship between quality of work life and productivity and an increase in quality of work life automatically increased productivity. The study was concluded by suggesting that the basic strategy for improving the quality of work life was to identify the employees' important needs and to satisfy those needs.

(Ambily, 2011) undertook a comparative study to identify the factors contributing to the quality of work life of the employees working in the Public and Private sector manufacturing industries in Kerala. A sample of 500 employees was collected for the study. The research findings revealed that Adequacy and fairness in compensation and Safe and healthy working conditions were identified as the major contributors towards quality of work life while the socio-economic parameters like age, education, income and experience had a role in maintaining quality of work life among the employees. Besides, the employees working in the public sector were having better quality of work life compared to the employees working in the private sector. The study concluded that the quality of work environment played a crucial role in the work life quality of the employees.

(S J Manjunath, 2011) investigated the impact of quality of work life on customer satisfaction among the star hotel employees in Bangalore. The study stated that the job satisfaction of the people involved in the process of extending services to the customers was important for achieving customer satisfaction. The findings indicated that the employees were highly dissatisfied with the salaries and other benefits provided to them followed by the work culture and decision making process. The study suggested that a broad human resource policy and professional manpower system should be developed to minimize the challenges faced by this sector.

(Madhesh, 2011) examined the employees' perception on the quality of work life practices followed by the Steel plants in TamilNadu. A multiple discriminant analysis was used in the study, which revealed a positive impact of demographic variables on the quality of work life among the employees. Occupational stress was found negatively correlated with the quality of work life while compensation, opportunity for growth and development and working conditions were identified as the important determinants of the quality of work life in the study.

(P Subburethina Bharathi, 2011) studied the quality of work life among the college teachers within Tiruchirappalli city limit TamilNadu. Sixteen dimensions used in the study were grouped under quality of work life and quality of work life in teaching environment. Disproportionate stratified random sampling method was used to collect responses from 239 teachers. The study revealed that the quality of work life total and quality of work life in teaching environment total was significantly associated and the quality of work life among the college teachers was in low level. The study suggested that quality of work life among the college teachers should be enhanced by integrating the task role and social role thereby the synergies were obtained effectively.

(Shalini Sheel, 2012) discussed in their study on quality of work life, employee performance and career growth that quality of work life policies were increasingly becoming part of the business strategies then and should focus on the potentials of these policies to influence employees' quality of working life in order to help them maintain work life balance along with the performance and

commitment to their work. Career growth opportunity was identified as one of the major determinants of quality of work life while employee performance was correlated with quality of work life. Due to the continued restructuring, downsizing and reorganization in the post recession period, high quality of work life became essential for organizations to attract and retain their employees.

(A Stephen, 2012) investigated the existence of quality of work life as per the view of the employers and employees in the small scale industrial units in TamilNadu since this sector is of national priority. The quality of work life was measured using 45 variables identified by Saklani which were then subjected to construct validity and discriminant validity. The study revealed that the employer perceives more about the existence of quality of work life than the employees and identified that 10 variables contributed to the quality of work life in SSI units. The suggestions put forward include that the employers should take consistent and steadfast measures to improve the quality of work life of employees at the industrial units.

(Tripti Singh, 2012) studied about quality of work life and organizational efficiency and were of the opinion that the efficiency of an organization depends on their work environment, working methodology and employee satisfaction. The model proposed in this study helps in determining the level of satisfaction with quality of work life in an organization whether it was adequate or superior. A superior level of quality of work life in an organization meant a gap between the employer and employee/ organization's perception of various factors of quality of work life was less or negligible while the adequacy level of quality of work life meant that the gap was prominent and needs amending for organizational efficiency.

(Somvir, 2012) investigated the level of quality of work life among the Library professionals working in the Private engineering colleges of Haryana. The work related quality of life scale which measured six core factors like job and career satisfaction, working conditions, general wellbeing, home- work interface, stress at work and control at work was used in this study to explain the variation in an individual's working life quality. The findings revealed that the quality of work life experienced by the librarians were not very high and no significant differences

in the quality of work life mean scores were noticed. The study concluded that the librarians should be given due participation while framing policies in the organization they were serving which in turn help them contributing towards the achievement of the organization's goals and also improving their work life quality.

(P Aranganathan, 2012) attempted to measure the level of perceived quality of work life among the employees working in the Private manufacturing companies in TamilNadu and also to find out the relationship of quality of work life with job related variables and demographic variables. Nine work related factors were identified in the study. The findings indicated that quality of work life was found to have a significant relationship with work related factors. The study suggested necessary measures like employee welfare programs, pay scale according to their performance etc, should be taken for reducing the confusions in the minds of the employees regarding quality of work life

(R Indumathy, 2012) in their research investigated the quality of work life among the workers of Textile industry in Tirupur District – A Textile hub. The researcher pointed out that attitude, environment, opportunities, nature of job, people, stress level, career prospects, challenges, growth and development, rewards and risk involved were the major factors that influenced and decided the quality of work life. The study revealed that the workers were more satisfied with the work environment and safety measures while they were least satisfied with their salary. The study proved that the total work experience had a significant relationship with overall job satisfaction and no such relationship was found between gender and job satisfaction. The research suggested that the work life balance of the employees must be maintained effectively to make the employees free from stress and strain.

(Namrata Sandhu, 2012) examined quality of work life among the employees working in the Indian banking industry. Data was collected from 235 employees using convenient sampling method. Factor analysis was done which revealed five factors- remuneration, opportunities for personal growth, supportive leadership, work environment and work life balance, which influenced the quality of work life among the banking employees.

(Gupta, 2014) examined the relationship between quality of work life and organizational commitment among the employees working in the manufacturing sector. The study covered 171 employees. The results indicated that quality of work life was positively correlated to the organizational commitment and quality of work life had shown a significant impact on the organizational commitment in the study. The study pointed out that the employees with favorable quality of work life were more committed and maintained a long term relationship with their organizations than those employees with unfavorable work life quality.

(D R Swamy, 2015) conducted a survey about quality of work life among the employees working in the Mechanical manufacturing small and medium sized enterprises (SMEs) in Karnataka. The main objective was to develop a valid and reliable scale using the significant dimensions of quality of work life. 1092 employees participated in the survey. The data was analyzed using the principal component factor analysis with varimax rotation. The results indicated that nine most important components of quality of work life, which together explained 82.24% of the total variance, were identified out of the 27 components studied.

(Dr K Srinivasa Krishna, 2015) examined the relationship of the work related factors and demographic factors with the perception of quality of work life and further studied the relationship between quality of life and quality of work among the textile manufacturing workers in the east Godavari district. The work related factors are assessed using the six factors. The study included 422 employees from five textile manufacturing units using the stratified random sampling method. The results revealed that the demographic factors like age, education and income were significantly related to the perception on quality of work life while factors like experience, family size and wealth were not related to the quality of work life. Besides, the quality of work life was found significantly related to the work related factors and the quality of life was assumed as not equal to the quality of work.

Section B

This section exhibits the studies concerning employee satisfaction undertaken by various researchers in different sectors within India and outside

India. The studies were carefully scrutinized by the researcher and presented as follows.

2.3 Studies relating to Employee Satisfaction

(Dail L Fields, 1997) investigated the relationship between the gender composition of an employees' work group and the employees job satisfaction among the employed persons located across the United States. Data was collected from 1634 employees consisting of 820 men and 814 women. Employee satisfaction was identified as a dependent variable while work group gender composition and sex of the employee were identified as independent employees. The findings revealed that the level of employee's job satisfaction was related to the gender composition of the employee's work group and that the relationship of these variables was not affected by the gender of the employees. Besides, higher levels of job satisfaction were found among the men and women working in gender-balanced groups than those working in the homogeneous groups. Mostly male employees working in groups had lowest level of job satisfaction while the groups having mostly women employees had medium levels of satisfaction which revealed that the satisfaction would be highest for employees working in more heterogeneous groups.

(Tat-Wing Leung, 2000) undertook a study to identify the sources of stress and to investigate the predictors of job satisfaction and psychological distress and overall to examine the moderating effect of locus of control on stressor- strain relationships. A multi stage cluster random sampling method was used in this study to collect the sample. A series of stepwise multiple regressions demonstrated that recognition, perceived organizational practices and financial inadequacy were the best predictors of job satisfaction, whereas perceived organizational practices and home/ work interface were the predictors of psychological distress. A series of hierarchical moderated regressions indicated a moderating effect of locus of control on some of the stressor- strain relationships. The study suggested that the university administrations should concern the professors' job stress, as increasing demands were adversely affecting their well being and the students too.

(Rosser, 2005) investigated the potential changes in faculty members' perceptions of their work life and satisfaction over time across the United States. The researcher identified that the potential changes in faculty members' perceptions over time might have an impact on their attitudes and subsequent behaviours and the work life quality of the members' were influenced by both internal and external pressures. The structural equation model was used in the study with three dimensions of quality of work life and four dimensions of satisfaction to examine the conceptual and measurement differences among two samples of research faculty members. The construct validity of the model was supportive and the work life and satisfaction were also constant among the groups. The findings indicated that the faculty members' perceptions had significantly changed over time and the individual characteristics were affecting the perceptions of their work life and satisfaction.

(Rachel W Y Yee, 2008) investigated the impact of employee satisfaction on operational performance in high contact service industries in Hong Kong. The study further examined the relationships among employee satisfaction, service quality, customer satisfaction and firm profitability. Data was collected from 618 respondents from 206 service shops. Structural equation modeling was used in the study to examine the model proposed using AMOS and found that employee satisfaction was significantly related to service quality and customer satisfaction which in turn influences firm's profitability. Besides, the firm profitability had a moderate non-recursive effect on employee satisfaction leading to a satisfaction-quality-profit cycle. The study suggested that operations managers should give due consideration to employee satisfaction to boost service quality and customer satisfaction which in turn would enhance the operational performance of organizations.

(Bulent Aydin, 2009) investigated the effect of organizational culture and spiritual leadership on employee satisfaction in the metalworking manufacturing sector. The employee satisfaction was considered as a dependent variable while organizational culture and spiritual leadership were identified as independent variables. Data was collected from 578 employees for the study. A model developed for the study was identified as significant. The findings revealed that

employee satisfaction had positive significant correlations with organizational culture and spiritual leadership. The regression analysis revealed that organizational culture had more role in employee satisfaction than spiritual leadership.

(Md Zohurul Islam, 2009) conducted an exploratory study about the influence of workers' quality of work life on job satisfaction and organizational performance in Dhaka. A questionnaire survey was done among the non managerial employees, mainly engaged in the production process. The findings indicated that quality of work life was positively related to organizational performance, but was not as significant as hypothesized. A positive and significant relationship was established between quality of work life and employees' job satisfaction. Besides, quality of work life towards workers development like training, workers union and participation in decision making variables were to be met by the management to have a positive impact on the firm's performance.

(Afshan Naseem, 2011) examined the relationship between employee satisfaction and customer satisfaction and the impact of both on the success of organization among hotels in Pakistan. It was viewed that the satisfied employees would culminate customer satisfaction. Data collected was subjected to the principal component analysis which revealed that great deal of employees' satisfaction among the surveyed cohorts where customers also had expressed satisfaction with the existing services. The customers were satisfied mainly with the environmental cleanliness, quality food and room services while the employees were satisfied with the conducive working environment with salary and frequent trainings which enabled the employees to work with dedication to uplift their organization which was clearly reflected by the satisfaction level of customers. The study thus establishes an indirect relationship between employee satisfaction and organizational success which was mediated by the customers.

(Hend Al Muftah, 2011) investigated the relationship between quality of work life and employees' satisfaction and examined the factors influencing the quality of work life in the oil and gas company in Qatar. In their study the physical, psychological and social factors were having a significant relationship with the quality of work life which indirectly influences the employee satisfaction. These

three factors were identified as the predictors of the quality of work life and among this, physical factor is the most important determinant of the quality of work life followed by psychological factors and then social factors. The study suggested that a successful family life affects the employees' career and make them more satisfied with their personal achievements.

(A Sageer, 2012) in their study identified the variables affecting employee satisfaction and their impact on the organization. They categorized the variables into two broad categories of organizational variables and personal variables. Ten variables were identified under organizational variables category and five variables were identified under the personal variables category. They further suggested thirteen ways for improving the employee satisfaction which included communication, creating a team, training, empowering employees, work, fair compensation and benefits, monitor performance and reward for contribution etc thereby increasing the business' revenue and profit.

(Tabassum, 2012) examined the interrelations between quality of work life dimensions and job satisfaction among the faculty members in the private universities of Bangladesh. Walton's eight dimensions were used to measure the quality of work life among the employees. The results indicated that all the dimensions of quality of work life were positively correlated with job satisfaction of the faculty members. Variables like adequate and fair compensation and constitutionalism in the work organization were found highly correlated with job satisfaction while opportunity to use and develop human capacities was least correlated with job satisfaction. The study suggested that by improving the dimensions of quality of work life the organization could improve the job satisfaction among the faculty members.

(S Shujaat, 2013) studied the relationship between career development opportunities available to the employees and their job satisfaction among the private bank employees in Karachi. The study was conducted among 500 respondents from five private banks in Karachi. Chi-Square test was used for testing the hypotheses. The results indicated that career development was positively related to employee job satisfaction which implied that the employees were satisfied with the career development activities provided by the organizations.

(Halil Zaim) examined the employee satisfaction in relation to employee turnover among the small and medium sized enterprises in the Textile industry in Turkey. Factors like pay and benefits, peers, management, working environment and superiors were identified in the study to measure employee satisfaction. The database of Turkish Small Business Administration (KOSGEB) was used in the study to select the sample randomly. A survey instrument was developed to measure the employee satisfaction and loyalty. The research findings indicated that all the factors of employee satisfaction were positively related to the employee loyalty. Pay and benefits were identified as the most important factor contributing to the employee satisfaction followed by the other factors like management and work environment.

(Zohreh Anbari, 2015) studied the quality of working life and its relationship with the employees' job satisfaction among the automotive parts manufacturing factory. Variables like job and career satisfaction, general well being, work conditions, home- work interface, stress at work and control at work were used to assess the quality of work life. The data were collected from 150 employees using the cluster random sampling method. The results indicated that quality of work life was positively related to the job satisfaction and majority of the employees were unsatisfied with their work life quality. Besides, job career satisfaction and general well being were found to have highest impact on the job satisfaction of the employees.

(Ganguly, 2010) examined the relationship between quality of work life and job satisfaction among a group of university employees in Kolkata. Eight variables were used to measure the quality of work life while five variables were used to measure job satisfaction. This study revealed that there exists a positive correlation between quality of work life and job satisfaction since the satisfaction or dissatisfaction experienced by the employees are highly dependent on the positivity or negativity of the relevant dimensions of quality of work life.

(A Sabarirajan, 2010) studied about the various welfare measures and their impact on quality of work life among the textile industries in TamilNadu. Being a highly labour intensive industry, it had to concentrate more in the area of employee welfare. The study revealed that the employees were highly dissatisfied with their

welfare measures. Moreover, the welfare measures like recreational facilities, grievance handling, medical facilities, etc play an important role in the employee satisfaction which resulted in improved quality of work life.

(D'Souza) studied about the employee satisfaction among the employees of Sangareddy depot in Andra Pradesh. Data was collected from 100 permanent employees and the findings suggested that majority of the employees felt that they had a high level of job security and wanted to continue their services. The employees were satisfied with their training, working environment, and salary. The study suggested that the organization should consider the suggestions and recommendations given by the employees and should take corrective actions. Besides, the organization was to open up a feedback system for assessing the employee satisfaction and thereby take decisions that will result in increased productivity and loyalty.

(Daljeet Singh Wadhwa, 2011) investigated the employee satisfaction in terms of behavioral, organizational and environmental factors among the employees working in the cement industry of Chhattisgarh. The study attempted to find the relationship between these factors and employee satisfaction. Samples of 150 employees were collected for the study. The findings indicated that all the three factors had a positive impact on the job satisfaction and among these factors; organizational factors were identified as the most important aspect. The study suggested that employees were to be treated equally and fairly and to be supervised properly in order to increase their satisfaction level towards their job.

(Dr Meenakshi Gupta, 2011) examined the factor credentials that enhanced the quality of work life and studied whether and how the quality of work life affected the satisfaction level of BSNL employees in Jammu region. Walton's eight dimensions were identified as the factors that determined the satisfaction with the quality of work life in the organization. The findings indicated that there was a higher level of satisfaction among the employees regarding quality of work life and all the dimensions were found positively correlated with the quality of work life. The study concluded that the quality of work life among the employees could be enhanced by improving these dimensions of quality of work life.

(Sakthivel Rani, 2011) studied the relationship between employee satisfaction and work/ life balance among the IT employees in India. The relationship between different constructs like career opportunities, recognition, work task, pay, work/ life balance, superior subordinate relationship and employee satisfaction were examined at first and further examined whether these constructs leads to employee satisfaction by keeping the work/ life balance as a mediating construct. Data was collected from 210 middle level employees from twenty IT companies. The findings indicated that work task and employee satisfaction was highly correlated with a mediator variable of work/ life balance.

(C Swarnalatha, 2012) analyzed the relationship of management practices like employee empowerment, team work, employee compensation and management leadership with the employee job satisfaction among the employees working in the first line of management in the automotive industries in India. 234 employees were included in the study. The findings indicated that the management practices were significantly positive predictors of the employee job satisfaction and suggested that the level of employee satisfaction can be improved through the implementation of management practices.

(D Chitra, 2012) have studied whether employees' perception towards quality of work life has any impact on job satisfaction. Ten variables under three facets namely affective, cognitive and instrumental facets were used to measure the quality of work life and tested their relationship with job satisfaction. The findings suggested that only three out of ten variables of quality of work life are significant predictors of job satisfaction.

(M L Meena, 2012) studied about the employee satisfaction among the employees working in the private sector and public sector banks in Rajasthan. Three banks were selected from the public sector, which included State Bank of India, Bank of Baroda and Punjab National Bank while two banks were selected from the private sector which included ICICI Bank and HDFC Bank. 315 employees (63 employees from each bank) were taken as samples for the study. The findings revealed that satisfied employees positively contributed towards the organizational effectiveness and performance.

(Sinha, 2013) examined the satisfaction level of employees in KRIBHCO, Surat. Systematic sampling was used in the study. Using the factor analysis, the 23 major variables identified in the study was reduced to 5 factors which included empowerment and work environment, working relationship, salary and future prospects, training and work involvement and job rotation. Kruskal-Wallis and Mann Whitney Rank test was used to test the data. The research indicated that the employees were satisfied with their organization. Besides, the satisfaction level of the employees did not differ with respect to job rotation among the gender and training opportunities between different age groups while the satisfaction did differ with regard to salary and experience.

(D Manjula Sureshkumar, 2014) examined the influence of quality of work life on the job satisfaction of the employees working in the private sector commercial banks operating in Virudhunagar District. The data was collected from 413 employees working in 54 branches of 11 private sector commercial banks. Wilk's Lamda Test, Discriminant Analysis and Kruskal Wallis Test were applied in the study. The Discriminant Analysis technique was applied in the study to determine the most important factor predicting the job satisfaction of employees. The findings implied that organizational culture and climate strongly predicted the job satisfaction and significant difference was found between the levels of satisfaction among the private sector bank employees.

(Bidyut Bijoya Neog, 2014) studied the factors influencing the employee's job satisfaction and further examined the relationship of factors like salary, supervisor support, working environment and job security with the employee's job satisfaction among the employees working in the automobile service workshops in Assam. The study covered 100 respondents from authorized service workshops of ten automobile manufacturers. The study revealed that the job satisfaction level among the employees was average and salary was identified as the most important factor affecting the job satisfaction of the employees although all the factors were found positively related to job satisfaction.

Section C

Section C presents the studies pertaining to the employee turnover undertaken by various authors in different sectors inside India as well as outside India. The researcher had carefully examined the studies with regard to their objective, methodology, findings and suggestions. The studies were consolidated and detailed as under.

2.4 Studies relating to Employee Turnover

(Hammerberg, 2002) investigated the reasons for employee turnover in a full priced department store. The study was conducted among 1190 employee exit interviews among a chain of 53 department stores. From the analysis of data, 41 different reasons were identified and categorized in to six groups based on the similarities found. The results indicated that full time and part time employees mostly left due to job related reasons while hourly employees left due to non-job related reasons. Besides, no significant differences were found between male and female employees regarding the reasons given for termination. The study suggested that appropriate programs are to be developed to reduce the employee turnover level with in the retail organizations.

(W Stanley Siebert, 2006) examined the impact of labor turnover on labor productivity among the employees working in different shops under a large clothing retailer in UK. The study was conducted using a panel dataset of 347 shops over 1995 – 1999. An inverted U shape effect of labor turnover on productivity was observed for the within shop link which implied productivity had increased up to a level and then started decreasing. On contrary to this, a positive link was found between average rates of turnover and average productivity which may be due to the better managers using high turnover matching the job and to compact labor inputs more closely to seasonal fluctuations in trade.

(Zeynep Ton, 2008) studied the impact of employee turnover on performance of the employees among the US stores of a major retail chain. The study was emphasized on process conformance which indicated the extent to which the managers aimed to reduce variation in stores operation with regard to the set of prescribed standards for task performance. The study covered 268 stores and from

each store, turnover and performance data was collected over the period 1999 – 2002. The results revealed that increasing turnover had a positive effect on the stores performance at high process conformance stores while the turnover had a negative effect on the stores performance at low process conformance stores. The study suggested that the managers can reduce the effects of turnover by imposing process discipline through the standard operating procedures.

(AHM Shansuzzoha) investigated the actual reasons behind employee turnover and its negative effects on the productivity of different industries (both from government and non government sectors) in Bangladesh. The researchers pointed out that the factors that causes turnover of employees were the economy, job characteristics, demographics, the person, bad match between employee's skills and the job, substandard equipment, lack of opportunity for growth, inadequate appreciation, inadequate supervision and training and unequal wage structure. The study revealed that turnover rate was higher in the private sector compared to the government sector. They further indicated that overall productivity of an organization was hampered by the employee turnover and hence adequate care must be taken to minimize the turnover rate as minimum as possible.

(Abdali, 2011) analyzed the impact of employee turnover on sustainable growth of organization in computer graphics sector in Pakistan. The study discussed about the major causes of employee turnover and various methods to control it. The data was collected from 60 employees working in the computer graphics companies using the cluster sampling design. The study revealed that age, education, tenure, income etc did not have impact on the turnover of the employees while professional qualification did have an impact on the turnover. Besides, a significant difference was found between the strategies of younger and older employees working in the computer graphics companies.

(M M Ghayas, 2012) studied the impact of job satisfaction on the turnover intention among the employees working in the Pharmaceutical industry in Karachi. Data was collected from 282 employees working in the industry using the 29 item questionnaire. Job satisfaction was measured using 24 items in the questionnaire while 5 items were used to measure the turnover. Factor analysis and multiple regression analysis were used to test the hypothesis. The results revealed that the

compensation, co-workers' attitude, work satisfaction, supervisor's support, promotional opportunities and the communications have a negative impact on the turnover intentions among the employees in the Pharmaceutical industry.

(S E Mbah, 2012) examined the job satisfaction and employees' turnover intentions in total Nigeria PLC in Lagos State. Pay, nature of work and job satisfaction was identified as the facets of job satisfaction that affected the employee turnover intention. A survey was conducted among 300 employees using questionnaire and personal interview. The findings indicated that job satisfaction was inversely related to the employee turnover which meant an increase in the job satisfaction resulted in a decrease in the employee turnover. They suggested that indices like pay structure, conducive nature of work and suitable supervision tactics for accomplishing the satisfaction of the employees which in turn will have a tendency to reduce the employee turnover.

(Arokiasamy, 2013) investigated the reasons behind employee turnover and its damaging effects on the productivity of manufacturing industries in Malaysia. The researcher discussed that the reasons behind turnover were job dissatisfaction, pay, career promotion, fringe benefits, management, job fit, personality, perceived alternate employment opportunity, unionization and influence of co-workers. The researcher further suggested strategies to minimize employee turnover which included recruiting suitable employees, retaining valuable employees, practices of the organization, economic factors, effective leadership, training and development, clear job expectations and balancing between work and family life.

(Lucie VNOUCKOVA, 2013) analyzed the impact of motivation principles on the employee turnover. The content analysis was done to identify the motivation principles based on professional and scientific publications on motivation. 13 motivation principles were identified based on the content analysis. The factor analysis was then carried out to assess the data collected and analyzed based on two quantitative surveys centered on the causes of employee turnover. The results suggested that lack of motivation principles may lead to employee dissatisfaction and disaffection and may in turn result in employee turnover.

(R S Siddiqui, 2013) examined the impact of emotional intelligence on the turnover rate of first line managers of FMCG organizations in Karachi. Data was collected from 40 employees working at first level management level belonging to the age group of 20 – 40 years and having qualified between intermediate and master's degree. Karl Pearson's Coefficient of Correlation and linear regression analysis was used to analyze the relationship. The results indicated that low emotional intelligence is having a strong impact with the increased employee turnover rate. Thus it substantiates the general belief that low emotional intelligence is a determinant of high turnover rate among the FMCG first line managers.

(Furssso, 2015) assessed the impact of employee turnover among the employees working in Oromia Water works design and supervision enterprise, Ethiopia. The data was collected from 217 employees working in that organization using the systematic and purposive sampling methods. The findings of the study implied that external factors like terms of employment, favorable government policy, working environment and conditions, etc were external factors causing employee turnover while factors like lack of good treatment of workers, lack of recognition and encouragement, etc were internal factors effecting the turnover of the employees.

(Sarosh Kuruvilla, 2010) discussed the reasons for employee turnover among the BPO sector in India. Their study was focused in the BPO sector where highly educated employees were performing low cost, low skilled jobs. They identified that the employee turnover may be caused due to job related factors, demographic profile of the workers and psycho-social factors. After conducting interviews and collecting evidences from the industry personnel, the researcher pointed out the reasons behind such turnover was that although the firms were experimenting variety of retention strategies, they were unable to develop an integrated organizational culture that should focus on longer organizational performance and on retention strategies. The researcher further suggested some newer approaches like developing a fun culture and developing family friendly practices for reducing the turnover among the BPO employees.

(Janani, 2014) examined the factors affecting employee turnover in the IT industry in India. The researcher has adopted Mobley's model discussing the process of making turnover decisions. The attrition rate of the top IT companies during the year 2013 was examined in the study. The study suggested certain ways to reduce the employee turnover among the IT industry of which compensation was the most important one. The researcher further suggested that the IT companies should create strategies to reduce the employee turnover thereby reducing the expenditure incurred for recruitment, training and development of the new employees.

(Thomas, 2015) investigated the reasons behind employee turnover and its effect on the development industries in Kerala. Eight factors were identified as the causes for employee turnover while twelve factors were stated as the effects of employee turnover. The study was conducted among the project managers/engineers working in the construction firms. Other employment opportunities was identified as the major cause for employee turnover while increased work load and training and development cost were identified as the main effects of employee turnover.

(Purohit, 2016) studied the employee turnover in the IT sector in India. The researcher stated that the biggest challenge faced by the Indian IT industry is about retaining the talent instead of not attracting the prospective employees. The researcher had classified the factors affecting employee turnover in Indian IT industry in to push factors or controlled factors, pull factors or uncontrolled factors and personal factors. The study further examined the causes of employee turnover in the top IT companies in India - Wipro Tech Ltd and Infosys.

Section D

This section presents the studies conducted in the IT sector by various researchers in India and outside India. The studies were presented in a consolidated manner and detailed as below.

2.5 Studies relating to the IT Sector

(Pascale Carayon, 2003) studied about job characteristics and quality of work life in the IT workforce and examined the factors relating to the work environment that resulted in the high turnover among the women employees in the IT workforce. This study measured the impact of gender and job type (IT jobs and non IT jobs) on the various quality of work life indicator and further the relationship between job and organizational factors and quality of work life. The results indicated that IT workers had higher job satisfaction and lower job strain than non IT workers while gender had no impact on quality of work life. Irrespective of the type of job and gender, feedback and autonomy were consistently related to job satisfaction and work pressure was related to job strain. Women IT workers' job satisfaction was affected by work pressure and their job strain was affected by task significance, whereas job strain experienced by non IT workers was affected by autonomy.

(Dean Elmuti) examined the financial as well as the human aspects of outsourcing activities since the activities handled by the internal staff was performed by outside resources. The data was collected using field surveys. The first survey was conducted in Plant A just before the implementation of outsourcing program to assess the employee attitudes and quality of work life facets and the second survey was conducted in Plant B after 18 months when the program had initiated, in order to assess the changes on employee perceptions. The study was conducted among 548 employees in Plant A and 540 employees from Plant B in the first survey, while 362 employees from Plant A and 610 employees from Plant B were included in the second survey. The results of this research indicated that the outsourcing strategies had a negative impact on the perceived quality of work life dimensions. The performance results in this study indicated that the outsourcing technique improved the employees' performance and productivity.

(Jen Schoepke, 2004) examined the quality of work life among men and women in the IT workforce and evaluated and compared the predictors of quality of work life and further studied the relationship between job characteristics/ demographics and whether the quality of work life varied for women and men.

Factors of quality of work life like job satisfaction, fatigue, tension, organizational involvement and burnout while predictors of quality of work life like IT demands, role ambiguity, decision control, challenge and demographics were also assessed. The study indicated that the women in the IT jobs had not reported poorer quality of work life and had greater organizational involvement compared to men in the IT jobs and concluded that the role ambiguity and decision control were statistically significant predictors of organizational involvement.

(Guna Seelan Rethinam, 2008) studied about the constructs of quality of work life among the IT professionals in Malaysia. They stated that the work force greatly affected by the dynamic changes in work environment is the IT professionals. The findings suggested that the main elements of quality of work life like health and well being, job security, job satisfaction, competency development etc are expected to help the human resource practitioners as adult educators to co-design the IT work with humanistic factors and this will ensure the smooth modulation of the modern work force towards a knowledge based work force.

(Alireza Bolhari, 2011) studied the level of quality of work life among the information technology staffs in Iran and examined the relationship between quality of work life and demographic characteristics among them. The results suggested that the level of quality of work life among the IT employees were medium and need managers' attention to enhance it. No significant relationship was approved between gender and quality of work life, but relationships between quality of work life and age, work experience and income were approved.

(Dasgupta, 2010) explored the emotional intelligence and its relationship with psychosocial variable like quality of work life, work family conflict and perceived happiness in order to understand the importance of the component among the female IT professionals. The emotional intelligence scale developed by Schutte et al (1997), quality of life scale developed by Dasgupta and Pal, work family conflict scale and family work conflict scale developed by Netemeyer et al (1996) and subjective happiness scale developed by Lyubomirsky and Leeper (1997) were used in the study. The research revealed that the emotional intelligence was positively correlated with quality of work life and happiness,

indicating that it contributed towards achieving higher quality of work life and greater perceived happiness while it was negatively correlated with both the domains of work family role conflict, indicating that emotional intelligence tunes down the perception of role conflict and thereby reduces the outcome, stress.

(J Arthi, 2011) studied the impact of quality of work life on organizational commitment among the ITES employees in Coimbatore. A regression model was developed in the study for showing the effect of quality of work life on organizational commitment. The study suggested that the quality of work life programs to be enhanced to advance the commitment level among the employees working in the ITES sector.

(Neena Malhotra) examined the extent of human resource development climate prevailing in the IT organizations in India. The human resource development survey covered ten dimensions that included rigorous selection process, value- based induction, comprehensive training, team based job design, working conditions, employee friendly work environment, development oriented performance appraisal, compensation, career development and value added incentives. Data was collected from 500 employees working in the selected IT companies. The findings revealed that the human resource development climate is very favorable, positive and satisfactory in the IT industry in India.

(B R Celia, 2012) carried out a study on quality of work life among the IT professionals in Chennai to identify the level of quality of work life in the organizations. Nine variables were used in this study to measure the quality of work life. Stratified random sampling method was used for collecting the samples. The study revealed that the employees were least satisfied with the hours of work followed by job security and worker participation. The IT professionals had a lower level of satisfaction on the salary and rewards given and the welfare measures while satisfaction was higher with superior subordinate relationship and working conditions. The study recommended that the hours of work, job security and worker participation should be duly considered to improve the satisfaction level of the IT professionals.

(M Kavitha) investigated the quality of work life among the employees working in the IT sector. The main objective of the study was to know the employees balance their life and to identify the health determinants in working life of the employees. The results indicated that the work environment, job analysis, satisfaction and motivation were the major determinants of quality of work life that helps in the better performance of employees in the organization. The researchers further suggested various strategies like job enrichment and job redesign, autonomous work redesign, opportunity for growth, job security etc to improve the work life quality of the employees.

(Vijayasri, 2013) studied the role of Information Technology (IT) industry in India. She examined the role of IT in the global level and in India; its growth in India and studied the impact of IT on Indian economy. She pointed out in this study that the size of IT sector had increased at a tremendous growth rate of 35 percent during the last 10 years. She further explained various promotional schemes introduced by the government to promote the growth of this sector. The study was concluded by expecting that Indian IT sector was likely to enjoy a steady and sustained growth for another decade.

(Megha Jain) examined the impact of employee retention strategies within the Indian IT sector. The study focuses on the dysfunctional employee turnover (productive employees leaving the organization). Variables associated with employee turnover like welfare benefits, personal satisfaction and organizational culture were also studied. The results indicated that employee retention strategies had an impact on the employee turnover in the IT sector.

(V Kubendran, 2013) studied the overall quality of work life and the impact of quality of work life on employees working in the IT companies in Coimbatore region. The sample included 132 employees working in the IT companies. The quality of work life was estimated using working conditions, pay particulars, social integration, career planning and employee opinion on management. The results revealed that quality of work life was found largely associated with the age of the employees while no association was found in the quality of work life based on work experience.

(Taranjit Singh Vij, 2014) in their study explained in detail about the origin of IT industry in India. They further pointed out the strength, weaknesses, opportunities and threats faced by the IT industry in our country. The growth and development of the industry, the major IT companies and the major IT hubs in India were also discussed. Tata Consultancy Services (TCS), Cognizant Technology Solutions, Infosys etc were pointed out in this study as the top IT companies operating in India.

(Bura Naresh, 2015) studied about the job hopping (an advanced term for employee attrition) scenario in the software industry in India. Seven dimensions were used to study the problem of job hopping. The data was collected from 390 employees working in the three major IT companies – Tata Consultancy Services, Infosys Technologies and Wipro Technologies. Among the seven dimensions, job satisfaction, employee turnover, psychological factors, role conflict and welfare measures were found as the significant factors affecting the job hopping. The study pointed out that the average attrition rate is higher among the Wipro while TCS has the lowest attrition rate of employees.

(Daimy, 2016) examined the motive or reasons behind the pool of IT professionals focusing Indian IT industry. The study was conducted among 382 IT professionals randomly selected from each of the top level, middle level and bottom level employees in Kerala. Ten variables were identified as the reasons for joining the IT companies and were ranked on the basis of Garrett's Ranking Analysis. Attractive salary was the variable ranked first which was followed by reputation of the company and better working environment.

2.6 Research Gap

The present study entitled “Quality of Work life in the IT sector in Kerala” is a novel topic attempted by the researcher to fill the research gap identified after reviewing the various studies relating to quality of work life, employee satisfaction and employee turnover. Although various studies have been done on Quality of work life in the IT sector in other states, no such study was conducted in the context of Kerala. Besides, the quality of work life in relation to employee

satisfaction and employee turnover was not yet studied in the IT sector. Thus the present study is initiated to fill this research gap.

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Chapter 3

**Quality of Work Life, Employee
Satisfaction and Employee Turnover - A
Theoretical Overview**

3.1 Introduction

The present chapter details the theories relating to the quality of work life, employee satisfaction and employee turnover. The evolution of quality of work life, quality of work life in India, its meaning, its importance and the components of quality of work life were described in detail. Similarly the meaning of employee satisfaction and employee turnover, its importance and components were also explained. The main objective of this chapter was to identify the importance of the concepts of quality of work life, employee satisfaction and employee turnover and hence the theories relating to these concepts were discussed in detail in the present study.

The present chapter is presented in three sections. Section A relates to the theories based on Quality of work life. Section B is concerned with the Employee satisfaction; and Section C details the theories related to Employee turnover.

Section A

Section A provides a framework about the Quality of work life, its meaning and definition, the evolution of quality of work life, the development of quality of work life programs, quality of work life in India, the importance of quality of work life, the dimensions of quality of work life used in the study, its relationship with employee satisfaction and employee turnover.

3.2 Quality of Work Life – Meaning and Definitions

Different people assign different meanings to the term Quality of work life; some consider it as industrial democracy or codetermination with increased employee participation in the decision making process (C P Garg, 2012). Quality of work life can be considered as a philosophy, a set of principles, which believes that the people are the most invaluable resource of an organization as they are trustworthy, responsible and capable of making a significant contribution (Nafei, 2015) and hence they should be treated with dignity and respect. Quality of work life can be defined as the favorable conditions and environment of a workplace that support and promote employee satisfaction by providing them with rewards, job

security and growth opportunities (Florence Muindi, 2015). Quality of work life can be viewed as below:

1. For Managers and Administrators - Quality of work life denotes improvement in the psychological aspects of work to enhance productivity.
2. For Union and workers - Quality of work life is the equitable sharing of profits, job security and health and human working conditions.
3. Others (in a broad view) - Changing the entire organizational climate by humanizing work, improving social relationships at work place, individualizing organizations and changing the structural and managerial systems.

The concept of quality of work life can be viewed in different approaches. One approach is of a broad view encompassing all aspects of work life, including wages, hours of work, work environment, employment benefits, career prospects and human relations. In other words, it embraces the whole gamut of every conceivable aspect of work ethic and work conditions (Merton, 1977). Another approach considers the positive value level ascribed to a given job as it affects the worker. This view examines the need for meaningful and satisfying work experiences and participation in decision making that affect the work lives (Y Delamotte, 1984) (Mankidy, 2004).

The essence of quality of work life, as evident from the major studies carried out both in India and abroad, is the opportunities for the employees at all levels to have substantial influence over their work environment by participating in the decision making process relating to their work thereby enhancing their self esteem and overall satisfaction from their work (Bhattacharya, 2002). Thus, the quality of work life is concerned with humanizing the work environment, ensuring the job security and improving the social coherence at workplace and thereby enhancing productivity of both the employees and the organization. Improving the quality of work life is a process by which an organization seeks to unlock the creative potentiality of its employees by participating them in decisions affecting their work life (Madhesh, 2011).

Quality of work life can be understood as the goal, the process and the philosophy (Dr Rajesh Bagga, 2008). It is detailed as below:

The Goal

- Organizational effectiveness
- More challenging, satisfying, effective jobs.

As a goal, the quality of work life tries to improve organizational effectiveness through the creation of more challenging, satisfying and effective jobs and work environment.

The Process

- The involvement and commitment of people throughout the organization.

As a process, quality of work life calls for efforts to realize this goal through the active involvement of people throughout the organization. It is concerned about organizational change usually from a control to an involvement organization.

The Philosophy

- People are seen as assets not costs.

As a philosophy, the quality of work life views people as assets capable of contributing skills, knowledge, experience and commitment, rather than as costs that are merely treated as extensions of the production process. It recommends that encouraging involvement and providing the best work environment produces tangible rewards for both individuals and organizations.

Robert H Guest (1979) defined Quality of work life as “a generic phrase that covers a person’s feelings about every dimension of work, including economic rewards and benefits, security, working conditions, organizational and interpersonal relations and its intrinsic meaning in a person’s life” (Madhesh, 2011).

Nadler and Lawler identified QWL in their various definitions as follows:

First definition (1969-1972)	QWL was identified as a Variable
Second definition (1969-1975)	QWL was treated as an Approach
Third definition (1972-1975)	QWL was identified as Methods
Fourth definition (1975-1980)	QWL was considered as a Movement
Fifth definition (1979-1982)	QWL was treated as the Best Approach
Sixth definition (1983)	QWL was identified as a Thought or an Ideal

Nadler and Lawler (1983) provide a summarized definition of Quality of work life “as a way of thinking about people, work and organizations. Its distinctive elements are: (i) a concern about the impact of work on people as well as on organizational effectiveness; and (ii) the idea of participation in organizational problem solving and decision making” (Gupta, 2016).

According to Johnstorn, Alexander and Robin, Quality of work life is more than simply a concept, means or an end (T D Tiwari, 2005). It embodies the following inter- related set of ideas.

1. Ideas dealing with a body of knowledge, concepts, and experiences related to the nature, meaning and structure of the work.
2. Ideas dealing with the nature and process of introducing and managing organizational change; and
3. Ideas dealing with outcomes or results the change process.

Robbins (1989) defines Quality of work life as “a process by which an organization responds to employee needs by developing mechanisms to allow them to share fully in making the decisions that design their lives at work” (Nafei, 2015) (Khera, 2015).

The definitions of quality of work life put forward by various authors are briefly explained in the table 3.1.

Table 3.1 Definitions of QWL given by Various Authors

Author's Name and Year	Definitions of Quality of Work Life
N R De (1976)	De pointed out the Quality of work life as an indicator of society's freedom from exploitation. He expressed that the exploitation, injustice, inequality, oppression, etc which obstructs the continuous growth of human resources can be eliminated by providing good quality of work life.
Richard Walton (1977)	He defined the quality of work life as the work culture that serves as a corner stone in an organization which means the work culture should be recognized and amended for improving the quality of work life of that organization.
R Cohen and E Rosenthal (1980)	They defined the quality of work life as an international endeavour designed to produce increased labour management cooperation to jointly overcome the problem of improving the performance of the organization and the employee satisfaction.
Hans Van Beinum (1984)	He defined the quality of work life being founded on a general approach and an organizational approach. All those factors affecting the physical, social, economic, psychological and cultural well being of workers were included in the General approach while the design and operations of the organization complying the value of a democratic society was referred as Organizational approach.
Fred Luthans (1995)	He viewed the quality of work life as the predominating purpose which is meant to change the climate at work place so that the human- technological- organizational interface leads to an improved quality of work life.

Thus, from the above definitions of the quality of work life, we can conclude that the quality of work life is concerned with the working environment prevailing in an organization and the effect of this working environment on the workforce as well as on organization's effectiveness. They further suggested that the work culture prevailing in an organization should be amended for improving the quality of work life and employee satisfaction.

3.2.1 Evolution of Quality of Work Life

In the early 20th century in order to protect employees from job- injury and to eradicate hazardous working conditions, a statute law was enacted, followed by the unionization movement in the 1930 and 1940s (Madhesh, 2011) were considered to be the initial stages of the evolution of the concept of quality of work life. Due to the process at the workplace and for ensuring economic gains to the workers, more priority was given to the job security. As a result of the industrial revolution, the work organizations were forced to increase their productivity. In an attempt to achieve this, Frederic Taylor (1947) came up with the Scientific Management movement. Taylor considered that specific task and clear instructions should be given to the employees before hand and the burden of planning and designing the work should be removed from them. He also administered the 'Division of Work' which means dividing a work into various parts and assigning each part to a different worker thereby enabling them to specialize in that work. He further introduced various incentive schemes thereby enabling workers to earn a certain percentage of the incentive after achieving a particular level of production.

Through his Time and Motion Study, the Division of Labour and Incentive Scheme, he tried to improve the work life of employees thereby contributing towards quality of work life. Though his work was most popular, he was the most criticized one. The scientific management principles were concentrated only on increasing production levels and ignored the human element. The workers felt that the management had set up strict and rigid standards which an average worker could not be reached since their sole objective was to increase production. The workers further felt that they were being cheated and exploited due to the indifference on the part of the employers. Apart from that, the incentive scheme resulted in groupism, back biting and spoiled the working environment since only

a skilled worker could earn more whereas a below average worker could not earn normal wages since standards were also set to earn normal wages. The workers assigned this to the scientific management.

Henri Fayol with his Fourteen Principles was another contributor of similar approach. With his principles of Division of Work, Unity of Command, Unity of Direction and *Espirit De Corps*, Fayol tried to improve the general management while Taylor was concentrated on the Shop- Floor Management. Various groups of academicians, researchers, workers etc felt that Taylor considered human beings as just another factor of production. They argued that Taylor's approach was mainly mechanical and this negative approach towards human beings was mostly criticized.

The researchers paid more attention to the human approach in the industry when the criticism on scientific management grew with the realization of the human capability. The industrial unrest and constant bickering among management and workers accentuated the need to think of a different approach which can overcome the drawbacks of scientific management and give due importance to the human element which finally resulted in the 'Human Relations Movement'.

The emergence of different theories by psychologists proposing a 'positive relationship between morale and productivity' and discussing about the possibility of improving both by enhancing the human relations was seen in the 1950s and 1960s. The human relations movement was mainly concerned with interpersonal and group relationships among workers and recommended participatory and democratic style of supervision to accomplish work efficiency. Maslow (1954), Herzberg (1959), McGregor (1960) etc were all major contributors towards this view. Equal employment opportunity and job enrichment schemes were also introduced as a result of the attempts made for reform. Finally, it was in 1970s, Richard Walton constituted the ideal of Quality of Work Life which encompasses the earlier developments and included 'the values that were the core of these earlier reforms' and 'human needs and aspirations'. The theories of Motivation and Leadership have also laid the foundation to the concept of Quality of work life.

Quality of work life has its lineage to the theories of Maslow, Herzberg and McGregor (Madhesh, 2011). Abraham Maslow's Motivational theory of need hierarchy is corresponding to the factors of quality of work life. Monetary benefits can be viewed as basic needs followed by good working conditions, career planning and growth and development of human capabilities which satisfy the social needs. The opportunity to use and develop human capabilities fulfills the esteem needs and finally challenging work introduced by Walton can be compared to the self actualization need in the Maslow's need hierarchy. The correspondence of Maslow's need hierarchy theory to Walton's dimensions of quality of work life is shown in the table 3.2.

Table 3.2 Maslow's Need Hierarchy Theory to Walton's Dimensions of QWL

Abraham Maslow's Need Hierarchy Theory	Richard Walton's Dimensions of Quality of Work Life
1. Basic Needs	Monetary Benefits and Good working conditions.
2. Social Needs	Career Planning, Growth and Development of Human Capacities
3. Esteem Needs	Opportunity to use and Develop Human Capacities
4. Self Actualization Needs	Challenging Work.

Quality of work life aims at satisfying both the motivational and hygiene factors defined by Herzberg. McGregor in his Theory X has stated that Management by direction and control would not succeed since the employee's psychological and safety needs are reasonably satisfied (Madhesh, 2011) and the higher level needs are becoming predominant. In contrast to this, Theory Y delineates the democratic approach and argues that people are not lazy and unreliable by nature. Quality of work life also assumes that all the employees are creative and reliable on the basis of Theory Y. Hence it is obvious that the quality of work life has its roots from these theories of motivation.

The activities of the quality of work life gained prominence between 1969 and 1974 when a group of researchers, scholars, union leaders and governmental bodies showed interest in how to improve the quality of an individual through on the job experience. A work was published in America regarding this issue which was sponsored by the US Department of Health, Education and Welfare. The US government was forced to address some of this issue due to the pressure of inflation at that time. Consequently, a Federal Productivity Commission was established which sponsored several labour management quality of work life experiments which were jointly undertaken by the University of Michigan quality of the work programme and the newly evolved National Quality of Work Centre.

Only in 1970s, the term Quality of Work Life made its appearance in research journals and press in the USA. The term Quality of Work Life was introduced by Louis Davis. The first International Conference on Quality of Work Life was held in Toronto in 1972 and an international council for quality of work life came into force in 1972. From 1980 onwards Employee centered productivity programmes were carried out with due importance to quality of work life. At the second international conference on Quality of Work Life held in Toronto in 1981, 1500 participants were there, including 200 unionists and 750 management people and they outnumbered the academicians, consultants and officials in attendance. This was an evidence of the rising tide of interest in the quality of work life movement.

Quality of work life gives more emphasis on the human factor in the workplace (Madhesh, 2011). Richard Walton, an American Professor, played a major role in developing the concept of Quality of work life. The eight dimensions to measure the quality of work life were advocated by Walton. These dimensions are mostly used to measure the quality of work life worldwide.

Initially the quality of work life programs included only job redesign efforts. A Socio- Technical System should be provided to the workers to enable them to participate in the design of their jobs. The specific objectives of the organization should be communicated to the workers and they should be given opportunities to plan and design their own activities. Further, the employees should be able to examine and review their own work which enables them to learn from

their own mistakes. The role of supervisors should be limited to activities like ensuring resources, coordinating, forecasting etc. But with the innovation of the sophisticated technology, the quality of work life movement based on socio-technical system approach has gradually widened to include a wide variety of interventions like job enrichment, stress management, job satisfaction, promotion and career planning, quality circles, employee participation etc.

In the mid 1990s till today faced with various challenges like rising educational levels, corporate restructuring, occupational aspiration etc, the quality of work life is re-emerging and there are rising concerns for quality of work life where employees are searching out for more meaning for career and personal life. Thus the term quality is no more a specialized word, but has become a necessity for the best survival in this era.

The evaluation of the concept, Quality of work life can be traced in to three phases:

1. Scientific Management - It was propounded by F W Taylor and concentrated on improving the productivity of work organization. The workers were ignored and treated as a factor of production. Though the production levels increased initially due to the application of the principles of scientific management, the elimination of the human elements soon affected it. It was to overcome the drawbacks of scientific management, Human relations management evolved.
2. Human Relations Management - Various Psychological theories were evolved and concentrated on the inter-personal and group relationships among workers and advocated participatory and democratic style of supervision to achieve work effectiveness (Madhesh, 2011).
3. Social-Technical Movement - This system implies that the design of the organization must be compatible with its objective, to adapt to change and capable of using the creative abilities of the individual. A whole organization is redesigned to serve the needs of people as well as production.

3.2.2 Quality of Work Life in India

Indian philosophy propounds self – actualization as the goal of life and treats work as a way of life performed in achieving that ultimate goal. The work life is viewed as a spiritual discipline in India. The traditional teaching considers the work place as a temple and work as worship. ‘To perform one’s duty is to worship the lord himself’ avows the Bhagavat Gita (Srivastava 1990). It has been observed that the central theme of the Bhagavat Gita is Karma Yoga. The Karma Yoga implies action, duty or work which is to be performed without a selfish need, but with the motive of surviving humanity. Besides, the Karma Yoga is concerned with the various stages of development – development of the self, the community, the society and the industry (Ganguly, 2010). The ideal put forward by the Karma Yoga commensurate with the Maslow’s Need Hierarchy theory.

The concept of Quality of work life is familiarized in India by the V V Giri National Institute of Labour. The four major factors that led to the QWL movement in India are (Khanka, 2011)

1. The changing profile of the Indian worker from an illiterate, rural, low caste individual to an educated, urban and belonging to the upper caste had made him concern for his own hopes and aspirations.
2. The view that worker is just like other factors of production had changed with the realization that he is a human being with feelings and emotions that made organizations behave with workers accordingly. The Indian workers’ wish has yet to be duly recognized and rewarded.
3. Around 10% of workers in the organized sector in India is unionized. The unionized work force usually demands for better working conditions which resulted in the development of quality of work life.
4. Quality of work life as a newer concept experiments on making the human resources for effective utilization since the human behaviour is highly unpredictable and complex.

The researches have revealed that most of the quality of work life projects undertaken in India passes through the developmental stages of hostility, curiosity, spreading of interest, formation of experimental groups, emergence of group consciousness among the subgroups, perception about gain resulting from the projects and then leading to further commitments to the projects, and finally experimental groups looking towards comparing notes and thus gaining potentials for diffusion. Thus, it can be concluded that the concept of treating work life as a spiritual discipline have been prevailing in India from earlier times and as a result due importance have been given for improving the quality of work life of employees.

3.2.3 Development of Quality of Work Life Programmes

Today the Management, Unions and Government agencies are increasingly supporting the Quality of work life programmes around the world. These programmes accentuate the development of an atmosphere that pertains to the impact of work on people as well as to an organization's efficiency and further emphasize on the participation in problem solving and decision making, leading to the progress of the economy.

The USA can be considered as the nation which took the initiative in developing thoughts, ideas and identifying the various dimensions relating to the Quality of work life. Richard Walton, an American Professor, was a major contributor who developed the concept of Quality of Work Life. Walton proposed eight dimensions to measure the Quality of work life and even today, these dimensions are mostly used worldwide to measure the quality of work life.

The General Motors in USA were faced with labour problems like high ratio of absenteeism and labour turnover along with the high cost of operations. The employer, employee relations were worse with fear and mistrust. Overall, the environment was not healthy and the production declined rapidly. The management looked for a solution and finally decided to launch Quality of Work Life programme involving 3800 workers and supervisors. This programme came forth from an agreement between the United 'Auto Workers' Union and the General Motors in 1973. The actual programme was started in 1977 with the objective of specifying the plans and functions of both management and union; and

acquiring problem solving skills along with developing the concept of quality of work life. This programme was initially introduced at Tarry Town Plant that resulted in improved productivity, quality and labour management relations (Madhesh, 2011). This success made General Motors to extend this programme throughout its plants, which produced excellent results. Even today this largest manufacturing organization practices the quality of work life programme with designing a new plant to carry out Social-Technical System.

Similarly the American Telephone and Telegraph Company (AT&T) undertook the quality of work life programme in the early 1980s with a massive participation of over 80 percent of workers. Union leaders felt that they might require new skills and knowledge during the quality of work life improvement project and worried if intra-union rivalry might delay the process. The management and unions perceived that these programmes were meant to strengthen their organization and hence require team work, trust and coordination between them.

A few federal agencies like National Centre for Productivity and Quality of Working Life as well as some of the private organizations like American Quality of Work Centre have been working towards disseminating and developing the concept of Quality of Work Life (Madhesh, 2011).

The very basis of Quality of work life is in the United Kingdom in the sense that the Tavistock Institute of Human Relations. The industrial scenario of the country was changed due to the increased government intervention in the political environment and changes in the economic environment as an impact of world war and changing technology. These changes paved the way for the development of quality of work life programmes in the United Kingdom. Major restructuring of job tasks was made to motivate the workers to work as a team and more decision making power was delegated to the workers, which resulted in increased commitment and morale thereby reducing the absenteeism. The output increased to more than 70 percent, while the processing costs were reduced to an extent.

The significant efforts made by Japan to improve the Quality of work life in its industrial sector had become successful due to the timely and continuous applications of technological innovations. The Japanese approach to quality of work life programme has two implications, namely, flexible employment of the workforce and acceptance of technological changes by the employees (Madhesh, 2011). Job integration and self management in the area of work organization had been playing a significant role in Japan.

In Sweden, Denmark, Holland and Switzerland, a number of local incentive programmes were initiated. Experimentation around autonomous work groups, technological changes and attempts to provide meaningful work was undertaken. Most European countries at the same time enacted some legislation like participation in organizational decision making either directly or through representatives and had further set up various Research Institutes.

Quality of work life was given high attention in Italy during the early 1970s, but gradually it declined in the later years of 1970s as they considered quality of work life as a 'peripheral problem'. But in the recent years, the Government of Italy has again taken necessary steps to increase consciousness about the quality of work life among organizations and while setting up of organizations like Fiat, Proctor and Gamble, IBM, etc to practice the quality of work life improvement programmes.

The Quality of work life becomes relevant in developing countries like India because the quality of work life can become both ends and means in a developing country (Madhesh, 2011). There is an assumption that the underdeveloped countries have not been able to solve the social and economic justice in their societies and hence the focus is not moved to the employees work life. In India, Government organizations are mismanaged causing heavy loss of public money either due to corruption or by intervention of politicians and Trade Unions. The privatization policy introduced by the government created many opportunities for the unemployed people and hence it becomes essential to improve the work environment which in turn will ameliorate the Quality of work life of the employees in our country. Moreover the workers should to be allowed to participate in decision making at the job level and the fruits of development should

be distributed among them. Hence socio-technical principles are to be adopted while redesigning jobs and organizations. The socio-technical approach to job design is related to the interface of the consonant between personnel, social and technological functioning.

3.2.4 Popular Quality of Work Life Programmes

The variables that led to the success of quality of work life programmes (Ashwathapa, 1999) (T D Tiwari, 2005) are detailed below.

1. Flexi- time: It refers to the system of flexible working hours. It implies a work scheduling scheme where the individual employees were allowed to control and redistribute their working hours around organizational demands but within establishing limits.
2. Job Enrichment: It implies redesigning the jobs from time to time, thereby allowing the employees greater autonomy and responsibility in performing their job tasks.
3. Management by Objectives: Employees are allowed to participate with their superiors in formulating the employee goals that are consistent with the objectives of the organization as a whole.
4. Staggered Hours: It is a work hour arrangement of overlapping schedules of predetermined hours established for the total work force. In such situations, groups of employees begin and complete their work at different intervals.
5. Socio- technical System: The workplace is redesigned physically and technologically so as to enable the employees to work with the human considerations of the work force.
6. Job Rotation: To reduce the monotony burden in the organizations, the job rotation programme is initiated. Here the employees periodically change from one job to another with work assignments, thereby, enabling them to acquire skills and knowledge to perform various jobs.

7. Job Enlargement: In this programme, the employees continue in their present jobs, but additional duties are assigned them with the intention of making the job more rewarding.
8. Autonomous Work Group: It is a form of participation whereby the groups of employees are given some control over decision making relating to the production methods, task distribution, work scheduling, selection of team members etc.
9. Employee Participation: This programme is aimed at ensuring the participation of employees in various the decision making process of the organization.

3.2.5 Problems of Implementing QWL Programmes

The three common problems identified by the researchers for implementing the quality of work life programmes (Decenzo David A, 1999), (T D Tiwari, 2005) are given below:

1. Managerial Attitudes: The quality of work life is based on the philosophy that the management must willingly allow their employees to participate in the decision making about conditions or process relating to their work tasks and work environment. Traditional managers have perceived this as a challenge to their rights to control and take decisions relating to the workers work and the environment. Such attitudes of management had obstructed the implementation of the quality of work life programmes.
2. Union Influence: Before implementing the quality of work life programmes, the management should explain the motives behind each such programme. They should further appreciate the participation of labour union in planning quality of work life programmes since the labour unions can inflict a significant influence on the success and failure of the quality of work life programmes. The union leaders often believe that such programmes are introduced by the management mainly to increase the productivity or to induce workers to speed up the work performance without increasing their compensation. Thus the approach of management

towards labour union is a hurdle to be overcome while implementing the quality of work life programmes.

3. Restrictiveness of Industrial Engineering: Industrial engineering gives more emphasis on fragmentation and specialization with minimal contribution by employees, stress on task. On the other hand, the quality of work life involves job changes to motivate the workers' initiative and judgment and hence it can be seen that the principle of industrial engineering is contradictory with the quality of work life programmes. To overcome this problem, careful planning is needed for implementing the new plant, space layout and equipment placement.

3.2.6 Components of Quality of Work Life

Like the concept of Quality of work life, various researchers have come up with their divergent views about the constituents of quality of work life. The most important views on the components of Quality of work life are explained in the table 3.3.

Table 3.3 Components of Quality of Work Life identified by the Past Researchers

Author's Name and Year	Components Identified
Richard Walton (1974)	Adequate and Fair Compensation, Safe and Healthy Working Conditions, Immediate Opportunity to Use and Develop Human Capacities, Opportunity for Continued Growth and Security, Social Integration in the Work Organization, Constitutionalism in the Work Organization, Work and Total Life Space and Social Relevance of Work Life.
Hackman and Oldham (1976)	Skill Variety, Task Identity and Task Significance.
Lippitt and Rumley (1977)	Organizational Environment, Physical Environment, Features of Job itself and Healthy Social Relations.

Author's Name and Year	Components Identified
Taylor (1979)	Autonomy and Feedback, Individual Power, Employee Participation in the Management, Fairness and Equity, Social Support, Use of One's Present Skills, Self Development, Meaningful Future at Work, Social relevance of the Work or Product and Effect on Extra Work Activities.
War and Colleagues (1979)	Work Involvement, Intrinsic Job Motivation, Higher Order Need Strength, Perceived Intrinsic Job Characteristics, Job Satisfaction, Life Satisfaction, Happiness and Self- Related Anxiety.
Cooper (1980)	Democracy, Security, Equity and Individuation.
Kirkman (1981)	Job Mobility, Quantity and Quality of Leisure Time Created by Job and Pay.
Kahn (1981)	Task Content, Supervision Resources, Promotion, Work Conditions, Organizational Context Autonomy and Control, Relations with Co-Workers and Wages.
International Labor Office (1982)	Hours of Works and Arrangements of Working Time, Work Organization and Job Content, Impact of New Technologies on Working Conditions, Working Conditions of Women, Young Workers, Older Workers and Other Special Categories, Work Related Welfare Services and Facilities and Shop Floor Participation in the Improvement of Working Conditions.
Mirvis and Lawler (1984)	Safe Work Environment, Equitable Wages, Equal Employment Opportunities and Opportunities for Advancement.
Kaira and Chosh (1984)	Safe and Healthy Working Conditions, Physical Environment, Absence Undue Work Stress, Employee Welfare and Job Security.

Author's Name and Year	Components Identified
Delamotte and Takezawa (1984)	Challenging Work Content, Traditional Goals, Influence on Decisions, Fair Treatment and Work as part of Life cycle.
Davis and Newstrom (1989)	Open Communications, Equitable Reward System, Employee Job Security and Participation in Job Designs.
Baba and Jamal (1991)	Job Satisfaction, Job Involvement, Work Role Ambiguity, Work Role Conflict, Work Role Overload, Job Stress, Organizational Commitment and Turnover Intentions.
Sirgy (2001)	Need Satisfaction based on Job Requirements, Need Satisfaction based on Work Environment, Need Satisfaction based on Supervisory Behavior, Need Satisfaction based on Ancillary Programs and Organizational Commitment.
Ellis and Pompli (2002)	Poor Working Environments, Resident Aggression, Workload, Inability to Deliver Quality of Care Preferred, Balance of work and Family, Shift Work, Lack of Involvement in Decision making, Professional Isolation, Lack of Recognition, Poor Relationships with Supervisors/ Peers, Role Conflicts and Lack of Opportunity to Learn New Skills.
Wyatt and Yue Wah	Favorable Work environment, Personal Growth and Autonomy, Nature of Job and Stimulating Opportunities and Co-Workers.
Rethinam and Ismail (2008)	Health and Well Being, Job Security, Job Satisfaction, Competence Development and Balance between Work Non-Work Life
Hosseini (2010)	Adequate and Fair Compensation, Safe and Healthy Working Conditions, Opportunity to Use and Develop Human Capacities, Opportunity for Continued Growth and Security,

Author's Name and Year	Components Identified
	Social Integration in the Work Organization, Constitutionalism in the Work Organization, Work and Total Life Space and Social Relevance of Work Life.
Che Rose (2006)	Career Satisfaction, Career Achievement and Career Balance.
Saraji and Dargahi (2006)	Fair Pay and Autonomy, Job Security, Reward Systems, Training and Career Advancements, Opportunities, Participation in Decision making, Interesting and Satisfying Work, Trust in Senior Management, Recognition of Efforts, Health and Safety Standards at Work, Balance between Time spend at Work and Time spend with Family and Friends, Level of Stress Experienced at work, Amount of Work to be Done and Occupational Health and Safety at Work.
Saklani (2004)	Adequate and Fair Compensation, Fringe Benefits and Welfare Measures, Job Security, Physical Work Environment, Work Load and Job Stress, Opportunity to Use and Develop Human Capacity, Opportunity for Continued Growth, Human Relations and Social Aspect of Work Life, Participation in Decision making, Reward and Penalty System, Equity, Justice and Grievance Handling, Work and Total Life Space and Image of Organization.

Source: (D R Swamy, 2015); (Sahni, 2015); (C P Garg, 2012); (Florence Muindi, 2015)

In addition to the above components, Herrick and Maccoby's (1975) identified four basic principles upon which the humanization of work is dependent (Khanka, 2011). These principles are as follows:

1. **The Principle of Security:** Work free from anxiety, fear and loss of future employment is considered as a major essential of humanization of work.

The skills and ideas can be fostered only in such a safe and secured working condition.

2. **The Principle of Equity:** Fair reward should be ensured for the effort made by the working. Profit sharing between employer and employees is an example of this principle. This also implies humanization of work.
3. **The Principle of Individuation:** Adequate freedom and autonomy should be provided to the workers in order to motivate them to their utmost competence.
4. **The Principle of Democracy:** Principle of democracy upholds the right to personal privacy, freedom of speech and equitable treatment. Ongoing participative management is an example of this principle.

3.2.7 Importance of Quality of Work Life

Quality of work life is the key to integrating the human resources with the organization for achieving higher productivity and for ensuring organizational success. An organization has to maintain order, to survive in the long run. The diagram showing the importance of quality of work life in the success of an organization is as follows

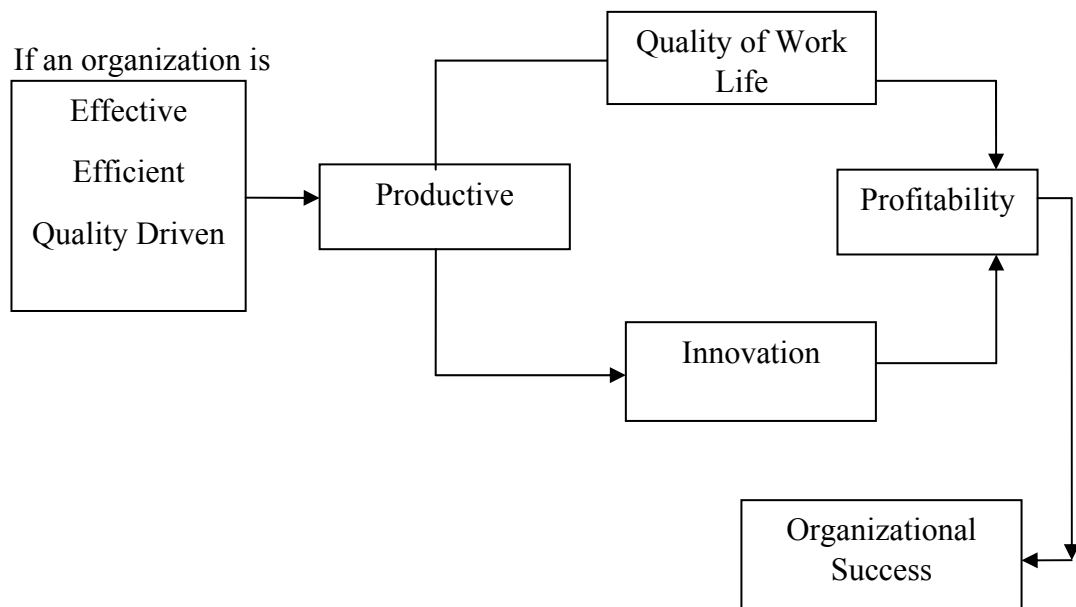


Fig 3.1: Organizational Success through Quality of Work Life

Source: (Deb, 2006).

The Figure 3.1 explains that the quality of work life acts a critical role towards the success of an organization. Even if the organization is effective, efficient and quality driven, they must ensure that the work life quality of the employees is satisfactory along with their innovative activities. If the organization is capable of maintaining a good work life for its employees, this will motivate them and may lead to the profitability of the organization which may ultimately result in their success.

3.2.8 Dimensions of Quality of Work Life used in the Study

Walton's eight dimensions were used in the study to identify the quality of work life among the IT sector employees. Sufficient modifications were made to these dimensions to make them suitable for the study. The variables, thus modified are presented in nine dimensions as given below.

1. Adequate and Fair Compensation - The organization must ensure fairness and adequacy in their pay rewards to their employees. The compensation paid by the organization should be compatible with the efforts taken by the employees in their respective jobs. The compensation should also justify the cost of living of the employees.
2. Working Environment – An organization should create a safe and healthy working environment for their employees. The physically safe working environment enables the employees to do their job effectively.
3. Employee Development – An organization should always ensure the growth and development of their employees. The organization should provide training, challenging jobs, and various opportunities for enhancing the skills, creativity and knowledge of the employees and thereby developing their career as well.
4. Autonomy of Work – The employees should be given adequate freedom to take decisions regarding their jobs and to implement them. The organization should provide opportunities to exert the innovative ideas put forward by the employees and to express their views in decision making. The organization should also appreciate their employees for their innovative ideas.

5. **Organizational Communication** – Adequate clarity and transparency must be ensured in the communication system prevailing in the organization. Correct information about work process and its results must be communicated to the employees working in the organization. Further, it is the duty of the organization to clarify the duties and responsibilities of the employees working there.
6. **Fair Treatment** – Each employee should be treated as equal in all matters in the organization. The employees should not be discriminated on the basis of age, sex, race etc. The employees must have freedom to speak up and voice their opinions frankly without the fear of being punished. The performance appraisal of the employees must be done on the basis of their performance rather than on favouritism.
7. **Total Life Space** – The personal life of the employee should be matched with his work life. He should get sufficient time to spend with his family apart from his job. The organization should ensure that the work life of the employees should not take too much of his leisure and family life.
8. **Attitude of Management** – The attitude of the management implies that the policies adopted by the management are fair and employee oriented. The management must treat their employees humanly and should provide sufficient support to their employees to make their work more enjoyable.
9. **Job Security** – Job security refers to the security of the job offered by the organization. The position of an organization in a society can influence the employees' value of his work and career (social prestige) since they are working with that organization.

3.2.9 Quality of work life and Employee Satisfaction

Various theories relating to the quality of work life have revealed that employees' satisfaction will increase along with the increase in their work life quality. Quality of work life can be viewed as a predictor of employee satisfaction and similarly employee job satisfaction can also be viewed as a significant predictor of quality of work life. If the employees are satisfied with their working environment they will get motivated to work there which will result in their job satisfaction. If the employees are satisfied with their working environment they

will stay committed to their organization in the long run. Thus, it can be concluded that quality of work life and employee satisfaction are interrelated to one another.

3.2.10 Quality of work life and Employee Turnover

Another view of the quality of work life is with the employee turnover. When the employees working in an organization are not satisfied with their work environment or their work life quality, it will directly reflect in their work. The various components of quality of work life, mainly compensation, workplace relations, attitude of co-workers, management policies, etc prevailing in an organization may also affect the employees. The employees will get demotivated in the absence of these components of work life and will naturally result in their work dissatisfaction. The employees dissatisfied with their work or working environment are likely to leave their organizations thereby resulting in employee turnover. Thus, it can be assumed as quality of work life is inversely related to the employee turnover.

Thus the importance of quality of work life can be understood from the above section. It can be perceived that the organization should improve the work life quality of the employees, thereby improving their productivity, which in turn will affect the organizational efficiency as well.

Section B

Section B describes the Employee satisfaction, its meaning and definitions, importance of employee satisfaction, the variables of employee satisfaction used in the study and the relationship between employee satisfaction and employee turnover.

3.3 Employee Satisfaction - Meaning and Definitions

Satisfaction is concerned with the fulfillment of a need or desire and the pleasure obtained by this fulfillment. It also measures the level of happiness a person derives out of his job in connection with his working environment as well. Nancy C Moore (1997) has defined satisfaction as the level of fulfillment of a person's needs, wants and desire and the basis of satisfaction is what an individual wants from the world and what he gets from the world (A Sageer, 2012) (N Silpa,

2016). Thus, it expresses how happy the employees are with their job and working environment.

Employee satisfaction is a comprehensive term that includes the job satisfaction of the employees as well as their overall satisfaction with the organization's policies, work environment etc. Employee satisfaction or employee job satisfaction means the positive attitude of an individual towards his job. It is a measure of how happy the employees are with their job and working environment (A Sageer, 2012).

Employee satisfaction is a terminology used to describe whether employees are happy, contented and fulfilling their desires and needs at work (A Sageer, 2012) (N Silpa, 2016). It can be viewed as a combination of the employees' feelings (maybe positive or negative) towards their work. Various studies have revealed that satisfied and convinced employees had stayed in the organization and promoted the organization in the long run. Each and every organization should give major priority for keeping their employees satisfied with their jobs. The organizations which encourage the ideas or suggestions given by the employees tend to have a consistent higher retention rates, better job satisfaction etc (D'Souza).

According to Moyes, Shao and Newsome (2008) (A Sageer, 2012) employee satisfaction refers to 'how pleased an employee is with his or her position of employment'.

(Locke, 1976) (Khanka, 2011) (Fatima Bushra, 2011) defined Employee satisfaction or job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience".

(C J Cranny, 1992) (A Sageer, 2012) defined Employee satisfaction "as the combination of affective reactions to the differential perceptions of what an employee wants to receive compared to what he actually receives".

Frederick Herzberg's Two-Factor Theory can be understood as an approach of the employee satisfaction. The employee satisfaction was associated with the conditions encompassing their job like working conditions, pay, quality of supervision, company policies and security rather than the work itself. The

presences of these factors prevented the negative reactions and hence Herzberg referred them as maintenance or hygiene factors. On the contrary, the outcomes of work or work related factors like achievement, promotion, appreciation, recognition and chances for personal growth were associated with higher levels of job satisfaction and hence Hertzberg called them as motivators. Hertzberg argued that the presence of the motivators at high level leads to job satisfaction while the absence of these factors does not lead to job dissatisfaction but just cause less satisfaction. Similarly, the presence of hygiene factors leads to dissatisfaction, but the absence of these factors does not lead to satisfaction as well. Hertzberg's theory is mainly criticized for its validity. However, the reasons behind job satisfaction and job dissatisfaction can be described and understood with the help of Hertzberg's theory (Khanka, 2011).

3.3.1 Importance of Employee Satisfaction

The organizations have to ensure that the satisfaction level among the employees is high which are essential for increasing their productivity since the satisfied and convinced employees will stay in the organization in the long run. Highly satisfied employees tend to have better mental and physical health and may have a positive attitude towards their job. They learn new job related tasks easily and quickly and may commit fewer mistakes in their jobs. The satisfied employees have fewer grievances about their job and management and may be more amiable towards their co-workers.

The importance of employee job satisfaction can be assessed using the following situations identified by (Spector, 1977) (Chripin, 2014).

- The humanitarian value based approach drives the organizations to treat their employees honourably and with respect. Higher levels of job satisfaction can be identified as the signs of emotional wellness or mental fitness.
- The utilitarian position adopted by the organization enables the employees' behaviour to influence the organizational operations, according to the degree of employee satisfaction or dissatisfaction towards their job.

- Various levels of satisfaction towards job among the organizational departments should be identified for planning down areas where improvements are needed.

It is evident that the sustained vitality and profitability of an organization is linked to the satisfaction of its employees. An organization that does not consider and improve the employee satisfaction may face increasing turnover of the employees along with the declining productivity of the employees remaining in the organization. Moreover, the organization may have limited ability to attract and retain the qualified replacement of the employees. Thus employee satisfaction directly affects the organization's ability to operate effectively (Dr Rajesh Bagga, 2008).

Employees' attitude towards their job may be positive (satisfaction) or negative (dissatisfaction). Employee satisfaction refers to the favourable attitude of the employees towards their job while employee dissatisfaction reflects the unfavourable feelings towards their job. Employee satisfaction is proved beneficial to the organization while employee dissatisfaction may have certain consequences towards the organization. The following theoretical model exhibits the consequences of dissatisfaction of work among the employees (Stephen P Robbins, 2013). The framework has four responses classified along two dimensions: Constructive/ Destructive and Active/ Passive.

Table 3.4 Responses to Dissatisfaction of Employees

Responses	Constructive	Destructive
Active	VOICE	EXIT
Passive	LOYALTY	NEGLECT

From the table 3.4, the various responses to the dissatisfaction of employees are described as follows.

- Voice – The dissatisfaction is expressed through the active and constructive attempts to improve the circumstances prevailing in the organization. The voice response indicates the employees' active participation towards improving the present conditions by giving suggestions, discussing the problems with superiors and undertaking some forms of union activity.
- Exit – The exit response implies the behaviour of the employees looking for a new job, resigning the job and leaving the organization (turnover). The dissatisfaction of the employees is expressed by leaving the organization.
- Loyalty – The loyalty response indicates the employees passively, but optimistically waiting for the conditions to improve, supporting the organization in case of external criticism and trusting the organization and management to do the right thing.
- Neglect – The neglect response involves the employees passively admitting the conditions to worsen and include severe absenteeism or lateness, reduced effort etc. The dissatisfaction of the employees is expressed through allowing conditions to worsen.

Exit and neglect behaviours comprehend the performance variables – productivity, absenteeism and turnover. The voice and loyalty behaviours are the constructive ones that allow individuals to tolerate the unpleasant conditions or recreate satisfactory working conditions.

3.3.2 Variables of Employee Satisfaction used in the Study

The variables of the employee satisfaction used in the study are detailed as below.

1. Pay – Pay refers to the incentives available to the employees in addition to their remuneration. The incentives include the housing facilities, medical leave, etc provided by the organization. Various researches had indicated that employees are found satisfied when they feel that they are paid in a

reasonable manner. Moreover, the compensation should be fair and adequate while comparing to similar organizations.

2. **Welfare Activities** – Welfare activities include the various activities offered by the organizations to keep their employees lively in their work place. It includes offering yoga sessions to reduce the stress levels of the employees. Similarly, various organizations have set up entertainment club and offer tour packages to their employees regularly in order to entertain them.
3. **Recognition and Appreciation** – It implies that the employees should be appreciated on achieving their targets and must be properly rewarded for their good work. In doing so, the employees may feel that their job is meaningful and thereby feel valued at their organization. The employees will stay longer in the organization only if they are properly recognized and appreciated for their work.
4. **Adequate Training** – Adequate training is essential for an individual employee to develop his skills and to familiarize with the new technologies introduced. It is evident that training improves productivity of the employees. The organization should therefore arrange training programs regularly to their employees.

3.3.3 Employee Satisfaction and Employee Turnover

The relationship between employee satisfaction and turnover is affected by the alternative job prospects. The job dissatisfaction is less predictive of turnover when an employee is having an unsolicited job offer since the employee is more likely leaving in response to ‘pull’ (the lure of the other job) than ‘push’ (the unattractiveness of the current job). If the employee has plenty of job opportunities, the job dissatisfaction is likely to predict the turnover since the employee observes it as easy to move. When the employees are having higher education and high ability, job dissatisfaction predicts the turnover of the employees since they are having many available job alternatives (Stephen P Robbins, 2013).

Thus, this section describes the importance of employee satisfaction with regard to his job. If the employees are satisfied with their jobs they will stay with

their organization with commitment and will contribute towards the effective functioning of the organization. The unsatisfied employees are likely to leave their organization if alternative job opportunities are available to them or will result in absenteeism in the organization and will be unloyal towards their job. Thus the organization has to suffer the consequences of the employee dissatisfaction.

Section C

Section C demonstrates the Employee turnover, its meaning and definitions, types of employee turnover, its causes and impact on the organization in detail.

3.4 Employee Turnover – Meaning and Definitions

To survive in this competitive world every organization has to maintain a skilled workforce for ensuring the organization's productivity. Several factors act as a barrier to this and turnover of employees is considered as a prominent one amongst them. Employee turnover is regarded as a major challenging issue faced by an organization now a day.

Employee turnover refers to a situation whereby the employees voluntarily leave their organization due to various reasons thereby affecting the organization negatively. When an employee leaves the organization, it has an effect not only on the organization, but also on employee and the society as well (Arokiasamy, 2013).

The employees working in an organization always look for new and challenging jobs and a good and safe working environment. But the organization may find it difficult to provide such necessities to their workforce in an economic way. The organization is bound to retain its talented workforce since it wishes to achieve higher productivity, lesser turnover and to be profitable. Hence managing the turnover of employees successfully is now a crucial step to every organization (AHM Shamsuzzoha).

Price (1977) (Abdali, 2011) defined Turnover as “the ratio of the employees of an organization who left in a particular period of time with the average number of employees in that organization during the same period of time”.

According to Glebbeek and Bax (2004) (S E Mbah, 2012) “Employee turnover is the series of actions that takes from the employees leaving for his or her being replaced. It acts as an indicator of company performance and can easily be observed negatively towards the organization’s efficiency and effectiveness”.

Agness (1999) (Abdali, 2011) defined turnover as “the ratio of the number of workers that had to be replaced in a given time period to the average number of workers”.

Bevan et al. (1997) suggested that it was possible and desirable to create a risk assessment based on people who may leave the organization and the potential impact that may create on the organization (Martin, 2010). They developed a four cell matrix based on two measures of likelihood of an individual leaving and the impact on the organization.

Table 3.5 Employee Turnover and its impact on Organization

Measures		Likelihood of Employee Turnover	
		High	Low
Impact on the Organization	High	DANGER ZONE	WATCHING BRIEF
	Low	THANKS FOR ALL YOU HAVE DONE	NO IMMEDIATE DANGER

Table 3.5 reveals the four results of the likelihood of an individual leaving the organization and the impact it has on the organization is detailed below

- High likelihood and High impact – This is categorized as the Danger zone, which implied that immediate actions are to be taken to retain the employees so designated.

- High Likelihood and Low impact – This is described as Thanks for all you have done, which expresses that there exist no reason to try and retain the employees so assigned.
- Low likelihood and High impact – This is explained as requiring a Watching brief, which states that no immediate actions are needed that could easily change the situations while careful handling is needed if the employees are to be retained to the success of the organization in the future.
- Low likelihood and low impact – This is detailed as No immediate danger, which means that no immediate actions are needed to retain the employees in the organization.

High likelihood and high impact; and low likelihood and high impact are crucial to the organization while high likelihood and low impact; and low likelihood and low impact are not at all critical to the organization.

3.4.1 Types of Employee Turnover

The various types of employee turnover are discussed as follows (Abdali, 2011), (S E Mbah, 2012)

- Functional v/s Dysfunctional Turnover - Functional turnover refers to the turnover in which the poor performing employee leaves the organization while in the Dysfunctional turnover good performer leaves the organization.
- Voluntary v/s Involuntary Turnover – Voluntary turnover refers to the turnover in which the choice of leaving the organization is initiated by the employee himself while in involuntary turnover the employee have no choice in their termination. For example: sickness, death, retirement, moving abroad etc.
- Avoidable v/s Unavoidable Turnover – Avoidable turnover refers to that turnover, which an organization can prevent by hiring, evaluating and motivating the employees. Unavoidable turnover arises from the life situations that extend beyond the employer’s control such as the decision to move to a new place or job transfer for the spouse etc.

- Skilled v/s Unskilled Turnover – Unskilled turnover refers to the turnover of the unskilled employees. They are known as contract staff and are generally untrained and less educated and experience high turnover. Their turnover does not affect the organization since new employees can be hired. Skilled turnover refers to the turnover of skilled employees and their turnover may create a risk to the organization while leaving. Hence turnover of skilled and educated professionals creates replacement costs as well as a competitive disadvantage (Abdali, 2011).

3.4.2 Causes of Employee Turnover

The employee turnover may be caused by various factors that include the personal factors, job related factors, work environment factors and external factor that include alternative working environment (Arokiasamy, 2013), (Abdali, 2011). They are detailed as below

1. Personal Factors – The personal characteristics of an employee like age, gender, qualification, marital status, work experience etc may be the reason for leaving the organization. For example: the older employees who have stayed longer with the organization leave their organization than the younger employees.
2. Job Satisfaction – The job satisfaction and employee turnover are inversely related to each other. The employees satisfied with their job will stay in the organization while the employees having job dissatisfaction are likely to leave their current employer very easily.
3. Job Stress – The job stress is identified as an important predictor of the employee turnover. The tight working schedules, the timing of the job, etc causes job stress and the employees having high stress of their job are likely to leave their jobs.
4. Organization and Work Environment – The factors relating to the organization and work environment include
 - Compensation – if the employees are not satisfied with their compensation packages, they are likely to leave the organization.
 - Inequity – The employees should not be discriminated on the basis of their race, sex, religion, etc which implied fairness or equality about the

compensation, sharing the rewards and pay etc. If the employees perceive inequality in any aspects, it will result in their turnover.

- Co-Worker Relations – The relationship with co-workers also create an impact on the employee turnover. The relationship among the work group, satisfaction with the co-workers, etc reduces the turnover among the employees. The co-ordination between the managers or supervisors, the communication skill of supervisors to handle the subordinates etc influences the employee turnover.
- Working Environment – The employees are likely to stay in the organization where the safe and healthy climate is prevailing. If they feel that the working environment is not safe/ healthy, the employee turnover is likely to occur.

5. Alternative Employment – If the employees are having alternative job opportunities they are motivated or encouraged to change their jobs. Thus, the alternative job opportunities are likely to cause employee turnover.

3.4.3 Variables of Employee Turnover used in the Study

The variables of employee turnover identified in the study are detailed as below

1. Work Stress – Work stress indicates the stress or strain faced by an employee while doing his job. Tight working schedule, working hours of the job, workplace problems, etc causes the work stress. The employees having high stress in their jobs will leave their organization, causing the employee turnover.
2. Work Life Imbalance – The work life imbalance refers to the situation when the employees are having problems to maintain a balance between their job and personal life. The employees may feel tired due to their work stress and may in turn affect their family performance. The employees may not get sufficient time to spend with their family and may cause imbalance in their personal life which in turn affects their work.
3. Health Problems – Health problem is the main factor causing the employee turnover. If the employees are not physically and mentally fit, it will affect

their work performance and may create an impact on the organization as well.

4. Economic Conditions – The economic conditions prevailing in the country may affect the employee turnover. During the recession period, the employees may be forced to leave their organizations where they are working or they have to work at lower compensations than usual.
5. Workplace Relations – The relationship between co-workers in an organization also affects the turnover of the employees. A cohesive work environment is always preferred by the employees. If the employees do not receive sufficient support from their supervisor or co-workers, they are likely to leave their organization.

This section concludes by stating that the turnover among employees is very crucial and may affect the performance of the organization. So the immediate steps need to be undertaken by the organization to eliminate this aspect as well as to retain their existing workforce.

3.5 Conclusion

This chapter concludes by stating that the quality of work life is indeed concerned with the employees' work life and the satisfaction experienced by them in their working environment. Quality of work life is thus, a multi-dimensional concept that includes the various work related aspects such as wages and hours, work environment, career prospects and human relations which may lead to employee satisfaction and motivation. It is concerned with the aspects to which an employee feels valued, motivated, consulted, rewarded and empowered. Besides, the quality of work life calls for efforts to improve the work environment in an organization through the active participation of employees throughout the organization. If the employees working in an organization are satisfied with their work environment, it will lead to their job satisfaction. The job satisfaction, in turn, leads to better performance of employees, thereby benefitting the organization. On the contrary, if the employees are not satisfied with their job or with the working conditions, they will seek another job and leave the organization thereby causing employee turnover. This implies the importance of quality of work life in an

organization. So it is advisable to implement the quality of work life programs in every organization so as to retain their employees in the long run.

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Chapter 4

Information Technology (IT) Sector - A

Brief Overview

4.1 Introduction

The previous chapter was concerned with the theories relating to the quality of work life, employee satisfaction and employee turnover along with the relevance of these variables in an organizational context. Better quality of work life and employee satisfaction enhances the efficiency of the organization while employee turnover decreases the organization's efficiency if not controlled.

The present chapter gives a detailed view on the Information Technology (IT) sector. The Information Technology - its meaning and definitions, the growth of the IT sector in India, its impact on the Indian economy, IT sector in Kerala, TechnoPark Trivandrum, InfoPark Kochi, and KinfraPark Malappuram. Besides, the importance of the IT sector in the global arena as well as in the Indian perspective was explained. The revenue generated by the IT sector in Indian economy highlights the importance of this sector in our country.

4.2 Information Technology – Meaning and Definition

In the last decade, the Information Technology (IT) has marked a tremendous growth in the global scenario. It has become one of the most robust industries in the world and is considered as fundamental for the global economic growth. The simplest form of IT, being the Internet, has become the backbone of every organization and households. For doing the simple day to day tasks, we have to rely on the information technology. Besides, it can be viewed as a major source for employment opportunities worldwide.

Information Technology is the technology (both hardware and software) needed for processing the data or information. In the context of business or an enterprise, information technology refers to the application of computer or computer related networks to store, retrieve, transmit and manipulate data or information. Information Technology (IT) can be viewed as the acquisition, processing, storage and dissemination of vocal, textual and numerical information by a micro- electronics- based combination of computing and telecommunications (Stuart P Meyer).

Information Technology (IT) can be treated as an industry that helps to spread the knowledge using the computers and other supporting equipments.

Information technology was generally understood as a synonym of computers. But with the advancement of information delivery system, information technology is now referred to as the entire gamut of media and devices used to broadcast and process information for use by the target groups in the society. It comprehends several other sectors like computer hardware, software, electronics, health care, e-commerce and computer services and hence termed as information and communication revolution.

The Information Technology Associate of America (ITAM) defines information technology as: “the study, design, development, information, support or management of computer based information systems, particularly software applications and computer hardware” (Stuart P Meyer) (Carver, 2000). Information technology helps to convert, store, protect, process and safely transmit the information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations etc.) using the computers and computer software. Both the technologies of computer and telephone can be included under the broad term of Information Technology.

The international foundation for information technology defines the information technology in the following three ways (Vijayasri, 2013) (Stuart P Meyer)

1. The information technology is identified as the technology used for the study, planning, designing, construction, testing, distribution, support and operations of software, computers and computer related systems for the processing of data, information and knowledge.
2. The information technology is considered as an industry that has emerged to include the study, science and solutions for all aspects of processing of data, information and knowledge management.
3. The information technology as an organization or business that is responsible and accountable for the technology used for planning, design, construction, testing, distribution, support and operations of software, computers and computer related systems that remain for the processing of data, information and knowledge management.

Almost all the sectors in our country like railways, airways, banking, health care, travel and tourism etc depends on the information technology. Information technology has made complicated and time consuming works simpler and faster along with sufficient security.

Today, many organizations, for performing their daily tasks, depend on the IT that makes the complex tasks easier and faster and avoid the redundancy of the data along with maintaining the safety of the confidential ones. E-commerce has enabled a common man to do online banking, online purchasing and selling of goods and services with much easier and faster. While booking air or railway tickets, one can choose from the best deals available and book tickets online, thereby avoiding the crowd and lengthy procedures of booking at counters. The application of information technology extends to the field of education by enabling the online application to institutions, checking the results online, online fee payment, online classes from experts employed abroad etc. Thus the services of information technology can be identified from almost all sectors in the world.

4.3 IT Industry in India

The Indian IT industry is recognized as a pioneer in the software development and is identified as a favourite destination for the IT- enabled services. It has created invaluable brand equity in the global markets. In the early 1970s the development of the IT industry in India was led by the Electronics Commission. India's most esteemed scientific and technological policy leader M.G.K. Menon was the driving force behind this initiative. The Electronics Commission with the support of the United Nations Development Programme (UNDP) under project IND/73/001 formulated a strategy and master plan for regional computing centres, each centre to have specific purposes to serve as a hub for manpower development and to propagate informatics in local economies. The strategy was intended to focus on intellectual capital and knowledge development rather than on large scale production of hardware. The National Centre for Software Development and Computing Techniques which formed in 1973 was focused on software development and was at the Tata Institute of Fundamental Research in Mumbai. The origin of IT industry in India can be traced back to the year 1974 when the mainframe manufacturer, Burroughs asked its Indian sales

agent, Tata Consultancy Services (TCS) to export programmers for installing system software for a US client (Shodhganga).

During the 1970's, the Indian economy was state-controlled and was very uncongenial towards the software industry. The local markets were not present and the government policies towards the private enterprises were hostile during that period. The Bombay-based conglomerates undertook the business of supplying the programmers to global IT firms located abroad, thus enabling the emergence of the Indian IT industry. The bank finance was not provided to the exporters and the IT sector had to face very hostile conditions during that period. The import duty levied was 135% on hardware and 100% on software. The major IT companies, Tata Infotech, ProcSys, Patni Computer Systems and Wipro became visible during the period 1977 – 1980. The microchip revolution in the 1980s convinced the government about the importance of this sector for India's growth and development, but the government was reluctant to promote its growth. The government policy towards IT sector changed in 1984 when Rajiv Gandhi became the Prime Minister of India (Shodhganga). The New Computer Policy (NCP-1984) was introduced at that time, which consisted of a package that reduced the import duties on hardware and software to 60%.

The Indian government initiated the creation of three wide-area computer networking schemes: INDONET (intended to serve the IBM mainframes in India), NICNET (the network for India's National Informatics Centre) and the academic research oriented Education and Research Network (ERNET) during the year 1986 – 1987. The Department of Electronics created a corporation called Software Technology Parks of India (STPI) in 1991 that could provide VSAT communications without breaking its monopoly. STPI had set up software technology parks in different cities which provided, satellite links to the firms using a wireless radio link. The individual companies were allowed to use their own dedicated links for transmitting their work done to abroad directly at 1993. As a result, the Indian companies were able to convince their customers abroad that the satellite link was as reliable as a team of programmers working in their clients' office (Taranjit Singh Vij, 2014).

The economic reforms in 1991 led to a new era of globalization and international economic integration. An annual economic growth of 6% was reported during the years 1993 – 2002. The development of IT sector was placed among the top five priorities when Atal Bihari Vajpayee became the Prime Minister of India in 1999. As a result, The Indian National Task Force on Information Technology and Software Development was formed to boost the development of IT sector. The New Telecom Policy (NTP) was introduced by this government in 1999 for promoting the IT sector in India. This new policy broke down the government's monopoly on international long distance communications traffic and brought down their prices, thereby unlocking the cost barriers for the wider usage of cross border IT services. The NTP 99 issued the first license in 2002 however a five year phase was considered for opening international long-distance (Russow, 2014).

In 2015, the Government of India led by our Prime Minister Narendra Modi launched the **Digital India program** which enabled the public to utilize the several government services using the information technology and thereby integrating the government departments and the people of India. The main objective behind this program is to connect rural areas with high speed internet networks and improving the digital literacy (India Brand Equity Foundation, 2016). Besides, the government is planning to develop five incubation centre for the 'Internet of Things' start-ups, as a part of the Digital India and Start-up India campaign, with at least two centres to be set up in rural areas to develop solutions for smart agriculture. The clear policies and the economic growth agendas of the central government, particularly – the Digital India and the Make in India, have helped in creating a vision of technology enabled India (Nihilent Technologies Ltd, 2015). The adoption of key technologies across sectors spurred by the 'Digital India Initiative' is expected to boost India's Gross Domestic Product (GDP) by US\$ 550 billion to US\$ 1 trillion by 2025 (India Brand Equity Foundation, 2016).

The figure 4.1 exhibits the evolution of the IT sector in India. It can be understood from the figure that by 1990's US based companies began to outsource their work in India. The IT industry began to mature during the period 1995- 2000 with the increased investment in research and development and infrastructure

facilities. The period 2000-‘05 marked the increase in the number of IT firms and the firms began offering complex services such as product management and go to market strategies. Finally the period 2005-’15 saw the Indian firms becoming multinational companies with delivery centres across the globe in more than 78 countries and making the global acquisition. Thus the evolution of the IT industry can be marked over four different periods.

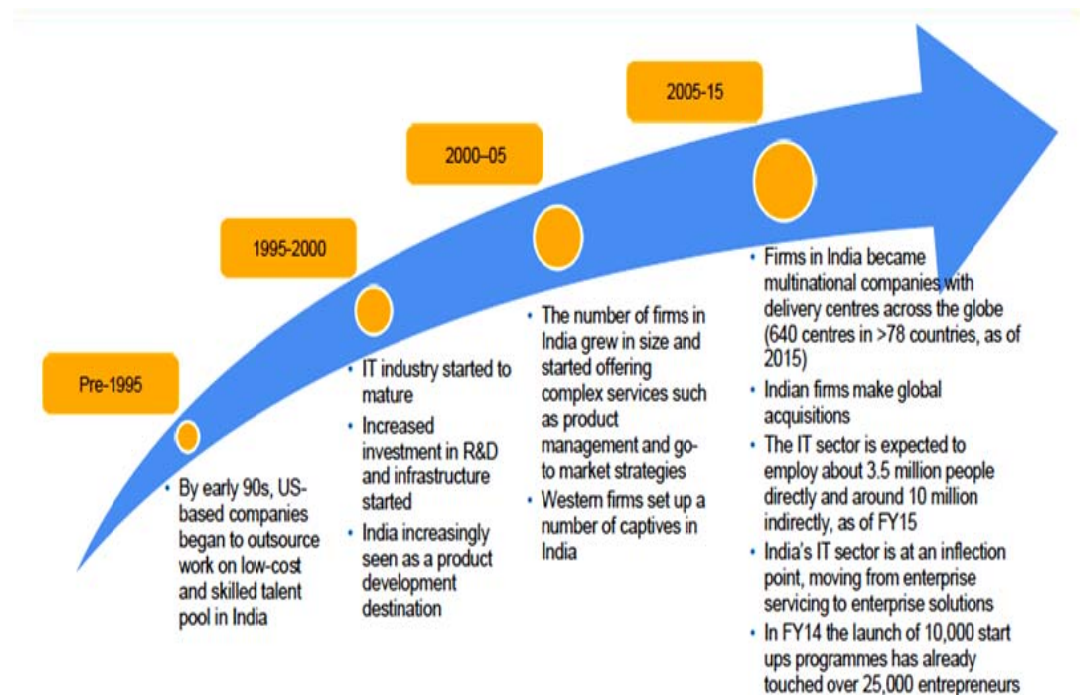


Fig 4.1: Evolution of the Indian IT Sector

Source: (India Brand Equity Foundation, 2016)

The IT sector in India comprises of Software sector and IT- enabled sector (ITES). The work that was earlier done in the developed countries, mainly the US, has been outsourced or contracted out in both these sectors, to locations in India. The IT sector of India has created an invaluable position in the global economy while the IT enabled services of India is emerging as the most important destination for the business process outsourcing (BPO). The activities outsourced in the IT enabled services include call centres, medical transcription, ticket reservation, credit card administration, data entry and such other office works that can be performed even in remote locations. Internet, the backbone of IT, has made

revolutionary changes in the lives of millions of people worldwide. Besides, the IT sector had brought about changes with possibilities of e-government initiatives like e-commerce, e-tourism, e-governance, e-education, e-agriculture, e-health, etc. Thus the IT sector had played a significant role in transforming the India from a rural and agriculture based economy to a knowledge based economy.

India is the world’s largest outsourcing destination of information technology industry that account for approximately 67% of the US\$ 124-130 billion markets. About 10 million workforces are employed in this sector. It has created jobs for 2.8 million IT professionals and has indirectly employed an additional 8.9 million workforce. The cost of providing IT services in India is 3 - 4 times cheaper than America and hence it remains to be the keystone of its Unique Selling Proposition (USP) in the outsourcing global market. The annual revenues of IT sector from outsourcing operations in India during the financial year 2009 was up to US\$ 60 billion and is expected to reach US\$ 225 billion by the year 2020 (India Brand Equity Foundation, 2016).

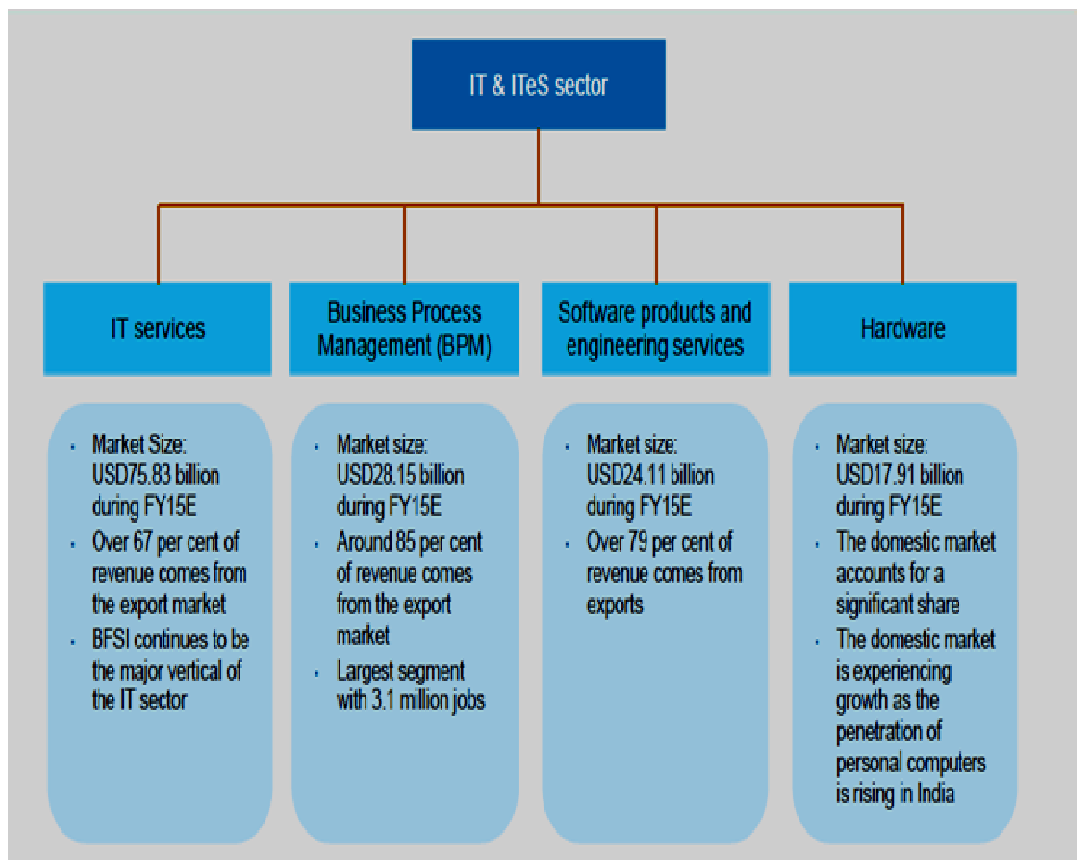


Fig 4.2: Segments of the Indian IT Sector

Source: (India Brand Equity Foundation, 2016)

The figure 4.2 depicts the segments of the Indian IT sector. The Indian IT and ITES industry is categorized into four major segments – IT services, Business Process Management (BPM), software products and engineering services and hardware. The IT services and software is the key contributor to the India's IT sector revenue while BPM is emerging as the fastest growing segment of the IT industry. India's IT-BPM sector (including hardware) is estimated to have generated US\$ 146 billion in revenue during the financial year 2015 compared to US\$ 118 billion in the financial year 2014, which implies a growth rate of 23.72 percent. The contribution of IT sector to India's GDP has increased to approximately 9.5% in financial year 2015 from 1.2% in financial year 1998 (India Brand Equity Foundation, 2016).

4.3.1 Growth of IT Sector in India

India's IT sector is moving ahead on its growth path. The contribution of IT industry in total services exports now exceeds greater than 38 percent. The exports record a growth of 12.3 percent to extend over US\$ 98 billion, an increase of US\$ 11 billion over last year. Domestic IT-BPM market is growing faster at US\$ 48 billion than the export market with a growth rate of 14 percent due to the addition of e-commerce services. Among the IT industry, IT services share 47 percent of the domestic market and hence identified as the largest segment. It is followed by BPM, with a share of 18 percent. Software products, engineering and research and development, and product development segments totally share 16 percent, which is followed by e-commerce (9.5 percent) and hardware (9 percent).

India occupies the third largest start-up in the world, having more than 4200 technology start-ups in 2015- 2016. The most prominent IT hub in India is the IT capital Bangalore and the other major IT destinations are Chennai, Hyderabad, Mumbai, Pune, Kolkata, Trivandrum, Pune, Delhi etc. The Indian IT industry provides employment opportunities to a significant number of workforces besides contributing to the India's GDP. The major IT hubs in India are briefly explained in the table 4.1.

Table 4.1 Major IT Hubs in India

Ranking	City	Description
1.	Bangalore	Popularly known as the Silicon Valley of India. It is the leading software exporter in India and considered to be a global IT hub of India.
2.	Chennai	The second largest IT and ITeS exporter of India and is the BPO hub of India. The largest operation centres of TCS and Cognizant is situated in Chennai.
3.	Hyderabad	Hyderabad, also known as Cyberabad, is a major IT hub in India. Multinational corporate companies like Google, Facebook, Microsoft, Amazon, Oracle etc are located at Hyderabad.
4.	Mumbai	Mumbai is the financial capital of India where many companies have established offices.
5.	Delhi	The National capital region comprising of Delhi, Gurgaon and Noida are clusters of software development.
6.	Pune	Pune is C-DAC headquarter. Major Indian and International firms are operating in Pune.
7.	Kolkata	Kolkata is a major back- end operational hub for IBM, Texas Instruments, Intel, Deloitte, Sun micro systems (Oracle) etc.
8.	Bhubaneswar	Bhubaneswar, the capital city of Odisha, is an emerging IT and education hub. It is one of the fastest developing cities in India.
9.	Thiruvananthapuram	Capital of Kerala, now contributes in the IT export of India. It houses all major IT companies including Oracle, Infosys, TCS, Wipro etc.

Source: (Taranjit Singh Vij, 2014)

The IT- BPM is anticipated to reach US\$ 143 billion for the financial year 2015 -2016 achieving a Compound Annual Growth Rate (CAGR) of 8.3 percent year by year and more than 45 percent of total exports in 2015 - 2016. The IT sector is expected to triple its current annual revenue to attain US\$ 350 billion by the financial year 2025 at a growth rate of 12 – 14 percent in constant currency terms (India Brand Equity Foundation, 2016).

The increased usage of the internet (including rural areas) and rapid growth of e-commerce marked the continued growth of data centre co-location and hosting market in India. The public cloud services market in the country is expected to reach US\$ 1.9 billion by the year 2018 from US\$ 638 million in 2014. The revenue from the public cloud services is anticipated to reach US\$ 1.26 billion in 2016, marking a growth of 30.4% year on year. India’s internet economy is expected to reach Rs 10 trillion (US\$ 146.72 billion) by the year 2018 which account for 5% of the country’s GDP. Currently it has reached over 400 million by May 2016 (third largest in the world) and the social media users grew to 143 million by April 2015 and the smart phone market has reached to 160 million. The Indian healthcare information technology market is currently valued at US\$ 1 billion and is expected to grow 1.5 times by the year 2020. India’s business to business (B2B) e-commerce market is expected to reach US\$ 700 billion by the year 2020 while the business to consumer (B2C) e-commerce market is anticipated to reach US\$ 102 billion by the year 2020 (India Brand Equity Foundation, 2016).

One of the important reasons for the success of IT industry in India is the largest supply of IT skilled workforce. The availability and adequate supply of knowledgeable and skilled work force and infrastructure facilities can be estimated as the promoters of the IT sector in India. The talent pool of IT professionals in India has tremendously increased from the financial year 2010 to 2015.

Table 4.2 Graduates Addition to Talent Pool in the Indian IT Industry

Financial Year	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Talents (in millions)	3.7	4	4.4	4.7	5.3	5.8

Source: (India Brand Equity Foundation, 2016)

The table 4.2 reveals that the talents of the IT sector have increased to 5.8 million in the financial year (FY) 2015 from the 3.7 million in the FY 2010 which marks a tremendous increase in the talent pool. The talent pool includes both graduates and post graduates. The IT sector is the largest private sector employer in India. The industry currently employs more than 5.3 million workforces with women employees exceeding 34 percent, 170000 foreign nationals and employees from non-tier 1 Indian cities and thus promotes diversity within the industry.

India continues to maintain its first mover advantage and retained its leadership position in the global outsourcing scenario with a share of 55 percent in the financial year 2015. India continues to reinforce its position as the only country in the world where one can do anything and everything.

4.3.2 Impact of IT sector on the Indian Economy

The IT industry has promoted the growth of the modern Indian economy. The IT sector accounts for 9.5% of the GDP of India and provides employment directly or indirectly for people. India is expected to be a talent pool of 5.8 million graduates and post graduates in the financial year 2015 and out of this, 1.5 million people form an industry suitable, ready to hire pool. Most of these talents migrate to the developed countries and form an integral part of the workforce there, thus arising as the India's most beloved export. The country hosts more than 7000 digital focused firms with start-ups fuelling innovation by investing further in futuristic technologies. India is now capable with a future-ready digital workforce with more than 1, 50,000 employees with SMAC (Social, Mobility, Analytics and Cloud) skills. Around 50,000 employees are skilled in analytics, 30,000 people engaged in enterprise mobility and more than 50,000 people in cloud and social media & collaboration (NASSCOM, 2015).

The export market is expected to reach over US\$ 98 billion in the financial year 2015, recording a growth of 12.3% over the last year. Engineering research and development and product development segment are growing at 13.2% and hence considered as the fastest growing segment. IT services export is expected to grow at an industry rate of 12.6% (Ghosh, 2015). Value-added services around SMAC – upgrading legacy systems to be SMAC enabled, greater demand for ERP (Enterprise Resource Planning), CRM (Customer Relationship

Management), mobility from manufacturing segment and user experience technologies in the retail segment is driving force behind the growth in the IT services. The growth in the BPM sector is driven by greater automation, expanding omni-channel presence, application of analytics across the entire value chain etc (Ghosh, 2015).

India, now, a well established digital economy is jumping ahead the technology maturity curve – a trend largely driven by the consumers. Over 75 percent of the country’s population is mobile enabled, 278 million internet users (exceeding the US) and a rapidly increasing online population and a US\$ 14 billion e-commerce market which is growing at an average of greater than 30 percent. The government’s Digital India campaign conceives a US\$ 20 billion investment, extending the mobile connectivity throughout the country, re-engineering of government process using the technology and undertaking the e-delivery of citizen services (Ghosh, 2015) (Nihilent Technologies Ltd, 2015). The domestic IT-BPM market is rapidly growing to the US\$ 50 billion mark. The market is anticipated to reach over US\$ 48 billion in the financial year 2015 marking an annual growth of 14 percent. The IT services is expected to reach over US\$ 13 billion and software products over US\$ 4 billion in the financial year 2015 which marks a growth of 10 percent and 12 percent respectively. The BPM segment is expected to grow at 8 percent to reach the US\$ 4 billion in the financial year 2015 (NASSCOM, 2015). The following diagram 4.3 details the revenue from Indian IT-BPM sectors.

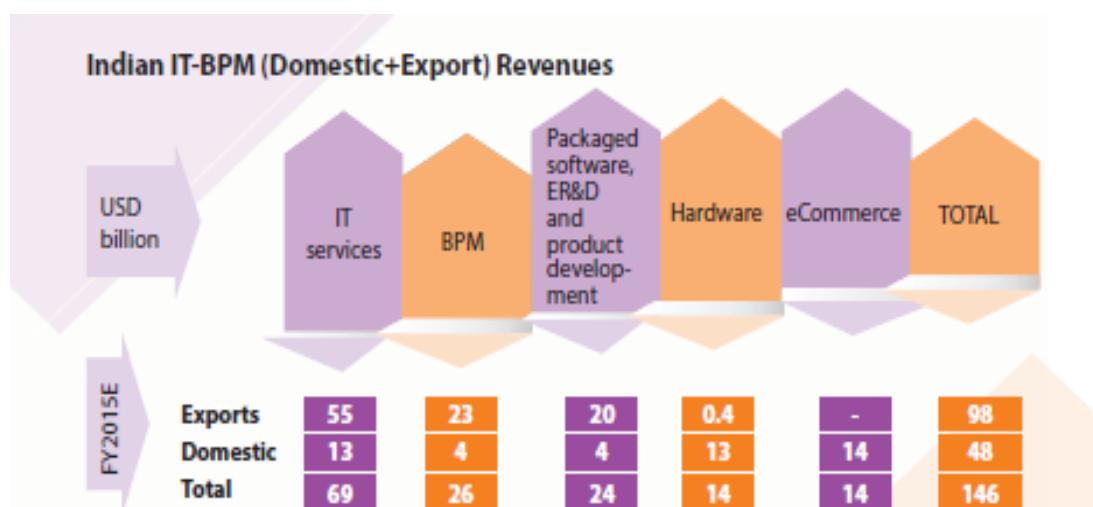


Fig 4.3: Revenues from the Indian IT Sector

Source: (NASSCOM, 2015)

The Figure 4.3 reveals the estimated revenues to be generated by the IT sector in India in the FY 2015. In the financial year 2015, the total revenue (both export and domestic markets) from the IT services is estimated to be 69 billion US\$, 26 billion US\$ from BPM sector, 24 billion US\$ from the software sector, 14 billion US\$ from the hardware sector and 14 billion US\$ from the e-commerce sector thus a total of 146 billion US\$ from both export and domestic sector.

The IT industry in India has witnessed massive changes, growth and development over the years. This industry is expected to grow more as many financial analysts had predicted. The growth in the IT sector is likely to create corresponding growth in various other sectors like employment, exports and Foreign Direct Investments. Besides, it is closely associated with other sectors like biomedical technology, defence and infrastructure. Thus, the IT sector can directly impact the growth of the nation (Vijayasri, 2013).

4.3.3 Investments

India is considered as the world's largest sourcing destination for the IT industry. It employs millions of workforces in our country, thereby developing our economy. Thus the IT industry has enabled the economic transformation of the country and changed the perception of India in the global economy. According to the data released by the Department of Industrial Policy and Promotion (DIPP), the computer software and hardware sector in India attracted cumulative Foreign Direct Investment (FDI) inflows worth US\$ 21.02 billion between April 2000 and March 2016 (India Brand Equity Foundation, 2016). The Indian start-ups are expected to raise US\$ 1.4 billion across 307 deals in the quarter ending March 2016. Based on the report published by the market research firm Zinnoy, India has nearly 51 million small and medium businesses, of which 12 million have a high degree of technology influence and are looking to adopt newer IT products. Some of the major developments in the Indian IT sector are as follows (India Brand Equity Foundation, 2016).

- National Association of Software and Services Companies (NASSCOM) plans to open four more tech start-up incubation centres in different parts of India in support of the Government of India's Start-up India initiative.

- As a part of the Government of India's Digital India initiative, the Nasscom Foundation, a non-profit organization which is a part of NASSCOM, has partnered with SAP India to establish 25 National Digital Literacy Mission (NDLM).
- With a vision of creating a viable and profitable business in the booming start-up sector in India, Microsoft Ventures is initiating to incubate 500 start-ups within the next five years.
- Infosys, India's top tier IT company has acquired the US based Noah Consulting, a provider of advanced information management consulting services for the oil and gas industry.
- In 2015, the Intel Corporation is planning to invest US\$ 62 million in 16 technology companies working on data analytics, wearable and the Internet of Things (IoT) through its investments in arm Intel Capital. The Indian IoT industry is anticipated to reach US\$ 15 billion and to connect 28 billion devices to the internet by the year 2020.
- Indian e-commerce industry is expected to grow at a CAGR of 35 percent to reach US\$ 100 billion sizes in the next five years.
- The Apple Inc is planning to establish its first technology development centre (outside US) in Hyderabad with an investment of US\$ 25 million which is expected to create 4500 job opportunities.
- Based on the study undertaken by the International Data Corporation (IDC), India is expected to catch up with the global technology trends quickly that have disrupted the enterprises, industry and the way consumers behave and transact.
- The Himachal Pradesh government in association with the Orange Business Services, the business arm of the Orange Group, has launched a state data centre using the green data centre concepts which minimize power requirements and increase power utilization efficiency and is assumed to be the first data centre in India using the green data etc.

4.3.4 Government Initiatives

The government of India has taken various initiatives to promote the growth and development of the IT industry in our country. It includes formulation

of National e-Governance Plan, State Wide Area Networks (SWANs), State Data Centres (SDCs), Common Service Centres (CSCs) and Open Technology Centre (OTC). Some of the major initiatives taken by the government are as follows (India Brand Equity Foundation, 2016).

- The Indian and US government have jointly agreed to explore opportunities for collaboration on implementing US\$ 16.58 billion on India's 'Digital India Initiative'. Besides, they agreed to hold the US-India Information and Communication Technology (ICT) Working Group in India by the end of this year.
- Through the public-private partnership (PPP), the Human Resource Development (HRD) Ministry has come upon a partnership with private companies, including Tata Motors Ltd, Tata Consultancy Services Ltd and real estate firm Hubtown Ltd, to begin three Indian Institute of Information Technology (IITs) at Nagpur, Ranchi and Pune.
- The Department of Electronics and Information Technology (DeitY) is planning to begin a digital literacy program intended to train over six crore Indians within the following three years and thereby empowering them for digital inclusion.
- The Government of Telangana with the aim of repositioning the city of Hyderabad as a technology destination has initiated the construction of a technology incubator there. The state government has initially invested US\$ 5.14 million to set up a 60,000 sq ft space on the campus of International Institute of Information Technology- Hyderabad (IIT-H) and is considered as the largest start-up incubator in the country and the project when completed, is proposed to be the world's biggest start-up incubator hosting 1000 start-ups.
- The Department of Electronics and Information Technology and M/s Canbank Venture Capital Ltd is intending to launch an Electronics Development Fund (EDF) which will be a 'fund of funds' to invest in the 'Daughters Fund' that would cover risk capital to companies developing new technologies in the areas of electronics, nano-electronics and information technology (IT).

- The Minister of Communication and Information Technology, Mr Ravi Shankar Prasad, recently announced a plan to increase the number of common service centres or e-Seva centres from 1,50,000 to 2,50,000 thereby enabling the village level entrepreneurs to interact with the national level experts for guidance and serving as a e-services distribution point.
- By introducing bar coded tickets, global positioning system (GPS) based information system inside coaches, integration of all facilities related to ticketing issues, Wi-Fi facilities at the stations, and super fast long route train service for unreserved passengers among other developments, the Railway Ministry is planning to give a digital push to the Indian Railways that will help to increase the passenger traffic.
- The e-Tourist visa (e-TV) scheme has been extended to 37 more countries and thus increasing the total number of countries to 150 under this scheme.

4.3.5 Future of the Indian IT industry

The future of the IT industry largely depends on the economic forces and the adoption of new technologies. The IT enabled digital transformation is a must to survive in this globally connected competitive world. The Indian IT-BPM industry is expected to continue handheld and partner clients to enable business success in this digital era and is expected to reach revenues of US\$ 300 billion by the year 2020 (Ghosh, 2015). The IT sector now capable of delivering both on-shore and off-shore services to global clients offers lots of opportunities for the top IT firms in India. Social, Mobility, Analytics and Cloud (SMAC) are together expected to offer a US\$ 1 trillion opportunity. The Cloud represents the largest opportunity under SMAC expected to raise US\$ 650 – 700 billion by the year 2020 which is followed by the social media offering a US\$ 250 billion market opportunity by the year 2020 (India Brand Equity Foundation, 2016). The Indian e-commerce market is US\$ 12 billion in size and offers opportunities for IT companies developing products and services that relate to the higher growth of the consumer segment.

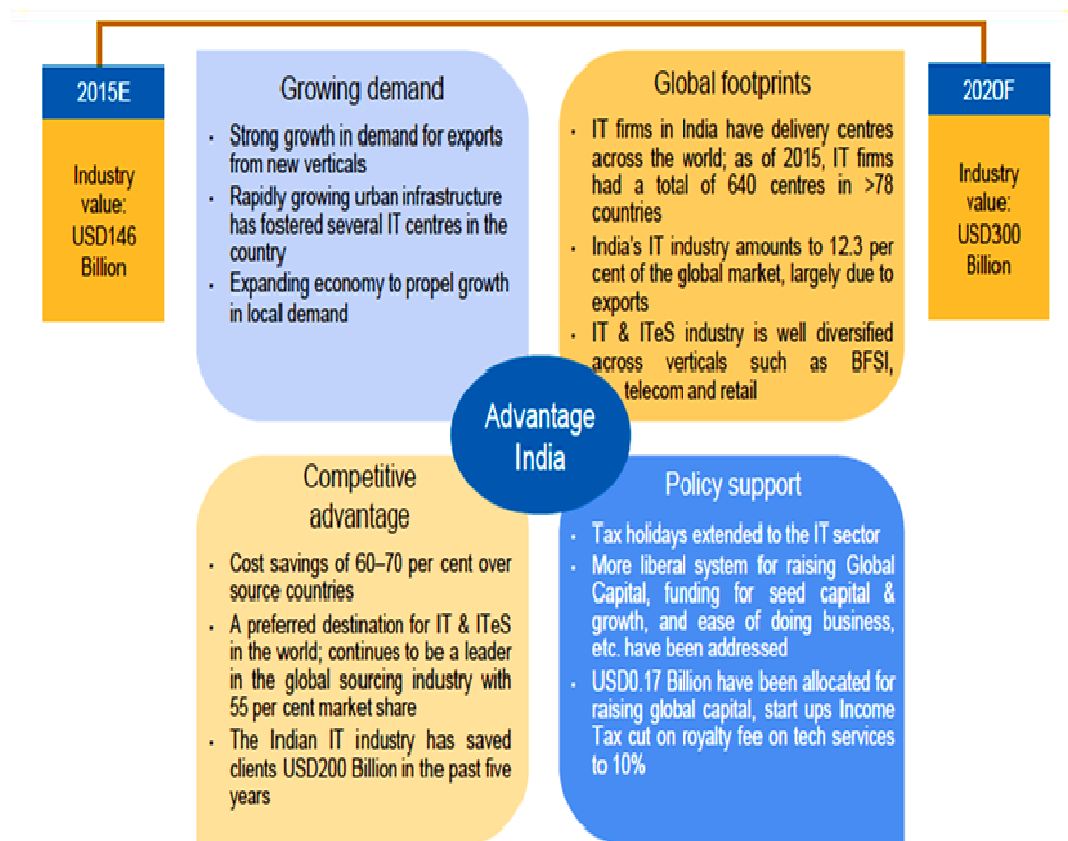


Fig 4.4: Advantages of the Indian IT Sector

Source: (India Brand Equity Foundation, 2016)

The figure 4.4 explains the advantages of the India's IT sector. The IT sector marked by the growth in demand for its exports and rapid growth of infrastructure has attained competitive advantage and is moving ahead to mark an estimated industry value of US\$ 300 billion in the financial year 2020. The advantages of Indian IT industry is its growing demand, the global level achievements, competitive advantage and the support of the policy makers. The Indian IT industry amounts to 12.3% of the global market mainly due to its export market. The competitive advantage of our IT sector is its cost savings of 60-70% over other outsourcing countries. Moreover, the government had liberalized systems for raising global capital for promoting the growth of IT sector. These all add to the advantages for the growth of Indian IT industry.

The scope of IT sector is changing with the convergence of computing, communications and electronics. The key industries such as transportation,

financial services, hospitality, automotive and aerospace, core industries like oil, gas, steel, etc; services like education, banking, healthcare, etc; and retail sector are utilizing the opportunities offered by the information technology and information technology enabled services. With the improvements in the global economy and increase in the consumer confidence, investing in the new technologies such as smart computing products, internet of things, product and platforms, cloud computing etc will enable vendors to gain efficiency, access to consumers and innovation, which when effectively managed, will facilitate in the delivery of real competitive value to the clients (Ghosh, 2015).

4.4 IT sector in Kerala

Kerala, always referred to as ‘God’s own Country’, is a state known for its higher levels of achievements in the fields of education, healthcare and social justice. Kerala has all the intrinsic advantages that can boost the growth of the IT sector for the social and economic developments of the state. Kerala has achieved higher literacy rates, advanced telecommunication networks connecting towns and villages, educated women, three international airports – Trivandrum, Kochi and Calicut and availability of world class IT professionals that can augment the growth of IT sector.

Due to the widespread misconception about information technology in the minds of common people and trade unions that the application of IT may replace the manpower and will result in the loss of employment, the government of Kerala did not make any serious attempts for the promotion of IT before the year 1995. But the growth of IT at a global level and in the nearby states, and the Keralites obtaining jobs in the IT sector outside Kerala made the government of Kerala realized the potentials of IT in creating employment at a large scale. As an initiative in this regard, the government of Kerala announced a comprehensive IT policy in April 1998. Besides, for the promotion of IT the government of Kerala established a new department for the IT (Dr K G K Nair, 2002).

The IT industry is generally considered as one of the most environment friendly and people friendly industries of modern times. It has the potential to create vast opportunities and employment with little pressure on land, environment and other resources and hence treated as ideal for Kerala. The delivery of

government services can be enhanced using the IT which may lead to very responsive and transparent administration, thereby empowering the people and satisfying their right for information as well. The government has taken various initiatives to promote the use of IT which include PC penetration, internet connection to the educational institutions, internet kiosks in every Panchayath ward and modernization and integration of government functions using the information technology.

The IT policy 1998 is aimed at increasing the application of IT in all walks of life, enhancing the IT industry base, creating a robust state information infrastructure and creating human resources for IT. It was followed by the IT Policies in 2001, 2007 and 2012 for promoting the further development of IT sector in Kerala. The vision of Kerala State's IT policy 2012 is to plan, develop and market the state as the most preferred IT/ ITES investment/ business destination in India; to utilize ICT in the effective, transparent and efficient delivery of services to the citizens endlessly through an integrated e-governance framework; and to make the state of Kerala a 100 percent e-literate and digital state. Various initiatives have been implemented for the development of IT sector in Kerala which include the State Data Centre, Kerala State IT Mission, Kerala State Wide Area Network, Mobile Service Delivery Platform, FRIENDS, Akshaya, Citizen Call Centre etc. The Kerala government supports the sector by way of single window clearance, developing Kerala 'IT Brand', inducing investments and promoting direct investments. All these policies have helped Kerala to achieve unique distinctions among other states as a preferred IT/ ITES investment destination and also a leader in e-governance. The government of Kerala has also created an apex company, Kerala State IT Infrastructure Ltd (KSITIL), for pioneering the development of IT/ ITES Special Economic Zones (SEZs), IT Townships and IT parks in the state by providing basic infrastructural facilities for the IT sector (Government of Kerala, 2012). 'Kerala Perspective Plan 2030' is aimed at developing State's ICT sector abreast with the top companies in the world in terms of ICT development (State Planning Board, 2016).

The export of registered IT/ ITES units in Software Technology Parks in India (STPI) increased from Rs 2, 51,497 crore in 2012-13 to Rs 2, 73,313 crore in 2013-14, which marked a growth of 8.67 percent in 2013-14. The export of the

sector of the state is estimated at Rs 2665.12 crore during the year 2013-14 which is 0.96 percent of overall India. Kerala ranks 8th in the export by STPI registered IT and ITES units (State Planning Board, 2016).

Thiruvananthapuram and Kochi, the major cities of Kerala, is treated as the booming metros and challenging IT locations in India. Both these cities are undergoing the expansion of existing IT parks. The third phase expansion of Technopark and Technocity in Thiruvananthapuram; the expansion of Infopark, Kochi and the Smartcity with private participation are progressing. The state government has initiated the process of setting up a 'hub and spoke' model IT development where the Technopark in Thiruvananthapuram, Infopark in Kochi and Cyberpark in Kozhikode are developed as the hubs and the other district locations as the spokes. Setting up of IT parks in Kollam, Cherthala, Ambalapuzha, Koratty, Kozhikode, Kannur and Kasargode have already been commenced for the promotion of IT sector. Remarkable progress has been made by the state government in the IT sector in terms of investment, infrastructure development and employment generation through the centralized initiatives of the IT Department.

4.4.1 IT Parks in Kerala

The major IT parks promoted by the government of Kerala having world class facilities and outstanding growth prospects are Technopark in Thiruvananthapuram, Infopark in Kochi and Cyberpark in Kozhikode and Rural IT parks (Techno lodges). These parks are operating in a hub and spoke model and are continuing in their expansion phase. To meet the growing demands of the IT space from the IT sector, the government is promoting IT parks in the private sector outside the government owned IT parks. Besides, the parks have also volunteered the private developers in India and abroad, in creating more build up space. The government has framed guidelines and standards for the functioning of the private IT parks. Some of the private IT parks operating in the state of Kerala are Smart City, L&T Park, Brigade Park, Muthoot Park etc.

The government owned IT parks operating in Kerala are explained in the table 4.3.

Table 4.3 Major Government owned IT Parks in Kerala

IT Parks	Location	Description
TECHNOPARK	Thiruvananthapuram	Largest IT park in India in terms of built up area. Developing through Four Phases I, II, III and IV.
	Kollam	Technopark in Kundra, Kollam is launched in 2011. It is the hub and spoke model of development of Technopark Thiruvananthapuram.
INFOPARK	Kochi	Launched in 2004 and developed through Phase I and II. Smart city is under construction. Acting as a hub for the other IT parks in the central region.
	Koratty, Thrissur	Established in 2009. 29 IT/ITES companies operating in the park.
	Cherthala, Alappuzha	Started in 2011. Operating in the Public Private Participation Model. Out of 66 acres, 60 acres are notified as SEZ land.
	Ambalapuzha	Launched in 2011. Public Private Participation model operation. Designed as the first water theme IT park in India.
CYBERPARK	Kozhikode	Established in 2014. Developing Stage and acting as a hub for developing IT/ITES sector in the northern region.
	Kannur	First spoke model as SEZ for the overall development of IT industry in the Malabar region in general and Kannur district in particular.
	Kasaragod	Another spoke model of Cyberpark. SEZs are developed for the promotion of IT/ITES sector in the Kasaragod region.
KINFRA NEOSPACE	Kakkanchery, Malappuram	First IT park in the Malabar region and came in to force in 2003. Operating under the ownership of KINFRA.

Source: (Wikipedia, 2016), (Cyberpark, 2016).

4.4.1.1 TechnoPark

Technopark Thiruvananthapuram, the Electronics Technology Parks Kerala, was formally dedicated to the nation on 18th November 1995. It is the largest IT Park in India in terms of the built up area. It is spread over an area of 334.17 acres, including the Phase I, II and III. The Technocity is provided with 423.51 acres of land and the Technopark Kollam has 4.45 acres. The Technopark has a built-up area of 9.33 million square feet and is home to 355 companies providing direct employment to 47,100 IT professionals and an indirect employment for another 1, 65,000 employees.

The Technopark is expected to become one of the largest IT parks in India with the development of Phase I, Phase II, Phase III and Technocity. Technopark has three Special Economic Zones (SEZ) inside it covering the Phases I, II and III. Phase IV will also become SEZ once the land is acquired thereby providing economic benefits to the companies operating within the park. The exports from the Technopark has reached Rs 5100 crore in 2014-15 marking a growth of 20 percent in 2014-15 compared to the previous year 2013-14 (State Planning Board, 2016). The details are shown in the Table 4.4.

The Technopark is owned and administered by the Government of Kerala and has a Governing Council and a Project Implementation Board, headed by the top officials of the government. The Technopark is headed by the Chief executive officer and the administration offices (including the CEO) are centered in the Park Centre building. The units in the Technopark include domestic firms, joint ventures and subsidiaries of foreign companies undertaking activities that include embedded software development, smart card technology, enterprise resource planning (ERP), process control software design, engineering and computer- aided design software development, IT enabled services (ITES), etc. The Technopark is expected to create 56000 new jobs by the year 2020 (Wikipedia, 2016).

Table 4.4 Physical Achievements of the Technopark

SI No.	Particulars	Land/ Area/ Rs.crore
1.	Total Land (Phases I, II, III)	Phase I – 158.17 acres
		Phase II – 86 acres
		Phase III – 90 acres
2.	Land for Technocity	423.51 acres
3.	Land for Technopark, Kollam	4.45 acres
4.	Total Built up space for Industries	32,51,500 sq.ft
5.	Total space for support facilities	1,80,250 sq.ft
6.	Total built up spaces by companies	
	a) Total built up spaces	1,25,64,700 sq.ft
	b) Completed	48,78,000 sq.ft
7.	Number of companies in the Technopark	355 companies
8.	Total Employment	47,100
9.	Total investment (up to 3/2015)	Rs. 4,900 crores
10.	Total turnover (up to 3/2015)	Rs. 5,000 crores
11.	Total Export (up to 3/2015)	Rs. 5,100 crores
12.	Total SEZ area	304.71
13.	Total Non SEZ area	457.42

Source: Economic Review 2015

4.4.1.2 InfoPark

Infopark Kochi is the second largest IT hub in Kerala having a build-up area of 5.8 million square feet. It was established in 2004 by the Government of Kerala. The park is currently in its expansion mode with its Phase II. The Infopark is operating on 225.86 acres of land, including Phase I and II. The Infopark Cherthala is operating on 66 acres of land. Infopark is home to 237 companies providing direct employment to 26500 professionals. The export revenue from the Infopark has reached Rs 3150 crore during the financial year 2014-15. Investments worth Rs 2000 crore have been made in the area as of March 2015 (State Planning Board, 2016).

Infopark, Thrissur and Cherthala are operating as spokes with the Infopark Kochi acting as the hub. The Infopark campus has both Special Economic Zones (SEZ) and the non-SEZ facility. The Ministry of Commerce, Government of India has notified 264.42 acres as a Special Economic Zone. The infrastructure developed in the park has been categorized as Multi tenanted facility (MTF) and Built to suit (BTS). The Infopark shows enormous growth in the number of IT companies and software exports within ten years of commencement compared to other parks in the state. The Infopark is expected to create 10000 additional jobs during the financial year 2015-16 (Wikipedia, 2016). The physical achievements of the Infopark are explained in the table 4.5.

Table 4.5 Physical Achievements of the Infopark

SI No.	Particulars	Land/ Area/ Rs.crore
1.	Land	
	Infopark Kochi Phase I	100.86 acres
	Infopark Kochi Phase II	125 acres
	Infopark Cherthala	66 acres
	Infopark Thrissur	30 acres
2.	Total Built up IT space	5.8 million sq.ft
3.	Total built up space by IT companies in SEZ	2.2 million sq.ft
4.	Number of companies in the Infopark	237 companies
5.	Total number of entrepreneurs through incubator	46
6.	Women entrepreneurs through incubator	4
7.	Total Employment (up to 3/2015)	26,500
8.	Total Investment (up to 3/2015)	2000 crores
9.	Total Turnover (up to 3/2015)	3150 crores (export turnover during 2014 -15)
10.	Total SEZ area	264.42 acres
11.	Total Non SEZ area	57.44 acres

Source: Economic Review 2015

The Infopark Thrissur is located at Koratty having a built up area of 45000 square feet. It is spread on 30 acres of land out of which 18.5 acres are in SEZ area. At present, 29 companies are operating in the Infopark Thrissur. The first phase of development and modifying the buildings as IT buildings have been completed in the park.

4.4.1.3 KinfraPark

The Neo Space at the Kinfrapark Kakkenchery, Malappuram is the first major infrastructure for IT in the Northern region. Its built up area is 85000 square feet and hosts 24 companies providing employment for more than 200 professionals. The companies operating in the Kinfrapark undertake numerous activities that include software development, BPO, web development, IT enabled services, animation etc.

The Kinfra Neospace is developed by the Kerala Industrial Infrastructure Development Corporation, a statutory body of the government of Kerala. It is responsible for the development of infrastructure for the industries and to catalyze industrial growth in the state. The Kinfra, Techno Industrial Park Kakkanchery, Malappuram is spread over 100 acres where 30 acres are allotted for Special Economic Zone (SEZ) for processing, 60 acres for non SEZ food processing and 10 acres for Information Technology.

4.5 Conclusion

The importance of IT sector in the Indian economy can be pointed out from the above explanations or theories. The IT sector has played a significant role in changing India's image from a sluggish economy to a global leader in technology on whom many countries are depending for world class technology solutions. The IT sector is considered as one of the fastest growing sectors in India. Both the central and state governments are bound to provide various incentives for promoting the IT sector since the growth of IT sector in India has brought about major positive changes in the Indian economy. The IT sector has created employment opportunities for over 2.3 millions of people in India both directly and indirectly. As a result, the purchasing power of a large section of Indian population increased rapidly and thereby, increasing the average standard of living of the

majority of the population in India. These changes made by the IT sector have contributed to the growth rate of other sectors of the Indian economy. Thus, it is evident that the IT sector has tremendously promoted the growth of Indian economy and is supposed to be in its growth stage in India.

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Chapter 5

Relationship between Quality of Work Life, Employee Satisfaction and Employee Turnover – An Analysis

5.1 Introduction

The present chapter is concerned with the analysis of primary data with respect to the Quality of work life, Employee satisfaction and Employee turnover of the sample respondents. The primary data was collected from 557 employees working in the IT sector in Kerala using a structured and pre-tested questionnaire. This chapter presents the validation of the Quality of work life scale, Employee satisfaction scale and Employee turnover scale in the IT sector in Kerala. Besides, the chapter exhibits the profile of the sample respondents identified in the study and explains the levels of the quality of work life, employee satisfaction and employee turnover among the employees working in the IT sector in Kerala.

The main objective of this chapter is to identify the strength of the relationship of the sub-variables with their respective variables – Quality of work life, Employee satisfaction and Employee turnover and to recognize the levels of quality of work life and employee satisfaction among the employees working in the IT sector in Kerala. Besides, the normality of the data is determined using the Kolmogorov-Smirnov test and Shapiro-Wilk test. The Spearman's rank correlation coefficient analysis is used to identify the degree of relationship between the variables studied. Further, the research model developed in the study is discussed at the end of this chapter.

The present chapter is classified into six sections. Section A is concerned with the profile of the sample respondents and discusses about the normality of the data. Section B describes the development and validation of the Quality of work life scale, Employee satisfaction scale and Employee turnover scale. Section C exhibits the relationship between quality of work life and its respective variables and further ascertain the level of quality of work life among the IT employees. Section D details the employee satisfaction – its relationship with its variables and the level of employee satisfaction among the employees. Section E explains the overall employee turnover, its relationship with its variables and the employee turnover perceived among the employees working in the IT sector in Kerala. Section F exhibits the relationship between quality of work life, employee satisfaction and employee turnover among the IT sector employees. The research

model is explained in this section through structural equation modelling using the Warp PLS 4.0.

Section A

Section A explains the personal profile of the sample respondents of the study. The data were collected from the employees working in the Technopark, Infopark and Kinfrapark, Kerala. Both the male and female employees were included in the study. The gender wise designation and park wise gender of the respondents are shown separately in this section. The normality of the data collected is also described in a separate table at the end of this section. The descriptive statistics (using mean and standard deviation) of the indicators of the variables quality of work life, employee satisfaction and employee turnover is detailed in the Appendix V.

5.2 Profile of the Sample Respondents

Previous studies have revealed that the demographic variables influenced the quality of work life, employee satisfaction and employee turnover among the employees working in various sectors to a great extent. The sample respondents included the employees working in the selected IT companies operating in the Technopark Trivandrum, Infopark Kochi and Koratty and Kinfrapark Malappuram. The profile of the respondents with regard to age, work experience, education, gender, marital status and monthly income is presented in the table 5.1.

The age wise classification indicates that 42.2 % of the employees belong to the second age group (26 yrs to 30 yrs) followed by 40.6 % employees in the first age group (25 yrs and below). The third age group (31 yrs – 35 yrs) comprises of 13.1 % employees while 3.6 % belong to the fourth age group (36 yrs to 40 yrs). Only 0.5 % of employees fall in the fifth age group (above 40 yrs). From this it can be concluded that the majority of the IT employees is youngsters under the age of 30 years.

The data reveal that 47.6 % employees are having work experience in their present company only up to 2 years while 32.9 % employees are having work experience between 2 years – 4 years. 13.6 % employees responded that they are having work experience between 4 years – 6 years; 2.5 % employees are having

work experience between 6 years – 8 years while 3.4 % employees are having work experience of 8 years and above, thus concluding that the majority of the employees are having work experience in their present company only less than 2 years.

Table 5.1 Profile of the Respondents

Demographic Variable	Categories	Frequency	Percentage	Cumulative Percentage
Age	25 yrs and below	226	40.6	40.6
	26 yrs – 30 yrs	235	42.2	82.8
	31 yrs – 35 yrs	73	13.1	95.9
	36 yrs – 40 yrs	20	3.6	99.5
	Above 40 yrs	3	.5	100.0
	Total	557	100.0	
Work Experience	Up to 2 yrs	265	47.6	47.6
	2 yrs – 4 yrs	183	32.9	80.4
	4 yrs – 6 yrs	76	13.6	94.1
	6 yrs – 8 yrs	14	2.5	96.6
	8 yrs and above	19	3.4	100.0
	Total	557	100.0	
Monthly Income	Below Rs 20000	121	21.7	21.7
	Rs 20000 – 30000	246	44.2	65.9
	Rs 30000 – 40000	121	21.7	87.6
	Rs 40000 – 50000	41	7.4	95.0
	Rs 50000 and Above	8	5.0	100.0
	Total	557	100.0	
Designation	Software Architect	57	10.2	10.2
	Business Analyst	39	7.0	17.2
	Team Leader	43	7.7	25.0
	Senior Software Engineer	161	28.9	53.9
	Software Engineer	257	46.1	100.0

Demographic Variable	Categories	Frequency	Percentage	Cumulative Percentage
	Total	557	100.0	
Education	Plus Two	21	3.8	3.8
	B Tech	319	57.3	61.0
	M Tech	32	5.7	66.8
	B Sc	48	8.6	75.4
	M Sc	34	6.1	81.5
	Others	103	18.5	100.0
	Total	557	100.0	
Gender	Male	299	53.7	53.7
	Female	258	46.3	100.0
	Total	557	100.0	
Marital Status	Married	237	42.5	42.5
	Unmarried	320	57.5	100.0
	Total	557	100.0	

Source: Primary Data

The monthly income of the employees reveals that 44.2 % employees belong to the second category of the income (Rs 20000 - 30000); 21.7 % employees belong to the third category of income (Rs 30000 - 40000) and the first category (below Rs 20000) each. The fourth category (Rs 40000 - 50000) include 7.4 % employees while 5.0 % employees come under the fifth category of income (Rs 50000 and above). This means that the majority of the employees working in the IT sector are having monthly income between Rs 20000 and 30000.

The designation wise category reveals that 46.1 % respondents are working as Software Engineers in the IT companies; 28.9 % employees are working as Senior Software Engineers. Employees' working as Software Architect comprises about 10.2 %, while 7.7 % are working as Team Leaders. 7.0 % employees responded that they are working as Business Analysts. The majority of the IT employees included in the study are working as Software Engineers in the selected IT companies.

The table 5.1 indicates that the educational qualification of the 57.3 % employees is B Tech while 18.5 % employees responded that their educational qualification comes under the sixth category of others. 8.6 % employees have qualified the B Sc degree while 6.1 % have qualified the M Sc degree. 5.7 % employees have M Tech qualification and 3.8 % employees are Plus Two qualified thus concluding that the majority of the employees have qualified the B Tech degree.

The gender wise classification reveals that 53.7 % of the respondents are male employees while 46.3 % are female employees.

The table 5.1 reveals the marital status of the respondents out of which 57.5 % of the respondents are unmarried employees and the remaining 42.5 % are married employees.

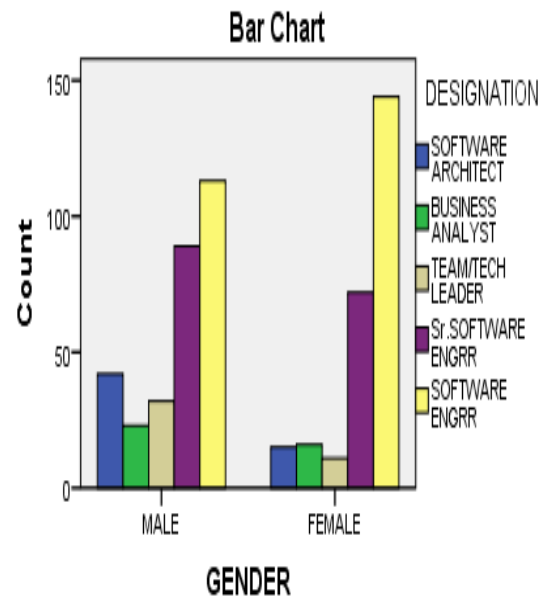
Thus, it can be concluded that the majority of the respondents are male employees and most of the respondents have qualified B Tech degree and the respondents mostly belong to the second age group of 26 yrs to 30 yrs. The data reveal that the majority of the respondents are having work experience in their present company only up to 2 years and most of the respondents belong to the income group of Rs 20000 – 30000. Besides, the major respondents are working as software engineers in the IT sector.

5.2.1 Gender * Designation of the Employees

The gender wise designation of the employees is given in the table 5.2. The software engineers comprises of 113 male and 144 female employees. The senior software engineers include 72 female employees and 89 male employees. The team leaders are of 11 female employees and 32 male employees. Business analysts include 23 male employees and 16 female employees while software architect consists of 15 female and 42 male employees. Thus, a total of 299 male employees and 258 female employees are included in the study.

Table 5.2 Gender wise Designation of the Respondents

Designation	Gender		Total
	Male	Female	
Software Architect	42	15	57
Tech/ Business Analyst	23	16	39
Team Leader	32	11	43
Sr. Software Engineer	89	72	161
Software Engineer	113	144	257
Total	299	258	557



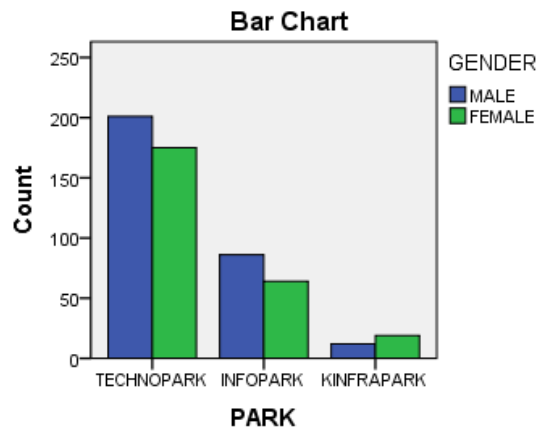
Source: Primary Data

5.2.2 Park * Gender of the Employees

The park wise gender classification of the employees is shown in the table 5.3. From the Technopark, the data is collected from 201 male and 175 female employees. 86 male and 64 female employees are identified as respondents in the study from the Infopark while 12 male and 19 female employees are included from the Kinfrapark.

Table 5.3 Park wise Gender of the Respondents

Park	Gender		Total
	Male	Female	
Technopark	201	175	376
Infopark	86	64	150
Kinfrapark	12	19	31
Total	299	258	557



Source: Primary Data

Thus, the profile of the respondents is concluded by describing the gender wise designation and park wise gender of the employees using the bar charts.

5.3 Normality of the Data

The Kolmogorov-Smirnov test and the Shapiro-Wilk test is used to verify whether the data collected follows a normal distribution or not. The null hypothesis is framed accordingly and stated as below

H₀: Sample is normally distributed.

The test statistics of the K-S test and the Shapiro-Wilk test with regard to the normality of the data is explained in the table 5.4.

Table 5.4 Normality Test – One Sample Kolmogorov- Smirnov Test

Variables	Sub-variables	Kolmogorov- Smirnov Z ^a	p- value	Shapiro- Wilk	p- value
Quality of Work Life	Adequate and Fair Compensation	.097	.000	.976	.000
	Working Environment	.183	.000	.927	.000
	Organizational Communication	.144	.000	.955	.000
	Autonomy of Work	.096	.000	.971	.000
	Employee Development	.083	.000	.984	.000
	Fair Treatment	.102	.000	.956	.000
	Job Security	.180	.000	.949	.000
	Total Life Space	.125	.000	.959	.000
	Attitude of Management	.136	.000	.963	.000
Employee Satisfaction	Pay	.112	.000	.974	.000
	Training	.119	.000	.973	.000
	Welfare Activities	.101	.000	.975	.000
	Recognition and Appreciation	.145	.000	.952	.000
Employee Turnover	Work Stress	.098	.000	.977	.000
	Workplace Relations	.107	.000	.973	.000
	Work Life Imbalance	.050	.002	.993	.010
	Health Problems	.106	.000	.974	.000
	Economic Conditions	.136	.000	.974	.000
^a indicate Lilliefors Significance Correction					

Source: Primary Data

The table 5.4 points out that all the p-values of the variables of quality of work life - adequate and fair compensation (K-S=.097, p-value=.000, S-W=.976, p-value=.000); working environment (K-S=.183, p-value=.000, S-W=.927, p-value=.000); organizational communication (K-S=.144, p-value=.000, S-W=.955, p-value=.000); autonomy of work (K-S=.096, p-value=.000, S-W=.971, p-value=.000); employee development (K-S=.083, p-value=.000, S-W=.984, p-value=.000); fair treatment (K-S=.102, p-value=.000, S-W=.956, p-value=.000); total life space (K-S=.125, p-value=.000, S-W=.959, p-value=.000); attitude of management (K-S=.136, p-value=.000, S-W=.963, p-value=.000) and job security (K-S=.180, p-value=.000, S-W=.949, p-value=.000) in both the tests appear to be less than the significance value of 0.05. Similarly the variables of employee satisfaction – pay (K-S=.112, p-value=.000, S-W=.974, p-value=.000); welfare activities (K-S=.101, p-value=.000, S-W=.975, p-value=.000); adequate training (K-S=.119, p-value=.000, S-W=.973, p-value=.000) and recognition and appreciation (K-S=.145, p-value=.000, S-W=.952, p-value=.000) and the variables of employee turnover – work stress (K-S=.098, p-value=.000, S-W=.977, p-value=.000); work life imbalance (K-S=.050, p-value=.002, S-W=.993, p-value=.010); health problems (K-S=.106, p-value=.000, S-W=.974, p-value=.000); economic conditions (K-S=.136, p-value=.000, S-W=.974, p-value=.000) and workplace relations (K-S=.107, p-value=.000, S-W=.973, p-value=.000) have p-values in both the tests less than the significance value (0.05).

The null hypothesis is thereby rejected at 1% level of significance and assumes that the sample is not normally distributed. Since the data is not normally distributed, the non-parametric test such as the Kruskal-Wallis H test, Mann-Whitney U test, Spearman's Rank Correlation Coefficient etc are used for the further analysis of the data.

This section concludes by discussing the personal profile of the respondents. The majority of the respondents are male employees and among the designation wise category, software engineers are the major respondents. Besides, the data collected is tested for normality and the results indicated that the data was not normally distributed.

Section B

This section is concerned with the validation of the Quality of work life scale, Employee satisfaction scale and Employee turnover scale developed by the researcher for the study. Exploratory factor analysis using SPSS 20 and confirmatory factor analysis through structural equation modelling using the Warp PLS 4.0 was done to validate the instrument.

5.4 Scale Development and Validation

After reviewing the literature, the researcher found that various components of quality of work life, employee satisfaction and employee turnover were used in different sectors to measure the same. Hence it became necessary to develop a suitable scale to measure quality of work life, employee satisfaction and employee turnover and validate the same in the IT sector in Kerala.

5.4.1 Data Collection and Cleaning

The purpose of the research was explained to the respondents before distributing the questionnaires. A total of 700 questionnaires were distributed among the respondents out of which 626 questionnaires were collected upon the completion from the respondents. Out of the 450 questionnaires distributed in the Technopark Trivandrum, 414 questionnaires were collected from the respondents. 200 questionnaires were distributed in the Infopark Kochi and Koratty out of which 176 were returned by the respondents, while 36 questionnaires were returned out of 50 questionnaires distributed in the Kinfrapark Malappuram, thus constituting a total of 626 questionnaires.

After the collection, the data were then checked to identify the missing responses, outliers, normality and reliability. Using Excel and Warp PLS 4.0 the data outliers were identified, thus ensuring the quality of the data. The multivariate outliers were identified at a minimal level on examining the data. A total of 69 responses were thus identified reducing the primary data collected to 557 in number.

The primary data collected was subjected to the Principal component factor analysis with the varimax rotation using SPSS 20. An Exploratory factor analysis

was done separately for each of the scales of Quality of work life, Employee satisfaction and Employee turnover.

5.4.2 Quality of Work Life Scale (QWLS)

The most important components relating to the quality of work life which were frequently used in the previous studies were identified which included working environment, fair compensation, job contentment, opportunities for skill utilization, employee career development, fair treatment, autonomy of work, organizational communication, job security, total life space, facilities and attitude of management. An exploratory factor analysis was done to identify the major components contributing to the quality of work life and to reduce the indicators that form the dimensions using the principal component analysis.

5.4.2.1 Exploratory Factor Analysis (EFA)

SPSS 20 was used to conduct factor analysis in order to identify the major components of the Quality of work life scale. It is suggested that the factor extraction can be done by extracting combinations of variables that explain the greatest amount of variance if the data set had a large set of variables. The selection of the method of factor rotation (between common factor analysis and component analysis) was based on two criteria: (1) the objectives of the factor analysis and (2) the amount of prior knowledge about the variance in the variables (Hair et al 2009). The Component Factor Analysis method, also known as Principal Component Analysis was adopted in the study since the primary objective was to reduce the data, focusing on the minimum number of factors that needed to account for the maximum portion of the total variance (common, specific and error variances) represented in the original variables set (Eappan, 2014).

Hair, Black, Babin and Anderson (2009) has summarized certain assumptions for factor analysis, which included linearity, normality and homoscedasticity (which means the dependent variable exhibits equal levels of variance across the range of predictor variables). They further argued that these statistical assumptions need not be met if the data matrix had sufficient correlation to produce representative factors and justify the application of factor analysis. The

Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy approaches are used to determine the sufficiency of correlations in the data set for factor analysis (Eappan, 2014). The results of the KMO and Bartlett's test are discussed in the table 5.5.

Table 5.5 KMO and Bartlett's Test of Quality of Work Life Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.929
Approx. Chi-Square	12911.251
Bartlett's Test of Sphericity Df	1176
Sig.	.000

Source: SPSS FA Output

Kaiser-Meyer-Olkin (KMO) test was performed to check the sampling adequacy of data for factor analysis. The KMO statistic indicated the proportion of variance in the variables that might be caused by the underlying factors. Kaiser and Rice (1974) stated that if the KMO values were greater than 0.6, it was considered to be adequate. The Barlett's test of sphericity related to the significance of the study and indicated the suitability of the responses collected to the problem being studied. The Barlett's test of sphericity is a statistical test to identify the presence of correlations among the variables and tests the hypothesis that the correlation matrix is an identity matrix i.e. all diagonal elements are 1 and off diagonal elements 0 indicating that all variables are uncorrelated and hence suitable for structure detection and it must be less than 0.05 for the factor analysis to be recommended. Since the KMO value is 0.929, it is acceptable. The Barlett's test values (12911.251, dof 1176, Sig 0.00) indicates that the values are significant and implies that non-zero correlations existed at the significance level of less than 0.001, and hence proceed to factor analysis (D R Swamy, 2015).

The component factor analysis method, also known as principal component method was used in the study since the primary concern was to reduce the data based on the minimum number of factors needed to account for the maximum portion of the total variance represented in the original set of variables. The latent root criterion technique was used to decide on the number of factors to be extracted.

The factors having latent roots or Eigen values greater than 1 are considered significant with the component analysis (Eappan, 2014).

The principal component analysis using varimax rotation was shown in the Appendix IV.

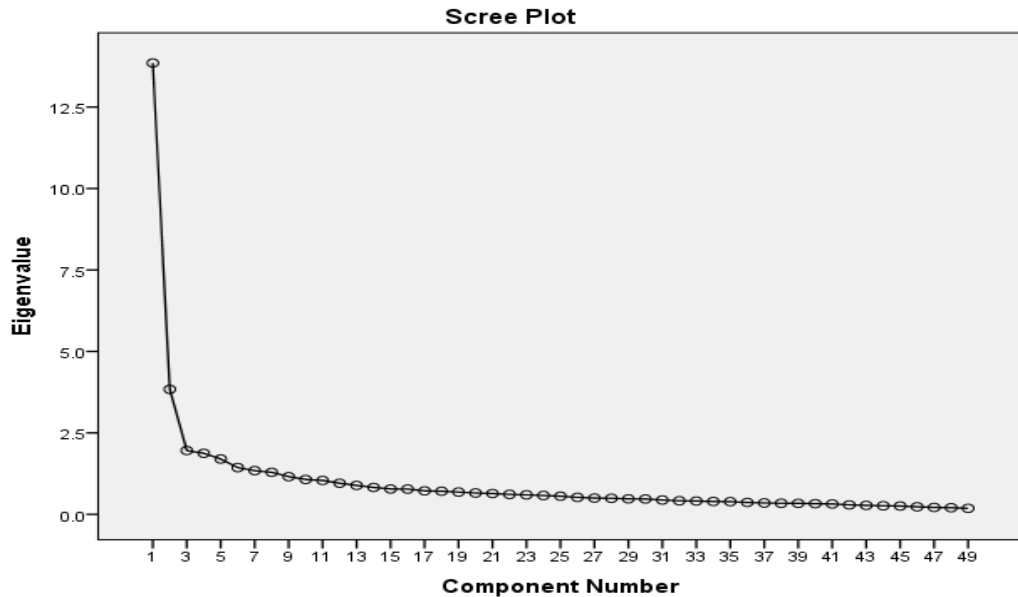


Fig 5.1: Scree Plot of Quality of Work Life Scale

The analysis revealed that nine factors identified from the factor analysis together explained 58.047 % of the total variance. The Scree plot represented that by laying a straight edge across the bottom portion of the roots, there were nine factors before the curve becomes approximately a straight line. Based on the principal component analysis, the most important nine components of quality of work life identified based on the Eigen values were

1. Employee Development,
2. Autonomy of Work,
3. Total Life Space,
4. Fair Treatment,
5. Attitude of Management,
6. Adequate and Fair Compensation,
7. Work Environment,

8. Organizational Communication, and

9. Job Security.

The communalities derived from the factor analysis were reviewed for assessing the importance of the data through questionnaire for factor analysis. If the factor loadings were greater than 0.5, the data set was considered as appropriate (Stewart 1981); (D R Swamy, 2015). The statements having the factor loading greater than 0.5 were finalized for the scale. In general, higher factor loadings were considered as better, and loadings below 0.3 were not interpreted. As a rule of thumb, loadings above 0.71 are excellent, 0.63 very good, 0.55 good, 0.45 fair, and 0.32 poor (Tabachnick and Fidell 2007), (Kumar G, 2011).

Out of the 49 items in quality of work life questionnaire, eight items having factor loading less than 0.5 were removed from the final scale and thus the Quality of work life scale was finalized with 41 statements under nine components.

The following table 5.6 shows the Eigen values with respect to the nine components derived.

Table 5.6 Summary of Factor Analysis of Quality of Work Life Scale

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
Employee Development	My career is developed.	0.709	5.940	12.122	12.122
	Facilities for self improvement.	0.686			
	Opportunities to improve job.	0.681			
	Opportunities to develop new skills.	0.637			
	Different approaches to work.	0.628			
	Work enhances the creativity.	0.611			
	Opportunities for career advancement.	0.578			
	Satisfied with				

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
	growth chances. Proper training is given.	0.550 0.533			
Autonomy of Work	Receive adequate freedom in work. Encouraged to experiment with new methods. Freedom to take decisions about job. Opportunities to try innovative ideas. Ideas to make new changes appreciated. Opportunities to express the views in decision making. Periodic changes in duties.	0.824 0.787 0.765 0.695 0.592 0.534 0.521	5.381	10.982	23.104
Total Life Space	Happy with my family life. Time to fulfill my family commitments. Enough time to spend with family Leave for my personal purposes.	0.825 0.801 0.761 0.691	4.020	8.204	31.308
Fair Treatment	Members identified on the basis of skill. Performance appraisal is done. Freedom to speak and voice opinions frankly. Receives equal	0.600 0.582 0.570 0.535	2.946	6.012	37.319

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
	treatment.				
Attitude of Management	Treats the employees humanly.	0.732	2.775	5.663	42.983
	Organization is a socially responsible unit.	0.651			
	Supports the employees.	0.577			
	Policies of the organization are fair, employee oriented.	0.549			
Adequate and Fair Compensation	Satisfied with current income.	0.675	2.546	5.197	48.180
	Satisfied with the chances of salary hike in job.	0.556			
	Income justified cost of living.	0.520			
	Income does not match with the effort taken in job.	0.519			
Work Environment	Physically safe in work area.	0.822	1.725	3.521	51.701
	Comfortable work space.	0.783			
	Physical work environment enable to work effectively.	0.503			
Organizational Communication	Clarification about the duties and responsibilities.	0.633	1.558	3.180	54.881
	Adequate clarity and transparency in communication.	0.562			
	Correct information about work process and results.	0.517			

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
Job Security	Satisfied with the job security.	0.526	1.551	3.166	58.047
	Strive hard to achieve the organization's objectives.	0.514			
	Organization enhances the social prestige.	0.511			

Source: SPSS FA Output

After the exploratory factor analysis, the researcher modified the quality of work life scale based on the analysis results. A Confirmatory factor analysis was then done to confirm the components of the Quality of work life scale through Structural Equation Modelling using the Warp PLS 4.0.

5.4.2.2 Confirmatory Factor Analysis (CFA)

The main objective of conducting the confirmatory factor analysis was to determine the ability of a predefined factor model to fit an observed set of data. It helps to determine the significance of the specific factor loadings and evaluates the convergent and discriminant validity of the data set. The confirmatory factor analysis was done using the Warp PLS 4.0 in the study.

5.4.2.2.1 Structural Equation Modelling (SEM)

Structural equation modelling is a confirmatory technique used to determine whether the model developed for the study is valid for data and is considered as the appropriate method for testing the hypothesized model for the best fit of the data. It combines both the confirmatory factor analysis and the path analysis. Structural equation modelling involves a number of statistical methodologies to measure a network of causal relationships framed in accordance to a theoretical model, which relates two or more latent complex concepts and each measured through a number of observable indicators. In structural equation

modelling, the inner or structural model describes the relationships between the latent variables identified in the study while the outer or measurement model explains the relationships between the latent variables and their indicators. The estimation of both the structural model and measurement model can be done through the Warp PLS 4.0

5.4.2.2.2 Partial Least Square Approach

Warp PLS is a powerful Partial Least Squares based SEM software that examines the nonlinear or ‘warped’ relationships among the latent variables and thereby estimates the path coefficients. Partial least square approach or variance based approach was adopted in this study, which focuses on maximizing the variance of the dependent variables identified by the independent variables instead of reproducing the empirical co-variance matrix (Haenlein and Kaplan 2004). The PLS based structural equation modelling explains the residual variance of the latent variables and of the manifest variables (indicators) at best in any regression run on the model (Fornell and Bookstein 1982), (Eappan, 2014). The PLS based SEM has two main stages: a PLS regression analysis, whereby weights and loadings are calculated and a path analysis (Kock, 2014).

The WarpPLS 4.0 software standardizes the raw data before proceeding for analysis. Standardized data usually range from -4 to 4 with outliers assuming values towards the right or left of those extremes or sometimes beyond thus ensuring the normal distribution of the data set.

The following figure 5.2 shows the results of the confirmatory factor analysis:

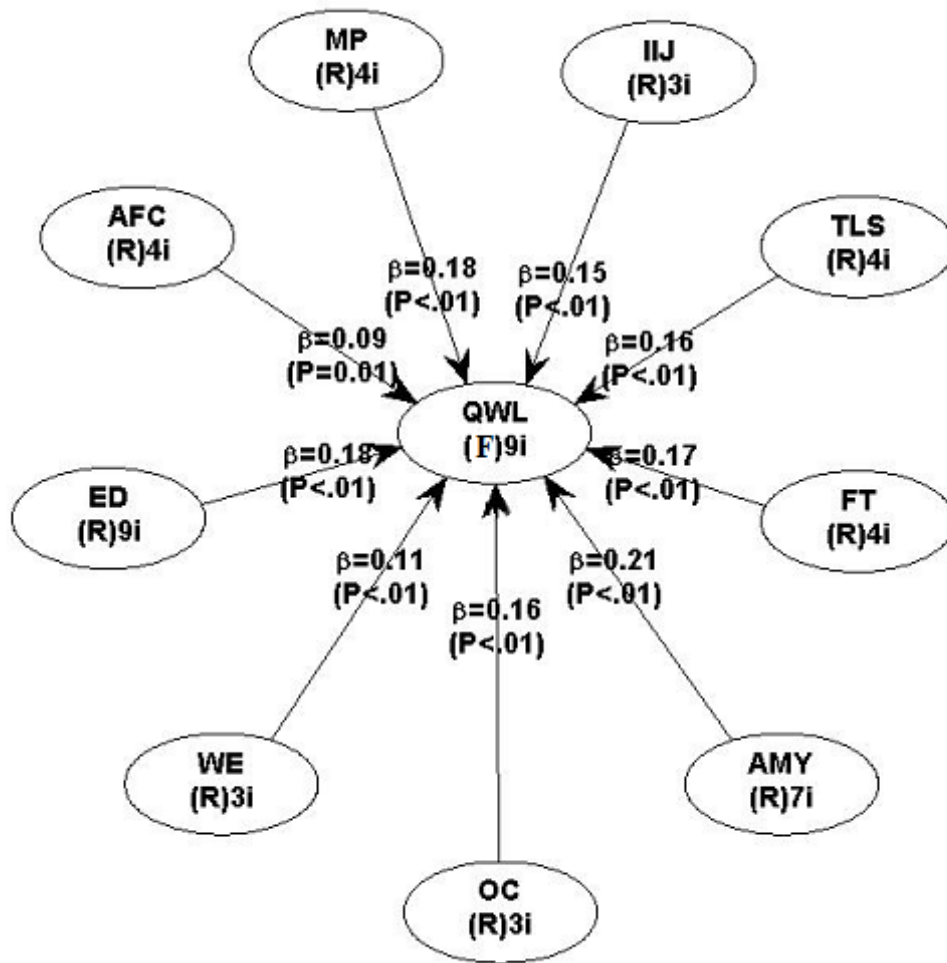


Fig 5.2: Confirmatory Factor Analysis of Quality of Work Life

The statistical significance of the Quality of work life and its dimensions were important in this study. The path coefficients (β) and the p-values of the relationships were shown in the Figure 5.2. Since the p-value was less than 0.01, all the paths were significant and all the path coefficients (β) were positive which indicated that any increase in these dimensions will result in an increase in the Quality of work life.

Table 5.7 The Model Fit Indices of Quality of Work Life Scale

Model Fit indices and P values
APC= 0.156, P value < 0.001
ARS= 0.992, P value < 0.001
AVIF= 1.773, Acceptable <= 5

Source: Warp PLS 4.0 Output

It is suggested that the p-values for the Average Path Coefficient (APC) and Average R Squared (ARS) be lower than 0.05 to assess a model to be fit. Moreover the Average Variance Inflation Factor (AVIF) should be lower than 5 (Ned Kock, 2014) (Eappan, 2014). All the three criteria were met in this model and hence assumed that the model represented the data.

5.4.2.3 Validation of Quality of Work Life Scale

Validity refers to the ability of an instrument to measure what it is supposed to measure. Face validity indicated that the questionnaire included a representative set of items that measured the concept and in its appearance adequate coverage of the concepts was ensured thus establishing the face validity of the questionnaire. The questionnaire drafted for the study was reviewed by a panel of experts and their suggestions were incorporated thus establishing the content validity.

Criterion validity can be established by the predictive or the concurrent validity. Churchill (1979) viewed predictive validity as an essential measure, but Rossiter (2011) argued that it can be desirable but not essential for validity, by definition, is internal to the measure and hence validity need not be established externally by revealing that scores on the measure predict those from another measure. During the data analysis and model testing, the predictive validity was established in the study. The Q squared coefficient of the QWL in the above model was 0.992 (this value was provided for the endogenous or dependent variable). The Q squared coefficient also known as the Stone-Geisser Q squared coefficient, reflects the predictive validity associated with the latent variable. The accepted

predictive validity suggested by a Q squared coefficient should be greater than zero (Ned Kock, 2014) (Kock, 2014). Since the value (0.992) was greater than zero, the predictive validity of the model was established. Another form of predictive validity is the Nomological validity, which is not essential, though merely desirable in a measure (Rossiter 2011) (Eappan, 2014).

Construct validity indicated the effectiveness of the operationalization of theoretical concepts in the measurement of the construct. It expresses how well the results obtained from the use of the measures fit in the theories around which the test was designed. The convergent validity and the discriminant validity are a measure of this validity (Kumar G, 2011).

Convergent validity ensures whether the scale was correlated with other known measures of the concept. It was used to establish that the responses to the questions were sufficiently correlated with the respective latent variables. A measurement instrument was considered to have good convergent validity if the question- statements associated with each latent variable were understood by the respondents in the same way as they were intended by the designers of the question- statement (Kock, 2014). The measurement model has acceptable convergent validity if it satisfies two criteria: p-values associated with the loadings should be lower than 0.05 and loadings for indicators of all respective latent variables must be 0.5 or above (Hair et al 2009) (Eappan, 2014). In the QWLS, the loadings related to each latent variables were higher while the cross loadings were low (shown in Appendix IV). Moreover the factor loadings related to the latent variables were above 0.5 and the p-values were lower than 0.01 and hence the scale has acceptable convergent validity.

Discriminant validity checks whether the scale is sufficiently different from other similar concepts to be distinct. It verifies whether the responses given by the respondents were correlated with the other latent variables. The square root of the Average Variance Extracted (AVE) for each latent variable should be higher than any of the correlations between the latent variables under study and any other latent variables in the measurement model in order to establish the discriminant validity (Fornell and Larcker 1981), (Eappan, 2014). The square roots of the average variance extracted were shown on the diagonal of the latent variable

correlation table 5.8. Since the value of the average variance extracted was higher than any other values above or below or to its right or left, the discriminant validity of the model was ensured.

Table 5.8 Correlations among Latent Variables with the Square roots of AVEs

Items	WE	OC	AMY	ED	FT	TLS	JS	AM	AFC
WE	0.801	0.338	0.452	0.426	0.132	0.197	0.254	0.353	0.337
OC	0.338	0.777	0.487	0.352	0.398	0.400	0.403	0.431	0.271
AMY	0.452	0.487	0.708	0.428	0.362	0.429	0.433	0.244	0.319
ED	0.426	0.352	0.428	0.702	0.466	0.383	0.450	0.490	0.366
FT	0.132	0.398	0.362	0.466	0.835	0.425	0.300	0.475	0.158
TLS	0.197	0.400	0.429	0.383	0.425	0.833	0.471	0.374	0.104
JS	0.254	0.403	0.433	0.450	0.300	0.471	0.747	0.456	0.148
AM	0.353	0.431	0.244	0.490	0.475	0.374	0.456	0.757	0.342
AFC	0.337	0.271	0.319	0.366	0.158	0.104	0.148	0.342	0.693

Source: Warp PLS 4.0 Output

Thus, it can be understood that the validity of the quality of work life scale is established. The model indicated that all the path coefficients significantly contributed to the variable quality of work life and thus confirms the factors contributing to the quality of work life.

5.4.3 Employee Satisfaction Scale

After reviewing the previous studies, the researcher identified that several components were frequently used for measuring the employee satisfaction. They were recognition, organizational practices, pay, adequate training, work and welfare activities. For measuring the satisfaction level of employees working in the IT sector in Kerala, the researcher developed a scale with these components

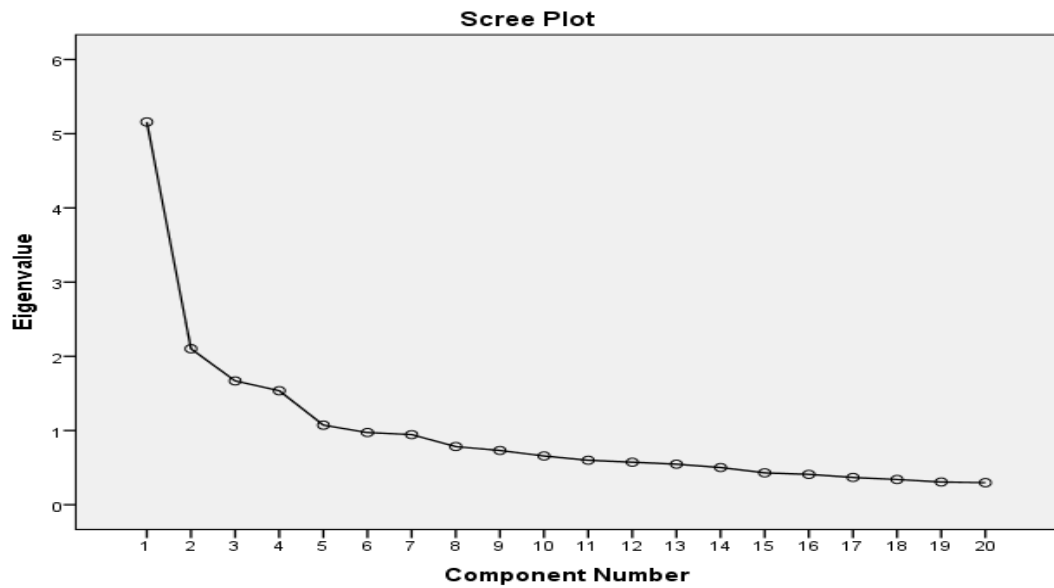


Fig 5.3: Scree Plot of Employee Satisfaction Scale

From the principal component analysis, the four major components of employee satisfaction were identified based on the Eigen values greater than one and they were

1. Recognition and Appreciation,
2. Welfare Activities,
3. Pay, and
4. Adequate Training.

These four components of employee satisfaction together explained 52.326 % of the total variance. The Scree plot indicated that by placing a straight line across the bottom portion of the factors, 4 factors were identified before the curve becomes a straight line approximately. Out of the 20 statements, 4 statements were removed from the scale since the factor loadings were less than 0.5 and thus finalizing the scale with 16 statements under four components having factor loadings at least 0.5 values.

The following table 5.10 shows the Eigen values with respect to the four variables identified.

Table 5.10 Summary of Factor Analysis of Employee Satisfaction Scale

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
Recognition and Appreciation	Job is meaningful.	0.798	3.367	16.833	16.833
	Appreciated on achieving targets.	0.795			
	Recognizes the good performance.	0.790			
	Properly rewarded for the work.	0.704			
	Feel valued at the organization.	0.689			
Welfare Activities	Maternity leave for women employees.	0.829	2.756	13.778	30.612
	Arranging various programs for refreshing the employees	0.748			
	Set up entertainment club.	0.656			
	Various tour packages are offered.	0.539			
	Yoga sessions to reduce the stress.	0.528			
Pay	Income is fair and adequate compared to other organization	0.783	2.296	11.480	42.092
	Happy with the available incentives.	0.602			
	Housing facilities are provided.	0.520			
Adequate Training	Helps to improves the productivity	0.673	2.047	10.234	52.326
	Arranges the training program regularly.	0.615			
	Inconvenient to attend training.	0.585			

Source: SPSS FA Output

5.4.3.2 Confirmatory Factor Analysis

After the exploratory factor analysis, the researcher then conducted a confirmatory factor analysis to confirm the components of Employee satisfaction scale through Structural equation modelling using the Warp PLS 4.0. The main objective of conducting the confirmatory factor analysis was to verify the ability of a predetermined factor model to fit an observed set of data. The results of the CFA were discussed as follows:

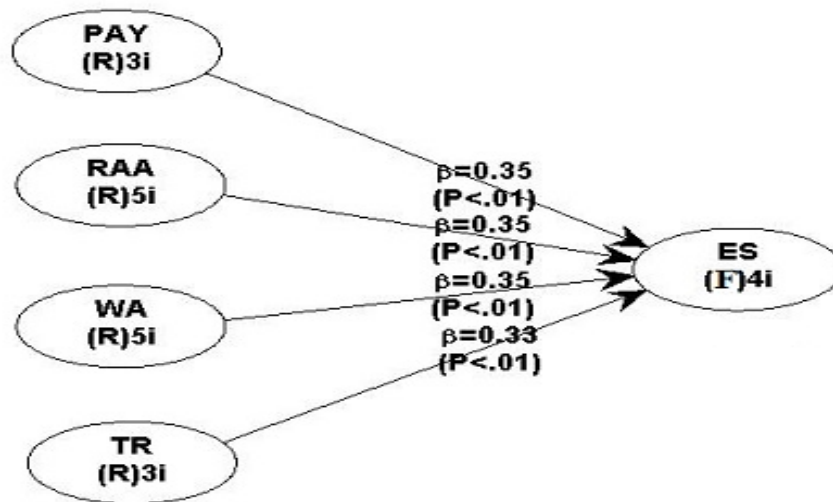


Fig 5.4: Confirmatory Factor Analysis of Employee Satisfaction

The statistical significance of the Employee satisfaction and its dimensions were discussed in the study. The path coefficients (β) values were positive which indicated that any increase in the dimensions will result in an increase in the Employee satisfaction. The p-values were less than 0.01 and hence all the paths were identified as significant.

Table 5.11 The Model Fit Indices of Employee Satisfaction Scale

Model fit indices and P values
APC=0.345, P value < 0.001
ARS= 0.993, P value < 0.001
AVIF= 1.309, Acceptable ≤ 5

Source: Warp PLS 4.0 Output

It is recommended that the p-values for the Average Path Coefficients (APC) and Average R Squared values should be less than 0.05 to assess a model to be fit. Besides, the Average Variance Inflation Factor (AVIF) must be lower than 5 (Ned Kock, 2014) (Eappan, 2014). This model was assumed to be fit since it had satisfied all the three criteria mentioned in table 5.11.

5.4.3.3 Validation of the Employee Satisfaction Scale

Validity refers to the ability of the instrument to measure what it intends to measure. The face validity of the scale was established since it appeared to have adequate coverage of the concepts and a representative set of items that measured the concept. The content validity ensured that the measure included an adequate set of items and sufficient clarity about the definitions and concepts used. Both the face validity and content validity of the scale was ensured since a panel of experts reviewed the questionnaire and their valuable suggestions were incorporated accordingly.

The Criterion validity of the scale was established by using the predictive validity. The Q squared coefficient, also known as the Stone- Geisser Q squared coefficient, of the Employee Satisfaction scale in the above model was 0.992. Since the value of the Q squared coefficient (0.992) was greater than zero, the predictive validity of the model too was established. The Nomological validity is another form of predictive validity, which is not at all essential, though merely desirable in a measure.

Construct validity of the model implied the effectiveness of the operationalization of the theoretical concepts in the model. It expresses how well the results obtained from the use of the measures fit in the theories around which the test was designed. Construct validity can be obtained through the convergent and the discriminant validity (Kumar G, 2011).

Convergent Validity assesses whether the scale was correlated with other known measures of the concept. It verifies whether the measurement was related to the variables to which it should be related. In the Employee satisfaction scale, the loadings associated with each latent variable were higher while the cross loadings

were low. Besides, the p-values were lower than 0.01 and the factor loadings related to the latent variables were above 0.5 and thus the convergent validity of the scale was ensured (table shown in Appendix IV).

Discriminant Validity verifies the scale if it was sufficiently different from other similar concepts. If the square root of the average variance extracted (AVE) for each of the latent variables was higher than the correlations between the latent variables under consideration and any other latent variables in the measurement model, the model was said to have the discriminant validity. Since the value of AVE of each latent variable was higher than any other values below or above it or to its right or left as revealed in the table 5.12, the discriminant validity of the model was established.

Table 5.12 Correlations among Latent Variables with the Square roots of AVEs

Items	PAY	WA	RAA	TR
PAY	(0.775)	0.296	0.391	0.298
WA	0.296	(0.698)	0.394	0.382
RAA	0.391	0.394	(0.757)	0.367
TR	0.298	0.382	0.367	(0.710)

Source: Warp PLS 4.0 Output

The validity of the employee satisfaction scale was thus established. The path coefficients in the model were significantly related to the variable employee satisfaction and thus confirm the factors contributing towards the employee satisfaction.

5.4.4 Employee Turnover Scale

From reviewing the studies relating to employee turnover, the researcher identified that certain components were frequently used to measure employee turnover in various sectors which included workplace relations, work stress, work

life imbalance, economic conditions, health problems, work schedule and attitude of co-workers. In order to measure employee turnover in the IT sector in Kerala, the researcher developed a scale based on these components. An exploratory factor analysis was done to identify the most important components of employee turnover.

5.4.4.1 Exploratory Factor Analysis

The factor analysis was done to reduce the database to a minimum number of factors that should account for the maximum portion of the total variance represented in the original variables set. The KMO measure of sampling adequacy and Bartlett's test of sphericity was carried out to check the sufficiency of correlations in the data set for factor analysis to be done. The results of the tests were shown in the table 5.13.

Table 5.13 KMO and Bartlett's Test of Employee Turnover

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.914
Approx. Chi-Square	7853.805
Bartlett's Test of Sphericity Df	465
Sig.	.000

Source: SPSS FA Output

Since the KMO value was 0.914 (greater than 0.6), it was considered as adequate. The Bartlett's test of sphericity indicated the significance and the suitability of the responses of the study. The Bartlett's test value (7853.805, dof 465, Sig 0.00) was less than 0.5 and hence significant and acceptable and recommended for factor analysis.

An exploratory factor analysis was then done to identify the important components of the employee turnover based on the principal component analysis with varimax rotation. The summary of the principal component analysis was shown in the Appendix IV.



Fig 5.5: Scree Plot of Employee Turnover Scale

Five major components of employee turnover were identified from the exploratory factor analysis based on the Eigen values greater than one. The components identified were

1. Work Life Imbalance,
2. Work Stress,
3. Health Problems,
4. Economic Conditions and
5. Workplace Relations.

These five components of employee turnover together explained 54.296 % of the total variance. The Scree plot indicated that by placing a straight edge on the bottom portion of the factors, five factors were extracted before the curve became approximately a straight line. Out of the 31 items, 6 items having factor loadings less than 0.5 were removed. Thus, the employee turnover scale constituted 25 statements under five components which have factored loadings of at least 0.5 values.

The following table 5.14 shows the Eigen values with respect to the five variables identified:

Table 5.14 Summary of Factor Analysis of Employee Turnover Scale

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
Work Stress	Working hours of the job are inconvenient.	0.860	5.687	18.344	18.344
	Tight working schedule makes a lot of mental pressure.	0.827			
	Work schedule is affecting life.	0.783			
	Maintain poor balance between work and family life.	0.758			
	Workplace problems result in the short temperedness.	0.737			
	Energy and time spend on job affect personal life.	0.682			
Work Life Imbalance	Feel exhausted to meet management's expectations.	0.807	5.006	16.147	34.492
	Feel emotionally upset on the pressure put on me.	0.790			
	Feel increase in hour loss after working here.	0.760			
	Work stress affects family life.	0.646			
	Mistakes at workplace are often criticized.	0.608			
	Feel tired while returning home.	0.553			
	Feel working too hard.	0.530			

Factors	Measurable Statements	Weights	Eigen Values	% of Variance	Cumulative Variance
Health Problems	Additional responsibilities at work adversely affect health.	0.658	2.246	7.246	41.737
	Suffer from digestive problems.	0.603			
	Suffer from the loss of appetite.	0.546			
	Experience headache daily.	0.524			
	Become lazy due to work.	0.512			
Workplace Relations	Do not receive enough support from supervisor.	0.618	2.013	6.492	48.229
	Prefer to accomplish work individually than in team.	0.606			
	Workers view is not considered in resolving working problems.	0.515			
	Receive adequate support from co-workers.	0.512			
Economic Conditions	Forced to leave the organization during the economic recession.	0.822	1.881	6.067	54.296
	Forced to work at lower compensation than usual during the recession.	0.720			
	Recession affect the employees.	0.672			

Source: SPSS FA Output

5.4.4.2 Confirmatory Factor Analysis

After the exploratory factor analysis, the researcher has done the confirmatory factor analysis through the structural equation modelling using the Warp PLS 4.0 in order to confirm the components contributing to the Employee turnover scale. The main objective of conducting CFA was to check whether a predefined factor model fits an observed set of data.

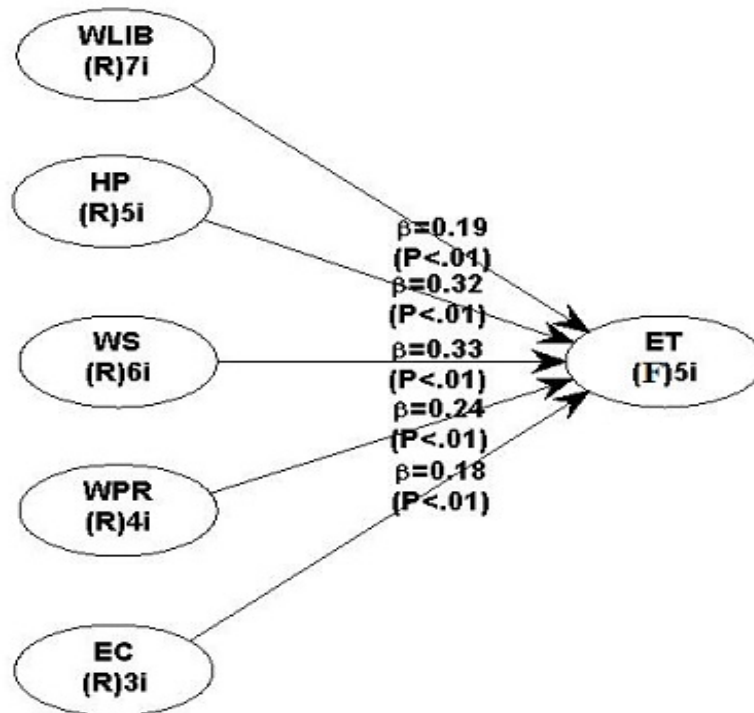


Fig 5.6: Confirmatory Factor Analysis of Employee Turnover

The path diagram of Employee turnover and its dimensions were of statistical significance in the present study.

Table 5.15 The Model Fit Indices of Employee Turnover Scale

Model fit indices and P values
APC=0.253, P value < 0.001
ARS= 0.993, P value < 0.001
AVIF= 2.001, Acceptable <= 5

Source: Warp PLS 4.0 Output

The path coefficients (β) and the p-values were shown in the model fit indices table 5.15. All the path coefficients (β) were positive in the above model which revealed that any increase in these dimensions will result an increase in the Employee turnover. Besides, the p-values in the above model were less than 0.01 which meant all the paths were significant. Hence it can be confirmed that the factors contributed towards the variable employee turnover.

The p-values for both the Average Path Coefficient (APC) and Average R Squared (ARS) were lower than 0.05 and the Average Variance Inflation Factor (AVIF) value was less than 5, and it had satisfied all the three criteria and hence the model was assumed to be fit which meant the model represented the data set.

5.4.4.3 Validation of Employee Turnover Scale

Validity is the extent to which a scale or set of measures accurately represents the concepts of interest and ensures the ability of scale to measure what it intended to measure. Face validity verified that the measure included adequate and representative set of items that covered the concept and in its appearance this was ensured establishing the face validity of the instrument. The questionnaire was reviewed by a panel of experts and their valuable suggestions were incorporated, thus ensuring both the face and content validity.

Criterion validity can be assessed by establishing concurrent or predictive validity. The predictive validity of measures was established in the study during data analysis and model testing. The Q squared coefficient, also known as the Stone-Geisser Q squared coefficient, in the above model was 0.992 and hence the predictive validity of the scale was established. Another form of predictive validity is the Nomological validity, which is not at all essential, though merely desirable in a measure (Rossiter 2011) (Eappan, 2014).

Construct validity was concerned with the degree to which the test measures the concept, it was designed to measure. It can be measured through the convergent validity and the discriminant validity.

Convergent Validity was used to assess whether the scale was correlated with other identified measures of the concept. It further verified that the responses to the questions are sufficiently correlated with the respective latent variables. From the table (shown in Appendix IV) it can be identified that the loadings associated with each latent variables were higher while the cross loadings were low. The p-values related to the loadings were lower than 0.05 and loadings for indicators of all respective latent variables were above 0.5. Since the model satisfies the above criteria, it is said to have acceptable convergent validity.

Discriminant Validity was used to verify that the scale was different from other similar concepts identified in the study. The square roots of Average Variance Extracted (AVE) were placed on the diagonals of the latent variables correlation table 5.16. The values of AVE were higher than any other values above or below it or to its right or left and hence the discriminant validity of the model was established.

Table 5.16 Correlations among Latent Variables with the Square roots of AVEs

Items	WPR	WLIB	HP	WS	EC
WPR	(0.706)	0.435	0.402	0.558	0.304
WLIB	0.435	(0.735)	0.432	0.405	0.372
HP	0.402	0.432	(0.790)	0.477	0.319
WS	0.558	0.405	0.477	(0.764)	0.359
EC	0.304	0.372	0.319	0.359	(0.812)

Source: Warp PLS 4.0 Output

This section ends with the validation of the employee turnover scale. The Quality of work life scale, Employee satisfaction scale and Employee turnover scale is thus validated and found reliable among the employees working in the IT sector in Kerala.

Section C

This section exhibits the levels of work life quality identified among the IT employees. It is determined using a criteria based on the quartiles deviation values of the variables studied. Besides, Spearman's rank correlation coefficient is used to assess the degree of relationship between quality of work life and its variables and to identify the most important factor relating to the quality of work life. The level of quality of work life among the employees based on gender, designation wise and park wise are shown separately in this section.

5.5 Correlation among the Quality of Work Life and its variables

Spearman's Rank correlation coefficient is used to determine the strength of the relationship between the quality of work life and its variables and also to identify the most important variables influencing the quality of work life of the employees. Spearman's rank correlation test does not assume any assumptions regarding the distribution of the data and hence considered as appropriate.

Generally the value of correlation coefficient varies between +1 and -1. When the value of correlation coefficient is around ± 1 , a perfect degree of association is said to exist between the variables. If the value of correlation coefficient tends to be near 0, the relationship between the variables is assumed as weaker. To assess the correlation coefficient, effect size can be used where the coefficients between .10 and .29 represents a small association, coefficients between .30 and .49 represents a medium association and coefficients above .50 represents a large association or relationship (Cohen 1988) (Nakagawa and Cuthill 2007).

The table 5.17 reveals the correlation coefficient of the relationship between the quality of work life and its variables.

Table 5.17 Correlation between Quality of work life and its variables

Sub-variables	Quality of Work Life
Adequate and Fair Compensation	r= .371** p=.000
Working Environment	r= .571** p=.000
Organizational Communication	r= .674** p=.000
Autonomy of Work	r= .726** p=.000
Employee Development	r= .707** p=.000
Fair Treatment	r=.738** p=.000
Total Life Space	r=.709** p=.000
Attitude of Management	r=.685** p=.000
Job Security	r=.673** p=.000
** indicates correlation is significant at 1% level (2-tailed). r refers to Spearman's Rho correlation coefficient; p is the significance value (2-tailed).	

Source: Primary Data

From the table 5.17, it can be seen that all the variables are positively correlated to the quality of work life and the relationships are considered as significant since their p-values are lower than the significance value of 0.05. On the basis of the correlation analysis, the variables that have highest correlation coefficient value with the quality of work life can be considered as the most important variable related to the quality of work life of employees. As such fair treatment (r= .738) is identified as the first and most important factor that relate to the quality of work life of employees. Autonomy of work (r= .726) is then ranked as the second important factor that determines the quality of work life which is

then followed by total life space ($r = .709$), employee development ($r = .707$), attitude of management ($r = .685$), organizational communication ($r = .674$), job security ($r = .673$), work environment ($r = .571$) and adequate and fair compensation ($r = .371$).

The degree of relationship between the quality of work life and its variables like fair treatment, autonomy of work, total life space, employee development, attitude of management, organizational communication, job security and work environment are considered as high since the correlation coefficient values are above 0.50 while the degree of association between the quality of work life and adequate and fair compensation is considered as medium since the correlation coefficient value lies between 0.30 and 0.49.

5.6 Level of Quality of Work Life

A generalized norm is laid down to evaluate the level with respect to the overall quality of work life and its variables. The overall quality of work life is estimated by multiplying the variables with the number of their respective indicators and finally dividing the summated score of all variables by the total number of indicators in the quality of work life scale.

$$\text{Quality of Work Life (Overall)} = ((\text{AFC} \times 4) + (\text{WE} \times 3) + (\text{OC} \times 3) + (\text{AW} \times 7) + (\text{ED} \times 9) + (\text{FT} \times 4) + (\text{TLS} \times 4) + (\text{AM} \times 4) + (\text{JS} \times 3)) \div 41$$

The criteria identified for determining the level of quality of work life and its variables are based on the quartile deviation values (Q_1 and Q_3) of each variable studied. The values below Q_1 are considered as Low level, the values between Q_1 and Q_3 are treated as Moderate level and the values higher than Q_3 are regarded as High level. The quality of work life and its variables were first categorized into five levels i.e. from very low level to very high level. **But the percentage of responses in the first (Very Low) and the last category (Very High) of the levels were only meagre and hence it became negligible. Further to classify the levels in a broader manner, the variables are then categorized into three levels (Low level, Moderate level and High level).** The criteria, thus laid down for the levels of quality of work life and its variables are detailed in the table 5.18.

Table 5.18 Criteria for determining the Level of Quality of Work Life and its Variables

Variables	Low Level	Moderate Level	High Level
Adequate and Fair Compensation	Below 3.00	3.00 – 4.00	Above 4.00
Working Environment	Below 3.67	3.67 – 4.67	Above 4.67
Organizational Communication	Below 3.33	3.33 – 4.00	Above 4.00
Autonomy of Work	Below 3.29	3.29 – 4.00	Above 4.00
Employee Development	Below 3.33	3.33 – 4.00	Above 4.00
Fair Treatment	Below 3.25	3.25 – 4.00	Above 4.00
Total Life Space	Below 3.00	3.00 – 4.25	Above 4.25
Attitude of Management	Below 3.25	3.25 – 4.00	Above 4.00
Job security	Below 3.33	3.33 – 4.00	Above 4.00
Quality of Work Life (Overall)	Below 3.39	3.39 – 3.98	Above 3.98

Source: Primary Data

The level of quality of work life and its variables are assessed as per the norms laid down (table 5.18) and are described in detail in the table 5.19.

The table 5.19 reveals that 42.2% respondents agreed that the level of adequate and fair compensation is Moderate among the IT employees while 29.8% responded that it is Low and 28% of the respondents opined it as High. The employees working in the IT sector may be having a feeling that their compensation packages are not sufficient while comparing the efforts they took in their jobs.

The level of working environment is viewed as Moderate by 56% of the respondents, while 32% agreed that it is Low and only 12% respondents regarded it as High among the IT sector. The employees should always be provided with comfortable work space since it affects their job. When the employees feel physically safe in their organization, they can work whole heartedly in their job.

Table 5.19 Level of Quality of Work Life and its Variables

Variables	Low Level		Moderate Level		High Level	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Adequate and Fair Compensation	166	29.8	235	42.2	156	28.0
Working Environment	178	32.0	312	56.0	67	12.0
Organizational Communication	99	17.8	201	36.1	257	46.1
Autonomy of Work	108	19.4	280	50.3	169	30.3
Employee Development	116	20.8	223	40.0	218	39.1
Fair Treatment	189	33.9	130	23.3	238	42.7
Total Life Space	155	27.8	247	44.3	155	27.8
Attitude of Management	169	30.3	100	18.0	288	51.7
Job security	90	16.2	155	27.8	312	56.0
Quality of Work Life (Overall)	147	26.4	273	49.0	137	24.6

Source: Primary Data

Most of the respondents (46.1%) agreed that communication prevailing in the organization is High, while 36.1% responded that it is Moderate and 17.8% respondents viewed it as Low. The responses reveal that the employees are satisfied with their level of organizational communication since they may be communicated about the work process and their results frequently.

The level of autonomy of work is regarded as Moderate by the majority of the respondents (50.3%). On the other hand 30.3% respondents viewed it as High and 19.4% of the respondents considered it as Low. This implies that the employees are moderately satisfied with the freedom they receive in their workplace to implement their ideas or experiment with their creativity.

Most of the respondents (40%) viewed employee development as in Moderate level, while 39.1% considered it as High and 20.8% agreed it as in Low level. The IT employees are moderately satisfied with the opportunities they receive to enhance their skills and creativity.

42.7% respondents agreed that employees are fairly treated in the organization (High). While 33.9% respondents regarded fair treatment as Low and 23.3% respondents considered it as Moderate. The IT employees may have felt that fair treatment is not prevailing in the organization and hence 33.9% of the employees opinioned it as Low.

Total life space is considered as Moderate by 44.3% respondents, while 27.8% respondents each agreed it as High and Low. The employees are moderately satisfied with the time they get for their personal purposes and 27.8 % employees considered it as Low.

The majority of the respondents (51.7%) regarded the attitude of management as High. 30.3% respondents considered it as Low and 18% viewed it as Moderate. The attitude of the management towards their employees can be assumed as positive from the above responses.

Job security is agreed upon in High level by the majority of the respondents (56%). It is considered as in Moderate level by 27.8% respondents and 16.2% respondents viewed it as in Low level. This implied that the IT employees are satisfied with the security offered by their organization.

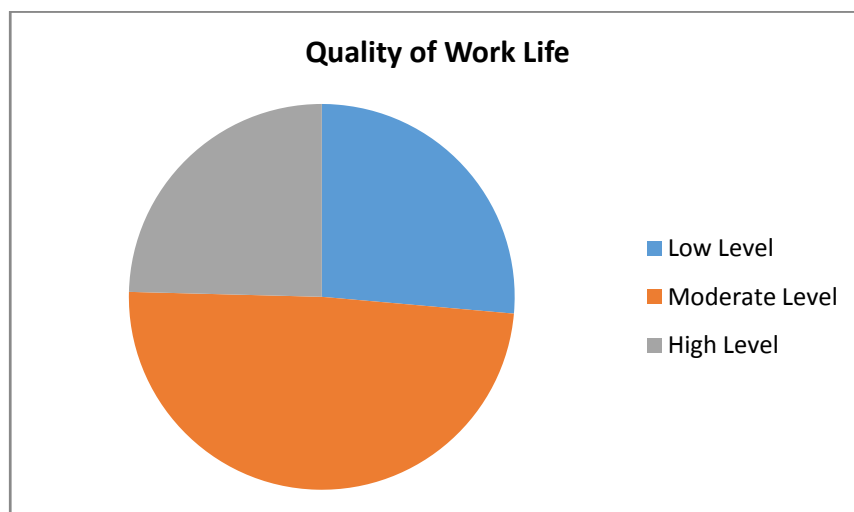


Fig 5.7: Level of Quality of Work Life

The majority of the respondents (49%) considered Quality of Work Life in Moderate level, while 26.4% respondents viewed it as Low level and the remaining 24.6% respondents regarded it as in High level (as in figure 5.7). The employees working in the IT sector have moderate level of work life quality followed by the low work life level and hence sufficient strategies are to be adopted to enhance the quality of work life of the employees working in the IT sector in Kerala.

5.6.1 Level of Quality of Work Life * Gender

The level of quality of work life among the male and female employees is described as below

Table 5.20 Gender wise Description of the Level of Quality of Work Life

Gender	Level of Quality of Work Life						Mean Value
	Low Level		Moderate Level		High Level		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Male	75	25.1	145	48.5	79	26.4	2.013
Female	72	27.9	128	49.6	58	22.5	1.946
Total	147		273		137		
Grand Total	557						

Source: Primary Data

From the table 5.20, it can be interpreted that the majority of the male employees (48.5%) considered quality of work life as moderate while 26.4% male employees perceived work life quality as high and 25.1% employees treated quality of work life as low level.

On the other hand, female employees perceived work life quality as moderate since the majority (49.6%) have responded it as moderate, 27.9% considered quality of work life as low and 22.5% female employees regarded work life quality as high level.

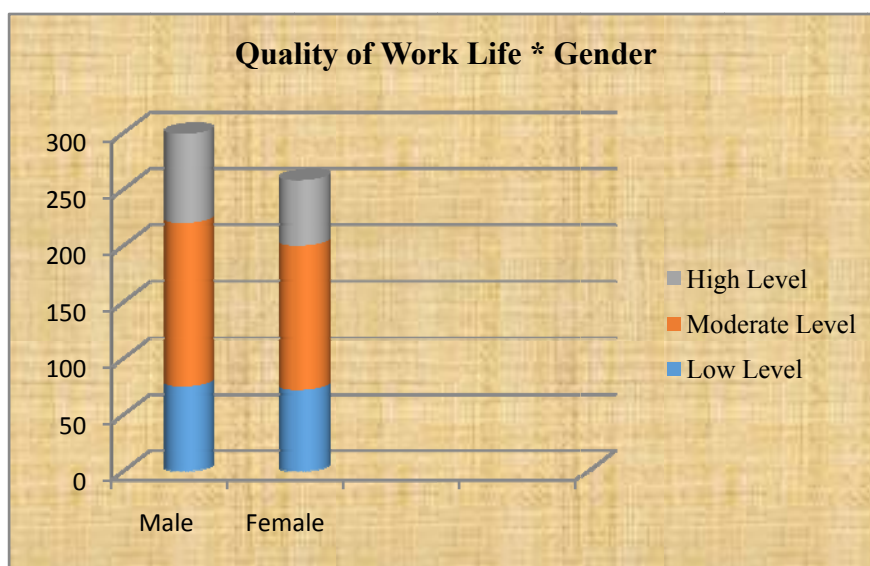


Fig 5.8: Gender wise level of Quality of Work Life

Both the male and female employees have moderate level of work life quality (as shown in figure 5.8). Based on the mean value, the male employees are having a better work life quality compared to the female employees.

5.6.2 Level of Quality of Work Life * Park

The level of quality of work life among the IT employees working in the three different parks in Kerala is shown in the table 5.21.

Table 5.21 Park wise Description of the Level of Quality of Work Life

Quality of Work Life	PARK					
	Technopark		Infopark		Kinfrapark	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	114	30.3	26	17.3	7	22.6
Moderate Level	166	44.1	91	60.7	16	51.6
High Level	96	25.6	33	22	8	25.8
Total	376	100	150	100	31	100
Mean Value	2.00		1.9400		1.9677	

Source: Primary Data

The table 5.21 indicates that in Technopark Thiruvananthapuram, the majority of the IT employees (44.1%) experience a moderate level of quality of work life while quality of work life is lower among 30.3% employees and it is higher among 25.6% employees working there.

The majority of the employees (60.7%) in the Infopark have a moderate level of quality of work life while 22% employees agreed that they have work life quality at high level and 17.3% employees experience a low level of quality of work life.

Most of the employees (51.6%) working in the Kinfrapark experience quality of work life at moderate level while 25.8% employees have a high level of quality of work life and 22.6% employees have work life quality at low level.

Thus, it can be concluded that the majority of the employees working in the three IT parks experience moderate level of work life quality. Based on the mean score, the quality of work life experienced by the employees working in the Technopark is found better compared to the other two IT parks.

5.6.3 Level of Quality of Work Life * Types of IT Company

The quality of work life estimated among the employees working in the large IT company, medium IT company and small IT company is described in the table 5.22.

Table 5.22 Level of Quality of Work Life among the types of IT company

Quality of Work Life	Types of IT Company					
	Large IT Company		Medium IT Company		Small IT Company	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	20	22.4	9	20	118	27.9
Moderate Level	45	50.6	26	57.8	202	47.8
High Level	24	27	10	22.2	103	24.3
Total	89	100	45	100	423	100
Mean Value	2.0449		2.0222		1.9645	

Source: Primary Data

From the table 5.22, it can be concluded that the majority of the employees (50.6%) working in the large IT companies have moderate level of work life quality, 27% employees responded quality of work life as high and 22.4% employees viewed it as low among the employees working in the large IT companies.

57.8% employees considered the quality of work life as moderate among the employees working in the medium IT companies, 22.2% employees viewed it as high and 20% employees responded it as low among the employees working in the medium IT companies.

The majority of the employees (47.8%) treated quality of work life as moderate among the employees working in the small IT companies. 27.9% employees responded it as low and 24.3% employees considered work life quality as high among the employees working in the small IT companies.

Based on the mean score, it can be concluded that employees working in the large IT companies are having better work life quality compared to the medium and small IT companies.

5.6.4 Level of Quality of Work Life * Designation

The quality of work life experienced by the employees' working among various designations in the IT sector is presented in the table 5.23.

The table 5.23 reveals that 45.6% of the employees working as the Software Architect have work life quality in moderate level, 33.3% employees have a high level of quality of work life and 21.1% employees have low level of work life quality.

The majority of the employees (41%) working as the Tech/Business Analyst have moderate level of quality of work life while 33.3% employees experience low work life quality and 25.7% employees have a high level of quality of work life.

Table 5.23 Designation wise Description of the Level of Quality of Work Life

Designation	Level of Quality of Work Life						Mean Value
	Low Level		Moderate Level		High Level		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Software Architect	12	21.1	26	45.6	19	33.3	1.947
Tech/ Business Analyst	13	33.3	16	41	10	25.7	2.231
Team/Tech Leader	7	16.3	21	48.8	15	34.9	2.140
Sr. Software Engineer	47	29.2	73	45.3	41	25.5	2.00
Software Engineer	68	26.5	137	53.3	52	20.2	1.914
Total	147		273		137		
Grand Total	557						

Source: Primary Data

48.8% employees working as a the Team/Tech Leader responded that their quality of work life is in moderate level, 34.9% employees have a high quality of work life and 16.3% employees have work life quality in low level.

Most of the Senior Software Engineers (45.3%) opinioned their work life quality are in moderate level while 29.2% employees have a low level of quality of work life and 25.5% have work life quality in high level.

53.3% Software Engineers agreed that their work life quality is in the moderate level, 26.5% have work life quality in low level and the remaining 20.2% employees have their quality of work life in the high level.

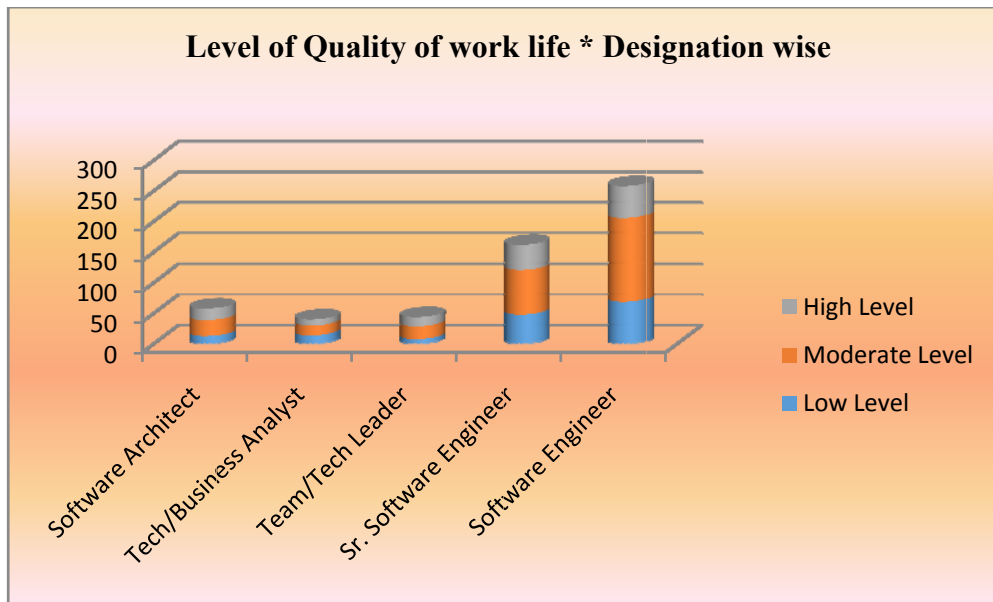


Fig 5.9: Designation wise level of Quality of Work Life

Thus, it can be understood that the majority of the employees working in various designations in the IT sector experience work life quality at the moderate level (as shown in figure 5.9). Based on the mean score, the employees working as the Business Analyst are experiencing a better quality of work life followed by the Team Leaders and then by the Senior Software Engineers.

This section is thus concluded by discussing the levels of quality of work life experienced by both the male and female employees working in the three IT parks and also by designation wise. The quality of work life among the employees working in the IT sector is in moderate level and therefore the IT companies should undertake immediate actions to improve the work life quality of their employees.

Section D

Section D demonstrates the satisfaction levels of the employees working in the IT sector. The Spearman's Rank Correlation Coefficient or Spearman's Rho is used to assess the relationship between employee satisfaction and its variables and to identify the most important variable affecting the employee satisfaction. The criteria, based on the quartiles, used to estimate the level of employee satisfaction and its variables among the IT employees are discussed in this section.

5.7 Correlation among the Employee Satisfaction and its variables

The relationship between the employee satisfaction and its variables is determined using the Spearman's rank correlation coefficient. The correlation coefficient value reveals the most prominent factor contributing to the employee satisfaction. The correlation analysis, among the employee satisfaction and its variables are shown in the table 5.24.

Table 5.24 Correlation between Employee satisfaction and its variables

Sub-variables	Employee Satisfaction
Pay	$r=.709^{**}$ $p=.000$
Welfare Activities	$r=.735^{**}$ $p=.000$
Recognition and Appreciation	$r=.659^{**}$ $p=.000$
Adequate Training	$r=.675^{**}$ $p=.000$
** indicates correlation is significant at 1% level (2-tailed). r refers to Spearman's Rho correlation coefficient; p is the significance value (2-tailed).	

Source: Primary Data

The table 5.24 points out that all the variables are positively correlated to the employee satisfaction and all the relationships are assumed as significant since the p-values are lower than the significance value of 0.05. The correlation analysis reveals that welfare activities ($r= .735$) is ranked as the most prominent variable relating to the employee satisfaction. Pay ($r= .709$) is considered as the second important variable affecting the employee satisfaction followed by adequate training ($r= .675$) and recognition and appreciation ($r= .659$).

The degree of association between employee satisfaction and all the four variables – pay, welfare activities, recognition and appreciation and adequate training are considered as high since the correlation coefficient values are above 0.50.

5.8 Level of Employee Satisfaction

The employee satisfaction and its variables are evaluated on the basis of a norm developed for the variable. The overall employee satisfaction is measured by multiplying the variables with the number of their respective indicators and then dividing the total score of all variables by the total number of statements in the employee satisfaction scale.

$$\text{Employee Satisfaction (Overall)} = ((\text{PAY} \times 3) + (\text{WA} \times 5) + (\text{RAA} \times 5) + (\text{AT} \times 3)) \div 16$$

The level of employee satisfaction and its variables are determined on the basis of the quartile deviation (Q_1 and Q_3) values of employee satisfaction and its variables. The values below Q_1 are regarded as Low level, the values within Q_1 and Q_3 are treated as Moderate level and the values above Q_3 are evaluated as High level. The criteria, thus developed for determining the level of employee satisfaction and its variables are as follows

Table 5.25 Criteria for determining the Level of Employee Satisfaction and its Variables

Variables	Low Level	Moderate Level	High Level
Pay	Below 2.67	2.67 – 4.00	Above 4.00
Welfare Activities	Below 2.80	2.80 – 3.80	Above 3.80
Recognition and Appreciation	Below 3.40	3.40 – 4.20	Above 4.20
Adequate Training	Below 3.00	3.00 – 4.00	Above 4.00
Employee Satisfaction (Overall)	Below 3.13	3.13 – 3.88	Above 3.88

Source: Primary Data

On the basis of the above criteria shown in the table 5.25, the level of employee satisfaction and its variables are estimated and described in the table 5.26.

Table 5.26 Level of Employee Satisfaction and its Variables

Variables	Low Level		Moderate Level		High Level	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Pay	146	26.2	264	47.4	147	26.4
Welfare Activities	153	27.5	198	35.5	206	37.0
Recognition and Appreciation	140	25.1	263	47.2	154	27.6
Adequate Training	175	31.4	223	40.0	159	28.5
Employee Satisfaction (Overall)	140	25.1	266	47.8	151	27.1

Source: Primary Data

The table 5.26 indicates that 47.4% employees considered the variable pay in moderate level while 26.4% employees regarded it as high and 26.2% employees viewed it as low. This means that the employees are moderately satisfied with the pay and incentives offered by the organization.

37% employees responded that they are highly satisfied with the welfare activities provided by the organization while 35.5% employees are moderately satisfied and the remaining 27.5% employees' satisfaction is low with regard to welfare activities. This implies that the employees are satisfied with the welfare activities provided by the organization.

The majority of the employees (47.2%) are moderately satisfied with the recognition and appreciation, 27.6% employees are highly satisfied and the remaining 25.1% employees treated recognition as low. The employees are moderately satisfied with the recognition and appreciation which implies that the

organization should always recognize and appreciate the work done by the employees.

Adequate training is considered as moderate by the majority of the respondents (40%), 31.4% employees viewed it as in low level and 28.5% employees responded it as high level. This indicates that adequate training should be provided by the organization at the time when it is needed which will change the attitude of employees towards the organization.

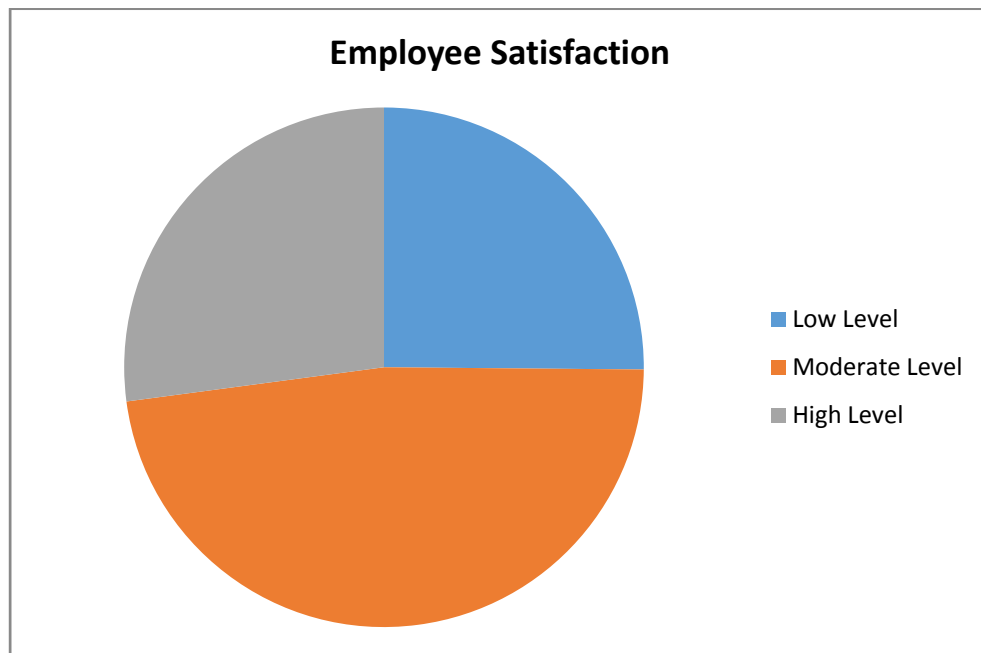


Fig 5.10: Level of Employee Satisfaction

The level of employee satisfaction is viewed as moderate by the majority of the employees (47.8%) working in the IT sector. The remaining 27.1% employees viewed it as in high level and 25.1% employees treated it as low level. The satisfaction level of the employees working in the IT sector is in moderate level (as exhibited in figure 5.10), which implies that the organization should consider all possible steps to improve the employees' satisfaction level.

5.8.1 Level of Employee Satisfaction * Gender

The employee satisfaction level among the male and female employees working in the IT sector is described as follows.

Table 5.27 Gender wise Description of the Level of Employee Satisfaction

Gender	Level of Employee Satisfaction						Mean Value
	Low Level		Moderate Level		High Level		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Male	85	28.4	144	48.2	70	23.4	1.950
Female	55	21.3	122	47.3	81	31.4	2.101
Total	140		266		151		
Grand Total	557						

Source: Primary Data

The table 5.27 indicates that the male employees are moderately satisfied with their job since the majority of the male employees (48.2%) responded as moderately satisfied with their job. 28.4% male employees have low satisfaction level with regard to their job and 23.4% male employees are highly satisfied in their job.

The majority of the female employees (47.3%) are moderately satisfied with their job, 31.4% female employees are highly satisfied and 21.3% female employees have low satisfaction level in their job.

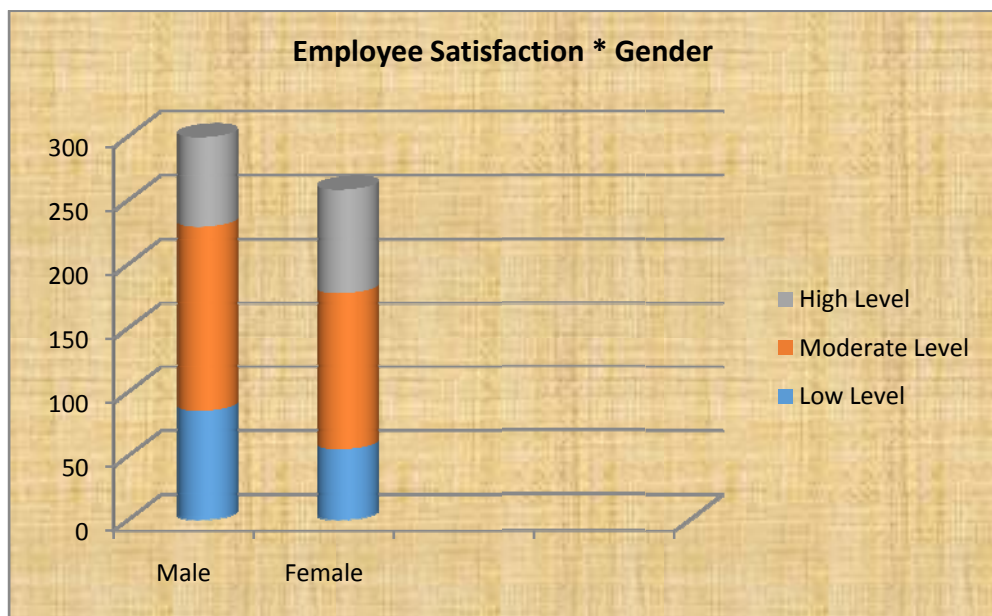


Fig 5.11: Gender wise level of Employee Satisfaction

Both the male and female employees are found to have moderate employee satisfaction level (as illustrated in figure 5.11). Based on the mean value, the female employees are perceived as more satisfied in their jobs compared to the male employees.

5.8.2 Level of Employee Satisfaction * Park

The level of employee satisfaction among the employees working in the Technopark, Infopark and Kinfrapark are described as in the table 5.28.

Table 5.28 Park Wise Description of the Level of Employee Satisfaction

Employee Satisfaction	PARK					
	Technopark		Infopark		Kinfrapark	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	97	25.8	25	16.7	18	58.1
Moderate Level	186	49.5	67	44.7	13	41.9
High Level	93	24.7	58	38.6	-	-
Total	376	100	150	100	31	100
Mean Score	1.9894		2.2200		1.4194	

Source: Primary Data

The table 5.28 indicates the satisfaction level of the employees. In the Technopark, the satisfaction level of the majority of the employees (49.5%) is in moderate level while 25.8% employees have low level of satisfaction followed by 24.7% employees in high satisfaction level.

The Infopark has the majority of employees' (44.7%) satisfaction in moderate level, 38.6% employees are having high satisfaction level and the remaining 16.7% employees have low level of satisfaction.

The employee satisfaction levels in the Kinfrapark points out that the majority of the employees (58.1%) have low satisfaction level followed by 41.9%

employees in moderate level of satisfaction. No employee is found to have a high satisfaction level in this park.

Thus, it can be seen that the employee satisfaction level in all the three parks is in the moderate level. Based on the mean score, the employees working in the Infopark are found to have better employee satisfaction level compared to the other two IT parks. Further, no employee working in the Kinfrapark is found to have high satisfaction level.

5.8.3 Level of Employee Satisfaction * Types of IT Company

The level of employee satisfaction as determined among the employees working in the large IT company, medium IT company and small IT company are explained in the table 5.29.

Table 5.29 Level of Employee Satisfaction among the types of IT company

Employee Satisfaction	Types of IT Company					
	Large IT Company		Medium IT Company		Small IT Company	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	19	21.4	9	20	112	26.5
Moderate Level	51	57.2	22	48.9	193	45.6
High Level	19	21.4	14	31.1	118	27.9
Total	89	100	45	100	423	100
Mean Value	1.9775		2.111		2.0189	

Source: Primary Data

The table 5.29 reveals that the majority of the employees (57.2%) working in the large IT companies are moderately satisfied in their job. 21.4% employees each responded satisfaction level as low and high among the employees working in the large IT companies.

Most of the employees (48.9%) working in the medium IT companies have moderate level of satisfaction while 31.1% employees are highly satisfied and 20% employees considered satisfaction level as low among the medium IT companies.

45.6% employees working in the small IT companies viewed satisfaction level as moderate, 27.9% respondents treated it as high and 26.5% employees regarded satisfaction as low among the employees working in the small IT companies.

Based on the mean score, it can be understood that employees working in the medium IT companies are having better employee satisfaction level compared to the large and small IT companies.

5.8.4 Level of Employee Satisfaction * Designation

The employee satisfaction level among the various designation of the employees working in the IT sector are described as follows

Table 5.30 Designation Wise Description of the Level of Employee Satisfaction

Designation	Level of Employee Satisfaction						Mean Value
	Low Level		Moderate Level		High Level		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Software Architect	16	28.1	29	50.8	12	21.1	1.929
Tech/ Business Analyst	5	12.8	19	48.7	15	38.5	2.256
Team/Tech Leader	8	18.6	28	65.1	7	16.3	1.977
Sr. Software Engineer	49	30.4	77	47.8	35	21.8	1.913
Software Engineer	62	24.1	113	44	82	31.9	2.078
Total	140		266		151		
Grand Total	557						

Source: Primary Data

The table 5.30 points out that 50.8% employees working as the Software Architect have moderate level of employee satisfaction, 28.1% employees have low level of satisfaction and the remaining 21.1% employees have a high satisfaction level.

The majority of the Business Analyst (48.7%) responded as having a moderate level of employee satisfaction while 38.5% viewed it as in high level and the remaining 12.8% employees regarded it as low level.

Most of the employees working as the Team Leader (65.1%) considered employee satisfaction level as moderate, 18.6% employees regarded it as low satisfaction level and the remaining (16.3%) treated it as high satisfaction level.

The majority of the employees working as the Senior Software Engineers (47.8%) have moderate satisfaction level while 30.4% employees considered satisfaction as low level and the remaining 21.8% employees viewed it as high level.

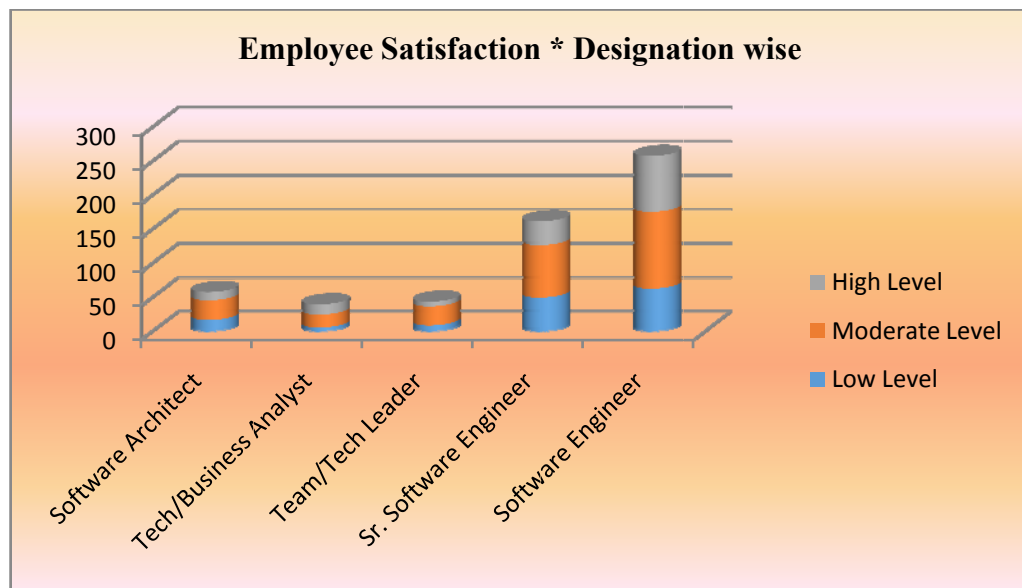


Fig 5.12: Designation wise level of Employee Satisfaction

The majority of the Software Engineers (44%) viewed employee satisfaction in moderate level, 31.9% employees treated it as high level and the remaining 24.1% employees considered employee satisfaction in low level (as exhibited in figure 5.12).

Based on the mean value, it can be seen that the employees working as the Business Analyst are found to have better employee satisfaction level followed by the Software Engineers and then by employees working as the Team Leaders.

Thus, this section is concluded by discussing the levels of employee satisfaction among the male and female employees, the park wise analysis of employee satisfaction and the designation wise analysis of employee satisfaction. The results indicated that the majority of the employees have moderate level of employee satisfaction both in park wise analysis and designation wise analysis.

Section E

Section E explains the relationship of the employee turnover with its variables. Spearman's rank correlation coefficient is used to assess the strength of relationship of the employee turnover with its variables and to identify the most important variable affecting the employee turnover. Moreover, the employee turnover among the gender wise, park wise and designation wise of the employees are discussed separately in this section.

5.9 Correlation among the Employee Turnover and its variables

The degree of relationship between the employee turnover and its variables is identified using the Spearman's rank correlation coefficient. The correlation coefficient is used to determine the strength of the relationship and to identify the most important variable relating to the employee turnover in the IT sector.

From the table 5.31, it can be observed that all the variables – work stress, work life imbalance, health problems, economic conditions and workplace relations are positively correlated to the employee turnover. Since the p-values of the variables are less than the significance value of 0.05, the relationship between employee turnover and variables are considered as significant. The correlation analysis indicates that work stress ($r = .868$) is the most important variable relating to the turnover among the employees. The work life imbalance ($r = .843$) is the second important factor affecting the employee turnover followed by health problems ($r = .775$), workplace relations ($r = .683$) and economic conditions ($r = .568$).

Table 5.31 Correlation between Employee turnover and its variables

Sub-variables	Employee Turnover
Work Stress	r=.868** p=.000
Work Life Imbalance	r=.843** p=.000
Health Problems	r=.775** p=.000
Economic Conditions	r=.568** p=.000
Workplace Relations	r=.683** p=.000
** indicates correlation is significant at 1% level (2-tailed). r refers to Spearman's Rho correlation coefficient; p is the significance value (2-tailed).	

Source: Primary Data

The degree of relationship between the employee turnover and its variables – work stress, work life imbalance, health problems, economic conditions and workplace relations can be considered as high since the correlation coefficient values are higher than 0.50.

5.10 Employee Turnover

Overall employee turnover is determined by multiplying the variables with the number of their indicators and finally dividing the total summated score of all variables by the number of indicators in the scale of employee turnover. Besides, a criterion is also developed to determine the level of the variables measuring the employee turnover.

$$\text{Employee Turnover (Overall)} = ((\text{WS} \times 6) + (\text{WLIB} \times 7) + (\text{HP} \times 5) + (\text{EC} \times 3) + (\text{WPR} \times 4)) \div 25$$

The level of the variables of the employee turnover is estimated on the basis of the quartile deviation (Q_1 and Q_3) values calculated for each variable studied. The values coming below the first quartile, Q_1 are considered as High

level, the values between Q_1 and Q_3 are regarded as Moderate level and the values below the third quartile, Q_3 are evaluated as Low level. The table 5.32 depicts the criteria thus laid down for determining the level of the variables identified for the employee turnover scale.

Table 5.32 Criteria for determining the Level of Variables of Employee Turnover

Variables	Low Level	Moderate Level	High Level
Work Stress	Above 3.50	2.00 – 3.50	Below 2.00
Work Life Imbalance	Above 3.50	2.40 – 3.50	Below 2.40
Health Problems	Above 3.25	2.00 – 3.25	Below 2.00
Economic Conditions	Above 3.33	2.33 – 3.33	Below 2.33
Workplace Relations	Above 3.50	2.50 – 3.50	Below 2.50
Employee Turnover (Overall)	Above 3.31	2.45 – 3.31	Below 2.45

Source: Primary Data

Based on the above criteria, the level of the variables of the employee turnover so evaluated is described in the following table 5.33.

Table 5.33 Overall Employee Turnover and the Level of its Variables

Variables	Low Level		Moderate Level		High Level	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Work Stress	140	25.1	257	46.1	160	28.7
Work Life Imbalance	141	25.3	272	48.8	144	25.9
Health Problems	158	28.4	214	38.4	185	33.2
Economic Conditions	243	43.6	206	37.0	108	19.4
Workplace Relations	192	34.5	193	34.6	172	30.9
Employee Turnover (Overall)	140	25.1	272	48.8	145	26.0

Source: Primary Data

The table 5.33 shows that the variable work stress is found moderate among 46.1% employees while 28.7% employees responded it as high and the remaining 25.1% employees considered it as low. This reveals that the majority of the employees working in the IT sector have a moderate level of work stress followed by high level of work stress, which indicates that the IT companies should adopt sufficient measures to reduce the work stress of their employees.

Work life imbalance is considered as moderate among 48.8% employees, 25.9% employees regarded it as high while 25.3% employees viewed it as low level. This means that the work life imbalance is moderate among the majority of the IT employees, which was followed by the high level of work life imbalance which suggests that the IT organizations should consider the personal life of the employees working there.

38.4% employees have health related problems in moderate level while 33.2% have high health related problems and 28.4% employees have low health related problems. The employees' are having health related problems while working in the IT sector and is a major cause for employee turnover in IT sector.

43.6% employees considered economic conditions as low cause of turnover while 37% considered it as moderate reason and the remaining 19.4% regarded it as high reason for employee turnover. The organizations should frame their policies in accordance with the changes in the economy so as to adapt to those changes.

The majority of the employees (34.6%) regarded workplace relations in the moderate level, 34.5% employees viewed it as low level and the remaining 30.9% employees considered it as high level. This implies that workplace relations are perceived as moderate by the majority of the employees and then followed by the lower level. A cohesive relationship between co-workers should be promoted within an organization so as to retain their employees.

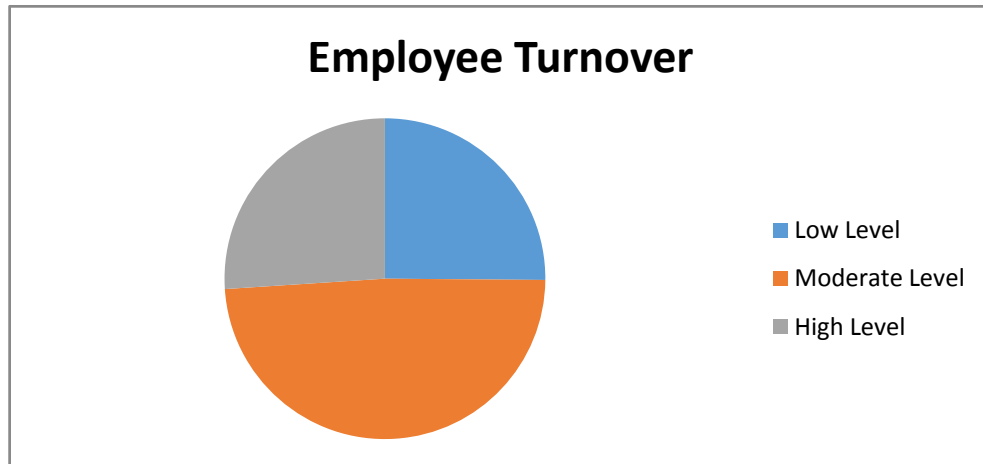


Fig 5.13: Overall Employee Turnover

The majority of the employees (48.8%) considered the overall employee turnover as moderate among the IT employees while 26% viewed it as high and the remaining 25.2% regarded it as low among the employees (as shown in figure 5.13). This means that employee turnover is indeed an important phenomenon that should be reduced to a minimum level among the IT sector.

5.10.1 Employee Turnover * Gender

The overall employee turnover perceived by the male and female employees working in the IT sector is explained as follows

Table 5.34 Gender Wise Description of Employee Turnover

Gender	Employee Turnover						Mean Value
	Low Level		Moderate Level		High Level		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Male	80	26.8	151	50.5	68	22.7	1.9599
Female	60	23.3	121	46.9	77	29.8	2.0659
Total	140		272		145		
Grand Total	557						

Source: Primary Data

From the table 5.34, it can be seen that the overall employee turnover is perceived as moderate by the majority of the male employees (50.5%), while 26.8% considered it as low and 22.7% employees responded it as high among the IT employees.

The female employees considered the overall employee turnover as moderate for most of the female employees (46.9%) responded it as moderate. 29.8% female employees perceived overall employee turnover as high among the IT employees while 23.3% female employees regarded it as low among the employees.

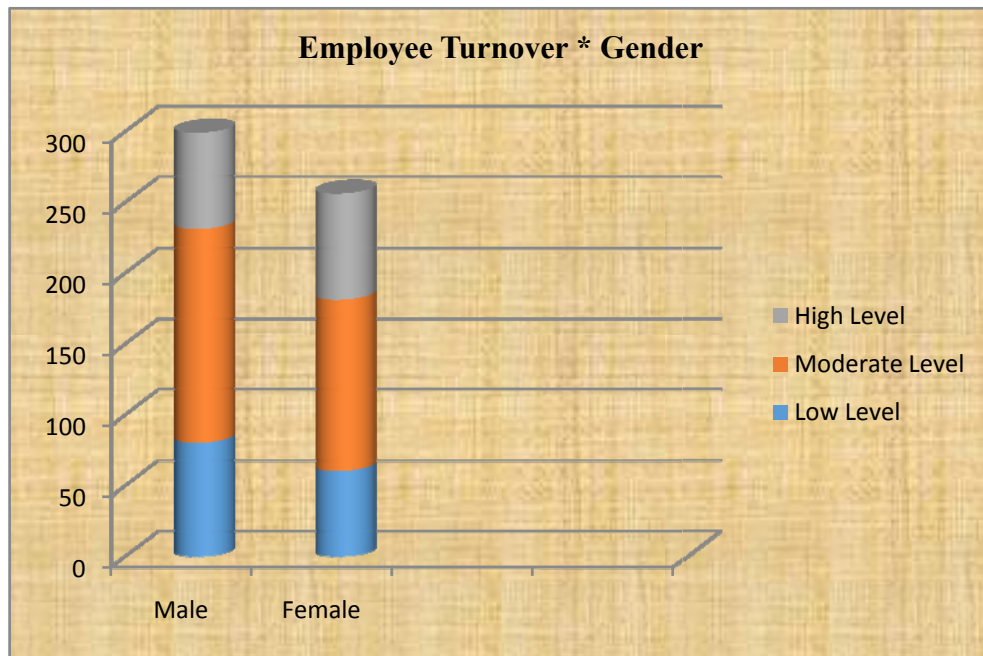


Fig 5.14: Gender wise level of Employee Turnover

It can be concluded that most of the male and female employees perceived the overall employee turnover as moderate among the IT employees (as illustrated in figure 5.14). Based on the mean score, it can be estimated that employee turnover is perceived as high among the female employees compared to the male employees.

5.10.2 Employee Turnover * Park

The turnover of employees among the three different parks is described as in the table 5.35.

Table 5.35 Park Wise Description of Employee Turnover

Employee Turnover	PARK					
	Technopark		Infopark		Kinfrapark	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	109	29	28	18.7	3	9.7
Moderate Level	180	47.9	75	50	17	54.8
High Level	87	23.1	47	31.3	11	35.5
Total	376	100	150	100	31	100
Mean Score	1.9495		2.1067		2.2581	

Source: Primary Data

In Technopark, the majority of the employees (47.9%) perceived the level of employee turnover as moderate, while 29% employees viewed it as low and 23.1% considered it as high.

The majority of the employees (50%) viewed the employee turnover as moderate in the Infopark, 31.3% regarded it as high and the remaining 18.7% responded it as low.

Employee turnover is considered as moderate by the majority of the employees (54.8%) in the Kinfrapark while 35.5% employees responded it as high and the remaining 9.7% employees viewed it as low.

This implies that employee turnover is perceived as moderate by the employees working among the three IT parks, but it is perceived as higher in the Kinfrapark compared to the other two parks based on their mean score.

5.10.3 Employee Turnover * Types of IT Company

The overall employee turnover as perceived among the employees working in the large IT company, medium IT company and small IT company is explained in the table 5.36.

Table 5.36 Employee Turnover among the types of IT company

Employee Turnover	Types of IT Company					
	Large IT Company		Medium IT Company		Small IT Company	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low Level	30	33.7	13	28.9	97	22.9
Moderate Level	45	50.6	24	53.3	203	48
High Level	14	15.7	8	17.8	123	29.1
Total	89	100	45	100	423	100
Mean Value	1.8202		1.8889		2.0615	

Source: Primary Data

The table 5.36 reveals that the majority of the employees (50.6%) working in the large IT companies perceived employee turnover as moderate, 33.7% employees viewed it as low and 15.7% employees considered the employee turnover as high among the employees.

53.3% employees working in the medium IT companies perceived employee turnover as moderate, 28.9% employees treated turnover among employees as low and 17.8% employees viewed it as high among the employees working in the IT sector.

Most of the employees working in the small IT companies perceived employee turnover as moderate, 29.1% employees viewed turnover as high among the employees and 22.9% employees considered the employee turnover as low among the employees.

Based on the mean score, it can be ascertained that the perception of employee turnover is high among the employees working in the small IT companies compared to the large and medium IT companies.

5.10.4 Employee Turnover * Designation

The employee turnover perceived among the various designations of employees is detailed in the following table 5.37.

Table 5.37 Designation Wise Description of Employee Turnover

Designation	Employee Turnover						Mean Value
	Low		Moderate		High		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Software Architect	13	22.8	28	49.2	16	28	2.070
Tech/ Business Analyst	12	30.8	18	46.2	9	23	1.949
Team/Tech Leader	13	30.2	20	46.5	10	23.3	1.907
Sr. Software Engineer	48	29.8	80	49.7	33	20.5	1.901
Software Engineer	54	21	126	49	77	30	2.091
Total	140		272		145		
Grand Total	557						

Source: Primary Data

The majority of the Software Architects (49.2%) perceived employee turnover as moderate, 28% of the employees considered it as high and the remaining 22.8% employees viewed employee turnover as low.

Most of the employees working as a the Business Analyst (46.2%) considered the employee turnover as moderate, 30.8% employees regarded it as low and 23% employees treated it as high among the employees.

Employee turnover is viewed as moderate by most of the employees working as the Team Leader (46.5%), 30.2% employees responded it as low and 23.3% employees considered the employee turnover as high among the employees.

Most of the Senior Software Engineers (49.7%) perceived employee turnover as moderate, 29.8% employees treated it as low and the remaining 20.5% employees considered employee turnover among the employees as high.

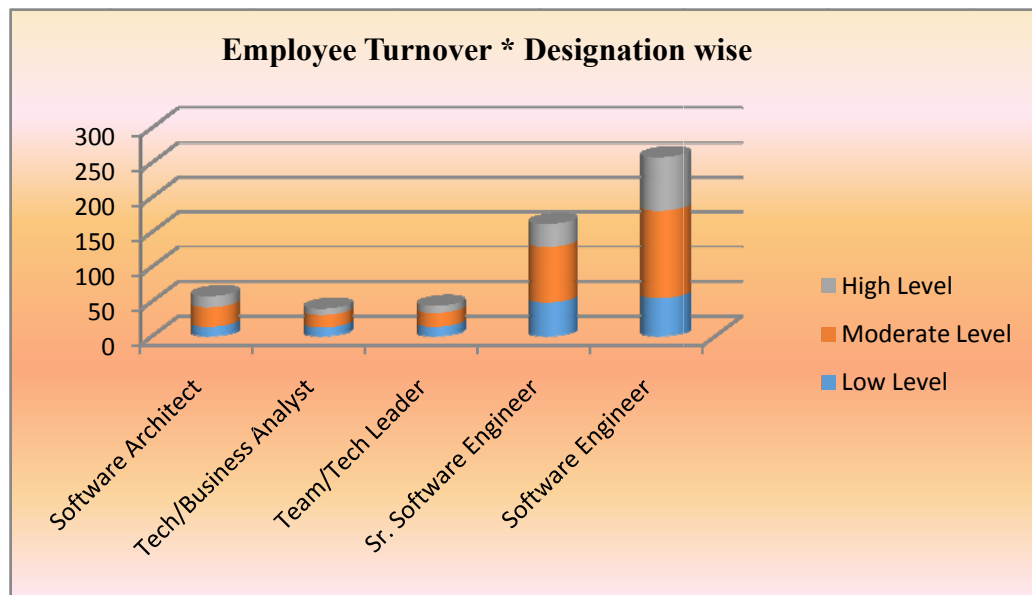


Fig 5.15: Designation wise level of Employee Turnover

The majority of the Software Engineers (49%) considered the employee turnover as moderate while 30% employees regarded it as high and 21% employees viewed it as low among the employees. Thus, it can be concluded that the employees working in various designations perceived the employee turnover as moderate (as exhibited in figure 5.15). Based on the mean score, it can be found that the employee turnover is perceived as high among the Software Engineers followed by the employees working as the Software Architects and then by the Business Analysts.

This section is concluded discussing the employee turnover and the levels of its variables. The levels of the variables of employee turnover are recognized as moderate and overall employee turnover is also perceived as moderate by the employees. The overall employee turnover among the three IT parks is found at

moderate and the employees working in various designations also perceived employee turnover as moderate.

Section F

This section examines the relationship between quality of work life, employee satisfaction and employee turnover using the Spearman's rank correlation coefficient. The research model developed in the study is also discussed in this section.

5.11 Correlation between the Quality of work life, Employee satisfaction and Employee turnover

The relationship between the quality of work life, employee satisfaction and employee turnover is estimated using the Spearman's rank correlation coefficient. The correlation coefficient regarding the quality of work life, employee satisfaction and employee turnover are shown in the table 5.38.

Table 5.38 Correlation Coefficient among QWL, ES and ET

Variables	Quality of Work Life	Employee Satisfaction	Employee Turnover
Quality of Work Life	r = 1.000	r = .493** p-value= .000	r = -.381** p-value= .000
Employee Satisfaction	r = .493** p-value= .000	r = 1.000	r = .123* p-value= .031
Employee Turnover	r = -.381** p-value= .000	r = .123* p-value= .031	r = 1.000
** indicates Correlation is significant at 1% level (2-tailed). * indicates Correlation is significant at 5% level (2-tailed). r refers to Spearman's Rho correlation coefficient; p is the significance value (2-tailed).			

Source: Primary Data.

1. The null hypothesis formulated with regard to the quality of work life and employee satisfaction was stated as

H₀: There is no significant relationship between the quality of work life and the employee satisfaction among the IT employees.

The table 5.38 exhibits that the relationship between the quality of work life and the employee satisfaction ($r = .493$, $p\text{-value} = .000$) is statistically significant since the p -value is lesser than the significance value (0.05). Hence the null hypothesis is rejected, which implies that the quality of work life is positively correlated to the employee satisfaction.

2. The null hypothesis framed in relation to quality of work life and employee turnover was stated as

H₀: There is no significant relationship between the quality of work life and the employee turnover among the IT employees.

From the table 5.38, it can be seen that the relationship between the quality of work life and the employee turnover ($r = -.381$, $p\text{-value} = .000$) is considered as statistically significant since the p -value is lesser than the significance value (0.05). The null hypothesis is therefore rejected, which means that the quality of work life is negatively correlated to the employee turnover.

3. The null hypothesis formulated with regard to the employee satisfaction and the employee turnover is as below

H₀: There is no significant relationship between the employee satisfaction and the employee turnover among the IT employees.

The table 5.38 reveals that the relationship between the employee satisfaction and the employee turnover ($r = .123$, $p\text{-value} = .031$) is assumed as statistically significant since the p -value is lesser than the significance value (0.05). The null hypothesis is therefore rejected at 5% level of significance. Thus, it can be concluded that the employee satisfaction is positively correlated to the employee turnover.

The effect size can be used to assess the degree of relationship between the quality of work life, employee satisfaction and employee turnover. The relationship between the quality of work life and the employee satisfaction is considered as high since the correlation coefficient value (.493) lies next to .50; the relationship between the quality of work life and the employee turnover is assumed as moderate since the correlation coefficient value (.381) lies between .30 and .49 and the association between the employee satisfaction and the employee turnover is small since the correlation value (.123) is between .10 and .29.

5.12 Research Model Developed for the Study

The researcher, based on the studies relating to the quality of work life, employee satisfaction and employee turnover among various other sectors, developed a research model for the present study. This model tries to examine the direct relationship between the independent variable and the dependent or the outcome variable through the inclusion of a mediating variable. The path diagram as a model for depicting the meaning of mediation is given below.

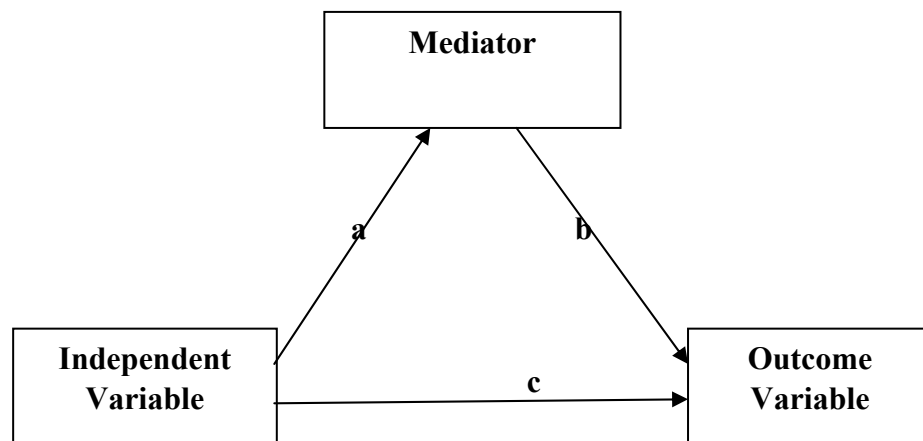


Fig 5.16: Median Path Diagram

In the above model, there are two causal paths leading into the outcome variable – the direct effect of the independent variable (Path c) and the indirect effect of the mediator (Path b). The path from the independent variable to the mediator is the (Path a). The mediating effect is considered significant if (i) the p-value associated with the product of the coefficients $a \cdot b$ must be significant at a specified level (usually lower than .05); and (ii) the p-values associated with a, b and c must also be significant. If these conditions are met and the p-value associated with c is not significant, it can be interpreted as full mediation is occurring. If the p-value associated with c is significant, then it can be concluded that partial mediation is occurring (Kock, 2014).

To examine the relationship between the Quality of work life, Employee satisfaction and Employee turnover, the Structural Equation Modelling (SEM) using the Warp PLS 4.0 is applied. The relationship between the Quality of Work Life (Independent variable) and the Employee Turnover (Outcome variable) is examined using the Employee Satisfaction as a Mediator variable. The mediation

model assumes that the independent variable (QWL) influences the mediator variable (ES), which in turn will influence the dependent variable (ET) rather than relying, on the direct causal relationship between the independent variable and the dependent variable. Here the Quality of work life is the causal variable and the variable it causes or Employee turnover is the outcome variable. The model without mediation is as follows

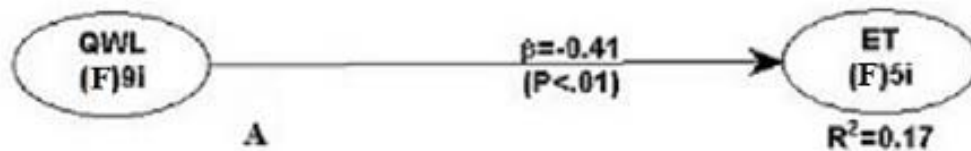


Fig 5.17: Model without Mediation

The path c is the total effect caused by the independent variable (QWL). The beta coefficient so derived is -0.41 which is significant at p-value lower than .01. The direct effect of the independent variable (QWL) on the outcome variable (ET) is termed as A. This effect is mediated by the mediator variable (ES) while the independent variable (QWL) may still affect the dependent variable (ET). The direct effect estimates the extent of variation in the outcome variable (ET) when the independent variable (QWL) is increased by one unit keeping the mediator variable (ES) unchanged. The indirect effect in a mediation or causal model is the amount of mediation which means the reduction in the effect of the causal variable (QWL) on the outcome variable (ET) when the mediator variable (ES) is introduced.

After reviewing the related literature, the researcher identified that Employee satisfaction is considered as a mediating variable since it accounts for changes in the relationship between the Quality of work life and the Employee turnover in many other contexts. Hence, in this model the Employee satisfaction is taken as a mediating variable that intervenes in the relationship between the Quality of work life and the Employee turnover. The model with employee satisfaction as a mediator is as follows.

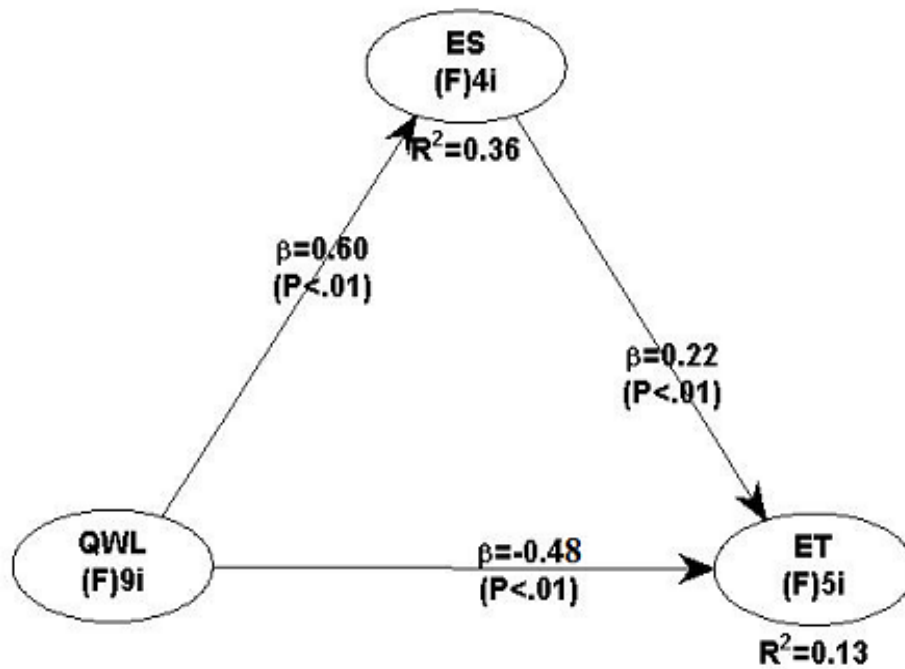


Fig 5.18: Model with Mediation

The above model assumes to be Partially mediated which implies that the mediator variable (ES) is reasonable for some changes in the relationship between the independent variable (QWL) and the outcome variable (ET). The beta coefficient of path c (-0.41) in the model without mediation (Figure 5.17) is reduced to -0.48 (Figure 5.18) and is significant at p-value less than 0.05. Besides, the p-values of the path a and path b are less than the significance value (.05) and hence partial mediation is implied. Complete mediation is possible when the p-value of the path c is not significant but in this model the p-value of path c is lower than the significance value (.05) which strengthens the fact that the variable employee satisfaction partially mediates the model. The total effect A of the independent variable (QWL) on the outcome variable (ET) is measured by adding the direct effect A_1 and the indirect effect $B \cdot C$ in the mediation model. The standard errors obtained for the path coefficients are 0.038 each.

The path coefficients (β) and the p-values of the relationships between QWL, ES and ET are exhibited in the model (Figure 5.18). All the p-values of the path coefficients are lower than the significance value and hence assume that all the three paths are statistically significant. The path coefficient (β) of the variable

quality of work life and employee turnover (-0.48) is negative, which indicates that the quality of work life is inversely related to the employee turnover, which means an increase in the quality of work life will result a decrease in the employee turnover. On the contrary, the path coefficients (β) of the variable quality of work life and employee satisfaction (0.60); and employee satisfaction and employee turnover (0.22) are positive which implies a positive relationship between the variables which means an increase in one variable will result an increase in the other related variable.

Table 5.39 The Model Fit and Quality Indices of the Research Model

Sl. No.	Model Fit and Quality Indices
1	Average Path Coefficient (APC) = 0.472, $p < 0.001$
2	Average R- Squared (ARS) = 0.241, $p < 0.001$
3	Average adjusted R-Squared (AARS) = 0.239, $p < 0.001$
4	Average block Variance Inflation Factor (AVIF) = 1.001, acceptable if ≤ 5 , ideally ≤ 3.3
5	Average Full collinearity VIF (AFVIF) = 1.617, acceptable if ≤ 5 , ideally ≤ 3.3
6	Tenenhaus GoF (GoF) = 0.354, small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36
7	Sympson's Paradox Ratio (SPR) = 0.767, acceptable if ≥ 0.7 , ideally = 1
8	R-Squared Contribution Ratio (RSCR) = 0.920, acceptable if ≥ 0.9 , ideally = 1
9	Statistical Suppression Ratio (SSR) = 1.00, acceptable if ≥ 0.7
10	Non-Linear Bivariate Causality Direction Ratio (NLBCDR) = 0.833, acceptable if ≥ 0.7

Source: Warp PLS 4.0 Output

The table 5.39 details the model fit and quality indices of the measurement model. The model fit indices describes the APC, ARS, AARS, AVIF, AFVIF, GoF, SPR, RSCR, SSR and NLBCDR of the model. The Average Path Coefficient (APC) value is 0.472 and Average R- Squared (ARS) value is 0.241 which have significant p-values. The Average block Variance Inflation Factor (AVIF) is 1.001

and is acceptable since the value is less than 5. Since the measurement model satisfies all the necessary criteria as mentioned in the above table, it is assessed to be fit.

This section concludes with the description of the measurement model. The relationship between the quality of work life, employee satisfaction and employee turnover was described in this section. Besides the quality of work life is found to have an influence on the satisfaction and turnover of the employees working in the IT sector in Kerala.

Conclusion

Thus, it can be concluded that scale of quality of work life, employee satisfaction and employee turnover developed for the study was validated and found reliable in the IT sector in Kerala. Correlation analysis indicated that the variables of quality of work life, employee satisfaction and employee turnover are all positively correlated to their respective variables and the most important variable that relate to the quality of work life, employee satisfaction and employee turnover among the employees are identified in this study. Moreover, the relationship between the quality of work life, employee satisfaction and employee turnover are also estimated using the correlation coefficient analysis. The research model developed in the study was tested through the Structural Equation Modelling using the Warp PLS 4.0. The partial mediating effect of the employee satisfaction on the relationship between the quality of work life and the employee turnover was also described in this chapter. The model fit and quality indices revealed that the model was fitted into the context of employees working in the IT sector in Kerala.

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Chapter 6

**Demographic Variables with Quality of
Work Life, Employee Satisfaction and
Employee Turnover**

6.1 Introduction

The present chapter is concerned with the analysis of the primary data with regard to the demographic variables of the sample respondents. The demographic variables studied include age, work experience, education, monthly income, gender and marital status of the respondents identified in the study. The main objective of this chapter is to analyze whether the demographic variables influence the quality of work life, employee satisfaction and employee turnover among the employees working in the IT sector in Kerala.

The primary data collected is analyzed to draw inferences. Non- parametric tests like the Mann-Whitney U test and the Kruskal Wallis H test have been used for the analysis of the primary data. The relationship between demographic variables and quality of work life, employee satisfaction and employee turnover is studied using the Kruskal Wallis H test and to further identify the significant differences among the various categories of the demographic variables, the Mann-Whitney U test is used.

The current chapter is categorized into three sections. Section A deals with the analysis of demographic variables in relation to Quality of work life. Section B is related to the analysis of demographic variables to Employee satisfaction and Section C concerns the analysis of demographic variables with the Employee turnover. The results of the analysis are described below.

Section A

Section A indicates the relationship of demographic variables like age, work experience, monthly income, education, gender and marital status; and Quality of work life. The relationship of variables like age, work experience, income and education with quality of work life is determined using the Kruskal Wallis H test and further to check the significant differences between various groups of the demographic variables studied, the Mann-Whitney U test is used. The relationship of gender and marital status with the quality of work life is tested using the Mann-Whitney U test. The hypotheses formulated with respect to the objectives of the study that relate to the demographic variables are tested and the results are described below.

6.2 Age and Quality of Work Life

The equality of the quality of work life and its variables among the various age groups of the employees is identified using the null hypothesis. The hypothesis formulated with regard to the age and quality of work life is stated as

H₀: There is no significant difference in the quality of work life and its variables among the various age groups of the employees working in the IT sector in Kerala.

To test the above hypothesis, the Kruskal Wallis H test is applied and to further recognize the significant differences among the various age groups, the Mann-Whitney U test is used. The test statistics derived after applying the Kruskal Wallis H test is described in the table 6.1 relating to age and quality of work life among the IT sector employees in Kerala.

Table 6.1 Age and Quality of Work Life – Kruskal Wallis H Test Statistics

Variables of Quality of work life	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Adequate and Fair Compensation	11.090	4	.026	Rejected
Working Environment	3.294	4	.510	Accepted
Organizational Communication	11.294	4	.023	Rejected
Autonomy of Work	5.474	4	.242	Accepted
Employee Development	5.170	4	.270	Accepted
Fair Treatment	4.132	4	.388	Accepted
Total Life Space	1.698	4	.791	Accepted
Job Security	7.383	4	.117	Accepted
Attitude of Management	.729	4	.948	Accepted
Quality of Work Life	1.444	4	.837	Accepted

Source: Primary Data

The table 6.1 indicates that the p-values of organizational communication (H= 11.294, df= 4, p-value= 0.023) and adequate and fair compensation (H= 11.090, df= 4, p-value= 0.026) are less than the 0.05 while the p-values of quality of work life (H= 1.444, df= 4, p-value= .837), job security (H= 7.383, df= 4, p-value= 0.117), autonomy of work (H= 5.474, df= 4, p-value= 0.242), employee development (H= 5.170, df= 4, p-value= 0.270), fair treatment (H= 4.132, df= 4, p-value= 0.388), working environment (H= 3.294, df= 4, p-value= 0.510), total life space (H= 1.698, df= 4, p-value= 0.791), and attitude of management (H= .729, df= 4, p-value= 0.948) are greater than 0.05. The null hypotheses formulated with regard to adequate and fair compensation and organizational communication is rejected at 5 % level of significance since the p-values are less than 0.05. Hence the alternative hypothesis is accepted which indicates that there is significant difference in the variables of quality of work life (adequate and fair compensation and organizational communication) among the various age groups of the IT sector employees.

6.2.1 Age and Adequate and Fair Compensation

The Kruskal Wallis H test indicates that adequate and fair compensation varies among the various age groups. In order to test the significant differences among the age groups with regard to adequate and fair compensation, the hypothesis framed is stated as

H₀: Adequate and fair compensation is same among the different pairs of the age groups of the IT employees.

The hypothesis was then tested using the Mann-Whitney U test for pair wise comparisons among the various age groups. The results of the analysis are shown in the table 6.2 relating to the various age groups and adequate and fair compensation.

**Table 6.2 Age Groups with regard to Adequate and Fair Compensation —
Mann-Whitney U Test Statistics**

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U= 23011.00 W= 48662.0 Z = - 2.494 P value= 0.013*	U = 6466.500 W= 32117.50 Z = -2.795 P value= 0.005*	U= 1941.000 W= 27592.00 Z = -1.054 P value= 0.292	U = 272.000 W = 278.000 Z = -.592 P value= 0.554
Group 2 (26 – 30 yrs)			U = 7925.500 W= 35655.50 Z = -.988 P value= 0.323	U= 2291.500 W= 2501.500 Z = -.186 P value= 0.852	U = 254.500 W = 260.500 Z = -.833 P value= 0.405
Group 3 (31 – 35 yrs)				U = 650.500 W = 860.500 Z = -.751 P value= 0.453	U = 70.000 W = 76.000 Z = -1.063 P value= 0.288
Group 4 (36 – 40 yrs)					U = 22.000 W = 28.000 Z = -7.41 P value= 0.459
Group 5 (Above 40 yrs)					

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The table 6.2 points out the comparison between the age group 2 and age group 4 (U=2291.500, W=2501.500, Z= -.186, p-value=0.852); age group 1 and age group 5 (U= 272.000, W= 278.000, Z = -.592, p-value= 0.554); age group 4 and age group 5 (U= 22.000, W= 28.000, Z= -7.41, p-value= 0.459); age group 3 and age group 4 (U= 650.500, W= 860.500, Z= -.751, p-value= 0.453); age group 2 and age group 5 (U= 254.500, W= 260.500, Z = -.833, p-value= 0.405); age group 2 and age group 3 U= 7925.500, W= 35655.500, Z = -.988, p-value= 0.323); age group 1 and age group 4 (U= 1941.000, W= 27592.000, Z = -1.054, p-value = 0.292); and age group 3 and age group 4 (U= 70.000, W= 76.000, Z= -1.063, p-value= 0.288) are not statistically significant since their p-values are greater than the significance value (0.05) and the Z scores of these groups did not exceed the critical values of -1.96 and +1.96. While the test statistics of the age group 1 and age group 2 is (U= 23011.000, W= 48662.000, Z = -2.494, p-value= 0.013); and age group 1 and age group 3 is (U= 6466.500, W=32117.500, Z = -2.7950, p-value= 0.005). The p-values of the age group 1 and age group 2 (0.013); and age group 1 and age group 3 (0.005) are less than 0.05 and are statistically significant since the Z scores of these groups are significant at p-value lower than 0.05 and the |Z| scores exceeded the critical values of 1.96.

Thus the null hypothesis is rejected and it can be concluded that adequate and fair compensation is significantly different between age group 1 (25 years and below) and age group 2 (26 – 30 years); and age group 1 (25 years and below) and age group 3 (31 – 35 years) of the employees working in the IT sector.

6.2.2 Age and Organizational Communication

The Kruskal Wallis H test reveals that the organizational communication varies among the age groups of the employees. To recognize the significant differences among the various age groups in relation to the organizational communication a null hypothesis is framed accordingly. The hypothesis is stated as follows

H₀: Organizational communication is not significantly different among the different pairs of the age groups of the IT employees.

The hypothesis framed is then tested using the Mann-Whitney U test for pair wise comparisons among the various age groups. The results are described in the table 6.3 relating to various age groups and organizational communication.

Table 6.3 Age group with regard to Organizational communication - Mann-Whitney U Test Statistics

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U= 23199.00 W= 50929.00 Z = - 2.389 P value= 0.017*	U= 7017.000 W=9718.000 Z = -1.953 P value= 0.051	U= 2109.500 W=2319.500 Z = -.503 P value= 0.615	U = 132.500 W=25783.500 Z = -1.844 P value= 0.065
Group 2 (26 – 30 yrs)			U= 8356.500 W=11057.50 Z = -.339 P value= 0.735	U= 2234.500 W=29964.50 Z = -.372 P value= 0.710	U = 99.000 W= 27829.00 Z = -2.179 P value= 0.029*
Group 3 (31 – 35 yrs)				U = 680.000 W= 3381.00 Z = -.478 P value= 0.633	U = 28.500 W = 2729.500 Z = -2.203 P value= 0.028*
Group 4 (36 – 40 yrs)					U = 10.500 W = 220.500 Z = -1.838 P value= 0.066
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The results indicate that the differences in organizational communication among the age group 2 and age group 3 (U = 8356.500, W= 11057.500, Z = -.339,

p- value= 0.735); age group 2 and age group 4 (U = 2234.500, W = 29964.500, Z = -.372, p- value= 0.710); age group 3 and age group 4 (U = 680.000, W = 3381.000, Z = -.478, p- value= 0.633); age group 1 and age group 4 (U = 2109.500, W = 2319.500, Z = -.503, p- value= 0.615); age group 4 and age group 5 (U = 10.500, W = 220.500, Z= -1.838, p-value= 0.066); age group 1 and age group 5 (U = 132.500, W= 25783.500, Z = -1.844, p-value= 0.065); and age group 1 and age group 3 (U = 7017.000, W = 9718.000, Z = -1.953, p-value = 0.051) are not statistically significant since their p-values are greater than 0.05 and the Z scores did not exceed the critical values of -1.96 and +1.96. While the age group 2 and age group 5 (U= 99.000, W = 27829.000, Z = -2.179, p- value= 0.029); age group 3 and age group 5 (U = 28.500, W = 2729.500, Z = -2.203, p- value= 0.028); and age group 1 and age group 2 (U = 23199.000, W = 50929.000, Z = - 2.389, p-value = 0.017) reveals that the p-values are lower than 0.05 and the |Z| scores exceeded the critical values and hence assumes that the differences in organizational communication among these pairs of age groups are statistically significant since the Z score is significant at p-value less than 0.05.

Thus the null hypothesis is rejected and we can conclude that organizational communication is significantly different between age group 1 (25 years and below) and age group 2 (26 – 30 years); age group 2 (26 – 30 years) and age group 5 (Above 40 years); and age group 3 (31 – 35 years) and age group 5 (Above 40 years) of the IT employees in Kerala.

6.3 Monthly Income and Quality of Work Life

In order to identify the whether the quality of work life and its variables are same among the various groups of monthly income, the null hypothesis is framed accordingly with regard to this objective.

H₀: There is no significant difference in the quality of work life and its variables among the various income groups of the IT sector employees in Kerala.

The Kruskal Wallis H test is used to test the above hypothesis regarding the relationship between variables of quality of work life and the various income

groups. The test results are shown in the table 6.4 relating to the monthly income and quality of work life among the IT sector employees.

Table 6.4 Monthly Income and Quality of Work Life – Kruskal Wallis H Test Statistics

Variables of Quality of work life	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Adequate and Fair Compensation	7.830	4	.098	Accepted
Working Environment	3.884	4	.422	Accepted
Organizational Communication	3.440	4	.487	Accepted
Autonomy of Work	4.239	4	.375	Accepted
Employee Development	1.786	4	.775	Accepted
Fair Treatment	8.543	4	.074	Accepted
Total Life Space	7.021	4	.135	Accepted
Job Security	4.372	4	.358	Accepted
Attitude of Management	10.956	4	.027	Rejected
Quality of Work Life	5.848	4	.211	Accepted

Source: Primary Data

The table 6.4 shows that the p-value of attitude of management ($H= 10.956$, $df= 4$, $p\text{-value}= .027$) is lesser than 0.05 while the p-values of quality of work life ($H= 5.848$, $df=4$, $p\text{-value}= .211$), fair treatment ($H= 8.543$, $df= 4$, $p\text{-value}= 0.074$), adequate and fair compensation ($H= 7.830$, $df= 4$, $p\text{-value}= .098$), total life space ($H= 7.021$, $df= 4$, $p\text{-value}= 0.135$), employee development ($H= 1.786$, $df= 4$, $p\text{-value}= 0.775$), organizational communication ($H= 3.440$, $df= 4$, $p\text{-value}= 0.487$), working environment ($H= 3.884$, $df= 4$, $p\text{-value}= 0.422$), autonomy of work ($H= 4.239$, $df= 4$, $p\text{-value}= 0.375$) and job security ($H= 4.372$, $df= 4$, $p\text{-value}= 0.358$) are greater than 0.05. The null hypothesis is thereby rejected since the p-value of attitude of management is less than 0.05 and concludes that variables of quality of work life (attitude of management) are significantly different among the various income groups of the IT employees.

6.3.1 Monthly Income and Attitude of Management

Since attitude of management is different among various income groups, it became necessary to recognize the income groups that vary significantly in relation to the attitude of management. The hypothesis formulated with regard to this objective is stated below

H₀: Attitude of Management is not significantly different among the different pairs of the income groups of the IT employees.

The Mann-Whitney U test is used to test the above hypothesis with regard to attitude of management and income groups. The results are described in the table 6.5 relating to the various monthly income groups and attitude of management.

The table 6.5 points out that the differences in attitude of management between the income group 2 and income group 5 ($U = 3362.000$, $W = 33743.000$, $Z = -.208$, $p\text{-value}=.835$); income group 4 and income group 5 ($U = 554.500$, $W = 1415.500$, $Z = -.241$, $p\text{-value} =.810$); income group 2 and income group 4 ($U = 4881.500$, $W = 5742.500$, $Z = -.331$, $p\text{-value} =.740$); income group 3 and income group 5 ($U = 1577.000$, $W = 1983.000$, $Z = -.576$, $p\text{-value} =.565$); income group 1 and income group 4 ($U = 2244.000$, $W = 9625.000$, $Z = -.920$, $p\text{-value} = .357$); income group 1 and income group 5 ($U = 1493.500$, $W = 8874.500$, $Z = -.982$, $p\text{-value} = .326$); income group 3 and income group 4 ($U = 2097.500$, $W = 2958.500$, $Z = -1.492$, $p\text{-value}=.136$); and income group 1 and income group 2 ($U=13095.500$, $W=20476.500$, $Z = -1.888$, $p\text{-value} =.059$); are statistically non-significant since their p-values tends to be higher than 0.05 and the Z scores did not exceed the critical values of z -1.96 and + 1.96. On the other hand, the income group 2 and income group 3 ($U = 12921.000$, $W = 43302.000$, $Z = - 2.074$, $p\text{-value} =.038$); and income group 1 and income group 3 ($U = 5587.000$, $W =12968.000$, $Z = - 3.214$, $p\text{-value} =.001$) are having p-values lower than 0.05 and their Z scores also exceeded the critical values of z and hence the differences among these pairs of income groups are assumed as statistically significant.

Table 6.5 Monthly Income with regard to Attitude of Management - Mann-Whitney U Test Statistics

Monthly Income	Group 1 (Below Rs 20,000)	Group 2 (Rs 20000-30000)	Group 3 (Rs 30000-40000)	Group 4 (Rs 40000-50000)	Group 5 (50000 and Above)
Group 1 (Below Rs 20,000)		U=13095.500 W=20476.500 Z = -1.888 P value = .059	U= 5587.00 W=12968.00 Z = - 3.214 P value = .001*	U=2244.00 W=9625.00 Z = -.920 P value = .357	U=1493.500 W=8874.500 Z = -.982 P value= .326
Group 2 (Rs 20000-30000)			U = 12921.0 W= 43302.0 Z = - 2.074 P value = .038*	U=4881.500 W=5742.500 Z = -.331 P value = .740	U= 3362.00 W=33743.00 Z = -.208 P value = .835
Group 3 (Rs 30000-40000)				U=2097.500 W=2958.500 Z = - 1.492 P value = .136	U= 1577.00 W= 1983.00 Z = -.576 P value = .565
Group 4 (Rs 40000-50000)					U= 554.500 W=1415.500 Z = -.241 P value = .810
Group 5 (50000 and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

Thus, the null hypothesis is rejected at 5% level of significance and can be assumed that attitude of management is significantly different between the income group 1 (Below Rs 20,000) and income group 3 (Rs 30000- 40000); and income

group 2 (Rs 20000-30000) and income group 3 (Rs 30000- 40000) of the employees working in the IT sector.

6.4 Work Experience and Quality of work life

The null hypothesis is formulated to recognize the equality of the quality of work life and its variables among the different categories of work experience of the employees working in the IT sector in Kerala. It is stated as below

H₀: There is no significant difference in the quality of work life and its variables among the various categories of work experience of the employees working in the IT sector in Kerala.

The Kruskal Wallis H test is applied to test the hypothesis relating to the work experience and quality of work life among the IT sector employees. The test results are shown in the table 6.6 relating to the work experience and quality of work life among the IT sector employees.

Table 6.6 Work Experience and Quality of Work Life – Kruskal Wallis H Test Statistics

Variables of Quality of work life	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Adequate and Fair Compensation	2.404	4	.662	Accepted
Working Environment	10.524	4	.032	Rejected
Organizational Communication	3.560	4	.469	Accepted
Autonomy of Work	3.330	4	.504	Accepted
Employee Development	8.393	4	.078	Accepted
Fair Treatment	.598	4	.963	Accepted
Total Life Space	3.345	4	.502	Accepted
Job Security	3.789	4	.435	Accepted
Attitude of Management	.462	4	.977	Accepted
Quality of Work Life	2.457	4	.652	Accepted

Source: Primary Data

From the table 6.6, it can be seen that the p-values of quality of work life (H= 2.457, df= 4, p-value= .652), employee development (H= 8.393, df= 4, p-value= 0.078), job security (H= 3.789, df= 4, p-value= 0.435), organizational communication (H= 3.560, df= 4, p-value= 0.469), total life space (H= 3.345, df= 4, p-value= 0.502), autonomy of work (H= 3.330, df= 4, p-value= 0.504), adequate and fair compensation (H= 2.404, df= 4, p-value= 0.662), attitude of management (H= .462, df= 4, p-value= 0.977) and fair treatment (H= .598, df= 4, p-value= 0.963) are greater than 0.05 while the p-value of working environment (H= 10.524, df= 4, p-value= 0.032) is lower than 0.05. Hence the null hypothesis is rejected at 5% level of significance since the p-value of one of the variables of quality of work life (working environment) is less than 0.05. Thus it can be concluded that there exists significant difference in one of the variables of quality of work life among various categories of the work experience.

6.4.1 Work Experience and Working Environment

The Mann-Whitney U test is used to identify the differences and enabled pair wise comparisons among the various categories of work experience in relation to the working environment. The hypotheses formulated with regard to this objective is stated as

H₀₁: Working environment is same among the different pairs of the work experience categories of the IT employees.

The table 6.7 describes the test statistics of the Mann-Whitney U test applied relating to the various categories of work experience and working environment.

The result indicates the test statistics of work experience category 3 and category 5 (U = 688.000, W = 878.000, Z = -.322, p-value =.747); category 2 and category 5 (U = 1646.000, W=18482.000, Z = -.386, p-value =.699); category 1 and category 4 (U =1722.000, W =36967.00, Z = -.460, p-value =.646); category 3 and category 4 (U = 451.500, W =3377.500 Z = -.913, p-value =.361); category 1 and category 5 (U = 2191.000, W = 2381.000, Z = -.960, p-value =.337); category 4 and category 5 (U = 106.500, W = 296.500, Z = -.982, p-value =.326); category 1 and category 3 (U =9307.500, W =12233.500, Z = -1.023, p-value = .306);

category 2 and category 3 (U =6323.000, W =23159.000, Z = -1.166, p-value = .244); and category 2 and category 4 (U = 975.000, W =17811.00, Z = -1.508, p-value =.132). The p-values of the above categories are greater than 0.05 and their Z scores did not exceed the critical values and hence the differences in these pairs of work experience categories are assumed as statistically non-significant. While the difference in this pair of work experience category 1 and category 2 (U=20169.000, W=37005.00, Z= -3.073, p-value =.002) are statistically significant since the Z score of this category is found significant at the p-value less than 0.05 and the Z score exceeded the critical values of z -1.96 and +1.96.

Table 6.7 Work Experience with regard to Working Environment – Mann-Whitney U Test Statistics

Work Experience	Category 1 (Up to 2 Yrs)	Category 2 (2- 4 yrs)	Category 3 (4- 6 yrs)	Category 4 (6- 8 yrs)	Category 5 (8 yrs and Above)
Category 1 (Up to 2 Yrs)		U=20169.0 W=37005.0 Z = -3.073 P value = .002*	U=9307.500 W=12233.50 Z = -1.023 P value = .306	U=1722.00 W=36967.0 Z = -.460 P value = .646	U = 2191.000 W = 2381.00 Z = -.960 P value = .337
Category 2 (2- 4 yrs)			U=6323.000 W=23159.00 Z = -1.166 P value = .244	U = 975.00 W=17811.0 Z = -1.508 P value = .132	U = 1646.000 W=18482.000 Z = -.386 P value = .699
Category 3 (4- 6 yrs)				U= 451.50 W=3377.50 Z = -.913 P value = .361	U = 688.000 W = 878.000 Z = -.322 P value = .747
Category 4 (6- 8 yrs)					U = 106.500 W = 296.500 Z = -.982 P value =.326
Category 5 (8 yrs and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

Thus the null hypothesis is rejected and thereby conclude that working environment significantly differs among the work experience category 1 (Up to 2 Yrs) and category 2 (2 yrs- 4 yrs) among the IT employees.

6.5 Education and Quality of Work Life

The equality of the quality of work life and its variables among the various categories of education is assessed after framing the null hypothesis. The null hypothesis framed to test the relationship between educational qualification and quality of work life among the IT sector employees in Kerala is stated as

H₀: The quality of work life and its variables are not significantly different among the various categories of education of the IT sector employees in Kerala.

The above hypothesis is tested by applying the Kruskal Wallis H test. The table 6.8 indicates the test statistics derived in relation to the various categories of education and quality of work life among the IT sector employees.

Table 6.8 Education and Quality of Work Life – Kruskal Wallis H Test Statistics

Variables of Quality of work life	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Adequate and Fair Compensation	17.083	5	.004	Rejected
Working Environment	5.731	5	.333	Accepted
Organizational Communication	4.261	5	.512	Accepted
Autonomy of Work	9.067	5	.106	Accepted
Employee Development	12.544	5	.028	Rejected
Fair Treatment	8.728	5	.120	Accepted
Total Life Space	14.174	5	.015	Rejected
Job Security	4.167	5	.526	Accepted
Attitude of Management	9.670	5	.085	Accepted
Quality of Work Life	9.428	5	.093	Accepted

Source: Primary Data

From the table 6.8, it can be seen that the p-values of quality of work life (H= 9.428, df= 5, p-value= .093), attitude of management (H= 9.670, df= 5, p-value= 0.085), autonomy of work (H= 9.067, df= 5, p-value= 0.106), fair treatment (H= 8.728, df= 5, p-value= 0.120), job security (H= 4.167, df= 5, p-value= 0.526), organizational communication (H= 4.261, df= 5, p-value= 0.512) and working environment (H= 5.731, df= 5, p-value= 0.333) are greater than 0.05 while the p-values of adequate and fair compensation (H= 17.083, df= 5, p-value= 0.004), total life space (H= 14.174, df= 5, p-value= 0.015) and employee development (H= 12.544, df= 5, p-value= 0.028) are lower than 0.05 and hence the null hypothesis is rejected at 5% level of significance. The alternative hypothesis is accepted which indicates that the variables of quality of work life is significantly different among the various categories of education of the IT sector employees.

6.5.1 Education and Adequate and Fair Compensation

The Kruskal Wallis H test implies that adequate and fair compensation differs among the categories of education. The significant difference among the various categories of education with regard to adequate and fair compensation is tested applying the Mann-Whitney U test for comparison among various categories of education. The hypothesis framed in relation to the above objective is stated as

H₀: Adequate and fair compensation is not significantly different among the different pairs of education categories of the IT employees.

The hypothesis is tested using the Mann-Whitney U test. The table 6.9 explains the test statistics relating to the various categories of education and adequate and fair compensation.

The table 6.9 points out the test statistics of educational category 3 and category 5 (U = 541.000, W =1069.00, Z = -.039, p-value = .969); category 4 and category 5 (U= 782.000, W =1958.00, Z = -.322, p-value = .747); category 2 and category 4 (U= 7292.00, W=58013.00, Z = -.501, p-value= .617); category 3 and category 4 (U = 707.500, W=1883.500, Z = -.598, p-value = .550); category 1 and category 5 (U= 321.00, W=916.00, Z = -.634, p-value= .526); category 1 and category 3 (U= 299.00, W= 827.00, Z = -.680, p-value= .497); category 1 and category 4 (U= 443.00, W=1619.00, Z = -.801, p-value= .423); category 2 and category 3 (U= 4488.00, W=55209.00, Z= -1.107, p-value= .268); category 2 and

**Table 6.9 Education with regard to Adequate and Fair Compensation –
Mann-Whitney U Test Statistics**

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=2620.50 W=53341.500 Z= -1.663 P value= .096	U= 299.00 W=827.00 Z = -.680 P value= .497	U= 443.00 W=1619.0 Z = -.801 P value= .423	U= 321.00 W=916.00 Z = -.634 P value= .526	U= 622.00 W= 978.00 Z= -3.100 P value= .002*
Category 2 (B Tech)			U= 4488.0 W=55209.00 Z = -1.107 P value= .268	U= 7292.0 W=58013.00 Z = -.501 P value= .617	U=4782.50 W=55503.500 Z= -1.113 P value= .266	U=13316.0 W=18672.00 Z= -2.872 P value =.004*
Category 3 (M Tech)				U=707.500 W=1883.500 Z = -.598 P value = .550	U= 541.00 W=1069.00 Z = -.039 P value = .969	U=1090.50 W=6446.5 Z = -2.915 P value = .004*
Category 4 (B Sc)					U= 782.00 W=1958.0 Z = -.322 P value = .747	U=1982.0 W=7338.0 Z = -1.973 P value = .049*
Category 5 (M Sc)						U=1181.0 W=6537.0 Z = -2.871 P value = .004*
Category 6 (Others)						

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

category 5 (U= 4782.500, W=55503.50, Z= -1.113, p-value= .266); and category 1 and category 2 (U = 2620.500, W= 53341.50, Z= -1.663, p-value= .096). The p-values of these categories tend to be higher than the significance value of 0.05 and the Z scores did not exceed the critical values of z -1.96 and +1.96 and hence these pairs of education categories are assumed as statistically non-significant. On the other hand, the p-values of the category 4 and category 6 (U= 1982.00, W= 7338.0, Z= -1.973, p-value= .049); category 2 and category 6 (U= 13316.00, W= 18672.00, Z= -2.872, p-value =.004); category 3 and category 6 (U= 1090.50, W= 6446.50, Z= -2.915, p-value= .004); category 5 and category 6 (U= 1181.00, W= 6537.00, Z = -2.871, p-value = .004) and category 1 and category 6 (U= 622.00, W= 978.00, Z = -3.100, p-value= .002); are less than 0.05 and hence the Z score of these pairs of education categories are statistically significant at p-values lower than 0.05 and the |Z| scores exceeded the critical values of z.

Thus the null hypothesis is rejected and can be interpreted that adequate and fair compensation is significantly different between the educational categories 1 (Plus two) and category 6 (Others); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 6 (Others); category 4 (B Sc) and category 6 (Others); category 5 (M Sc) and category 6 (Others) of the IT sector employees.

6.5.2 Education and Employee Development

In order to identify the significant differences among the various categories of education with regard to employee development, the hypothesis is framed and tested using the Mann-Whitney U test. The hypothesis framed accordingly relating to the above objective is stated as follows

H₀₁: Employee development is not significantly different among the different pairs of education categories of the IT employees.

The table 6.10 indicates the results of the Mann-Whitney U test applied for pair wise comparison among the various categories of education with the employee development.

**Table 6.10 Education with regard to Employee Development – Mann-Whitney
U Test Statistics**

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=3018.5 W=3249.5 Z = -.739 P value = .460	U=278.500 W=509.50 Z=-1.052 P value= .293	U=423.00 W=654.00 Z=-1.059 P value= .290	U=250.50 W=481.50 Z = -1.851 P value = .064	U=1043.00 W=6399.00 Z = -.257 P value= .797
Category 2 (B Tech)			U=4572.0 W=55293.0 Z = -.950 P value = .342	U=7189.0 W=57910.0 Z= -.651 P value = .515	U=4115.0 W=54836 Z= -2.296 P value = .022*	U=14221.0 W=19577.0 Z = -2.015 P value = .044*
Category 3 (M Tech)				U=735.00 W=1911.0 Z = -.325 P value = .745	U=447.50 W=975.50 Z= -1.242 P value = .214	U=1263.50 W=6619.50 Z= -1.994 P value = .046*
Category 4 (B Sc)					U=662.00 W=1838.0 Z= -1.453 P value = .146	U=2028.00 W=7384.00 Z = -1.778 P value = .075
Category 5 (M Sc)						U=1176.50 W=6532.50 Z = -2.867 P value = .004*
Category 6 (Others)						
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.						

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The table 6.10 exhibits the test statistics of education category 1 and category 6 (U=1043.00, W=6399.00, Z = -.257, p-value= .797); category 3 and category 4 (U= 735.00, W= 1911.00, Z = -.325, p-value = .745); category 1 and category 2 (U= 3018.500, W= 3249.500, Z= -.739, p-value = .460); category 1 and category 3 (U=278.500, W=509.500, Z = -1.052, p-value= .293); category 1 and category 4 (U=423.00, W=654.00, Z = -1.059, p-value= .290); category 1 and category 5 (U=250.500, W=481.500, Z = -1.851, p-value = .064); category 2 and category 3 (U=4572.00, W=55293.00, Z = -.950, p-value = .342); category 2 and category 4 (U=7189.00, W=57910.00, Z = -.651, p-value = .515); category 3 and category 5 (U=447.500, W=975.500, Z = -1.242, p-value = .214); category 4 and category 5 (U=662.00, W=1838.00, Z = -1.453, p-value = .146); category 4 and category 6 (U=2028.00, W=7384.00, Z = -1.778, p-value = .075). The p-values of the above said categories are higher than the significance value of 0.05 and the Z scores did not exceed the critical value of z and hence the differences in employee development among these pairs of education categories are assumed as statistically non-significant. While the p-values of the category 3 and category 6 (U=1263.500, W=6619.500, Z= -1.994, p-value =.046); category 2 and category 6 (U=14221.00, W=19577.00, Z = -2.015, p-value = .044); category 2 and category 5 (U=4115.00, W=54836.00, Z = -2.296, p-value = .022); and category 5 and category 6 (U=1176.500, W=6532.500, Z = -2.867, p-value = .004) are lower than the significance value and hence the Z score is statistically significant at p-value less than 0.05 and the Z scores exceeded the critical values of z -1.96 and +1.96 which implies that the differences in employee development among these pairs of education categories are significant.

Thus the null hypothesis is rejected, which implies the employee development is significantly different among the categories of 2 (B Tech) and category 5 (M Sc); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 6 (Others); and category 5 (M Sc) and category 6 (Others) of the employees working in the IT sector.

6.5.3 Education and Total Life Space

The significant difference between the various educational categories in relation to the total life space is identified after formulating the null hypothesis considering the above objective. The hypothesis so formulated is stated as

H₀: There is no significant difference in Total life space among the different pairs of education category of the IT employees.

The hypothesis is tested applying the Mann-Whitney U test. The table 6.11 indicates the test statistics in relation to the various categories of education and total life space among the employees working in the IT sector.

Table 6.11 Education with regard to Total Life Space – Mann-Whitney U Test Statistics

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=3086.50 W=3317.5 Z= -.584 P value = .559	U=292.00 W=820.0 Z= -.806 P value = .420	U=384.500 W=1560.50 Z = -1.566 P value = .117	U=295.00 W=526.00 Z= -1.080 P value = .280	U=1053.50 W=6409.50 Z = -.187 P value = .851
Category 2 (B Tech)			U=4154.5 W=4682.50 0 Z= -1.722 P value = .085	U=5626.00 W=6802.00 Z = -2.952 P value = .003*	U=4840.0 W=55561.0 0 Z= -1.010 P value = .313	U=14784.5 W=20140.50 0 Z = -1.492 P value = .136
Category 3 (M Tech)				U=722.500 W=1898.50 Z = -.449 P value = .653	U=389.50 W=917.50 Z= -1.993 P value = .046*	U=1496.00 W=2024.0 Z = -.790 P value = .429
Category 4 (B Sc)					U=514.00 W=1690.0 Z= -2.854 P value = .004*	U=2010.00 W=3186.00 Z = -1.854 P value = .064
Category 5 (M Sc)						U=1405.00 W=6761.00 Z = -1.732 P value = .082
Category 6 (Others)						
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.						

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The table 6.11 reveals the test statistics of the education category 1 and category 6 (U=1053.500, W=6409.500, Z = -.187, p-value = .851); category 3 and category 4 (U=722.500, W=1898.500, Z = -.449, p-value = .653); category 1 and category 2 (U=3086.500, W=3317.500, Z = -.584, p-value = .559); category 1 and category 3 (U=292.00, W=820.00, Z = -.806, p-value = .420); category 1 and category 4 (U=384.500, W=1560.500, Z = -1.566, p-value = .117); category 1 and category 5 (U=295.00, W=526.00, Z = -1.080, p-value = .280); category 2 and category 3 (U=4154.500, W=4682.500, Z = -1.722, p-value = .085); category 2 and category 5 (U=4840.00, W=55561.00, Z = -1.010, p-value = .313); category 2 and category 6 (U=14784.500, W=20140.500, Z= -1.492, p-value = .136); category 3 and category 6 (U=1496.00, W=2024.00, Z = -.790, p-value = .429); category 4 and category 6 (U=2010.00, W=3186.00, Z = -1.854, p-value = .064); and category 5 and category 6 (U=1405.00, W=6761.00, Z = -1.732, p-value = .082). The Z scores of these categories are not significant since their p-values are higher than the significance value of 0.05 and Z scores did not exceed the critical values of the z and hence these pairs of education categories are assumed as statistically non-significant. While the p-values of the category 3 and category 5 (U=389.500, W=917.500, Z = -1.993, p-value = .046); category 4 and category 5 (U= 514.000, W= 1690.00, Z = -2.854, p-value = .004); and category 2 and category 4 (U=5626.00, W=6802.00, Z = -2.952, p-value = .003) are seen lower than 0.05 and hence the Z scores are assumed as statistically significant at p-values less than 0.05 and the Z scores exceeded the critical values of z (-1.96 and +1.96).

Thus the null hypothesis is rejected which means the total life space is significantly different among the category 2 (B Tech) and category 4 (B Sc); category 3 (M Tech) and category 5 (M Sc); and category 4 (B Sc) and category 5 (M Sc) of education among the IT employees.

6.6 Gender and Quality of Work Life

In order to verify the equality of the variables of quality of work life among the male and female employees and further to identify whether gender has an effect on the quality of work life of the employees, the null hypothesis is framed as below

H₀: There is no significant difference in the variables of quality of work life between the male and female IT sector employees.

The Mann-Whitney U test is applied to identify whether quality of work life variables differ significantly between the male and female employees working in the IT sector in Kerala.

Table 6.12 Gender and QWL – Mann-Whitney U Test Statistics

Variables of Quality of work life	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Adequate and Fair Compensation	33626.500	67037.500	-2.628	.009	Rejected
Working Environment	38255.500	83105.500	-.169	.866	Accepted
Organizational Communication	35693.500	80543.500	-1.547	.122	Accepted
Autonomy of Work	36808.500	70219.500	-.934	.350	Accepted
Employee Development	37369.000	70780.000	-.636	.525	Accepted
Fair Treatment	38502.500	83352.500	-.036	.971	Accepted
Total Life Space	37249.000	70660.000	-.702	.483	Accepted
Job Security	33713.000	78563.000	-2.63	.009	Rejected
Attitude of Management	37418.000	70829.000	-.614	.539	Accepted

Source: Primary Data

The table 6.12 indicates the test statistics of fair treatment (U= 38502.500, W= 83352.500, Z= -.036, p-value= 0.971), working environment (U= 38255.500, W= 83105.500, Z= -.169, p-value= 0.866), attitude of management (U= 37418.000, W= 70829.000, Z= -.614, p-value= 0.539), employee development (U= 37369.000, W= 70780.000, Z= -.636, p-value= 0.525), total life space (U= 37249.000, W= 70660.000, Z= -.702, p-value= 0.483), autonomy of work (U= 36808.500, W= 70219.500, Z= -.934, p-value= 0.350), and organizational communication (U= 35693.500, W= 80543.500, Z= -1.547, p-value= 0.122). The p-values of these variables are greater than 0.05 and Z score did not exceed the critical values of z -1.96 and +1.96 and hence variables like working environment, organizational communication, autonomy of work, employee development, fair treatment, total life space and attitude of management do not differ significantly among the male and female employees. While the test results of job security (U= 33713.000, W= 78563.000, Z= -2.631, p-value= 0.009) and adequate and fair

compensation (U= 33626.500, W= 67037.500, Z= -2.628, p-value= 0.009) are statistically significant since their Z scores are significant at 5% level or the p-values are less than 0.05 and the |Z| scores exceeded the critical values. Thus the null hypothesis is rejected at 5% significance level and it can be concluded that variables of quality of work life (adequate and fair compensation and job security) are significantly different between the male and female employees working in the IT sector.

6.7 Marital Status and Quality of Work Life

The equality of the quality of work life and its variables among the marital status of the employees is tested to understand whether work life quality is same among the married and unmarried employees. The hypothesis is framed accordingly and stated as

H₀: The quality of work life and its variables are not significantly different between the married and unmarried employees working in the IT sector.

The hypothesis is tested using the Mann-Whitney U test to identify whether married and unmarried employee's quality of work life is same among the IT sector.

Table 6.13 Marital Status and QWL – Mann-Whitney U Test Statistics

Variables of Quality of work life	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Adequate and Fair Compensation	31864.000	83224.000	-3.247	.001	Rejected
Working Environment	35809.500	87169.500	-1.141	.254	Accepted
Organizational Communication	34827.000	63030.000	-1.677	.094	Accepted
Autonomy of Work	34734.500	86094.500	-1.703	.089	Accepted
Employee Development	37566.000	65769.000	-.189	.850	Accepted
Fair Treatment	33842.500	62045.500	-2.185	.029	Rejected
Total Life Space	37361.000	88721.000	-.299	.765	Accepted
Job Security	37500.000	65703.000	-.229	.819	Accepted
Attitude of Management	37763.000	89123.000	-.084	.933	Accepted
Quality of Work Life	37712.00	89072.00	-.111	.912	Accepted

Source: Primary Data

The table 6.13 points out that quality of work life (U= 37712.00, W= 89072.00, Z= -.111, p-value= .912), attitude of management (U= 37763.00, W= 89123.00, Z= -.084, p-value= 0.933), employee development (U= 37577.00, W= 65769.00, Z= -.189, p-value= 0.850), job security (U= 37500.00, W= 65703.000, Z= -.229, p-value= 0.819), total life space (U= 37361.000, W= 88721.00, Z= -.299, p-value= 0.765), working environment (U= 35809.500, W=87169.500, Z= -1.141, p-value= 0.254), organizational communication (U= 34827.000, W=63030.000, Z= -1.677, p-value= 0.094), and autonomy of work (U= 34734.500, W= 86094.500, Z= -1.703, p-value= 0.089) are not statistically significant since their p-values tends to be greater than 0.05 and their Z scores did not exceed the critical values of z -1.96 and +1.96. The fair treatment (U= 33842.500, W= 62045.500, Z= -2.185, p-value= 0.029); and adequate and fair compensation (U= 31864.000, W= 83224.000, Z= -3.247, p-value= 0.001) are statistically significant since the Z scores are significant at p-value less than 0.05 and the |Z| scores exceeded the critical value of z. Hence the null hypothesis is rejected at 5% level of significance and can be concluded that variables of quality of work life (adequate and fair compensation and fair treatment) significantly differs between the married and unmarried employees working in the IT sector in Kerala.

This section is concluded by stating that the variables of quality of work life are significantly different among the various categories of age, education, work experience, monthly income, gender and marital status of the employees working in the IT sector in Kerala.

Section B

Section B is concerned with assessing whether the variables of employee satisfaction are same among the various categories of the demographic variables like age, work experience, education, monthly income, gender and marital status of the IT sector employees. The Kruskal Wallis H test is used to determine the relationship of variables like age, work experience, income and education with the employee satisfaction and the Mann-Whitney U test is then carried out to identify the significant differences among various groups of the demographic variables studied. The relationship of gender and marital status to the employee satisfaction is tested using the Mann-Whitney U test. The hypotheses framed in relation to the

demographic variables are tested and the results of the analysis are discussed as follows.

6.9 Age and Employee Satisfaction

To determine the equality of the employee satisfaction and its variables among the various age groups of the IT sector employees, the following hypothesis is formulated and stated as follows

H₀: The employee satisfaction and its variables are not significantly different among the various age groups of the employees working in the IT sector.

The Kruskal Wallis H test is applied to test the hypothesis. The test statistics of the age with the variables of employee satisfaction is explained as follows.

Table 6.14 Age and Employee Satisfaction – Kruskal Wallis H Test Statistics

Variables of Employee Satisfaction	H statistic	df	Asymp. Sig.	Null Hypothesis
Pay	11.125	4	.025	Rejected
Welfare Activities	2.304	4	.680	Accepted
Recognition and Appreciation	3.535	4	.473	Accepted
Adequate Training	3.995	4	.407	Accepted
Employee Satisfaction	4.075	4	.396	Accepted

Source: Primary Data

The table 6.14 reveals that the employee satisfaction (H= 4.075, df= 4, p-value= .396) and variables like adequate training (H= 3.995, df= 4, p-value= 0.407), recognition and appreciation (H= 3.535, df= 4, p-value= 0.473) and welfare activities (H= 2.304, df= 4, p-value= 0.680) are not statistically significant since their p-values are found higher than 0.05 while the p-value of the variable pay (H= 11.125, df= 4, p-value= 0.025) is less than 0.05 and is identified as significant. The null hypothesis is therefore rejected since the variable of employee satisfaction (Pay) significantly differs among the various age groups of the employees working in the IT sector.

6.9.1 Age and Pay

The Kruskal Wallis H test indicates that the variable pay differs among the various age groups of the employees. The hypothesis is framed accordingly and stated as follows

H₀: Pay is not significantly different among the different pairs of the age groups of the IT employees.

To identify the significant differences among the various age groups regarding pay, Mann-Whitney U test is used. The test statistics of the analysis is as follows.

Table 6.15 Age with regard to Pay – Mann-Whitney U Test Statistics

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U=22528.500 W=48179.500 Z = -2.838 P value= .005*	U= 6662.500 W=32313.500 Z = -2.493 P value= .013*	U=2180.00 W=27831.00 Z = -.265 P value= .791	U=285.500 W=25936.500 Z = -.473 P value= .636
Group 2 (26 – 30 yrs)			U= 8326.500 W= 36056.50 Z = -.381 P value = .703	U= 2007.00 W= 2217.00 Z = -1.093 P value= .274	U=346.500 W=28076.500 Z = -.051 P value= .959
Group 3 (31 – 35 yrs)				U= 571.00 W= 781.00 Z = -1.512 P value= .130	U=104.500 W=110.500 Z = -.135 P value= .892
Group 4 (36 – 40 yrs)					U= 26.500 W= 236.500 Z = -.330 P value= .741
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The table 6.15 indicates the test statistics of the various age groups. The age group 2 and group 5 (U=346.500, W=28076.500, Z = -.051, p-value= .959); group 3 and group 5 (U=104.500, W=110.500, Z = -.135, p-value= .892); group 1 and group 4 (U=2180.00, W=27831.00, Z = -.265, p-value= .791); group 4 and group 5 (U= 26.500, W= 236.500, Z = -.330, p-value= .741); group 2 and group 3 (U= 8326.500, W= 36056.500, Z = -.381, p-value = .703); group 1 and group 5 (U=285.500, W=25936.500, Z = -.473, p-value= .636); group 2 and group 4 (U= 2007.00, W= 2217.00, Z = -1.093, p-value= .274); and group 3 and group 4 (U= 571.00, W= 781.00, Z = -1.512, p-value= .130) indicated that they are not significant since their Z scores did not exceed the critical values of z and the p-values are higher than the significance value of 0.05. While the age group 1 and group 2 (U=22528.500, W=48179.500, Z = -2.838, p-value= .005); and group 1 and group 3 (U= 6662.500, W=32313.500, Z = -2.493, p-value=.013) are having the Z scores exceeding the critical values of z and the p-values are lower than the significance value and thus the Z score is statistically significant at p-value less than 0.05.

Thus, the null hypothesis is rejected thereby interpreting that the pay is significantly different among the age group 1 (25yrs and Below) and age group 2 (26 – 30 yrs); and age group 1 (25yrs and Below) and age group 3 (31 – 35 yrs) of the IT sector employees.

6.10 Work Experience and Employee Satisfaction

The equality of the employee satisfaction and its variables among the various categories of work experience is analyzed using the Kruskal Wallis H test. The hypothesis formulated with regard to this objective is stated as

H₀: There is no significant difference in the employee satisfaction and its variables among the various categories of work experience of the IT sector employees.

The Kruskal Wallis H test is used to test the hypothesis with regard to work experience of the employees. The result of the analysis is provided in the table 6.16.

Table 6.16 Work Experience and Employee Satisfaction – Kruskal Wallis H Test Statistics

Variables of Employee Satisfaction	H statistic	df	Asymp. Sig.	Null Hypothesis
Pay	2.222	4	.695	Accepted
Welfare Activities	.459	4	.977	Accepted
Recognition and Appreciation	3.275	4	.513	Accepted
Adequate Training	7.272	4	.122	Accepted
Employee Satisfaction	3.837	4	.428	Accepted

Source: Primary Data

The table 6.16 indicates that the p-values of the employee satisfaction (H= 3.837, df= 4, p-value= .428) and the variables adequate training (H= 7.272, df= 4, p-value= 0.122), recognition and appreciation (H= 3.275, df= 4, p-value= 0.513), pay (H= 2.222, df= 4, p-value= 0.695) and welfare activities (H= .459, df= 4, p-value= 0.977) are greater than the value 0.05. Hence the null hypothesis is accepted which means that the employee satisfaction and its variables are not significantly different among the various categories of work experience among the IT sector employees.

6.11 Monthly Income and Employee Satisfaction

The Kruskal Wallis H test is used to determine the equality of the employee satisfaction and its variables among the various groups of monthly income. The null hypothesis framed accordingly is stated as

H₀: The employee satisfaction and its variables are not significantly different among the various monthly income groups of the IT employees in Kerala.

The result of the analysis is given in the table 6.17 with regard to monthly income and employee satisfaction.

Table 6.17 Monthly Income and Employee Satisfaction – Kruskal Wallis H Test Statistics

Variables of Employee Satisfaction	H Statistic	df	Asymp. Sig.	Null Hypothesis
Pay	6.300	4	.178	Accepted
Welfare Activities	4.060	4	.398	Accepted
Recognition and Appreciation	5.051	4	.282	Accepted
Adequate Training	11.570	4	.021	Rejected
Employee Satisfaction	7.107	4	.130	Accepted

Source: Primary Data

The table 6.17 shows that the employee satisfaction (H= 7.107, df= 4, p-value= .130) and its variables like pay (H= 6.300, df= 4, p-value= 0.178), recognition and appreciation (H= 5.051, df= 4, p-value= 0.282) and welfare activities (H= 4.060, df= 4, p-value= 0.398) are having p-values greater than 0.05 while adequate training (H= 11.570, df= 4, p-value= 0.021) is having p-value less than 0.05 and hence the null hypothesis (with regard to adequate training) is rejected. Thus it can be assumed that the variables of employee satisfaction (adequate training) are significantly different among the various groups of monthly income of the employees working in the IT sector.

6.11.1 Monthly Income and Adequate Training

To identify significant differences among various groups of monthly income with regard to adequate training, null hypothesis is framed to fulfill the objective. The hypothesis is stated as

H₀: There is no significant difference in adequate training among the different pairs of the income groups of the IT employees.

The Mann-Whitney U test is applied for pair wise comparison among the income groups and for testing the hypothesis. The test statistics are given in the table 6.18.

Table 6.18 Monthly Income with regard to Adequate Training – Mann-Whitney U Test Statistics

Monthly Income	Group 1 (Below Rs 20,000)	Group 2 (Rs 20000-30000)	Group 3 (Rs 30000-40000)	Group 4 (Rs 40000-50000)	Group 5 (Rs 50000 and Above)
Group 1 (Below Rs 20,000)		U=14142.000 W=21523.00 Z = -.784 P value=.433	U= 5932.000 W=13313.00 Z = -2.578 P value=.010*	U= 1979.000 W= 9360.000 Z = -1.956 P value=.050	U= 1577.00 W= 1983.0 Z = -.575 P value=.565
Group 2 (Rs 20000-30000)			U= 12816.50 W=43197.500 Z = -2.187 P value=.029*	U= 4258.500 W=34639.500 Z = -1.612 P value=.107	U= 3029.50 W=3435.50 Z = -1.056 P value=.291
Group 3 (Rs 30000-40000)				U= 2439.500 W= 9820.500 Z = -.160 P value=.873	U= 1222.00 W= 1628.0 Z = -2.327 P value=.020*
Group 4 (Rs 40000-50000)					U= 400.500 W= 806.50 Z = -2.151 P value=.032*
Group 5 (Rs 50000 and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The table 6.18 exhibits that the test statistics of monthly income group 3 and group 4 (U= 2439.500, W= 9820.500, Z = -.160, p-value= .873); group 1 and group 5 (U= 1577.000, W= 1983.000, Z = -.575, p-value= .565); group 1 and group 2 (U=14142.000, W=21523.000, Z = -.784, p-value= .433); group 2 and group 5 (U= 3029.500, W= 3435.500, Z = -1.056, p-value= .291); group 1 and group 4 (U= 1979.000, W= 9360.000, Z = -1.956, p-value= .050); and group 2 and group 4 (U= 4258.500, W=34639.500, Z = -1.612, p-value= .107) are having p-values higher than the significance value and their Z scores are not exceeding the critical values of z -1.96 and +1.96 and hence the differences in adequate training among these pairs of income groups are assumed as statistically non-significant. On the other hand, the group 4 and group 5 (U= 400.500, W= 806.500, Z = -2.151, p-value=.032); group 2 and group 3 (U= 12816.500, W=43197.500, Z = -2.187, p-value=.029); group 3 and group 5 (U= 1222.000, W= 1628.000, Z= -2.327, p-value=.020); and group 1 and group 3 (U= 5932.000, W=13313.000, Z=-2.578, p-value=.010); are having the acceptable p-values and the Z scores of these groups are statistically significant at p-value less than 0.05 and the |Z| scores exceeded the critical values of z which implies that the differences in adequate training among these pairs of income groups are significant.

Thus, the null hypothesis is rejected and it is evident that adequate training significantly differs between the monthly income groups 1 (Below Rs 20,000) and group 3 (Rs 30000- 40000); group 2 (Rs 20000-30000) and group 3 (Rs 30000-40000); group 3 (Rs 30000- 40000) and group 5 (Rs 50000 and Above); and group 4 (Rs 40000- 50000) and group 5 (Rs 50000 and Above) of the employees working in the IT sector.

6.12 Education and Employee Satisfaction

The Kruskal Wallis H test is used to identify the whether the employee satisfaction and its variables are same among the various categories of education of the employees working in the IT sector. The null hypothesis is formulated considering the above objective and is stated as

H₀: There is no significant difference in the employee satisfaction and its variables among the various categories of education of the employees working in the IT sector in Kerala.

The hypothesis is then tested using the Kruskal Wallis H test. The test statistics is shown in the table 6.19 with regard to education and employee satisfaction.

Table 6.19 Education and Employee Satisfaction – Kruskal Wallis H Test Statistics

Variables of Employee Satisfaction	H statistic	df	Asymp. Sig.	Null Hypothesis
Pay	6.640	5	.249	Accepted
Welfare Activities	17.491	5	.004	Rejected
Recognition and Appreciation	9.969	5	.076	Accepted
Adequate Training	11.897	5	.036	Rejected
Employee Satisfaction	23.209	5	.000	Rejected

Source: Primary Data

The p-values of the variables like recognition and appreciation (H= 9.969, df= 5, p-value= 0.076) and pay (H= 6.640, df= 5, p-value= 0.249) are not significant since these values tends to be higher than 0.05. The p-values of the employee satisfaction (H= 23.209, df= 5, p-value < 0.001), welfare activities (H= 17.491, df= 5, p-value= 0.004) and adequate training (H= 11.897, df= 5, p-value= 0.036) are statistically significant since these values are lower than the significance value (0.05). Hence the null hypothesis is rejected at 5% level of significance thereby concluding that there is significant difference in the employee satisfaction and its variables among the various categories of education of the employees working in the IT sector.

6.12.1 Education and Employee Satisfaction

The significant differences among the various categories of education with regard to employee satisfaction are identified using the Mann-Whitney U test. The null hypothesis formulated with regard to this objective is stated as

H₀: There is no significant difference in employee satisfaction among the different pairs of the education categories of the IT employees.

The test statistics of the Mann-Whitney U test with regard to employee satisfaction and different pairs of education categories are detailed in the table 6.20.

The table 6.20 indicates that the p-values of education category 2 and category 6 (U= 14717.50, W= 20073.50, Z= -1.591, p-value= .112); category 2 and category 5 (U=4881.500, W=55921.50, Z = -.958, p-value= .338); category 1 and category 2 (U= 2975.00, W= 54015.00, Z= -.859, p-value= .390); category 5 and category 6 (U= 1409.500, W= 6765.500, Z = -1.703, p-value= .089); category 1 and category 6 (U= 853.000, W=6209.000, Z = -1.524, p-value= .128); category 4 and category 5 (U= 710.000, W= 1305.00, Z= -.999, p-value= .318); category 3 and category 4 (U= 689.000, W= 1865.00, Z= -.777, p-value= .437); category 1 and category 4 (U= 459.000, W= 690.000, Z = -.587, p-value = .557); category 1 and category 5 (U= 346.500, W= 941.500, Z= -.182, p-value=.856); and category 1 and category 3 (U= 262.000,W= 493.000, Z= -1.350, p-value= .177) are higher than the significance value (0.05) and the Z scores did not exceed the critical values of z -1.96 and +1.96. Hence the differences in employee satisfaction among these pair wise categories of education are assumed as statistically non-significant. While the category 2 and category 4 (U= 6094.500, W= 57134.50, Z= -2.281, p-value=.023); category 2 and category 3 (U= 3074.000, W= 54114.0, Z= -3.714, p-value < .001); category 4 and category 6 (U= 1781.500, W= 7137.500, Z= -2.761, p-value=.006); category 3 and category 6 (U= 869.500, W= 6225.500, Z = -4.032, p-value < .001); and category 3 and category 5 (U= 386.000, W= 981.000, Z = -2.032, p-value= .042) are statistically significant since their p-values are less than 0.05 and the Z scores exceeded the critical values of z which implies that the differences in employee satisfaction among these pairs of education categories are significant.

**Table 6.20 Education with regard to Employee Satisfaction – Mann-Whitney
U Test Statistics**

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=2975.0 W=54015 Z = -.859 P value= .390	U=262.00 W=493.00 Z = -1.350 P value = .177	U=459.000 W=690.00 Z = -.587 P value = .557	U=346.50 W=941.50 Z = -.182 P value= .856	U=853.00 W=6209.0 Z = -1.524 P value= .128
Category 2 (B Tech)			U=3074.0 0 W=54114. 00 Z = -3.714 P value < .001*	U=6094.50 0 W=57134.5 00 Z = -2.281 P value= .023*	U=4881.50 0 W=55921. 500 Z = -.958 P value= .338	U=14717.5 00 W=20073.5 00 Z = -1.591 P value= .112
Category 3 (M Tech)				U=689.000 W=1865.00 Z = -.777 P value= .437	U=386.00 W=981.00 Z = -2.032 P value= .042*	U=869.500 W=6225.50 Z = -4.032 P value < .001*
Category 4 (B Sc)					U=710.00 W=1305.0 Z = -.999 P value= .318	U=1781.50 W=7137.50 Z = -2.761 P value= .006*
Category 5 (M Sc)						U=1409.50 W=6765.50 Z = -1.703 P value= .089
Category 6 (Others)						

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is thereby rejected which implies that the employee satisfaction significantly differs among the education category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 4 (B Sc); category 3 (M

Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the IT sector employees.

6.12.2 Education and Welfare Activities

The significant differences of welfare activities among the various categories of education is recognized by framing the null hypothesis as stated below

H₀: Welfare activities do not differ significantly among the different pairs of the education categories of the IT employees.

The Mann-Whitney U test is applied to test the hypothesis with regard to education and welfare activities. The test statistics are shown in the table 6.21.

It is evident from the table 6.21 that the p-values and Z scores of the education category 5 and category 6 (U=1711.500, W=7067.500, Z = -.198, p-value= .843); category 2 and category 6 (U=15988.500, W=66709.500, Z = -.363, p-value=.716); category 1 and category 5 (U=335.000, W=930.000, Z = -.384, p-value=.701); category 3 and category 4 (U= 706.000, W= 1882.00, Z = -.612, p-value= .541); category 2 and category 5 (U=5054.000, W=55775.00, Z = -.627, p-value=.531); category 1 and category 4 (U=451.500, W=682.500, Z = -.688, p-value = .492); category 1 and category 6 (U=961.000, W=6317.000, Z = -.805, p-value= .421); category 1 and category 2 (U=2912.00, W=53633.000, Z = -.985, p-value= .324); category 1 and category 3 (U= 252.500, W= 483.500, Z = -1.529, p-value =.126); and category 4 and category 5 (U=653.500, W=1248.500, Z = -1.535, p-value= .125) are less than the acceptable limits and hence they are assumed as statistically non-significant. While the education category 3 and category 5 (U=386.500, W=981.500, Z = -2.035, p-value= .042); category 4 and category 6 (U=1949.000, W=7305.000, Z = -2.096, p-value= .036); category 2 and category 4 (U=5813.000, W=56534.00, Z = -2.672, p-value= .008); category 3 and category 6 (U=1101.000, W=6457.000, Z = -2.840, p-value=.005); and category 2 and category 3 (U=3248.000, W=54288.00, Z = -3.405, p-value= .001) are statistically significant since their Z scores are significant at p-value lower than 0.05 and the |Z| scores exceeded the critical values of z.

Table 6.21 Education with regard to Welfare Activities – Mann-Whitney U Test Statistics

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=2912.0 W=53633. Z = -.985 P value= .324	U=252.50 W=483.50 Z = -1.529 P value = .126	U=451.500 W=682.50 Z = -.688 P value = .492	U=335.00 W=930.00 Z = -.384 P value= .701	U=961.00 W=6317.0 Z = -.805 P value= .421
Category 2 (B Tech)			U=3248.0 W=54288. 00 Z = -3.405 P value= .001*	U=5813.00 W=56534. 00 Z = -2.672 P value= .008*	U=5054.0 W=55775. 00 Z = -.627 P value= .531	U=15988.5 W=66709.5 00 Z = -.363 P value= .716
Category 3 (M Tech)				U=706.000 W=1882.00 Z = -.612 P value= .541	U=386.500 W=981.50 Z = -2.035 P value= .042*	U=1101.00 W=6457.00 Z = -2.840 P value= .005*
Category 4 (B Sc)					U=653.50 W=1248.5 Z = -1.535 P value= .125	U=1949.00 W=7305.00 Z = -2.096 P value= .036*
Category 5 (M Sc)						U=1711.50 W=7067.50 Z = -.198 P value= .843
Category 6 (Others)						

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

Thus the null hypothesis is rejected and it can be concluded that welfare activities significantly differs among the educational category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 4 (B Sc); category 3 (M Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and

category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector.

6.12.3 Education and Adequate Training

The significant differences among the various categories of education with regard to adequate training are determined using the null hypothesis. The hypothesis framed in accordance with the above objective is stated as

H₀: There is no significant difference in adequate training among the different pairs of education categories of the IT employees.

The hypothesis framed is then tested using the Mann-Whitney U test for pair wise comparison among the various categories of education. The results of the analysis are demonstrated in the table 6.22 regarding the categories of education and adequate training.

The table 6.22 reveals the test statistics of educational category 2 and category 5 (U=5392.500, W=5987.500, Z = -.024, p-value= .981); category 3 and category 4 (U=742.500, W=1918.500, Z = -.252, p-value= .801); category 1 and category 6 (U=1031.000, W=6387.000, Z = -.342, p-value= .732); category 1 and category 5 (U=327.500, W=558.500, Z = -.519, p-value= .604); category 1 and category 2 (U=3044.500, W=3275.500, Z = -.685, p-value= .493); category 1 and category 3 (U=232.000, W=463.000, Z = -1.916, p-value= .055); category 1 and category 4 (U=388.000, W=619.000, Z = -1.529, p-value= .126); category 2 and category 3 (U=4084.00, W=54805.00, Z = -1.861, p-value= .063); category 2 and category 4 (U=6551.000, W=57272.00, Z = -1.599, p-value= .110); category 2 and category 6 (U=14348.00, W=19704.00, Z = -1.913, p-value= .056); category 3 and category 5 (U= 439.500, W=1034.500, Z = -1.359, p-value= .174); category 4 and category 5 (U= 703.500, W=1298.500, Z = -1.069, p-value= .285); category 5 and category 6 (U=1526.000, W=6882.000, Z = -1.140, p-value= .254). The Z scores of the above categories of education did not exceed the critical values of z – 1.96 and + 1.96 and the p-values tend to be higher than the significant value of 0.05 and hence the differences among these pairs of education categories are assumed as non-significant. The Z scores and the p-values of the category 4 and category 6 (U=1853.500, W=7209.500, Z = -2.501, p-value= .012); and category 3 and

category 6 (U=1120.000, W=6476.000, Z = -2.770, p-value= .006) are satisfying the significance norms (exceeded the critical values of z and the p-value less than 0.05) and hence the |Z| scores of these pairs of education categories are assumed as statistically significant.

Table 6.22 Education with regard to Training – Mann-Whitney U Test Statistics

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=3044.50 W=3275.50 Z = -.685 P value=.493	U=232.00 W=463.00 Z= -1.916 P value=.055	U=388.00 W=619.00 Z = -1.529 P value=.126	U=327.500 W=558.500 Z = -.519 P value=.604	U=1031.00 W=6387.00 Z = -.342 P value=.732
Category 2 (B Tech)			U=4084.0 W=54805.0 Z= -1.861 P value=.063	U=6551.0 W=57272.0 Z = -1.599 P value=.110	U=5392.50 W=5987.50 Z = -.024 P value=.981	U=14348.0 W=19704.0 Z = -1.913 P value=.056
Category 3 (M Tech)				U=742.500 W=1918.5 Z = -.252 P value=.801	U=439.500 W=1034.5 Z = -1.359 P value=.174	U=1120.00 W=6476.0 Z = -2.770 P value=.006*
Category 4 (B Sc)					U=703.500 W=1298.5 Z = -1.069 P value=.285	U=1853.50 W=7209.50 Z = -2.501 P value=.012*
Category 5 (M Sc)						U=1526.00 W=6882.0 Z = -1.140 P value=.254
Category 6 (Others)						

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

Thus, the null hypothesis is rejected thereby assuming that the adequate training is significantly different among the educational category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector.

6.13 Gender and Employee Satisfaction

To recognize the relationship between the gender and employee satisfaction and to further identify the significant differences among the male and female employees with regard to the variables of employee satisfaction, the null hypothesis is formulated. The null hypothesis framed in accordance with the above objective is stated as under

H₀: The variables of employee satisfaction are not significantly different between the male and female employees working in the IT sector in Kerala.

The hypothesis is then tested using the Mann-Whitney U test to compare the male and female employees to recognize the significant differences among the variables of employee satisfaction. The test statistics of the Mann-Whitney U test is described in the table 6.23 regarding the gender and employee satisfaction.

Table 6.23 Gender and Employee Satisfaction – Mann-Whitney U Test Statistics

Variables of Employee Satisfaction	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Pay	36227.500	69638.500	-1.248	.212	Accepted
Welfare Activities	33558.000	78408.000	-2.656	.008	Rejected
Recognition and Appreciation	38358.500	83208.500	-.113	.910	Accepted
Adequate Training	35973.000	80823.000	-1.387	.165	Accepted

Source: Primary Data

The variables of employee satisfaction like recognition and appreciation (U= 38358.500, W= 83208.500, Z= -.113, p-value= 0.910); pay (U= 36227.500, W= 69638.500, Z= -1.248, p-value= 0.212); and adequate training (U= 35973.000,

W= 80823.000, Z= -1.387, p-value= 0.165) are statistically not significant since their p-values are greater than 0.05 and the Z scores did not exceed the critical values of z -1.96 and +1.96. The variable welfare activities (U= 33558.000, W= 78408.000, Z = -2.656, p-value= 0.008) is found to be statistically significant since the Z score is significant at p-value less than 0.05 and the Z score exceeded the critical values of z. Hence the null hypothesis is rejected at 5% level of significance thereby concluding that the variables of employee satisfaction (welfare activities) significantly differ between the male and female employees working in the IT sector.

6.14 Marital Status and Employee Satisfaction

The relationship between marital status and employee satisfaction is determined and analyzed whether the variables of employee satisfaction is same between the married and unmarried employees. The null hypothesis framed with regard to the above objective is described below

H₀: There is no significant difference in the employee satisfaction and its variables between the married and unmarried employees working in the IT sector in Kerala.

The above hypothesis is verified using the Mann-Whitney U test in relation to the marital status and employee satisfaction. The results of the analysis are described in the table 6.24 as follows.

Table 6.24 Marital Status and Employee Satisfaction – Mann-Whitney U Test Statistics

Variables of Employee Satisfaction	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Pay	33983.000	85343.000	-2.115	.034	Rejected
Welfare Activities	34510.000	85870.000	-1.822	.068	Accepted
Recognition and Appreciation	35606.000	86966.000	-1.245	.213	Accepted
Adequate Training	34939.500	86299.500	-1.605	.109	Accepted
Employee Satisfaction	33396.500	84756.500	-2.411	.016	Rejected

Source: Primary Data

The table 6.24 exhibits that the variables of the employee satisfaction like recognition and appreciation (U= 35606.000, W= 86966.000, Z= -1.245, p-value= 0.213); adequate training (U = 34939.500, W = 86299.500, Z = -1.605, p-value= 0.109); and welfare activities (U= 34510.000, W= 85870.000, Z= -1.822, p-value= 0.068) are not statistically significant since their p-values tend to be greater than the value 0.05 and the Z scores did not exceed the critical values of z. Meanwhile the p-values of employee satisfaction (U= 33396.500, W= 84756.500, Z= -2.411, p-value= .016) and pay (U= 33983.000, W= 85343.000, Z= -2.115, p-value= 0.034) are less than 0.05 and hence it is assumed as statistically significant since the Z scores are significant at 5% level and it exceeded the critical values of z -1.96 and +1.96. Thus it can be interpreted that the employee satisfaction and its variable (pay) is significantly different between the married and unmarried employees working in the IT sector in Kerala.

This section is concluded by estimating that the variables of employee satisfaction differ significantly among the various categories of age, education, monthly income, gender and marital status of the employees while no significant difference is found in the employee satisfaction with regard to the work experience category of the employees working in the IT sector in Kerala.

Section C

Section C exhibits the relationship of demographic variables like age, monthly income, work experience, education, gender and marital status; with the Employee turnover of the IT sector employees in Kerala. The Kruskal Wallis H test is used to recognize the equality of the variables of employee turnover among the demographic variables. The significant differences among the various categories of the variables studied in relation to the employee turnover are identified using the Mann-Whitney U test. It enabled pair wise comparisons between the various groups of the variables studied. The hypotheses relating to the above objectives are framed accordingly and tested to derive conclusions and the results of the analysis are provided below.

6.15 Age and Employee Turnover

The equality of the employee turnover and its variables between the different age groups is determined using the Kruskal Wallis H test. The null hypothesis is formulated to verify the significant relationship between various groups of age and employee turnover among the IT sector employees. The hypothesis thus framed is stated as below

H₀: There is no significant difference in the employee turnover and its variables among the various age groups of the IT sector employees in Kerala.

The hypothesis is then tested using the Kruskal Wallis H test. The test statistics relating to the employee turnover and various age groups of the employees are shown in the table 6.25 as follows.

Table 6.25 Age and Employee Turnover – Kruskal Wallis H Test Statistics

Variables of Employee Turnover	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Work Stress	6.697	4	.153	Accepted
Work life Imbalance	6.288	4	.179	Accepted
Health Problems	11.863	4	.018	Rejected
Economic Conditions	15.333	4	.004	Rejected
Workplace Relations	10.628	4	.031	Rejected
Employee Turnover	12.259	4	.016	Rejected

Source: Primary Data

The table 6.25 reveals that the p-values of the variables like work stress (H= 6.697, df= 4, p-value= 0.153) and work life imbalance (H= 6.288, df= 4, p-value= 0.179) are greater than the significance value of 0.05 and hence they are assumed as not significant. The p-values of the employee turnover (H= 12.259, df= 4, p-value= .016) and the variables like economic conditions (H= 15.333, df= 4, p-value= 0.004), health problems (H= 11.863, df= 4, p-value= 0.018) and workplace relations (H= 10.628, df= 4, p-value= 0.031) tend to be lower than the value 0.05 and hence they are considered as statistically significant. The null

hypothesis is therefore rejected and it can be concluded that the employee turnover and its variables (health problems, economic conditions and workplace relations) are significantly different among the various age groups of the employees working in the IT sector.

6.15.1 Age and Employee Turnover

The Mann-Whitney U test is applied to identify the significant differences among the various age groups of the employees working in the IT sector. The null hypothesis framed with regard to this objective is stated as follows

H₀: There is no significant difference in the employee turnover among the different pairs of the age groups of the IT employees.

The Mann-Whitney U test is used to test this hypothesis. The test statistic of the analysis is exhibited in the table 6.26.

The table 6.26 indicates that the p-values of the age group 2 and group 3 (U= 8339.500, W= 36069.500, Z= -.358, p-value= .720); group 1 and group 3 (U=7190.000, W=32841.00, Z = -1.649, p-value= .099); group 1 and group 4 (U= 2028.500, W= 2238.500, Z = -.759, p-value= .448); group 2 and group 4 (U= 1793.00, W= 2003.00, Z = -1.759, p-value= .079); and group 3 and group 4 (U= 542.500, W= 752.500, Z = -1.753, p-value = .080) are greater than the significance value (0.05) and their Z scores did not exceed the critical values of -1.96 and +1.96 and hence the differences among these pairs of age groups are assumed as statistically non-significant. While the age group 1 and group 2 (U= 23738.500, W= 49389.500, Z= -1.970, p-value= .049); group 1 and group 5 (U= 101.00, W= 107.00, Z= -2.088, p-value=.037); group 2 and group 5 (U= 63.500, W= 69.500, Z= -2.439, p-value= .015); group 3 and group 5 (U= 18.00, W= 24.00, Z= -2.441, p-value= .015); and group 4 and group 5 (U= 8.000, W= 14.000, Z= -2.008, p-value= .045) have p-values less than 0.05 and the Z scores exceeded the critical values of z and hence these pairs of age groups are assumed as statistically significant at p-value less than 0.05 which means the differences among these age groups are significant.

**Table 6.26 Age Groups with regard to Employee Turnover – Mann-Whitney
U Test Statistics**

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U=23738.500 W=49389.500 Z = -1.970 P value= .049*	U=7190.00 W=32841.0 Z = -1.649 P value= .099	U=2028.500 W=2238.50 Z = -.759 P value= .448	U = 101.00 W = 107.00 Z = -2.088 P value= .037*
Group 2 (26 – 30 yrs)			U=8339.500 W=36069.50 Z = -.358 P value= .720	U= 1793.00 W= 2003.00 Z = -1.759 P value= .079	U= 63.500 W= 69.500 Z = -2.439 P value= .015*
Group 3 (31 – 35 yrs)				U= 542.500 W= 752.500 Z = -1.753 P value = .080	U= 18.000 W= 24.000 Z = -2.441 P value= .015*
Group 4 (36 – 40 yrs)					U= 8.000 W= 14.000 Z = -2.008 P value= .045*
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is therefore, rejected and concludes that the employee turnover significantly differs among the age group 1 (25yrs and Below) and group 2 (26 – 30 yrs); group 1 (25yrs and Below) and group 5 (Above 40 yrs); group 2 (26 – 30

yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.

6.15.2 Age and Health Problems

The Kruskal Wallis H test statistics reveals that health problems differed among the various age groups of the employees. In order to identify the significant differences among age groups with regard to the health problems, Mann-Whitney U test is used to compare the age groups pair wise. The null hypothesis framed accordingly is stated as below

H₀: Health problems remain the same among the different pairs of the age groups of the IT employees.

The test statistics of the Mann-Whitney U test applied to test the hypothesis is described in the table 6.27 relating to the health problems and age groups.

The table 6.27 indicates the results of the Mann-Whitney U test. The test statistics of age group 2 and group 4 (U= 2319.00, W= 30049.00, Z = -.098, p-value= .922); group 3 and group 4 (U= 704.500, W= 3405.500, Z = -.240, p-value = .811); group 2 and group 3 (U= 8387.00, W= 11088.00, Z = -.288, p-value= .773); group 1 and group 2 (U= 1965.500, W=27616.500, Z = -.973, p-value= .331); and group 1 and group 3 (U= 7427.000, W= 33078.00, Z = -1.289, p-value= .197) reveals that the Z scores of the above categories did not exceed the critical value of z – 1.96 and + 1.96; and the p-values are greater than the significance value of 0.05 and hence assumes that these groups are statistically non-significant. On the other hand, the age group 1 and group 4 (U= 23241.500, W= 48892.500, Z= -2.333, p-value= .020); group 1 and group 5 (U = 73.00, W = 79.00, Z = -2.353, p-value = .019); group 4 and group 5 (U= 5.500, W= 11.500, Z = -2.253, p-value= .018); group 2 and group 5 (U= 58.00, W= 64.00, Z = -2.500, p-value= .012); and group 3 and group 5 (U= 18.000, W= 24.000, Z = -2.454, p-value= .008) shows that the p-values are lower than the significance value and the |Z| score exceeded the critical values of z and hence assumes that the Z scores of these groups are statistically significant at p-value less than 0.05.

Table 6.27 Age Groups with regard to Health Problems – Mann-Whitney U Test Statistics

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U= 1965.500 W=27616.500 Z = -.973 P value= .331	U=7427.00 W=33078.0 Z = -1.289 P value= .197	U=23241.500 W=48892.500 Z = -2.333 P value= .020*	U = 73.00 W = 79.00 Z = -2.353 P value= .019*
Group 2 (26 – 30 yrs)			U= 8387.0 W=11088.0 Z = -.288 P value= .773	U= 2319.00 W= 30049.00 Z = -.098 P value= .922	U= 58.000 W= 64.000 Z = -2.500 P value= .012*
Group 3 (31 – 35 yrs)				U= 704.500 W= 3405.500 Z = -.240 P value = .811	U= 18.000 W= 24.000 Z = -2.454 P value= .008*
Group 4 (36 – 40 yrs)					U= 5.500 W= 11.500 Z = -2.253 P value= .018*
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is thus rejected and concludes that health problems are significantly different among the age group 1 (25yrs and Below) and group 4 (36 –

40 yrs); group 1 (25yrs and Below) and group 5 (Above 40 yrs); group 2 (26 – 30 yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.

6.15.3 Age and Economic Conditions

The significant differences among various age groups in relation to economic conditions are identified using the Mann-Whitney U test which compared the age groups pair wise. The null hypothesis framed to achieve the above objective is stated as

H₀: Economic conditions do not differ significantly among the different pairs of the age groups of the IT employees.

The results of the Mann-Whitney U test are given in the table 6.28 regarding age groups and economic conditions.

The test statistics point out that the age group 2 and group 3 (U= 8489.500, W=11190.500, Z = -.134, p-value= .894); group 1 and group 3 (U= 7659.000, W=33310.00, Z = -.929, p-value= .353); group 1 and group 2 (U=24420.000, W= 50071.00, Z = -1.508, p-value= .132); and group 1 and group 4 (U= 1700.000, W= 1910.000, Z = -1.855, p-value= .064) are having the p-values greater than the significance value of 0.05 and the Z scores are not exceeding the critical values of z –1.96 and +1.96 and hence the differences in economic conditions among these pairs of age groups are assumed as statistically non-significant. On the other hand, age group 3 and group 4 (U= 499.500, W= 709.500, Z = -2.176, p-value=.030); group 4 and group 5 (U= 6.500, W= 12.500, Z = -2.171, p-value=.030); group 2 and group 4 (U= 1569.500, W= 1779.500, Z = -2.490, p-value=.013); group 1 and group 5 (U= 35.000, W= 41.000, Z= -2.695, p-value=.009); group 2 and group 5 (U= 15.000, W= 21.000, Z= -2.877, p-value=.004); and group 3 and group 5 (U= 5.000, W= 11.000, Z = -2.815, p-value=.005) are having the |Z| score higher than the critical values of z and hence assumed as statistically significant at p-value less than 0.05 which implies that differences in economic conditions among these pairs of age groups are significant.

**Table 6.28 Age Groups with regard to Economic Conditions – Mann-Whitney
U Test Statistics**

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U=24420.000 W= 50071.00 Z = -1.508 P value= .132	U= 7659.000 W=33310.00 Z = -.929 P value= .353	U=1700.000 W=1910.000 Z = -1.855 P value= .064	U= 35.000 W= 41.000 Z = -2.695 P value= .009*
Group 2 (26 – 30 yrs)			U= 8489.500 W=11190.500 Z = -.134 P value= .894	U=1569.500 W=1779.500 Z = -2.490 P value= .013*	U= 15.000 W= 21.000 Z = -2.877 P value= .004*
Group 3 (31 – 35 yrs)				U= 499.500 W= 709.500 Z = -2.176 P value= .030*	U= 5.000 W= 11.000 Z = -2.815 P value= .005*
Group 4 (36 – 40 yrs)					U= 6.500 W= 12.500 Z = -2.171 P value= .030*
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is thus rejected which means economic conditions differ significantly between the age group 1 (25yrs and Below) and group 5 (Above 40 yrs)

40 yrs); group 2 (26 – 30 yrs) and group 4 (36 – 40 yrs); group 2 (26 – 30 yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 4 (36 – 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.

6.15.4 Age and Workplace Relations

The Kruskal Wallis H test points out that the workplace relations varied among the age groups of the employees. In order to further identify the significant differences among the age groups regarding the workplace relations Mann-Whitney U test is used. The null hypothesis formulated to achieve this objective is framed as below

H₀: There is no significant difference in the workplace relations among the different pairs of the age groups of the IT employees.

The Mann-Whitney U test is used to test the hypothesis and to enable pair wise comparison among the various age groups of the employees regarding the workplace relations. The test statistics of the Mann-Whitney U test is described in the table 6.29.

The table 6.29 exhibits the test statistics of age group 4 and group 5 (U= 30.000, W= 36.000, Z = .001, p-value= 1.00); group 2 and group 3 (U=8422.500, W=11123.500, Z = -.235, p-value= .814); group 1 and group 5 (U= 244.000, W= 250.000, Z = -.838, p-value= .402); group 1 and group 3 (U=7587.500, W=33238.50, Z = -1.036, p-value=.300); group 3 and group 5 (U= 67.500, W= 73.500, Z = -1.127, p-value= .260); group 2 and group 5 (U= 199.000, W= 205.000, Z = -1.304, p-value= .192); group 1 and group 2 (U=23959.000, W=49610.000, Z = -1.826, p-value= .068); and group 1 and group 4 (U=1680.500, W=1890.500, Z = -1.910, p-value= .056). The p-values of the above discussed groups are higher than the significance value of 0.05 and the Z scores are not exceeding the critical values of z -1.96 and +1.96 and hence these pairs of age groups are assumed as statistically non-significant. While the p-values of age group 3 and group 4 (U= 480.000, W= 690.000, Z = -2.351, p-value= .019) and group 2 and group 4 (U= 1476.000, W= 1686.000, Z = -2.776, p-value=.005); are lower than the acceptable value of 0.05 and the Z scores exceeded the critical

value of z. Hence the |Z| scores of these pairs of age groups are assumed as statistically significant at p-value less than 0.05.

Table 6.29 Age Groups with regard to Workplace Relations – Mann-Whitney U Test Statistics

Age	Group 1 (25yrs and Below)	Group 2 (26 – 30 yrs)	Group 3 (31 – 35yrs)	Group 4 (36 – 40 yrs)	Group 5 (Above 40 yrs)
Group 1 (25yrs and Below)		U=23959.00 W=49610.00 Z = -1.826 P value= .068	U=7587.500 W=33238.500 Z = -1.036 P value= .300	U=1680.500 W=1890.500 Z = -1.910 P value= .056	U=244.00 W=250.000 Z = -.838 P value= .402
Group 2 (26 – 30 yrs)			U=8422.500 W=11123.500 Z = -.235 P value= .814	U= 1476.00 W=1686.000 Z = -2.776 P value= .005*	U= 199.00 W=205.000 Z = -1.304 P value= .192
Group 3 (31 – 35 yrs)				U= 480.000 W= 690.000 Z = -2.351 P value= .019*	U= 67.500 W= 73.500 Z = -1.127 P value= .260
Group 4 (36 – 40 yrs)					U= 30.000 W= 36.000 Z = .001 P value= 1.00
Group 5 (Above 40 yrs)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is thereby rejected indicating that workplace relations varies significantly among the age group 2 (26 – 30 yrs) and group 4 (36 – 40 yrs); group 3 (31 – 35 yrs) and group 4 (36 – 40 yrs) of the employees working in the IT sector in Kerala.

6.16 Work Experience and Employee Turnover

The relationship between work experience and employee turnover is determined using the Kruskal Wallis H test and to further identify the significant differences among the various categories of work experience relating to the variables of employee turnover, Mann-Whitney U test is used. The null hypothesis is framed accordingly to identify the relationship between work experience and employee turnover and is stated as

H₀: The employee turnover and its variables are not significantly different among the various categories of work experience of the IT sector employees in Kerala.

The test statistics of the Kruskal Wallis H test is described in the table 6.30 relating to the work experience and employee turnover among the employees working in the IT sector.

Table 6.30 Work Experience and Employee Turnover – Kruskal Wallis H Test Statistics

Variables of Employee Turnover	H Statistic	Df	Asymp. Sig.	Null Hypothesis
Work Stress	3.917	4	.417	Accepted
Work life Imbalance	3.266	4	.514	Accepted
Health Problems	4.094	4	.393	Accepted
Economic Conditions	19.241	4	.001	Rejected
Workplace Relations	14.334	4	.006	Rejected
Employee Turnover	1.264	4	.867	Accepted

Source: Primary Data

The table 6.30 exhibits that the employee turnover (H= 1.264, df= 4, p-value= .867), health problems (H= 4.094, df= 4, p-value= .393), work stress (H= 3.917, df= 4, p-value= .417) and work life imbalance (H= 3.266, df= 4, p-value= .514) are having p-values greater than the significance value of 0.05.

While the variables like economic conditions ($H= 19.241$, $df= 4$, $p\text{-value}= .001$) and workplace relations ($H= 14.334$, $df= 4$, $p\text{-value}= .006$) are having p -values lower than 0.05. Hence the null hypothesis is rejected and thereby concluding that variables of employee turnover (economic conditions and workplace relations) are significantly different among the various categories of work experience of the IT sector employees.

6.16.1 Work Experience and Economic Conditions

The Kruskal Wallis H test reveals that economic conditions varied among the various categories of work experience of the employees. To identify the significant differences among the various categories of work experience regarding the economic conditions, the null hypothesis is formulated in accordance and is stated as

H_0 : Economic conditions are not significantly different among the different pairs of the work experience categories of the IT employees.

The Mann-Whitney U test is applied to test the null hypothesis and the test statistics of the Mann-Whitney U test regarding work experience and economic conditions are exhibited in the table 6.31.

The table 6.31 indicates the test statistics of the various categories of experience. The work experience category 1 and category 4 ($U= 1746.500$, $W=36991.500$, $Z= -.373$, $p\text{-value}= .709$); category 2 and category 4 ($U= 1180.00$, $W= 18016.00$, $Z= -.496$, $p\text{-value}= .620$); category 1 and category 2 ($U=23510.500$, $W=40346.500$, $Z = -.553$, $p\text{-value}= .580$); category 3 and category 4 ($U= 419.000$, $W= 3345.000$, $Z = -1.270$, $p\text{-value}= .204$); category 3 and category 5 ($U= 562.000$, $W= 752.000$, $Z = -1.505$, $p\text{-value}= .132$); and category 4 and category 5 ($U= 80.000$, $W= 270.000$, $Z = -1.947$, $p\text{-value}= .052$) are having Z scores not exceeding the critical values of $z -1.96$ and $+1.96$; and the p -values are higher than the significance value of 0.05. Hence the differences in economic conditions among these pairs of work experience categories are assumed as statistically non-significant. On the other hand, the category 2 and category 3 ($U= 5589.00$, $W= 8515.00$, $Z = -2.511$, $p\text{-value}= .012$); category 2 and category 5 ($U= 995.000$, $W= 1185.000$, $Z = -3.096$, $p\text{-value}= .002$); category 1 and category 3 ($U= 7791.500$,

W=10717.500, Z= -3.039, p-value=.002); and category 1 and category 5 (U= 1351.500, W= 1541.500, Z= -3.407, p-value=.001) are having |Z| scores exceeding the critical values of z and hence assumed as statistically significant at p-values lower than the significance value of 0.05. This implies that the differences in economic conditions among these pairs of work experience categories are found statistically significant.

Table 6.31 Work Experience with regard to Economic Conditions – Mann-Whitney U Test Statistics

Work Experience	Category 1 (Up to 2 Yrs)	Category 2 (2- 4 yrs)	Category 3 (4- 6 yrs)	Category 4 (6- 8 yrs)	Category 5 (8 yrs and Above)
Category 1 (Up to 2 Yrs)		U=23510.500 W=40346.500 Z = -.553 P value=.580	U= 7791.500 W=10717.500 Z = -3.039 P value=.002*	U= 1746.500 W=36991.500 Z = -.373 P value=.709	U=1351.500 W=1541.500 Z = -3.407 P value=.001*
Category 2 (2- 4 yrs)			U= 5589.00 W= 8515.00 Z = -2.511 P value=.012*	U= 1180.00 W=18016.00 Z = -.496 P value=.620	U= 995.000 W=1185.00 Z = -3.096 P value=.002*
Category 3 (4- 6 yrs)				U= 419.000 W=3345.000 Z = -1.270 P value=.204	U= 562.000 W=752.000 Z = -1.505 P value=.132
Category 4 (6- 8 yrs)					U= 80.000 W=270.000 Z = -1.947 P value=.052
Category 5 (8 yrs and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is therefore rejected and conclude that the economic conditions differ significantly among the work experience category 1 (Up to 2 Yrs) and category 3 (4- 6 yrs); category 1 (Up to 2 Yrs) and category 5 (8 yrs and Above); category 2 (2- 4 yrs) and category 3 (4- 6 yrs); category 2 (2- 4 yrs) and category 5 (8 yrs and Above) of the IT sector employees.

6.16.2 Work Experience and Workplace Relations

The significant differences among the various categories of work experience regarding the workplace relations are recognized using the Mann-Whitney U test which compares the various categories of experience pair wise with regard to workplace relations. The null hypothesis framed to test this relationship is stated as

H₀: Workplace relations are not significantly different among the different pairs of the work experience categories of the IT employees.

The test statistics of the Mann-Whitney U test regarding the work experience and workplace relations are shown in the table 6.32.

The test statistics of the Mann-Whitney U test is exhibited in the table 6.32. The work experience category 4 and category 5 (U= 125.000, W= 230.000, Z = -.297, p-value= .766); category 1 and category 2 (U=23338.500, W=40174.500, Z = .678, p-value= .497); category 2 and category 3 (U= 6272.000, W=9198.000, Z = -1.251, p-value=.211); category 3 and category 5 (U= 542.000, W= 732.000, Z = -1.695, p-value= .090); category 1 and category 3 (U= 8725.000, W=11651.00, Z = -1.785, p-value=.074); and category 3 and category 4 (U= 362.000, W= 467.000, Z = -1.912, p-value= .056) are having the p-values greater than the significance value of 0.05 and the Z scores are not exceeding the critical values of z and hence the categories are considered as statistically non-significant. While the pairs of work experience category 2 and category 5 (U= 1224.500, W= 1414.500, Z= -2.132, p-value=.033); category 2 and category 4 (U= 797.000, W= 902.000, Z = -2.370, p-value=.018); category 1 and category 5 (U= 1672.500, W= 1862.500, Z= -2.456, p-value=.014); and category 1 and category 4 (U= 1082.500, W= 1187.500, Z= -2.639, p-value=.008) are considered

as statistically significant since the Z scores exceeded the critical values of z -1.96 and +1.96 at p-values less than 0.05.

Table 6.32 Work Experience with regard to Workplace Relations – Mann-Whitney U Test Statistics

Work Experience	Category 1 (Up to 2 Yrs)	Category 2 (2- 4 yrs)	Category 3 (4- 6 yrs)	Category 4 (6- 8 yrs)	Category 5 (8 yrs and Above)
Category 1 (Up to 2 Yrs)		U=23338.500 W=40174.500 Z = .678 P value=.497	U= 8725.00 W=11651.00 Z = -1.785 P value=.074	U=1082.500 W=1187.500 Z = -2.639 P value=.008*	U=1672.500 W=1862.50 Z = -2.456 P value=.014*
Category 2 (2- 4 yrs)			U= 6272.00 W=9198.000 Z = -1.251 P value=.211	U= 797.000 W= 902.000 Z = -2.370 P value=.018*	U=1224.500 W=1414.50 Z = -2.132 P value=.033*
Category 3 (4- 6 yrs)				U= 362.000 W= 467.000 Z = -1.912 P value=.056	U=542.000 W=732.000 Z = -1.695 P value=.090
Category 4 (6- 8 yrs)					U=125.000 W=230.000 Z = -.297 P value=.766
Category 5 (8 yrs and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance.

The null hypothesis is thus rejected and thereby concluding that workplace relations are significantly different between the work experience category 1 (Up to 2 Yrs) and category 4 (6- 8 yrs); category 1 (Up to 2 Yrs) and category 5 (8 yrs and Above); category 2 (2- 4 yrs) and category 4 (6- 8 yrs); category 2 (2- 4 yrs) and category 5 (8 yrs and Above) of the employees working in the IT sector.

6.17 Monthly Income and Employee Turnover

The Kruskal Wallis H test is used to determine the equality of the employee turnover and its variables among the different income groups of the employees and to further determine the significant differences among the various monthly income groups of employees among the variables of employee turnover; Mann-Whitney U test is applied. The null hypothesis framed in relation to attain the above objective is stated as follows

H₀: There is no significant difference in the employee turnover and its variables among the various monthly income groups of employees working in the IT sector in Kerala.

The test statistics of the Kruskal Wallis U test is shown in the table 6.33 relating to the monthly income and employee turnover of the IT employees.

Table 6.33 Monthly Income and Employee Turnover – Kruskal Wallis H Test Statistics

Variables of Employee Turnover	H Statistic	df	Asymp. Sig.	Null Hypothesis
Work Stress	3.942	4	.414	Accepted
Work life Imbalance	1.933	4	.748	Accepted
Health Problems	2.621	4	.623	Accepted
Economic Condition	2.747	4	.601	Accepted
Workplace Relations	16.332	4	.003	Rejected
Employee Turnover	4.652	4	.325	Accepted

Source: Primary Data

The test statistics of the employee turnover and its variables are given in the table 6.33. Employee turnover ($H= 4.652$, $df= 4$, $p\text{-value}= .325$) and its variables like work stress ($H= 3.942$, $df= 4$, $p\text{-value}= .414$), economic conditions ($H= 2.747$, $df= 4$, $p\text{-value}= .601$), health problems ($H= 2.621$, $df= 4$, $p\text{-value}= .623$) and work life imbalance ($H= 1.933$, $df= 4$, $p\text{-value}= .748$) are having p-values greater than the significance value of 0.05 while the workplace relations ($H= 16.323$, $df= 4$, $p\text{-value}= .003$) have p-value less than the significance value (0.05). The null hypothesis is thus rejected and concludes that the variables of employee turnover (workplace relations) are significantly different among the various monthly income groups of employees working in the IT sector.

6.17.1 Monthly Income and Workplace Relations

The significant differences among the various monthly income groups regarding workplace relations are recognized using the Mann-Whitney U test which compares the income groups' pair wise. The null hypothesis framed is stated as below

H_0 : Workplace relations are not significantly different among the different pairs of the monthly income groups of the IT employees.

The test statistics derived using the Mann-Whitney U test is exhibited in the table 6.34 regarding monthly income and workplace relations among the IT sector in Kerala.

The table 6.34 points out the test statistics of monthly income group 2 and group 4 ($U= 5014.500$, $W=35395.500$, $Z = -.058$, $p\text{-value}= .954$); and group 3 and group 4 ($U= 2417.000$, $W= 9798.000$, $Z= -.246$, $p\text{-value}= .806$); group 2 and group 3 ($U=14624.000$, $W=22005.000$, $Z = -.273$, $p\text{-value}= .785$); and group 1 and group 4 ($U= 2122.500$, $W=2983.500$, $Z= -1.389$, $p\text{-value}= .165$). The p-values of these groups are greater than the significance value of 0.05 and the Z scores are not exceeding the critical values of z -1.96 and +1.96 and hence the differences among these pairs of income groups are assumed as non-significant. The test statistics of the income group 1 and group 3 ($U=6209.500$, $W=13590.500$, $Z = -2.053$, $p\text{-value}= .040$); group 1 and group 2 ($U=12784.000$, $W=43165.00$, $Z = -2.210$, $p\text{-value}= .027$); group 3 and group 5 ($U= 1197.500$, $W= 1603.500$, $Z = -2.426$, $p\text{-value}= .015$); group 4 and group 5 ($U= 361.000$, $W= 767.000$, $Z = -2.622$,

p-value=.009); group 1 and group 5 (U= 916.500, W= 1322.500, Z = -3.799, p-value <.001); and group 2 and group 5 (U= 2269.500, W= 2675.500, Z = -2.973, p-value= .003) indicates that the p-values of these pairs of income groups are lower than the significance value and the Z scores are assumed as statistically significant at p-value less than 0.05 since the Z scores exceeded the critical values of z.

Table 6.34 Monthly Income with regard to Workplace Relations – Mann-Whitney U Test Statistics

Monthly Income	Group 1 (Below Rs 20,000)	Group 2 (Rs 20000-30000)	Group 3 (Rs 30000- 40000)	Group 4 (Rs 40000- 50000)	Group 5 (Rs 50000 and Above)
Group 1 (Below Rs 20,000)		U=12784.000 W=43165.00 Z = -2.210 P value= .027*	U=6209.500 W=13590.500 Z = -2.053 P value= .040*	U= 2122.500 W=2983.500 Z = -1.389 P value= .165	U= 916.500 W=1322.500 Z = -3.799 P value < .001**
Group 2 (Rs 20000-30000)			U=14624.000 W=22005.000 Z = -.273 P value= .785	U= 5014.500 W=35395.500 Z = -.058 P value= .954	U= 2269.500 W=2675.500 Z = -2.973 P value= .003*
Group 3 (Rs 30000-40000)				U= 2417.000 W=9798.000 Z = -.246 P value= .806	U= 1197.500 W=1603.500 Z = -2.426 P value= .015*
Group 4 (Rs 40000-50000)					U= 361.000 W= 767.000 Z = -2.622 P value= .009*
Group 5 (Rs 50000 and Above)					
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.					

Source: Primary Data; * Reject null hypothesis at 5% level of significance; ** Reject null hypothesis at 1% level of significance.

The null hypothesis is hereby rejected, thus concluding that workplace relations are significantly different among the monthly income group 1 (Below Rs

20,000) and group 2 (Rs 20000-30000); group 1 (Below Rs 20,000) and group 3 (Rs 30000- 40000); group 1 (Below Rs 20,000) and group 5 (Rs 50000 and Above); group 2 (Rs 20000-30000) and group 5 (Rs 50000 and Above); group 3 (Rs 30000- 40000) and group 5 (Rs 50000 and Above); and group 4 (Rs 40000-50000) and group 5 (Rs 50000 and Above) of the employees working in the IT sector.

6.18 Education and Employee Turnover

The Kruskal Wallis H test is used to identify the relationship between education and employee turnover among the IT sector employees. The significant differences among the various categories of education in relation to the variables of employee turnover is further recognized using the Mann-Whitney U test that compares the categories of education pair wise. The null hypothesis is framed and stated as follows

H₀: There is no significant difference in the employee turnover and its variables among the various categories of education of the IT sector employees in Kerala.

The test statistics of the Kruskal Wallis H test relating to the education and employee turnover is given in the table 6.35.

Table 6.35 Education and Employee Turnover – Kruskal Wallis H Test Statistics

Variables of Employee Turnover	H statistic	Df	Asymp. Sig.	Null Hypothesis
Work Stress	7.891	5	.162	Accepted
Work life Imbalance	7.226	5	.204	Accepted
Health Problems	6.811	5	.235	Accepted
Economic Condition	19.206	5	.002	Rejected
Workplace Relations	19.970	5	.001	Rejected
Employee Turnover	7.324	5	.198	Accepted

Source: Primary Data

The table 6.35 points out that the p-values of employee turnover ($H= 7.324$, $df= 5$, $p\text{-value}= .198$), work stress ($H= 7.891$, $df= 5$, $p\text{-value}= .162$), work life imbalance ($H= 7.226$, $df= 5$, $p\text{-value}= .204$) and health problems ($H= 6.811$, $df= 5$, $p\text{-value}= .235$) are higher than the significance value of 0.05 while the workplace relations ($H= 19.970$, $df= 5$, $p\text{-value}= .001$) and economic conditions ($H= 19.206$, $df= 5$, $p\text{-value}= .002$) have p-value less than 0.05. Hence the null hypothesis is rejected thereby concluding that the variables of employee turnover (economic conditions and workplace relations) are significantly different among the various categories of education of the IT sector employees in Kerala.

6.18.1 Education and Economic Conditions

The significant differences among the various categories of education with regard to the economic conditions are recognized using the Mann-Whitney U test which compared the educational categories pair wise. The null hypothesis framed in accordance with the objective is stated as below

H_0 : Economic conditions are not significantly different among the different pairs of the education categories of the IT sector employees.

The Mann-Whitney U test results are shown in the table 6.36 relating to the education and employee turnover among the employees working in the IT sector.

The table 6.36 points out the test statistics of the education category 4 and category 6 ($U=2462.00$, $W=7818.00$, $Z = -.040$, $p\text{-value}= .968$); category 2 and category 3 ($U=5017.000$, $W=56057.00$, $Z = -.161$, $p\text{-value}= .872$); category 4 and category 5 ($U=791.500$, $W=1967.500$, $Z = -.232$, $p\text{-value}= .816$); category 5 and category 6 ($U=1667.00$, $W=7023.00$, $Z = -.423$, $p\text{-value}= .672$); category 3 and category 5 ($U=508.000$, $W=1103.00$, $Z = -.466$, $p\text{-value}= .641$); category 2 and category 5 ($U=4988.500$, $W=5583.500$, $Z = .750$, $p\text{-value}= .453$); category 3 and category 4 ($U=668.00$, $W=1844.00$, $Z = -.991$, $p\text{-value}= .321$); category 3 and category 6 ($U=1452.500$, $W=6808.500$, $Z = -1.021$, $p\text{-value}= .307$); category 2 and category 4 ($U=6842.00$, $W= 8018.00$, $Z= -1.171$, $p\text{-value}= .242$); and category 2 and category 6 ($U=14331.00$, $W=19687.00$, $Z = -1.928$, $p\text{-value}= .054$). The p-values of the above categories of the education are greater than the significance value of 0.05 and Z scores did not exceed the critical values of z -1.96 and +1.96.

Hence the differences in economic conditions among these pairs of education categories are considered as statistically non-significant.

Table 6.36 Education with regard to Economic Conditions – Mann-Whitney U Test Statistics

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=1608.50 W=1839.5 Z = -4.029 P value < .001**	U=144.500 W=375.50 Z = -3.516 P value < .001**	U=306.00 W=537.00 Z= -2.605 P value= .009*	U=199.500 W=430.500 Z = -2.747 P value= .006*	U=636.000 W=867.00 Z = -2.996 P value= .003*
Category 2 (B Tech)			U=5017.0 W=56057.0 Z = -.161 P value= .872	U=6842.0 W=8018.0 Z= -1.171 P value= .242	U=4988.50 W=5583.50 Z = .750 P value= .453	U=14331.0 W=19687.0 Z = -1.928 P value= .054
Category 3 (M Tech)				U=668.00 W=1844.0 Z = -.991 P value= .321	U=508.00 W=1103.00 Z = -.466 P value= .641	U=1452.50 W=6808.50 Z = -1.021 P value= .307
Category 4 (B Sc)					U=791.500 W=1967.50 Z = -.232 P value= .816	U=2462.00 W=7818.00 Z = -.040 P value= .968
Category 5 (M Sc)						U=1667.00 W=7023.00 Z = -.423 P value= .672
Category 6 (Others)						

U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.

Source: Primary Data; * Reject null hypothesis at 5% level of significance;

** Reject null hypothesis at 1% level of significance.

While the p-values of category 1 and category 4 (U= 306.000, W= 537.00, Z= -2.605, p-value= .009); category 1 and category 5 (U= 199.500, W= 430.500, Z= -2.747, p-value= .006); category 1 and category 6 (U= 636.000, W= 867.000, Z= -2.996, p-value= .003); category 1 and category 2 (U= 1608.500, W= 1839.500, Z= -4.029, p-value < .001); and category 1 and category 3 (U= 144.500, W= 375.500, Z= -3.516, p-value < .001) are lower than the significance value and Z scores are assumed as statistically significant at p-values less than 0.05 and the Z scores exceeded the critical values of z which implies that the differences in economic conditions among these pairs of education categories are significant.

The null hypothesis is therefore rejected by concluding that economic conditions significantly differs among the education category 1 (Plus two) and category 2 (B Tech); category 1 (Plus two) and category 3 (M Tech); category 1 (Plus two) and category 4 (B Sc); category 1 (Plus two) and category 5 (M Sc); and category 1 (Plus two) and category 6 (Others) of the IT sector employees.

6.18.2 Education and Workplace Relations

The relationship between education and workplace relations are identified using the Kruskal Wallis H test and to further identify the significant differences among the various categories of education in relation to the workplace relations, Mann-Whitney U test is used. The null hypothesis is stated as below

H₀: Workplace relations are not significantly different among the different pairs of the education categories of the IT sector employees.

The Mann-Whitney U test enables the pair wise comparison among the various categories of the education with regard to workplace relations. The test statistics of the Mann-Whitney U test in relation to education and workplace relations are explained as in table 6.37.

The test statistics of education categories can be understood from the table 6.37. Education category 2 and category 5 (U=5358.500, W=5953.500, Z = -.085, p-value= .932); category 1 and category 6 (U=982.500, W=1213.500, Z = -.665, p-value= .506); category 3 and category 4 (U=699.000, W=1875.000, Z = -.683, p-value= .495); category 5 and category 6 (U= 1532.500, W= 6888.500, Z= -1.097,

p-value= .273); category 4 and category 5 (U= 672.500, W= 1267.500, Z = -1.358, p-value= .174); category 1 and category 5 (U= 278.000, W= 509.000, Z= -1.382, p-value= .167); category 1 and category 2 (U= 2643.500, W= 2874.500, Z= -1.608, p-value= .108); and category 2 and category 4 (U=6408.00, W=57129.00, Z= -1.801, p-value= .072) have Z score that did not exceed the critical values of z -1.96 and +1.96 and the p-values are greater than the significance value of 0.05 and hence the above pairs of education categories are considered as statistically non-significant. On the other hand, the education category 2 and category 6 (U= 14232.00, W= 19588.00, Z = -2.011, p-value= .044); category 3 and category 5 (U=372.000, W=967.000, Z = -2.224, p-value= .026); category 1 and category 4 (U=329.00, W=560.00, Z = -2.295, p-value= .022); category 2 and category 3 (U= 3603.00, W=54324.00, Z = -2.737, p-value= .006); category 1 and category 3 (U= 169.500, W= 400.500, Z= -3.050, p-value= .002); category 3 and category 6 (U= 937.000, W= 6293.00, Z = -3.702, p-value <.001); and category 4 and category 6 (U= 1786.00, W= 7142.00, Z = -2.758, p-value= .006) have Z scores that exceeded the critical value of z and hence the differences in workplace relations among these pairs of education categories are assumed as statistically significant at p-value less than 0.05.

The null hypothesis is thereby rejected by concluding that workplace relations are significantly different among the education category 1 (Plus two) and category 3 (M Tech); category 1 (Plus two) and category 4 (B Sc); category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector in Kerala.

Table 6.37 Education with regard to Workplace Relations – Mann-Whitney U Test Statistics

Education	Category 1 (Plus two)	Category 2 (B Tech)	Category 3 (M Tech)	Category 4 (B Sc)	Category 5 (M Sc)	Category 6 (Others)
Category 1 (Plus two)		U=2643.50 W=2874.500 Z = -1.608 P value= .108	U=169.500 W=400.500 Z= -3.050 P value= .002*	U=329.00 W=560.000 Z = -2.295 P value= .022*	U=278.00 W=509.000 Z = -1.382 P value= .167	U=982.500 W=1213.500 Z = -.665 P value= .506
Category 2 (B Tech)			U=3603.0 W=54324.00 Z= -2.737 P value= .006*	U=6408.0 W=57129.00 Z = -1.801 P value= .072	U=5358.50 W=5953.500 Z = -.085 P value= .932	U=14232.0 W=19588.00 Z = -2.011 P value= .044*
Category 3 (M Tech)				U=699.00 W=1875.0 Z = -.683 P value= .495	U=372.00 W=967.00 Z = -2.224 P value= .026*	U=937.00 W=6293.0 Z = -3.702 P value < .001**
Category 4 (B Sc)					U=672.50 W=1267.5 Z = -1.358 P value= .174	U=1786.00 W=7142.0 Z = -2.758 P value= .006*
Category 5 (M Sc)						U=1532.50 W=6888.5 Z = -1.097 P value= .273
Category 6 (Others)						
U indicates the Mann-Whitey U test statistic; W indicate Wilcoxon test statistic, Z indicates the critical values and p value indicate the significance value.						

Source: Primary Data; * Reject null hypothesis at 5% level of significance; ** Reject null hypothesis at 1% level of significance.

6.19 Gender and Employee Turnover

The significant difference between the male and female employees with regard to variables of the employee turnover is identified using the Mann-Whitney U test. The null hypothesis is formulated in accordance with the above objective and is stated as below

H₀: There is no significant difference in the variables of employee turnover between the male and female employees working in the IT sector in Kerala.

The Mann-Whitney U test is applied to recognize significant differences between the male and female employees and the test results are exhibited in the following table 6.38.

Table 6.38 Gender and Employee Turnover – Mann-Whitney U Test Statistics

Variables of Employee Turnover	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Work Stress	37193.000	82043.000	-.731	.465	Accepted
Work life Imbalance	34343.000	79193.000	-2.235	.025	Rejected
Health Problems	35361.000	80211.000	-1.706	.088	Accepted
Economic Condition	34298.500	79148.500	-2.278	.023	Rejected
Workplace Relations	36136.000	80986.000	-1.293	.196	Accepted

Source: Primary Data

The table 6.38 points out the test statistics of work stress (U= 37193.00, W= 82043.00, Z= -.731, p-value= .465); workplace relations (U= 36136.00, W= 80986.00, Z= -1.293, p-value= .196); and health problems (U= 35361.00, W= 80211.00, Z= -1.706, p-value= .088) where the p-values tends to be higher than the significance value of 0.05 and the Z scores are assumed as non significant since their values did not exceed the critical values of z -1.96 and +1.96. While the variables like work life imbalance (U= 34343.00, W= 79193.00, Z= -2.235, p-value= .025) and economic conditions (U= 34298.500, W= 79148.500,

Z= -2.278, p-value= .023) are having the p-values lower than the significance value and the Z scores are considered as statistically significant at p-value less than 0.05 and the Z scores exceeded the critical values of z. Hence the null hypothesis is rejected at 5% level of significance. Thus, it can be concluded that variables of employee turnover (work life imbalance and economic condition) is significantly different between the male and female employees working in the IT sector.

6.20 Marital Status and Employee Turnover

The Mann-Whitney U test is used to determine the relationship between marital status and employee turnover. The null hypothesis framed in relation to the above objective is stated as under

H₀: There is no significant difference in the employee turnover and its variables between the married and unmarried employees in the IT sector in Kerala.

The significant differences among the married and unmarried employees regarding the variables of employee turnover are recognized using the Mann-Whitney U test. The test statistics relating to the marital status and employee turnover among the employees in the IT sector is given in the table 6.39.

Table 6.39 Marital Status and Employee Turnover – Mann-Whitney U Test Statistics

Variables of Employee Turnover	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Null Hypothesis
Work Stress	33896.500	85256.500	-2.153	.031	Rejected
Work life Imbalance	32670.000	84030.000	-2.799	.005	Rejected
Health Problems	34389.500	85749.500	-1.892	.058	Accepted
Economic Condition	36793.000	88153.000	-.606	.545	Accepted
Workplace Relations	34712.500	86072.500	-1.718	.086	Accepted
Employee Turnover	32966.000	84326.000	-2.638	.008	Rejected

Source: Primary Data

The table 6.39 indicates that the economic conditions (U= 36793.00, W= 88153.00, Z= -.606, p-value= .545), workplace relations (U= 34712.500, W= 86072.500, Z= -1.718, p-value= .086) and health problems (U= 34389.500, W= 85749.500, Z= -1.892, p-value= .058) have p-value greater than significance value of 0.05 and Z scores are considered as non significant since the scores did not exceed the critical values of z -1.96 and +1.96. The employee turnover (U= 32966.00, W= 84326.00, Z= -2.638, p-value= .008) and its variables like work stress (U= 33896.500, W= 85256.500, Z= -2.153, p-value= .031) and work life imbalance (U= 32670.00, W= 84030.00, Z= -2.799, p-value= .005) exhibits that the p-values are lower than the significance value and the Z scores exceeded the critical values of z and hence considered as statistically significant. The null hypothesis is therefore rejected at 5% level of significance. Thus it can be interpreted that the employee turnover and its variables (work stress and work life imbalance) significantly differs between the married and unmarried employees working in the IT sector in Kerala.

This section concludes that the variables of employee turnover significantly differ among the various categories of age, work experience, monthly income, education, gender and marital status of the employees working in the IT sector in Kerala.

6.21 Conclusion

The chapter concludes by stating that the variables of quality of work life, employee satisfaction and employee turnover are tested with regard to the various demographic variables. The demographic variables studied include age, work experience, gender, education and marital status of the employees working in the IT sector. The results indicated that all the variables of quality of work life, employee satisfaction and employee turnover significantly differed among the demographic variables except employee satisfaction and work experience. Employee satisfaction was found same among the various categories of work experience. The hypotheses formulated with regard to the objectives were tested accordingly. The analysis of the primary data ends with this chapter. The findings of the study are discussed in detail in the succeeding chapter.

Chapter 7

Findings, Conclusion and Suggestions

7.1 Introduction

The present chapter discusses the findings, suggestions and conclusions of the study. The primary data was collected from the IT sector employees working in the Technopark, Infopark and Kinfrapark in Kerala using the multi-stage sampling method. The analysis of the primary data was done in the previous chapters using the non-parametric tests. The relationship between quality of work life, employee satisfaction and employee turnover was identified and the mediating effect of employee satisfaction was determined through the structural equation modelling (SEM) using the Warp PLS 4.0.

7.2 Research Problem in brief

It is generally believed that the workforce employed in the IT sector has a high work stress and poor work life quality. The IT organizations have to face cut throat competition in the market to survive in this global economy and hence the organizations are supposed to frame their strategies accordingly. As a result, the organizations entirely rely on their workforce to accomplish these objectives. The organizations should always ensure the working environment of their employees or else it will affect their work life quality. The IT jobs are considered to be the most stressful jobs since the work load is very high and the timing of the job is long. Since they have to work long time (even at night), they are faced with many health problems and may even lead to their family problems. This can be assumed as major reasons for the employees leaving their organizations or the employee turnover, which is now a common phenomenon in the IT sector. So the organizations are supposed to ensure the satisfaction and wellness of their employees in order to retain their existing workforce thereby reducing the turnover among employees.

The work life quality and the work satisfaction level of the IT sector employees are assumed as moderate and the overall employee turnover is also perceived as moderate by the employees. Besides, the employees have problems related to their work stress, work life imbalance and health. So the present study is undertaken to examine the level of quality of work life and employee satisfaction among the IT sector employees. Moreover the employee turnover among the IT

employees was also studied. The relationship of quality of work life with employee satisfaction and employee turnover; and the employee satisfaction with employee turnover were further studied. Therefore the present study is assumed to be significant in this context.

7.3 Objectives

1. To assess the extent of the level of quality of work life of the IT sector employees in Kerala.
2. To examine the extent of the level of employee satisfaction among the IT sector employees.
3. To identify the extent of employee turnover among the IT sector employees in Kerala.
4. To examine the relationship between quality of work life and employee satisfaction among the IT sector employees.
5. To explore the relationship between quality of work life and employee turnover among the IT sector employees.
6. To examine the relationship between employee satisfaction and employee turnover among the IT employees in Kerala.
7. To identify the influence of quality of work life on employee satisfaction and employee turnover.
8. To study the influence of demographic variables on the quality of work life among the IT employees.
9. To examine the influence of demographic variables on the employee satisfaction among the IT sector employees.
10. To study the influence of demographic variables on the employee turnover among IT sector employees in Kerala.

7.4 Hypotheses Framed

1. There is no significant relationship between quality of work life and employee satisfaction among the IT employees.
2. There is no significant relationship between quality of work life and employee turnover among the IT employees.

3. There is no significant relationship between employee satisfaction and employee turnover among the IT employees.
4. Demographic variables do not influence the quality of work life among the IT sector employees.
5. Demographic variables do not influence the employee satisfaction of the IT employees.
6. Demographic variables do not influence the employee turnover among the IT employees.

7.5 Research Design and Methodology

The research is descriptive in nature. The research is based on both secondary and primary data. The secondary data were collected from the various journals, websites, books, reports published by NASSCOM, Economic Reviews, online journals etc. The primary data were collected from the employees working in the selected IT companies operating in the Technopark, Infopark and Kinfrapark. The Multi-Stage sampling using the non-probabilistic method was used for data collection. A Sample of 557 employees was included in the study, out of which 376 respondents were from the Technopark, 150 respondents from the Infopark and 31 employees from the Kinfrapark.

A structured questionnaire was the tool used for the data collection. The researcher undertook a pilot study among 60 IT employees to check the reliability and validity of the instrument. Sufficient modifications were made to the questionnaire before administering it in the final data collection. The primary data collected was analyzed using the SPSS 20 software. Both exploratory factor analysis using SPSS and confirmatory factor analysis through the Structural Equation Modelling using Warp PLS 4.0 was done for the scale validation. The normality of the data was determined using Kolmogrov-Smirnov test. Non-parametric tests like Kruskal Wallis H test and Mann-Whitney U test was used in the study to describe the relationship of demographic variables with the quality of work life, employee satisfaction and employee turnover. Spearman's rank correlation coefficient was used to determine the relationship between quality of work life, employee satisfaction and employee turnover. The research model developed was tested through structural equation modelling using the Warp PLS

and the mediation effect of the employee satisfaction on the relationship between the quality of work life and the employee turnover was further estimated in the study.

7.6 Summary of Chapters

The first chapter of the study is the Introduction chapter. It provides an introduction to the study, explains the background of the study, significance, scope of the study, defines the research problem, objectives of the study, its hypothesis, operational definitions, research design and methodology, validity, reliability, tools for analysis, limitations of the study, scheme of each chapter and scope for further research. The second chapter is concerned with the review of studies relating to the quality of work life, employee satisfaction, employee turnover and the studies relating to the IT sector. The third chapter details the theories related to quality of work life, employee satisfaction and employee turnover. The theories relating to the IT sector are described in the fourth chapter. The analysis relating to the relationship between the quality of work life, employee satisfaction and employee turnover; scale development and validation of the quality of work life scale, employee satisfaction scale and employee turnover scale, the determination of the levels of overall quality of work life, overall employee satisfaction etc is done in the fifth chapter. The relationship of demographic variables like age, gender, work experience, education and marital status with the quality of work life, employee satisfaction and employee turnover is analyzed and presented in the sixth chapter. The seventh and last chapter details the findings, conclusion and recommendation of the study.

The present chapter is shown as three sections. Section A describes the findings of the study based on the analysis of the primary data collected from the sample respondents identified in the study. Section B concludes the present study and Section C incorporates the suggestions given by the researcher based on the findings of the study using the primary data.

Section A

The Section A is concerned with the findings of the study. The primary data collected was analyzed to test the hypotheses framed in accordance with the objectives of the study. The findings of the study are described as below.

7.7 Findings

The major findings of the study with regard to the variables – Quality of work life, Employee satisfaction and Employee turnover are described as follows

7.7.1 Quality of Work Life

1. The level of quality of work life among the employees working in the IT sector in Kerala is found to be moderate, which is then followed by a low level of quality of work life among the employees. The majority of the IT employees (49%) considered Overall Quality of Work Life in Moderate level while 26.4% employees viewed it as Low level and 24.6% employees rated it as High level.
2. Quality of work life is found to be positively correlated to the employee satisfaction. The correlation coefficient of the relationship between quality of work life and employee satisfaction is .493 and the effect size indicates that the relationship is high.
3. The correlation coefficient of the relationship between quality of work life and employee turnover is -.381 which means quality of work life is negatively correlated to employee turnover. The effect size implies that the relationship between quality of work life and employee turnover is moderate.
4. Quality of work life is found to have an effect on the employee satisfaction among the IT sector. The β coefficient value of the relationship between quality of work life and employee satisfaction is .60 which implies that the quality of work life has a significant positive effect on the employee satisfaction.

5. Quality of work life is ascertained to have an effect on the turnover among the employees in the IT sector. The β coefficient value of the relationship between quality of work life and employee turnover is $-.48$ which indicates that quality of work life has a significant negative effect on the employee turnover among the IT sector.
6. The most important variable that relate to the quality of work life is Fair treatment with a correlation coefficient value of $.738$. The second variable that relate to quality of work life is Autonomy of work with a correlation value of $.726$, which is then followed by total life space, employee development, attitude of management, organizational communication, job security, work environment and adequate and fair compensation.
7. The male and female employees working in the IT sector have moderate level of work life quality. The male employees are found to have a better quality of work life compared to the female employees.
8. The variables, Adequate and fair compensation and Working environment are found moderate among the IT sector employees since the majority of the employees responded it as moderate which is then considered as low level and then as high level by the IT employees.
9. Variables like Autonomy of work, Employee development and Total Life Space are considered as moderate by the IT employees since the majority of the employees treated it as moderate. It is then viewed as high level and then low level by the employees.
10. The IT sector employees considered Fair treatment and Attitude of management as high since most of the employees regarded it as high. It is then perceived in low level by the employees and then as moderate among the employees working in the IT sector.
11. The variables, Organizational communication and Job security are found higher among the IT sector employees. The majority of the employees viewed it as high, which is then considered as moderate and then as low level among the employees working in the IT sector.

12. The majority of the employees working in the large, medium and small IT companies considered quality of work life as in the moderate level. The employees working in the large IT companies are found to have better work life quality compared to the medium and small IT companies.
13. The park wise analysis indicates that the level of quality of work life perceived by most of the employees working in the Technopark, Infopark and Kinfrapark is moderate. The employees working in the Technopark are ascertained to have a better work life quality compared to the other two parks.
14. Most of the employees' working as Software Engineers, Senior Software Engineers, Tech/Business Analyst, Team Leaders and Software Architect are assessed to have a moderate level of work life quality. The employees working as Business Analyst are found experiencing a better quality of work life followed by Team Leaders and then by Senior Software Engineers.
15. Adequate and Fair compensation differs among the various age groups of the employees. It is found different between age group 1 (25 years and below) and age group 2 (26 – 30 years); and age group 1 (25 years and below) and age group 3 (31 – 35 years) of the employees working in the IT sector.
16. Organizational communication significantly varies among various age groups of the employees. It is ascertained differences among the age group 1 (25 years and below) and age group 2 (26 – 30 years); age group 2 (26 – 30 years) and age group 5 (Above 40 years); and age group 3 (31 – 35 years) and age group 5 (Above 40 years) from the IT employees in Kerala.
17. Attitude of Management is found to differ among various monthly income groups of employees. It is found significantly different between the income group 1 (Below Rs 20,000) and income group 3 (Rs 30000- 40000); and income group 2 (Rs 20000-30000) and income group 3 (Rs 30000- 40000) among the employees working in the IT sector.

18. Working environment varies among the different categories of work experience among the employees. Working environment differs among the work experience category 1 (Up to 2 Yrs) and category 2 (2 yrs- 4 yrs) among the IT employees.
19. Adequate and fair compensation is found to vary among different categories of education among the employees. It significantly varies among the educational categories 1 (Plus two) and category 6 (Others); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 6 (Others); category 4 (B Sc) and category 6 (Others); category 5 (M Sc) and category 6 (Others) among the IT sector employees.
20. Employee development varies among the various categories of education among the employees working in the IT sector. It is different among the education categories of 2 (B Tech) and category 5 (M Sc); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 6 (Others); and category 5 (M Sc) and category 6 (Others) of the employees working in the IT sector.
21. Total life space differs among the various categories of education among the employees. It is significantly different among the category 2 (B Tech) and category 4 (B Sc); category 3 (M Tech) and category 5 (M Sc); and category 4 (B Sc) and category 5 (M Sc) of education among the IT employees.
22. Quality of work life is perceived as differently among the male and female employees working in the IT sector. The variables - Adequate and fair compensation and Job security differs significantly among the male and female employees working in the IT sector.
23. Quality of work life is ascertained different among the married and unmarried IT employees. The variables, Adequate and fair compensation and Fair treatment, is significantly different among the married and unmarried employees working in the IT sector in Kerala.

7.7.2 Employee Satisfaction

1. The level of employee satisfaction among the employees working in the IT sector in Kerala is found moderate. The majority of the employees (47.8%) viewed it as in moderate level while 27.1% employees viewed it as high and 25.1% employees treated employee satisfaction as low level.
2. The employee satisfaction is assumed to partially mediate the relationship between quality of work life and employee turnover among the IT sector employees. The employee satisfaction is taken as a mediating variable that reduced the effect of quality of work life on employee turnover among the IT employees.
3. The employee satisfaction is ascertained to be positively correlated to the employee turnover. The correlation coefficient value of the relationship between employee satisfaction and employee turnover is .123 and the effect size indicates that the relationship is assumed to be small.
4. The employee satisfaction is found to have an effect on the turnover of the employees. The β coefficient value is .22 which means employee satisfaction is having a significant positive effect on the turnover of the employees working in the IT sector. The employees working in the IT sector may be having alternative job alternatives available to them. If the employees get a better job opportunity, they will definitely leave their present job even if they are satisfied with their job. Hence the employees working in the IT sector are having a small positive relationship with the employee turnover.
5. The correlation coefficient value of welfare activities is .735 and is considered as the most important variable relating to the employee satisfaction. The Pay is the second important variable related to the employee satisfaction which is followed by adequate training and recognition and appreciation.
6. The variables, Pay and Recognition and Appreciation are found to be moderate among the majority of the employees working in the IT sector.

These variables are then viewed as high level by the employees which, is then followed by low level among the IT employees.

7. IT employees are ascertained to be satisfied with the welfare activities provided by their organizations since most of the respondents (37%) viewed it as high followed by the moderate level and then the low level.
8. Most of the employees are moderately satisfied with the training provided by their organizations since 40% employees responded it as moderate. The adequate training is then viewed as low (31.4%) by the employees, which, is then followed by high level (28.5%) as regarded by the employees.
9. Both the male and female employees working in the IT sector have moderate level of employee satisfaction since the majority of the male employees (48.2%) and female employees (47.3%) are having satisfaction level at moderate level. Besides, the female employees are found more satisfied in their jobs compared to the male employees.
10. Employee satisfaction is found moderate among the employees working in the three IT parks – Technopark, Infopark and Kinfrapark. Park wise analysis reveals that Infopark employees are having more employee satisfaction level compared to the other two IT parks. No employee working in the Kinfrapark is found to have a high level of satisfaction.
11. Employees working in the large, medium and small IT companies are ascertained as moderately satisfied in their jobs. Besides, the employees working in the medium IT companies are having better employee satisfaction level compared to the large and small IT companies.
12. Employees working as Software Architect, Business Analyst, Team Leader, Senior Software Engineer and Software Engineers have moderate level of employee satisfaction. The employees working as Business Analyst are found to have better employee satisfaction level followed by Software Engineers and then by employees working as Team Leaders.

13. The variable Pay is ascertained different among the various age groups of the employees. It significantly differs among the age group 1 (25yrs and Below) and age group 2 (26 – 30 yrs); and age group 1 (25yrs and Below) and age group 3 (31 – 35 yrs) of the IT sector employees.
14. Employee satisfaction remains the same among the different categories of the work experience of the employees working in the IT sector. This implies that the work experience has no role in determining the satisfaction among the IT employees.
15. Adequate training differs among the monthly income groups of the IT employees. It is found different among the monthly income groups 1 (Below Rs 20,000) and group 3 (Rs 30000- 40000); group 2 (Rs 20000- 30000) and group 3 (Rs 30000- 40000); group 3 (Rs 30000- 40000) and group 5 (Rs 50000 and Above); and group 4 (Rs 40000- 50000) and group 5 (Rs 50000 and Above) of the employees working in the IT sector.
16. Welfare activities are perceived as different among the IT employees. It significantly varies among the educational category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 4 (B Sc); category 3 (M Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector.
17. Employee satisfaction is found different among the education category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 4 (B Sc); category 3 (M Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the IT sector employees.
18. Adequate training significantly varies among the different categories of education among the IT sector employees. It is found differently among the educational category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector.

19. Employee satisfaction is ascertained different among the male and female employees working in the IT sector. The variable, welfare activities, is perceived as differently among the male and female employees.
20. Employee satisfaction is perceived differently among the married and unmarried employees working in the IT sector. The variable pay significantly varies among the married and unmarried IT employees.

7.7.3 Employee Turnover

1. The employees working in the IT sector perceived overall employee turnover as moderate. The majority of the employees considered the employee turnover as moderate among the employees, which is then regarded as high level followed by low level among the employees.
2. Work stress is found to be the most important variable relating to the employee turnover in the IT sector. The work life imbalance is the second important factor affecting the employee turnover, which is then followed by the health problems, workplace relations and economic conditions. Thus, it can be ascertained that the work stress is an important predictor of turnover among the IT employees since the employee turnover increases with the increase in the employees' work stress.
3. Employee turnover is perceived as moderate among the male and female employees working in the IT sector. The employee turnover is perceived as high among the female employees compared to the male employees working in the IT sector in Kerala.
4. The variables, Work stress, Work life imbalance and health problems are ascertained as moderate among the IT employees. The majority of the employees perceived these variables as moderate which are then considered as high and as low among the employees working in the IT sector.
5. The majority of the IT employees (43.6%) perceived economic conditions as a low reason for causing turnover among the employees. 37% employees considered it as a moderate reason for turnover while 19.4% employees regarded it as high reason causing employee turnover in the IT sector.

6. Workplace relations are considered as moderate among the IT employees since most of the employees (34.6%) responded it as moderate, 34.5% employees viewed it as low level and 30.9% treated it as high among the employees working in the IT sector.
7. The employee turnover is perceived as moderate among all the three IT parks – Technopark, Infopark and Kinfrapark. The employee turnover is viewed as high among the employees working in the Kinfrapark compared to the other two IT parks.
8. Employee turnover is perceived as moderate among the employees working in the large, medium and small IT companies. The perception of employee turnover is high among the employees working in the small IT companies compared to the large and medium IT companies.
9. Employees working as Software Architect, Business Analyst, Team Leader, Senior Software Engineer and Software Engineer considered the employee turnover as moderate among the employees. Employee turnover is perceived as high among the Software Engineers followed by the employees working as Software Architects and then by Business Analysts.
10. Employee turnover is found significantly different between the age group 1 (25yrs and Below) and group 2 (26 – 30 yrs); group 1 (25yrs and Below) and group 5 (Above 40 yrs); group 2 (26 – 30 yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.
11. Health problems are perceived different among the various age groups of the IT employees. It significantly varies between the age group 1 (25yrs and Below) and group 4 (36 – 40 yrs); group 1 (25yrs and Below) and group 5 (Above 40 yrs); group 2 (26 – 30 yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.
12. Economic conditions are found different among the various age groups of the IT employees. It is found significantly different between the age group

1 (25yrs and Below) and group 5 (Above 40 yrs); group 2 (26 – 30 yrs) and group 4 (36 – 40 yrs); group 2 (26 – 30 yrs) and group 5 (Above 40 yrs); group 3 (31 – 35 yrs) and group 4 (36 – 40 yrs); group 3 (31 – 35 yrs) and group 5 (Above 40 yrs); and group 4 (36 – 40 yrs) and group 5 (Above 40 yrs) of the employees working in the IT sector.

13. The variable, workplace relations, is found to vary significantly among the age group 2 (26 – 30 yrs) and group 4 (36 – 40 yrs); group 3 (31 – 35 yrs) and group 4 (36 – 40 yrs) of the employees working in the IT sector in Kerala.

14. Economic conditions differ among the various categories of work experience of the IT sector employees. It significantly varies among the work experience category 1 (Up to 2 Yrs) and category 3 (4- 6 yrs); category 1 (Up to 2 Yrs) and category 5 (8 yrs and Above); category 2 (2- 4 yrs) and category 3 (4- 6 yrs); category 2 (2- 4 yrs) and category 5 (8 yrs and Above) of the IT sector employees.

15. Workplace relations significantly vary among the different categories of work experience of the IT employees. It is ascertained different between the work experience category 1 (Up to 2 Yrs) and category 4 (6- 8 yrs); category 1 (Up to 2 Yrs) and category 5 (8 yrs and Above); category 2 (2- 4 yrs) and category 4 (6- 8 yrs); category 2 (2- 4 yrs) and category 5 (8 yrs and Above) of the employees working in the IT sector.

16. Workplace relations are perceived differently among the various groups of monthly income of the employees working in the IT sector. It significantly differs between the monthly income group 1 (Below Rs 20,000) and group 2 (Rs 20000-30000); group 1 (Below Rs 20,000) and group 3 (Rs 30000-40000); group 1 (Below Rs 20,000) and group 5 (Rs 50000 and Above); group 2 (Rs 20000-30000) and group 5 (Rs 50000 and Above); group 3 (Rs 30000- 40000) and group 5 (Rs 50000 and Above); and group 4 (Rs 40000-50000) and group 5 (Rs 50000 and Above) of the employees working in the IT sector.

17. Economic conditions are found to vary among the different categories of education of the IT sector employees. It significantly differs between the

education category 1 (Plus two) and category 2 (B Tech); category 1 (Plus two) and category 3 (M Tech); category 1 (Plus two) and category 4 (B Sc); category 1 (Plus two) and category 5 (M Sc); and category 1 (Plus two) and category 6 (Others) of the employees working in the IT sector.

18. Workplace relations are ascertained different among the various categories of education of the IT sector employees. It varies between the education category 1 (Plus two) and category 3 (M Tech); category 1 (Plus two) and category 4 (B Sc); category 2 (B Tech) and category 3 (M Tech); category 2 (B Tech) and category 6 (Others); category 3 (M Tech) and category 5 (M Sc); category 3 (M Tech) and category 6 (Others); and category 4 (B Sc) and category 6 (Others) of the employees working in the IT sector in Kerala.

19. Employee turnover is perceived differently among the male and female IT employees. The variables, work life imbalance and economic conditions, is found different among the male and female employees working in the IT sector in Kerala.

20. Employee turnover differs among the married and unmarried employees working in the IT sector. The variables, work stress and work life imbalance, is perceived differently among the married and unmarried IT sector employees.

Thus, this section concludes by stating the findings with regard to the study. The findings are explained based on the variables used in the study.

Section B

The present study concludes in this section. The suggestions of the study are explained after this section.

7.8 Conclusion

The employees working in the IT sector are found having a moderate level of work life quality since they may not be satisfied with the facilities offered by their organization to promote their working environment. Besides, the

organizations may not be providing fair compensation for the employees. The employees' personal life should be duly considered by the organization while assigning them duties or otherwise it will adversely affect their personal life which may have its effect on the employees' work life quality. The organization should also recognize the skills of their employees and should create opportunities for the skill development and self expression of the employees working there which will add to their career advancement. If these factors are not considered by the organization, it will adversely affect the work life quality of their employees. The quality of work life is found to have a significant direct relationship with the employee satisfaction and an inverse relationship with the turnover of employees in the present study. The work life quality should be enhanced at any cost since it may lead to the satisfaction of the employees and if not, will result in the turnover among the IT sector employees.

The satisfaction level of the employees working in the IT sector is found moderate among the employees. The employees may not be satisfied with the pay and incentives offered by their organization. The organization should always recognize the good work done by their employees and properly reward them on achieving their targets. Besides, the organization should provide adequate welfare activities like maternity leave to the female employees, refreshment facilities for the employees etc to motivate their employees. The employees should be given adequate training regularly, based on their convenience to make them familiarize with the sophisticated technologies adopted by their organizations. The organizations are required to adopt adequate strategies to enhance the satisfaction level of their employees, thereby making them committed towards their organization.

The employee turnover is perceived as moderate among the employees working in the IT sector. The work stress, work life imbalance and health problems are found to be the major causes of turnover among the IT employees. The majority of the employees are having stress relating to their work which has its effect on their personal life. The employees are assigned projects which they have to achieve within the stipulated time, causing stress on the employees. They have to work even late night for fulfilling their projects which have its effect on their

family life. The employees are often tired to fulfill their family commitments along with their work. Hence the work life imbalance can be viewed as an important cause of employee turnover in the IT sector. The employees are further having many health related problems on account of their work. The employees have to sit long hours which may have its effect on their health. Since they have to continuously look at the screen of their monitor, they have problems related to their eyes. They are suffering from digestive problems as well. The work schedule is another factor affecting the employees. The employees need a flexible working schedule which may reduce their work stress since they can work freely at their leisure time. Such strategies are to be implemented by the organizations to retain their existing employees and thereby reducing the turnover among the employees to a minimal level. Hence, the organizations should adopt strategies necessary to enhance the work life quality of their employees since work life quality is found to have an inverse relationship with the employee turnover. Only if the work life quality of the employees is enhanced, the employees will stay committed and loyal towards their organization which in turn will reduce the turnover among the employees working in the IT sector in Kerala.

Section C

Section C provides the suggestions to improve the work life quality of the employees, to reduce their work stress, health problems and also to minimize the turnover among the employees working in the IT sector based on the findings and conclusions of the study.

7.9 Suggestions

The suggestions of the study are mainly intended to the policy makers and the management since they are the authorities who are supposed to implement these measures as suggested by the researcher. The suggestions of this study are as follows.

7.9.1 To the Policy Makers:

1. The IT companies operating in Kerala come under the purview of Kerala Shops and Commercial Establishments Act. This Act is framed according

to the work situations prevailing earlier in our society. With the innovation of the sophisticated technologies, mainly due to the IT revolution, the work situation has changed considerably. The employees working in the IT sector are supposed to work beyond their fixed working schedule in order to complete their projects within the stipulated time. Besides, the employees have to work even on the holidays declared by the government. Considering this work culture, a separate Act should be implemented (with regard to working hours, casual leave, etc) for the employees working in the IT sector to incorporate the employees with their work culture prevailing in the IT sector.

2. The grievances or complaints of the employees working in the IT sector come under the purview of the Labour officer and if not resolved, the employees are supposed to approach the judiciary for settling their grievances and this process may take a long time in resolving their grievances. Hence a Grievance Redressal Machinery is to be implemented and regulated by the state government only for considering and redressing the grievances of the employees working in the IT sector and that too within a short period of time.
3. The Capability Maturity Model Integration (CMMI) levels in the IT sector indicate the growth of an organization; or the ability of an organization to perform and complete the software projects assigned to them. There are five levels of CMMI. It is generally believed that the predictability, effectiveness and control of an organization's software process, improve as the organization moves up the CMMI levels. Hence the IT companies are to be grouped on the basis of their CMMI levels and the companies coming under each group should be provided with a separate unique compensation policy to their employees working under different designations. By implementing this, a Common Compensation Policy can be adopted in the IT sector. This will prevent the disparities in the compensation provided to the employees working in the same designation since the compensation offered to them changes from company to company. By adopting this

Common Compensation policy, the turnover of the IT employees based on the compensation can be reduced to a minimal level.

4. A Full fledged database of the employees working in the IT sector is to be maintained in the Labour Commission office functioning under the government of Kerala. The government should insist the park authorities (appointed by the state government) to keep a proper record of the new employees joining the companies, employees currently working in different companies, employees leaving the companies etc and should be updated regularly. Such data is not available even with the park authorities and the Labour commission should strictly ensure if it is maintained or not.
5. The Labour commission with the assistance of the respective park authorities should appoint a Committee to verify the work environment or the work situations provided by different companies to their employees in various IT parks operating in Kerala. The committee can conduct a surprise visit to the IT companies and can organise discussions with the IT employees on their views to improve the working environment or conditions, working time etc so that the authorities can take decisions or frame policies accordingly.

7.9.2 To the Management:

1. The management should organise an Employee wellness committee for ensuring the health and wellbeing of the employees working in the organizations. An employee from each department should be appointed to this committee. This committee is meant to report the worries, tensions and stress faced by the employees working there and suggest the management to adopt such programmes that will reduce their tension and worries and thereby enhancing their physical as well as psychological wellness.
2. The management shall try to acquire patents for the technological inventions or the innovative ideas put forward by the employees working in the organization. The manager by taking this initiative is promoting the employees since they feel appreciated for the work done by them and feel

motivated for further achievements in their work. This may lead to their work satisfaction and enhance their work life quality.

3. The management with the help of the employees shall try to organise technological fest thereby enabling other organizations to participate in this fest and foster the new and innovative ideas put forward by the employees. Proper rewards should be offered for the participants who have creative ideas in this field. Such programmes will promote the individual creativity of the employees and they will stay committed to the organization.
4. Training programmes should be made mandatory in every organization. The employees should be provided with adequate skill development programmes, training and seminars for their career development. The training programmes are to be arranged regularly according to the requirements of the employees so that they can stay put with the sophisticated technologies adopted by the organization.
5. The management can organise the work restructuring practices in the organization whereby, the employees are provided with opportunities to perform new tasks which are performed in other jobs or higher levels along with their current jobs. This will enable the employees to acquire the skills and abilities to perform such jobs which may result in their career development and may in turn enhance their work life quality.
6. Women counselling cell can be established in the organizations so that the problems faced by the female employees can be well-known. The female employees' problems with regard to their work stress, personal matters, harassment in the work place, etc can be understood and, thereby, proper advices and remedies can be enforced to resolve such problems. All these activities will lead to a better work life among the female employees.
7. Women employees shall be exempted from the night shifts, especially, the married employees since the women employees are often seen leaving their jobs in the IT sector after their marriage. The married employees need to fulfil their responsibility towards their children and spouse along with their

work and hence they have to maintain a balance between their work and family life.

8. Working at home facilities should be offered to the employees working in the IT sector. By adopting such practices, the organizations can reduce the work stress faced by their employees at their workplaces. Employees, especially the women employees can work at their leisure at home, thereby, enabling them to balance their work life with their family life.
9. A grievance handling system should be strictly implemented in each and every organization whereby an employee can raise his complaints with regard to his work, physical environment, compensation, benefits, leaves, etc with the managers and immediate actions are to be taken by the management to resolve these issues, thereby ensuring the employees' work life quality in the organizations.
10. The managers can implement job enrichment practices in the organization so that the employees are often given challenging tasks, decision making power, etc to make them motivated and thereby, enhancing the work life quality of the employees.
11. Flexi-time practices should be enforced in the organization so that the employees are allowed to work at their own time instead of the tight working schedule prevailing in the organization. The employees are supposed to complete their projects assigned to them within the stipulated time and hence they feel highly stressed if they have to work within this schedule. By adopting such practices the employees are relieved from the work stress causing mental strain to them.
12. Every organization must provide yoga classes, meditation classes and stress management training to the employees for effectively handling the stress faced by them at work. The stress management techniques can be adopted by the organizations and regular feedback shall be taken to evaluate the same. Sufficient changes need to be incorporated into the technique with regard to the feedback collected from the employees.

13. A night shift of the employees at work is seen as unavoidable in the IT sector. The manager is therefore supposed to ensure that the night shift of employees does not last for a long period of time instead it should be allotted for only a short period for every employee working in the organization.
14. Through the employee intervention practices, the manager can delegate their responsibilities and work with the employees and can provide valuable suggestions about the work, thereby, making them capable of doing that work effectively which will increase the self confidence of the employees. By dividing the work load, the managers are supposed to relieve the employees out of their stress and strain caused by their heavy work load. The employees are empowered to undertake any future responsibilities which positively influence their quality of work life through the employment of such practices in the organization.
15. The employees are assigned to various projects in their organizations which are to be accomplished as a team. The team is headed by a leader as selected by the management and hence every employee should be given a chance to head the project once, as a team leader. The employees may feel approved and valued in their abilities and will work hard to accomplish the project assigned to them as a team leader.
16. Both the husband and wife employed in the IT sector should be allotted work at the same time otherwise it will affect their personal life. The couples working in this sector are not willing to have children due to the stress and strain caused by their work. Hence the management should give due consideration to the couples working in this sector and allot them work at the same time.
17. Every organisation must strictly provide the following activities to ensure the health and well being of the employees at work which include
 - Gymnasium centre
 - Art of living programmes

- Yoga centre
- Health club
- Fitness club
- On-site doctor facility
- Medical insurance, etc.

Though the large IT organizations are offering such facilities to their employees, not all organisations are providing these. Hence every organization (especially the small IT companies) should strictly offer such facilities to their employees for their well being and to reduce their work related stress. This will reduce the turnover among the employees working in the small IT companies.

18. Competency mapping can be done by the management whereby the specific skills, abilities, capabilities and behaviour of the individual employees are identified. The managers can then provide jobs to the employees on the basis of their ability to do that job, thereby making them achieve the results as desired by the organization. This will lead to the better performance of the employees and will increase their work satisfaction as well.
19. Employee turnover is found influenced by the different age groups of the employees. The organization should therefore consider the ages of the employees while framing strategies to retain the employees working there. Separate policies are to be framed for the youngster employees, middle aged employees and for the senior employees working in an organization so as to make them stay committed to the organization.
20. Education is found to influence the compensation among the IT sector employees. Hence, while framing the compensation policies the educational qualification of the employees should be considered and the employees having higher qualification should be given higher compensation compared to the other employees in the same designation.

21. The management must strictly ensure the various welfare activities for promoting the employees working in their organization which may include

- Free education and scholarships to the children
- Foreign tour with the family
- Family get together of the employees
- Crèche/ Day care facilities for the children
- Fun at work place events
- Cultural programmes
- Music and other entertainments, etc

The implementation of such programs will reduce the stress level of the employees and will enhance their work life quality.

22. Education is found influencing the satisfaction of the employees working in the IT sector. The employees having higher qualification should be recognized and should be provided with more opportunities for their career advancement, individual development, etc and should be promoted to a higher position on the basis of their performance and decision making ability. This will enhance the satisfaction level of the employees since they feel recognized by the management and will stay loyal towards their organization.

Thus, this section is concluded by stating the suggestions provided by the researcher based on the findings and observations done among the employees working in the IT sector in Kerala.

7.10 Areas for Further Research

The researcher after reviewing the related studies proposes the following areas for further research:

1. Quality of work life and its effect on Employee Satisfaction and Employee Turnover among the BPO sector employees in Kerala.

2. Effect of Quality of work life on Employee Performance among the employees working in the IT/ ITES sector.
3. Effect of Human Resource Practices on the Quality of work life among the female employees working in the IT/ ITES sector in Kerala.
4. Effect of Human Resource Practices on the Employee satisfaction among the IT/ ITES sector employees in Kerala.
5. Employee Retention strategies and its effect on the Employee Satisfaction among the IT/ ITES sector employees in Kerala.
6. Employee Retention strategies and its effect on the Employee turnover among the IT/ ITES sector employees in Kerala.
7. The Talent Management practices and its effect on Employee Satisfaction among the employees working in the IT/ ITES sector in Kerala.

The chapter is, thus, concluded by stating the areas for further research identified by the researcher during the course of this study.

APPENDIX I

As per the **National Industrial Activity Code (NIC) – 2004**, the operations of the IT companies selected for the study falls under the following groups.

Group 722: Software publishing, consultancy and supply [Software publishing includes production, supply and documentation of ready-made (non-customized) software, operating systems software, business & other applications software, computer games software for all platforms. Consultancy includes providing the best solution in the form of custom software after analyzing the user's needs and problems. Custom software also includes made-to-order software based on orders from specific users. Also, included are writing of software of any kind following directives of the users; software maintenance, web-page design].

Class 7221: Software publishing

Subclass **72211:** Production, supply and documentation of ready-made (non-customized) software

Subclass **72212:** Production, supply and documentation of ready-made (non-customized) operating systems software

Subclass **72213:** Production, supply and documentation of ready-made (non-customized) software for business & other applications, where the application is by & large spelt out clearly

Subclass **72214:** Production, supply and documentation of ready-made (non-customized) computer games software for all platforms

Class 7229: Other software consultancy and supply

Subclass **72291:** Analysis, design and programming of custom software, ready to use, including analysis of the user's needs and problems, consultancy on the best solution and production of software to realize this solution

Subclass **72292:** Development, production, supply and documentation of made-to-order soft-ware based on orders from specific users

Subclass **72293:** Writing of programmes of any kind following directives of the users

Subclass **72294:** Web-page designing

Subclass **72295:** Software maintenance.

APPENDIX II

List of the IT companies selected from the Technopark

SI No.	Name of the IT Company	Type of IT Company
1	Phykon Solutions Ltd	Large IT Company
2	Polus Software Private Limited	
3	Speridian Technologies Private Limited	
4	Allianz Cornhill Information Services Private Limited	
5	IBS Software Services Private Limited	
6	Experion Technologies India Private Limited	
7	Oztern Technology Private Limited	
8	Dimensions Corporation India Private Limited	
9	Ariva Med Data Infotech Private Limited	
10	Transversal E Networks Private Limited	
11	Attinad Software Private Limited	Medium IT Company
12	Sigtech Wireless Technologies Private Limited	
13	Macrosoft IT Solutions India Private Limited	
14	Stabilix Technologies Private Limited	
15	Mobatia Technology Private Limited	
16	Rainconcert Technologies Private Limited	
17	Experion Transtech Solutions Private Limited	Small IT Company
18	ERS Software Technology Private Limited	
19	Akira Software Solutions Private Limited	
20	Finware Technologies Private Limited	
21	Zoondia Software Private Limited	
22	Optiologic Technologies Private Limited	
23	Founding Minds Software Private Limited	
24	Infoblox Technical Support and Software Development Private Limited	

Sl No.	Name of the IT Company	Type of IT Company
25	Pivotsys Technologies Private Limited	
26	Sparkling Design and InfoTech Private Limited	
27	GD Innovative Solutions Private Limited	
28	Futurepoint Solutions Private Limited	
29	Cell Technologies Private Limited	
30	Softex Digital Private Limited	
31	IBS Technologies Private Limited	
32	P I T Solutions Private Limited	
33	Proxy Systems Private Limited	
34	D H Solutions Private Limited	
35	Impulse Software India Private Limited	
36	Palnar Transmedia Private Limited	
37	Pentacircle Informatics Private Limited	

List of the IT Companies Selected from the Infopark

Sl No.	Name of the IT Company	Type of IT Company
1	Thinkpalm Technologies Private Limited	Large IT Company
2	ECOMM IT Labs Private Limited	
3	QMIS Systems Private Limited	Medium IT Company
4	V I Point Solutions Private Limited	Small IT Company
5	UST Global Technology Services India Private Limited	
6	Cool Minds Technologies Private Limited	
7	Visual IQ Techno Services India Private Limited	
8	LSG India Private Limited	
9	DOT Peripherals India Private Limited	
10	Asterisks Software Private Limited	
11	Fingent Technology Solutions Private Limited	
12	Nuvento Systems Private Limited	
13	Apps Team Technologies Private Limited	
14	Braddock InfoTech Private Limited	

Sl No.	Name of the IT Company	Type of IT Company
15	Systalent Software Private Limited	
16	Yoptimizo IT Solutions Private Limited	

List of the IT Companies Selected from the Kinfrapark

Sl No.	Name of the IT Company	Type of IT Company
1	Sweans Technologies Private Limited	Large IT Company
2	Emysys Technologies Private Limited	Small IT Company
3	Digifour Technologies Private Limited	
4	Diligenz System Integrators India Private Limited	
5	Axon Web Solutions Private Limited	
6	Cybrosys Techno Solutions Private Limited	

APPENDIX III

The following questionnaire relates to the measuring of the Quality of Work Life of the IT employees. The information will be used as part of the PhD work conducted by **Remya P R**, Research Scholar, DCMS, University of Calicut and will be kept confidential. Your co-operation is greatly appreciated. Please answer as honestly as possible.

QWL Profile:

Please evaluate your experience in this organization and mark if you strongly agree to strongly disagree in the following statements.

Strongly Agree – SA

Agree – A

Neither Agree or Disagree – NA

Disagree – DA

Strongly Disagree – SD

Statements	SA	A	NA	DA	SD
1. I am satisfied with the current income from work.					
2. The income I receive does not match with the effort I take in my job.					
3. I am satisfied with the chances for salary hike in my job.					
4. My income justifies my cost of living.					
5. I have a comfortable personal work space.					
6. I feel physically safe in my work area.					
7. My physical work environment enables me to do my job effectively.					
8. The organization has clarified me about my duties and responsibilities.					
9. Adequate clarity and transparency in communication is prevailing in this organization.					
10. I get correct information about the work process and its results.					

Statements	SA	A	NA	DA	SD
11. I receive adequate freedom in my work.					
12. I have freedom to take decisions regarding the job and to implement them.					
13. My idea to make new changes in the organization is appreciated.					
14. Employees are encouraged to experiment with new methods and creative ideas.					
15. I have plenty of opportunities to try my innovative ideas in this organization.					
16. Management provides opportunities to express my view in decision making.					
17. Opportunity for periodic change in duties is also provided in this organization.					
18. My work enhances my individual creativity.					
19. The organization provides facility for the self improvement of the employees.					
20. I often get opportunities to improve my job.					
21. My job provides me opportunities to develop new skills.					
22. I am satisfied with the growth chances provided by the company.					
23. I strongly believe my career is developed after working here.					
24. The organization insists different approaches to work according to the nature of job and ability of the worker.					
25. Proper training is given to familiarize with sophisticated/ new technologies.					
26. My job offers a lot of opportunities for career advancement.					
27. I receive equal treatment in all matters in the organization.					
28. People can speak up and voice their opinions frankly without fear of being punished.					
29. Performance appraisal is done here on the basis of objective assessment than on favouritisms.					

Statements	SA	A	NA	DA	SD
30. Members are identified purely on the basis of skill and potentialities without regard to race, age, sex etc.					
31. I am happy with my personal/ family life.					
32. My job allows time to fulfill my family commitments and other interests.					
33. I get enough time to spend with my family.					
34. I can take leave for my personal purposes whenever necessary.					
35. The policies of the organization are fair and employee oriented.					
36. My organization is functioning as a socially responsible unit.					
37. Management supports the employees to make their work more enjoyable.					
38. The management treats the employees humanly.					
39. My organization enhances my social prestige.					
40. I am satisfied with the security offered to me by the organization.					
41. I strive to achieve the organizations objectives by working hard.					
42. I am happy with the incentives available to me.					
43. The income I receive is fair and adequate when compared to similar organizations.					
44. The organization is providing adequate housing facilities.					
45. The organization is offering yoga sessions for employees to reduce their stress.					
46. The organization provides maternity leave for the women employees.					
47. The organization has also set up an entertainment club for delighting the employees.					
48. The organization is also arranging games, funny quiz programs for refreshing the employees.					
49. Various tour packages are sponsored by the					

Statements	SA	A	NA	DA	SD
organization regularly.					
50. I feel that I am valued at my organization.					
51. I feel my job is meaningful in my organization.					
52. The employees are properly rewarded for their good work.					
53. The employees are appreciated by the management on achieving targets.					
54. Company recognizes the good performance of the employees.					
55. Training helps to improve my productivity.					
56. My organization provides training which is inconvenient for me to attend.					
57. The organization arranges the training programs regularly.					
58. I feel working too hard for the organization.					
59. I feel emotionally upset by the pressure my company put on me.					
60. I feel burned out/ exhausted from trying to meet top management's expectations.					
61. I feel that there is an increase in hour loss after working here.					
62. Work stress affects my family life.					
63. I feel tired while coming back to my home.					
64. My mistakes at work place are often criticized.					
65. I believe that the energy and time spent on the job affect my personal life adversely.					
66. I maintain poor balance between my work and family life.					
67. Work place problems result in short temperedness at home.					
68. The additional commitments or responsibilities at work adversely affect my health.					
69. I feel that I get headache daily.					
70. I feel that I have become lazy.					

Statements	SA	A	NA	DA	SD
71. I suffer from loss of appetite.					
72. I suffer from digestive problems.					
73. The work schedule is affecting my life.					
74. The tight working schedule makes a lot of mental pressure and agony.					
75. The working hours of my job are inconvenient to me.					
76. The recession/depression in the economy affect the employees.					
77. Employees are forced to leave the organization during the economic recession.					
78. Employees have to work at lower compensation than usual during the recession.					
79. I receive adequate support from my co-workers.					
80. Workers views are not considered in resolving the working problems.					
81. I do not receive enough support from my supervisor.					
82. I prefer to accomplish the work individually than in the team.					

Personal Profile:

Name of Company:

Location/ Park: TechnoPark InfoPark, Kochi KinfraPark

InfoPark, Koratty

Age (Employees):

Work Experience :

Monthly Income:

Designation : Business Analyst Team Leader Senior Software

Engineer Software Engineer Software Architect

Others if any specify, _____

Gender : Male Female Others

Education : Plus Two BTech MTech BSc

MSc Others if any specify, _____

Marital Status : Married Unmarried Divorced/ Separated

APPENDIX IV

Quality of Work Life Scale

1. Results of Exploratory Factor Analysis through SPSS 20:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.929
Approx. Chi-Square	12911.251
Bartlett's Test of Sphericity Df	1176
Sig.	.000

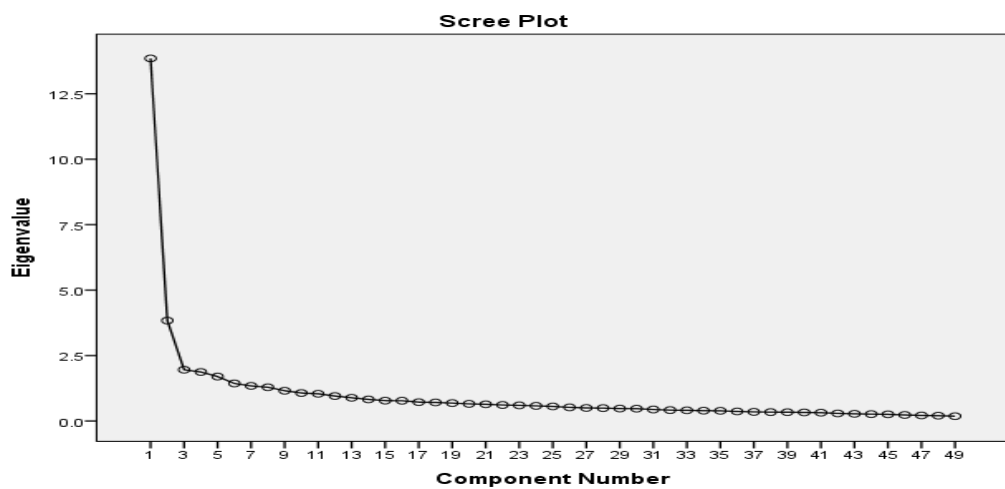
Source: SPSS FA Output

Table Total Variance Explained - QWL

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.852	28.269	28.269	13.852	28.269	28.269	5.940	12.122	12.122
2	3.837	7.830	36.099	3.837	7.830	36.099	5.381	10.982	23.104
3	1.959	3.997	40.096	1.959	3.997	40.096	4.020	8.204	31.308
4	1.874	3.824	43.920	1.874	3.824	43.920	2.946	6.012	37.319
5	1.698	3.466	47.386	1.698	3.466	47.386	2.775	5.663	42.983
6	1.435	2.930	50.315	1.435	2.930	50.315	2.546	5.197	48.180
7	1.341	2.737	53.053	1.341	2.737	53.053	1.725	3.521	51.701
8	1.291	2.635	55.687	1.291	2.635	55.687	1.558	3.180	54.881
9	1.086	2.360	58.047	1.156	2.360	58.047	1.551	3.166	58.047
10	1.071	2.185	60.232						
11	.941	2.024	62.355						
12	.915	1.950	64.305						
13	.888	1.813	66.117						
14	.825	1.684	67.801						
15	.779	1.590	69.391						
16	.776	1.583	70.974						
17	.721	1.472	72.446						
18	.710	1.449	73.895						
19	.685	1.398	75.293						

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
20	.656	1.339	76.632						
21	.640	1.306	77.938						
22	.612	1.249	79.187						
23	.598	1.220	80.408						
24	.578	1.180	81.588						
25	.558	1.138	82.726						
26	.522	1.066	83.792						
27	.499	1.018	84.810						
28	.493	1.006	85.816						
29	.476	.971	86.786						
30	.470	.959	87.745						
31	.440	.897	88.643						
32	.417	.851	89.493						
33	.408	.832	90.326						
34	.396	.808	91.133						
35	.389	.794	91.927						
36	.366	.746	92.673						
37	.349	.713	93.386						
38	.341	.695	94.081						
39	.337	.688	94.769						
40	.328	.670	95.439						
41	.317	.648	96.087						
42	.291	.594	96.681						
43	.275	.561	97.242						
44	.264	.538	97.780						
45	.256	.523	98.303						
46	.231	.471	98.773						
47	.212	.432	99.205						
48	.205	.418	99.623						
49	.185	.377	100.000						

Extraction Method: Principal Component Analysis. Source: SPSS FA Output



Scree Plot of Quality of work life

2. Results of Confirmatory Factor Analysis through Warp PLS 4.0:

2.1 Model fit and quality indices: Quality of Work Life Scale

Average path coefficient (APC) =0.156, P<0.001

Average R-squared (ARS) =0.992, P<0.001

Average adjusted R-squared (AARS) =0.992, P<0.001

Average block VIF (AVIF) =1.773, acceptable if ≤ 5 , ideally ≤ 3.3

Tenenhaus GoF (GoF) =0.753, small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36

Sympson's paradox ratio (SPR) =1.000, acceptable if ≥ 0.7 , ideally = 1

R-squared contribution ratio (RSCR) =1.000, acceptable if ≥ 0.9 , ideally = 1

Statistical suppression ratio (SSR) =1.000, acceptable if ≥ 0.7

Nonlinear bivariate causality direction ratio (NLBCDR) =1.000, acceptable if ≥ 0 .

2.2 Path coefficients

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										
TLS										
JS										
AM										
AFC										
QWL	0.107	0.164	0.206	0.179	0.168	0.162	0.151	0.180	0.085	

2.3 P values

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										

TLS										
JS										
AM										
AFC										
QWL	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.012	

2.4 Standard errors for path coefficients

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										
TLS										
JS										
AM										
AFC										
QWL	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	

2.5 Combined Loadings and Cross Loadings – Quality of Work Life Scale

Items	AFC	WE	OC	AW	ED	FT	TLS	JS	AM	P Value
AFC1	(0.857)	0.524	0.306	0.556	0.417	0.226	0.346	0.572	0.631	<0.001
AFC2	(0.524)	-0.489	-0.531	-0.348	-0.285	-0.353	-0.327	-0.194	-0.358	<0.001
AFC3	(0.745)	0.179	0.248	0.264	0.423	0.465	0.215	0.212	0.169	<0.001
AFC4	(0.755)	0.405	0.367	0.408	0.268	0.252	0.513	0.328	0.414	<0.001
WE1	-0.024	(0.876)	-0.123	-0.017	-0.036	-0.186	-0.170	-0.084	-0.171	<0.001
WE2	0.165	(0.881)	0.220	0.216	0.147	0.135	0.090	0.204	0.196	<0.001
WE3	-0.201	(0.618)	-0.139	-0.283	-0.158	0.070	0.113	-0.173	-0.037	<0.001
OC1	0.190	0.517	(0.826)	0.612	0.512	0.705	0.519	0.514	0.590	<0.001
OC2	0.552	0.811	(0.818)	0.156	0.199	0.118	0.058	0.132	0.203	<0.001
OC3	-0.896	-0.606	(0.679)	-0.097	-0.159	-0.205	-0.905	-0.188	-0.046	<0.001

AW1	-0.701	-0.037	0.129	(0.549)	-0.594	-0.220	-0.302	-0.215	-0.665	<0.001
AW2	-0.337	-0.426	-0.695	(0.668)	-0.136	-0.563	-0.595	-0.589	-0.385	<0.001
AW3	0.005	-0.303	-0.335	(0.730)	-0.413	-0.577	-0.389	-0.318	-0.403	<0.001
AW4	0.080	0.265	0.309	(0.785)	0.447	-0.508	0.391	0.341	0.511	<0.001
AW5	0.104	0.184	0.215	(0.802)	0.348	0.413	0.154	0.235	0.226	<0.001
AW6	0.244	0.383	0.606	(0.755)	0.676	0.046	0.581	0.704	0.509	<0.001
AW7	0.436	0.279	0.367	(0.632)	0.255	0.068	0.331	0.226	0.076	<0.001
ED1	-0.274	-0.077	-0.247	-0.116	(0.633)	-0.086	-0.063	-0.178	-0.166	<0.001
ED2	-0.104	-0.035	-0.170	-0.098	(0.747)	-0.141	-0.229	-0.156	0.018	<0.001
ED3	-0.005	0.240	0.238	0.459	(0.721)	0.472	0.280	0.246	0.408	<0.001
ED4	0.280	0.156	0.236	0.226	(0.789)	0.264	0.326	0.213	0.267	<0.001
ED5	-0.062	0.319	0.135	0.108	(0.773)	0.133	0.228	0.018	0.069	<0.001
ED6	0.390	0.357	0.492	0.432	(0.673)	0.345	0.422	0.516	0.249	<0.001
ED7	-0.035	-0.050	0.146	-0.085	(0.670)	0.002	-0.082	0.010	-0.045	<0.001
ED8	-0.400	-0.206	-0.173	-0.476	(0.573)	-0.384	-0.241	-0.044	-0.179	<0.001
ED9	0.262	0.023	0.089	0.231	(0.712)	0.188	0.080	0.161	0.099	<0.001
FT1	0.087	0.050	0.131	0.193	0.258	(0.857)	0.091	0.138	0.176	<0.001
FT2	0.018	-0.083	-0.068	0.056	-0.088	(0.854)	-0.085	-0.030	-0.165	<0.001
FT3	-0.160	-0.213	-0.388	-0.419	-0.390	(0.829)	-0.304	-0.333	-0.291	<0.001
FT4	0.053	0.256	0.355	0.168	0.222	(0.799)	0.310	0.229	0.289	<0.001
TLS1	0.115	0.533	0.642	0.593	0.562	0.604	(0.815)	0.566	0.645	<0.001
TLS2	0.078	-0.061	0.025	0.042	0.129	-0.008	(0.887)	0.002	-0.022	<0.001
TLS3	0.044	-0.186	-0.149	-0.114	-0.079	-0.044	(0.869)	-0.175	-0.203	<0.001
TLS4	-0.267	-0.288	-0.551	-0.559	-0.667	-0.591	(0.756)	-0.411	-0.437	<0.001
JS1	0.255	0.171	0.448	0.385	0.539	0.157	0.299	(0.742)	0.430	<0.001
JS2	0.356	0.516	0.666	0.546	0.622	0.194	0.296	(0.783)	0.511	<0.001
JS3	-0.655	-0.592	-0.721	-0.175	-0.649	-0.161	-0.134	(0.715)	-0.168	<0.001
AM1	0.019	0.056	0.078	0.117	-0.105	0.335	0.196	0.221	(0.731)	<0.001
AM2	0.082	0.211	0.285	0.205	0.193	0.285	0.049	0.278	(0.765)	<0.001
AM3	-0.066	-0.309	-0.345	-0.386	-0.123	-0.584	-0.309	0.394	(0.768)	<0.001
AM4	-0.034	0.046	-0.012	0.070	0.031	-0.017	0.074	-0.093	(0.765)	<0.001

2.6 Structure loadings and cross-loadings

	WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
WE1	0.876	0.236	0.377	0.363	0.010	0.065	0.160	0.235	0.399	0.301
WE2	0.881	0.224	0.309	0.274	-0.031	0.028	0.134	0.239	0.353	0.315

WE3	0.618	0.399	0.434	0.422	0.441	0.482	0.375	0.426	0.618	0.175
OC1	0.257	0.826	0.363	0.382	0.423	0.325	0.298	0.328	0.553	0.136
OC2	0.251	0.818	0.396	0.469	0.441	0.383	0.398	0.382	0.619	0.226
OC3	0.286	0.679	0.382	0.443	0.283	0.211	0.234	0.291	0.513	0.285
AW1	0.427	0.421	0.549	0.442	0.255	0.287	0.217	0.294	0.520	0.280
AW2	0.343	0.350	0.668	0.313	0.443	0.403	0.369	0.330	0.567	0.186
AW3	0.364	0.346	0.730	0.449	0.289	0.233	0.288	0.383	0.558	0.357
AW4	0.310	0.354	0.785	0.482	0.428	0.367	0.353	0.476	0.624	0.178
AW5	0.390	0.336	0.802	0.499	0.263	0.229	0.288	0.392	0.568	0.250
AW6	0.208	0.368	0.755	0.451	0.527	0.396	0.402	0.442	0.624	0.154
AW7	0.227	0.262	0.632	0.441	0.313	0.217	0.212	0.359	0.476	0.196
ED1	0.297	0.389	0.473	0.633	0.423	0.399	0.373	0.361	0.585	0.130
ED2	0.375	0.391	0.489	0.747	0.312	0.219	0.319	0.433	0.588	0.290
ED3	0.301	0.439	0.553	0.721	0.481	0.386	0.395	0.464	0.657	0.181
ED4	0.304	0.416	0.460	0.789	0.363	0.314	0.329	0.385	0.609	0.382
ED5	0.430	0.429	0.472	0.773	0.332	0.327	0.300	0.327	0.596	0.211
ED6	0.303	0.351	0.360	0.673	0.217	0.197	0.277	0.220	0.472	0.330
ED7	0.232	0.398	0.353	0.670	0.283	0.190	0.268	0.270	0.476	0.198
ED8	0.147	0.314	0.280	0.573	0.202	0.149	0.295	0.281	0.410	0.198
ED9	0.261	0.352	0.450	0.712	0.317	0.223	0.297	0.335	0.539	0.366
FT1	0.117	0.444	0.477	0.467	0.857	0.518	0.438	0.446	0.662	0.167
FT2	0.117	0.430	0.485	0.408	0.854	0.523	0.440	0.376	0.640	0.168
FT3	0.107	0.374	0.388	0.354	0.829	0.515	0.396	0.395	0.590	0.126
FT4	0.098	0.413	0.349	0.323	0.799	0.532	0.392	0.367	0.566	0.062
TLS1	0.179	0.347	0.335	0.276	0.516	0.815	0.403	0.324	0.534	-0.032
TLS2	0.161	0.376	0.407	0.404	0.554	0.887	0.414	0.330	0.612	0.152
TLS3	0.085	0.306	0.337	0.312	0.554	0.869	0.350	0.258	0.533	0.122
TLS4	0.243	0.302	0.351	0.278	0.451	0.756	0.407	0.342	0.538	0.100
IIJ1	0.207	0.355	0.360	0.429	0.318	0.302	0.742	0.399	0.544	0.204
IIJ2	0.229	0.361	0.380	0.325	0.478	0.411	0.783	0.394	0.577	0.119
IIJ3	0.130	0.181	0.225	0.254	0.317	0.339	0.715	0.225	0.407	0.003
AM1	0.171	0.309	0.384	0.268	0.485	0.408	0.427	0.731	0.559	0.171
AM2	0.283	0.347	0.392	0.354	0.344	0.214	0.356	0.765	0.540	0.246
AM3	0.328	0.346	0.442	0.496	0.270	0.228	0.304	0.768	0.575	0.379

AM4	0.283	0.302	0.429	0.360	0.346	0.289	0.300	0.765	0.543	0.236
AFC1	0.213	0.179	0.207	0.246	0.046	-0.011	0.077	0.265	0.275	0.857
AFC2	-0.003	-0.155	-0.140	-0.084	-0.209	-0.266	-0.160	-0.129	-0.156	0.524
AFC3	0.256	0.291	0.324	0.399	0.276	0.175	0.184	0.292	0.436	0.745
AFC4	0.367	0.252	0.305	0.287	0.149	0.196	0.161	0.325	0.404	0.755

2.7 R-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
									0.992

2.8 Adjusted R-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
									0.992

2.9 Average variances extracted

WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
0.642	0.604	0.501	0.493	0.698	0.694	0.558	0.574	0.481	0.466

2.10 Q-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
									0.992

Employee Satisfaction Scale

1. Exploratory Factor Analysis Results:

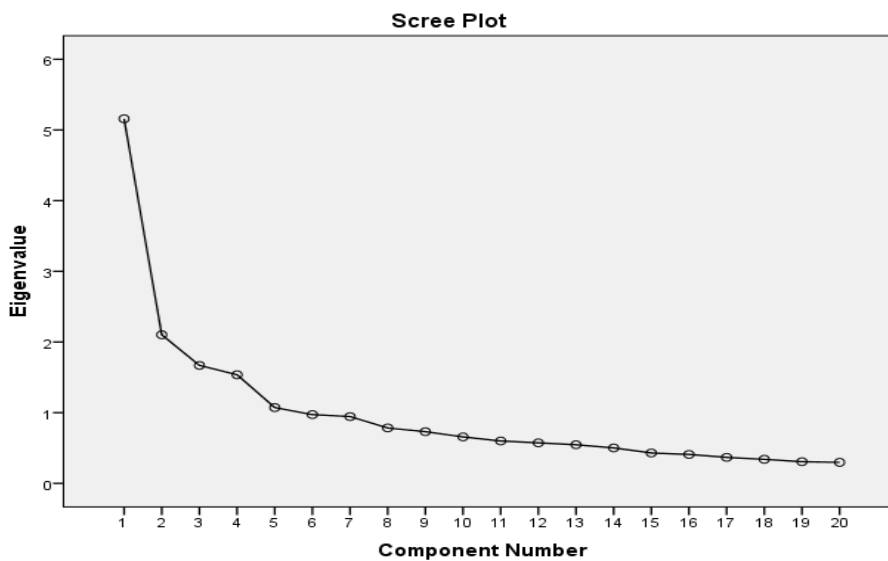
Table KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.831
Approx. Chi-Square	3415.137
Bartlett's Test of Sphericity Df	190
Sig.	.000

Total Variance Explained- Employee satisfaction

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.158	25.790	25.790	5.158	25.790	25.790	3.367	16.833	16.833
2	2.102	10.510	36.300	2.102	10.510	36.300	2.756	13.778	30.612
3	1.669	8.344	44.644	1.669	8.344	44.644	2.296	11.480	42.092
4	1.536	7.682	52.326	1.536	7.682	52.326	2.047	10.234	52.326
5	.986	4.963	57.688						
6	.973	4.863	62.551						
7	.945	4.725	67.277						
8	.784	3.919	71.196						
9	.731	3.657	74.853						
10	.657	3.284	78.137						
11	.600	2.999	81.137						
12	.573	2.863	84.000						
13	.547	2.736	86.735						
14	.501	2.505	89.241						
15	.430	2.151	91.391						
16	.410	2.048	93.439						
17	.368	1.840	95.279						
18	.340	1.701	96.979						
19	.307	1.534	98.513						
20	.297	1.487	100.000						

Extraction Method: Principal Component Analysis. Source: SPSS FA Output



Scree Plot of Employee satisfaction

2. Results of Confirmatory Factor Analysis through Warp PLS 4.0:

2.1 Model fit and quality indices of Employee Satisfaction Scale

Average path coefficient (APC) =0.345, P<0.001

Average R-squared (ARS) =0.993, P<0.001

Average adjusted R-squared (AARS) =0.993, P<0.001

Average block VIF (AVIF) =1.309, acceptable if ≤ 5 , ideally ≤ 3.3

Tenenhaus GoF (GoF) =0.729, small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36

Sympson's paradox ratio (SPR) =1.000, acceptable if ≥ 0.7 , ideally = 1

R-squared contribution ratio (RSCR) =1.000, acceptable if ≥ 0.9 , ideally = 1

Statistical suppression ratio (SSR) =1.000, acceptable if ≥ 0.7

Nonlinear bivariate causality direction ratio (NLBCDR) =1.000, acceptable if ≥ 0.7

2.2 Path coefficients

	PAY	WA	RAA	TR	ES
PAY					
WA					
RAA					
TR					
ES	0.346	0.353	0.349	0.332	

2.3 P values

	PAY	WA	RAA	TR	ES
PAY					
WA					
RAA					
TR					
ES	<0.001	<0.001	<0.001	<0.001	

2.4 Standard errors for path coefficients

	PAY	WA	RAA	TR	ES
PAY					
WA					

RAA					
TR					
ES	0.038	0.038	0.038	0.038	

2.5 Combined Loadings and Cross Loadings – Employee Satisfaction Scale

Items	PAY	WA	RAA	TR	P value
PAY1	(0.823)	0.408	0.383	0.388	< 0.001
PAY2	(0.723)	-0.063	-0.773	-0.031	< 0.001
PAY3	(0.777)	-0.504	-0.646	-0.512	< 0.001
WA1	-0.175	(0.504)	-0.416	-0.174	< 0.001
WA2	0.122	(0.513)	0.348	0.160	< 0.001
WA3	-0.026	(0.806)	-0.034	-0.027	< 0.001
WA4	0.605	(0.837)	0.527	0.674	< 0.001
WA5	0.727	(0.756)	0.630	0.624	< 0.001
RAA1	-0.536	-0.648	(0.520)	-0.662	< 0.001
RAA2	-0.507	-0.386	(0.757)	-0.493	< 0.001
RAA3	0.226	0.168	(0.855)	0.236	< 0.001
RAA4	0.045	0.050	(0.831)	0.058	< 0.001
RAA5	0.565	0.566	(0.834)	0.643	< 0.001
TR1	0.431	0.319	0.591	(0.745)	< 0.001
TR2	-0.386	-0.458	-0.591	(0.624)	< 0.001
TR3	0.562	0.632	0.573	(0.782)	< 0.001

2.6 Structure loadings and cross-loadings

	PAY	WA	RAA	TR	ES
PAY1	0.823	0.318	0.390	0.337	0.638
PAY2	0.723	0.136	0.326	0.139	0.468
PAY3	0.777	0.224	0.192	0.205	0.494
WA1	0.328	0.504	0.193	0.286	0.483
WA2	0.087	0.513	0.212	0.161	0.345
WA3	0.218	0.806	0.294	0.294	0.560
WA4	0.146	0.837	0.337	0.288	0.551
WA5	0.283	0.756	0.311	0.300	0.570
RAA1	0.166	0.077	0.520	0.034	0.251
RAA2	0.211	0.272	0.757	0.199	0.502
RAA3	0.399	0.376	0.855	0.386	0.700
RAA4	0.322	0.332	0.831	0.328	0.624
RAA5	0.339	0.351	0.834	0.375	0.656
TR1	0.237	0.229	0.346	0.745	0.520
TR2	0.132	0.162	0.082	0.624	0.365
TR3	0.254	0.406	0.326	0.782	0.594

2.7 R-squared coefficients

PAY	WA	RAA	TR	ES
				0.993

2.8 Adjusted R-squared coefficients

PAY	WA	RAA	TR	ES
				0.993

2.9 Average variances extracted

PAY	WA	RAA	TR	ES
0.601	0.488	0.573	0.504	0.509

2.10 Q-squared coefficients

PAY	WA	RAA	TR	ES
				0.992

Employee Turnover Scale

1. Results of Exploratory Factor Analysis:

Table KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.914
Approx. Chi-Square	7853.805
Bartlett's Test of Sphericity Df	465
Sig.	.000

1.2 Table Total Variance Explained- Employee Turnover

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.794	31.594	31.594	9.794	31.594	31.594	5.687	18.344	18.344
2	2.107	6.797	38.391	2.107	6.797	38.391	5.006	16.147	34.492
3	1.802	5.812	44.202	1.802	5.812	44.202	2.246	7.246	41.737
4	1.666	5.373	49.575	1.666	5.373	49.575	2.013	6.492	48.229
5	1.463	4.721	54.296	1.463	4.721	54.296	1.881	6.067	54.296
6	.986	3.547	58.443						
7	.954	3.321	62.164						
8	.894	3.046	65.210						
9	.863	2.784	67.994						
10	.763	2.461	70.454						
11	.747	2.410	72.865						
12	.697	2.249	75.114						
13	.663	2.138	77.252						
14	.618	1.993	79.245						
15	.601	1.940	81.185						
16	.585	1.886	83.071						
17	.515	1.662	84.733						
18	.506	1.633	86.366						
19	.461	1.486	87.851						
20	.420	1.354	89.205						
21	.386	1.246	90.451						
22	.374	1.206	91.657						
23	.357	1.152	92.809						
24	.338	1.091	93.901						
25	.335	1.080	94.980						
26	.297	.958	95.939						
27	.280	.905	96.843						
28	.278	.898	97.741						
29	.267	.862	98.603						
30	.226	.730	99.333						
31	.207	.667	100.000						

Extraction Method: Principal Component Analysis. Source: SPSS FA Output



Scree Plot of Employee Turnover

2. Results of Confirmatory Factor Analysis through Warp PLS 4.0:

2.1 Model fit and quality indices of Employee Turnover Scale

Average path coefficient (APC) =0.253, P<0.001

Average R-squared (ARS) =0.993, P<0.001

Average adjusted R-squared (AARS) =0.993, P<0.001

Average block VIF (AVIF) =2.001, acceptable if <= 5, ideally <= 3.3

Tenenhaus GoF (GoF) =0.760, small >= 0.1, medium >= 0.25, large >= 0.36

Sympson's paradox ratio (SPR) =1.000, acceptable if >= 0.7, ideally = 1

R-squared contribution ratio (RSCR) =1.000, acceptable if >= 0.9, ideally = 1

Statistical suppression ratio (SSR) =1.000, acceptable if >= 0.7

Nonlinear bivariate causality direction ratio (NLBCDR) =1.000, acceptable if >= 0.7

2.2 Path coefficients

	WPR	WLIB	HP	WS	EC	ET
WPR						
WLIB						
HP						
WS						
EC						
ET	0.235	0.194	0.323	0.332	0.182	

2.3 P values

	WPR	WLIB	HP	WS	EC	ET
WPR						
WLIB						
HP						
WS						
EC						
ET	<0.001	<0.001	<0.001	<0.001	<0.001	

2.4 Standard errors for path coefficients

	WPR	WLIB	HP	WS	EC	ET
WPR						
WLIB						
HP						
WS						
EC						
ET	0.038	0.038	0.038	0.038	0.038	

2.5 Combined Loadings and Cross Loadings – Employee Turnover Scale

Items	WPR	WLIB	HP	WS	EC	P values
WPR1	(0.577)	-0.532	-0.246	-0.520	-0.597	< 0.001
WPR2	(0.836)	0.115	0.138	0.117	0.110	< 0.001
WPR3	(0.826)	0.147	0.284	0.376	0.110	< 0.001
WPR4	(0.762)	0.140	0.295	0.304	0.201	< 0.001
WLIB1	-0.423	(0.572)	-0.515	-0.680	-0.346	< 0.001
WLIB2	0.085	(0.754)	0.329	-0.140	0.099	< 0.001
WLIB3	0.242	(0.795)	0.384	-0.049	0.192	< 0.001
WLIB4	0.166	(0.786)	0.398	0.270	0.236	< 0.001
WLIB5	-0.060	(0.803)	-0.239	0.061	-0.114	< 0.001
WLIB6	0.012	(0.758)	0.012	0.669	0.104	< 0.001
WLIB7	-0.077	(0.644)	-0.248	-0.100	-0.137	< 0.001
HP1	0.430	0.359	(0.849)	0.408	0.338	< 0.001

Items	WPR	WLIB	HP	WS	EC	P values
HP2	0.131	0.209	(0.813)	-0.058	0.045	< 0.001
HP3	0.176	0.014	(0.815)	0.060	0.182	< 0.001
HP4	0.016	0.012	(0.825)	0.029	0.069	< 0.001
HP5	-0.600	-0.069	(0.678)	-0.049	-0.560	< 0.001
WS1	0.478	0.618	0.598	(0.769)	0.288	< 0.001
WS2	0.701	0.600	0.533	(0.731)	0.521	< 0.001
WS3	0.009	0.036	0.451	(0.789)	0.587	< 0.001
WS4	-0.749	-0.718	-0.006	(0.813)	-0.626	< 0.001
WS5	-0.725	-0.616	-0.010	(0.849)	-0.432	< 0.001
WS6	-0.483	-0.686	-0.686	(0.740)	-0.349	< 0.001
EC1	-0.492	-0.336	-0.567	-0.057	(0.706)	< 0.001
EC2	0.215	0.141	0.227	0.016	(0.886)	< 0.001
EC3	0.189	0.135	0.493	0.032	(0.832)	< 0.001

2.6 Structure loadings and cross-loadings

	WPR	WLIB	HP	WS	EC	ET
WPR1	0.577	0.035	-0.002	-0.010	-0.045	0.085
WPR2	0.836	0.463	0.346	0.469	0.283	0.602
WPR3	0.826	0.448	0.342	0.479	0.220	0.588
WPR4	0.762	0.399	0.303	0.427	0.257	0.540
WLIB1	0.325	0.572	0.309	0.352	0.146	0.446
WLIB2	0.406	0.754	0.564	0.521	0.329	0.660
WLIB3	0.448	0.795	0.529	0.510	0.344	0.663
WLIB4	0.359	0.786	0.489	0.507	0.304	0.618
WLIB5	0.451	0.803	0.471	0.588	0.256	0.661
WLIB6	0.353	0.758	0.434	0.614	0.255	0.622
WLIB7	0.408	0.644	0.428	0.509	0.250	0.581
HP1	0.341	0.614	0.849	0.619	0.250	0.708
HP2	0.331	0.536	0.813	0.505	0.240	0.660
HP3	0.235	0.396	0.815	0.427	0.235	0.580
HP4	0.370	0.556	0.825	0.599	0.332	0.724
HP5	0.315	0.382	0.678	0.529	0.198	0.602

WS1	0.467	0.621	0.502	0.769	0.267	0.685
WS2	0.400	0.489	0.464	0.731	0.250	0.605
WS3	0.358	0.538	0.562	0.789	0.252	0.626
WS4	0.440	0.538	0.546	0.813	0.230	0.715
WS5	0.449	0.577	0.537	0.849	0.347	0.753
WS6	0.436	0.464	0.496	0.740	0.293	0.669
EC1	0.188	0.245	0.130	0.310	0.706	0.374
EC2	0.278	0.307	0.256	0.262	0.886	0.452
EC3	0.266	0.348	0.375	0.309	0.832	0.503

2.7 R-squared coefficients

WPR	WLIB	HP	WS	EC	ET
					0.993

2.8 Adjusted R-squared coefficients

WPR	WLIB	HP	WS	EC	ET
					0.993

2.9 Average variances extracted

WPR	WLIB	HP	WS	EC	ET
0.499	0.540	0.624	0.583	0.659	0.591

2.10 Q-squared coefficients

WPR	WLIB	HP	WS	EC	ET
					0.992

APPENDIX V

1. Descriptive Statistics of Quality of Work Life

Variables	Measurable Indicators	Mean	Std Deviation
Adequate and Fair Compensation	Satisfied with the current income from work.	3.77	1.046
	Income receive does not match with the effort take in job.	3.02	1.117
	Satisfied with the chances of salary hike in job.	3.63	.969
	Income justifies the cost of living.	3.33	1.076
Working Environment	Comfortable personal work space.	4.00	.931
	Feel physically safe in work area.	4.13	.936
	Physical work environment enables to do job effectively.	3.85	.824
Organizational Communication	Organization has clarified about duties and responsibilities.	3.79	.806
	Adequate clarity and transparency in communication is prevailing in the organization.	3.62	.837
	Correct information about work process and its results.	3.72	.874
Autonomy of Work	Receive adequate freedom in work.	3.91	.867
	Have freedom to take decisions about job and to implement them.	3.63	.933
	Idea to make new changes is appreciated.	3.59	.891
	Encouraged to experiment with new methods and creative ideas.	3.75	.851
	Plenty of opportunities to try innovative ideas in organization.	3.62	.877
	Provides opportunities to express view in decision making.	3.54	.922

Variables	Measurable Indicators	Mean	Std Deviation
	Opportunity for periodic change in duties is also provided.	3.47	.880
Employee Development	Work enhances individual creativity.	3.69	.876
	Provides facility for the self improvement of the employees.	3.80	.903
	Get opportunities to improve my job.	3.77	.813
	Satisfied with growth chances provided by the company.	3.60	.959
	Provides opportunities to develop new skills.	3.75	.912
	Strongly believe career is developed after working here.	3.98	.844
	Different approaches to work according to the nature of job and ability of the worker.	3.73	.765
	Proper training to familiarize with new technologies.	3.59	.922
	Job offers opportunities for career advancement.	3.67	.878
Fair Treatment	Receive equal treatment in all matters in the organization.	3.54	.978
	Freedom to speak up and voice opinions frankly without fear of being punished.	3.59	1.024
	Performance appraisal is done based on objective assessment.	3.61	1.106
	Members identified purely on the basis of skill and potentialities.	3.79	1.000
Total Life Space	Happy with personal life.	3.95	.996
	Job allows time to fulfill family commitments.	3.63	1.077
	Get enough time to spend with family.	3.44	1.173
	Can take leave for personal purposes		

Variables	Measurable Indicators	Mean	Std Deviation
	whenever necessary.	3.43	1.101
Attitude of Management	Policies of the organization are fair and employee oriented.	3.52	1.001
	Organization is functioning as a socially responsible unit.	3.58	.919
	Supports employees to make work more enjoyable.	3.55	.917
	Treats the employees humanly.	3.78	.960
Job Security	Organization enhances social prestige.	3.78	.813
	Satisfied with the security offered by the organization.	3.84	.874
	Strive hard to achieve organization's objectives.	3.80	.824
Overall Quality of Work Life		3.6866	.47809

2. Descriptive Statistics of Employee Satisfaction

Variables	Measurable Indicators	Mean	Std Deviation
Pay	Happy with the incentives available.	3.55	1.053
	Income is fair and adequate when compared to similar organizations.	3.56	1.008
	Organization is providing adequate housing facilities.	2.81	1.161
Welfare Activities	Offering yoga sessions for employees to reduce stress.	2.61	1.200
	Provides maternity leave for the women employees.	3.91	1.050
	Organization has set up an entertainment club for employees.	3.35	1.204
	Arranging games, funny quiz programs for refreshing employees.	3.52	1.105
	Tour packages are sponsored by the		

Variables	Measurable Indicators	Mean	Std Deviation
	organization regularly.	3.29	1.140
Recognition and Appreciation	Feel valued at the organization.	3.73	.918
	Feel job is meaningful in the organization.	3.87	.774
	Employees are properly rewarded for their good work.	3.75	.987
	Employees are appreciated on achieving targets.	3.85	.971
	Company recognizes good performance of the employees.	3.84	.923
Adequate Training	Training helps to improve productivity.	3.80	.956
	Provides training which is inconvenient to attend.	3.11	1.102
	Arranges training programs regularly.	3.46	1.075
Overall Employee Satisfaction		3.4765	.54173

3. Descriptive Statistics of Employee Turnover

Variables	Measurable Indicators	Mean	Std Deviation
Work Life Imbalance	Feel working too hard for the organization.	3.29	1.031
	Feel emotionally upset by the pressure put on by company.	2.76	.963
	Feel exhausted from trying to meet top management's expectation.	2.73	.984
	Feel increase in time loss after working here.	2.86	.924
	Work stress affects family life.	2.96	1.071
	Feel tired while coming back to home.	3.18	1.063
	Mistakes at workplace are often criticized.	3.05	1.011
Work Stress	Energy and time spend on the job affect personal life adversely.	3.01	1.064
	Maintain poor balance between work and family life.	2.80	1.088

Variables	Measurable Indicators	Mean	Std Deviation
	Workplace problems result in short temperedness at home.	2.93	1.044
	Work schedule is affecting life.	2.78	1.012
	Tight working schedule makes a lot of mental pressure and agony.	2.68	1.113
	Working hours of the job are inconvenient.	2.51	1.038
Health Problems	Additional responsibilities at work adversely affect health.	2.57	1.027
	Feel get headache daily.	2.82	1.136
	Feel became lazy.	2.89	1.110
	Suffer from loss of appetite.	2.75	1.127
	Suffer from digestive problems.	2.65	1.095
Economic Conditions	Recession in the economy affect the employees.	3.17	1.045
	Employees are forced to leave organization during recession.	2.82	1.024
	Employees have to work at lower compensation than usual during recession.	2.89	1.019
Workplace Relations	Receive adequate support from co-workers.	3.76	.905
	Workers views not considered in resolving working problems.	3.02	1.106
	Do not receive enough support from supervisor.	2.73	1.203
	Prefer to accomplish work individually than in the team.	2.86	1.097
Overall Employee Turnover		2.8839	.61456

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