

**JOB SATISFACTION IN THE SERVICE SECTOR:
MULTIVARIATE APPROACH**

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(168829T)

Degree of Master of Science in Business Statistics

Department of Mathematics

Faculty of Engineering

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DECLARATION OF THE CANDIDATE

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ABSTRACT

Employment plays a vital role in determining the economic wellbeing of both individuals and nations. To achieve this, the job satisfaction of the employee is very important. This study was carried out to identify the factors affecting in deciding the employee job satisfaction level in the service sector in Colombo district. The necessary data were collected from randomly selected 128 individuals via a structural questionnaire and simple random sampling method was used. The analysis found that employee job satisfaction level was significantly influenced by socio-economic factors, income factors and individual factors connected with the employment. The employee job satisfaction is negatively influenced by the financial rewards of the employee with 5% margin of errors. Moreover, it has been found that the employee job descriptions need to be designed based on their qualifications, capabilities and the capacities of the individual employees. Furthermore, it was found that the lack of staff training provided is also significantly influenced on the job satisfaction. Factor analysis confirmed that the following six factors: (i) working environment & professional growth, (ii) team spirit & supervisor concern, (iii) attitude of the top management & the level of appreciation of the employees at the workplace, (iv) attitude of the employees towards the benefits received & their view on the organization, (v) the facilities provided, other benefits provided by the organization and work related concerns of the employees and (vi) resources provided to carry out day-to-day work & for the continuous career advancement within the organization are the main factors for job satisfaction.

Keywords: Employee Job Satisfaction, Financial Rewards, Job Description and Staff Training

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LIST OF ABBRIVATIONS

Abbreviation	Description
FA	Factor Analysis
PCA	Principal Component Analysis
VIF	Variance Inflation Factor
PAF	Principal Axis Factoring
HR	Human Resource

CHAPTER 1

INTRODUCTION

1.1 Background

All over the world most of the people in the labour force are joined with various organizations which will help them to make an earnings for the survival of survive their lives. An organization is generally defined as an “organized group of people with a particular purpose, such as a business or government department (Kumar & Amsaveni, 2014). Further it says “organization is the process so combining the work which individuals or groups have to perform with the facilities necessary for its execution, that the duties so performed provide the best channels for the efficient, systematic, positive and coordinated application of the available effort” (Perry, Enterprise Operations - Cima Official, 2010). However, various authors give different explanations for the term organization. The most important party of an organization is its employees. Also, it is a well-known fact that most of the people in employment are experiencing either a degree of satisfaction or dissatisfaction within their job. The well-known fact is that nowadays people won't work for a single company for their whole career. Several reasons are impacted by this decision made by the employees (Motors, 2019).

In the period of recession, some companies have permanently terminated employment without any valid reason. This created job insecurity among the employees which lead to change jobs frequently. Furthermore, the employees find that it is too expensive for them to be committed for a single employer for several years because transferring into new employment would facilitate the employees higher pay, better working environment, recognition and many more other facilities as well. The shifting of jobs is more frequent among the younger generation than among the matured employees. This confirms that most of the employees are not satisfied with the jobs.

1.2 Reasons for Shifting Jobs

Doyle (2018) claimed in an article published in the website the facts which have inspired the employees in shifting their employment frequently are higher pay, better benefits & perks, relocation to a different geographic area, career advancement, choosing a less stressful job, escaping an incompetent or negative boss, changing career focus, better work-life balance, reorganization at their company, layoff due to duplication of their job resulting from a merger or acquisition, more interesting work, better work schedule, skills and abilities didn't fit the job, lack of recognition for accomplishments, outsourcing of job function, company moved to a new location and better alignment between personal values and organizational priorities. In fact, such factors can be considered as common to all the people irrespective of the country and gender.

The Senior Recruiting Manager at Solar Winds in India, a company that provides powerful and affordable IT management software to customers worldwide, claimed seven main reasons that have direct relationship in shifting jobs frequently are, lack of opportunity, bad management, toxic workplace or company culture, career advancement and promotions, excessive or too little Work, better salary and financial stability and lack of rewards and benefits (Tegze, 2019).

Furthermore, some other authors (Staff,2019) have also suggested that changing jobs will enable the employee to gain a broader base of knowledge and to facilitate in increasing your earning power, current job doesn't challenge the employee, the employee cannot stand his boss any longer, the employee feels that his employer is about to fail, employer's life has changed in a major way, co-workers creating a hostile atmosphere within the company, when there is a better offer for the employee and when the employee is ready to begin a new career.

1.3 Job Satisfaction in Sri Lanka

The term, job satisfaction is most popular as a human resource term in Sri Lanka as well. It helps organizations to evaluate employees, to create strategies to achieve

organizational goals, to set targets to their employees and to motivate employees to increase their effectivity and efficiency.

"Employee job satisfaction" can be defined as an expression used to describe whether employees are happy and fulfilling their desires and needs at work (Bank, 2019). Also, employee satisfaction can be considered as the main concern in employee motivation, achieving employee goals, and positive employee morale in the workplace. Different authors tend to give different definitions for the term employee satisfaction. In Wikipedia, it is stated that job satisfaction is "A measure of workers' contentedness with their job, whether or not they like the job or individual aspects or facets of jobs, such as nature of work or supervision" (Job Satisfaction, 2019).

In Sri Lanka most cases the employees are not positive on the level of job satisfaction with respect to their employment. Mostly the younger generation is not satisfied with what they do to earn something for their day to day expenses. The young generation used to attach to a single employee only for a one-year maximum. Their main concern is the pay that they are getting for what they are giving to the company. Also, these groups are highly educated with several extra professional qualifications (Staff, 2019) and are also talented therefore always compare their capabilities and the performance against the returns, resulting frequent job shifting by youngsters.

1.4 Present Trend of Youngsters in Sri Lanka

There is an increasing trend among the young employees that they are serving as professionals in different areas with the use of their professional qualifications rather than serving the areas that they academically qualified in. Some of the reasons for this behavior is higher pay, the fond to take advantage of the hidden capabilities of the young crowd, the fond in serving in different sectors, less demand in the academically qualified fields, an impossibility in waiting for a job in the academically qualified field and many more other concerns.

Another known fact for frequent job shifting among the younger generation is the attitude and the behavior of the immediate boss. The group is not keen on working

with older aged bosses, because the thinking styles and attitudes are far more different compared with the younger generation (Staff, 2019).

The middle-aged group have several years of experience in their career so far. They also have worked for several employees and have settled with a reasonable employer according to their knowledge and experience. In general, the factors they have considered in setting down with a single employer is the rate of pay, job security, retirement benefits, better working conditions, recognition of the employer, and their personal responsibilities. But most of the employees are not having positive thoughts towards job satisfaction and are willing to change their employment for more enhanced expectations anytime.

Furthermore, among the middle-aged group, there is an increasing trend in doing part-time employment as they bring extra income to their families in managing the day to day expenses. The elderly aged people in Sri Lanka has got their jobs based on different circumstances. And some of the known reasons are for their qualifications, due to any political influence, due to an influence from a family member who is currently working or worked for an employer, due to a relationship of either a neighbor or any third party.

Though they are not satisfied with the employment they have valid reasons to continue the employment with the employer they are attached to. According to the discussions had with the respondents (Employees, 2019) some of the reasons are their age, less period to continue with further employment, less possibility in getting employed by a new employer, lapse of modern of technical knowledge, specialty in manual work rather than working in computerized environment and the retirement benefits.

1.5 Important Statistics Related to Employee's

In Sri Lanka, more than 40% of the employed population are in the service sector, irrespective of years (Table 1.1). The corresponding percentage varied from 41.3% (in 2008) to 46.5% (in 2016) during the period from 2008 to 2017.

Table 1. 1 - Service Sector Employment Statistics Sri Lanka

Year	Services Head Count	% for the Service Head Count
2008	3,151,432	41.3
2009	3,215,289	42.4
2010	3,319,059	43.1
2011	3,260,717	43.0
2012	3,214,746	42.9
2013	3,363,334	43.8
2014	3,450,205	44.8
2015	3,568,259	45.6
2016	3,696,306	46.5
2017	3,737,500	45.5

Source : Department of Census & Statistics (2018)

Based on the Table 1.2, the total employment rate in Sri Lanka during 2017 was 95.8%, in comparison among the labour force against the total employed population. The males represent the highest rate of employment with a figure of 97.1% compared to the corresponding figure for females which is 93.5%.

Table 1. 2 - Employment Statistics by Gender - 2017

Employment Statistics	Sri Lanka	Male	Female
Employed Population	8,208,179	5,279,158	2,929,021
Labour Force	8,566,686	5,434,510	3,132,176
Employment Rate	95.8	97.1	93.5

Source : Department of Census & Statistics (2018)

The distribution of employment in SL in 2017 among three living sectors (urban, rural and estate) and the distribution within each sector is shown in Table 1.3.

Table 1. 3 - Percentage Distribution of Employed Population by Major Industry Group and Sector

Sector	Major Industry Report			
	Agricultural	Industrial	Service	Total
Sri Lanka	26.1	28.4	45.5	100
Urban	4.6	26.8	68.6	100
Rural	28.2	29.4	42.3	100
Estate	63.3	17.3	19.4	100

The percentage of employment sector is much higher in urban (68.6%) compared with 42.3% and 19.4% in Rural & Estate sector respectively (Table 1.3) irrespective of the province. Also, the lowest percentage of service sector employees are in the estate with 19.4%.

According to the results in Table 1.4, out of the nine provinces, Western province got a significantly higher percentage of employment rate for the service sector (60.5%) followed Eastern Province (47.7%)

Table 1. 4 - Percentage Distribution of Employed Population by Major Industry Group and Sector & Province

Province	Major Industry Report			
	Agricultural	Industrial	Service	Total
Western	5	34.5	60.5	100
Central	38	21.5	40.5	100
Southern	30.4	28.5	41.2	100
Northern	28.3	25.7	46	100
Eastern	28	24.2	47.7	100
North Western	28.2	33.5	38.3	100
North Central	42.8	20.7	36.5	100
Uva	53.3	14.1	32.6	100
Sabaragamuwa	31.8	31.9	36.3	100

Source : Labour Force Survey (2017)

The lowest percentage of service sector employees are in the Uva province. Except North Central and Uva province in all other provinces the service sector employment rates are the higher compared to the industrial and agricultural sectors.

The most concerned fact driven to carry out this study is that in general service sector employees are not satisfied with their employment though there is a higher number of service level employees (Table 1.4) in the Western province (Statistics D. o., 2018). Therefore, it is interesting to identify the critical factors affecting an employee's job satisfaction level of the service sector employees.

1.6 Objectives of the Study

On view of the above description, the objectives of the study are

- To identify the factors affecting in deciding the employee job satisfaction level in the service sector
- To develop a model to decide the factors affecting in deciding the employee job satisfaction level in the service sector
- To provide recommendations for improving the level of job satisfaction in the employees working in the service sector

1.7 Outline of the Dissertation

Chapter 1 consist of the background, job satisfaction statistics in Sri Lanka, Research problem & the main objectives of the research. Chapter 2 is the Literature Reviews done in local & international. Chapter 3 explains the Materials & Methods used to carry out the research. Chapter 4 and 5 consist of the detailed Explanatory Analysis regarding the distribution of the data, discussions of the data, and findings from the statistical tests, their explanations and the observations. Chapter 6 consist of the Conclusions, Recommendations and the Suggestions drawn from the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Theoretical Aspect and the theories of Job Satisfaction

Job Satisfaction is purely a journey that continues with employment but not a destination. This term is purely an HR term where in most cases it is used for evaluation purposes and to induce training & development programs for the employees of any organization. Various HR professional has found theories on job satisfaction. Some of them are Maslow's Needs Hierarchy Theory, Herzberg's Motivator-Hygiene Theory, Job Characteristics Model & Dispositional Approach (Perry, 2009).

2.1.1 Maslow's Needs Hierarchy Theory

Maslow's Needs Hierarchy theory was one of the first theories to understand the main contributors for motivation. Job satisfaction and motivation have a direct relationship, therefore Maslow explained once the employees are motivated the satisfaction is also fulfilled. According to Maslow, the five main categories identified were physiological, Safety, Social, Esteem and the self-actualization. In figure 2.1 the theory is clearly explained.



Figure 2. 1 - Maslow's Hierarchy of Needs

Source : CIMA Study Official – Enterprise Operation

2.1.2 Herzberg's Motivator-Hygiene Theory

In Herzberg's Motivator-Hygiene Theory it suggests that job satisfaction and dissatisfaction are not two opposite ends of the same context, but instead are two separate unrelated concepts. That is 'Motivating' factors like pay and other benefits, recognition, achievement and recognition need to be met for an employee to be satisfied with the work he is performing. On the other hand, at the absence of 'hygiene' factors such as better working conditions, well established and a recognized company, policies, and good infrastructure, job security, interaction with colleagues and quality of the management employees will be dissatisfied with their jobs (Perry, 2009). In below figure 2.2, a clear description is shown of the Herzberg's Motivator-Hygiene Theory.

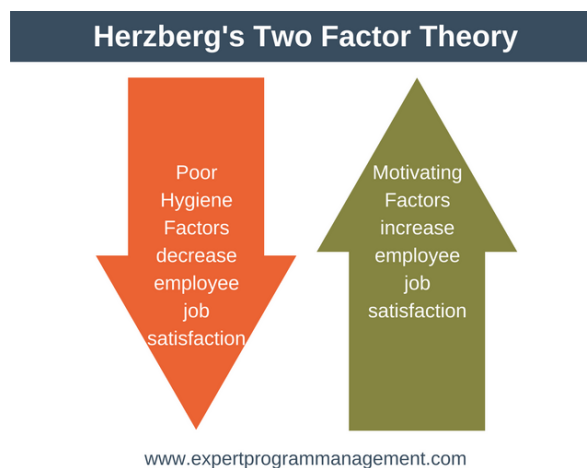


Figure 2. 2 - Herzberg's Motivator-Hygiene Theory

Source : CIMA Study Official – Enterprise Operation

2.1.3 The Job Characteristics Model

According to the job characteristics model, they have identified that job satisfaction occurs when the work environment encourages intrinsically motivating characteristics. The five key job characteristics are skill variety, task identity, task significance, autonomy and feedback. Simply from the point of the organization once the above stated key areas are satisfied the employee's working environment and the job satisfaction levels can be increased exceptionally. A small diagram is shown in figure 2.3 explaining the job characteristics model.

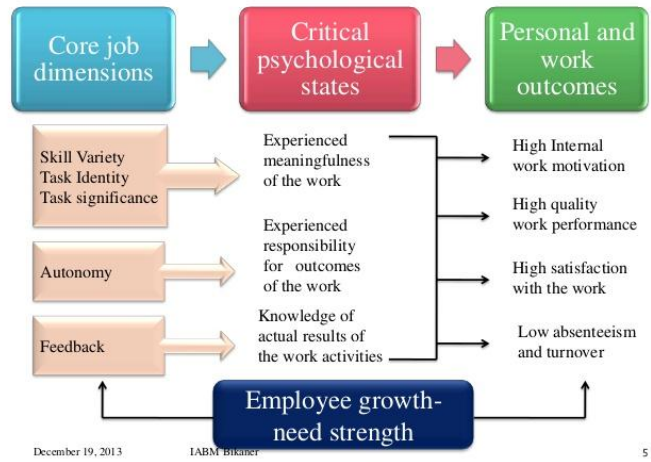


Figure 2. 3 - The Job Characteristics Model

Source : CIMA Study Official – Enterprise Operation

2.1.4 Dispositional Theory

Dispositional Theory is a very general theory that suggests that people have innate dispositions that cause them to have tendencies toward a certain level of satisfaction, regardless of one's job. This approach became a notable explanation of job satisfaction considering evidence that job satisfaction tends to be stable over time and across careers and jobs (Theories of Job Satisfaction (Explained with Example), 2017). Research also indicates that identical twins have similar levels of job satisfaction. The summary of the dispositional theory is shown in figure 2.4.

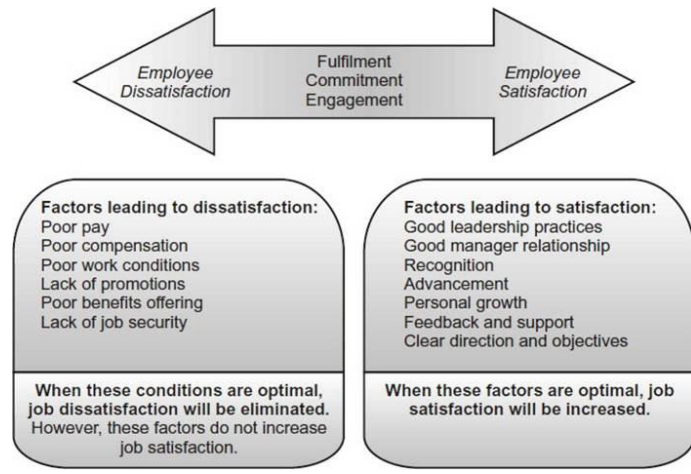


Figure 2. 4 - The Dispositional Theory

Source : CIMA Study Official – Enterprise Operation

2.2 Local Empirical Studies

A study carried out in Sri Lanka by Weerasinghe et al., (2017) on the employees in Banks in Anuradhapura District. The conceptual framework of their study is shown in figure 2.5.

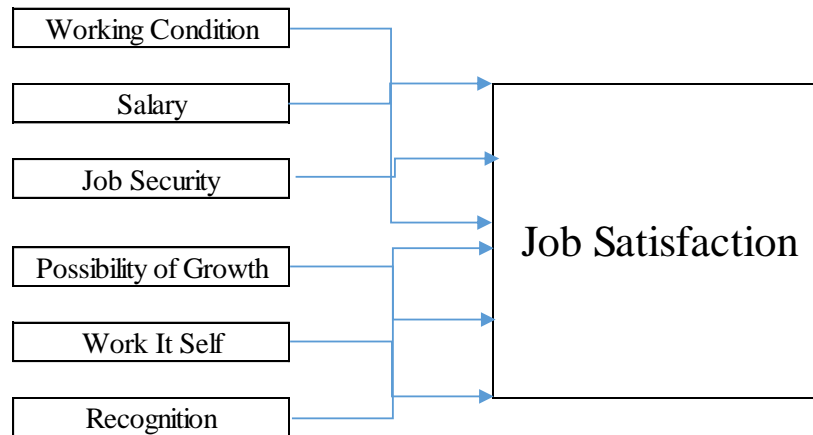


Figure 2. 5 - Conceptual frame work of Anuradhapura Bankers Job Satisfaction Study

They claimed that the job satisfaction levels are at considerable levels in both types of Banks, but the public bankers had higher satisfaction levels compared to the private bankers in the Anuradhapura district (Weerasinghe, Senawirathna, Dedunu, 2017). In order to identify the main factors affecting job satisfaction, the multiple regression model has been used. Results showed that there is significant impacts of work itself, recognition, salary and job security on job satisfaction. Also, they have found that working conditions and the possibility of growth shown statistically insignificant with employee job satisfaction in Sri Lanka. Also, they have identified that employee salary as greatest explanatory variable of employee job satisfaction of banking employees in Sri Lanka.

The recommendations based on their study was that, banks should provide more financial benefits to the employee to enhance the level of job satisfaction. In this process, salary increments, allowances, annual bonus and more overtime payments can be used. In addition bank should maintain their employee's job security, providing a challenging but achievable work packages and must take necessary

actions in order to make the job more recognizing to enhance the level of employee satisfaction. The specifically identified components in increasing the level of job satisfaction by the researchers were salary increments, allowances, annual bonus and more overtime payments to be maintained for the employees by the banks in the Anuradhapura district.

A study has been s carried out by Jayathilaka (2014) on job satisfaction among extension officers, in the Department of Animal Production and Health in Rathnapura District According to the study it has been claimed that the extrinsic satisfaction can be derived from factors/reinforces in the work environment that are extraneous to the work itself, where intrinsic satisfaction can be derived from satisfaction derived from factors/ reinforces in the work environment that are inherent in the work itself. Further to make recommendations to enhance the job satisfaction level of employees.

The data was gathered via a questionnaire including six main questions distributing in the Department of Animal Production and Health of Rathnapura district. The conceptual framework of the research is shown in figure 2.6.

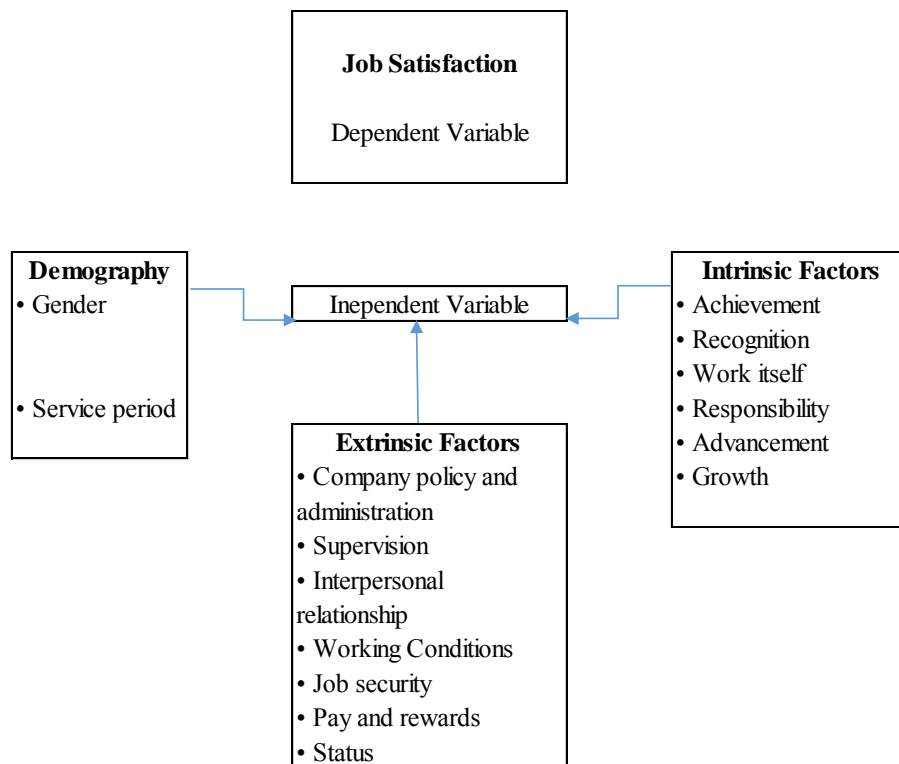


Figure 2. 6 - Conceptual framework used by Jayathilake (2014)

The following conclusions have been derived from the study..

- a) The majority of the employees satisfied with the extrinsic, intrinsic factors and the general job satisfaction. The employees are dissatisfied with the Work Environment and the reward structure where no one was satisfied with the work responsibilities, the opportunities for job enhancement
- b) There is no significant relationship between Job satisfaction and demographic variables such as gender, length of service, occupational level in commenting in overall job satisfaction level
- c) The employees are dissatisfied with their working conditions. And there is no assurance on promotion policies and procedures are to be equitable, where performance-based incentive system or managing for development results concepts should be incorporate in the master plan to motivate employees.
- d) The organization structure should be revised with more horizontal level categories with more individual level responsibility. It is also recommended that the leadership qualities should be developed rather than the managerial skills among the officials in the top levels of the department to provide more recognition to the employees as well as the service.

Another study has been carried out by Ranaweera (2018) with a sample size of 707 employees attached to a university library system. He claimed that the university library staff members in Sri Lanka are fairly satisfied with their jobs. However, he recommended to enhance their present level of job satisfaction levels by improving the least satisfaction factors such as appreciation of the work, and also providing solutions for current barriers related to the job, strengthen the cooperation between staff members, establishing a proper mechanism and systematic and introducing standard performance evaluation system. Moreover, he suggested that cooperation among coworkers can be improved by organizing various activities such as team building activities, job rotation programs, and lectures on attitude changing, team building and positive thinking.

Furthermore, he has recommended that the university library administration must take necessary actions to upgrade the current physical environment of the workplace,

resources and facilities, recruit new people, give more work freedom and upgrade welfare facilities to staff members to make them work satisfactorily.

Another study has been conducted by Ahamed (2016) to find the reasons for Job Satisfaction of Banking Employees in Government and Private Banks in Ampara, Sri Lanka. The required data were collected using the Minnesota Satisfaction Questionnaire. (MSQ) was used as a tool. The MSQ is designed to measure an employee’s satisfaction with his or her job (Minnesota Satisfaction Questionnaire | Vocational Psychology Research, 2019).The conceptual model of the study is shown in figure 2.7.

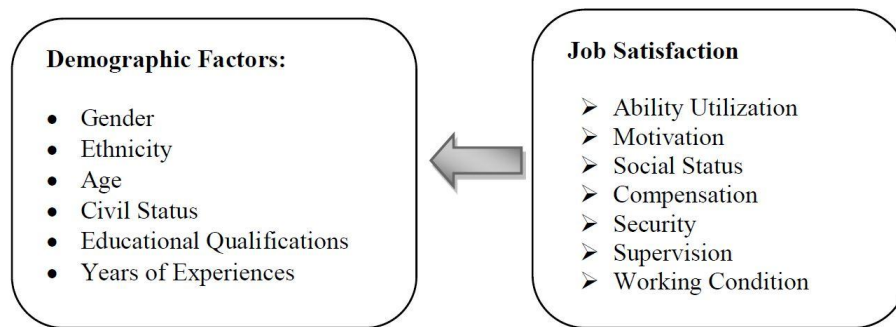


Figure 2. 7 - Conceptual framework for the research carried out by Ahamed (2016)

The study concluded that gender, marital status, age, and period of experience are not significant factors influencing the job satisfaction irrespective of the type of bank. However, the government sector bank employee’s educational qualifications impact on job satisfaction while private sector bank employee’s ethnicity impact on job satisfaction. Conclusion with respect to ethnicity, the researcher has concluded that in the private banks Tamil employees are more satisfied than other ethnicity groups. Among the government bank employees with Advanced Level (A/L) qualification are more satisfied with the job compared with the bankers having postgraduate diploma qualification.

Another similar study was carried out by Velnampy (2009) on job satisfaction and employee motivation on public and private sector organisations in Sri Lanka.. The general conclusion of the study was that in both sectors the level of satisfaction was at the high end. The satisfaction is positively correlated with motivation indicating

that highly satisfied people are highly inspired in the job. It is also said that financial remuneration, fringe benefits, promotion and good supervision are the most significant factors on job satisfaction. Furthermore, he concluded that compared to psychological factors employees are highly inspired by economic factors and among the other group of factors economic factors are the key factor in motivating people. Furthermore, the following recommendations have been given.

- to enable and take necessary actions to have fair pay,
- to increase employee benefits, t
- to increase promotion opportunities and good supervision of the work done.

This will inspire the employees and will increase the level of motivation. The employees need to be praised and recognised by their supervisors which is identified as a highly motivating factor. Another key recommendation by the researcher was to provide challenging work assignments for high performing employees and performance-related pay to increase job satisfaction. Also, he has recommended that the organisations should match people with a job that fit their interest and skills other than recruiting people required for the open vacancies which will result in highly motivated employees as well as an increased level of productivity throughout the company (Velnampy, 2009).

2.3 International Empirical Studies

Swarna (2015) has carried a study to find out Employee Job Satisfaction in Standard Bank Limited Hatirpool Branch in the UK. The research was carried out based on the information captured from the employee's satisfaction against the job security, compensation and benefits from the organization, and the working atmosphere with the use of both primary and secondary from a selected sample.

It was claimed that job satisfaction largely depends on the number of interrelated components such as the workplace, salary and other financial benefits, training provided by the organization, lack of gender discrimination and the neutral promotion policies. The study has recommended introducing lower-level employee's involvement in the decision-making process which will motivate them and will make them feel more challenged with what they are doing, to improve the working

environment by providing the necessary facilities since the employees are not satisfied with the available. The study also recommended that the organization has to provide more tools and resources as better facilities will help the employees to carry out their work effectively and more efficiently. The necessity of the awareness programs to motivate employees and to enhance the company reputation and has also been recommended.

Anju et al., (2011) has also carried out a similar study as done by Swarna (2015) in Bpcl – Kochi Refinery Limited. Ambalamugal” using both primary & secondary data. The initial conclusion of the study was, most of the employees in the company are devoted to the work and continue the employment as they feel secure with their current job. However, the company is lacking training and development programs for their employees and most of the employees are of the view that the promotion policies adopted by the company need to be revised. Also, it was claimed that the career development programs and present job rotation process need to be revised in order to develop multiple skills in employees to create greater job interest and career options were resulting in high motivation levels among the employees and found that the employees are less involved in the decision making process of the company.

It has been recommended to introduce financial benefit packages in-line with the qualifications, work done, and based on the employee’s achievements. Job rotation is to be made at least once in three years so that it will help the employees to enhance their overall skills towards better performance in work.

A similar study was carried out by Aydin et al., (2009) under the topic of “A Research Analysis on Employee Satisfaction in terms of Organizational Culture and Spiritual Leadership” in metal firms. The data were collected via a questionnaire. The researchers claimed that the overall satisfaction level is at the high end, concluding that most of the employees of the metalworking firms are happy with their current job status, the employee satisfaction level has a positive significant correlation with organizational culture and spiritual leadership within the firms. Also, it was claimed that the organizational culture is playing a vital role in employee satisfaction than the spiritual leadership in metalworking firms, because most of the

time the employees are interconnected with the organizations culture rather than its leaders. The recommendations of the study were as follows.

- To enhance the facilities to the employees with better financial rewards
- To provide promotions and recognitions for the employees inside as well as outside the company
- To create a safe and happy working environment and to fulfil the necessary requirements

The study has kept space for further study in analyzing why organizational culture plays a vital role than spiritual leadership. Singh et al., (2013) have also carried out a similar study on the topic “A Study of Employees’ Job Satisfaction and Its Impact on their Performance”.

According to the study, they have concluded that the following factors were highly influenced by job satisfaction, the policies of compensation and benefit, job security, working conditions, relationship with the superior authority, pathway to promotions and career development, leadership styles within the organization, personal variables and other influencing factors. Further, they have concluded that there is a significant relationship between employee satisfaction and the performance of the employees, where the satisfaction levels will be reflected through their performance. The study has noticed that the satisfaction levels can be measured through performance measures, and they were productivity, absenteeism, staff turnover, workplace deviance, organization citizenship behaviour, and the customer satisfaction level.

The recommendations of the study were as follows,

- The employees need to be communicated regarding what is the mission, vision, objects of the company, and what is expected from them for the company so that the employees will understand their responsibilities toward their job role.
- Hiring must be focusing in targeting the right employee for the right job and need to address employee expectations, provide the necessary education, training and coaching which will increase employees’ skills and shows the

employee that the company is interested in their success and readiness for a new responsibility.

- Fair compensation and benefits to all employees, setting up appropriate levels of new responsibility across the company, to develop programs to promote all titles in the organization and build programs for the career development of each title.
- To motivate employees to reach new performance levels by knowing how they measure up to expectation. The company should build proper evaluation and fair and encourage employees to perform work.
- To invest in employees by making sure being successful, giving them the very best tools to deliver the very best performance to the company, customers and the marketplace. Companies should build an occupational health and safety program.

Kumar et al., (2013) also have carried out a study on “A Study on Job Satisfaction of Employees in Le-Shark Global Llp, Palladam”. Both primary and secondary data were used for the purpose of the study where the whole population was used as the sample. It was claimed that there is no relationship between the age and the employee’s satisfaction and found that most of the employees working at Le-Shark Global Llp, Palladam are satisfied with their superior support.

However, the recommendation of the study was to that “it is the responsibility of the management of the company to make the employee satisfied”. The company could satisfy the Employee in their job by adopting and facilitating the necessary equipment, tools working conditions, financial rewards and other required things that can be observed through continuous evaluation and appraisal of their employees.

2.4 Summary of Chapter 2

This chapter consists of the theoretical aspect and the theories explained by different HR specialists on Job Satisfaction and previous studies carried out internationally and locally on different topics on the basic idea of identifying the factors affecting the job satisfaction of the employees. The reasons for the job satisfaction vary from

place to place as well as from country to country. However, the review is useful in planning the present study.

CHAPTER 3

MATERIALS AND METHODS

3.1. Materials

Based on the Labour Force survey done by the Department of Census and Statistics in 2017, the total number of all employed population in 2017 was 8,208,179 including 5,279,158 males & 2,929,021 females all together (Table 1.1) Also the average service sector employees in 2017 were 3,737,500 which was of 45.5% of the total employees (Table 1.1). The population size of this study is therefore 3,737,500. Since the population is massive, need to select an appropriate sample to carry out the study.

The sample size depends on the accuracy, funds available and the requirement to give a perfect confidence interval. Several factors need to be considered in deciding the sample size which is the degree of variability, the number of classes or proposed strata's, nature of the study, type of sampling, availability of funds, the level of precision or standard accuracy and the acceptable confidence level. For the purpose of this study, the simple random sampling method has been used.

3.1.1 Sample Size

The formulae to calculate the sample size is shown below (3.1) (Cochran, 2006).

$$n = \frac{\lambda_{\alpha/2}^2 p(1-p)}{\delta^2} \dots (3.1)$$

Where, $\lambda_{\alpha/2}$ = critical value at a given level of confidence

δ = margin of error at alpha level

p = expected prevalence or the proportion

As the proportion of service sector is 45.5%, we can take p = 0.455 considering a margin of error 0.08, at 95% confidence interval and the sample size calculated was,

$$n = [(1.96/0.08) ^2] * (0.455) (0.545)$$
$$= 149$$

However, questioner was distributed to 175 persons.

3.2 Primary Data

In order to acquire the required information for this study, a structural questionnaire was designed (Appendix A). The questionnaire was pre-tested before it was finalized. The questionnaire consists of 24 questions which are 2-Likert scale and they were grouped into 8 categories. However all the questions were binary.

In preparing the questionnaire the following points were considered. Both the emailed version and distributed questionnaire captured data about some of the main facts regarding the overall satisfaction level with the employer, the leaders of the attitude towards their employees wellbeing, the leaders attitude of the organization for the input from employees, adequacy of the staffing levels to provide quality products/services, employees believe on the spirit of cooperation within the organization, employees' view on expressing their honest opinions without fear of negative consequences, the view on the communication of the changes that may effect on the employee prior to implementation, the view on the realistic of the deadlines at the organization, view on the team spirit and whether all are working toward a shared goal, satisfaction of the use of the skills and abilities of the employee's at work, level of the physical working conditions, level of safety in the work environment, level of satisfaction working with the supervisor, view on the level of training provided by the organization, the view on the adequacy of the software and program applications using while on work, whether the employees are encouraged to explore growth or advancement opportunities within the organization, the view on the consideration for a promotion when the employee is hardworking and dedicated to the responsibilities of the work, the satisfaction level with the financial benefits, view on the non-financial and other benefits of the company which

are available for the employee's, view on the present employment and some general factors such as gender, job status and the service period.

3.3 Principal Component Analysis (PCA)

The objective of the PCA is to find whether we can explain all the variation of the observed data with fewer uncorrelated variables (orthogonal) and visualize multivariate data sets through uncorrelated hyper plans spanned in multidimensional space (Peiris, 2018).

PCA is mostly used as a tool in exploratory data analysis and for making predictive models. It is often used to visualize genetic distance and relatedness between populations. PCA can be done by eigenvalue decomposition of a data covariance (or correlation) matrix or singular value decomposition of a data matrix, usually after a normalization step of the initial data so that initial variables of which PCA is carried out have zero mean and variance one. The PCA involves deconstructing of the multidimensional data set into several principal components, and each new variable is a linear combination of the original variables. In PCA new set of p variables known as PCs are formed such that, $PC_i = \sum_{j=1}^p a_{ij} X_j$, $I = 1, 2 \dots p$. In order to use a standard notation, Let $PC_i = Y_i$ for all I and thus $Y_i = \sum_{j=1}^p a_{ij} X_j$, $I = 1, 2 \dots p$. All the new variables are uncorrelated. The i^{th} PC (say, y_i) is given in (3.2), where, x_1, x_2, \dots, x_p are the observed variables. ($i = 1, 2 \dots p = 1, 2 \dots$)

$$y_i = a_1 x_{i1} + a_2 x_{i2} + a_3 x_{i3} + \dots + a_p x_{ip} \quad (3.2)$$

Also, another important lemma in PCA that the variance of Y_i is equal to λ_i where λ_i is the Eigen value of the correlation matrix.

$$V(Y_i) = \lambda_i \quad (3.3)$$

3.4 Factor Analysis (FA)

3.4.1 Concept of Factor Analysis

Factor analysis is one of the statistical data mining technique and it looks at the data from a different angle compared to PCA. FA is used to determine whether the set of observed covariance or correlation structure among the observed variables can be explained in terms of a smaller number of unobservable factors, known as “latent” factors. FA helps to find the solution of many different common factors are required to examine the pattern of relationship among the observed set of correlated variables, to identify the nature of common factors, how well do the latent factor explain the observed data set and common factors useful for the user for decision making in the areas of medical, engineering, sociology, political, finance, etc. (Peiris, 2018).

3.4.2 FA Models

Let the observed p response variables be $\mathbf{X} = \mathbf{x}_i$ ($i = 1, 2, \dots, p$) of n subjects from a population with mean vector and variance-covariance matrix Σ . The FA model assumes that there are m ($m < p$) underlying common factors (say, F_i $i = 1, 2, \dots, m$) and the m – factor model is written as:

$$X_i = \mu_i + \lambda_{i1}F_1 + \lambda_{i2}F_2 + \lambda_{i3}F_3 + \dots + \eta_i \quad (i = 1, 2, \dots, p) \quad (3.4)$$

λ_{ij} is the factor loading of the j^{th} factor and i^{th} response variable, λ_i is known as unique factors for a given X_i . Without loss of generality, it can be assumed that $\mu_i = 0$ for all i and thus the m -factor model becomes.

$$X_i = \lambda_{i1}F_1 + \lambda_{i2}F_2 + \lambda_{i3}F_3 + \dots + \eta_i \quad (i = 1, 2, \dots, p) \quad (3.5)$$

In a matrix form above FA model can be written as,

$$\mathbf{X} = \Lambda\mathbf{F} + \boldsymbol{\eta} \quad (3.6)$$

Where, $\mathbf{X} = [X_1, X_2, \dots, X_p]^T$, $\mathbf{F} = [F_1, F_2, \dots, F_m]^T$, $\boldsymbol{\eta} = [\eta_1, \eta_2, \dots, \eta_p]^T$

3.4.3 Appropriateness of data for FA

Once it is decided to proceed with FA with the observed data the first thing to do is to check the appropriateness of the observed data for factor analysis (Peiris, 2018). The tests to be carried out prior to FA are as follows.

- a) Significance of the Correlation matrix of the observed variables
- b) Validity - Kaiser-Meyer-Olkin (KMO) Statistics
- c) Reliability Test

Significance of the Correlation matrix of the observed variables

In order to carry out the FA, the correlation coefficients among variables must be highly significant. This is carried out using Bartlett's test in SPSS. The null and the alternative hypothesis of Bartlett's test is (3.7)

$$H_0 - \Sigma = I_p$$

$$H_1 - \Sigma \neq I_p$$

Kaiser-Meyer - Olkin (KMO) Statistics

This test measures sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited your data is to Factor Analysis. A rule of thumb for interpreting the statistic is that if the KMO figure for a given data set is greater than 0.6 the data is suitable to carry out the factor analysis. The formula of the KMO statistics is shown below (3.8).

$$KMO_j = \frac{\sum_{i \neq j} r_{ij}^2}{\sum_{i \neq j} r_{ij}^2 + \sum_{i \neq ju}} \quad (3.8)$$

Reliability Test

In statistics, the reliability measures the overall consistency of an observed data set when the data is acquired using multiple Likert questions either from a survey or through a questionnaire. Cronbach's alpha statistics give an idea about the internal consistency of the observed data. The data is reliable if Cronbach's alpha is greater than 0.8.

3.5 Extraction of Factors

Among different methods proposed for the extraction of factors, the most popular techniques for survey data collected through Likert scale are

Principal Component Factoring (PCF) and

Principal Axis Factoring (PAF)

3.5.1 Principal Component Factoring (PCF)

In PCF it is assumed that the communalities for all the variables are equal to one and consequently no prior estimates are required for communalities (not defined). It is assumed that few principal components (components of which the eigenvalues > 1) would account for a majority of the observed variance of the system. In this method, those principal components are considered as common factors while remaining principal components are considered as nuisance components. Therefore, extracting factors using the PCF method is essentially the same as obtaining principal components in PCA, In fact, PCF is the most common and standard extraction method (Peiris, 2018).

3.5.2 Principal Axis Factoring (PAF)

In PAF an attempt is made to estimate the communalities. The initial communalities are considered as the squared multiple correlations that each variable has all the other response variables (Peiris, 2018).

- As in PCA, both PCF and PAF, the first factor accounts for as much common variance as possible, then the second factor next most variance, and so on.
- An advantage of PCF method and PAF method is that both methods can be used when the assumption of normality has been violated.
- The PCF method and PAF method are the same on the correlation matrix.

3.6 Identification of Number of Factors

One of the most important decisions in FA is to decide the number of common factors (m) that are driving the values of the variables being measured. The common method is to start with a PCA and determine how many principal components would be required based on the size of the eigenvalues. The common rule is to select the factors with an eigenvalue of ≥ 1 . This is known as Kaiser's rule (Peiris, 2018). Another option is the scree plot. The scree plot shows downward curve as $\lambda_1 > \lambda_2 > \dots > \lambda_p$. Then where the slope of the curve is clearly levelling off (the "elbow") indicates the number of common factors for the FA. However, there is no guarantee that the number of common factors for the FA is the same as the number of principal components. Some subjective and objective criteria have been suggested (Peiris, 2018).

3.7 Rotating Factors

In general, when a set of factors are extracted, they are not easy to interpret. In order to make the factors more meaningful and simpler, it is recommended that factors be rotated using orthogonal transformation. In other words, rotation procedures try to make some factor loadings close to zero and other factor loadings to be large. Therefore, FA can be considered as "simplification of loading matrix in PCA". The beauty of orthogonal rotation is that the rotation procedures keep the factors uncorrelated as the initial factors are also orthogonal (Peiris, 2018). The popular orthogonal rotations in SPSS are

- Varimax
- Quartimax
- Equamax

The factors derived using oblique rotation is not orthogonal to each other. Thus the interpretation of the factor structure resulted via oblique rotation is more complex and generally not used very often. The most popular combination is PCA and Varimax rotation.

3.8 Factor Score Coefficients

Once each observed variable is represented by linear functions of common factors and unique factors, it is necessary to define factors also from original (selected) variables. In other words, unlike principal component scores, which are computed, the factor scores must be estimated in FA. Multiple linear regression is one of the methods used to estimate factor score coefficients in SPSS. If F^{\wedge} be the estimated factor score for the i^{th} factor then,

$$F^{\wedge} = \beta_1^{\wedge}x_{i1} + \beta_2^{\wedge}x_{i2} + \beta_{31}^{\wedge}x_{i3} + \dots + \beta_p^{\wedge}x_{ip} \quad (i = 1, 2, \dots, m)$$

Thus β_i^{\wedge} s are the coefficients of linear combinations to predict values of the selected factors and these coefficients are known as factor score coefficients. The factor score coefficients are functions of the original standardized variables. Thus factor score can depend on the type of rotation as well as the type of extraction. In other words, the factor scores are not unique. As a result, some researchers hesitate to use the factor scores for interpretation.

3.9 Chi Square Test

The Chi Square test of independence is used to determine whether there is a significant relationship between two nominal (categorical) variables. The frequency of each category for one nominal variable is compared across the categories of the second nominal variable. The data can be displayed in a contingency Table where each row represents a category for one variable and each column represents a category for the other variable.

H_0 - There is no relationship between the variables

H_1 - There is a relationship between the variables

However, the Chi-square test can be used only to find the association between two factors. The simultaneous effect of many factors or the interaction between two or more factors are not possible to test using the Chi-square.

3.10 Collection of Data

The primary data were collected from the Colombo district by way of distributing a questionnaire and by way of forwarding an emailed link of the questionnaire through

a google doc. Colombo district was selected to collect information because the people in this area is more connected with the latest technologies and are more educated when compared to the other parts of our country. And also it is the main district of the western province having a population of about 2.3 million (Sri Lanka Census of Population and Housing, 2011). Consist of more service sector employees in all the sectors which are urban, rural & the estate sector, which was a perfect match for the objective purpose of the study. The questionnaire distributed to collect the information required is shown in Appendix A. These data are considered as primarily data.

Secondary data for this study were obtained through relevant websites, databases, previous studies & other information sources.

Statistical analysis was carried out using SPSS & Microsoft Excel.

CHAPTER 4

DESCRIPTIVE ANALYSIS OF THE OBSERVED VARIABLES

This chapter consists of a descriptive analysis and the association between two variables using Chi square test statistics.

4.1 Response Rate

Only 128 responses were received out of the 149 and thus the response rate is 86%.

$$\begin{aligned} \text{Response Rate} &= \frac{128}{149} * 100 \\ &= 85.9\% \end{aligned} \quad (4.1.1)$$

This can be considered as a better response rate.

4.2 Distribution of the Job Satisfactory

Table 4. 1 - Distribution of Job Satisfaction

Status of the Response	Frequency	Percentage
Disagree	34	26.6
Agree	94	73.4
Total	128	100.0

The results in Table 4.1 indicate that 73.4 percent of the employees are satisfied with their current employment where the remaining 26.6 percent of the respondents are not satisfied with the present employment.

4.3 Variables Associated with Job Satisfaction

The detailed descriptive analysis of the 21 variables and their association with the job satisfaction are described below using two-way chi-square table. The variables are denoted Q2 to Q24 (Appendix B).

4.3.1 Gender

The graphical representation of gender distribution is shown in Figure 4.1.

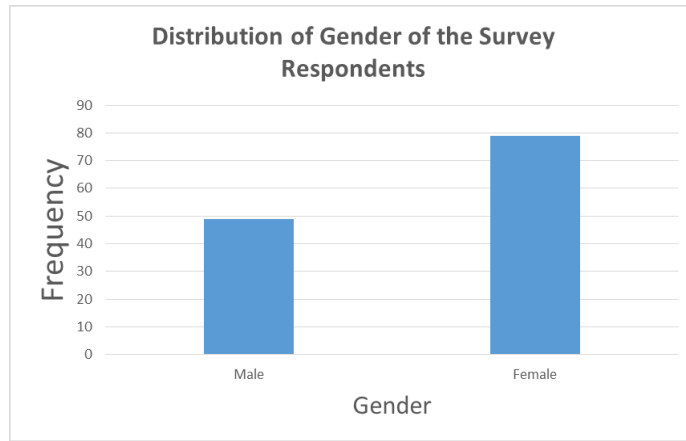


Figure 4. 1 - Graphical Presentation of Gender Distribution

Table 4. 2 - The distribution of Gender with the Job Satisfaction

Gender with the Job Satisfaction			Job Satisfaction		Total
			Disagree	Agree	
Q23	Male	Count	11	38	49
		% within Q23	22.4%	77.6%	100.0%
	Female	Count	23	56	79
		% within Q23	29.1%	70.9%	100.0%
Total		Count	34	94	128
		% within Q23	26.6%	73.4%	100.0%
Chi Square Test Statistics = 0.689 (p=0.407)					

The Chi Square test statistics for gender and of the job satisfaction is shown in Table 4.2. The results indicate that the test statistic (0.689) between the two variables is not significant (p=0.407). Therefore it can be concluded with 95% confident that there is no significant association (or relationship) between the job satisfaction and the gender. Among the female 70.9% are satisfied with their present jobs while among the males 77.6% are satisfied with their present job.

4.3.2 Service Level

Table 4. 3 - The distribution of Service Level with the Job Satisfaction

Service Level with the Job Satisfaction			Job Satisfaction		Total
			Disagree	Agree	
Q24	< 1	Count	4	19	23
		% within Q24	17.4%	82.6%	100.0%
	1 – 2	Count	22	35	57
		% within Q24	38.6%	61.4%	100.0%
	2 – 5	Count	4	33	37
		% within Q24	10.8%	89.2%	100.0%
	5 – 10	Count	4	7	11
		% within Q24	36.4%	63.6%	100.0%
Total		Count	34	94	128
		% within Q24	26.6%	73.4%	100.0%

Chi Square Test Statistics = 10.471 (p=0.015)

The chi square statistics for the two variables (10.471) is significant (p=0.015) thus it can be conclude with 95% confident that the job satisfaction is significantly influenced by the service period.

Most of the respondents are highly satisfied (> 65%) with their jobs irrespective of the service period. (Table 4.3). The highest satisfied employees are from the service period of two to five years having 89.2% and the least satisfied service group is from one to two years representing 61.4%. The percentage of satisfactory is not significantly different between < 1 year and 2-5 years group. Similarly no significant different on satisfactory between the two service groups of 1-2 years and 5-10 years.

4.3.3 View of the Leaders on Employee's Well-being

Table 4. 4 - Distribution of View of the Leaders on Employee's Well-being

View of the Leaders on Employee's Well-being			Job Satisfaction		Total
			Disagree	Agree	
Q2	Disagree	Count	19	30	49
		% within Q2	38.8%	61.2%	100.0%
	Agree	Count	15	64	79
		% within Q2	19.0%	81.0%	100.0%
Total		Count	34	94	128
		% within Q2	26.6%	73.4%	100.0%

Chi Square Test Statistics = 6.071 (p=0.014)

Among the disagreed group on the view of the leaders on employee's wellbeing 61.2% are satisfied with job where as 81% from the agreed group on the leaders view on employee's wellbeing are also satisfied with their current job (Table 4.4). The respective percentages on the dissatisfied group are 38.8% and 19% accordingly. The chi square test statistics (6.071) is significant ($p=0.014$). It can be concluded that there is a significant association between the view of the leaders on employee's well-being and the employee's job satisfaction level. The percentage of employee who satisfied in their job among those who agree the views of the leaders on employee's well-being (81%) is significantly higher than that of those who do not agree with the views of the leaders on employee's well-being (62%).

I who agree further as the chi value is significant we can confirm that the job satisfaction level of the people who believes that the leaders are positively thinking on the employee's well-being are significantly higher than that of the people who does not believe so.

4.2.4 Input from employee's for Decision Making

Table 4. 5 - Distribution of Input from employee's for decision making

Input from employee's for decision making			Job Satisfaction		Total
			Disagree	Agree	
Q3	Disagree	Count	29	54	83
		% within Q3	34.9%	65.1%	100.0%
	Agree	Count	5	40	45
		% within Q3	11.1%	88.9%	100.0%
Total		Count	34	94	128
		% within Q3	26.6%	73.4%	100.0%
Chi Square Test Statistics = 8.494 ($p=0.004$)					

The percentage of employees satisfied in their job, among the employees who believes that their input is not welcomed in decision making against that of among the employees who think that their input is welcomed for the decision making is 88.9% (Table 4.5). The chi square test statistic (8.494) between the two variables is significant ($p=0.004$). Therefore it can be concluded with 95% confident, that the job satisfaction is significantly influenced by getting the presence and the input from the employees of the organization in decision making.

4.3.4 Adequacy of Staff

Table 4. 6 - Distribution of Adequacy of the Staffing Levels to provide Quality Service

Adequacy of the Staffing Levels to provide Quality Service			Job Satisfaction		Total
			Disagree	Agree	
Q4	Disagree	Count	24	55	79
		% within Q4	30.4%	69.6%	100.0%
	Agree	Count	10	39	49
		% within Q4	20.4%	79.6%	100.0%
Total		Count	34	94	128
		% within Q4	26.6%	73.4%	100.0%

Chi Square Test Statistics = 1.542 (p=0.214)

The non-significance of the chi-square test ($p = 0.214$) in Table 4.6 indicates that adequacy of the staffing levels to provide quality service and the job satisfaction is not significantly associated. Therefore it can be concluded with 95% confidence that the job satisfaction level is significantly influenced by the adequacy of the staff in providing quality service.

Among the disagreed group on the adequacy of staffing level in providing quality service the job satisfaction level is 69.6% and the job satisfaction level of the agreed group on the adequacy of the job satisfaction level is 79.6%. The respective percentages on the dissatisfied groups are 30.4% and 20.4%.

4.2.5 Existence of the Spirit of Cooperation in the Organization

Table 4. 7 - Distribution of Existence of the Spirit of Cooperation in the Organization

Existence of the Spirit of Cooperation in the Organization			Job Satisfaction		Total
			Disagree	Agree	
Q5	Disagree	Count	10	44	54
		% within Q5	18.5%	81.5%	100.0%
	Agree	Count	24	50	74
		% within Q5	32.4%	67.6%	100.0%
Total		Count	34	94	128
		% within Q5	26.6%	73.4%	100.0%

Chi Square Test Statistics = 3.098 (p=0.078)

The Chi Square test statistics (3.098) between the job satisfaction and the fact of existence of the spirit of cooperation in the organization is not significant ($p=0.078$), and thus it confirms that there is no significant influence from the existence of the

spirit of cooperation in the organization on the job satisfaction level (Table 4.7).81.5% among the group that is having negative view on the existence of the spirit of cooperation in the organization highly satisfied compared to the job dissatisfied people from the same group (18.5%). 67.6% of the employees who believes that there is the spirit of cooperation in the organization are satisfied with their jobs where only 32.4% from the same group are not satisfied with the present employment.

4.2.6 Comments of the Employees on the Company

Table 4. 8 - Distribution of Comments of the employees on the company

Comments of the Employees on the Company			Job Satisfaction		Total
			Disagree	Agree	
Q6	Disagree	Count	24	56	80
		% within Q6	30.0%	70.0%	100.0%
	Agree	Count	10	38	48
		% within Q6	20.8%	79.2%	100.0%
Total		Count	34	94	128
		% within Q6	26.6%	73.4%	100.0%
Chi Square Test Statistics = 1.292 (p=0.256)					

The results in Table 4.8 indicate that the chi square value (1.292) between the variables are not significant ($p = 0.256$) thus we can conclude that there is no significant association between job satisfaction and the comments of the employees on the company. The job satisfaction level of the employees who believes that they can comment on the organization is 79.2% whereas the respective level of satisfaction for the disagreeing party is 70% (Table 4.8). The job satisfaction rates with respect to the ability to comment on the organization of the employees are very much higher than that of the dissatisfaction rates.

4.2.7 Communication of Changes prior to Implementation

Table 4. 9 - Distribution of Communication of Changes prior to Implementation

Communication of Changes prior to Implementation			Job Satisfaction		Total
			Disagree	Agree	
Q7	Disagree	Count	21	34	55
		% within Q7	38.2%	61.8%	100.0%
	Agree	Count	13	60	73
		% within Q7	17.8%	82.2%	100.0%
Total		Count	34	94	128
		% within Q7	26.6%	73.4%	100.0%

Chi Square Test Statistics = 6.675 (p=0.010)

Results in Table 4.9 indicates that there is a significant influence on the communication of changes prior to implementation on the job satisfaction as the Chi-square statistic is significant (p =0.010). It can be concluded with 95% confident that the job satisfaction level of the agreed party on communication of changes prior to implementation (82.2%) is significantly higher than that of the disagreed party in the same group (61.8%).

4.2.8 Realisticness of the Employee Deadlines

Table 4. 10 - Distribution of Realisticness of the Employee Deadlines

Realisticness of the Employee Deadlines			Job Satisfaction		Total
			Disagree	Agree	
Q8	Disagree	Count	22	54	76
		% within Q8	28.9%	71.1%	100.0%
	Agree	Count	12	40	52
		% within Q8	23.1%	76.9%	100.0%
Total		Count	34	94	128
		% within Q8	26.6%	73.4%	100.0%

Chi Square Test Statistics = 0.545 (p=0.460)

In Table 4.10, the chi square test statistic (0.545) between job satisfaction and the realisticness of the employee deadlines is not significant (p = 0.460) confirming that there is no significant influence from the realisticness of the employee deadline on the job satisfaction level. The percentage of job satisfaction under both categories is not significantly different.

4.2.9 Working towards a Shared Goal

Table 4. 11 - Distribution of Working towards a Shared Goal

Working towards a Shared Goal			Job Satisfaction		Total
			Disagree	Agree	
Q9	Disagree	Count	18	37	55
		% within Q9	32.7%	67.3%	100.0%
	Agree	Count	16	57	73
		% within Q9	21.9%	78.1%	100.0%
Total		Count	34	94	128
		% within Q9	26.6%	73.4%	100.0%
Chi Square Test Statistics = 1.879 (p=0.170)					

In Table 4.11, the chi square test statistic (1.879) between job satisfaction and the concern of the working towards a shared goal is not significant ($p = 0.170$) confirming that there is no significant influence from working towards a shared goal on the job satisfaction level. The percentages of job satisfaction and the dissatisfaction under both categories is not significantly different.

4.2.10 Organization using Employee Skills and Abilities for their Employment

Table 4. 12 - Distribution of Organization using Employee Skills and Abilities for their Employment

Organization using Employee Skills and Abilities for their Employment			Job Satisfaction		Total
			Disagree	Agree	
Q10	Disagree	Count	20	56	76
		% within Q10	26.3%	73.7%	100.0%
	Agree	Count	14	38	52
		% within Q10	26.9%	73.1%	100.0%
Total		Count	34	94	128
		% within Q10	26.6%	73.4%	100.0%
Chi Square Test Statistics = 0.006 (p=0.939)					

The results in Table 4.12 clearly indicate that the status of job satisfaction is independent of the use of the employee skills and their abilities on the employment by the organizations as the chi square statistic (0.006) between the two variables is not significant ($p = 0.939$) thus it confirms that there is no significant influence from the organization using employee skills and abilities for the employment in job satisfaction.

Irrespective of the organization is using employee skills and ability for their employment, around 73% claimed that they are satisfied from the present job. And the people who are disagreeing on the above are higher than that of in the job dissatisfaction level. The respective percentages are 73.1% and 73.7%. It can be seen that many of the respondents believe that the organization is not making use of the employee's abilities & skills while on employment are helpful while doing the day to day work.

4.2.11 Physical Working Conditions

Table 4. 13 - Distribution of Physical Working Conditions

Physical Working Conditions			Job Satisfaction		Total
			Disagree	Agree	
Q11	Disagree	Count	17	16	33
		% within Q11	51.5%	48.5%	100.0%
	Agree	Count	17	78	95
		% within Q11	17.9%	82.1%	100.0%
Total		Count	34	94	128
		% within Q11	26.6%	73.4%	100.0%
Chi Square Test Statistics = 14.192 (p=0.000)					

The chi square test statistic (14.192) between the job satisfaction and the physical working conditions is highly significant ($p = 0.00$). Thus it can be confirmed with 95% confident that the job satisfaction is significantly associated by the physical working conditions (Table 4.13). The percentage of employee who are satisfied in their job among those who are also satisfied with the physical working conditions (82%) is significantly much higher than that of who do not satisfied with the physical working condition (48.5%).

4.2.12 Physical Safety in the Working Environment

Table 4. 14 - Distribution of Physical Safety in the Working Environment

Physical Safety in the Working Environment			Job Satisfaction		Total
			Disagree	Agree	
Q12	Disagree	Count	23	22	45
		% within Q12	51.1%	48.9%	100.0%
	Agree	Count	11	72	83
		% within Q12	13.3%	86.7%	100.0%
Total		Count	34	94	128
		% within Q12	26.6%	73.4%	100.0%
Chi Square Test Statistics = 21.439 (p=0.000)					

Among the disagreed group on the physical safety in the working environment 48.9% are satisfied with the job where as 86.7% from the agreed group on the physical safety in the working environment are also satisfied with their current job (Table 4.14). The respective percentages on the dissatisfied group are 51.1% and 13.3% accordingly. The chi square test statistics (21.439) is highly significant (p=0.000). It can be concluded with 95% confident that there is a significant association between the physical safety in the working environment and the employee's job satisfaction level. The percentage of employee who are satisfied in their job among those who agree with the physical safety in the working environment (86.7%) is significantly higher than that of those who do not agree with the physical safety in the working environment (48.9%).

The graphical presentation for the distribution of physical safety in the working environment is shown in Figure 4.2.

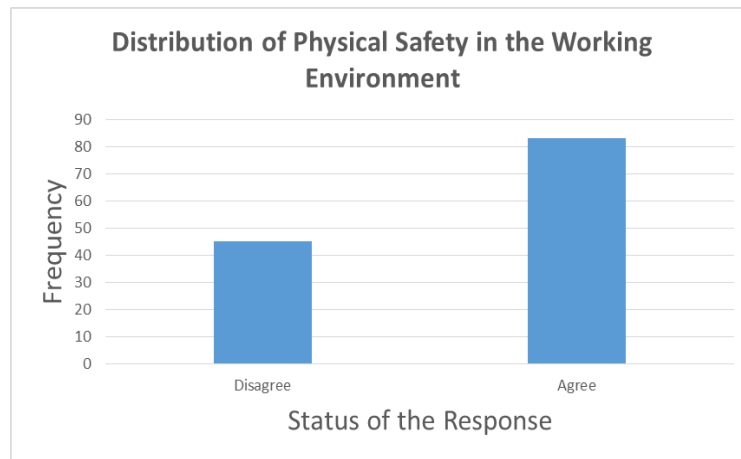


Figure 4. 2 - Graphical Presentation for Distribution of Physical Safety in the Working Environment

4.2.13 Relationship between the Supervisor and the Employee

Table 4. 15 - Distribution of Relationship between the Supervisor and the Employee

Relationship between the Supervisor and the Employee			Job Satisfaction		Total
			Disagree	Agree	
Q13	Disagree	Count	8	23	31
		% within Q13	25.8%	74.2%	100.0%
	Agree	Count	26	71	97
		% within Q13	26.8%	73.2%	100.0%
Total		Count	34	94	128
		% within Q13	26.6%	73.4%	100.0%
Chi Square Test Statistics = 0.012 (p=0.913)					

The chi square test statistics (0.012) between the job satisfaction and the relationship between the supervisor and the employee is not significant ($p=0.913$), and thus it confirms that there is no significant influence from the existence of the relationship between the supervisor and the employee on the job satisfaction level (Table 4.15). 74.2% among the group that is having negative view on the relationship between the supervisor and the employee is highly satisfied compared to the job dissatisfied people from the same group (25.8%). 73.2% of the employees who believes that there is a relationship between the supervisor and the employee are satisfied with their jobs where only 26.6% from the same group are not satisfied with the present employment.

4.2.14 Initial Training provided based on the Employee Requirement

Table 4. 16 - Distribution of Initial Training provided based on the Employee Requirement

Initial Training provided based on the Employee Requirement			Job Satisfaction		Total
			Disagree	Agree	
Q14	Disagree	Count	22	66	88
		% within Q14	25.0%	75.0%	100.0%
	Agree	Count	12	28	40
		% within Q14	30.0%	70.0%	100.0%
Total		Count	34	94	128
		% within Q14	26.6%	73.4%	100.0%
Chi Square Test Statistics = 0.352 (p=0.553)					

In Table 4.16, the chi square test statistic (0.352) between job satisfaction and the initial training provided based on the employee requirement is not significant (p = 0.553) confirming that there is no significant influence from the initial training provided based on the employee requirement on the job satisfaction level. The percentage of job satisfaction under both categories is not significantly different.

4.2.15 Software and Other Applications provided to carryout day to day work

Table 4. 17 - Distribution of Software and Other Applications provided to carryout day to day work

Software and Other Applications provided to carryout day to day work			Job Satisfaction		Total
			Disagree	Agree	
Q15	Disagree	Count	23	39	62
		% within Q15	37.1%	62.9%	100.0%
	Agree	Count	11	55	66
		% within Q15	16.7%	83.3%	100.0%
Total		Count	34	94	128
		% within Q15	26.6%	73.4%	100.0%
Chi Square Test Statistics = 6.840 (p=0.0093)					

The percentage of employees satisfied with the software and other applications provided to carryout day to day work against that of among the employees who think that the software and other applications provided to carryout day today work 83.3% (Table 4.17). The chi square test statistic (6.840) between the two variables is significant (p=0.0093). Therefore it can be concluded with 95% confident, that the job satisfaction is significantly influenced by the software and other applications provided to carryout day to day work in the organization.

4.2.16 Exploration of Advancement Opportunities

Table 4. 18 - Distribution of Exploration of Advancement Opportunities

Exploration of Advancement Opportunities			Job Satisfaction		Total
			Disagree	Agree	
Q16	Disagree	Count	18	40	58
		% within Q16	31.0%	69.0%	100.0%
	Agree	Count	16	54	70
		% within Q16	22.9%	77.1%	100.0%
Total		Count	34	94	128
		% within Q16	26.6%	73.4%	100.0%
Chi Square Test Statistics = 1.087 (p=0.297)					

In Table 4.18, the chi square test statistic (1.087) between job satisfaction and exploration of advancement opportunities is not significant (p = 0.297) confirming that there is no significant influence from exploration of advancement opportunities on the job satisfaction level. The percentages of job satisfaction and the dissatisfaction under both categories is not significantly different.

4.2.17 Getting a Promotion based on the Performance

Table 4. 19 - Distribution of getting a promotion based on the performance

Getting a promotion based on the performance			Job Satisfaction		Total
			Disagree	Agree	
Q17	Disagree	Count	21	37	58
		% within Q17	36.2%	63.8%	100.0%
	Agree	Count	13	57	70
		% within Q17	18.6%	81.4%	100.0%
Total		Count	34	94	128
		% within Q17	26.6%	73.4%	100.0%
Chi Square Test Statistics = 5.057 (p=0.025)					

The percentage of employees satisfied in their job, among the employees who believes that they are getting promotion based on their performance against that of among the employees who think that their performance is not concerned in getting promoted 81.4% (Table 4.19). The chi square test statistic (5.057) between the two variables is significant ($p=0.025$). Therefore it can be concluded with 95% confident, that the job satisfaction is significantly influenced by getting a promotion based on the performance.

4.2.18 Employee view on the Financial Benefits

Table 4. 20 - Distribution of Employee view on the Financial Benefits

Employee view on the Financial Benefits			Job Satisfaction		Total
			Disagree	Agree	
Q18	Disagree	Count	29	55	84
		% within Q18	34.5%	65.5%	100.0%
	Agree	Count	5	39	44
		% within Q18	11.4%	88.6%	100.0%
Total		Count	34	94	128
		% within Q18	26.6%	73.4%	100.0%
Chi Square Test Statistics = 7.940 ($p=0.005$)					

Results in Table 4.20 indicate that there is a significant influence on the employee view on financial benefits provided by the organization for the work performed on the job satisfaction as the chi square statistic (7.940) is significant ($p =0.005$). It can be concluded with 95% confident that the job satisfaction level of the employees who are having a positive view on the financial benefits (88.6%) is significantly higher than that of the negative party in the same group (65.5%).

4.2.19 Employee's Other Benefits offered by the Organization

Table 4. 21 - Distribution of Employee's Other Benefits offered by the Organization

Employee's Other Benefits offered by the Organization			Job Satisfaction		Total
			Disagree	Agree	
Q19	Disagree	Count	29	78	107
		% within Q19	27.1%	72.9%	100.0%
	Agree	Count	5	16	21
		% within Q19	23.8%	76.2%	100.0%
Total		Count	34	94	128
		% within Q19	26.6%	73.4%	100.0%
Chi Square Test Statistics = 0.098 (p=0.755)					

The chi square test statistics (0.098) between the job satisfaction and the employee's other benefits offered by the organization is not significant ($p=0.755$), and thus it confirms that there is no significant influence from the employee's other benefits offered by the organization on the job satisfaction level (Table 4.21). 72.9% among the group that is having negative view on the employee's other benefits offered by the organization is highly satisfied compared to the job dissatisfied people from the same group (27.1%). 76.2% of the employees who are satisfied with the other benefits offered by the organization are satisfied with their jobs where only 23.8% from the same group are not satisfied with the present employment.

4.2.20 Working for the Present Employer

Table 4. 22 - Distribution of Working for the Present Employer

Working for the Present Employer			Job Satisfaction		Total
			Disagree	Agree	
Q20	Disagree	Count	30	47	77
		% within Q20	39.0%	61.0%	100.0%
	Agree	Count	4	47	51
		% within Q20	7.8%	92.2%	100.0%
Total		Count	34	94	128
		% within Q20	26.6%	73.4%	100.0%
Chi Square Test Statistics = 15.229 (p=0.000)					

Among the dissatisfied group in working for the present employer 61.0% are satisfied with the job where as 92.2% from the satisfied group in working for the present employer are also satisfied with their current job (Table 4.22). The respective percentages on the dissatisfied group are 39.9% and 7.8% accordingly. The chi square test statistics (15.229) is highly significant ($p=0.000$). It can be concluded with 95% confident that there is a significant association between the satisfaction level of working for the present employer and the overall job satisfaction level. The percentage of employee who are satisfied in their job among those who are satisfied with their present employer (92.2%) is significantly higher than that of those who do not satisfied with the present employer (7.8%).

4.2.21 Willingness of Employee in giving their maximum for the Success of the Organization

Table 4. 23 - Distribution of Willingness of Employee in giving their maximum for the Success of the Organization

Willingness of Employee in giving their maximum for the Success of the Organization			Job Satisfaction		Total
			Disagree	Agree	
Q21	Disagree	Count	15	16	31
		% within Q21	48.4%	51.6%	100.0%
	Agree	Count	19	78	97
		% within Q21	19.6%	80.4%	100.0%
Total		Count	34	94	128
		% within Q21	26.6%	73.4%	100.0%
Chi Square Test Statistics = 9.989 ($p=0.002$)					

Results in Table 4.23 indicates that there is a significant influence on the willingness of employee in giving their maximum for the success of the organization on the job satisfaction as the chi square statistic (9.989) is significant ($p =0.002$). It can be concluded with 95% confident that the job satisfaction level is significantly influenced by the willingness of employee in giving their maximum for the success of the organization. The satisfaction level of the agreed group who are willing to give their maximum toward the success of the organization (80.4%) is significantly higher than that of the disagreed group in giving their maximum toward the success (51.6%).

4.2.22 Recommending for Future Employment

Table 4. 24 - Distribution of Recommending for Future Employment

Recommending for Future Employment			Job Satisfaction		Total
			Disagree	Agree	
Q22	Disagree	Count	21	29	50
		% within Q22	42.0%	58.0%	100.0%
	Agree	Count	13	65	78
		% within Q22	16.7%	83.3%	100.0%
Total		Count	34	94	128
		% within Q22	26.6%	73.4%	100.0%

Chi Square Test Statistics = 10.024 (p=0.002)

Results in Table 4.24 indicate that there is a significant influence on recommending the present employer for future employment on the job satisfaction as the chi square statistic (10.024) is significant ($p = 0.002$). It can be concluded with 95% confidence that the job satisfaction level of the agreed party in recommending the organization to future employment (83.3%) is significantly higher than that of the disagreed party in the same group (58.0%).

The graphical presentation for the distribution of recommending the present organization for future employment is shown in figure 4.3.

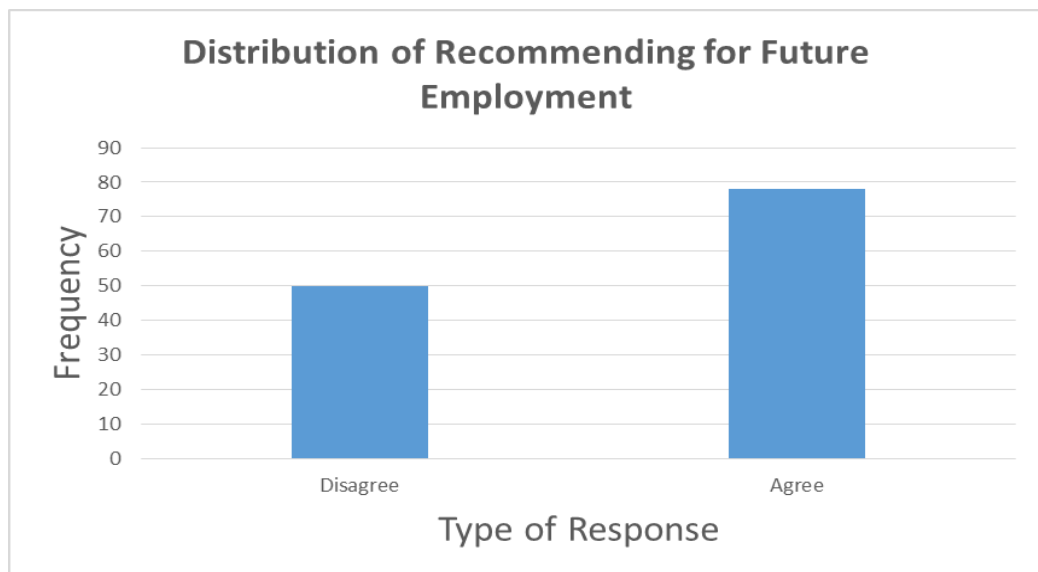


Figure 4. 3 - Graphical Presentation for Distribution of Recommending for Future Employment

4.3 Summary of Chapter 4

The status of the significance of the selected variables with the binary variable job satisfaction is summarized in Table 4.25.

Table 4. 25 - The Status of the significant Association between the selected Variables and the Response Variable

Selected Explanatory Variable	The association between the Explanatory Variable and the Binary Variable	
	Significant	Not Significant
The leaders of the organization care about their employees well being	Yes	
Staffing levels are adequate to provide quality products/services		Yes
I believe there is a spirit of cooperation within the organization		Yes
I feel I can express my honest opinions without fear of negative consequences		Yes
Changes that may affect me are communicated to me prior to implementation	Yes	
Deadlines at this organization are realistic		Yes
I feel part of a team working toward a shared goal		Yes
My job makes good use of my skills and abilities		Yes
My physical working conditions are good	Yes	
I feel physically safe in my work environment	Yes	
My supervisor handles my work-related issues satisfactorily		Yes
This organization provided as much initial training as I needed		Yes
The software and program applications I use to do my job are adequate	Yes	
I am encouraged to explore growth or advancement opportunities within the organization		Yes
I trust that if I do good work, I will be considered for a promotion	Yes	
My pay is fair for the work I perform	Yes	
Specifically, I'm satisfied with the Retirement plan and other benefits		Yes
I am proud to work for this organization	Yes	
I am willing to give extra effort to help this organization succeed	Yes	
I would recommend working here to a friend		
How long have you worked for this organization	Yes	
Recommending for future Employment	Yes	

CHAPTER 5

IDENTIFICATION OF FACTORS

In order to identify factors using the information gathered via questionnaire, which can influence the job satisfaction of the employees, Factor Analysis (FA) was carried out and the corresponding results are discussed in this Chapter. Even though each factor has 2-Likert scale, similar to binary form, the factor analysis was carried out. (Visual Statistics-Seeing Data with Dynamic Interactive Graphics , n.d.)

5.1 Pre-requirement for FA

5.1.1 Correlation among the Variables

The Seremban correlation matrix of the observed 21 variables is shown in Table 5.1.

Table 5. 1 - Correlation matrix and the corresponding probabilities of the

Description	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	
Correlation	Q2	1.000	.243	.058	.173	.212	.128	-.363	-.002	-.036	.160	-.008	.155	.046	.137	.155	.510	.164	-.302	.181	.305	.424
	Q3		1.000	.329	.298	.342	.507	.157	.441	.524	.247	.268	.263	.386	.354	.210	.342	.432	.071	.604	.263	.455
	Q4			1.000	.282	.253	.294	.167	.326	.559	.391	.243	.295	.267	.152	.459	.200	.039	-.002	.180	.370	.301
	Q5				1.000	.302	.089	.095	.121	.449	.184	.034	.108	.405	.185	.366	.271	.219	.165	.437	.182	.224
	Q6					1.000	.314	.148	.216	.181	.309	.131	.250	.035	.396	.219	.413	.153	.354	.227	.212	.389
	Q7						1.000	.075	.554	.493	.354	.088	.246	.074	.011	.383	.288	.030	-.084	.158	.246	.502
	Q8							1.000	.204	.320	.233	.343	.245	.129	.388	.306	-.110	.138	.321	.172	-.089	.043
	Q9								1.000	.525	.246	.220	.393	.109	.169	.288	.066	.030	.001	.126	.246	.340
	Q10									1.000	.342	.176	.393	.300	.038	.561	.178	.172	-.023	.302	.319	.336
	Q11										1.000	.613	.417	.166	.286	.540	.360	.239	.116	.297	.459	.443
	Q12											1.000	.271	.249	.498	.480	.119	.395	.282	.432	.424	.249
	Q13												1.000	-.012	.218	.401	.365	.102	.053	.088	.276	.519
	Q14													1.000	.316	.343	.275	.151	.202	.381	.145	.091
	Q15														1.000	.217	.248	.175	.387	.374	.218	.249
	Q16															1.000	.527	.262	.149	.356	.475	.494
	Q17																1.000	.361	.149	.484	.475	.687
	Q18																	1.000	.168	.688	.217	.343
	Q19																		1.000	.372	.004	.095
	Q20																			1.000	.348	.455
	Q21																				1.000	.594
	Q22																					1.000

Sig. (1-tailed)	Q2	.003	.257	.025	.008	.075	.000	.492	.344	.035	.466	.040	.305	.061	.040	.000	.032	.000	.020	.000	.000
	Q3		.000	.000	.000	.000	.038	.000	.000	.002	.001	.001	.000	.000	.009	.000	.000	.211	.000	.001	.000
	Q4			.001	.002	.000	.030	.000	.000	.000	.003	.000	.001	.043	.000	.012	.331	.492	.021	.000	.000
	Q5				.000	.158	.144	.086	.000	.019	.353	.113	.000	.018	.000	.001	.007	.031	.000	.020	.006
	Q6					.000	.048	.007	.021	.000	.070	.002	.348	.000	.007	.000	.042	.000	.005	.008	.000
	Q7						.199	.000	.000	.000	.161	.003	.202	.449	.000	.000	.368	.172	.037	.003	.000
	Q8							.011	.000	.004	.000	.003	.074	.000	.000	.109	.060	.000	.026	.158	.316
	Q9								.000	.003	.006	.000	.111	.028	.000	.230	.368	.496	.078	.003	.000
	Q10									.000	.023	.000	.000	.336	.000	.022	.026	.399	.000	.000	.000
	Q11										.000	.000	.030	.001	.000	.000	.003	.095	.000	.000	.000
	Q12											.001	.002	.000	.000	.091	.000	.001	.000	.000	.002
	Q13												.445	.007	.000	.000	.126	.274	.163	.001	.000
	Q14													.000	.000	.001	.045	.011	.000	.051	.154
	Q15														.007	.002	.024	.000	.000	.007	.002
	Q16															.000	.001	.047	.000	.000	.000
	Q17																.000	.047	.000	.000	.000
	Q18																	.029	.000	.007	.000
	Q19																		.000	.481	.142
	Q20																			.000	.000
	Q21																				.000
	Q22																				.000

The results in Table 5.1 clearly indicate that most of the pairs are having significant correlations ($p < 0.05$). This suggests that the observed variables are highly multi correlated and that the data can be used for factor analysis. The result of the Bartlett test statistic for the null hypothesis $H_0 : \Sigma = I$ shown in Table 5.2 indicate that the test statistic is significance ($p < 0.05$) at the 5% level. Thus it can be concluded with 95% confident that the true correlation matrix of the observed 21 variables is significantly different from the identity matrix. This further confirms that the condition of correlations among variables satisfies the requirement for FA.

5.1.2 Kaiser-Meyer-Olkin Statistics

Table 5. 2 - Results of the KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.724
Bartlett's Test of Sphericity	Approx. Chi-Square	1413.245
	df	190
	Sig.	0.000

The results in Table 5.2 also confirm that the condition of the sampling adequacy for factor analysis as KMO statistic for the observed data (0.7241) is greater than the recommended value of 0.6, for FA.

5.1.3 Reliability Test

The observed data are in Likert scale and therefore it is necessary to check the data for internal consistency. The summary statistics of the reliability test are shown in Table 5.3.

Table 5. 3 - Reliability Statistics of the observed data

Reliability Statistics	
Cronbach's Alpha	N of Items
0.880	21

Based on the results it can be seen that any of the observed data has not been deleted, where confirms that all the 128 cases are valid for the analysis. According to the above Table, the Cronbach's alpha is 0.880 which is greater than the critical value of

0.8. This value confirms that there is internal consistency in the observed data set which fulfills another pretest requirement for the factor analysis.

As all the pre requirements for FA are satisfied by the information in Q1-Q21, FA was carried out and corresponding results are discussed below.

5.2 Results of FA

5.2.1 Eigenvalues Analysis

For the purpose of carrying out the factor analysis for the observed responses on the 21 questions factors were extracted using the PCF method and the number of factors was decided by the eigenvalue (>1). The output for the explained variance based on Eigen analysis without rotation is shown in Table 5.4.

Table 5. 4 - The Eigen Analysis - Without Rotation

Principal Component	Eigen Value	% of Variance	Cumulative % of Variance	% of Variance explained by PC	Cumulative % % of Variance explained by PC
1	6.496	30.933	30.933	30.933	30.933
2	2.248	10.704	41.637	10.704	41.637
3	2.075	9.879	51.516	9.879	51.516
4	1.550	7.381	58.897	7.381	58.897
5	1.302	6.202	65.099	6.202	65.099
6	1.172	5.582	70.681	5.582	70.681
7	.951	4.528	75.209		
8	.800	3.811	79.021		
9	.720	3.428	82.449		
10	.641	3.051	85.499		
11	.556	2.648	88.147		
12	.496	2.363	90.511		
13	.395	1.880	92.390		
14	.335	1.597	93.987		
15	.283	1.348	95.335		
16	.248	1.179	96.514		
17	.229	1.089	97.603		
18	.173	.825	98.428		
19	.140	.669	99.097		
20	.111	.529	99.626		
21	.078	.374	100.000		

The results shows that the eigenvalues are greater than 1 only in the first six components. The variances of the said components varies between the ranges of 6.4 to 1.172. Out of the six components, the first component was able to capture 30.933% and the 6th component was able to capture 5.582% out of the total variability of the initial 21-D system. Accordingly, all six components were able to capture 71.978% of the initial 21-D system. Thus it can be concluded that the original system of the 21-D system can be reduced to a 6-D system. Therefore a 6-factor model can be considered to identify the factors.

The selection of six factors was further confirmed by the scree plot shown in Fig. 5.1. A sharp l-blow shape can be seen at 6.

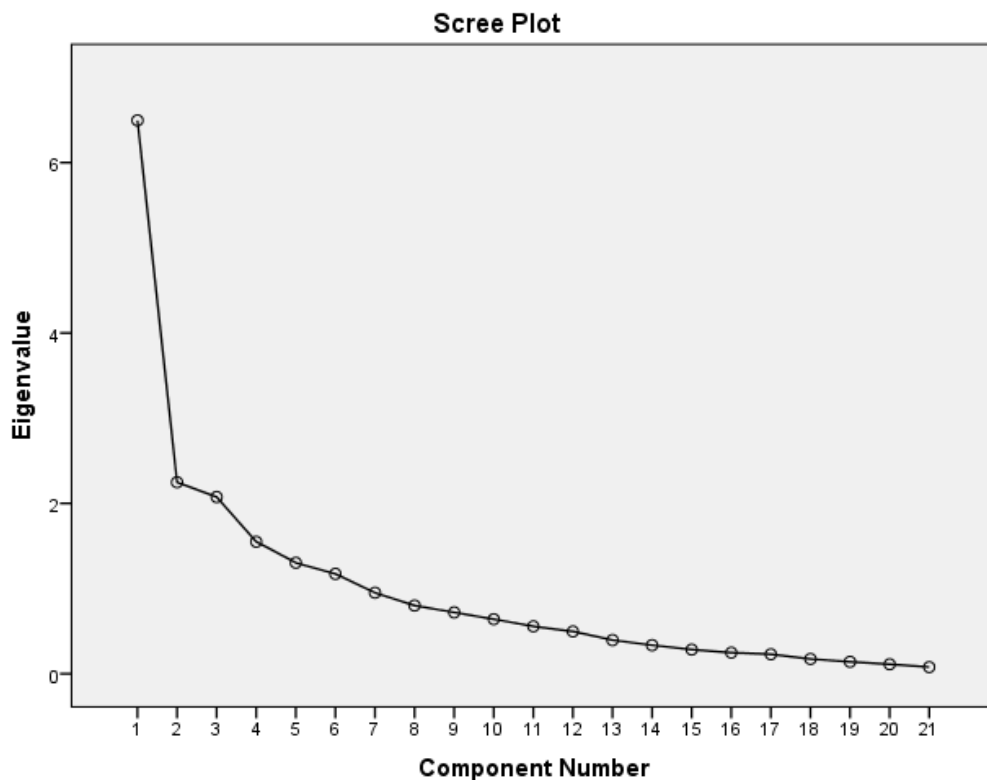


Figure 5. 1 - Scree Plot for the eigenvalues in Table 5.4

5.2.2 Initial and Final Communalities for 6 Factor Model

Communalities indicate the common variance shared by the factors with given variables. Higher communality (> 0.6), with an exceptional for Q13, indicates that larger amount of the variance in each of the variable has been extracted by the factor solution. The output for the initial communalities (without rotation) and final communities (after extraction) are shown below in Table 5.5.

Table 5. 5 - Initial and final communalities of the 6-factor model Table 5.4

Variable	Initial	Final
Q2	1.000	0.682
Q3	1.000	0.821
Q4	1.000	0.584
Q5	1.000	0.698
Q6	1.000	0.748
Q7	1.000	0.695
Q8	1.000	0.667
Q9	1.000	0.678
Q10	1.000	0.829
Q11	1.000	0.667
Q12	1.000	0.828
Q13	1.000	0.540
Q14	1.000	0.615
Q15	1.000	0.602
Q16	1.000	0.736
Q17	1.000	0.774
Q18	1.000	0.738
Q19	1.000	0.687
Q20	1.000	0.855
Q21	1.000	0.626
Q22	1.000	0.772

It can be clearly observed that the figures for the final communalities for all the gathered data on the identified variables are having values greater than 0.540 and thus it confirms that the rotation is required in order to get a clearer picture of the observed data.

5.2.3 Factor Loadings when Factors are extracted via PCA

The results for the factor loadings of the selected six factor model from the PCA without rotation is shown in Table 5.6. The results indicates that most of the initial variables load more highly on the first factor except for a very few observed variables. The factor loadings in other factors for all the variables are not well defined as the corresponding loadings in these are less than that of in Factor 1. Therefore it is concluded that the initial loadings in Factor 1 is not helpful in selecting the six factors and rotation of factors is required.

Table 5. 6 - Factor Loadings of the Observed Variables - Without Rotation

Variable	Selected Components					
	1	2	3	4	5	6
Q2	.304	-.553	.528	-.026	.023	.064
Q3	.682	-.020	.008	.387	.262	-.372
Q4	.552	-.109	-.364	.108	-.217	.275
Q5	.476	.090	.103	.530	-.042	.412
Q6	.510	.020	.104	-.113	.603	.317
Q7	.530	-.398	-.363	.091	.275	-.201
Q8	.304	.600	-.435	-.121	.098	-.036
Q9	.497	-.164	-.536	.053	.242	-.237
Q10	.640	-.104	-.511	.364	-.121	.001
Q11	.664	.011	-.101	-.394	-.242	.037
Q12	.564	.422	-.010	-.402	-.337	-.237
Q13	.540	-.178	-.249	-.374	.115	.053
Q14	.423	.290	.079	.479	-.257	.224
Q15	.489	.466	.165	-.214	.245	.112
Q16	.734	-.013	-.137	-.095	-.348	.222
Q17	.650	-.278	.476	-.065	.067	.193
Q18	.480	.225	.428	.117	-.111	-.498
Q19	.255	.670	.132	-.107	.310	.216
Q20	.668	.297	.411	.273	-.038	-.276
Q21	.619	-.263	.144	-.238	-.309	.028
Q22	.749	-.345	.176	-.188	.144	-.063

Based on the above explanation, the six factors were extracted using the three types of orthogonal rotations in order to get meaningful factors and to check whether the factors are invariant on the type of rotation.

5.2.4 Rotation via Varimax

Of the three types of rotations, Varimax is more popular and efficient compared to the other methods. The output for the Eigen analysis in Varimax rotation is shown in Table 5.7.

Table 5. 7 - The Eigen Analysis - Varimax Rotation

Component	Eigen Value	% of Variance explained by PC	Cumulative % % of Variance explained by PC	Rotated Eigen Value	Rotated % of Variance explained by PC	Rotated Cumulative % % of Variance explained by PC
1	6.496	30.933	30.933	3.053	14.537	14.537
2	2.248	10.704	41.637	2.902	13.819	28.356
3	2.075	9.879	51.516	2.441	11.622	39.978
4	1.550	7.381	58.897	2.203	10.491	50.469
5	1.302	6.202	65.099	2.135	10.168	60.637
6	1.172	5.582	70.681	2.109	10.044	70.681
7	0.951	4.528	75.209			
8	0.800	3.811	79.021			
9	0.720	3.428	82.449			
10	0.641	3.051	85.499			
11	0.556	2.648	88.147			
12	0.496	2.363	90.511			
13	0.395	1.880	92.390			
14	0.335	1.597	93.987			
15	0.283	1.348	95.335			
16	0.248	1.179	96.514			
17	0.229	1.089	97.603			
18	0.173	0.825	98.428			
19	0.140	0.669	99.097			
20	0.111	0.529	99.626			
21	0.078	0.374	100.000			

Based on the results, the observed variance of the rotated loadings has given a more symmetric view for the 6 factors compared to the corresponding's in the initial factor analysis. The first factor was able to capture 14.5% of the variance and followed by 13.8%, 11.6%, 10.5% and 10.2% from the other components accordingly. The sixth component was able to capture 10%.

The factor loadings of 6-factor model after the Varimax rotation is shown in Table 5.8. The factor loadings are the correlations between the original variables and the common factors the correlations under each factor has been highlighted accordingly.

Table 5. 8 - Factor Loadings of the Observed Variables - Varimax Rotation

Initial Variable	Selected Components					
	1	2	3	4	5	6
Q2	.082	.021	.809	.114	-.087	.018
Q3	-.021	.620	.156	.572	.150	.249
Q4	.444	.367	.010	-.140	-.011	.482
Q5	-.006	.095	.187	.092	.190	.780
Q6	.033	.324	.364	-.074	.704	.096
Q7	.129	.802	.181	.036	-.020	.031
Q8	.269	.219	-.577	.098	.443	.085
Q9	.180	.793	-.105	.042	.050	.024
Q10	.292	.659	-.117	.072	-.098	.530
Q11	.759	.193	.103	.107	.163	.062
Q12	.731	-.017	-.210	.445	.223	-.038
Q13	.503	.438	.160	-.110	.223	-.086
Q14	.105	-.034	-.046	.270	.095	.720
Q15	.259	.008	.006	.248	.684	.078
Q16	.699	.212	.121	.062	.085	.422
Q17	.300	.096	.725	.203	.248	.214
Q18	.156	.020	.133	.829	.074	.048
Q19	.046	-.142	-.191	.160	.765	.134
Q20	.152	.090	.175	.788	.251	.332
Q21	.632	.128	.409	.162	-.051	.121
Q22	.414	.429	.574	.225	.194	.011

The results in Table 5.8 indicate that of the initial variables, Q11, Q12, Q16, Q13 and Q21 were loaded in the first factor with higher loadings (>0.5) whereas the variables Q3, Q7, Q9 and Q10 were loaded with higher correlation values (>0.6) in the second factor. Similarly, variables Q2, Q17 and Q22 in the third factor, Q18 and Q20 were in the fourth factor and the Q6, Q8, Q15 and Q19 were loaded in the fifth factor with higher loadings respectively. The remaining three variables Q4, Q5 and Q14 were loaded in the final factor.

5.2.5 Rotation via Equamax

The factor loadings of 6-factor model after the Equamax rotation is shown in Table 5.9. The selected correlations under each factor has been highlighted accordingly.

Table 5. 9 - Factor Loadings of the Observed Variables - Equamax Rotation

Initial Variables	Selected Components					
	1	2	3	4	5	6
Q2	.010	.054	.809	.125	.020	-.095
Q3	.598	-.064	.158	.589	.258	.150
Q4	.355	.420	.030	-.113	.517	.009
Q5	.060	-.056	.187	.111	.779	.191
Q6	.310	-.007	.377	-.056	.107	.704
Q7	.799	.111	.195	.055	.065	-.011
Q8	.220	.265	-.561	.108	.100	.460
Q9	.794	.170	-.089	.060	.060	.064
Q10	.643	.264	-.101	.098	.565	-.080
Q11	.194	.741	.131	.134	.099	.186
Q12	-.014	.720	-.189	.463	-.016	.243
Q13	.442	.491	.186	-.087	-.047	.242
Q14	-.064	.065	-.047	.286	.716	.099
Q15	-.003	.227	.019	.262	.081	.689
Q16	.199	.668	.146	.094	.458	.107
Q17	.076	.252	.736	.226	.225	.248
Q18	.004	.126	.129	.836	.039	.070
Q19	-.154	.021	-.185	.165	.123	.765
Q20	.062	.102	.174	.803	.324	.248
Q21	.122	.607	.429	.187	.150	-.036
Q22	.419	.376	.592	.251	.039	.201

Results indicate that Q3, Q7, Q9 and Q10 has been loaded in first factor having higher loading values (>0.5). Q11, Q12, Q13, Q16 and Q21 has loaded in the second factor, having correlation values greater than the corresponding's in factor one except for Q13. Also, Q2, Q17 and Q22 has loaded in the third factor where Q18 and Q20 has loaded in fourth factor. Finally it can be seen that Q4, Q5, and Q14 has been loaded in fifth and the remaining in the sixth factor with higher correlation values.

5.2.6 Rotation via Quartimax

The factor loadings of 6-factor model after the Quartimax rotation is shown in Table 5.10. The selected correlations under each factor has been highlighted accordingly.

Table 5. 10 - Factor Loadings of the Observed Variables - Quartimax Rotation

Initial Variable	Selected Component					
	1	2	3	4	5	6
Q2	.132	.027	.804	.110	-.072	.013
Q3	.052	.636	.145	.557	.153	.242
Q4	.480	.351	-.022	-.162	-.032	.450
Q5	.059	.115	.180	.079	.192	.778
Q6	.101	.328	.339	-.085	.708	.086
Q7	.181	.797	.163	.019	-.025	.006
Q8	.267	.203	-.605	.087	.419	.069
Q9	.217	.783	-.128	.025	.036	-.002
Q10	.340	.653	-.141	.048	-.117	.501
Q11	.783	.158	.051	.085	.135	.022
Q12	.731	-.050	-.257	.429	.191	-.067
Q13	.534	.409	.119	-.129	.205	-.121
Q14	.146	-.021	-.055	.258	.089	.718
Q15	.294	.002	-.026	.238	.673	.069
Q16	.738	.186	.073	.036	.058	.383
Q17	.372	.096	.698	.188	.251	.199
Q18	.190	.027	.122	.824	.074	.050
Q19	.067	-.138	-.210	.157	.758	.138
Q20	.211	.103	.159	.776	.250	.331
Q21	.667	.104	.370	.143	-.067	.088
Q22	.481	.417	.537	.206	.189	-.017

The results for the factor loading via the Quartimax rotation is shown in Table 5.12. The results shows that Q4, Q11, Q12, Q13 and Q21 have been loaded in first factor having higher loading values (0.5). Except Q3, Q7, Q9 and Q10 have loaded in the second factor, having correlation values greater than 0.6. Also, Q6, Q15 and Q19 have loaded in the third factor where Q18 and Q20 have loaded in fourth factor. Finally it can be seen that Q18, Q20, and Q5, Q14 have been loaded in fifth and sixth factor with higher correlation values.

5.2.7 Comparison of Factors in three rotations

Results of the three Tables for Varimax, Quartimax and Equamax rotations are summarized in Table 5.11. The results indicates that a similar trend is there in extracting factors from Varimax and Quartimax rotations. A different trend was there in the Equamax in extracting the factors of the 21 initial variables. Thus a six factor model was extracted comparing the results of Varimax and Quartimax rotations. Among the above two orthogonal rotations, Varimax is more popular and efficient.

Table 5. 11 - List of Variables Selected for the 6 Factors

Type of Rotation	Variables Identified By Factor Analysis					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Varimax	Q11, Q12, Q13, Q16, Q21	Q3, Q7, Q9, Q10	Q2, Q17, Q22	Q18, Q20	Q6, Q8, Q15, Q19	Q4, Q5, Q14
Equamax	Q3, Q7, Q9, Q10	Q11, Q12, Q136, Q16, Q21	Q2, Q17, Q22	Q18, Q20	Q4, Q5, Q14	Q6, Q8, Q15, Q19
Quartimax	Q4, Q11, Q12, Q13, Q16, Q21	Q3, Q7, Q9, Q10	Q2, Q8, Q17, Q22	Q18, Q20	Q6, Q15, Q19	Q5, Q14

The results in Table 5.11 indicated the variables selected for the six factors are all the same under Varimax and Equamax. The six-factor model can be formed using the initial variables as follows.

[Q11, Q12, Q16, Q21],

[Q3, Q7, Q9, Q10],

[Q2, Q8, Q17, Q22],

[Q18, Q20],

[Q6, Q15, Q19] and

[Q4, Q5, Q14].

As Varimax is most popular rotation, the results of Varimax was used for identification factors.

The final communalities of the 6 Factors obtained from Varimax rotation method are shown in Table 5.12. The final column of the table represents the difference of the initial and the final communalities.

Table 5. 12 - Final Communalities of the Six Factors Model

Initial Variable	Communalities	
	Final	Initial – Final
	$(\sum_{j=1}^{10} \lambda_{ij}^2)$	$(1 - (\sum_{j=1}^{10} \lambda_{ij}^2) = \psi_i^2$
Q2	0.682	0.318
Q3	0.821	0.179
Q4	0.584	0.416
Q5	0.698	0.302
Q6	0.748	0.252
Q7	0.695	0.305
Q8	0.667	0.333
Q9	0.678	0.322
Q10	0.829	0.171
Q11	0.667	0.333
Q12	0.828	0.172
Q13	0.540	0.460
Q14	0.615	0.385
Q15	0.602	0.398
Q16	0.736	0.264
Q17	0.774	0.226
Q18	0.738	0.262
Q19	0.687	0.313
Q20	0.855	0.145
Q21	0.626	0.374
Q22	0.772	0.228

From the results (Table 5.12) it can be seen that the final communalities are close to one and the difference between initial and final communalities tends to zero. Therefore the 6-factor solution is accepted. The factors 1,2,3,4,5 & 6 can be formed as a linear combination of the standardized values of { Q11, Q12, Q13, Q16,Q21},{ Q3, Q7, Q9, Q10},{ Q2, Q17, Q22},{ Q18, Q20},{ Q6, Q8, Q15, Q19} & { Q4, Q5, Q14}.The factor score coefficients from the Varimax rotation is shown in Table 5.13.

Table 5. 13 - Factor Score Coefficient of Selected Factors from Varimax

Initial Variable	Factors					
	1	2	3	4	5	6
Q2	-.015	-.050	.354	.007	-.049	-.018
Q3	-.225	.273	-.007	.298	-.013	-.011
Q4	.144	.035	-.039	-.193	-.071	.250
Q5	-.123	-.063	.073	-.099	.061	.462
Q6	-.152	.112	.182	-.202	.438	-.017
Q7	-.093	.355	.026	.006	-.036	-.098
Q8	.068	.078	-.288	.005	.188	-.028
Q9	-.055	.358	-.107	.019	-.012	-.107
Q10	.006	.210	-.126	-.023	-.149	.231
Q11	.321	-.057	-.016	-.046	-.014	-.068
Q12	.332	-.119	-.172	.198	-.033	-.152
Q13	.163	.120	.036	-.148	.098	-.147
Q14	-.027	-.121	-.053	.044	-.043	.414
Q15	.020	-.056	-.009	.010	.336	-.047
Q16	.271	-.083	-.008	-.109	-.067	.176
Q17	.026	-.075	.301	-.032	.096	.051
Q18	-.022	-.021	-.018	.477	-.105	-.109
Q19	-.057	-.088	-.067	-.032	.415	.034
Q20	-.079	-.026	.005	.379	-.007	.059
Q21	.263	-.088	.124	-.001	-.126	-.011
Q22	.055	.102	.203	.027	.048	-.129

The six common factors can be written as:

$$F_1 = 0.321Z_{11} + 0.332Z_{12} + 0.163Z_{13} + 0.271Z_{16} + 0.263Z_{21},$$

$$F_2 = 0.273Z_3 + 0.355Z_7 + 0.358Z_9 + 0.210Z_{10},$$

$$F_3 = 0.354Z_2 + 0.301Z_{17} + 0.203Z_{22},$$

$$F_4 = 0.477Z_{18} + 0.379Z_{20},$$

$$F_5 = 0.438Z_6 + 0.188Z_8 + 0.336Z_{15} + 0.415Z_{19}$$

$$\text{And } F_6 = 0.250Z_4 + 0.462Z_5 + 0.414Z_{14}, \text{ where } Z_i = \left[\frac{X_i - \bar{X}_i}{SD_{X_i}} \right]$$

Thus it can be concluded that the overall job satisfaction level of service sector employees in Colombo district are based on the following six factors. The factors are,

Factor 1 - Working Environment & Professional Growth

Factor 2 - Team Spirit & Supervisor Concerns

Factor 3 - Attitude of the Top Management & the level of appreciation of the employees at the workplace

Factor 4 - Attitude of the employees towards the benefits received & their view on the Organization

Factor 5 - The facilities provided, other benefits provided by the Organization and work related concerns of the employees

Factor 6 - The resources provided to carry out day-to-day work & for the continuous career advancement within the Organization

5.3 Summary of Chapter 5

Factor analysis confirmed that six factors are sufficient to represent the variance covariance of the 21-D system (that is having a system of 21 variables) irrespective of the factor extraction method and type of orthogonal rotation. The main six factors which influence the job satisfaction of the service sector in Colombo are: Working Environment & Professional Growth, Team Spirit & Supervisor Concerns, Attitude of the Top Management & the level of appreciation of the employees at the workplace, Attitude of the employees towards the benefits received & their view on the Organization, The facilities provided, other benefits provided by the Organization and work related concerns of the employees and The resources provided to carry out day-to-day work & for the continuous career advancement within the Organization.

CHAPTER 6

CONCLUSIONS, RECOMMENDATIONS & SUGGESTIONS

Based on results of the statistical analyses in Chapter 4 and Chapter 5, the following conclusions and recommendations are given below along with few suggestions.

6.1 Conclusions

- About 73% of the employees in the service sectors are satisfied in their present employment.
- Most of the service level employees 44.5% in the Colombo district are having a service period of one to two years.
- The top management is not interested in considering employee thoughts and ideas in decision making, they are more concerned about the employee's wellbeing.
- The spirit of cooperation within the organizations' in the service sector in Colombo district is very high.
- The employees are well satisfied over the prior communication on the job changes before implementation which is having a positive relationship with the level of satisfaction.
- There are no adequate staffing levels in providing high quality service for their customer base within the organizations based on the employee view.
- The deadline provided to conclude expected work duties of the service sector employees are not realistic based on the observations of the study which is having a negative impact on the satisfaction level.
- The employer is not keen on the employee skills and abilities in designing the employees' work duties, where resulting negatively on job satisfaction.
- The supervisor intervention in the employee is also having favorable effects on the job satisfaction level.
- The adequacy of staff training is having a negative impact on the level of job satisfaction of the service level employees.

- The use of provided software and hardware in completing the job responsibilities, encouragement to explore growth opportunities within the organization, getting promoted based on superb performance are having positive effects on the satisfaction level.
- The benefits and the pay structure are playing a vital negative role in the satisfaction on level of the service sector employees in the Colombo district.
- The main six factors which influence on the job satisfactory are:
 - Working Environment & Professional Growth
 - Team Spirit & Supervisor Concerns
 - Attitude of the Top Management & the level of appreciation of the employees at the workplace
 - Attitude of the employees towards the benefits received & their view on the Organization
 - The facilities provided, other benefits provided by the Organization and work related concerns of the employees
 - The resources provided to carry out day-to-day work & for the continuous career advancement within the Organization

6.2 Recommendations

- It is important to formulate policies and programs to increase the amount of training by the employers for their employees since the initial and the required ongoing training sessions will be directly reflected on the employee performance which is key in achieving the organizational goals and objectives.
- The employee deadlines in completing job duties and responsibilities need to be set on a realistic base considering the weight of the work and the capacity of the employees.
- The top management needs to encourage the employees in commenting both positive as well as negative thoughts which will be helpful in strategic decision making. This will increase the employee motivation and their moral

as they will feel that they are also part of the decision-making process of the organization.

- The employers must make sure that there are enough staff levels to cope up the job responsibilities of the employees on time on a regular basis. Also, this will add value to the company as the quality of services of the company will be in a better stage and will also help in creating a happy bunch of customers.
- It is necessary to introduce the latest technology enhancements in order to make the employee work-life better for superb performance.
- It is necessary to do changes to the financial benefits of the employees as most of them are not satisfied with the current package. Pay benefits will have to align with the market rates, position, qualifications and the other concerned facts. Also, the employees need to be educated about the non-financial benefits of the company which are there for them, so that the employees will be aware of both financial and non-financial benefits within the organization.

6.3 Suggestions

- In this study Factor Analysis was carried out taking the variables are 2-Likert scale. However, in such occasion Rasch model approach or structural modelling approach are suggested.
- This study should be extended to other districts in Sri Lanka.
- Due to various constrains, the questionnaire was limited to few questions. One can expand this questionnaire to get more information which will be useful to obtain brooder view.

LIST OF REFERENCES

- Aydin, B., & Ceylan, A. (2009). A Research Analysis on Employee Satisfaction in terms of Organizational Culture and Spiritual Leadership. *International Journal of Business and Management - Vol 4 - No 03*, (pp. 159 - 168).
- Ahamed, M. I. (2016). Job Satisfaction Of Bank Employees In Government And Private Banks In Ampara Region, Sri Lanka. *5th Annual Science Research Sessions*, 201 - 209.
- Alexander, D. (2013). *Forbes.com*. Retrieved July 22, 2018, from <https://www.forbes.com/sites/danalexander/2013/11/08/worlds-top-saving-countries-2013/#7c2b714b1616>
- Anju, K. J., & George, S. (2011). *A Study On Job Satisfaction Of Employees In Bpcl – Kochi Refinery Limited, Ambalamugal*. Retrieved from Research Gate: https://www.researchgate.net/publication/281857611_A_STUDY_ON_JOB_SATISFACTION_OF_EMPLOYEES_IN_BPCL_-_KOCHI_REFINERY_LIMITED_AMBALAMUGAL
- Bank, E. a. (2019). Manager. (W. K. Soysa, Interviewer)
- BUSINESS, L. -T. (n.d.). Retrieved from <https://lmd.lk/what-are-the-main-contributing-sectors-of-sri-lankas-economy/>.
- Cochran, W. G. (1977). *Sampling Techniques*. Massachusetts : John Wiley & Sons. Inc.
- Cochran, W. G. (2006). *Sampling techniques*. New York: J. Wiley.
- Doyle, A. (2018, October 17). *How Often Do People Change Jobs*. Retrieved from The Balance Careers: <https://www.thebalancecareers.com/how-often-do-people-change-jobs-2060467>
- Employees, S. S. (2019). Job Satisfaction. (W. K. Soysa, Interviewer)
- Jitendra Kumar Singh, M. J. (2013). A Study Of Employees' Job Satisfaction And Its Impact On Their Performance. *Journal of Indian Research*, 105 - 111.
- Job Satisfaction*. (2019). Retrieved from Wikipedia, the free encyclopedia: https://en.wikipedia.org/wiki/Job_satisfaction
- Kumar, U., & Amsaveni, C. (2014). A Study on Job Satisfaction of Employees in Le-Shark Global Llp, Palladam. *Journal of Business and Management*, 7 - 9.
- M.I.G.Jayathilaka. (2014). *A Study On Job Satisfaction Among Extension Officers In The Department Of Animal Production And Health In Rathnapura District*.

- Ministry of National Policies and Economic Affairs. (2017). *Annual Bulletin - 2017 - Sri Lanka Labour Force Survey*. Colombo: Statistics, Department of Census and.
- Minnesota Satisfaction Questionnaire / Vocational Psychology Research*. (2019). Retrieved from Vpr.psych.umn.edu: http://vpr.psych.umn.edu/sites/vpr.dl.umn.edu/files/msq_booklet_1977.pdf
- Motors, E. a. (2019, February 15th). Assistant Manager. (W. K. Soysa, Interviewer)
- Organization: Meaning, Definition, Concepts and Characteristics*. (2019). Retrieved from Your Article Library: <http://www.yourarticlelibrary.com/organization/organization-meaning-definition-concepts-and-characteristics/53217>
- Peiris. (2018). Applied Multivariate Techniques in Applied Statistics. In T. Peiris, *Handbook on Analysis of Multivariate Data using SPSS*.
- Peiris, T. S. (2016, August). Statistical Modeling in Business. Western, Sri Lanka: Faculty Of Engineering, University of Moratuwa.
- Peiris, T. S. (2017). Applied Multivariate Techniques in Business. In *Applied Multivariate Techniques in Business*. University of Moratuwa. Retrieved from En.wikipedia.org: https://en.wikipedia.org/wiki/Factor_analysis
- Perry, B. (2009). *CIMA OFFICIAL LEARNING SYSTEM - Enterprise Operations*. cima.
- Perry, B. (2010). *Enterprise Operations - Cima Official*. Elivester.
- Principal Component Analysis*. (n.d.). Retrieved from En.wikipedia.org: https://en.wikipedia.org/wiki/Principal_component_analysis
- Ranaweera, R. (2018). Job Satisfaction Of Staff In University Libraries In Sri Lanka. *The International Journal of Organizational Innovation Vol 11*.
- Sri Lanka Census of Population and Housing*. (2011). Retrieved from <http://www.statistics.gov.lk/>: <http://www.statistics.gov.lk/PopHouSat/CPH2011/index.php?fileName=Colombo&gp=Activities&tpl=3>
- Staff, Y. B. (2019). Job Satisfaction. (W. K. Soysa, Interviewer)
- STATISTICS, D. O. (2016). *Labour Force Survey*. DEPARTMENT OF CENSUS AND STATISTICS.
- Statistics, D. o. (2017). *SRI LANKA LABOUR FORCE SURVEY*. Colombo: Ministry of National Policies & Home Affairs.
- Statistics, D. o. (2017). *SRI LANKA LABOUR FORCE SURVEY*. Colombo: Ministry of National Policies and Economic Affairs.

Statistics, D. o. (2018). *Empolyment*. Colombo: Department of Census & Statistics.

Swarna, S. S. (2015). *EMPLOYEE JOB SATISFACTION REPORT*.

Tegze, J. (2019). *The 7 Reasons Why People Change Jobs > Recruiting News and Views @ RecruitingDaily*. Retrieved from Recruiting News and Views @ RecruitingDaily: <https://recruitingdaily.com/7-big-reasons-people-change-jobs/>

Theories of Job Satisfaction (Explained with Example). (2017). Retrieved from iEduNote.com: <https://iedunote.com/job-satisfaction-theories>

Velnampy, T. (2009). *Job Satisfaction and Employee Motivation: An Empirical Study of*. Retrieved from Research Gate: https://www.researchgate.net/publication/232273196_Job_Satisfaction_and_Employee_Motivation_An_Empirical_Study_of_Sri_Lankan_Organizations

Visual Statistics-Seeing Data with Dynamic Interactive Graphics . (n.d.). Retrieved from Uv.es: <https://www.uv.es/visualstats/Book/>

Weerasinghe, Senawirathna,Dedunu. (2017). Factors Affecting to Job Satisfaction of Banking. *Business and Management Horizons*, 62 - 73.

APPENDIX – A

Questionnaire for the Survey

Employee Job Satisfaction Survey – Service Sector

Through this form information related to Job Satisfaction who are engaged in Service sector of the professionals are to be collected. All collected information will be used for my Masters Research purpose and will not be transferred to any other third party.

Email address

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Note - Mark only one oval

1. Overall, I am very satisfied with my employer
- Disagree
- Agree

This organization's leadership and planning:

2. The leaders of the organization care about their employees well being
- Disagree
- Agree
3. The leaders of this organization are open to input from employees
- Disagree
- Agree

The organization's corporate culture and communications:

4. Staffing levels are adequate to provide quality products/services
- Disagree
- Agree
5. I believe there is a spirit of cooperation within the organization
- Disagree
- Agree
6. I feel I can express my honest opinions without fear of negative consequences
- Disagree
- Agree

7. Changes that may affect me are communicated to me prior to implementation
- Disagree
- Agree

Your role within the organization:

8. Deadline at this organization is realistic
- Disagree
- Agree
9. I feel part of a team working toward a shared goal
- Disagree
- Agree
10. My job makes good use of my skills and abilities
- Disagree
- Agree

Your work environment:

11. My physical working conditions are good
- Disagree
- Agree
12. I feel physically safe in my work environment
- Disagree
- Agree

Your relationship with your immediate supervisor:

13. My supervisor handles my work-related issues satisfactorily
- Disagree
- Agree

Training, development and resources:

14. This organization as much as initial training as I needed
- Disagree
- Agree
15. The software and program applications I use to do my job are adequate
- Disagree
- Agree

16. I am encouraged to explore growth or advancement opportunities within the organization

Disagree

Agree

17. I trust that if I do good work, I will be considered for a promotion

Disagree

Agree

Pay and Benefits:

18. My pay is fair for the work I perform

Disagree

Agree

19. Specifically, I'm satisfied with the Retirement plan and other benefits

Disagree

Agree

Overall feelings about your employment experience:

20. I am proud to work for this organization

Disagree

Agree

21. I am willing to give extra effort to help this organization succeed

Disagree

Agree

22. I would recommend working here to a friend

Disagree

Agree

Gender, Job Status & the Service period

23. What is your Gender
- Male
 - Female
24. How long have you worked for this organization
- Less than one year (>1)
 - One year to less than two years (1-2)
 - Two years to less than five years (2-5)
 - Five years to less than ten years (5-10)

Thank You!!!

APPENDIX – B

Reference List of the Questionnaire

Question	Question Number
Overall, I am very satisfied with my employer	Q1
The leaders of the organization care about their employees well being	Q2
The leaders of this organization are open to input from employees	Q3
Staffing levels are adequate to provide quality products/services	Q4
I believe there is a spirit of cooperation within the organization	Q5
I feel I can express my honest opinions without fear of negative consequences	Q6
Changes that may affect me are communicated to me prior to implementation	Q7
Deadlines at this organization are realistic	Q8
I feel part of a team working toward a shared goal	Q9
My job makes good use of my skills and abilities	Q10
My physical working conditions are good	Q11
I feel physically safe in my work environment	Q12
My supervisor handles my work-related issues satisfactorily	Q13
This organization provided as much initial training as I needed	Q14
The software and program applications I use to do my job are adequate	Q15
I am encouraged to explore growth or advancement opportunities within the organization	Q16
I trust that if I do good work, I will be considered for a promotion	Q17
My pay is fair for the work I perform	Q18
Specifically, I'm satisfied with the Retirement plan and other benefits	Q19
I am proud to work for this organization	Q20
I am willing to give extra effort to help this organization succeed	Q21
I would recommend working here to a friend	Q22
What is your Gender	Q23
How long have you worked for this organization	Q24