

MOTIVATION OF CONSTRUCTION LABOUR IN SRI LANKA

Udaya Chitraka Widanagamachchi

(09 8893)



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Degree of Master of Science in Construction Project Management

Department of Civil Engineering

University of Moratuwa

Sri Lanka

June 2013

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Master of Science in Construction Project Management

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Sri Lanka

June 2013

DECLARATION

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ABSTRACT

Construction is the fourth highest sub sector in Sri Lankan economy which contributed 8.1% of overall GDP in year 2012. Labourer is an important resource in construction because it is the one that combines all the other resources namely materials, plant and equipment, and finance in order to produce the various construction products. Labourers on civil engineering projects are frequently confronted with problems that could lead to demotivation; thus, join and retain them in construction field in Sri Lanka is a key challenge. Thus, the research problem is articulated for this study as: why construction labourers do not motivate to join and retain in the construction field in Sri Lanka?

Survey research methodology was used to investigate the research problem. Structured questionnaire was used data collection in this study. Sample of 60 construction labourers was obtained across construction sites of ICTAD certified medium scale construction companies, which are located in Colombo area in Sri Lanka. The phenomenon of 'labour motivation in construction' was examined through self-administered questionnaire. Percentage and Relative Important Index (RII) data analysis techniques were used to analyse the data.

The results indicated of top six significant factors for lack of motivation for construction work force: lack of income; poor retirement benefits; difficulties in understanding technical drawings; temporary nature of the job; hard working; and, lack of social recognition; thus, most important demotivating factors in the eyes of construction workers in Sri Lanka. Mitigating these de-motivators through effective motivation strategies will increase motivation of construction labourers to join and retain in construction field; thereby, improve productivity of construction work force.

Keywords: Construction, De-motivators, Labourers, Motivation, Sri Lanka

DEDICATION



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I dedicate this dissertation to my loving sons, Senuraka & Mihin, daughter Osadee & wife Sakula.....

ACKNOWLEDGEMENT

I sincerely thank the following people and organisations who supported throughout this dissertation study.

First and foremost, I am indebted to my supervisor, Senior Lecturer of Department of Civil Engineering, University of Moratuwa, Dr.LeslyEkanayake, for his guidance, encouragement and helpful cooperation that significantly contributed for the successful completion of this dissertation.

I would like to express my sincere thanks to the Head of the Department, Prof. S.M.A.Nanayakkara, specially, Prof. A.A.D.A.J. Perera,Dr.RangikaHalwatura in construction Engineering & management division and other staff members of the department for their support given to me to complete my dissertation successfully.

And I give my sincere thanks to the Chairman of Maga Neguma Road Construction Company, for giving me opportunity & requested supports to complete my dissertation successfully.



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Special thanks goes to the construction companies and industry practitioners who participated for this study, for providing access to their organisations and providing necessary data to complete the study.

Finally, I give my immeasurable thanks to my colleagues and many others who wholeheartedly support my research work.

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LIST OF ABBREVIATIONS

ADB	– Asian Development Bank
EPF	– Employees’ Provident Fund
ETF	– Employers’ Trust Fund
GDP	– Gross Domestic Product
ICTAD	– Institute for Construction Training & Development
IT	– Information Technology
NVQ	– National Vocational Qualification
OJT	– On the Job Training
RII	– Relative Important Index
SDP	– Skill Development Projects
TEDP	– Technical Education Development Project
TVET	– Tertiary and Vocational Education
UGC	– University Grant Commission



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CHAPTER 1 – INTRODUCTION

1.1 Background

Construction is a key sector of the national economy of countries all around the world. Traditionally, it looks up a big portion in nation's total employment and contributes significant segment of nation's revenue as a whole. In Sri Lankan economy, construction is the fourth highest sub sector after services, manufacturing and agriculture which contributed 8.1% of overall GDP (Gross Domestic Product) in 2012 (CBSL, 2012). Construction industry work covers new or existing construction of buildings, both residential and non-residential, dams, canals, highways, harbours, air ports, power stations, water supply system and in general, all forms of Civil Engineering construction. Construction activities range from investigation, planning, designing, procurement and implementation up to the completion of structures along with post construction maintenance. Labour is an important resource in construction because it is the one that combines all the other resources namely materials, plant and equipment, and finance in order to produce the various construction products (Wahab, 1991 cited Olabosipo, Ayodeji, and James, 2011).



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Labour is defined as “a task that requires the exertion of body and mind or both” (Olabosipo, Ayodeji, and James, 2011, p.251). Site workers (labours) account for up to forty per cent of the direct capital cost of large construction projects (Ibironke, Adedokun, and Hungbo, 2011; Ng, Skitmore, Lam, and Poon, 2004). According to Ng, Skitmore, Lam, and Poon (2004), workers on civil engineering projects are frequently confronted with problems that could lead to demotivation; thus, they make only a minimal effort, therefore, reducing overall productivity potential. Further, it highlighted that the total time lost in the seven civil engineering projects surveyed due to demotivation of workers ranged from 5.1–13.6 man-hours/week. As a result, construction industries all over the world are still facing number of problems regarding the low productivity, high labour turnover, poor safety and insufficient quality (for example see, Olabosipo, Ayodeji, and James, 2011; Ng, Skitmore, Lam, and Poon, 2004; Parkin, Tutesigensi, and Buyukalp, 2009; Monese and Thwala,

2009; Ibrinke, Adedokun , and Hungbo, 2011; Kadir, Lee, Jaafar, Sapuan, and Ali, 2005; Khan, Umer, & Khan, 2011). Therefore, there is a need to maximise the productivity of labour resources through effective motivation strategies in order to get rid of one of the obstacle faced by construction industry.

After concluding the 30 year civil war in Sri Lanka, now requires a rapid infrastructure and other development as an urgent need. Therefore, construction industry needs to support the rapid economic growth of the country through the entire infrastructure development of the country. Shortage of skilled labour and unskilled labour in construction field in Sri Lanka are identified by many past researchers as one of the challenges faced by the Sri Lankan construction industry today. Further, it was found that many workers are willing to fly for other countries than work in Sri Lanka. Currently, large volumes of foreign workers are involved in the construction field due to this short fall of labours. Sri Lanka still is having a high number of vacancies in the construction field but finds it difficult to attract and retain required labour force. Therefore, labour motivation to join and retain in construction field is an area to be addressed immediately. Moreover, this search is very significant to identify one of the obstacles that face by the industry to rectify it as early as possible. This is relatively under researched area in construction field and new to Sri Lankan construction industry. Thus, the researched problem emerges through this background study as why construction labours do not motivate to join and retain in the construction field in Sri Lanka?

1.2 Research Problem Definition

The research problem emerged as “why construction labours do not motivate to join and retain in the construction field in Sri Lanka?” through the background study. The aim of this study was to propose effective motivation strategies for construction labours to join and retain in the construction field in Sri Lanka through investigation of current reasons for lack of labour motivation and help construction industry to improve worker productivity. To address the research problem key motivators were

identified through comprehensive literature review mainly to provide focus for data collection.

1.3 Objectives

- To identify the current situation of the shortage of labour in the construction industry.
- To identify the reasons for lack of labour motivation within the construction Industry.
- To propose effective strategies to motivate construction labour to join and retain within the construction industry.

1.4 Methodology

Comprehensive literature survey was carried out to explore the theoretical status and research issues. Survey research methodology was adopted in order to explore the current reasons for lack of labour motivation and significant motivators to retain and join them in the construction field. Descriptive survey was carried out to identify the existing causes of lack of motivation of workers and significant motivators to retain and join them in construction field. Structured questionnaire was the data collection technique of this study. Sample of 60 construction labours was obtained across construction sites of ICTAD (Institute of Construction Training Development) certified medium scale construction companies, which are located in Colombo area in Sri Lanka. Initially, informal survey was carried out among management of the organizations and site workers in order to identify the problems associated with data collection and to improve data quality. Causes of lack of motivation of construction workers and significant motivators to retain and join them in construction field were determined by using self-administered questionnaire. Percentage and Relative Important Index (RII) data analysis techniques were used to analyze the data.

1.5 Scope and Limitations

The scope of the research was investigation regarding the research problem in medium sized contracting organizations in construction context. Therefore, the researched was limited to the construction labours who are working in construction sites of ICTAD (Institute of Construction Training Development) certified medium scale construction companies, which are located in Colombo area.

1.6 Main Findings

The results indicated that most significant factors for lack of motivation to construction work force: lack of income; poor retirement benefits; difficulties in understanding technical drawings; temporary nature of the job; hard working; and, lack of social recognition; thus, most important demotivating factors in the eyes of construction workers in Sri Lanka. Mitigating these de-motivators through effective motivation strategies will increase motivation of construction labours to join and retain in construction field; thereby, improve productivity of construction work force.



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1.7 Structure of the Report

Chapter 1 – Introduction

Chapter 1 of this report introduces broader research area and identifies research problem with aim, objectives, methodology, scope and limitations of this study. Finally, Chapter 1 highlights the main findings and the structure of the report.

Chapter 2 – Literature synthesis

Chapter 2 describes the theoretical background of the study. This chapter discusses about the past studies carried out to identify the causes and methods of motivation and its' importance.

Chapter 3 – Research methodology

Chapter 3 describes the methodology adopted for this study and identifies the difficulties encountered with construction labours and behavioural problems of labour force in construction industry

Chapter 4 – Analysis and discussion of results

Chapter 4 presents and discusses the research findings from the study.

Chapter 5 – Conclusions and recommendations

Chapter 5 draws conclusions of the research with respect to the research issues to be addressed and explains recommendations of the research, limitations and opportunities available for further research under this area of study.

1.8 Summary

This chapter has presented broader research area of this study and identified research problem with aim, problem definition, objectives, methodology and scope and limitations of this study. Finally, main findings were summarised and the structure of the report was explained. The next chapter explores the theoretical status and research issues through comprehensive literature review and synthesis.

CHAPTER 2 – LITERATURE SYNTHESIS

2.1 Introduction

Chapter 1 introduced research area of this study and identified research problem with aim, problem definition, objectives, methodology and scope and limitations of this study. The aim of this chapter is to explore the theoretical status and research issues through comprehensive literature review and synthesis in order to understand and establish the significance of research problem.

2.2 Construction Labour

2.2.1 Definition of construction labour and labour productivity

A recent study labour is defined as “*a task that requires the exertion of body and mind or both*” (Olabosipo, Ayodeji, and James, 2011, p.251). Further this study broadly classified labour force into two: skilled labour or craftsmen and unskilled labour. The staffs under the skilled labour are of varying abilities ranging from apprentices to trades foremen or supervisors. The apprentice can be described as a beginner who is willing and interested in learning a certain trade in the construction industry. Some of the craftsmen in this category are carpenters; joiners; masons/bricklayers; electricians; plumbers; mechanics; painters; plant operators; scaffolders; crane drivers; steel fixers; and, tile setters. The unskilled labour on the other hand is a category of workers that requires no special skill; thus, it is defined as any way of making a living with little or no degree of security of income and employment.

Construction is the world’s largest and most challenging industry. Common human resource today has a strategic role for productivity increase of any organisation, and this makes it superior in the industrial competition (Tabassi and Bakar, 2009). With the effective and optimum uses of it, all the advantages supplied by the productivity growth can be obtained. Productivity can be defined in many ways. In construction, productivity is usually taken to mean labour productivity, that is, units of work place

or produced per person-hour. The inverse of labour productivity, man hours per unit (unit rate), is also commonly used.

2.2.2 Construction labour force in Sri Lanka - Current Scenario

Sri Lanka's construction industry might face a possible labour shortage given the reluctance of youth to join the vocation even in the post-war building boom is underway. Approximately 500,000 people are employed in the construction industry, which contributes about 6.5% of gross domestic product (LBR, 2013). However, this report highlighted that there are few entrants into the trade with school leavers preferring alternative work. Further stressed that there are no new entrants as the school leavers are prefer to go into other jobs like IT (Information Technology). Construction labour is more migratory type labour with demand being more seasonal and not permanent as in factory work. If there is a construction boom and the construction sector's share of GDP increases to 9% as happened in a previous boom, then over a million people would be needed and would have a serious labour problem and may be needed to get down labour from abroad as highlighted in this report. Even though some countries (eg. China and Japan) made with an agreement to have instead of local workers especially on foreign donor – funded projects but the native people from those countries. As an example, it was revealed that in the Hambantota and even Mattala Rajapaksha International Airport project a large number of Chinese workers were involved. Youth were reluctant to enter to this trade because of the arduous nature of the work, which often had to be done in the open air, exposed to the elements and therefore it was not branded as a popular job. Several large infrastructure projects are underway or planned and the local housing market is seen reviving after a recent slump and it was assured that remuneration was attractive for skilled craftsmen like masons, carpenters and tillers. Another issue pointed out in this report is the continuity of the employment. The government needs to ensure that there is continuity and the sustainability of the jobs of those labours. The industry tends to be cyclic with bouts of feverish construction activity followed by slumps in keeping with economic cycles.

2.2.3 Construction industry and psychological contract

The distribution of values of Sri Lankan construction industry work done by the private sector is 43% whereas the public sector is 57%. Wijewickreme and Ekanayake (2010) asserted that about 7% of the physical production work force in the construction industry is above its retirement age. They also claimed that old construction workers still have to struggle as the physical production work force due to unavailability of an affective and lifelong social security system for them. Therefore, the construction industry finds it difficult to attract youth and retained the experienced people with it. Weerasinge and Ekanayake (2011) found that inability of the construction industry to retain its experienced work force is the main barrier for effective technology transfer. They also warn that construction industry may continue as a dirty, dangerous and difficult industry unless it restores and environment, which is conducive for appropriate technology, transfer. On the other hand, with the post conflict conditions, construction industry is contributing significantly to the fast growth of the economy of Sri Lanka. The industry to retain its skilled workforce is extremely important today.



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Kiran (2011) highlighted that developing a stable work force involves two steps: understanding why employees leave and developing and implementing strategies to get them to stay. According to Kiran (2011), employees leave jobs for five main reasons: lack of support at work place; lack of appreciation from the organisation and society; lack of opportunity for advancement; poor working conditions; and, inadequate compensation. It was found that, satisfied employees are those who enjoy coming to work with an attribute to excel. These employees exhibit a sense of pride and ownership in their work. Satisfied employees also believed that they are valued for the work they do and have confidence in their ability to do the job well (Kiran, 2011). Contract is the foundation in employment relations, which establishes inducements and contribution vital to relationship in an organisation. According to Rousseau (1990) psychological contract is an individual's belief regarding reciprocal obligation. Beliefs become contractual when the individual believes that he or she owes the employer's certain contributions (eg. hard work, loyalty, sacrifices) in

return for certain inducements (eg. high pay , job security , learning opportunities) and it requires that there be a trust on the both sides. These contract promises need not be made explicit. Weick (1981) stated that when two parties can predict what each other will do in an interaction; a contract is created to continue these behaviours into their future relationship. Employees compare the inducements they receive, with the promises made by the organisation at the beginning of their employment contract. Thus, difficulties experienced by the construction labours can be identified with relevance to literature issues discussed above:

- Poor retirement benefits;
- Temporary nature of employment;
- Lack of communication with families;
- Poor incentive scheme;
- Lack of social recognition;
- Insufficient income;
- Improper gender balance;
- Being away from family and relatives;
- Non-availability of recreational facilities;
- Political and social influence;
- Interpersonal relationships;
- Behaviour of the immediate supervisor;
- Lack of safety and sanitary facilities; and,
- Influence from the dependants

2.2.4 NVQ trade competencies and impact towards construction industry

In a construction site, labourers are considered either as skilled or unskilled depending on their skill level. According to their skill level they are being paid.

2.2.4.1 Skilled and unskilled labour

Skilled Labour

Skill is a measure of a worker's expertise, specialization, wages, and supervisory capacity (Olabosipo, Ayodeji, and James, 2011). Skilled workers are generally more trained, higher paid, and have more responsibilities than unskilled workers have.

Unskilled Labour

A labour is one of the construction trades, traditionally considered unskilled manual labour, as opposed to skilled labour. In the division of labour, labourers have all blasting, hand tools, power tools, air tools, and small heavy equipment, and act as assistants to other trades, e.g., operators or cement masons (Olabosipo, Ayodeji, and James, 2011).

2.2.5 Introduction to national vocational qualification system in Sri Lanka

Traditionally the primary and secondary schools are teaching according to nationally recognised curricula and conduct exams and award G.C.E. (O/L) and G.C.E. (A/L) certificates. Further, the bachelor's degrees in arts and sciences are awarded under the preview of UGC (University Grant Commission) and have equality and recognition irrespective of universities. Nevertheless, certificates and diplomas are offered by the public and private vocational training institutions which do not carry such status. As a result, youths are in puzzle of selecting a quality program to prosper their future as a carrier path. Similarly, at the recruitment, the employers are also in difficult stage to consider which certificate to accept and complying with industry requirements. Tertiary and Vocational Education Commission has taken steps to introduce a National Vocational Qualification System (NVQ) consisted with 7 Levels in collaboration with all Government Technical Education and Vocational Training Institutes and Skills Development Project presently as TEDP under the guidance of Ministry of Vocational and Technical Training (TVCE, 2013).

There have been identified vocational skill certification systems similar to that fifth NVQ system introduced by many developed and developing countries. At present, such system is in real practice in those countries. As such international awareness on skills relating to NVQ certificate levels are prevailing in the manner as it is applicable for knowledge and skills. National Vocational Qualification System could be considered as nationally and internationally recognized vocational certification system, which is a unified one. The Tertiary and Vocational Education Commission (TVEC), in association with the Skills Development Project (SDP) funded by the Asian Development Bank (ADB), introduced the national certification system for the Technical and Vocational Education and Training (TVET) sector of Sri Lanka, which is called the National Vocational Qualifications (NVQ) framework with effect from January 2005. The Tertiary and Vocational Education act no. 20 of 1990 under which the TVEC was established requires it to establish systems for granting offer Tertiary and Vocational Education awards including certificates for the TVET sector.

2.2.5.1 Identifying and development of NVQ levels

Identifying and development of NVQ levels as illustrated in Table 2.1 in a particular standard are done by a group comprising experts in the respective trade, supervisors and senior managers that have together to develop national skills standards. A skill standard is a document, which defines competency units pertaining to a certain skill, its elements, and its standards, comprising a range of activities required for knowledge competencies and attitudes. Then the competency units are identified based on the industry requirements of a particular occupation.

Table 2.1: NVQ levels

NVQ Level	Award	Description
1	Certificate	For craftsmen who possess basic skills and
2	Certificate	For craftsmen who need direct & regular supervision
3	Certificate	For craftsmen who need occasional guidance
4	Certificate	For craftsmen who could work independently
5	Diploma	For Supervisors
6	Higher Diploma	For Managers
7	Degree Equivalent	For Decision Makers

2.3 Motivation

2.3.1 Motivation process

Motivating is the capability of programming the personnel with a unity of purpose and maintaining a continuing, harmonious relationship among all people (Monese and Thwala, 2009). Motivation is said to be intrinsic or extrinsic the term is generally used for humans but, theoretically, it can also be used to describe the causes for animal behaviour as well. However, only the human motivation is considered here. According to various theories, motivation may be rooted in the basic need to minimise physical pain and maximise pleasure, or it may include specific needs such as eating and resting, or a desired object, hobby, goal, state of being, ideal, or it may be attributed to less-apparent reasons such as altruism, selfishness, morality or avoiding mortality. Conceptually, motivation should not be confused with either volition or optimism.

Workers in any organisation need something to keep them working. Most occasions the salary of the employee is enough to keep him or him working for an organisation. However, sometime just working for salary is not enough for employees to stay at an organisation. An employee must be motivated to work for a company or organisation. If no motivation is present in an employee, then that employee's quality

of work or all work in general will deteriorate. Keeping an employee working at full potential is the ultimate goal of employee motivation. There are many methods to help keep employees motivated. Some traditional ways of motivating workers are placing them in competition with each other. When we consider about motivation we can identify two categories of motivation concepts; intrinsic motivation and extrinsic motivation. Intrinsic motivation occurs when people are internally motivated to do something because it either brings them pleasure, they think it is important, or they feel that what they are learning is significant. Extrinsic motivation comes into play when a student is compelled to do something or act a certain way because of factors external to him or her (such as money or good grades). Weick (1981) identified five principles that contribute to the success of an employee: recognition of employees' individual differences, a declare identification of behaviour deemed worthy of recognition; allowing employees to participate; linking rewards to performance; rewarding of nominators; and, visibility of the recognition process.

Motivation may be defined as the characteristic of an individual willing to expend effort towards a particular set of behaviours. In a training context, motivation can influence the willingness of an employee to attend the training program (Maurer and Tarulli, 1994), to exert energy towards the program, and to apply what they learn in the program onto the job. Thus, it is likely that trainees cannot reap the full benefits of training without consideration of training motivation (Wei-Tao, 2006). Studies conducted in the past decade and concluded that training motivation influences trainee's training performance and transfer out comes (Cheng and Ho, 2001). Colquitt, LePine and Noe (2000) suggested that even if trainees possess the ability to learn the content of a course, they might fail to benefit from the training because of low motivation. The key to motivating employees is to find proper ways to satisfy their needs. Each individual has different needs. These needs can be broken down into a few basic categories: workers participation, recognition and team belonging. For workers participation, many employees are motivated when they are "empowered" and feel that their participation is important in making the comp-any successful. When employees feel empowered in such ways, they will work in ways

that not only meet their own needs but also the needs of the company as a whole. According to Nesan and Holt (1999) "...the participative approach addresses development of good supervisor - subordinate relationships and cohesive work groups in order to satisfy both social needs and the needs of business demand...". To encourage worker participation, managers are advised to use a system that identifies and rewards workers who do a good job. For example, construction workers can receive a financial bonus for identifying ways to improve the quality of their company's operations (Jahn, 1996). One study found that money is a powerful motivator and claimed that a well-designed reward system will "lead to higher productivity for the employer and extra pay for the employees for their efforts" (Olomolaiye, Jayawardane and Harris, 1998). Team belonging is another powerful motivator in construction workers. Workers feel more motivated when they belong to a team where they are free to make suggestions, because the feeling of participating in a group is one of the basic needs of the human soul. Nesan and Holt (1999) noted that teams are especially managed allows participation among the group members, while the group as a whole is given increased responsibility for decision making. A related concern is that of cultivating good relationships among all the members of an organisation.



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The construction industry exhibits characteristics (and problems) which, taken individually, are shared with some other industries but which, in combination, create unique conditions calling for a unique management approach. One of such characteristics (which has already been mentioned) is that the industry is predominantly labour-intensive. The factor which makes the workforce or labour in the construction industry to differ from other industries is the fact that unlike an assembly line or manufacturing industry whose workers remain stable at their job for relatively long periods of time that of the construction industry is always dynamic. The reason for this is that the duration of most projects is between 1 to 3 years and the labour force fluctuates significantly during the project (Cormican, 1985). To worsen the case, projects are often spread over a wide geographical area. Barrier and Paulson (1992) also asserted that as in other service industries, success or failure in

construction is by far more dependent on the qualities of its people than it is on technologies protected by patents or by sheer availability of capital facilities, though the latter, in particular, is often also very important.

It is in stimulating or ensuring high level of productivity of workers that the issues of motivation and reward system come into focus, as a way of ensuring survival and cost effectiveness of companies/firms in the construction industry. There is no gainsaying the fact that human action (including work) are based on motives and human motives are based on needs whether consciously or subconsciously felt (Koontz and Wehrich, 1988) Furthermore, according to Mansfield and Odeh (1991), motivators should be of great concern to managers in construction organisation, as the proper implementation of motivational programs can encourage employers act in the desired way to accomplish organisation's goals at the same time as they meet their own personal objectives or motives. In order for a company to survive in the highly- competitive environment of the construction industry, it must have managers of the highest calibre, one of their main tasks being to use motivational scheme to increase the productivity of workers, in order to make profit in fact (Cormican, 1985).



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2.3.2 Motivation concepts

The concept of motivation, and describing the Hawthorne studies conducted in the United States almost 100 years ago. Concept and the outline of the ideas of early contributors to motivation theories in the 1950s and 1960s were notably by work of Abraham Maslow (Maslow et al., 2009). Summaries of the work of later theories including Victor Vroom's expectancy theory, and the contribution of E.A Locke, A Kelly and B F Skinner cannot be left behind as well. Furthermore, there were quantum of researches carried out by various constructions professionals and other professionals for motivating 'In House' workforce. However, no attempt had been made to study motivating human being towards a particular profession.

2.3.2.1 Need hierarchy theory - Maslow

This is one of the most widely mentioned theories of motivation. Maslow tried to see the human needs in the form of a hierarchy, ascending from the lowest to the highest, and concluded that when one set of needs is satisfied, this kind of need ceases to be a motivator. According to Maslow's theory, needs are physiological needs, security or safety needs, social needs, esteem needs and need for self-actualisation (Maslow et al., 2009).

Physiological needs are important to sustain the human life is defined as the physiological needs. Food, water, warmth, shelter, sleep, medicine and education are the basic physiological needs which fall in the primary list of needs of human life. According to the concept of Maslow, until these needs are satisfied to a degree to maintain life, no other motivating factors can work. So first of all physiological needs must be satisfied to motivate the people.

Security or safety needs are the needs to be free of physical danger and of the fear of losing a job, property, food or shelter. It also includes protection against any emotional harm. These needs might be fulfilled by living in a safe area; medical insurance; job security; and, financial reserves.

Social needs arise as people are social beings, they need to belong and be accepted by others. People try to satisfy their need for affection, acceptance and friendship.

Esteem needs according to Maslow (2009), once people begin to satisfy their need to belong, they tend to want to be held in esteem both by themselves and by others. This kind of need produces such satisfaction as power, prestige status and self-confidence. It includes both internal esteem factors like self-respect, autonomy and achievements and external esteem factors such as states, recognition and attention.

Need for self-actualisation is regarded by Maslow regards as the highest need in the hierarchy. It is the drive to become what one is capable of becoming; it includes

growth, achieving one's potential and self-fulfilment. It is to maximise one's potential and to accomplish something.

The concept of Maslow can be graphically represented as Figure 2.1 (Maslow's Hierarchy of Needs - Original five stage model).

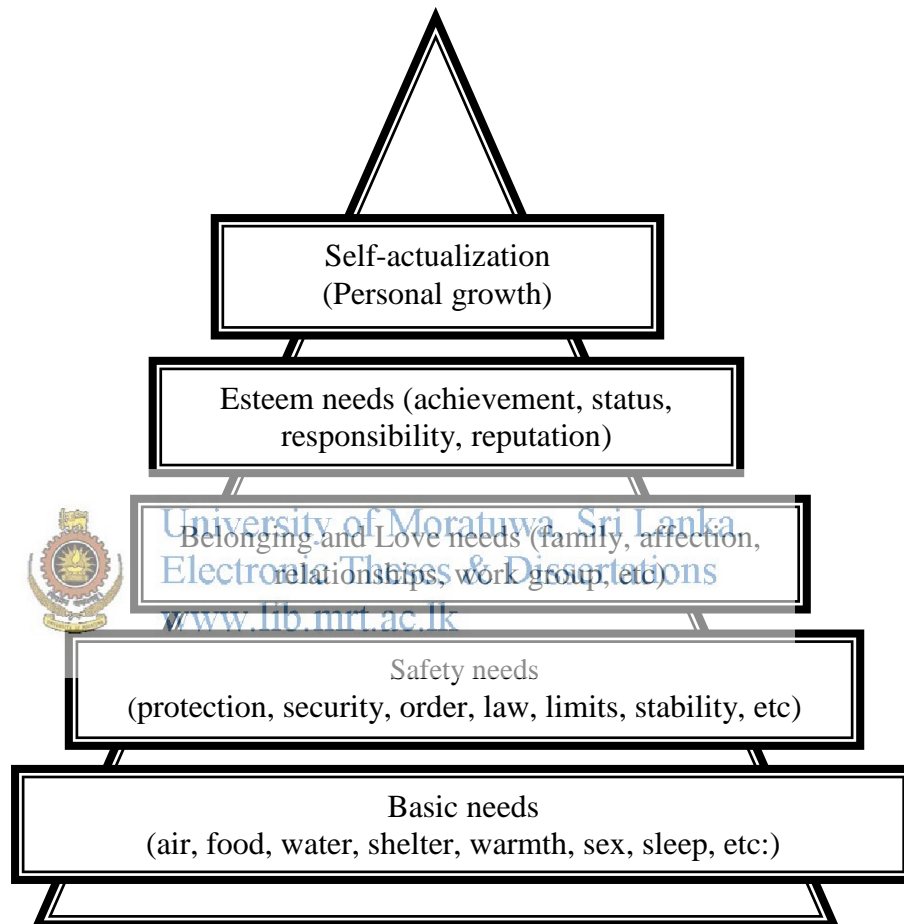


Figure 2.1: Graphical representation of Maslow Theory

As each of those needs is substantially satisfied, the next need becomes dominant. From the standpoint of motivation, the theory would say that although no need is ever fully gratified, a substantially satisfied need no longer motivates. Therefore, if you want to motivate someone, you need to understand what level of the hierarchy that person is on and focus on satisfying those needs or needs above that level.

Maslow's need theory has received wide recognition, particularly among practicing managers. This can be attributed to the theory's intuitive logic and ease of understanding. However, research does not validate these theories. Maslow provided no empirical evidence and other several studies that sought to validate the theory found no support for it.

2.3.2.2 Hygiene motivation theory

Hertzberg (1948) identified some factors, which affect people's attitudes about work: company policy; supervision; interpersonal relations; working conditions; and, salary. He identified those as hygiene factors rather than motivators. According to the theory, the absence of hygiene factors can create job dissatisfaction, but their presence does not motivate or create satisfaction about works. The second component in Hertzberg's motivation theory involves what people actually do on and should be engineered in to the jobs employees do in order to develop intrinsic motivation with the workforce. The motivators are: achievement; recognition; interest in the job; and, advancement. These factors result from internal instincts in employees, yielding motivation rather than movements. Both these factors (Hygiene factors and motivators) must be done simultaneously. Treat people as best you can so they have minimum dissatisfaction. Use people so they get achievement, recognition for achievement, interest and responsibility and they can do their works very effectively.

2.3.2.3 Equity theory

Adams' Equity Theory calls for a fair balance to be struck between an employee's inputs (hard work, skill level, tolerance, enthusiasm, etc.) and an employee's outputs (salary, benefits, intangibles such as recognition, etc.). According to the theory, finding this fair balance serves to ensure a strong and productive relationship is achieved with the employee, with the overall result being contented, motivated employees. Adams' Equity Theory acknowledges that subtle and variable factors affect an employee's assessment and perception of their relationship with their work

and their employer. The theory is built-on the belief that employees become de-motivated, both in relation to their job and in relation to their employer, if they feel as though their inputs are greater than the outputs. Employees can be expected to respond to this in different ways, including de-motivation (generally to the extent the employee perceives the disparity between the inputs and the outputs exist), reduced effort, becoming disgruntled, or, in more extreme cases, perhaps even disruptive. It is important to also consider the Adams Equity Theory factors when striving to improve an employee's job satisfaction, motivation level, etc., and what can be done to promote higher levels of each. To do this, consider the balance or imbalance that currently exists between your employee's inputs and outputs; it can be shown as follows. Inputs typically include: effort; loyalty; hard work; commitment; skill; ability; adaptability; flexibility; tolerance; determination; enthusiasm; trust in superiors; support of colleagues; personal sacrifice, etc. Outputs typically include: financial rewards (salary, benefits, etc.) and intangibles that typically include: recognition; reputation; responsibility; sense of achievement; praise; stimulus; sense of advancement/growth; and, job security. While many of these points cannot be quantified and perfectly compared, the theory argues that managers should seek to find a fair balance between the inputs that an employee gives and the output received. In addition, according to the theory, employees should be content where they perceive these to be in balance. The concept of the Adams' equity theory can be graphically represented as Figure 2.2.

$$\frac{\text{Out comes by a person}}{\text{Inputs by a person}} = \frac{\text{Out comes by another person}}{\text{Input by another person}}$$

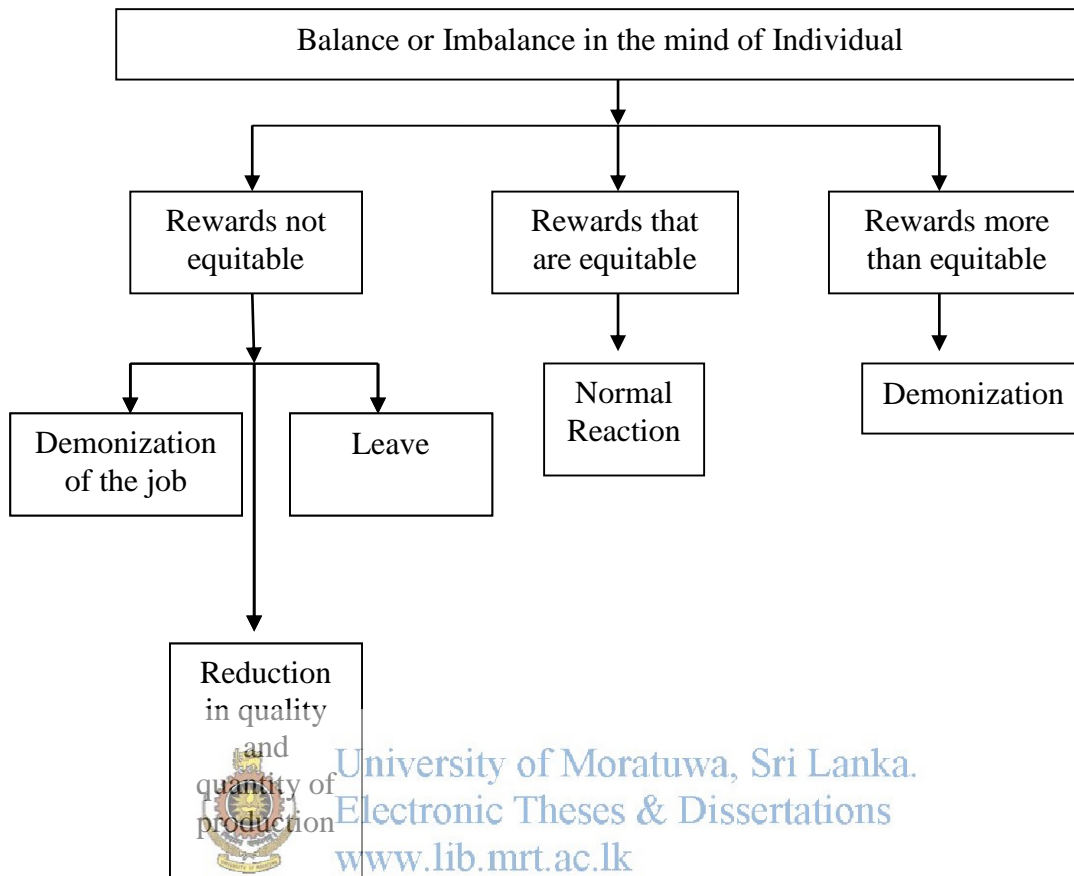


Figure 2.2: Graphical representation of Equity Theory

2.3.3 Putting theory into practice

The basic idea of motivation is to answer the employee's question, "What is in it for me?" That may sound a little insensitive, but it is the truth. While there are general actions that hit some of the needs of most employees, there are specifics that you may have to determine for each individual. Different things motivate everyone, and the age and generation of the employee can affect motivation. Aspirations of Baby boomers, generation years are different. It is interesting to analyse the differing needs of employees of different generations. Findings of such a study should be the guidance for motivational actions. Whatever actions are imposed on employees, the

first thing should be to find out what exactly motivates each person. Therefore, interviewing people, listening to them and observing them are prominent. Some of the strategies for motivation that has proved to be successful are: having good two way communication; employee rewards on job performance; treat employees with respect; employ effective discipline and punishment; give high expectations; conduct some training programmes; understand the behaviour of the employees; and, effective leadership.

Having good two way communication

Good two-way communication can help to build the psychological contract, in which employees feel valued by their employer, and the employer values employees' contributions. By having good communication we can ensure that, project team members know the organisational goals for the project. Those will gives the added advantages not only employer but also for employees. Therefore, Communication is an important aspect of employee engagement. The two most important drivers of employee engagement identified from some research are: having opportunities to feed upwards and feeling well informed about what is happening in the organisation. Some research finds 'opportunities for upward feedback' and 'feeling well informed about what's happening in the organisation' are the key drivers of employee motivation which in turns promotes better performance, employee retention and positive emotions towards work. Further, key barriers to engagement have been identified as a lack of communication knowledge sharing and poor visibility of senior management and quality of downward communication. According to above without having good communication any company cannot achieve their goals. There may be so many problems in the company due to having weak communication skills. Such Problems are: misunderstanding; delaying of works; problems in material handling; and, not passing messages to the every layer of the company. Management rank money as being 1st whereas workers rank achievement, promotion, and advancement as 1st. The ranking by management is not surprising since management always think invariably in terms of money, so although they give promotions, it all boils down to how much money the company has to pay out to the worker. The

response by the workers however indicate that they are not motivated just by money in isolation, but indeed they are motivated by the social status and recognition associated with the increase in money, such as higher post higher responsibility. This confirms the finding of Armstrong (2003) Who asserts very strongly that managers should appreciate that motivation is not just a matter of forking out (or dishing out) more money.

Employee rewards on job performance

The only way employees will fulfil employer dream is to share in the dream. Reward systems are the mechanisms that make this happen. However, reward systems are much more than just bonus plans and stock options. While they often include both of these incentives, they can also include awards and other recognition, promotions, reassignment, non-monetary bonuses (e.g., vacations), or a simple thank you. All rewards should be based on job performance. Personality should not play a part. Rewards or recognition should be given as appropriately and fairly. Ensure that it is in relation to meeting the goals I related to the company. In addition, it should be done to meet employee and organisational needs. As well as, all the rewards must be based on the work that they perform.



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Treat employees with respect

The golden rule in successfully dealing with people has always been to treat others, as you would want to be treated. Managers must understand the fact that your employee is a human being. An employee should be able to feel like their boss is a fellow human being and not want to run away in fear. In addition, employees work best with someone who can be reasonable and fair rather than someone who just barks out orders and expects them done. This makes everyone happier and provides a less stressful environment.

Employ effective discipline and punishment

Although frequently used, the least effective method of motivating a worker is with a negative consequence, such as a verbal dressing-down, suspension, or the loss of the job. Punishment may achieve immediate results, but it does not accomplish internal

motivation for several reasons. First, adults are not inclined to remain in employment where they are threatened and intimidated. Second, workers who are backed by a strong union may dissolve the threat with a higher level of authority. Third, scares and intimidation can create animosity toward a superior and employees may respond with hostility and subversion. Another problem with the fear strategy is that it creates a punitive climate in which individuals are afraid of being different from or of offending others. This particular situation has a tendency to diminish creativity and lead to intellectual stagnation.

Give high expectations

Having and communicating high expectations for the employees is critical. If people know that the organisation expects good things from them, they are motivated to live up to those expectations, a positive self-fulfilling prophecy works.

Training

A firm's greatest asset is its' people. Training is one key to increase the performance of employees. Training can increase productivity, morale, reduce the load on supervisors, improve safety and increase organisational stability and flexibility. In developing highly qualified people, it helps to offer vocational and supervisory training facilities, especially when free tuition or greater promotional opportunities are offered to workers and supervisors who enrol. Workers indicated that their companies do not carry out further training workshop and seminar for workers. One worker even went on to indicate on his questionnaire that even such training. Workshop or seminars are available, they are meant for company's Management staff alone. This is at variance with the large expatriate construction companies, who this researcher learnt, go to great extends/lengths to train their workers (not just management alone) in order to maintain set standards by which they are known for. After such workers have risen through the ranks and retire, these companies retain them as sub-contractors. On the other hand, the construction sector is considered as one of the most dynamic and complex industrial environments (Druker, White and

Mayne, 1996). The changing requirements of construction work necessitate the formation of bespoke teams each time a new project is awarded. The external sources of labour (subcontractors, agency temporaries, and self-employed) are very common in construction industry (Langford, et al., 1997). In fact, it is accepted that construction firms face many difficulties in the training and development of labour and staff (Winch, 2003; Raiden and Dainty, 2006). Two significant methods of training construction workers are on-the-job and off-the-job training (Smith, 2002).

On –the –job training: In the traditional model of on-the-job training (OJT), to promote new practices, workers would typically receive a pre-prepared course on the new regulations, procedures, or processes, often at a different location than their place of work, and be expected apply this abstracted knowledge later in their workplace. OJT and experience are probably the most common methods of employee development used at all levels of the organisation. Where organisations utilise a large number of “skilled” bricklayers, carpenters, plumbers, armature workers, welders, etc. they may utilize a special type of OJT called apprenticeship training. This training is mostly done under standards which are established (i.e curriculum, number of hours, and affirmative action goals) by government parts (Smith, 2002). Popular OJT methods include job rotation and understudy assignments. Job rotation involves lateral transfers that employees to work at different jobs. Both job rotation and understudy assignments apply to the learning of technical skills. Interpersonal and problem-solving skills are acquired more effectively by training that takes place off the job. Off- the- job training: There is a number off the job training methods that managers may want to make available to employees. The most popular methods are classroom lectures, films and simulation exercises. Classroom lectures are well suited for conveying specific information. They can be used effectively for developing technical and problem-solving skills. Films can also be used to explicitly demonstrate technical skills.

Understand the behaviour of the employees

People at work naturally tend to adopt instinctive modes of behaviour that are self-protective rather than open and collaborative. This explains why emotion is a strong

force in the workplace and why management often reacts violently to criticisms and usually seeks to control rather than take risks. Therefore, in order to eliminate this kind of perspective and to increase employee motivation, it is best that you influence behaviour rather than to change personalities. Insisting what you expect from your employees will only worsen the situation.

Effective leadership

The term "leadership" has different interpretations, and only a few will be provided. According to Webster's New World Encyclopaedia, the concept "leadership" refers to "a process or technique of managing, organizing and operating a business. According to the Moorhead and Griffin, Leadership implies making people do what the leader wants, but this is not done in an aggressive manner. Managers are value-directed, they understand where the organisation wants to go (vision), and they point out the direction to their followers. Invariably, machines, materials, methods, markets, and money (five m's) do not provide leadership, even though they are important for the growth and development of an organisation and without effective leadership, the factors such as money, equipment, people, and machinery are sterile. Through the astute leadership that is provided in an organisation, employees may develop a positive work ethic. In such organisations, employees are willing to achieve organisational objectives and target because they know what is expected of them. One may conclude that effective leaders do not only blaze the trail and clear obstacles that could hamper productivity; they also set high standards for job performance.

2.3.4 Incentive schemes and motivators in construction industry

Bonus schemes are the main incentive schemes in operation in the construction industry (eg. New Year bonus, Christmas bonus). According to Butler (1991) that bonus schemes are the most common type of financial incentive in the industry which relate earning to effort, if correctly applied. Free medication or medical care which is extended to family members of workers is another method of incentives. The various

companies offers it within reasonable limits of course e.g. indicating how many family members can be permitted and to what extent of medical care they can qualify. Construction companies should go beyond just providing a first aid box full of medications for slight headaches and wounds to providing. Medication to combat prevalent tropical diseases like malaria fever is vital part of these medical schemes. Transporting the wives of the workers to ‘bush markets’ to buy foodstuffs at lower prices for them to either re-sell or for personal consumption is another motivator of workers. For example, the middle –sizes firms do well to emulate such a scheme because it serves both as a motivator as well as a guarantee of good feeding of the workers which as stated by Okwa (1981). It is gratifying that it was to motivate workers and increase productivity, with the final aim of increasing profit. It is also gratifying to know that the benefits achieved from the incentive scheme include motivation of workers and increased productivity, resulting in good return (i.e profit). This implies that even the incentive scheme already in operation, have to some reasonable extent, achieved their aims and targets.

2.4 Summary



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This chapter discussed key definitions and concepts relating to labour, motivation and labour motivation in construction industry through a comprehensive literature review and synthesis. Based on the above literature findings questionnaire was formulated by incorporating factors identified to address the research problem. The next chapter describes research methodology of this study.

CHAPTER 3 – RESEARCH METHODOLOGY

3.1 Introduction

Chapter 2 discussed the theoretical status and key research issues through comprehensive literature review and synthesis. The aim of this chapter is to describe the whole research process of this study.

3.2 Research Approach

This quantitative study adopted survey research methodology in order to explore the current reasons for lack of labour motivation and significant motivators to retain and join them in the construction field. Survey research method was selected mainly because it facilitates to obtain data about practices, situations or views regarding the labour motivation in construction at one point in time through questionnaires or structured interviews (Blaxter, Hughes and Tight, 1999). Descriptive survey was carried out to identify the existing causes of lack of motivation of workers and significant motivators to retain and join them in construction field.



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3.3 Research Process

The research process of this study, which was based on survey research method comprised following stages: initial impetus; literature review; problem statement; questionnaire design; data collection; data analysis; and, write-up. The succeeding sections follow this sequence in explaining the whole research process of this study.

3.3.1 Initial impetus

The initial impetus to conduct this research was mainly driven through an opportunity given by the Department of Civil Engineering for full-fulfillment of dissertation study for post graduate candidates for the award of Master of Science degree. The research topic was triggered as a current issue to be addressed in construction industry in Sri Lanka. After concluding the 30 year civil war in Sri

Lanka, country requires a rapid infrastructure and other development as an urgent need. Therefore, construction industry needs to support the rapid economic growth of the country through the entire infrastructure development of the country. Shortage of skilled labour and unskilled labour in construction field in Sri Lanka are identified by many past researchers as one of the challenges faced by the Sri Lankan construction industry today. Further, it was found that many workers are willing to fly for other countries than work in Sri Lanka. Currently large volumes of foreign workers are involved in the construction field due to this short fall of labours. Sri Lanka still is having a high number of vacancies in the construction field but finds it difficult to attract and retain required labour force. Therefore, labour motivation to join and retain in construction field is an area to be addressed immediately. Moreover, the phenomenon of ‘labour motivation in construction’ is very significant to identify one of the obstacles that face by the industry to rectify it as early as possible. This is relatively under researched area in construction field and new to Sri Lankan construction industry.



3.3.2 Literature review

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The comprehensive literature review was conducted to explore the theoretical status and research issues such as definitions, concepts, empirical studies, gaps of this area and establish the significance of research problem. The literature search was done in publications such as conference papers, web publications, thesis, dissertations, books, and journal articles available in common databases (for example, Emerald full text search) and university library. It was extended gradually by finding references and key authors, within already found publications.

3.3.3 Research problem statement

Shortage of skilled labour and unskilled labour in construction field in Sri Lanka are identified by many past researchers as one of the challenges faced by the Sri Lankan construction industry today. Further, it was found that many workers are willing to fly for other countries than work in Sri Lanka. Currently, large volumes of foreign

workers are involved in the construction field due to this short fall of labours. Sri Lanka still is having a high number of vacancies in the construction field but finds it difficult to attract and retain required labour force. Therefore, labour motivation to join and retain in construction field is an area to be addressed immediately. The research problem emerged as “why construction labours do not motivate to join and retain in the construction field in Sri Lanka?”. Moreover, this study investigate current reasons for lack of construction labour motivation and identify most significant motivators to join and retain them in the construction field in Sri Lanka; therefore, helps construction industry to improve worker productivity.

3.3.4 Questionnaire design

Two sets of questionnaires were designed to administer among company workers and company management (See Appendix A and B). This was done to validate the workers responses with relevant company management. Both sets of questionnaires were accompanied by a letter of introduction, which explained the need for the research questionnaires as well as soliciting the respondents' cooperation, as well as assuring them of the confidentiality of the information supplied in the questionnaire.



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Both sets of questionnaires were sub-divided into three parts namely: (A) personal and company data; (B) motivation; and, (C) labour productivity. The questionnaire is basically used to identify the current situation, technical qualifications and the difficulties that are experienced by the construction labour force; thus, basically covers general information of construction labour force; career information; training and technical information; and, difficulties of construction labour force. Respondents were asked to evaluate the significance of measure items in the questionnaire using three-point Likert scale. Likert scale is commonly used in questionnaires and the most widely used scale in survey research (Oppenheim, 1992). When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement. The questionnaire survey in this study was in a three-point Likert scale with response options ranging from “High” to “Low” (1 = Low, 2 = Middle, 3 = High).

After the final draft of the questions and form of the questionnaires had been finalised and agreed between the researchers and his supervisor, the questionnaires were subjected to pre-testing to test their validity and reliability. This was done primarily to check if the questions asked were being understood by the respondent and whether they were providing the answers in the required form. It was observed from the pre-testing that certain questions did not elicit the needed responses. Such questions in the final copies of the questionnaire re-structured/re-framed or in certain cases cancelled out altogether. After the pre-testing had been carried out, a new form of the questionnaires was then mass-produced for administering to the respondents.

3.3.5 Data collection

Data collection of the research study consisted of two steps: pilot study and sample selection; and, actual survey. Subsequent paragraphs explain the data collection process of the study.

The pilot study was carried out with the groups: directors in leading construction companies in Sri Lanka; lecturers in technical training schools related to construction industries; professionals in construction industry; and, labourers in construction industry in order to develop the data collection instrument to gather data and to identify appropriate and accessible construction organisations and labour force. The researchers encountered following difficulties during data collection stage which were minimised due to the pilot study. The bureaucracy involved in applying and being allowed to either administer the questions or of the questionnaires being accepted to be distributed to workers, was so much that some companies/firms had to be neglected because of the “go today, come tomorrow” syndrome. In addition, the level of suspicion and mistrust were found to be a milting factor. Many workers and the company officials were not co-operative and seemed suspicious of the questionnaire even after they were assured that that the information to be so obtained was only for the purpose of research work and will be treated with confidentiality.

85 questionnaires were distributed to a total five medium scale ICTAD registered construction company in Colombo area. Out of this number 10 questionnaires were distributed to company management while another 75 for company workers. Management here referred to the middle management (eg. Quantity Surveyor) and lower management (eg. Foreman, Supervisor) because top management was not accessible (eg. Managing Directors) due to their busy schedules or the bureaucracy involved to see them. The lower management was consulted because it was felt that they, being closer to the workers in terms of supervision, will be in a better position to know the needs and characteristics of their workers. 70 participants (10 from Managers and 60 from workers) returned the filled questionnaire; thus, overall response rate of 82% was achieved.

3.3.6 Data analysis

The data collected from the questionnaire survey was analysed using Relative Important Index (RII) in order to recognise the effective each factors identified (Khan, Umer, and Khan, 2011) in labour force motivation in construction.



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$$RII = \frac{\sum \mu}{A \times N}$$

Where, μ is weighting given to each factor by respondents; A is the highest weight available to rate the factor; and, N is the total number of respondents. In addition to RII, data was analysed using percentage.

3.3.7 Write-up

The final stage of the research process was to write-up the dissertation. This was progressively developed from time to time, rather than at the end of the data analysis process. The write-up of the dissertation was started with descriptive writing (see Chapter 2 to Chapter 4) and led to narrow chapter (see Chapter 5) that provides conclusions and recommendations for construction industry.

3.4 Summary

This chapter has presented research approach and research process used in this research study. The next chapter analyses and discusses the findings from the study in detail.



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CHAPTER 4 – ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

Chapter 3 discussed the research methodology used for this research study. The aim of this chapter is to present and analyse the research findings of the empirical investigation.

4.2 Demographic Characteristics of the Data sample

The term demographics as a noun and often used to study the human population and its' structure. Since this research is interacted with people, this study used demographic characteristics to analyse some areas of the research. Some characteristics as in the following to clarify the structure and variety of the labours in the construction industry are illustrated in Table 4.1. According to the clarification related to gender balance, 95% of the construction labours were male labours. Female doesn't like to this industry due to so many problems. When consider about age variation of construction labours most of the labours were in the category of age variation 36 to 49 years. Experience of the most of construction labours ranged between category of 11 years to 15 years.

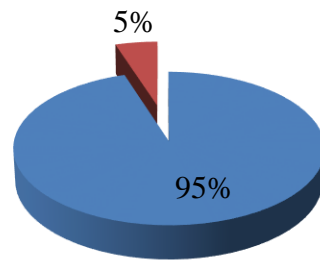
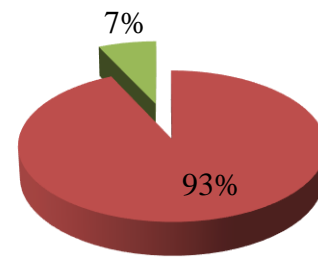
Table 4.1: Demographic characteristics of construction labour force

Demographic characteristics	Responded by workers	Responded by Managers regarding the workers
<i>Gender balance</i>		
Male	95%	93%
Female	5%	7%

<i>Age Variation</i>		
Age between 18-25	7%	5%
Age between 26-35	7%	8%
Age between 36-49	50%	53%
Age between 50-60	29%	31%
Age above 60	7%	3%
<i>Experience Variation</i>		
Experience less than 5 years	23%	25%
Experience between 6-10 years	23%	23%
Experience between 11-15 years	46%	44%
Experience between 16-20 years	8%	9%
Experience between 21-25 years	0%	1%
Experience between 26-30 years	0%	0%
Experience between 31-35 years	0%	0%

4.2.1 Gender balance

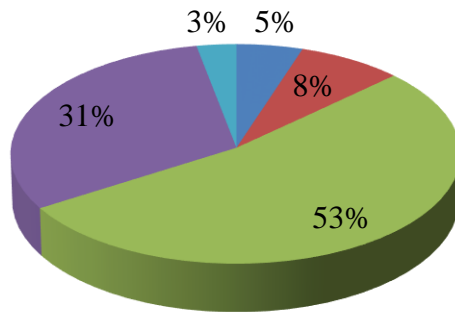
This study found 5% female and 95% males in the construction industry as responded by workers (see Figure 4.1). Most females don't like to join the industry because it is a difficult industry to them. According to this research study, when the gender balance improves, the female percentage form 1% to 5% the males also used to come to the industry and use to stay in the industry for many years than usual.

Gender balance - As responded by workers**Gender balance - As responded by Managers regarding the workers****Figure 4.1: Gender balance of construction labour force**

4.2.2 Age variation

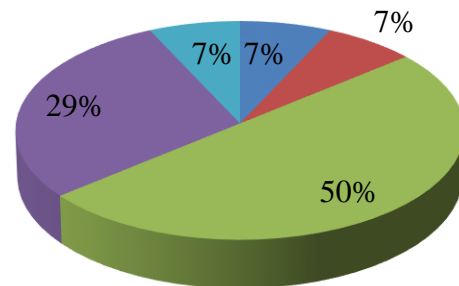
This study found that only up to age of 49 years higher percentage of labours stay in the industry (See Figure 4.2). When they pass the age limit of 49 years they use to move away from this field and do other careers or use to be dependent on their children. Therefore, it is important to improve retirement benefits to them such as EPF (Employment Provident Fund). Unfortunately, most of the workers are employed through subcontractors via labour suppliers. According to International Labour Organisation report on Geneva, this trend is improving (ILO, 2001). Therefore, it is important to improve a method of registering the subcontractors and labour suppliers as in Malaysia and Singapore.

**Age variation - As responded
by Managers regarding the
workers**



- Age between 16-25 years
- Age between 26-35 years
- Age between 36-49 years
- Age between 50-60 years
- Age greater than 60

**Age variation - As responded
by workers**



- Age between 16-25 years
- Age between 26-35 years
- Age between 36-49 years
- Age between 50-60 years
- Age greater than 60



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Figure 4.2: Age variation of construction labour force

4.2.3 Experience level

According to empirical data only few labours stay in construction industry for more than 20 years (see Figure 4.3). It shows the temporary nature of labour force in construction industry in Sri Lanka. Only labours work in the same office in the same construction site. Most of the time labours move from one organisation to another when they become ideal.

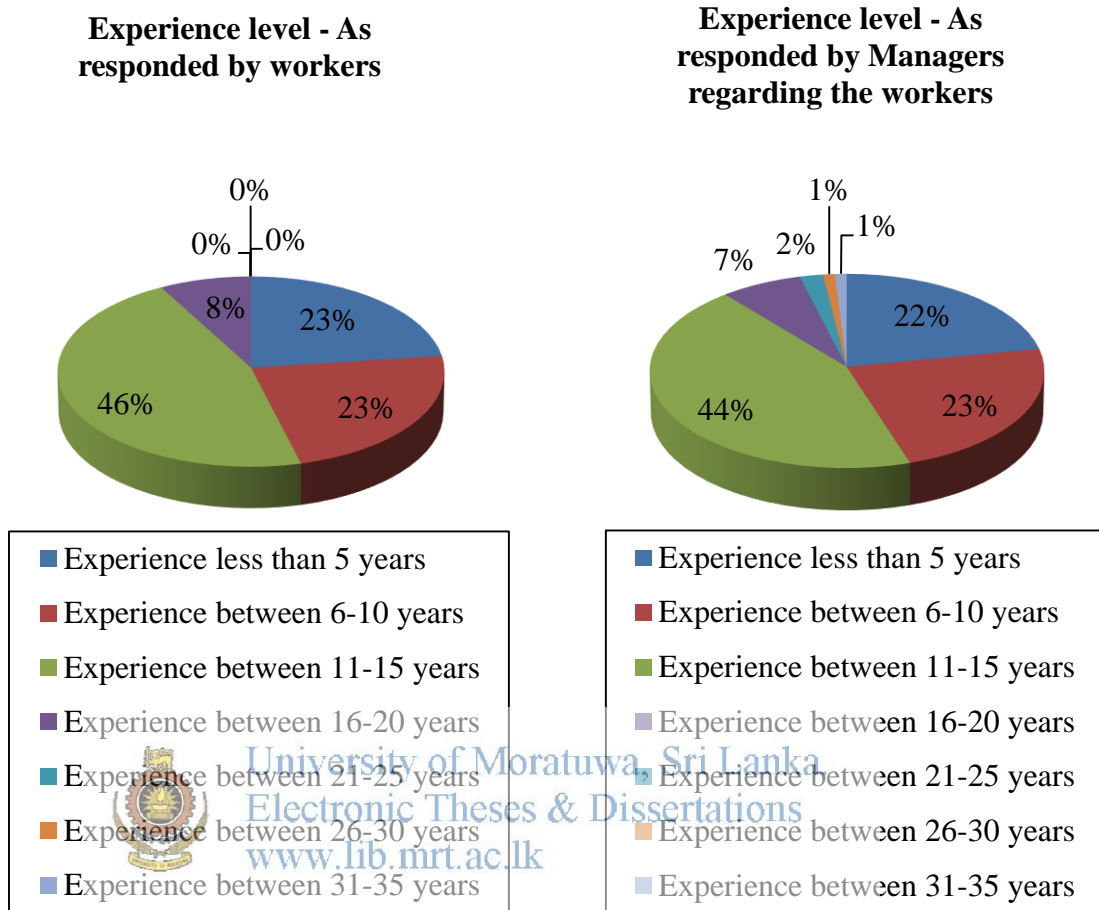


Figure 4.3: Experience level of construction labour force

4.3 Nature of Work for Construction Labour Force

Nature of work for skilled labours is shown in Figure 4.4. 10% of the skilled labours had permanent employment in the respective organisation. Therefore, they were able to enjoy many benefits such as holidays with pay, health holidays, EPF, etc. 90% of the skilled labours worked temporary. This finding is consistent with Jayewardane and Gunawardena (1998) who argued that the temporary nature of the skilled labour force has improved. All of the skilled labours had obtained skills in informal way and no one had interest to obtain NVQ certificates. No one knew the method of obtaining NVQ certification through RPL method as mentioned in the literature review.

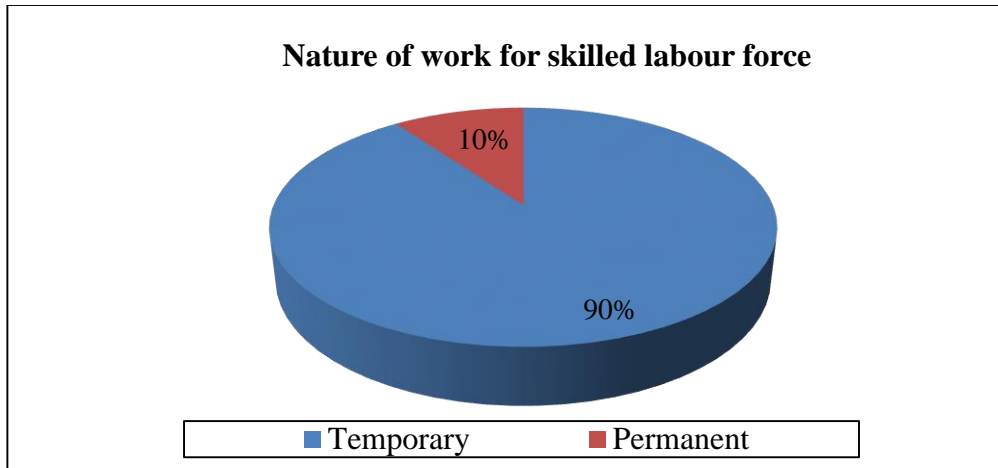


Figure 4.4: Nature of work for skilled labour force

The study found that the only 5% of the unskilled labours had permanent employment in construction organisation (see Figure 4.5). They were able to enjoy benefits such as holidays with pay, health holidays, EPF, etc as the permanent skilled labour. 95% of the unskilled labours worked temporary. This finding is consistent with Jayewardane and Gunawardena (1998) who argued that the temporary nature of the skilled labour force has improved. Similarly, no unskilled labours had enrolled to NVQ courses except informal trainings and no one had known about courses that can be followed in the weekends which became aware during the pilot study with NVQ colleges lectures.

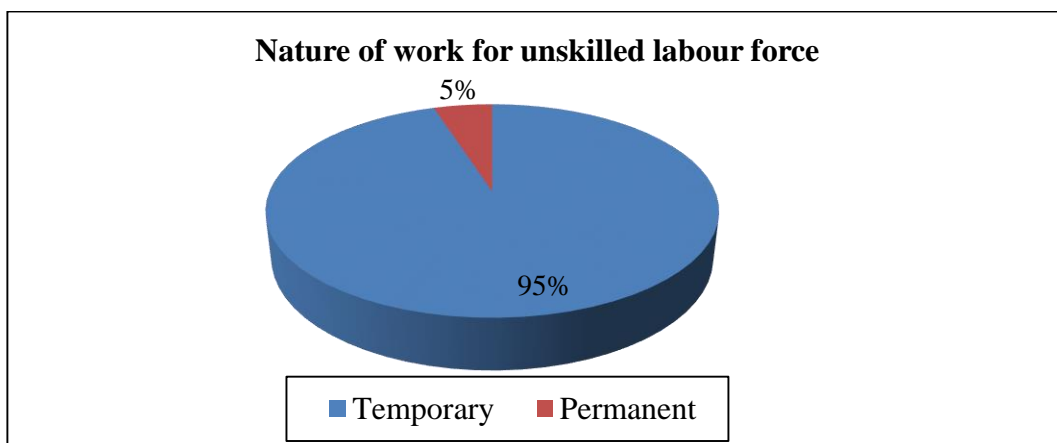


Figure 4.5: Nature of work for unskilled labour force

4.4 Reasons for Lack of Labour Motivation in Sri Lankan Construction Industry

4.4.1 Barriers to get the technical qualifications

Majority of the labours were unable get technical qualifications due to lack of time (63%) as illustrated in Figure 4.6. Since labours are paid less, they intend to work on Saturdays and Sundays in order to obtain additional income. Therefore, most of them don't have enough time to go for the technical colleges. 37% of the labours mentioned that they were unable to get required technical qualifications due to inadequate income. Most of the labours revealed that they find difficult to enrol for NVQ courses due to lack of income. They wish to get an allowance to spend on collages to enrol for the courses while work. It is evident that most of the labours were trained informal ways and they believed that the courses are not important. This finding is consistent with Jayewardane and Gunawardena (1998) who showed that if the income doesn't improve they have no interest to obtain the qualifications.

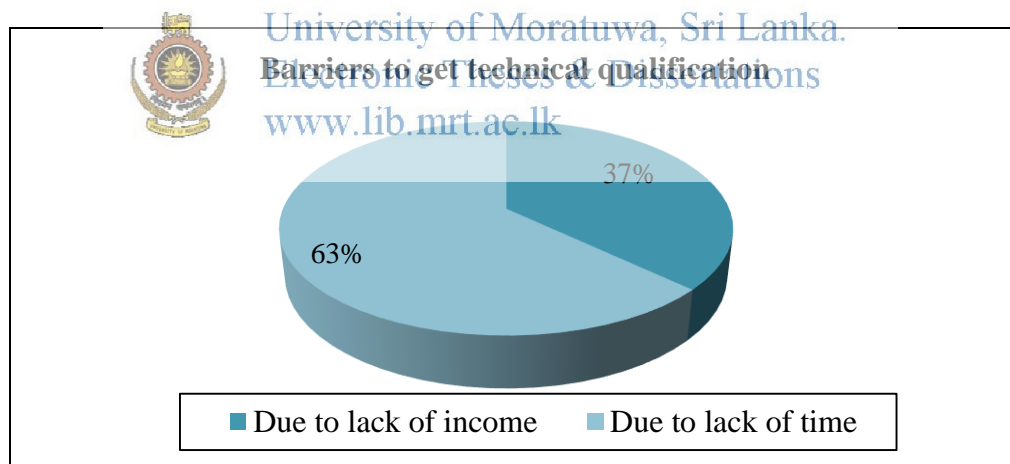
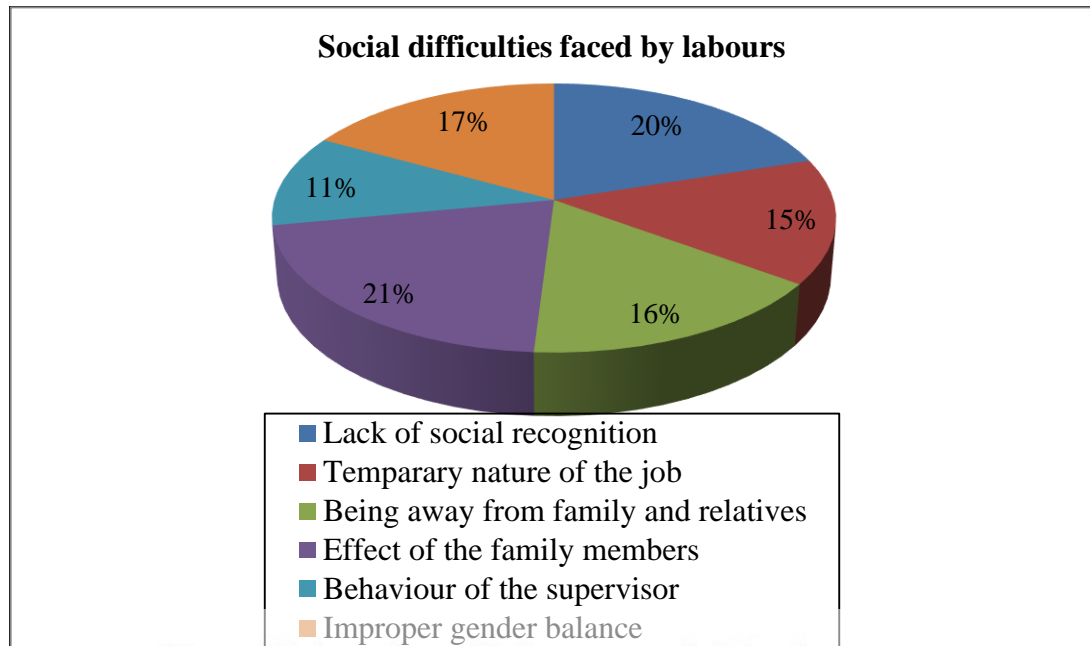


Figure 4.6: Barriers to get technical qualifications

4.4.2 Social difficulties

Figure 4.7 illustrates social difficulties experienced by the construction labour force. Most critical social factors were effect of the family members; lack of social recognition; improper gender balance; being away from family and relatives; and, the temporary nature of the job. Actually whole construction industry is of temporary

nature. This can be rectified by a proper planning of projects to reduce the temporary nature of work since many labours like to work in permanent jobs. Being away from their own families is also a social difficulty.



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Figure 4.7: Social difficulties faced by labours

4.4.3 Technical reasons

One of the major tasks is to analyse the technical knowledge of construction labour force and effect of technical knowledge to sustain in the construction industry. Figure 4.8 presents critical technical difficulties faced by the labour force. Lack of supervisor's appreciate and work with new machinery was shown to be most critical difficulties among others.

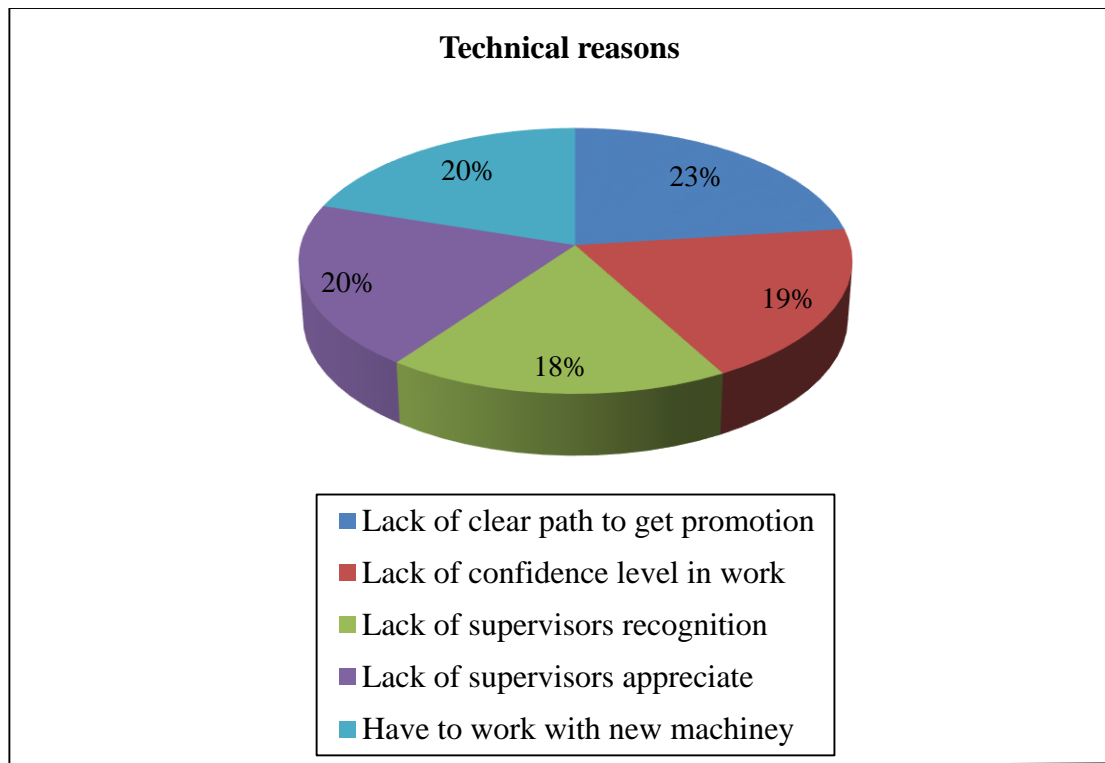


Figure 4.8: Technical difficulties faced by labours



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4.4.4 Health reasons www.lib.mrt.ac.lk

According to Maslow, the safety factor is given a large priority in the list of needs. Therefore, it is very important to analyse health difficulties experienced by the construction labour force as whole construction environment is at risk. The study observed 23% of labours said that hard work was a most critical difficulty that they experience (see Figure 4.9).

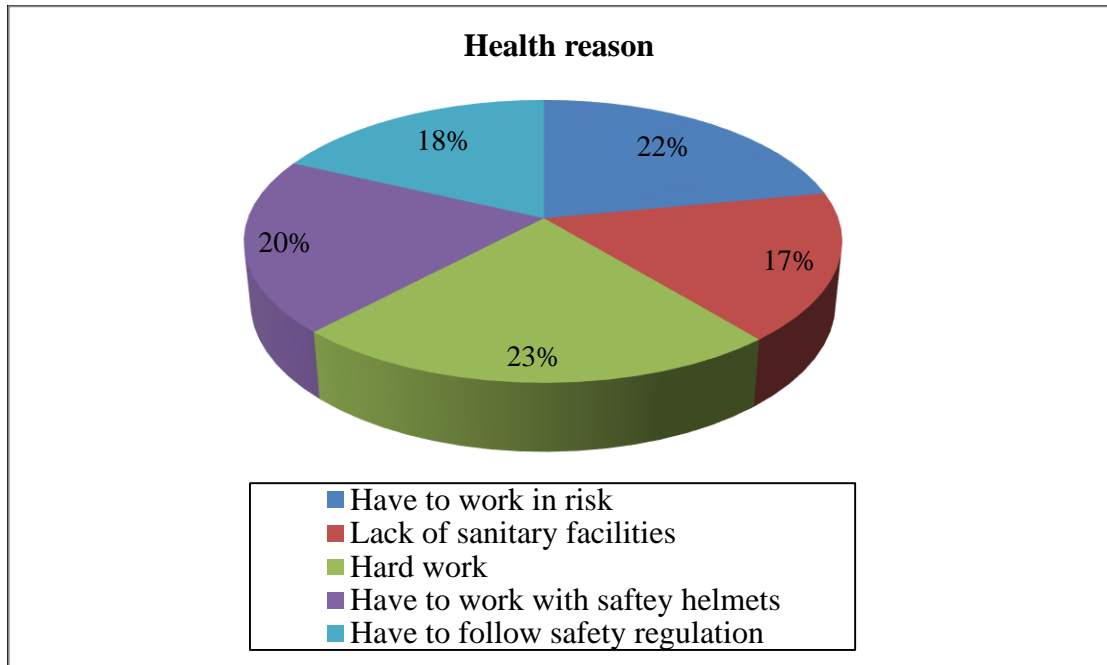


Figure 4.9: Health difficulties faced by labours

4.5 Overall Discussion of Results

Table 4.2 illustrates Relative Important Index (RII) of difficulties experienced by construction workers. This study revealed that top six reasons for lack of labour motivation in construction field: identify lack of income; poor retirement benefits; difficulties in understanding technical drawing; temporary nature of the job; hard work; and, lack of social recognition.

According to the results, four factors were shown <75% RII, (1) namely lack of income, (2) poor retirement benefits, and (3) difficulties in understanding technical drawings (4) temporary nature of job, among identified 25 de-motivating factors. Thus, these can be considered as critical barriers for labour motivation (Fig 4.10).

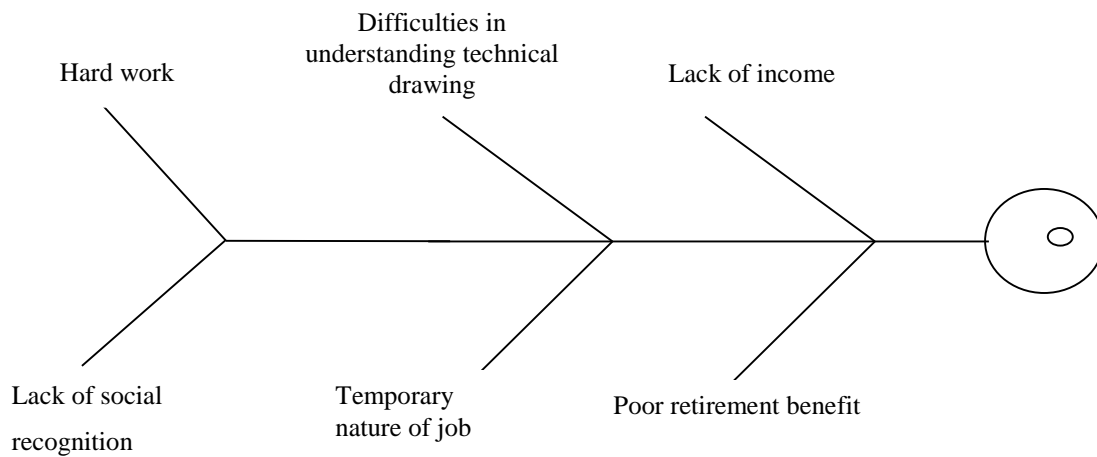


Figure 4.10: Critical labour De-motivators (Fish Bone Diagram)

Explain these factors:

- Lack of Income
- Poor retirement benefit
- Understanding technical drawing
- Temporary nature of job
- Hard work
- Lack of social recognition

- **Lack of income**

Money is the very important factor to achieve comfortable life time. Therefore, every human tries to get more than they can earn. Due to that reason all people say that the salary is not enough for their day to day requirements even they earn handsome salary when compared with other people. When examined the construction labours what has been identified was, they achieve handsome salary to have a comfortable life. Sometimes their salary can be greater than those people who have higher positions in other fields. The same findings are comparable with the report that was issued by the central bank of Sri Lanka. Since money is a basic need of all people they give the priority for that. Therefore, we ignored this difficulty from the hierarchy of the difficulties that are faced by the people.

- **Poor retirement benefits**

A pension created by an employer for the benefit of an employee is commonly referred to as an occupational or employer pension. Labour unions, the government, or other organisations may also fund pensions. Occupational pensions are a form of deferred compensation, usually advantageous to employee and employer for tax reasons. Many pensions also contain an additional insurance aspect, since they often will pay benefits to survivors or disabled beneficiaries. From the beginning of second world war, government employments were offered to the educated of the country by British rulers. These employees were offered with lifelong retirement benefits called as 'pension' in common in order to maintain respectable lives after the end of their service. However people started to educate their children well and direct them to in government sector to have a happy life in their elder ages. However politicians have decided that giving a pension is a huge liability to the government. However government corporations and boards were introduced to overcome this problem. This was the starting point of natural death of government departments. However government increased the salary scale in the non-pensionable government structures. Many people decided that the non-pensionable structures are much better than the pensionable structures. Due to urbanisation children have a limited chance to take care of their parents when parents become older. So people over 60 years are suffering due to lack of care and sufficient money to spend the rest of life. According to that people have to work until their death due to the insufficient income in their older life. It can be represented by our results also because the percentage of labourers over 60 years is nearly 7%. Also at the time there was a war in Sri Lanka, people entered the military even it was a much risky job rather than entering the construction industry. The retirement benefits will definitely be a reason for that because people think about the future of their family even if they lose their life. Any young intelligent person who identifies this scenario will not think twice to choose a different industry as his future career. This reason will also be a greater barrier to the construction industry

- **Difficulties in understanding technical drawings**

Majority of the labour force faced difficulties in understanding of technical drawings. This is mainly because they always undergo informal trainings rather than more formal ways of training of their trades. This difficulty greatly affects the buildability of construction projects.

- **Temporary nature of the occupation**

Most of the construction projects do not exist for high durations. Higher number of projects normally complete in short duration. Even two or three year project is very difficult to find. Most of the labours do not like to that nature as they have to be away from their families, friends, etc. this reason also becomes a severe effect for the construction labours. As well as construction workers have no job security even if they the best contractor. Sudden stoppage, suspension or redundancy is always possible due to client related issues. Further, any young intelligent person who identifies this scenario will not think twice to choose a different industry as his future career. This reason will also be a greater barrier to the construction industry.



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- **Hard work**

Construction industry is bind with the hard works. Construction workers have to do very heavy works. Sometimes they have to carry high weighted things which are not suitable for any person. As well as most of the times they have to work under the high sun rays. Due to all those reasons all, the people do not like to join this industry as well as most of the people leave the industry due to that reason.

- **Lack of social recognition**

Social recognition of a career is a very important thing in a country like Sri Lanka. It is represented in the Maslow also as a higher need of the human. There is a good example that can be found in Sri Lankan society. Actually Sri Lanka is a country that had suffered from a rebel war since thirty years. Normally people do not like to join the war as a soldier because it is a risky job. The social recognition for the job of soldier was not in a good position. They were called as 'Hamuda karaya, Army

karaya' but government changed this situation. They changed this word to in 'Ranawiruwa' and contributed a good recognition toward the society. After that people admired that career and motivated to join the military. This is simply because of the social recognition. It is very similar to construction industry also. As we discussed in the introduction the social recognition of the construction labour is not acceptable. Even mason or a carpenter is called as 'Wadda' or 'Basa'. In our results of this research also tells a good story. Normally people are not encouraged to express that their career is not socially recognised even it is. Therefore, the lack of social recognition is the difficulty for construction labour.

Table 4.2: Relative Important Index (RII) for de-motivators in construction

No.	Difficulty	High	Middle	Low	$\Sigma\mu$	RII
1	Lack of income	52	8	0	172	0.96
2	Poor retirement benefits	46	14	0	166	0.92
3	Lack of social recognition	32	32	60	124	0.69
4	Being away from family and relatives	6	20	34	92	0.51
5	Behaviour of the supervisor	4	36	20	104	0.58
6	Temporary nature of the job	24	26	10	134	0.74
7	Improper gender balance	6	0	54	72	0.40
8	Effect of the family members	8	30	22	106	0.59
9	Lack of trouble free communication	2	32	26	96	0.53
10	Self-satisfaction level	2	28	30	92	0.51
11	Lack of clear path to get promotions	12	24	24	108	0.60
12	Lack confidence level in work	0	28	32	88	0.49
13	Lack of supervisors recognition	0	24	36	84	0.47
14	Lack of supervisors appreciate	6	24	30	96	0.53

15	Have to work with new machinery	0	32	28	92	0.51
16	Have to handle other equipments	0	38	22	98	0.54
17	Difficulties in understanding technical drawings	26	24	10	136	0.76
18	Have to do rework	12	16	32	100	0.56
19	Need supervision	0	16	44	76	0.42
20	Like to have responsibilities	12	24	24	108	0.60
21	Have to work in risk	16	28	16	120	0.67
22	Lack of sanitary facilities	0	38	22	98	0.54
23	Hard work	20	32	8	132	0.73
24	Have to work with safety	14	26	20	114	0.63
25	Have to follow safety	4	36	20	104	0.58



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4.6 Summary

This chapter presented and analysed the research findings of the empirical investigation. The next chapter provides conclusions and recommendations. Further, chapter 5 presents limitations of the research study and guides to further research studies.

CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter 4 presented and analysed the empirical findings of the research within the context of the hypotheses set out in Chapter 2. The aim of this chapter is to provide conclusions and recommendations. Further, this chapter presents limitations of the research study and guides to further research studies.

5.2 Conclusions about the Research Problem

The aim of this study was to propose effective motivation strategies for construction labours to join and retain in the construction field in Sri Lanka through investigation of current reasons for lack of labour motivation and help construction industry to improve worker productivity. The results indicated that top six significant factors for lack of motivation to construction work force were lack of income; poor retirement benefits; difficulties in understanding technical drawings; temporary nature of the job; hard working; and, lack of social recognition; thus, most important demotivating factors in the eyes of construction workers in Sri Lanka. Mitigating these demotivators through effective motivation strategies will increase motivation of construction labours to join and retain in construction field; thereby, improve productivity of construction work force.

With this key conclusion, the next section presents recommendations for construction organisations and industry.

5.3 Recommendations

The following recommendations are made in order to improve the motivation and productivity of workers in the construction industry. In this research, main objective is to find the reasons lack of motivation of construction labour force and propose some solutions to remove such demotivation factors.

- **Introduce some retirement benefit schemes**

Labours in the construction industry are normally doing hard work during their working life and retire from the construction industry. The pension or EPF (Employees' Provident Fund) and ETF (Employers' Trust Fund) spend for their older age with having financial problems, social problems as well as health problems due to their former carrier. Usually they will be without hope in their old age. This problem directly causes to diminish skill-full and experienced labours in the industry. Therefore, it is very important to giving good plan to spend their senior life.

- **Increase the reputation in the society**

When consider construction labours, the picture which generates in our mind is a person who wears a sarong without a shirt; thus, people think that it is a poor job. If we can introduce the uniform which gives a better appearance that picture will change and it can give a higher position to them in the society. More often construction labours are addressed as "Wadda" or the "Basa" in the society. Those attitudes of some people make some effect to reduce the recognition of construction labours in the society. Using better name for that post and always calling them using that name, society also will practice to address them in the same way. That also can uplift their recognition in society.

- **Introducing alternative innovations**

Construction industry is a rapidly changing industry with the technology. New construction methodologies and new machineries are introduced to make easy the task, which has to be performed. Those tasks will be very easy to be handled using these techniques rather than using older machineries. This will be a good way to motivate labours. Further, new machineries are safe to use; thus, according to Maslow, safety is a basic need of all human beings.

- **Training sessions to improve the technical knowledge of the labours**

Construction organisations should pay their attention to uplift the technical qualifications and the ways that labours can get technical qualifications. In any construction workers have to deal with the technical drawings. Most of the construction labours do not familiar to read technical drawings due to lack of technical qualifications as well as they do not know how to use new machineries. Due to that reason they face many difficulties which can affect to leave the whole carrier in the construction industry. Therefore, if some technical knowledge is given to them, labours will survive in such situations. At the same time industry can get added advantages such as quality product, etc. When consider the level of technical knowledge of construction labour force, many of labours do not possess any certificates of technical qualifications and they do not know how to get technical knowledge from a recognised institute. Some companies are not giving time to follow technical courses for labours. Thus, companies should allocate some time to follow those courses it will be a long term service to accommodate training sessions to improve the technical knowledge of the labours.



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5.3.1 Further recommendations for the government

- Create more jobs by awarding more contracts.
- Regulate/ control prices of materials and goods as pertained in the construction industry.
- Ensure clients (e.g. government's ministries) pay for work already done by the construction companies for such clients.
- The government, through the minister responsible for labour and productivity as well as the officials/ representatives of the union of construction and woodworkers, should seek ways of alleviating the problems and effects of the country's present economic downturn on the workers as well as on the project in the construction industry.

- Many of the construction workers stated that the minister responsible for labour and productivity should look into the problems of the construction workers with a view of alleviating their present problems.

5.3.2 Further recommendations for the management

- Put in motion procedures/programmes to have better knowledge of the needs of workers so as to either change or adapt the incentive schemes in operation in their companies to suit the needs of workers.
- Carry out further training, seminars and workshops not just for the management cadre but also for the workers so as to attain and maintain a high standard of workmanship.
- Keep up the good work of salary increases and promotions which the respondents indicated were done recently.
- Construction contracts should prominently features in the proposed failed contracts tribunal, so as to find solutions to the defaults of clients who do not pay works executed by the contractors.



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5.4 Limitations of the Research

The scope of the research was investigation regarding the research problem in medium sized contracting organizations in construction context. Therefore, the researched was limited to the construction labours who are working in construction sites of ICTAD (Institute of Construction Training Development) certified medium scale construction companies, which are located in Colombo area. Due to the nature of the selected population it is difficult to generalize the analyzed results to wider population or universe. The population details and sample selection reasons were explained in section 3.3.5, in Chapter 3. However, the result represented opinions and views regarding the research problem in the eyes of construction workers in construction sites of ICTAD medium scale construction companies. This research paves the way for future researches to find more generalizable results.

5.5 Recommendations for Future Research

During this research study, the researcher identified some interesting research opportunities that could be subjected to future research. These are briefly mentioned in this section.

- The same study can be extended by conducting with larger sample that represent more medium scale contracting organisations in Sri Lanka. It will be interesting to discover whether the new study repeats the results discovered through this research study and strengthen the generalizability of this research.
- The research questions of this study can be tested in different contexts. For example, instead of medium scale ICTAD certified construction organisations, other ICTAD grade large or small contractors can be selected for a new research study.
- The research can be conducted for other project-based organisations. It will be interesting to find whether similar results are repeated and able to learn lessons to construction industry.
- The study can be conducted to explore the relationship between construction worker productivity and most significant de-motivators identified in this study.
- A study can be conducted to identify effective training and motivation methods to retain and join labour in construction field.



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