

# SKILL LABOUR SHORTAGE IN CONSTRUCTION INDUSTRY IN BATTICALOA

MISS. SOVITHA VARADARAJAH

<sup>1</sup> Student, Department of Management, Eastern University, Sri Lanka

## ABSTRACT

*Skilled laborer is a key and primary resource that has a direct impact on the success of any construction company's project. Construction companies of Sri Lanka voice on a prevailing skill shortage of the country. Therefore, the purpose of this research paper is to investigate the concept of skill labor shortage. This study analyses the present situation of the construction industry in Batticaloa with respect to skilled laborer by assessing the need to increase the number of skilled laborers and their skill level by identifying the causes and effects of the shortage of skilled labor. Recommended steps for a Systematic Literature Review have been followed in order to increase methodological rigor. The objectives of this study are to identify the current situation of the shortage of skill labor, to identify the causes of the shortage of skill labor, to identify effects of the shortage of skill labor. The research was conducted via questionnaire surveys among the randomly selected 30 number of construction company in Batticaloa. Finally found the top there causes and effects of the shortage of skill labor in Batticaloa. According to the results, after trained skill labors are shifting for another carrier, Contractor do not provide trainee to labors, Younger generation unwilling to take part in construction firm" are the main causes for the skill labor shortage and "Delay in project duration, Cost overrun and more rework" are the main effects happened due to the skill labor shortage in construction companies in Batticaloa. This research information will be very much helpful for the construction companies to identify their shortage in skill labor and its causes and effects.*

**Keyword:** - Construction industry, Skill labor shortage, Causes, Effects, Resource

## 1. INTRODUCTION

Now there is a rapid growth in construction industry, this continuous development of construction companies and their products and services are very much important for reduction of poverty and provision of employment. Though, for such to occur, necessary skills in term of professional, technical, business and managerial skills are required not only to improve productivity of workforce but also for overall performance of construction projects. However, skill shortage is not a new phenomenon within the construction industry and has been a recurrent problem over the past thirty years in many countries such as United Kingdom, Britain, Sri Lanka, South Africa and etc. It is apparent that, with the end of the civil war, the Sri Lankan Construction Industry awakened and is expanding rapidly to all areas as never before. In this context, Sri Lanka is experiencing increased investment on high-rise and medium scale buildings. The construction sector development is expected to grow at a high rate in the coming years too. Therefore, effectively facing the challenges and upgrading the construction industry is important to cope with the present and future needs locally and internationally. Nowadays foreign and local government invest heavily for the construction industry. Such as Buildings, Roads, Bridges, Dams etc. This industry expansion creates great opportunities as well as great challenges. One of the major shortages is skill labor shortage. Therefore, it is the high time that effective and efficient construction management practices are adopted in Sri Lanka. Furthermore, it is essential to carry out research related to management practices of construction industry to facilitate its development by identifying the challenges and counter measures and in that way the increases the development of the country.

A past study on training needs of construction workers shown that the current programmes are turning out inadequate number of workers annually in comparison to the anticipated growth in the construction jobs. It is further supported by a recent publication which says “with the economic growth in Sri Lanka, the manufacturing and foreign employment shows an upward trend. As a result, there is a short supply of Technicians and Associate Professionals and vacancies prevail in middle level and highly skilled categories. Hence a need arises for the creation of highly trained workers, technicians and technologists”. Thus, shortage of skilled labour is a key issue which need to be analysed. The current study therefore examines shortage of skill labours in the construction industry of Batticaloa with a view to identify the causes and effects of skill labour shortage.

### 1.1 Research Objectives

- To identify the current level of the labors in Batticaloa.
- To identify the causes of the shortage of skill labor.
- To identify effects of the shortage of skill labor.

### 1.2 Research Questions

- What is the current level of skill labor shortage in construction industry located in Batticaloa?
- What are the causes for skill labor shortages in construction industry in Batticaloa?
- What are the effects due to the skill labor shortage?

## 2. LITERATURE REVIEW

Literature review analyses the empirical and theoretical findings which supports to the study. Skill labor shortage in construction industry have become a worldwide issue. This has a significant effect on the socioeconomic growth and development of a country also. Many definitions are given with regarding to this concept. Botha & Rasool, (2011) define skill shortage as a situation in which there are unfilled vacancies in positions where salaries are the same as those currently being paid to others of same type and quality. However, Botha & Rasool, (2011) adopt the definition followed by researchers such as Shah & Burke, (2005) and Trendle, (2008) accordingly, a skill shortage means shortage of workers in a particular occupation, labor demand exceeds availability of skills, or workers lack appropriate qualifications.

The term “labor shortage” is subject to various interpretations rendered by different authors but basically a labor shortage is referring to an “absolute shortfall in the number of workers in a labor workforce” while at other times it also refers to a “mismatch between worker qualifications and the jobs which are available” (Barnow, 2013). In general, it is a situation where the demand for labor in a particular market exceeds the supply. There are some indicators within the industry that may be used to determine the supply and demand forces in the economy.

According to (Golden, 2008), the supply forces within a labor market can be evaluate based on unemployment rate, number of workers unemployed, and job openings reported within the industry, meanwhile the gross domestic product, number of workers employed in the labor market and spending within the industry may be used to evaluate the demand forces. Labor shortage is one of the most important risks in construction projects that may affect the project performance which it capable to change successful projects to those with excessive cost and schedule overruns (Baloyi, 2011). Shortage of skilled labor is among the major construction risks considered by general contractors operating in Qatar (M.Jarkas, 2015) as the factor contributing to construction delay. Ineffective manpower training and entry in to construction labor force in both numbers and requisite skills can present continuing problems not only for the contractors but also for other stakeholders of the industry (Praveen R 2013).

According to Joshua Healy, (2011), a shortage implies a disequilibrium situation in which the demand for labor by an employer or group of employers is in excess of the supply of available workers at the ruling market wage. Further, they mention that a situation in which an employer is not willing to pay the wage required to eliminate the shortage of workers should not be regarded as a true labor shortage. Healy, (2011) further explain that employers may also view labor shortages as internal skill deficiencies (where the skills of their existing workers are below some optimal level), or skill gaps (where firms’ existing workers lack sufficient skills to do their jobs effectively). And further Francis Green, (1998) explained that there may be a difficulty in recruiting workers with the right skills and also there may be a

'skills gap' when 'firms' existing staffs do not have the skills they need to do their job effectively. The construction industry is heavily dependent on the adequate supply of a skilled labor force (MacKenzie, 2000). De Silva, (2008), Mitra, (2012) and NeringaGudienė, (2013) identify, among other factors, the availability of professional and skilled workforce as a factor critical for the achievement of construction project success. It has a great effect on quality, time, cost and productivity (Praveen, 2013).

Skill shortages have implications not only to industry but also economic and social stability of the country. Healy, (2011) explain that skill shortages are a complex labor market phenomenon and the most businesses address skill shortages through better utilization of their core workforce (e.g. longer hours, better pay and conditions, and internal training), while some employ peripheral strategies (e.g. outsourcing and short-term contracts). These steps often taken as short-term arrangements and some steps may adversely affect in the long run. For an example, burnout affect (Xiaoming, 2014) could occur due to work of longer hours and also this could be a compliance issue as well. Praveen, 2013) reveal that the most significant causal factor for skill shortage is "inadequate number of trained personnel coming out from training institutions and joining with the labor market" and resulting effect is "time over-run" of construction project.

This study also revealed that "increasing the wages to minimize migration of skilled labor seeking foreign employment" as the most important mitigation measure. Gunawardena, (1998) found that approximately 80% of the workforce is casually employed, only 40% is fully utilized and 86% of the skilled workforce have received informal training only. More than 20% of the workforce is dissatisfied due to low income, lack of job security and difficulty in finding regular work. Comparing HRD (Human Resource Development) practices to those in the USA and the UK indicates that Sri Lanka needs to adopt a more structured approach, including a more formal training system and proper grading of the skilled workforce. MacKenzie, (2000) analyses the views of construction employers in relation to the response strategies promoted by industry and government, which tackle elements of the skills shortage problem within the construction industry.

Human capital is a critical factor that is decisive for the success of any organization particularly in this era of complex, highly competitive and ever-changing business environment. Human capital has been identified as a key source of sustainable competitive advantage of an organization as well as one of the key enablers of economic development of a country. Shortages of human capital have been a serious problem for decades in many countries. Some of the industry sectors in Sri Lanka have already begun to feel the pain more than ever due to the growing nature of competition for talent among business firms. Construction firms in Sri Lanka feel this pressure more than other industries due to the rapid expansion of the industry with the dawn of peace after three decades long war. On the other hand, this industry is perceived less attractive as the preferred choice for employment among potential job seekers mainly due to the fragmented and temporary the nature of work assignments. Today, the issue of human capital shortage has become the key people related management challenge in the construction industry and it has been predicted that this situation will continue to grow in future. Finally, literature review deals with previous empirical evidence regarding the skill labor shortage in construction technology. And this will be used to develop my research and analyze the findings.

### **3. METHODOLOGY**

Methodology clarifies the methodological aspects that were applied while carrying out the research.

#### **3.1 Method of Data Collection**

Data is collected using quantitative method. There are 157 companies in the Batticaloa and randomly there are 30 number of construction companies were selected which are situated in the Batticaloa. Questionnaires issued to the contractors, Project managers of that specified company, Site engineers and also quantity surveyors who are working in the companies.

**Table - 1:** Cida (Construction Industry Development Authority) grade and number of companies

Grade	No
C1	-
C2	2
C3	2
C4	14
C5	56
C6 -C9	83
Total	157

### 3.2 Method of data analysis

There is two method have to analyze the collected data which prepared on the questionnaire. One method is manual and other method is using by software. One of the famous statistical software is SPSS. So all the data were input to the SPSS software and data were analyzed.

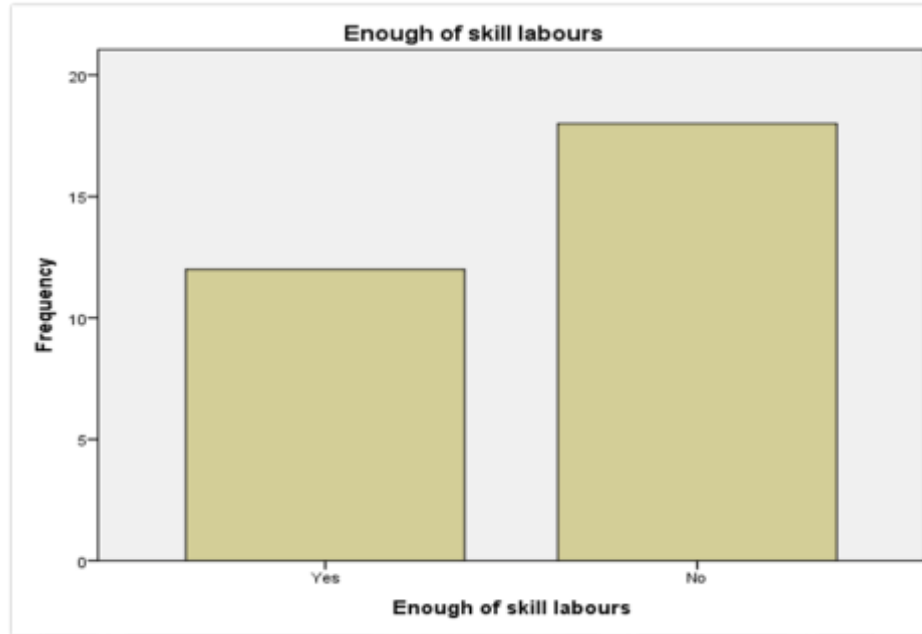
## 4. DATA ANALYSES

Collected data were analyzed by using SPSS software.

### 4.1 To identify the current level of the labors in Batticaloa,

**Table - 2 :** Current level of the skill labors

Enough of Skill Labors					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12 companies	40.0	40.0	40.0
	No	18 companies	60.0	60.0	100.0
	Total	30 companies	100.0	100.0	



**Chart - 1:** Enough skill labours in Construction sites in Batticaloa

#### 4.2 To identify the causes of the shortage of skill labor in Batticaloa.

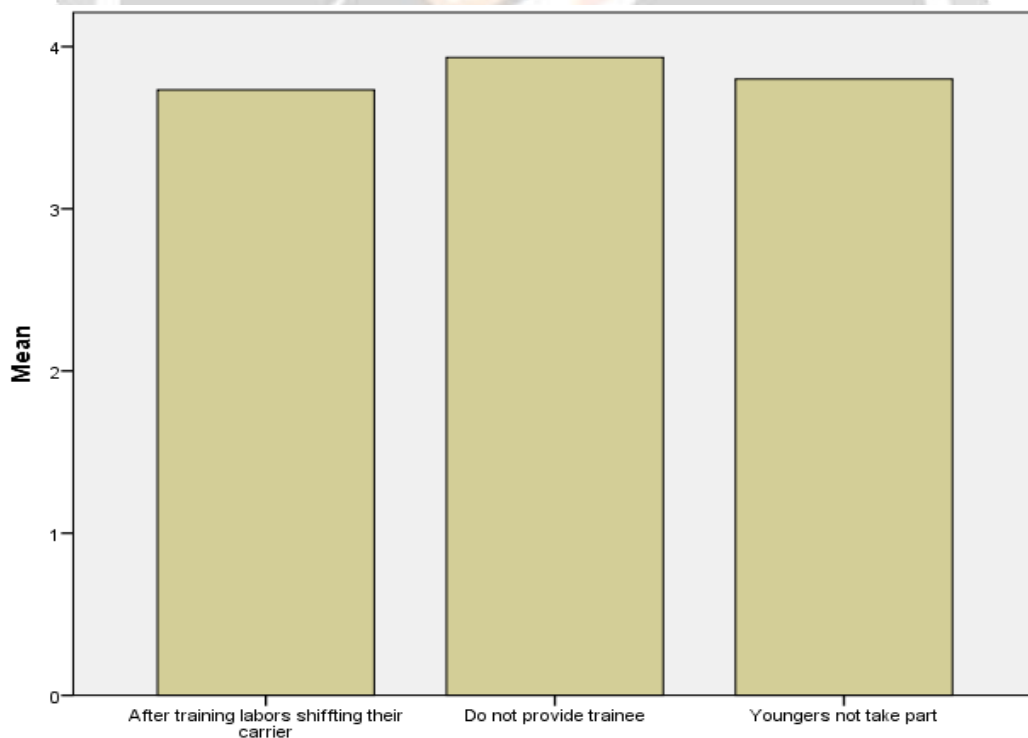
All means were found according to the SPSS software. According to the SPSS analysis, found the mean values and identified the top three causes.

**Table - 3 :** Causes of the shortage of skill labor

No	Causes	Mean Value
01	Skilled labors salary is less in construction sector	2.67
02	A transfer from another sector to construction sector requires more duration for become as a skilled labor	3.47
03	Labors are not satisfactory about their salaries	2.20
04	Lack of accommodation is the major reason for the shortage of skilled labor	3.07
05	Work forced by the supervises for the skilled labor is high	3.20
06	Non-permanent skilled labors receive skill training within your company	2.93
07	Casual skilled labors are less likely to receive skilled training on your company	3.60
08	Contractors do not provide training to labors	3.93

10	Less amount of population in our area	3.20
11	Younger generation unwilling to take part in construction firm	3.80
12	Lack of food allowances is the major reason for the shortage of skilled labor	3.43
13	Available training facilities are inadequate	3.40
14	Delay in payment of skilled labors	3.17
15	Retirement of the skill labors in your company	3.27
16	Getting more projects in same area	3.50
17	After the training, skilled labors shifting for another carrier	3.73

According to the mean values main three causes for skill labor shortage are shown in the below chart.



**Chart - 2 :** major causes for the skill labor shortage

**Table - 4 :** Ranking the causes of the skill labor shortage

No	Causes	Mean value
01	Contractor do not provided the trainee to labors	3.93
02	Younger generation unwilling to take part in construction	3.80
03	After trained, skilled labors are trained for another carrier	3.73

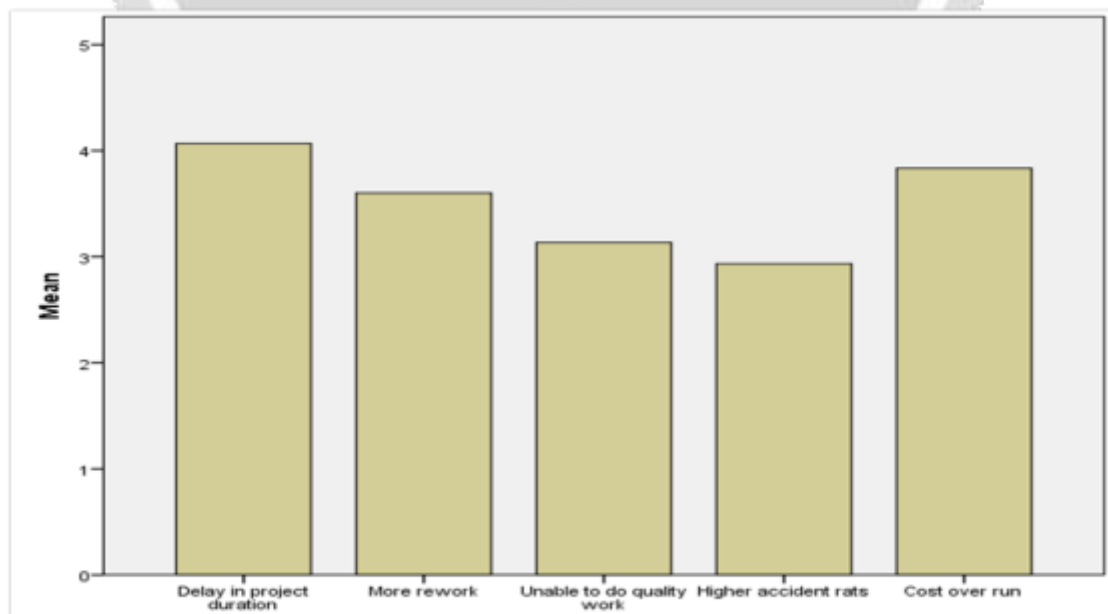
Most of the respondents are saying the main causes for the skill labor shortage is “Contractor do not provide the trainee to labors” the mean value for this is 3.93 and next causes is Younger generation unwilling to take part in construction, the third causes for the skill labor shortage is After trained, skilled labors are turned for another carrier.

**4.3 To identify effects of the shortage of skill labor**

According to the SPSS analysis found the mean values and rate the top three effects.

**Table - 5 :** Effects of the shortage of skill labor

No	Effects	Mean value
01	Delay in project duration due to skill labor shortage	4.07
02	More rework due to lack of skill labors shortage	3.60
03	Unable to do quality work	3.13
04	Lack of skill labor shortage reason for higher accidents rates	2.93
05	Cost overrun	3.83



**Chart - 3 :** Effects of the skill labor shortage

The chart above shown is ranking the effects of the skill labor shortage in Construction industry in Batticaloa. The major effects of the construction industry in Batticaloa is Delay in project duration. Cost overrun and more reworks are the second and third effects of the skill labor shortage.

**Table - 6 :** Ranking the effects of the skill labor shortage

No	Effects	Mean value
01	Delay in project duration	4.07
02	Cost overrun	3.83
03	More rework	3.60

## 5. CONCLUSIONS

Skill labour is a primary and necessary source for the construction industry. Shortage of the skill labour is major problem in construction industry. This research studied the causes, effects and measures related to the problem of “shortage of skilled labour in the construction industry”, the questionnaire survey conducted in the 30 construction industries among the population of 157 companies in Batticaloa. Collected data were analysed and ranked using SPSS software. Based on the findings, it is concluded that 60% of the construction companies are suffering from skill labor shortage. “After trained, skill labors are shifting for another carrier, Contractor do not provide trainee to labors, Younger generation unwilling to take part in construction firm” are the main causes for the skill labor shortage and “Delay in project duration, Cost overrun and more rework” are the main negative consequences happened because of skill labor shortage in construction industry of Batticaloa.

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