

Construction Industry and Factor Condition Prospective Of Sri Lanka: A Special Reference to Skill Labour Shortage.

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Abstract

The local construction industry is one of the most important sector which contributes 7.4% to the national economy .Within the last decade it has shown great development and even foreign investors were encouraged to enter the local business and foreign contractors also made their presence felt by entering the local competition. With this new boom of the industry, the “Labour force” factor too has emerged simultaneously and the term “**Skilled Labour Force**” has become vital ever than before. The shortage of skilled labour has been identified as a major drawback in the local construction field and it directly impacts the competition internationally. On the other hand, many factors are identified as the causes for this matter and mitigation of the problem is also becoming crucial in order to maintain the momentum of the construction industry. However, this review suggests a broader view of the shortage of skilled workers and emphasizes that there is a serious problem of attracting, training and retaining personnel in the Sri Lankan construction industry , Practitioners and future researchers can conduct further research on this basis.The industry is going through the most difficult times than ever before due to the impact of the COVID 19 pandemic and development is becoming slower due to the scarcity of labour among many other resources.

Keywords

Construction Industry,Labour Shortage,Skilled Labour

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I. Background of the Industry

Construction is one of the most important industry in the world. Skill shortage is not a new phenomenon in the construction industry, and it has become a frequent problem in the UK during the past 30 years (Andrew et al, 2004; DfEE, 2000). Compared with other countries, the labour shortage is usually much higher than in United Kingdom (Healy et al., 2011).It consists of many activities such as planning, design and architecture, building, maintenance, repairs and even demolishing. ‘Construction’ basically will be driven in three major ways. It is Civil Engineering, Mechanical, Electrical and Plumbing or any other activity related to the core area, and this element plays a vital part in the economic growth of any country. This industry is one of most challenging industry of all time due to various reasons and it has impacted on the growth of the field and directly affected the economic growth as well. On average, two-thirds of its members across Australia were either delaying projects, or even declining them altogether, because of the lack of workers (Deegan, 2008, Healy et al., 2011). Construction is always complex, that makes the industry susceptible to disputes, delays and exceeding costs. The industry lacks sufficient plumbers and construction machine operators, resulting in aslowing of construction activity and increasing the overall cost of projects, thus posing a major challenge to India’s infrastructure development plans (Heikkila, 2012). The construction industry has characteristics that are separately shared by other industries, but in combination appear in construction alone (Hillebrandt, 1984).Unlike other industries, this sector has many stakeholders. The client plays the major role in the industry while the project vision, investment and monitoring, evaluations etc are some of the important parts which are in the control of the client. Professional bodies and advisers like consultant firms, consultants, architect firms and architects will visualize and drive the project forward and the main contractors come under the recommendation and supervision of the client and the said parties. Government bodies (Inland Revenue Department, Environmental Authorities, Financial Institutions, District/Divisional secretaries) are some of the other parties those who are not in the control of the client and suppliers but also need to provide sufficient support in order to drive companies to increase their aspirations and move to even higher levels of competitiveness. Manufacturers and research and development bodies are more controllable than other stakeholders. The construction industry can be segregated into three sectors in terms of the types of work undertaken.

In Sri Lanka, the post-war era has increasingly stimulated and attracted the government's as well as the private (both local and foreign) sectors' attention to invest heavily on large scale capital projects such as high-rise buildings, renovation of airports, ports, roads, highways, land reclamation, water and sanitation etc (Silva et al., 2016). Infrastructure constructions mainly focus on roads, bridges, railway, electricity, water and waste water disposal. These projects are mostly local government funded or based on foreign aids. Investing on these projects will indirectly impact the local economy. For example, the Central Expressway and the Greater Kandy Water Project are some of these development projects referred to and also building constructions related to high-rises (residential, commercial), industrial, and leisure. These type of projects directly impact the local economic growth. Apartments, hotels, mixed development projects, manufacturing facilities are very common development projects related to this type of construction. The real estate sector's contribution to the national GDP is 2.4% in 2019, which amounts to USD 1.96 billion (CBSL 2019). Competitors in the real estate sector consist of around 15 prominent players, among which seven are leading the segment. They are Mireka Homes, Sanken Lanka, Access Group, John Keells, Altair, Prime Land and Home Lands (CMA, 2019). The presence of a substantial number of developers and a few large-scale operators defines the intensity of the competition. As per the above data it is proven that this industry is facing intense competition. However, a good feature in this industry is that due to the uniqueness of certain projects, the developers can maintain a decent margin in the business, thus the threat of rivalry can be considered as high. According to the Condominium Management Authority (CMA), the growth rate of condominiums during the past decade has been 34%. There was an unprecedented growth in 2017 at 64% compared to 2016.

The industry is identified as a high demand sector where it has a massive money circulation and hence a large number of job opportunities were created, and in Sri Lanka there are around 600,000 workers involved in the construction field (Human Capital Index ,2019). The Training Need Assessment and Skills Gap Analysis survey highlights the problem of skill shortage in Sri Lanka. The survey further highlights that a total increase in employment of 800,583 is projected in the construction sector during the period 2016-2020 (TVEC of Sri Lanka, 2016). A lot of potential markets have been identified and local and foreign investors are very interested in investing their money on local projects. Hence, there is a construction boom in the local context, where the Government has given a helping hand by offering various tax and other concessions to the private sector and hence, even many financial organizations world-wide are also involved in this matter. Though this has its positive factors, the sector is threatened by many fundamental problems like political instability and the economic crisis in the country, competition created by foreign contractors, health, safety regulations and practices. One gigantic problem faced by the industry is the insufficient labour force and skilled labour. The construction industry is at a crossroad. On the other hand, the demand for the construction workforce has never been greater. Driving this demand is the growth in worldwide population by 9.7 billion by 2050 (<https://populationmatters.org>) and the increase in people living in cities (two out of three people will live in cities by 2050). However, challenges in factors like productivity, performance, digitization, decreasing construction workforce and sustainability could derail the industry's growth, even though construction is already among the world's largest industrial sectors.

Factor Condition of Construction Industry

In Sri Lanka, the construction industry plays a vital role in economical and physical development. Furthermore, in the Sri Lankan economy, construction is the fourth highest sector after services, manufacturing and agriculture (CBSL,2019). Therefore, it is important to consider the present context of the industry to identify areas and take counteractive measures in order to uplift the industry to meet future challenges. The GDP from construction in Sri Lanka decreased to 148,966 LKR million in the first quarter of 2020 from 173,245 LKR million in the fourth quarter of 2019 (CBSL, 2019). This decrease was hugely due to the Easter bomb attacks faced by the country in 2019 and the global Covid 19 outbreak which slowed down the entire world. According to the ,Shah and Burke, (2005) and Trendle ,(2008), Labour is a character or a person who is assigned to perform a task or a job which will be related to any operation. The type of labour will be defined depending on the type of task or job given to the particular person. There are three categories of labour in the field at different levels and it is recognized in different levels when it comes to the evaluation stage. Unskilled labor refers to some task or activities which do not need any specific training or knowledge to perform the particular action and it can be executed by practice (Healy et al. ,2011) . For example office underwriters, cashier, cleaners etc do not require any talents, skills or knowledge to carry on their duties. Semi-skilled labour is another category that does not require any advanced skills or knowledge to perform their duties, and only a mechanical background will be sufficient to execute assigned tasks. Anyway, it is not like unskilled labour and machine operators, truck drivers, bar-benders are some of the examples for this type of labour. Skilled labourer is someone who possesses the special skill or qualification or is being well trained to execute their task (MacKenzie et al., 2000). Researchers from Sri Lanka and other developing countries analyzed the reasons for construction project delays and disbelieve that "skilled labor shortage" was an important

contributing factor.[Jayawardane and Pandita , (2003) ; Sadi A. Assaf, Sadiq Al-Hejji, (2006) ; Samarakoon , (2009)].

Due to these facts there is a higher demand for this particular category and their wages are also very high and sometimes they are recognized in many developed countries and even granted citizenship(www.ciob.lk). Skilled labour consistently go above and beyond in the performance of their tasks. In the context of modern days the demand created for skilled labour is much greater than the demand for unskilled labour (www.ciob.lk). So, most of the unskilled labourers are qualifying themselves in terms of knowledge, ability and skills to move into the skilled labour category. There are many types of job roles in skilled labour such as heavy machinery operators, masons, plumbers, electricians, bar benders, carpenters riggers, signalmen etc . According to the Gunawardena and Jayawardane, (2001) . which categories are highly needed and in demand in the sector. Nowadays in the case of a workforce, skilled manpower is a necessity. Any industry or a company which values productivity, efficiency, quality workmanship, loyalty and a harmonious workplace should be investing on their employees by providing access to further development in training, enhancing knowledge and new ventures to expand their skills level and achieve their potential (Praveen et al. 2011). In doing so, you will be investing in the success of your business whilst enjoying a positive working relationship with your staff. Also by doing so there will be many advantages as a result of having a skilled labour force in the industry and basically it will maximize productivity, since it is all about maximizing the output in lesser time with the usage of minimum materials to the highest possible quality levels. In order to meet the said goals, any industry or business needs a workforce with a high level of skill and knowledge (Praveen et al.,2011). In any industry or business process there will be continuous, chronic and sudden problems which are related and non-related. The issues should be identified then and there from time to time and it should be addressed within a shorter period of time. The skilled worker will possess the knowledge and ability to confront such challenges (www.msctl.org). Contingency planning is one of the most important talents which skilled labour will always possess (Basnayake and Premathilaka ,2015). Failing to maintain the momentum of the process of any task will affect meeting company tasks, goals, objectives etc. The degree of quality work will depend on the level of skills and knowledge that the worker possesses and sometimes it may reflect in direct profits to the business and the reputation of the company in securing future work.

The construction industry is considered as one of the largest industry in the world (Ahmed, 2008). It is an essential developmental component of a nation's economy (Oseghale & Ata, 2008), and one of the reasons for its growth is dependent on skilled labour. The availability of skilled labour has been identified as the most challenging aspect that faces the industry. The shortage of skilled labour is an intricate phenomenon, which influences the performance of construction activities (Windapo, 2016).A skill shortage means the shortage of workers in a particular occupation, labour demand exceeding availability of skills, or workers lacking appropriate qualifications (Trendle, 2008). In 2019, during a discussion organized among a few construction companies, Senior Manager of Tudawe Engineering Company said that the ageing workforce is one of the serious issues of the above subject. The working carder who have started their career in this industry still remain employed and most of them have not adapted to new technologies and methods. Most of them are performing nowadays and the potential younger workforce has been motivated to select white collar jobs instead of blue color jobs (www.ciob.lk). Also, he emphasized on the issue of skilled labour migration and said it was a chronic issue that the country is facing for the last two decades due to various reasons. Economic changes, low salary scales, lack of job security and unattractive jobs, dissatisfaction with labour organizations and lack of worker-oriented career paths are some of the main issues which motivate the skilled laborers to go overseas. In 2015 alone, more than 260,000 Sri Lankans migrated for work (provisional; SLBFE, 2015). The majority of them were male (66 %), young (48 % in the 20-34 age bracket). In terms of skills profile, the majority of the migrants were unskilled (36 %) in 2014 (SLBFE, 2015). Latest technology, knowledge and new methods will be the most trending rules in this industry and the labourer should always be equipped with abilities to cater to the requirements. Also, the local authorities and training institutes possess inadequate supply of skilled manpower which are not compatible with the job market. Mr. Sumudu Jayathilake (Managing Director of APS Lanka Pvt. Ltd) highlighted during a one to one interview conducted by a author that the poor construction industry image is something that reflects on the community's mind as a negative impact where people are unwilling to start their career as workers in the construction industry, while poor site safety and working environment is also affecting the issue. By considering the above illustrated areas, most of the facts create negative impacts on the local construction industry.

Demand Condition in Shortage of Skilled Labour

The biggest issue faced by the construction industry is the workforce challenge, especially the growing shortage of skilled construction workers(Henny et al., 2012). This challenge is beginning to exert intense demand on construction companies trying not only to compete within the sector, but also maintain safety standards at construction sites. Businesses that ignore these issues struggle to survive. There are possibilities of

some even going out of business. However, businesses that confront these challenges head on could enjoy tremendous growth. The key is taking proactive actions at the right time. In the contracting organization it is evident that there are groups of people who possess special skills that are essential for the construction process (www.ciob.lk). One of the groups that are discussed less often than others is the skilled workforce or tradesmen. They are crucial, because without them the architects concepts and engineers designs would not become a reality.

Most of the Sri Lankan workers are “all-rounders” within their broad fields. For example, masons very often carry out all the work related to their trade, such as brick laying, concreting, plumbing, plastering, tiling, scaffolding and even bar bending. When it comes to carpenters, they often erect form work and facades, fabricate door and window frames, fit glazing and so forth. These practices are common in building projects. Mr. Sagara Gunawardana, the Managing Director of a leading electrical contracting company, (Venora International Pvt. Ltd) expressed that there is a shortage of educated electrical insulators in the industry. As a leading electrical contractor, he further commented that demand for the industry is very low and it is difficult to find skilled electrical insulators in the market. Senior Manager of Maga Engineering Pvt. Ltd. while sharing his views said that there is a huge shortage of masons in the construction industry. He observed that in the past there were a lot of skilled masons available in the industry and now there is a gap between demand and availability. Another leading contractor in the industry, Director of Kent Engineering Pvt. Ltd., Mr. Madura Silva stated that there is a huge demand for plumbers and civil engineers in the construction industry. But they are struggling to fill the vacancies for skilled labourers as there is a shortage in the market. He further expressed that in the past the attraction towards the construction industry among the youth was high and it helped in attracting more skilled labourers to the industry. Now the focus on the construction industry for employment is rather low and it largely affects the construction industry due to the shortage of skilled labourers (www.mscsi.org). Also, the shortage of skilled labour is one of the main challenges faced by the construction industry and it may hinder its growth. In a sector survey conducted by the Research Intelligence Unit of a property consultancy group with a regional office in Colombo in 2019, 56% of the respondents said a shortage in skilled labour was on top of the list, which is identified as a major problem currently faced by the industry (Research Intelligence Unit, 2019). According to Paul Callebaut, Country Manager of BESIX Sanotec, brain drain is common, with the country’s top engineers leaving for the Gulf countries for better opportunities. Skilled labour in general is difficult to find, which is why Chinese state-owned companies in Sri Lanka hire Chinese workers.

Related and Supporting Focus on Community of Youth in Sri Lanka

Every country has its own power capacity, defence policy, dynamic education systems, strong foreign affairs, economic stability and forecast and healthy national policy on employment. If all these factors are integrated timely and effectively, then national development, sustainability and prosperity can be achieved. The nation's workforce is the most vital factor during this journey. Youth is considered as the generation which has the ability to drive forward the nation’s economic development. The youth community is a set of people which can be crafted very easily, either towards prosperity or destruction of any country (Silva et al., 2018). The ability to learn, absorb, change accordingly, integrity and the degree of diversity make this age group stronger and vital. Even though Sri Lanka has a focused primary and secondary education system, higher education does not cater to the entire youth community. It is more biased towards the professional category like medicine, engineering, law, business management etc (Silva et al., 2018). Though there are many local bodies to educate and conduct skills training, the country is yet to meet its goals of having a local skilled labourer to support the nation’s construction industry. This could be avoided if foreign workers are allowed for employment on certain conditions (www.theiland.com). Further, a media briefing of the Chamber of Construction Industry of Sri Lanka highlights that the local construction industry cannot cater to Government projected investments if Chinese and Indian labourers are not allowed. As a result, foreign labour is utilized to fulfill these requirements (www.dailyft.lk). There is limited vocational training and a severe lack of skilled labour. The knee-jerk reaction is to bring in foreign workers, said Suresh Rajendra, President of John Keells Group. Productivity levels are hindered by the limited labour force. Developers struggle to meet the ‘one foreigner to two locals’ ratio required on construction sites, he added.

Mitigating Local Skilled Labor Shortage and Developing Skilled Labor Capacity in Sri Lanka.

The Sri Lanka Chamber of Commerce has estimated a labour force of 400,000 in 2020 as additional personnel to cater to the current construction projects in the pipeline. The Government should maintain a minimum salary with attractive pay scales to motivate construction workers mainly to retain the existing skilled labourer within the country (Silva et al., 2018). The private sector companies too should follow the same rule by staying in line with government policies in order to maintain the competition and also maintain the industry potential.

Government Involvement and Infrastructure of Labour Force

As stated above, the government should initiate the identifying, developing and maintaining of a skilled workforce in any country through a national policy. Despite carrying out a number of education reforms, like changes to the school curricula, South Africa still faces considerable skills shortages due to lack of vocational training (Rasool and Botha, 2011). Establishment of educational policies focused on vocational training and career development will encourage the youth to qualify themselves in these sectors, and if the government can guide them towards more secure job opportunities then the younger generation will pay more attention and interest to this sector like in other areas as well. Reputation, higher salaries, greater opportunities will prevent skilled labour migration to overseas countries. People-related managerial issues are widespread and it is a chronic problem that affect negatively on the achievement of project success and development of the construction industry (Silva et al, 2018). According to the Ministry of Education in year 2019, there was 29.5% drop out candidate from the ordinary level exam from total of 334,000 candidate who failed to attend their advance level education. The public sector plays a key role in the provision of vocational training in Sri Lanka. The main agency responsible for vocational education and training is the Ministry of Skills Development and Vocational Training, which has 11 other major agencies. The Tertiary Industry and Vocational Education Commission (TVEC) is the main regulatory agency. Other agencies include the Ministry of Technical Education and Training (DTET), the Sri Lanka Vocational Authority and the Vocational and Technical University (UNIVOTEC). Currently the locals institution like the NAITA, VTA, ICTAD, German Tech, Small Industry Development Board, Sri Lanka Youth Services Council, the Sri Lanka Army, Foreign training at UAE, Dudley Senanayake Multi-task Training Institute and the Galkulama Construction Training Center are some of the government funded establishments in the country providing such training and thousands of their students enter the local labour force annually (Ministry of Skill Develop and Vocational Education, 2020). Apart from these, the private sector too has some training facilities to support this sector. Also, the private companies should conduct training sessions and workshops to equip their skilled laborers in order to keep them updated on the latest cutting edge technology, methods and knowledge. Any industry is rated in terms of size, volume, value and its market potential. Hence, the construction industry too will project its brand image depending on the above aspects. The degree of high reputation will attract more business in the field and encourage people to come and work for the industry. High salary scales including incentives, job security, occupational health and safety, skills and knowledge upgrade, proper adherence to labour laws and policies in a country will grant the opportunity to retain the skilled labour in Sri Lanka (www.ciob.lk). This will lead the industry to complete world standard projects with the support of the local workforce where the contractors will be recognized not only domestically, but within the global market as well. The construction industry is one of the most hazardous industries in the world and there is no work site which can be maintained at zero risks. Employees are motivated to perform in their job roles by providing safety equipment and measures. According to Healy, (2011), shortage implies a disequilibrium situation in which the demand for labour by an employer or group of employers is in excess of the supply of available workers at the prevailing market wage. Further, they mention that a situation in which a (low-wage) employer is not willing to pay the wage required to eliminate the shortage of workers should not be regarded as a true labour shortage, high wages and many more benefits. So, providing the latest safety measures and related requirements and other motivations will ensure that more people would join the labour force in the industry.

External Events That Impacts the Industry

The impact on the construction industry by the COVID 19 pandemic is unprecedented and it has directly affected the national economy as well. According to sources, most of the ongoing projects have been halted or delayed due to this situation and sectors like the hospitality and leisure, entertainment and condominiums have been completely frozen and developments related to these sectors have been severely affected. The local clients and contractors are running their businesses without sufficient financial reserves, thus pushing them into a crisis situation, while their market shares also become vulnerable to competitors (Pathirana ,2020). Timely settlement of debts to their suppliers is vital to secure uninterrupted material supplies in order to continue the work process. Paying laborers wages on time, other settlements of financial liabilities and maintaining the cash flow are harder than ever due to the slow or non-recovery of repayments from clients. The government has granted them debt moratoriums and concessionary working capital loans in order to maintain the business potential (www.treasury.gov.lk). Companies and the industry itself have begun reshaping and restructuring their businesses and operational models according to the 'new normal' concept and are more focused towards foreseeing the latest business trends. Another major problem is to retain the workforce at site within the given new health and safety parameters. This sector is not like other industries, cannot be operated remotely and the workers should always be at site to perform their duties. Maintaining a minimum carder at site with recommended distance, accommodation and spending on additional PPE is something heavy on contractors' budgets and retaining a large carder without any work in progress is a challenging issue for the

construction companies. On the other hand, the industry may risk losing skilled labour due to the dull situation in the country where they will look for better opportunities in other countries as well (www.ccisrilanka.org).

Sri Lanka is a country where imports are more than exports. So it automatically drives the nation to experience a negative trade balance (CBSL,2019). Having said that, most of the raw materials and finished goods are being imported from China, India, Europe, the USA and Middle-Eastern countries and due to the pandemic situation in the Asian region and the rest of the world the supply chain has been interrupted. Local manufacturers and contractors face difficulties when meeting their deadlines to handover the projects and this may lead all parties to face unbearable financial losses (Praveen et al., 2011)..

II. Conclusion

Skilled labour shortage is one major problem identified in the construction sector and the review has gone through an extensive review on the local construction industry, its foreign investor involvement and the view of the government policy. Many facts affecting the issue were discussed including economic and social factors. Focus on the Sri Lankan youth, the Government's strategic plans on the industry related areas, including proper educational institutes and succession plans, policies and regulations on foreign investments etc, are some of the remedial actions that need to be taken for the betterment of the industry. It is important to rebuild the fallen pillars of the industry due to the COVID-19 pandemic and getting in line with the global construction industry's trends which will ensure a sustainable growth in the local context. Future researchers will be able to Use this as a good foundation for their learning. This review will mainly cover on Human capital, construction industry development. In addition, this will help policy development at the national and industry levels. Industry is directly related to the country's employment opportunities and GDP. Furthermore author recommend to examine the impact of migration of labour farce to mid-list countries.

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