

# **PARTICIPATION OF FEMALE WORKFORCE IN THE CONSTRUCTION SECTOR IN SRI LANKA: CHALLENGES AND POLICY IMPLICATIONS**

Sri Lanka Journal of  
Economic Research  
Volume 11(2) March 2024  
SLJER 11.02.P: pp. 119-130  
Sri Lanka Forum of  
University Economists  
DOI: <https://doi.org/10.4038/sljerv.11i2.207>



*A A Shanthaarchchi*

---

## ***Abstract***

It is widely accepted that women do not have equal rights and status, particularly in developing nations. The various theoretical and empirical studies show gender inequalities in salaries, earnings, income and pay scales, and the construction sector is no exception. This study highlighted potential areas for women in the construction sector labour market by analyzing market and employment related trends and requirements on the demand and supply sides. Further, the study identified the challenges and necessary policy implications for enhancing female labour force participation in the construction sector in Sri Lanka. Many female workforces believe that developing a critical mass of women in different occupations in the construction sector would encourage more women to enter the business. Many studies have shown that since women have poor levels of skills and are either not given or unaware of skill upgrading opportunities, they are unable to enter or flourish in construction-related industries. In addition, interruptions in careers, limitations on flexible working hours, engaging in precarious work due to household responsibilities, and the gender pay gap are some other important factors that limit labour market activities by women, thus lowering social protection coverage for females. Besides socio-cultural and religious barriers, the data also revealed that women face sexual harassment, which discourages them from continuing their jobs in the construction sector for a long time.

***JEL:*** J81, J83, L74, N6

***Keywords:*** Construction sector, Demand side, Female, Supply side, Workforce,

---

***A A Shanthaarchchi***  
*Department of Economics and Statistics,*  
*Sabaragamuwa University of Sri Lanka.*  
*Email: [arunaeconomics999@gmail.com](mailto:arunaeconomics999@gmail.com)*



## INTRODUCTION

Today, Sri Lanka faces multiple challenges of negative economic growth, humanitarian crises, foreign reserve issues, political instability, and low social development indicators. Women in Sri Lanka continue to face constraints due to the prevalent socio-cultural norms that deny them equal access to facilities and opportunities. Sri Lanka still ranks 73 out of 191 on Human Development Index (2022), 79 out of 132 on Global Knowledge Index, 74 out of 187 on Gender Inequality Index (2021) and 116 out of 156 on the Global Gender Gap Report with the score of 0.670 in 2021 (ADB, 2022). Sri Lankan women have limited access to resources; restricted rights, limited mobility, and somewhat muted voice in shaping decisions make them highly vulnerable. The same UNDP report ranked Sri Lanka 75th in the gender inequality index (GII) with 0.383. A GII of 0.383 shows that gender inequality along these three dimensions is low in Sri Lanka, but it being ranked 75th is testimony to the fact that the scenario in Sri Lanka is better than 74 other countries (UNDP, 2022). Out of the 8.5 million economically active population, 72 per cent are males and only 35 per cent are females in the labor force. Women constitute 52 per cent of Sri Lanka's population, but female representation in parliament is only 5.3 per cent. The labour force participation of women as of 2023 is 33.6 per cent of the total population (Fernando et al., 2016).

The social influence in selecting the construction industry for employment is due to not so high reputation attached to the industry, especially at lower-level employments. Further, stereotyping the industry 'for men not for women' in the society is also one of the factors influencing the selection of construction industry (Agrawal & Halder, 2020). These perceptions have been kept unattended for a long time now and it is very important to take action to correct these negative perceptions without further delay. Lack of definition in the hierarchy for lower-level staff is one of the key underlining concerns for the retention of employees in the industry (Chigara & Moyo, 2014). The recruitment process, training process, termination process, evaluation process and hence, career progression are some of the important human resource management and development practices that are missing or not implemented formally in the industry (Ghoddousi et al., 2015). Lack of compelling reasons to lack of inspiration to choose the industry for employment and no barriers to exit from the industry is the fundamental gap in the industry when it comes to lower-level employees (Halwatura, 2015). Due to this fundamental gap in the industry, the industry lacks the luxury of choosing talents rather than working with what is available (Onyekachi, 2018).

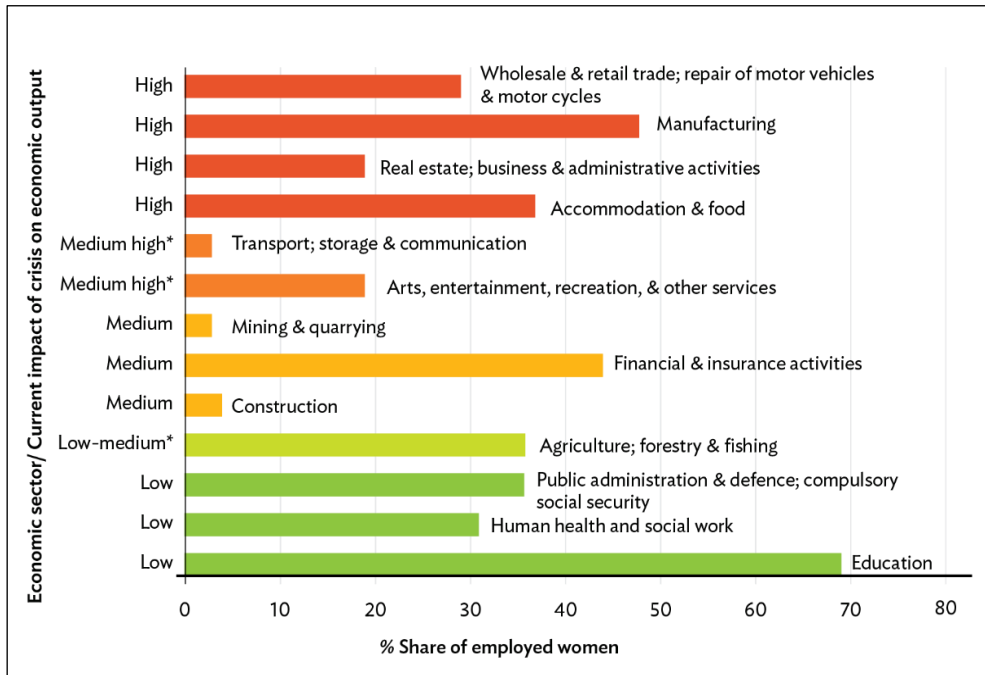
Women are represented in many occupations where male representation had dominated, these include law, medicine, accountancy, information technologies and most of the secretaries' positions. However, in the construction industry there is an easily observable disparity of female representation. On a global basis there is a shortage of skilled labor in the construction sector, and this is also the case in Sri Lanka. Given the limited traditional male workers for the construction sector, there would appear to be an opportunity for

women. Thus, the main objective of this article is to highlight potential areas for women where women are and can participate (in the road and construction sector labour market), by analyzing market and employment related trends and requirements (Umar et al., 2018a). Further the study attempted to identify and assess the challenges for women within the construction sector regarding human resource quality and the possible lack of required skills through targeting employers and working women (Umar et al., 2018b). Female labour force participation rate in Sri Lanka has remained low between 30 – 35 per cent in the past two decades, which is surprising given the consistently high educational attainment levels and other social indicators of women in the country. While research has focused on the supply-side factors that have kept female labour force participation rate at low levels, data on demand-side constraints is sparse. This study will identify both demand-side and supply side constraints based on primary observations from key stakeholders. The supply side represents contractors of road and construction field in nine provinces and supply side represents household level female labour force in the same provinces and vocational training institutes in the country.

Women represent approximately 52 per cent of the 22 million individuals that comprise the population of Sri Lanka. 8.5 million people are economically active and of that number women represent 33.6 per cent (Department of Census and Statistics, 2022). Given the population values it is obvious that there is a large portion of the population that is not economically active and within that the majority of the female population is not classified as economically active. Female representation in the Sri Lankan construction industry is approximately 8,549 of a total of 188,877 individuals employed in the sector. Fostering female participation in the sector has some challenges including time of work, the location of work, gendered view of construction, sexual harassments, family commitments as well as gender-specific physical and body related issues (Dharani, 2015). Women face several barriers in the construction industry such as family commitments (having children and effect on promotion, achieving a good work-life balance), sexist attitudes towards women (jokes, comments), lack of female role models, unattractive clothing (personal protection equipment, hard hats, steel capped boots), lack of career information at school age, recruitment practices (not getting same opportunities due to gender), lack of knowledge related to opportunities available in the construction industry, male dominated culture and income inequality between women and men.

The figure 1 represents the Sri Lankan women's contribution to different sectors and the level of engagement in each production and service line. The construction, mining & quarrying, transport storage & communication sectors are poorly utilized the women's labour. Moreover, it is important to highlight that, generally, the road and construction sector establishments is less than 5 per cent of total establishments in each district. Therefore, it is needed to observe the reasons for such low-level establishments and low-level contribution to the employment with special reference to the female labour force in Sri Lanka.

**Figure 1: Sectorial Perspective of Women Workers in Sri Lanka in 2019**



Source: Development Asia, 2022

### Labour Force in the Construction Sector

The road and construction industry plays a significant role in infrastructure development and its facilities in a country, and it makes a major contribution to the development of the national economy in a country (Halwatura, 2015). The construction sector accounts for a considerable proportion of gross domestic product (GDP) in different countries – for instance, 9 per cent in Oman, 6.1 per cent in the UK and 5.5 per cent in Japan (Umar et al., 2018a). In Sri Lanka, the consultations with the Construction Industry Development Authority (CIDA) highlight that 6 per cent of GDP is accounted to the construction sector. (Umar et al., 2018a) further state that the rapid growth of the construction industry in many developing countries like Sri Lanka has created a large number of jobs for different labour categories, which is expected to be further rising up for the next some years.

The relatively low female labour force participation rate in Sri Lanka has puzzled many researchers, especially given the consistently high educational attainment levels of women in the country. Despite significant achievements unique to the sub region in many human development indicators and in gender equality, it is surprisingly similar to the trend in other South Asian countries which rank lower in those indicators when it comes to the participation of women in the labour force. Female labour force participation has stagnated at between 30 to 35 per cent in the past two decades, which is much lower than one would expect given the achievements in social indicators. However, with the labour

force predicted to start shrinking in 2026 and a rapidly ageing population, the country needs more of its working age women in the labour force to achieve and sustain its growth strategies. There is a large body of research available on the supply side factors which have attempted to shed light on the reasons which have kept female labour force participation rate at low levels. One of the most recent studies, used data from the Household Income and Expenditure Survey (HIES) 2009/10 of the Department of Census and Statistics, to identify supply-side factors constraining women's participation, such as remittances from abroad; Islamic Moor ethno-religious identity; disability; education up to Ordinary level; the presence of children less than five years of age; the employment and education characteristics of male household members and male head of household (Kesavan et al., 2015). Having children later rather than earlier was also found likely to be a significant constraint. The study also looks briefly at demand-side determinants and found that local labour market conditions, such as whether relatively more people were employed in manufacturing and services rather than in agriculture, were associated with a reduced likelihood of labour market participation.

Construction industry is a highly booming sub sector in Sri Lankan economy. With changes in the governments in the past, the industry has shown vast changes in its contribution to country's GDP. As per the latest update by the Department of Census and Statistics, the construction sector contribution to GDP in Q1 2020 has been 6.4 per cent. Still, the value contribution from construction in Sri Lanka overall GDP has increased to LKR 1,121 billion in 2019 from LKR 934 billion in 2016. However, with Covid19 pandemic it has significantly reduced. In comparison to other key sectors, on average the construction sector's contribution to overall country GDP is around 6 per cent and it is in the 4<sup>th</sup> place.

**Table 1: Construction Sector GDP Contribution**

Year	Contribution Rs. Million	Per cent of GDP
2014	813,689.00	13.7 per cent
2015	830,412.00	2.10 per cent
2016	934,787.00	12.6 per cent
2017	1,040,978.00	11.4 per cent
2018	1,050,428.00	0.9 per cent
2019	1,121,659.00	6.80 per cent
2020	137,391.00	0.06 per cent
2021	143,035.00	0.06 per cent

Source: Annual Reports – Central Bank of Sri Lanka, 2022

In comparison to other key sectors, on average the construction sector's contribution to overall country GDP is around 6 per cent. Out of the industrial activities growth rate

percentage reported by the Department of Census and Statistic Q1 2020, construction sector growth rate is 16 per cent and the construction sector is one of the highest impacted industrial sectors mainly due to the pandemic. The specific factors that have impacted this contraction of the industry in Q1 2020 are the decrease of total cement supply by 16.5 per cent (total import of cement has declined by 27.5 per cent) and value of important building materials has declined by 20.4 per cent.

### **Demand Side Factors**

#### *Contribution to Workforce*

As per the estimated construction sector workforce by the Sri Lanka Census and Statistics in Q1 2020, it is 512,225. As per the Labour Force Study 2019, the estimated workforce the industry is amounts to 698,283 which is a degrowth by 2 per cent when compared to 2018 estimates. These workforce figures do not include foreign employment in the industry.

#### *Working Strength by Gender – Road and Construction Sector*

**Table 2: Distribution of Road and Construction Sector Workforce Among Male and Female**

<b>Year</b>	<b>Total Number of Workforce in the Road and Construction Sector</b>	<b>Female</b>	<b>Per cent</b>	<b>Male</b>	<b>Per cent</b>
2014	557,185	20,320	3.6 per cent	536,865	96.4 per cent
2015	549,649	22,230	4 per cent	527,419	96.0 per cent
2016	616,968	26,509	4.3 per cent	590,459	93.7 per cent
2017	687,544	32,108	4.7 per cent	655,436	95.3 per cent
2018	713,707	24,884	3.5 per cent	688,316	96.5 per cent
2019	698,283	13,966	2.0 per cent	698,283	98.0 per cent
2020	512,225	18,989	3.7 per cent	493,036	96.3 per cent

Source: State Engineering Cooperation, 2021

It is important to note that, the female workforce participation in the road and construction sector is significantly low compared to national average female labour force participation rate which is around 34per cent. During the last decade the female labour force participation in the construction sector has not exceeded 5 per cent and it has further reduced after Covid19 pandemics situation (see, Table 2). Over the years, there is hardly any growth in female participation shift that can be observed in the industry. However, it is fascinating to witness the female participation in the industry has not had a degrowth till year 2019. Total local workforce in the road and construction sector in the year 2019

is 698,283. Out of this 684,317 (98 per cent) are male and the balance 13,966 (2 per cent) are female workforce. Out of female workforce more than 98 per cent are unskilled workforce. Out of 80,505 estimated recruitments from outside countries, 53 per cent of them are skilled resources the industry source from other countries whereas 47 per cent of it are unskilled employees.

## **Supply Side Factors**

### *TVET Structure and Trends*

The public sector plays a key role in providing vocational training in Sri Lanka. The main institution responsible for vocational education and training is the Ministry of Skills Development and Vocational Training, under whose purview are 11 other main institutes. The Tertiary and Vocational Education Commission (TVEC) is the main regulatory and other institutes include the Department of Technical Education and Training (DTET), the Vocational Authority of Sri Lanka and the University of Vocational Technology (UNIVOTEC) all the institutes as well as the number of training centres each institution has and the kind of courses that they offer. Registering with TVEC is compulsory for both public and private training providers in Sri Lanka. However, of the total of 1,362 public centres counted in 2015, only 41 per cent of them were registered. Among those that were registered, 86 per cent were institutions under the aegis of the Ministry for Skills Development and Vocational Training (MSDVT). The situation is similar for private training providers. Out of 1,339 private training institutions, of which 7 per cent were NGO sector training institutions, only 38 per cent of private institutions were registered, and 59 per cent among the NGO centres, for an overall private registration rate of 39 per cent.

In 2019, a total of 250,690 students have been enrolled to construction or electrical & mechanical related courses of NVQ and non NVQ courses. It is 11 per cent of the total enrolment to TVET institute which makes 27,676 total enrolments to construction related courses. 77 per cent of that enrolment has completed the course and passed out, which is a healthy compliance rate. 19 per cent is the dropout rate recorded. Out of the passed-out students 12,084 are from direct construction related courses while others are from engineering and mechanical side courses. Out of the students passed out from the construction related courses in 2019, 98 per cent have been passed out from public institutes and 2 per cent is from private institutes. In 2019 total enrolment to TVET construction related courses is 14,601 (5.8 per cent of total enrolment) and out of that figure 14 per cent drop out, 3 per cent till studies and 83 per cent (12,084) have been completed. While the female participation in construction related courses is very low, it is just 6 per cent in the passed-out segment. A total of 9,561 total students passed out from construction related courses in 2018 have increased by 26 per cent in 2019 and it has decreased drastically by 60 per cent in 2020. This could be due to Covid 19 pandemic

impact. From 12,084 passed out in 2019, 86 per cent are with NVQ qualified whereas the balance is non-NVQ students.

In 2019, the total number of recruitments in construction related vocational training was 14,601, with 9,844 completed. However, the drop-out rate is 14 per cent out of total registrations. Of the total recruitments, the construction craftsman showed the highest percentage, at 58 per cent. Nearly 10.3 per cent were plumbers and 10.2 per cent were wood craftsmen. These figures reflect the provision of road and construction skills through vocational training centers in the country. The highest enrolment for construction related courses has been at NAITA in 2019 and has established a very high rate of passed out as well. Compared to NAITA, enrolment at DTET is low at the same time passed out rate is also low comparatively. 34 per cent drop out rate at DTET needs special evaluation. Under the TVEC purview, construction related courses are offered at 162 TVET institutes across the country with a presence of at least one institute in one district. Out of the total 162 institutes, 90 are of VTA and 31 are of DTET. While only 4 NAITA institutes hold construction related courses across the country, it was noted above that larger enrolment and maximum number of passed out also can be seen from NAITA.

Compared to year 2010, it is seen a drastic drop of departure numbers for construction related occupations from Sri Lanka. The drop is more than 50 per cent. As of 2019, the highest number of departures can be found for electrician jobs followed by fabricators and carpenters. However, after Covid19 Pandemic and economic crisis this situation might be changed by 2023. Nearly, 40 per cent of students those who have passed out from TVET courses wish to start up an entrepreneurship in construction based on the skills and knowledge they gained from the course. Only 23 per cent are planning to join private sector and only 7 per cent wants to work in public sector employment 15 per cent is planning to go abroad. Starting salary expectation by about 50 per cent students mentioned is as 30,000 – 50,000 monthly salaries.

At the current rate of skill supply by TVET, it can be expected 40,000-50,000 full supplies during the next five years, if not any policy level changes to expedite the process to meet the requirement of projects that is planned to be completed within the next five years source. However, around 30 per cent passed out would be potential to the industry, which is less than 5 per cent of the requirement. There is a total of 338,192 skilled staff required for the industry to perform the planned growth. However, due to uncertainty in the market and the pandemic situation, most of the companies are unsure of these forecasts and this could be the basic minimum future requirement. Further, timelines of projects in the pipeline would change the time frame in which this future workforce is required too. Nevertheless, there is a large quantity gap of skills will be created in the market. If not, skill supply plans are created now it is focusing on the largest lacking occupations in the industry discussed above the industry will face a huge challenge. Annual departure requirement is in a reducing trend and further with pandemic it will get impacted and hence projection will be difficult.



## CONCLUSIONS

Women's economic empowerment is not a linear or straightforward process. This is a policy question created by a series of interrelated processes. Therefore, in order to achieve gender parity in the construction industry, it is important to take steps to incorporate gender aspects in policies such as the labour policy, youth policy, national skills strategy, vocational training policy and action plans and schemes, in general. These policies and plans should be designed to provide clear and straightforward guidelines for different sectors, such as the road and construction industry. Flexible working-time arrangements, policies that remove distortions against part-time work will boost female participation (although, care has to be taken not to allow this to create a segmented labour market). Support to families with young children, in particular in the form of parental leaves (up to a duration of 20 weeks) and childcare subsidies are also identified as raising female participation. If maternity leave makes women less attractive to employers, this can at least be partially balanced by the provision of paternity leave. Once both women and men have the right to take time off after the birth of their child, women are less of a risk in the eyes of employers. Recent literature shows a significant and substantial difference in the average gender ratio of labour force participation between economies that mandate paternity leave and those that do not.

A multitude of non-policy factors undoubtedly influence female labour force participation, such as cultural expectations and the type of industry in which a country specializes. Nonetheless, analysis of the women, business and law database in the country reveals broad trends that can be useful for policy makers in understanding how to encourage women in the workforce. A sustainable and gender balanced job creation policy can only be developed and executed successfully if all the concerned stakeholders such as the government, employers and society are brought together to work for a common goal. Consequently, all stakeholders should be facilitated by providing a neutral forum where ideas can be freely shared and developed, and where relevant international best practices can be introduced. In this regard, seminars, training programs and support from the media can be very helpful. The trends show that efforts are being made at different levels (individual, institutional and policy) to achieve gender parity in the construction sector. However, conscious efforts are needed to improve the links between different stakeholders. In this context, there is a need to start interventions from the macro level policies that govern the job market which can have an impact on future employment prospects for women. In doing so, we need to focus on introducing specialized degrees in construction-related fields and encourage women's participation in those fields. There is a need to allocate sufficient financial resources to introduce technical skill trainings throughout the country which include women's participation; and a corresponding need to enhance the social linkages of women to enable them to compete on an equal basis in the job market. This is a tripartite question in which employers and social sector organizations have a very important role to play.

There are a number of possible interventions to stimulate women's increased participation in the 'green' areas of the construction sector. The need for these has been identified through various surveys of sub-sectors of the construction industry of Sri Lanka. There is a need to develop and commence short courses for the youth, especially young girls, with a special focus on the needs of the construction industry. These will supplement any technical training programs that they might already be enrolled in and will substantially improve their chances of finding jobs at various levels of the industry. Studies suggest that in the construction industry, regardless of the sub-sector, there are a number of functional skills that are in demand and are now becoming a pre-requisite for all types of jobs. Hence, there is a need to develop and launch short courses for the youth, especially young girls with a special focus on the needs of the construction industry. These will supplement any technical training programs that they might already be enrolled in and will substantially improve their chances of finding jobs at various levels of the industry.

There is a need to enhance women's access to institutions which are facilitating women's increased participation in the work force and especially in non-traditional sectors such as the construction industry. Moreover, the creation of a labour market regulatory environment which facilitates employers and at the same time protects the interests of the workforce is also a key step to addressing gender disparities in the construction sector. Moreover, construction sector of Sri Lanka show that a majority of businesses do not use any formal means to announce vacancies or to recruit employee's mainly unskilled workers. Hence, there is a need to streamline access to information in a way which is accessible to majority of the target group.

Analysis of employee demand in each trade of the construction industry and ways to meet this demand are key areas through which to integrate women into the construction sector. Once a detailed market demand survey is conducted, this demand could be met by providing relevant training to the women. The vast majority of women are still trained in skills that produce goods requiring high labour inputs (carpet weaving, tailoring, and embroidery) for which there is little market demand. Therefore, there is a need to introduce technical training in areas which were initially regarded as non-traditional. Training can be introduced as per the market demand focusing on the trades which are culturally and socially acceptable women to participate, in the context of Sri Lankan society. The system also lacks linkages between training providers and potential employers, which could facilitate job placement of female graduates. There is a need to integrate interventions of all key stakeholders including members of society, NGOs, and development sector organizations, to put together and pursue a shared vision and strategy for addressing gender disparity in the construction sector. In some developed countries, such as Norway, Sweden, and Japan, gender-balance policies have been implemented in major sectors, and employers must comply with them.

Sexual harassment prevention can be defined as the measures and strategies organizations take to protect their workforce against all forms of violence and harassment. This is done

to create a safe work culture and promote mutual respect and a supportive environment for employees. Although many think employees can easily identify sexual harassment, this is not always the case. The obvious ones are easily identifiable but the subtle ones, such as comments about physical appearance, flirting, and cyberbullying, are not easily identifiable. This is why sexual harassment training should be a part of your anti-harassment strategy. Some countries such as USA make it mandatory for organizations to have a proper anti-harassment policy to prevent workplace harassment. For example, California, Illinois, Connecticut, New York, and others states have a standard requirement to create sexual harassment policies for organizations. Sexual harassment prevention policy defines everything that employees need to know about your organization's stance against harassment. It reflects that you have zero tolerance for all forms of harassment. An effective policy makes it easier for employees to identify, report, and take the right action against harassment. It also makes them feel safe and protected, knowing that the company they work for takes the right measures to protect their well-being and dignity.

Another key area of intervention is to create favorable working condition for women in construction-related jobs. They should be provided with workplace facilities such as separate toilets, separate resting areas, and day care centers. Making the environment women friendly will encourage more and more women to join this sector.

## REFERENCES

- Agrawal, A., & Halder, S. (2020). Identifying Factors Affecting Construction Labour Productivity in India and Measures to Improve Productivity. *Asian Journal of Civil Engineering*, 21, 569-579.
- Annual Report (2022), Central Bank of Sri Lanka, Colombo.
- Asian Development Bank (ADB). (2022). Reducing Women's Employment Vulnerability in Sri Lanka Beyond the Pandemic. Colombo, Sri Lanka.
- Chigara, B., & Moyo, T. (2014). Factors Affecting Labor Productivity on Building Projects in Zimbabwe. *International Journal of Architecture, Engineering and Construction*, 3(1), 57-65.
- Department of Census and Statistics, Sri Lanka Labour Force Survey (2020 & 2022), Colombo, Sri Lanka.
- Dharani, K. (2015). Study On Labours Productivity Management in Construction Industry. *International Journal of Latest Trends in Engineering and Technology*, 6(1), 278-284.
- Fernando, P. G. D., Fernando, N., & Gunarathna, M. A. C. L. (2016). Skills Developments of Labourers to Achieve the Successful Project Delivery in the Sri Lankan Construction Industry. *Civil and Environmental Research*, 8(5), 86-97.

- Ghoddousi, P., Poorafshar, O., Chileshe, N., & Hosseini, M. R. (2015). Labour Productivity in Iranian Construction Projects: Perceptions of Chief Executive Officers. *International Journal of Productivity and Performance Management*, 64(6), 811-830.
- Halwatura, R. U. (2015). Critical Factors Which Govern Labour Productivity in Building Construction Industry in Sri Lanka. *PM World Journal*, 4(4), 1-13.
- Kesavan, M., Gobishanker, R., Gobidan, N. N., & Dissanayake, P. B. G. (2015). Proper Project Planning in Avoiding Construction Project Delays. In *Proceedings of the 5<sup>th</sup> International Conference on Sustainable Built Environment*, 256-265.
- Onyekachi, V. N. (2018). Impact Of Low Labour Characteristics on Construction Sites Productivity in EBONYI State. *International Journal of Advanced Research in Science, Engineering and Technology*, 5(10), 7072-7087.
- Ramsbotham, J., Dinh, H. A., Truong, H., Huong, N., Dang, T., Nguyen, C., ... & Bonner, A. (2019). Evaluating The Learning Environment of Nursing Students: A Multisite Cross-Sectional Study. *Nurse Education Today*, 79, 80-85.
- Sunimalee Madurawala. (2022). Reducing Women's Employment Vulnerability in Sri Lanka Beyond the Pandemic, *Development Asia Insight*, Asian Development Bank.
- Umar, T., Egbu, C., Honnurvali, M.S., Saidani, M., & Al-Mutairi, M. (2018a). An Assessment of Health Profile and Body Pain Among Construction Workers, *Proceedings of the Institution of Civil Engineers – Municipal Engineer*. doi: 10.1680/jmuen.18.00019.
- Umar, T., Egbu, C., Wamuziri, S., & Honnurvali, M. S. (2018b). Briefing: Occupational Safety and Health Regulations in Oman. *Proceedings Of the Institution of Civil Engineers-Management, Procurement and Law*, 171(3), 93-99.
- United Nations Development Programme (UNDP). (2022). *Under Gender Equality Strategy 2022-2025. Annual Report – Development Programme*.