This study has been conducted to assess the skills gap in the construction sector Sri Lanka. The study has been awarded by the Construction Industry Sector Council after a competitive evaluation of technical and financial proposal submitted by SRL. Upon award of this study, expected deliverables and research objectives have been discussed to be in line with the TOR.

This study has been conducted and completed under the guidance and direction of the Construction Industry Sector Council in close association with major and specialist group of construction companies.

In that process, following deliverables were completed in consultation and under guidance of the Construction Industry Sector Council.

- Conducted a comprehensive desk research and compiled the report of secondary data
- Preparation of research materials for Qualitative and Quantitative data collection for both demand and supply side
- Preparation of list of stakeholders to be interviewed on demand and supply side
- Sampling and sample selection

- Conducting Qualitative and Quantitative interviews from both demand and supply side
- Data quality check and validation using a mix approach
- Analysis and report writing to answer all the research questions as of the TOR

SRL would like to acknowledge the immense guidance provided by all the stakeholders in the supply and demand side of the industry.
RESEARCH SCOPE

Skills Gaps Analysis Of The Construction Industry Sector

HINDERING FACTORS FOR THE GAP
Physical, human resource and curricular gaps in supply side to meet the demand

SKILLS SUPPLY
Private Sector supply
Public Sector supply

SKILLS DEMAND
Private Sector Demand
Public Sector Demand

PERSONAL TRAITS
ability traits + personality traits + Motivational traits

MANAGEMENT SKILLS
Technical skills + Interpersonal skills + Conceptualizing skills

Institute leads
Lecturers
Students

HR Managers
Dept. heads
Owners

Data collection from supply side

Data collection from demand side

Supplying quality

Expected quality
STUDY OBJECTIVES

Skills Gaps Analysis Of The Construction Industry Sector

- To review the skills gaps in the construction industry sector with the view to improving the quality, relevance, accessibility, and recognition of skills training provisions needed in Sri Lanka.
- To revise the “Existing Training Plan” to bridge the skills gaps in the construction industry sector.
- To identify the present status of construction industry workforce in terms of strengths, composition, gender composition, quality, and other special characteristics.
- To discover the demand, supply and gaps for each occupation in construction industry in Sri Lanka.
- To examine the gaps in the curriculum, quality of trainers, training needs of trainers and infrastructure
- To make recommendations on solutions to bridge skills gaps.
- To identify future demanding occupations
- To evaluate Covid-19 impact on construction industry
- To discover government policy directives on construction industry
**RESEARCH DESIGN**

*Skills Gaps Analysis Of The Construction Industry Sector*

---

**Desk Research**
- To explore trends in construction industry and its contribution to the country’s Economic growth
- To source the details of the universe of the considered company types for sampling
- Locally and internationally accepted occupation categories
- Identify the skills gap and quality measuring variables for questionnaire development
- To identify public and private sector construction skills supply trends and demand trends & gather supply side statistics
- To study currently offering courses and curriculars by different institutes

---

**Qualitative Research**
- Experts’ views and perspectives on;
  - Current trends in the industry locally and internationally and how these trends would impact the industry in Sri Lanka and structural changes in the future
  - Explore current status of the supply side, human resources, infrastructure and policy situation of supply side institutes and possibilities and barriers to change or improve to meet the market demands
  - To discover government policy directives on construction industry
  - To identify future demanding occupations in the construction industry
  - To evaluate Covid-19 impact on construction industry

---

**Quantitative Research**
- Interviews with employers of construction companies & Government institutes;
  - Skills demand analysis
  - Skill supply analysis
  - Skill gap analysis
  - Skill gap analysis by types of institutes & occupation types – in quantity and quality gaps etc..

---

**Exploratory Approach**

---
## STUDY LIMITATIONS

*Skills Gaps Analysis Of The Construction Industry Sector*

<table>
<thead>
<tr>
<th>COVID – 19 IMPACT FOR STUDY EXECUTION</th>
<th>COVID-19 IMPACT ON COMPANY’S CLARITY ON FUTURE</th>
<th>IMPACT ON DATA PROJECTION</th>
<th>RESISTANCE TO SHARE INTERNAL DATA BY DEMAND SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The refusal for the face-to-face interviews impacted to collect hard facts and figures on supply side and demand side. The consultant team had to take lot of efforts to collect internal data via emails and online methods.</td>
<td>Due to the recession the industry faced during the last few years and due to Covid impact, the industry is trying to recover from it more than planning for a future, hence less clarity on future skill requirement. This impacted future skill requirement calculation within the study.</td>
<td>Due to staff slashing down during Covid, current staff that they maintain was reported very low and some companies are not planning to recruit large staff as they are planning to depend on sub contractors. Hence, projection of workforce based on current staff requirement will be slightly misleading in this study.</td>
<td>Some of the large companies had requested to agree for different terms and conditions in order to provide internal data. These terms and conditions include special approval from TVET (beyond the approval letter) and free access to study report.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENSITIVE DATA THAT IS REQUIRED FOR PROJECTION WAS NOT FULLY COLLECTED</th>
<th>STUDY FRAME OF REFERENCE</th>
<th>SAMPLE REPRESENTATION</th>
<th>CHANGES IN UNIVERSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies who accepted to participate for the interview did not provide all the data that was requested, due to internal controls, eg. company annual turnover, growth plans and number of employees by occupation level etc...</td>
<td>The frame of reference considered for the study, which is ‘Skilled employees’ was defined as NVQ 4 level&amp; below 4 employees. However, it was found that companies define skilled employees as those who can execute work independently, hence the frame of reference of the study was changed along the way.</td>
<td>Due to lack of robust universe data by large, medium and small-scale companies, and lack of data on universe proportions of these types in the industry, ensuring the right representation of different scale companies within the study was challenging. Further, this study does not cover Micro level establishments in the industry.</td>
<td>Sample universe was drawn from different reliable secondary sources. However, there was a significant number of companies had closed down by the time the study was conducted, hence random selection of companies for the sample got impacted and converted to convenience sampling.</td>
</tr>
</tbody>
</table>

### COVID-19 IMPACT ON COMPANY’S CLARITY ON FUTURE

Due to the recession the industry faced during the last few years and due to Covid impact, the industry is trying to recover from it more than planning for a future, hence less clarity on future skill requirement. This impacted future skill requirement calculation within the study.

### IMPACT ON DATA PROJECTION

Due to staff slashing down during Covid, current staff that they maintain was reported very low and some companies are not planning to recruit large staff as they are planning to depend on sub contractors. Hence, projection of workforce based on current staff requirement will be slightly misleading in this study.

### RESISTANCE TO SHARE INTERNAL DATA BY DEMAND SIDE

Some of the large companies had requested to agree for different terms and conditions in order to provide internal data. These terms and conditions include special approval from TVET (beyond the approval letter) and free access to study report.

### SENSITIVE DATA THAT IS REQUIRED FOR PROJECTION WAS NOT FULLY COLLECTED

Companies who accepted to participate for the interview did not provide all the data that was requested, due to internal controls, eg. company annual turnover, growth plans and number of employees by occupation level etc...

### STUDY FRAME OF REFERENCE

The frame of reference considered for the study, which is ‘Skilled employees’ was defined as NVQ 4 level& below 4 employees. However, it was found that companies define skilled employees as those who can execute work independently, hence the frame of reference of the study was changed along the way.

### SAMPLE REPRESENTATION

Due to lack of robust universe data by large, medium and small-scale companies, and lack of data on universe proportions of these types in the industry, ensuring the right representation of different scale companies within the study was challenging. Further, this study does not cover Micro level establishments in the industry.

### CHANGES IN UNIVERSE

Sample universe was drawn from different reliable secondary sources. However, there was a significant number of companies had closed down by the time the study was conducted, hence random selection of companies for the sample got impacted and converted to convenience sampling.
CONSTRUCTION SECTOR IN SRI LANKA – INDUSTRY REVIEW

Skills Gaps Analysis Of The Construction Industry Sector
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 of 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%.

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.
In comparison to other key sectors, construction sector contribution to overall country GDP is around 6% and it is in the 4th place.
Out of the industrial activities growth rate percentage reported by the Department of Census and Statistic Q1 2020, construction sector growth rate is -16% and the construction sector is one of the highest impacted industrial sectors mainly due to the pandemic.

The specific factors that has impacted this contraction of the industry in Q1 2020 are decrease of total cement supply by 16.5% (total import of cement has declined by 27.5%) and value of important building materials has declined by 20.4%.


Source: Desk Research
2020 – Q1 – Estimated total workforce – 8,020,446 (SLDCS)

In the total estimated workforce in the country, which is 8,020,446, construction sector workforce contribution is around 7%.

As per the estimated construction sector workforce by the Sri Lanka Census and Statistics in Q1 2020, it is 641,636.

Source: Desk Research
Skills Gaps Analysis Of The Construction Industry Sector

ESTIMATION OF NUMBER OF COMPANIES IN CONSTRUCTION SECTOR

- As per the demand side, Experts’ experience in the industry and based on company database details available with CIDA and other reliable sources, it is estimated that there are 62.1% small scale establishments, 37.2% medium scale establishments and only 0.2% large scale establishments in the constructions in the country.

Source: Desk Research & Expert Interviews

Approximately 10,000 Establishments are in the industry

Only around 30% is registered in CIDA

60%

ONLY 30 companies contributes to the 60% of the industry revenue
PERCEPTION ON CONSTRUCTION SECTOR BY EXPERTS

Skills Gaps Analysis Of The Construction Industry Sector
PERCEPTION OF EXPERTS

Skills Gaps Analysis Of The Construction Industry Sector

Sri Lanka should fast track in catching the speed in which other countries are **upgrading the Technology Adoption and Human Resource Development in the construction sector**

**PRODUCT RELATED**

- In western countries as well as in Korea and Japan, there is a well-developed **equipment hiring industry**. We do not have that in Sri Lanka.

- **Technology adoption** in the construction sector should be speed up in Sri Lanka.

**PEOPLE RELATED**

- People have to **work hard to get paid better**

- There is **no proper structure in workforce – hierarchy of designation** are not constant and defined.

**WORK RELATED**

- **Social Factors**
  - Women has the capabilities to be in the industry on certain work, but the **industry has not done enough homework to really align women talents in the industry growth**

**SOCIAL FACTORS**

- Procedures on **career progression, recruitment, termination** are not standardized

- **No proper policies** related to construction on the way forward of the industry and the growth avenues

- **The industry wastage is very high**. So, the Waste Management processes should be established and train the team

- **Product storage systems, BIM – Building Information Modeling**, are few other areas to focus in Sri Lanka

Source: Interviews with Experts
PERCEPTION OF SKILL SUPPLY SIDE

Skills Gaps Analysis Of The Construction Industry Sector

WORK RELATED

• This profession is **very tough** and there is **an uncertainty about the job security**. They have to work from site to site.

• Students who come to construction sector consider these professions as **their last option** when it comes to the job category, if they get a better job opportunity, they tend to leave this industry. **No exist barrier set for employees** (no promotions or a career that they are going to lose if they leave the industry)

PEOPLE RELATED

• People in the **construction sector don’t have the identification to these jobs** and they lack the **social recognition** because of that. They are being named as **“Basses/drivers/labourers etc..”**

• People consider the construction industry is **not the glamoured** one and hence youth **do not like to associate themselves with the industry related jobs**

Source: Interviews with Experts
PERCEPTION OF SKILL DEMAND SIDE

Skills Gaps Analysis Of The Construction Industry Sector

WORK RELATED

- Construction industry is a hard working industry
  - “People think of danger, sweating, under the sun, no proper identity when thinking of work of construction sector”
- Work is tough – “There are many options for people to work with less effort but sometimes to earn more that what they have to do in the industry”. Hence they don’t see a big reason to join the industry if not the last option / till they find another suitable place / if they are really desperate to do something to earn. This is the perception among youth specially
- Extensive hours of working in site if considered as a demotivator for today’s generation

CULTURAL CONCERNS

- “Cultural and social barriers will cause mental block in entering the industry” - Not suitable for women.
- Even when they want to get married, nobody likes to marry a mason, even though they are poor they are clever guys. We have enough people, but they don’t like involving in it. “Even though a mason earns more than an engineer, a girl would like to marry an “engineer”/ “someone with an identified designation” because of the social recognition”
- “Industry occupations are given a high level of social acceptance, pay and recognition in other country (European countries). Sri Lankan who go and work in the industry in other countries will earn the social respect which can not be expected in a country like Sri Lanka”
- “Younger generation likes to dress well, spend time on face book etc. This is the current trend which is leaving many barriers for the industry to attract youth to the industry”
- “The younger people don’t like it and they don’t show much interest in joining blue color work these days”

Source: Interviews with Experts
IN SUM SKILLED AND UNSKILLED JOBS ARE NOT BUILT AS CAREERS FOR MAJORITY OF STAFF IN THE INDUSTRY

Skills Gaps Analysis Of The Construction Industry Sector

<table>
<thead>
<tr>
<th>Professional jobs in the construction sector</th>
<th>Vs.</th>
<th>Skilled/ un-skilled jobs in construction sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition</td>
<td>NO</td>
<td>Recognition</td>
</tr>
<tr>
<td>No social acceptance</td>
<td>NO</td>
<td>Socially acceptance</td>
</tr>
<tr>
<td>Paper qualification</td>
<td>NO</td>
<td>Paper qualification required</td>
</tr>
<tr>
<td>Stability</td>
<td>NO</td>
<td>Stability</td>
</tr>
<tr>
<td>Assurance/ security</td>
<td>NO</td>
<td>Assurance/ security</td>
</tr>
<tr>
<td>Career growth</td>
<td>NO</td>
<td>Career growth</td>
</tr>
</tbody>
</table>

Source: Interviews with Experts
INDUSTRY TALKS OF SKILLS SITUATION & TRENDS

Skills Gaps Analysis Of The Construction Industry Sector

1. Construction companies have a higher motivation to hire people from outside countries

“Bringing in foreign employees cost effective as they are open to work for a longer period without any break.”

2. However, experts are aware of quality of work of Sri Lankan Workers

“However, quality of work of Sri Lankan workers is much better.”

3. Industry lack luxury of choosing the best talent given high scarcity

“We do not reject applications coming from any institutes as we don’t have the liberty to do so and work with whoever is available”

4. The industry is exploring segments of people who can be trained to the industry work

“We have started using unutilized or under-utilized groups of people and involve them in the industry. Eg. using prison inmates, forces etc..”

Source: Primary study – Discussions with Experts in Demand Side
INDUSTRY TALKS OF SKILLS SITUATION & TRENDS

Skills Gaps Analysis Of The Construction Industry Sector

5. There is a clear focus from companies to hire and retain high skilled workers within organizations.

“When we come across highly skilled workers, we absorb them into the permanent carder.”

“We hire the good skilled workers and send them for institutes to be trained.”

6. The large organizations are training staff to use advanced equipment which are unique to them as a strategy to create exist barrier for high skilled workers.

“When we find high skilled workers, we train them to use our own high tech equipment, so that they have to continue within the organization as they become specialized in it. When there is very less organizations who use these high tech solutions, workers will not have much opportunity to go around and changing jobs.”

7. MEP (Mechanical, Electrical and plumbing) is a Specialization that is in demand when pitching for projects.

“Most of the projects demand MEP specialization or partnership with MEP specialized sub contractors when evaluating proposals.”

Source: Primary study – Discussions with Experts in Demand Side
INDUSTRY TALKS OF SKILLS SITUATION & TRENDS

Skills Gaps Analysis Of The Construction Industry Sector

8 Large training institutes are established under some major companies as business diversification

“We have our own training institutes to provide resources to our own projects as well as to train workers that are sent by other organizations. We make more relevant and appropriate skills to the industry”

9 Having a sub-contracting arm under the main company has become the trend in the construction sector

“Pilling work are done and taken by our sub company and infrastructure work is done by another arm but all in the same group”

10 Women participation is skewed towards top and the bottom in the hierarchy. There is an opportunity in the middle level for women in the industry

“There is a huge opportunity to drive women participation in NVQ level 2,3,4”

“Women are trainable for finishing work in the industry as they are inclined towards creative and neat work like painting and tiling”

Source: Primary study – Discussions with Experts in Demand Side
A study conducted by KPMG globally reveals that BIM (Building Information modeling) & data analytics are widespread among the innovative construction companies.

Source: https://www.raconteur.net/infographics/construction-disruption/
COVID 19 IMPACT TO THE INDUSTRY

Skills Gaps Analysis Of The Construction Industry Sector
**COVID 19 IMPACT ON THE INDUSTRY SKILL SITUATION**

Skills Gaps Analysis Of The Construction Industry Sector

1. **STAFF SLASHING DOWN**

   “If we don’t invest money for construction projects, what will happen? That means, the people will lose jobs. No way of distributing funds”

2. **Impact of Covid 19 on operation cost of the industry**

   “the cost of construction goes up due to the practice of social distance guidelines. Those days we used to put about 20 people in one house. But now we put 20 people in three houses.
   “Finding accommodation for workers is difficult more than ever”
   “Need additional funds to facilitate for safety measures”

3. **Cost & Time of Quarantine impact on project**

   “Our work is happening in Jaffna. We send a person or an engineer to the site, then we have to stay there 14 days under quarantine. So, we have to pay them even during the quarantine period. This is called quarantine cost.”

Source: Primary study – Discussions with Experts in Demand Side
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong></td>
<td>SELF TERMINATION</td>
<td>“during this pandemic situation, people have stopped coming for work”</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>CONTINUOUS INVESTMENT</td>
<td>“Construction industry has to survive or go back to the business we had 3-4 years back. Otherwise the economy will have a problem”</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>JOB TERMINATION</td>
<td>“these days most of the companies in the construction industry have stopped taking workers as this covid situation and various other things. But people are agitating that they don’t have jobs and they will not have salaries during this time. All these ones go home they have to do something. They don’t want to be in the construction industry. So, they do something very simple if they are not in the industry”</td>
</tr>
</tbody>
</table>

Source: Primary study – Discussions with Experts in Demand Side
INDUSTRY CHALLENGES

Skills Gaps Analysis Of The Construction Industry Sector

While there are many challenging issues with regards to the construction industry of Sri Lanka, many local players are very optimistic about the future this segment holds for the country.

The state has invested largely in developing infrastructure since 2009 but much still needs to be done, especially in road development.

Moreover, with the increasing per capita income and growing population, Sri Lanka now demands affordable housing.

As a result, there is a huge demand for all types of new facilities including homes, office spaces and hotels which indicate that the construction industry will keep on growing, offering more prospects for contractors as well as for the economy of Sri Lanka.

SALIENT CHALLENGES IN THE INDUSTRY IN THE CURRENT CONTEXT

- Brain drain in the industry
- Continuous decline witness in the growth of the industry
- Rescheduling of projects across the industry
- High construction cost/High wastage
- Low attraction youth towards the industry and high drop out from courses
- Cultural and social barriers resulting in mental stigmas to enter the industry as part of the workforce
- COVID19 economic and social impact

Source: Primary study – Discussions with Experts in Demand Side
WORKFORCE ANALYSIS

Skills Gaps Analysis Of The Construction Industry Sector
EXPERT’S VIEW ON CONSTRUCTION SECTOR WORKFORCE

Skills Gaps Analysis Of The Construction Industry Sector

**6000 Bn.** Construction projects for next 5 years (2026)

1 million work force is needed for 6000 Bn. Construction projects

Existing work force in the country

- Approx. 650,000 Direct work force
- Approx. 100,000 Foreign work force
- Approx. 600,000 Indirect work force
- Approx. 10,000 – 15,000 students will be produced from institutes in a year

250,000-350,000 Work force shortage

To take on future projects of 6000 Bn worth. But, the companies are not planning for these projects yet

Source: Primary study – Discussions with Experts in Demand Side (CIDA & ICC)
Construction work → almost exclusively male dominant industry (ILO)

Reasons for limited participation of women in construction industry

- Entrepreneurial perspective in the mind
- Less social acceptance
- Sexually stereotyping of the profession
- Physical incapability
- Exposures
- Injuries
- Hazards
- Sexual discrimination
- Gender-based harassment.
- Cultural factors

- Nature of the work – hard work, work in the sun, dust, climbing high etc.
- Harassments happen in the sites
- Working hours – late hours
- Family commitment – 100% dedicated to the family
- Engage as babysitters, housemaids etc.
- The industry is not so attractive to women
- Low awareness of the job categories available
- Cultural barriers – “not good to work with lot of men”
- Male dominated industry – “its not for women”

Source: Primary study – Discussions with Experts in Demand Side
As per the **Labour Force Study 2019**, the estimated workforce in the industry amounts to 693,205 which is a degrowth by 3% when compared to 2018 estimates.

These workforce figures do not include foreign employment in the industry.
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 over the past five years too.
SKILLS SUPPLY

Skills Gaps Analysis Of The Construction Industry Sector
TOTAL SUPPLY SIDE BY TVET

Enrollment

A - Grade 1 Admissions 328,632
B - No. sat for GCE O/L 315,278
C - No. sat for GCE A/L 281,786
D - No. enrolled in Public & Private Universities, Professional Courses and study Abroad = 66,000

Academic Levels

School Dropouts before GCE O/L
School Dropouts after GCE O/L
School Dropouts after GCE A/L
With higher Education Qualifications
New entrants to The Labour Market

Potential TVET Beneficiaries

45,000 = 15%
74,000 = 26%
78,000 = 37%
68,000 = 34.8%
10,000

Total Actual Enrollment for Skills Development and Vocational Training 250,690 (2019)

Source: TVEC
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% of the total enrolment too TVET Institutes which makes 27,676 total enrolment to construction related courses.

77% of that enrolment has completed the course and passed out which is a healthy compliance rate. 19% is the drop out 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% have been passed out from Public Institutes and 2% is from private institutes.

Source: TVEC
While the female participation in construction related courses is very low, it is just 6% in the passed out segment.
A total of 9,561 total students passed out from construction related courses in 2018 have increased by 26% in 2019 and it has decreased drastically by 60% in 2020. This could be due to Covid 19 pandemic impact.

From 12,084 passed out in 2019, 86% are with NVQ qualified where as the balance is Non-NVQ students.

Source: TVEC
ANALYSIS OF PASSED OUT STUDENTS’ NVQ LEVEL

Highest no. of students have completed NVQ Level 03 followed by NVQ 4, NVQ 2, NVQ 5 and NVQ 6 in 2019.

SKILL LEVEL

- NVQ 2: Work Under Guidance
- NVQ 3: Work Independently and Quality is monitored
- NVQ 4: Work Independently
- NVQ 5: Self working and give guidance
- NVQ 6: Managerial

Source: TVEC
# Construction Sector Skill Supply – Occupation Wise

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Recruitment</th>
<th>Completion</th>
<th>Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Craftsman (Masonry)</td>
<td>8403</td>
<td>7844</td>
<td></td>
</tr>
<tr>
<td>Plumber</td>
<td>1504</td>
<td>1262</td>
<td></td>
</tr>
<tr>
<td>Carpenter</td>
<td>573</td>
<td>554</td>
<td>104</td>
</tr>
<tr>
<td>Construction Site Supervisors</td>
<td>1109</td>
<td>708</td>
<td>401</td>
</tr>
<tr>
<td>Draftman</td>
<td>190</td>
<td>74</td>
<td>8</td>
</tr>
<tr>
<td>Equipment Operator</td>
<td>203</td>
<td>167</td>
<td>9</td>
</tr>
<tr>
<td>Wood Craftsman</td>
<td>1498</td>
<td>1129</td>
<td>273</td>
</tr>
<tr>
<td>Construction Technology</td>
<td>1121</td>
<td>346</td>
<td>278</td>
</tr>
<tr>
<td>Total</td>
<td>14601</td>
<td>12084</td>
<td>2040</td>
</tr>
</tbody>
</table>

Source: TVEC
CONSTRUCTION SECTOR SKILL SUPPLY – INSTITUTE WISE

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% drop out rate at DTET needs special evaluation.

Source: TVEC
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 holds 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

<table>
<thead>
<tr>
<th>District</th>
<th>DTET</th>
<th>NAITA</th>
<th>NYSC</th>
<th>Private</th>
<th>Public-Other</th>
<th>VTA</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampara</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Trincomalee</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Batticaloa</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Anuradhapura</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Polonnaruwa</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Colombo</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Gampaha</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Kalutara</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Galle</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Hambantota</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Matara</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Kandy</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Nuwara Eliya</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Matale</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Kurunegala</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Puttalam</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Monaragala</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Badulla</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Ratnapura</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Kegalle</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Jaffna</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Kilinochchi</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mullaitivu</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Vavuniya</td>
<td>1</td>
<td>1</td>
<td>25</td>
<td>2</td>
<td>90</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

Source: TVEC
Post 2015, it is seen a drastic drop of departure numbers for construction related occupations from Sri Lanka. The drop is more than 50%.

As of 2019, the highest number of departure can be found for electrician jobs followed by Fabricators and carpenters.

Source: Foreign Employment Bureau
Nearly, 40% 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% are planning to join private sector and only 7% wants to work in public sector employment. 15% is planning to go abroad. Starting salary expectation by about 50% students mentioned is as 30,000 – 50,000 monthly salary.
SKILLS DEMAND

Skills Gaps Analysis Of The Construction Industry Sector
## Construction Sector Demand Side Sample

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planned</strong></td>
<td>120</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>Achieved</strong></td>
<td>110</td>
<td>114</td>
<td>56</td>
<td>54</td>
<td>34</td>
<td>54</td>
<td>30</td>
</tr>
</tbody>
</table>

### Pie Chart
- **40.90%**: CIDA Registered
- **59.10%**: CIDA Non-Registered

### Bar Chart
- **CS1**: 5.7%
- **CS2**: 8.1%
- **C1**: 8.9%
- **C2**: 7.3%
- **C3**: 4.9%
- **C4**: 14.6%
- **C5**: 9.8%
- **C6**: 5.7%
- **C7**: 17.9%
- **C8**: 1.6%
- **C9**: 1.6%
- **EM1**: 7.3%
- **EM2**: 3.3%
- **EM3**: 0.8%
- **EM4**: 2.4%

Legend:
- **CIDA Registered**
- **CIDA Non-Registered**

### Notes
- Planned and achieved figures reflect the percentage of registered and non-registered contractors in various sub-sectors of the construction sector.
**DEFINITION OF MAJOR OCCUPATION CATEGORIES AS PER ISCO***

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Managers</td>
<td>This category includes chief executives; general and corporate managers managing director; administrative, finance, production, service and sale manager; and regional and branch manager who plan, direct and coordinate the policies and activities of business and other organization</td>
</tr>
<tr>
<td>2 Professionals.</td>
<td>Professionals increase the existing of knowledge, apply scientific or artistic concepts and theories, or teach in a systematic manner. Most occupations in this category such as engineers, lawyers, economists, computing professionals, teachers and health professional require skills at graduate and postgraduate education</td>
</tr>
<tr>
<td>3 Technicians and associate professionals</td>
<td>This category performs mostly technical and related tasks connect with research and application of scientific, artistic, or operational methods. These occupations, which typically require skills at upper secondary education, include industrial robot controllers, photographers and medical assistants</td>
</tr>
<tr>
<td>4 Clerical support workers</td>
<td>This category performs clerical duties with associated with non-handling operations, travel arrangements, requests for information and arrangement. Most of these jobs, such as secretaries, cashiers, or transport clerks, require skills at least lower secondary education</td>
</tr>
<tr>
<td>5 Service and sale workers</td>
<td>This category provides personal services related to travel housekeeping, catering, personal care, or protection, or they demonstrate and sell goods. Most occupations require skills at least lower secondary education</td>
</tr>
<tr>
<td>6 Skilled agricultural, forestry and fishery workers</td>
<td>This group includes occupations that require skills at least secondary education or equivalent critical skills and knowledge such as crop growers, gardeners And dairy and livestock producers</td>
</tr>
<tr>
<td>7 Craft and related trades workers</td>
<td>This group applies their skills in the fields of mining and construction, making or repairing machinery, printing, processed food, textiles, or articles including handicrafts goods which involve the performance of complex physical duties that normally involve initiative, manual dexterity and other practical skills. Most of these occupations, such as builders, bricklayers, plumbers, or electronic mechanics require a substantial period of training</td>
</tr>
<tr>
<td>8 Plant and machine operators and assemblers</td>
<td>This group operates and monitors industrial and agricultural machinery and equipment, drives and operates motor vehicles and mobile machinery, or assembles products. Most occupations have not a particular standard of education but will usually have formal experience related training</td>
</tr>
<tr>
<td>9 Elementary occupations</td>
<td>This group consists of simple and routine tasks that mainly require the use of hand tools plus physical effort. Most occupations in this group, such as cleaners, building caretakers, doorkeepers or labourers do not require formal education qualification</td>
</tr>
</tbody>
</table>

*International Standard Classification of Occupation*
2020 TOTAL WORKFORCE IN SRI LANKA CONSTRUCTION SECTOR

2020 Year – Estimated
Total Workforce = 778,788
Foreign Employees = 80,505
Local Employees = 698,283

The above total workforce comprise of Permanent, Contract, casual Full time and Casual Part Time workforce in the industry.

Source: Demand Side – Primary Research
As per the Sri Lanka Labour Force Survey (LFS) 2019, total workforce of Construction Sector* is the most validated secondary data source available for workforce trend comparison compared to last few years. Taking this proxy in to consideration, The below trend is assessed. According to this trend, after 2016 and 2017 nearly 12% increase of workforce, it has showcased a diminishing growth rate in 2018. In 2019, a degrowth of 2.8% is reported in workforce as per the LFS 2019.

As per this study, it was projected a workforce strength of 698,283 in relevant to 2020 which is in comparison to LFS a 0.73% growth.

*Construction, Electricity, gas, steam and air conditioning supply, Water supply, sewerage, waste management and remediation activities

Source: Desk – LFS -2019
### SRI LANKA CONSTRUCTION SECTOR WORKFORCE IN 2020 BY ISCO OCCUPATION CLASSIFICATION – PAY ROLE + HIRE

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Total Workforce</th>
<th>Contribution by Each Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers (Teams in Admin roles)</td>
<td>43,655</td>
<td>6% Managers (Teams in Admin roles)</td>
</tr>
<tr>
<td>Professionals (Engineers, Architects, and other senior professionals etc.)</td>
<td>54,133</td>
<td>7% Professionals (Engineers, Architects, and other senior professionals etc.)</td>
</tr>
<tr>
<td>Associate Professionals (Technician, QS and other associates to Professionals)</td>
<td>13,951</td>
<td>2% Associate Professionals (Technician, QS and other associates to Professionals)</td>
</tr>
<tr>
<td>Technical officers</td>
<td>22,695</td>
<td>3% Technical officers</td>
</tr>
<tr>
<td>Supervisors</td>
<td>18,602</td>
<td>2% Supervisors</td>
</tr>
<tr>
<td>Clerks &amp; Support Services workers (support services such as HR, maintenance, operations...)</td>
<td>21,426</td>
<td>3% Clerks &amp; Support Services workers (HR, maintenance, operations etc.)/</td>
</tr>
<tr>
<td>Skilled Workers</td>
<td>155,504</td>
<td>20% Skilled Workers</td>
</tr>
<tr>
<td>Semi-Skilled Workers</td>
<td>313,360</td>
<td>40% Semi-Skilled Workers</td>
</tr>
<tr>
<td>Elementary Occupations/Helpers</td>
<td>135,462</td>
<td>17% Elementary Occupations/Helpers</td>
</tr>
<tr>
<td><strong>Total Workforce</strong></td>
<td><strong>778,788</strong></td>
<td></td>
</tr>
</tbody>
</table>

*This includes foreign skilled and unskilled workers of 80,505

Not many in the industry defines their occupation categories as per the ISCO categorization exactly. Sometimes, Supervisors of some companies (mainly small scale companies) include senior basses too into supervisor level. Further, they do multiple tasks in a project not just one specific area of work like mason work, plumbing work and tiling work etc.. When identifying the workforce segregation by these occupation categories, it is very clear that around 60% of the total workforce in the industry are skilled & Semi Skilled workers as companies define them.

Unskilled workers/ helpers could have been projected a higher number than this if not Covid impact.

Source: Demand Side – Primary Research
### Construction Industry

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Total Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers (Teams in Admin roles)</td>
<td>43,655</td>
</tr>
<tr>
<td>Professionals (Engineers, Architects, and other senior professionals etc.)</td>
<td>54,133</td>
</tr>
<tr>
<td>Associate Professionals (Technician, QS and other associates to Professionals)</td>
<td>13,951</td>
</tr>
<tr>
<td>Technical officers</td>
<td>22,695</td>
</tr>
<tr>
<td>Supervisors</td>
<td>18,602</td>
</tr>
<tr>
<td>Clerks &amp; Support Services workers (support services such as HR, maintenance, operations...)</td>
<td>21,426</td>
</tr>
<tr>
<td>Skilled Workers</td>
<td>155,504</td>
</tr>
<tr>
<td>Semi-Skilled Workers</td>
<td>313,360</td>
</tr>
<tr>
<td>Elementary Occupations/Helpers</td>
<td>135,462</td>
</tr>
</tbody>
</table>

*This includes foreign skilled and unskilled workers of 80,505*

### Supervisor to Skilled & Semi-Skilled Employee Ratios - Pay Role

**Supervisors : Skilled + SS Workers**

18,602 : 468,864 → 1:25

When considering the higher Top: bottom employee ratios on the industry, it is evident that 1 supervisor to 25 skilled/Semi skilled workers can be found in the industry.

However, in some companies, supervisors and manager level staff would involve in multiple roles.

Hence, it is not very right if the supervisor to skilled level staff ratio is calculated at overall level as it would defer from the company to company as well as the nature of the main activities of each companies such as whether the main activities are around contracting or sub contracting etc..

Source: Demand Side – Primary Research
Skilled workers are defined as those who can work without supervision. If the worker is a new recruit, after first weeks of supervision of work, workers are defined as skilled or semi-skilled. Those who have worked in the industry before, they are identified as skilled or semi-skilled based on recommendation by the former employee/previous work experience. Some organizations consider their vocational training qualification when categorizing them as skilled/Semi-skilled.

Accordingly, it was very clear that there is no standard measure of skill level of workers in the industry and hence a proper skill measurement criteria should be introduced and institutionalize in the industry.

Source: Demand Side – Primary Research
When analyzing the employment terms of construction sector workforce, it is clear that more than 40% of the workforce is a hired staff.

Even in the pay role staff, 24% is on contractual basis and another 26.5% is on casual terms working in construction companies.

Required skilled, semi-skilled and unskilled staff is been recruited through contacts by majority of companies like 70%. Another 44% of companies had mentioned that they source the staff through Newspaper advertisements. Another 28% mentioned that the staff is sourced from Training Institutes too.
WORKFORCE STRENGTH IN PAY ROLL – FURTHER SEGMENTATION

Skills Gaps Analysis Of The Construction Industry Sector

<table>
<thead>
<tr>
<th>Category</th>
<th>PERMANENT</th>
<th>CONTRACTUAL</th>
<th>CASUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers (Teams in Admin roles)</td>
<td>76.4%</td>
<td>13.0%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Professionals (Engineers, Architects, and other senior professionals etc.)</td>
<td>70.9%</td>
<td>21.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Associate Professionals (Technician, QS and other associates to Professionals)</td>
<td>70.2%</td>
<td>6.8%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Technical officers</td>
<td>93.2%</td>
<td>6.8%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Supervisors</td>
<td>83.1%</td>
<td>8.6%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Clerks &amp; Support Services workers (support services such as HR, maintenance, operations etc.)</td>
<td>69.5%</td>
<td>27.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Skilled &amp; Semi-Skilled Workers</td>
<td>40.3%</td>
<td>25.4%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Elementary Occupations/Helpers</td>
<td>31.2%</td>
<td>10.0%</td>
<td>58.8%</td>
</tr>
<tr>
<td>All</td>
<td>24.3%</td>
<td>26.5%</td>
<td>49.2%</td>
</tr>
</tbody>
</table>

Source: Demand Side – Primary Research
WORKFORCE STRENGTH BY GENDER

Skills Gaps Analysis Of The Construction Industry Sector

13,966
Women working on construction sector

2%
Female representation

 Majority like
98-99% are unskilled workers

684,317
Men working on construction sector

98%
Male representation

698,283*
All working in construction sector

* Without foreign employees

Source: Demand Side – Primary Research
From 80,505 estimated recruitment from outside countries, 53% of them are skilled resources the industry source from other countries where as 47% of it are unskilled employees.
KEY REASONS FOR YOU TO HIRE SKILLED EMPLOYEES FROM OTHER COUNTRIES

Skills Gaps Analysis Of The Construction Industry Sector

• When it involves international projects
• Some specific projects which local workers are not sufficient.
• When lacking required skills locally

“Riggers – the real riggers are not in SL. When we need them, we hire them from Bangladesh” “sometimes we hire most of the craftsman”

• When required big capacity of laborers – hire from India, Nepal, Bangladesh and China

Source: Demand Side – Primary Research
Skills Gaps Analysis Of The Construction Industry Sector

- Hiring foreign employees is very costly, the foreign workers should be provided food, accommodation etc.
- The process of hiring is not easy
- There is a cost of VISA and has a certain process to obtain VISA for foreign employees
- Have to provide security as they are visitors to Sri Lanka or should ensure their safety
- The countries holidays are applicable for local & foreign employees. So even if its a holiday we have to pay the day payment and food allowance for foreign employees.

Source: Demand Side – Primary Research
ADVANTAGES OF SOURCING SKILLED EMPLOYEES INTERNATIONALLY

Skills Gaps Analysis Of The Construction Industry Sector

- Can work extensive hours since they do not have family commitments
- Productivity is higher than locals
- Committed to work – They have been trained like that
- Do not take regular leaves
- Hard working than locals
- Has an updated knowledge
- Ability to use new techniques

Source: Demand Side – Primary Research
Current Skilled & Semi-Skilled Workforce by Occupation

Construction Industry – Skilled + Semi-skilled Employees = 468,864

28% of the skilled employees in the industry today is populated by Masons and concrete finishers followed by 10% of electrician.

Source: Demand Side – Primary Research
Future Skilled Requirement = Approx.340,000

Source: Demand Side – Primary Research
EVALUATION OF SKILLS GAP

Skills Gaps Analysis Of The Construction Industry Sector
Estimated workforce requirement for future growth

Skills Gaps Analysis Of The Construction Industry Sector

- There is a total of 338,192 skilled staff is 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 forecast and this could be the basic minimum future requirement. Further, timelines of projects in the pipeline would change the time frame in which these 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 itself 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.

**Current Staff**
698,283

**Foreign Staff**
80,505

**Future Requirement**
340,000

**Total Supply***
40,000-50,000

**Skill Gap**
95%

*At the current rate of skill supply by TVET, it can be expected 40,000-50,000 full supply 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.

Around 30% passed out would be potential to the industry, which is less than 5% of the requirement.

Source: Demand Side – Primary Research
### CURRENT AND UPCOMING PROJECTS

**Skills Gaps Analysis Of The Construction Industry Sector**

<table>
<thead>
<tr>
<th>ROAD DEVELOPMENT</th>
<th>WATER PROJECTS</th>
<th>OTHER INFRASTRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Construction of Ruwanpura Expressway</td>
<td>• Construction of Kelani Ganga Upstream Reservoirs</td>
<td>• Hambantota Economic zone</td>
</tr>
<tr>
<td>• Construction of Central Expressway</td>
<td>• Construction of Yatimahana Reservoir in Mah Oya</td>
<td>• Drug manufacturing plants – Horana, A’pura &amp; Hambantota</td>
</tr>
<tr>
<td>• Construction of New Kelaniya Bridge and Elevated Road to Colombo Port &amp; Fort Area (CKE extension)</td>
<td>• Construction of salinity barrier across Kaluganga</td>
<td>• Liquefied natural gas plant</td>
</tr>
<tr>
<td>• Construction of Elevated Urban Expressway from New Kelani Bridge to Battaramulla</td>
<td>• Construction of treatment plant at Kethhena</td>
<td>• Another tire factory is to be constructed in Horana by China</td>
</tr>
<tr>
<td>• 100,000 km road project and 10,000 km x 3 large road projects</td>
<td>• Construction of ground reservoirs to enhance water storage facility for Colombo city</td>
<td>• Cement Factory</td>
</tr>
<tr>
<td>• Infrastructure - many rural roads and the medium scale G/grade, C/grade roads coming up</td>
<td>• Mirigama industrial city water supply project</td>
<td>• numerous projects related to education, health and sports</td>
</tr>
<tr>
<td>• 100,000 houses</td>
<td>• Ingiriya, Handapangoda water supply project</td>
<td>• Sethsiripaya phase 3</td>
</tr>
<tr>
<td></td>
<td>• Kirindiwela water supply project</td>
<td>• University project initiated by UGC – medical faculty in Kaluthara</td>
</tr>
<tr>
<td></td>
<td>• Mabima water supply project</td>
<td>• Police headquarters building etc.</td>
</tr>
<tr>
<td></td>
<td>• Rehabilitation water tanks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Water projects - portable water invert now it is 40-45% to 70-80%of the people - some are awarded, and some are to be awarded</td>
<td>• Port city</td>
</tr>
<tr>
<td></td>
<td>• 420,000 water supply projects for individual households</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10,000 bridges</td>
<td></td>
</tr>
</tbody>
</table>

Expanding the Transport Network

- Railway Electrification and Modernization (Panadura to Polgahawela, Ragama to Negombo, Kelani Vally line)
- New Railway Line - Kottawa to Horana & Kelaniya to Kosgama
- Rapid Transit System (Either LRT, Monorail or BRT)
- Multi Model Transport Hub (Fort)

Source: Primary study & Desk

---

**Total Workforce Requirement Estimated = 1,116,980**

**2021 - 2026**

**6000Bn worth**
**SKILLS SHORTAGES – DEMAND SIDE VOICE**

*Skills Gaps Analysis Of The Construction Industry Sector*

“At the movement the major shortage in the country is masons and the carpentry occupation categories”

“There is a shortage of heavy machinery equipment operators”

“other countries are requesting our country for these particular people. Eg: Hungary, Rumania, Bulgaria”. But, we don’t have people to cater to those needs

“Use of Aluminum instead of wood is an increasingly expected requirement, but unfortunately there are not many aluminum workers to be employed in the market”

“Jointers in the telecommunication sector jobs are extremely rare in the country at it is a high risk involved job”

“Rigger is a special installation mechanism in very tall towers. It is not like installing something on the ground. There is a shortage of Riggers”

When it comes to the Riggers, we hire Riggers from countries like Bangladesh. But we also have a lot of people who can be trained as Riggers

“middle level people who are involved in the technology now. Because the people study only those things but the real shortage is in the lower level”

“there is a shortage of mechanics of heavy machines and vehicles.”

Source: Demand Side – Primary Research
REASONS FOR SHORTAGE OF SKILLED WORKERS

Skills Gaps Analysis Of The Construction Industry Sector

**JOB/WORK RELATED**
- Perceive to be hard working/tough work
- High risk involve job categories
- Social issues with regard to jobs in construction sector
- Lack of awareness/knowledge about the industry and career opportunities available in the industry
- Perceive to be low paid jobs
- Old people/over age people are in the sector than youngsters

**PEOPLE RELATED**
- There is no place to train Masons, Carpenters, painters etc. in Sri Lanka and give them a certificate.
- Machine operators or the supporters are not having required qualifications
- Labeling people as masons, carpenters
- People are semi-skilled mostly and they are not identified for skill improvements and plan their growth
- No inspiration to go up the ladder in the industry
- No career or upgrade in occupations

**PROCESS RELATED**
- No performance evaluation systems and identification of skill gaps and skill improvement requirements in the industry at lower level
- The projects are under time pressure always and hence training the team is deprioritized in the industry

Source: Primary study

Source: Experts – Primary Research
# Emerging Skill Requirements in the Industry

**Skills Gaps Analysis of the Construction Industry Sector**

## Emerging Skills Requirements

<table>
<thead>
<tr>
<th>Skills of Google mapping System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Management Systems</td>
</tr>
<tr>
<td>Product Storage Systems</td>
</tr>
<tr>
<td><em>Eg: BIM – Building Information Modeling</em></td>
</tr>
<tr>
<td>Skills to use new materials</td>
</tr>
<tr>
<td>Flooring Technology</td>
</tr>
</tbody>
</table>

## Skills Types

| Wallpaper designers          |
|设计师/装饰绘画师              |
| Interior designs             |
| *Eg: Carpeting*              |
| Machinery Operators          |
| Electronic cutters           |
| Material Testers             |
| Lab Technicians              |
| Timber workers               |
| Survey Assistance            |

*Source: Demand side interviews*
SKILLS SEARCH METHODS

Skills Gaps Analysis Of The Construction Industry Sector
**SOURCES OF RECRUITMENT**

- **Direct Contact** is the most used source of recruitment. Paper Ads follow.

Source: Demand Side – Primary Research
**EVALUATION OF SOURCES OF RECRUITMENT**

*Skills Gaps Analysis Of The Construction Industry Sector*

<table>
<thead>
<tr>
<th>Source</th>
<th>Extremely satisfied</th>
<th>Very satisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other (Including Foreign Employment Bureau)</td>
<td>28%</td>
<td>72%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Media</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Contact</td>
<td>78%</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training Institutes (NAITA/TVA/NYSC/DTET)</td>
<td>7%</td>
<td>81%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Manpower Company</td>
<td>56%</td>
<td>39%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Internet Advertisement (top job..)</td>
<td>8%</td>
<td>46%</td>
<td>38%</td>
<td>6%</td>
</tr>
<tr>
<td>Newspaper Advertisement</td>
<td>5%</td>
<td>45%</td>
<td>48%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Foreign Employment Bureau* is one of the most satisfactory recruitment source followed by *Direct Contacts and Training Institutes*

Source: Demand Side – Primary Research
In order to find skilled and unskilled employees, construction companies post advertisements.

As the study reveals, it is quite a task for the demand side to source these skilled and unskilled employees in the market.

Source: Demand Side – Primary Research
DIFFICULTIES IN SOURCING SKILLED EMPLOYEES LOCALLY

Skills Gaps Analysis Of The Construction Industry Sector

Difficulty is largely at the entry level, hence ‘LOW ENTRY’ should be addressed as priority. At the same time, once entered there is NO EXIT BARRIER too and hence high turnover.

- The youngsters do not like to join construction related jobs as it is not recognized in the society
- Do not get much applicants. Hence whatever the applicant we get, we never reject
- There is a shortage of Masons & Carpenters
- People do not join risk involve jobs such as telecommunication joiners, riggers etc.
- People's interest to join the construction field is low
- Required skills are not there
- Difficult to source people who would retain with us for long time
- Parents are reluctant to send their children to construction field
- Lack of awareness of construction industry jobs among general public
- High expectations/ salaries and other benefits
- People look for comforts in jobs
- Look for flexible hours of working

Source: Demand Side – Primary Research
QUALIFICATION EXPECTED TO RECRUIT FOR SKILLED AND UNSKILLED EMPLOYEES
Skills Gaps Analysis Of The Construction Industry Sector

- Majority of occupations looks at NVQ 3 & 4 when hiring people for skilled cadre. This is from those who consider a qualification when hiring people for skilled levels. However, vast majority like 86% of companies mentioned that they do not look at formal qualifications when hiring people for skill level occupations.

Source: Demand Side – Primary Research
GOVERNMENT DIRECTION ON REVAMPING SKILLS GAP

Skills Gaps Analysis Of The Construction Industry Sector

**PLANNING TO FORM A 100,000 SKILLED WORKER POOL**

“Government is planning to form a course of 100,000 skilled worker pool all over the country as government employees on contract basis. There they will be eligible for a kind of a pension. The construction companies will have the opportunity to hire workers from the pool. Eg: if some company need 200 people in ANURADHAPURA, the government pool will be able to supply. It is a very good program. The people will be attracted to a government job and its stability of the job”

**TRAIN 5,000 CRAFTSMEN IN THE COUNTRY**

“Currently we are conducting Construction Craftsman Training National Program over last 4 years. There we mainly focus on occupations of masonry, carpentry, plumbing, welding, and tiling covering the whole country. There we have targeted on 5000 numbers of craftsmen to be trained”

“There is a delay of conducting the programme due to this Covid situation but we hope to continue it as soon as possible. After the training period, we place them with the help of NCSL on their sites as well as the government sites”

**PROVIDING INSURANCE**

“We hope to discuss in near future about providing an insurance scheme and make those pensionable jobs”

**TRAIN FORCES FOR CONSTRUCTION WORK**

“there is a huge amount of army force is there without much work. The government has planned to make them use in construction sector – Industry Experts”

**REBRANDING OCCUPATIONS**

“TVEC has come up with some better solutions. They have brought the term of “Technician” to identify them but it is so hard to change the old establishments from the society”

**INTRODUCING A PENSION SCHEME**

“we have taken measures to avoid uncertainty of the job security by suggesting a pension scheme” - CIDA

**IMPLEMENTATION OF RPL**

“there is a specified test for people who have a low literacy level who can not sit for an exam. Based on their skills they are being assessed. If somebody request for a RPL test from NITA, they will arrange it at a cost. There will be a pre-test and a final test and then the certificate will be issued when they pass the examination. If someone is unable to sit for a written test, verbal test or an interview will be arranged”

Source: Demand Side – Expert Interviews
“when it comes to the construction industry, there is no any professional qualifications based method to hire them until now. But we want to make standardize labor workforce to the industry through our registrations and all these trainings.

Most of the workers who are employed are self learnt workers while working under someone. With the establishment of the act, it will be compulsory to get registered with us and will have to participate on any assessment training program as skilled workers. After that no one can work without a NVQ qualification that is where we want to bring up the industry”

When the rule is active, they will have to either get registered with CIDA individually or they will have to work under registered contractor. This will be only applicable for projects above 10 million for now” - CIDA

Women will be trained for painting work as they are talented on artistic tasks

Source: Demand Side – Expert Interviews
SKILL DEVELOPMENT FLOW SUGGESTED

Skills Gaps Analysis Of The Construction Industry Sector

Leverage on NVQ qualification reputation
Enhance perception towards industry, its culture and its future
Demonstrate the Career Path of a skilled employee in the industry

Create a compelling reason to enter

Supply Side

LOW ENTRY

Recruit and train

Provide a career path and inspire for a career journey in the industry
Invest time and money for Human Resource Development

Create a compelling reason to retain

Demand Side

NO EXIT BARRIER
(Flirting or leaving)

REBRANDING OCCUPATIONS
PROVIDING INSURANCE
INTRODUCING A PENSION SCHEME
IMPLEMENTATION OF RPL
STANDARDIZATION OF WORKFORCE
Conclusions

Construction Industry Overview

The construction sector contributes to 6% of the total GDP of the country in 2019 and value contribution to GDP has increased continuously during the last five years. Building construction is the largest contributor in the industry (51%) followed by road and highway development (27%).

Unfortunately, the construction industry is one of the highest impacted sectors from Pandemic and reported a -16% growth rate. The impact of the pandemic had caused a low supply of cement (cement supply decreased by 16.5%) and decreased value of building material imports (declined by 20.4%) as per the National Accounts of Sri Lanka.

2020 Q1 estimates by the Department of Census and Statistics of Sri Lanka reveals that 7% of the total workforce of the country is added from the construction industry. The total workforce of the country as per the 2020 Q1 estimate is 8,020,446 and hence estimated workforce of the construction sector is 641,636. As per the experts’ estimation, there is an average of 100,000 foreign employees working in the industry and another 600,000+ indirect workforce is in construction-related sectors such as material providers, equipment providers, etc.
CONCLUSIONS

Market perception on the Construction Industry

Perception of the industry is a critical factor for talent attraction. As per the experts’ view, the procurement process of the industry is yet to be updated and streamlined. That will create a positive perception of the construction sector among potential employees, especially among the new generation.

The other side of the coin is the social influence in selecting the construction industry for employment 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. These perceptions are 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. 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.

Market perception on the Construction Industry Cont..

Due to busy project scheduling and timelines pressure for projects, organizations put more focus on project deadlines over people. From companies point of view, the delay of projects is a huge cost to the organization.

75% of companies in the industry do not have a training budget.

Lack of compelling reason to enter/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.

There is a considerable divide in perception towards higher grade jobs in the industry Vs. skilled and unskilled level jobs.

Due to this fundamental gap in the industry, the industry lacks the luxury of choosing talents rather than working with what is available.

The construction industry is one of the biggest impacted sectors from Covid 19 which added to this pressure of skill gap. On one side it increased the cost of operation due to safety guidelines/quarantine cost for social distancing and employee slash down took place due to business pressure. On the other side employees, self-termination impacted the industry.
CONCLUSIONS

Project pipeline

Nevertheless, the project pipeline is promising and it is estimated to implement 6000 billion worth of construction projects in the country in the next five years which require approximately 1 million workforces for these projects as per the experts in the industry.
CONCLUSIONS

Skill Supply Situation in the Industry

TVET has been contributing towards the National Economic Growth of the country through Skills Supply towards key industrial sectors. As per TVET records, 250,690 is the total enrolment for courses in 2019. From this total enrolment, 5.8% have enrolled in construction-related courses. This amounts to 14,061 in the year 2019. After a dropout ratio of 21% and another 9% who enrolled continues studying, a total of 12,084 students have completed their courses and passed out from TVET. 98% of these passed out students contributed from public sector TVET institutes. Accordingly, TVET public sector contribution to construction sector skill supply is key in Sri Lanka. 94% male students and 6% female students consist in the total passed out from TVET after construction-related course.

Therefore, efforts from the skill supply side to increase female participation in the industry had not shown results so far.

Further, 86% of passed out students are of NVQ qualification and 14% are on non-NVQ qualification. From the total NVQ qualified students, nearly 39% are of NVQ 3, 28% of NVQ 4, 22% NVQ 2. NVQ 5 & 6 are only 11%.

Skill Supply Situation in the Industry Cont..

There are 162 courses offered by TVET and the largest numbers of courses are from VTA. However, very little enrolment and passed-out have been recorded from VTA. There are 31 courses offered by DTET around the country, only 1,391 students get passed out.

On the other hand, with 4 courses in NAITA, it had generated 8052 students in 2019. 25 private sector courses around the country had generated only 282 in 2019.

There is a large dispersion in the way the construction-related courses are provided by different institutes and the number of students passed out from those courses. Private sector training institutes are yet to demonstrate their own towards the growth of the industry skills gap.

1 million total workforce target to execute the projects in the pipeline would be technically impossible at this rate of skill supply capabilities in the country.
CONCLUSIONS

Skill Departure Situation

The statistics published by the Foreign Employment Bauer, departure for construction-related employment has diminished from 18,468 in 2010 to 6579 in 2019 and it is a more than 60% drop. With Covid 19 impact, this trend would further decline for the next couple of years and the major skills requirement will be to fulfill the local construction sector project going forward.

Needless to say that there seem to be a significant market opportunity to provide skilled occupation like riggers to many other countries as per the views of experts in the country.
CONCLUSIONS

Workforce Situation in the Industry

As per this study conducted by Survey Research Lanka (Pvt) Ltd., among demand-side construction companies covering main contractors and sub-contractors representing small, medium, and large scale companies from building construction, road & highway, Water supply, infrastructure developing companies (bridges, airport, ports, etc..), specialized subcontractors and suppliers of raw materials, the current workforce and the future requirement has been estimated.

It is important to note that companies in the industry can not be bucketed to mutually exclusive segments saying construction and sub-construction, as most of the companies are contracting as well as subcontracting for some other projects.

According to the study, the 2021 Q1 total workforce estimation in the Construction sector is 778,788. 10.3% of it is foreign employees and 90.7% are local employees. Accordingly, the total local workforce in the construction sector counts to be 698,283 as per Q1, 2021. Approximately, 20% of this workforce is categorized as a skilled workers, 40% semi-skilled and 17% is helpers/ elementary level workers. The balance workforce consists of a supervisor and higher grand up to senior management and professionals in the industry.

Workforce Situation in the Industry Cont..

The industry defines whether an employee is skilled/ semi-skilled is based on the recommendation by the former employee or based on previous work experience. After the first week of supervision, employees are identified for skilled or semi-skilled categories. Employees who can work independently are categorized as skilled and those who need supervision are categorized as unskilled or unskilled.

It is very important to note that the categorization of workers as skilled, semi-skilled, and unskilled is not standard across the companies. It defers from company to company. Sometimes, it may differ from project to project too.

54% of the total workforce are on pay role cadre and the balance is hired, staff. However, the majority of the pay role cadre is also on casual or contract terms. The majority like 75% of skilled and semi-skilled employees are on casual or contract terms. 90% of helpers/ elementary workers are on casual or contract terms.
CONCLUSIONS

Skilled and unskilled Current Cadre Analysis

60% of the total workforce in the industry are skilled and semi-skilled employees. 17% is categorized as unskilled/helpers/elementary workers.

The total of skilled employees in the industry is 155,504 and 313,360 are semi-skilled as per the demand side identifies. The total estimated number of supervisors is around 18,602 which makes a 1:25 ratio of the supervisor to skilled/semi-skilled employees.

28% of skilled and semi-skilled workers are mason and concrete finishers which is second to the size of machine operators, 16%. Electrician, Plumbers, Carpenters, Bar benders/ironworkers, Vehicle Operators, Tile Fixtures, Painters, Jointers, Riggers, Mechanics, Aluminum workers, Drywall installers, Welders, and Draftsman are the key occupation categories in the skilled and semi-skilled cadre in the industry.

Recruitment methods

The industry is in perspective that it is not at all easy to find these skilled employees and dependency on semi-skilled is significant. However, findings unskilled is easier comparatively.

The majority like 86% of companies do not expect any education qualification when hiring people at a skilled level. They only value the skills and hence experience. However, about 36% of companies had mentioned that NVQ 3 & 4 are considered when recruiting people at a skilled level even though it is not a compulsory requirement given the high scarcity.

The majority of companies (71%) source the staff from known contacts and 44% of companies mentioned that they use Newspaper advertisements. Only 28% of companies mentioned that they source from TVET institutes. Internet advertisements are also used by 1/4th of companies.

The companies are satisfied recruiting people from direct contacts and training institutes too. Foreign Employment Bureau also seems a quite good fit for companies requirement. However, internet/social media leads and manpower companies are not so helpful for companies for hiring employees at a skilled level.
CONCLUSIONS

Future Demand for Skilled Employees

As it was read earlier, there is 6000 billion worth of projects in the pipeline, and 1 million of staff requirement was indicated by demand-side experts in interviews of this study.

While some companies were not ready to estimate their skilled employee requirement considering market uncertainty and uncertainty of projects in the pipeline, around 30-40% of companies had plans for future projects.

Accordingly, a total of 338,192 skilled employees requirement exist in the industry. This requirement was drawn by taking the project pipeline from 2021-2026 into consideration by the demand side.

Other than these skilled workers, 32,864 unskilled workers and 700 – 750 supervisor grade employees are required by the demand side.

Skills Gap Assessment – Quantity

TVET has supplied 9,561 to the industry in 2018, which has increased to 12,084 in 2019. 4726 was the supply in 2020. Accordingly, an average of 8000-10000 skill supply is generated from TVET for the construction sector in a year as per the data the last three years.

On the other hand, around 30% of the students who pass out from these courses are expecting to find a job in the construction sector private or public company whereas the majority like 40% wishes to do something of their own.

Therefore, only around 30-40% of the passed out students will be potentially be recruited by the industry. It means, an average of 2500-3000 talent potential in a year.

The total skilled employee requirement for the next 5 years projects is estimated to be 338,192. Total supply for the next year 40,000 – 50,000 at the current supply rate. However, it seems that only around 30% of students are entering the workforce. Therefore, the potential skilled pool is around 12,000-15,000, which is just around 5% of the requirement. Accordingly, around 90-95% of the requirement is the skill gap in the industry.
CONCLUSIONS

Skills Gap Assessment – Quality

Given the bigger issue is the quantity of gap faced by companies, quality of requirement is not a burning issue for companies right now. However, the semi-skilled pool of employees is significant in the industry and hence the need of getting them trained fully is a concern that they live with currently. Although companies do not prioritize any budget or time for training people currently due to project execution pressure, getting the semi-skilled trained is a dire need in the industry.

In terms of quality of supply, other than the attitude gap and mind block on accepting the industry for their employment, major criticisms about the quality of supply were not highlighted. However, low appreciation towards the industry, lack of dedication, lack of patience to be in the industry to go up the ladder, lack of practical knowledge, lack of skills of supervision, positive mindset towards light work and rejection of hard work, and high salary expectation are the bigger concerns of the demand side. These attitudinal concerns are not specific to the construction industry but attitudinal issues of youths towards employment.

Skills Gap Assessment – Quality

Further, it was evident that the productivity and commitment levels of foreign workers are unparallel to Sri Lankan employees, hence most of the companies prefer to work with foreign workers.

It is fascinating to table how one expert explained the difference between local employees Vs foreign employees in the industry and how it creates no inspiration for youth to consider the sector for their employment.

“Our Sri Lankan people start working after eating a bun soaked into their morning tea. But, people who come from other countries eat a heavy breakfast and start their day with energy. At that point onwards, our people are not energetic and not ready for work”
Thank you