



SKILLS DEMAND SURVEY IN CONSTRUCTION SECTOR



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Abbreviations

BACI	Bangladesh Association of Construction Industry
BBS	Bangladesh Bureau of Statistics
BIDS	Bangladesh Institute of Development Studies
BTEB	Bangladesh Technical Education Board
BMET	Bureau of Manpower, Employment and Training
BSIC	Bangladesh Standard Industrial Classification
CBLM	Competency-based Learning Materials
CBT&A	Competency-based Training and Assessment
CISC	Construction Industry Skills Council
DCI	Data Collection Instrument
DTE	Directorate of Technical Education
EBT	Enterprise-based Training
EIG	Employment and Income Generation
GDP	Gross Development Product
HDRC	Human Development Research Centre
HSC	Higher School Certificate
IMT	Institutes of Marine Technology
ISC	Industry Skills Council
ISIC	International Standard Industrial Classification
KII	Key Informant Interview
LFS	Labour Force Survey
MoE	Ministry of Education
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment
MoU	Memorandum of Understanding
NGO	Non-government Organization
NSC	National Skill Certificate
NSDC	National Skills Development Council
NTVQF	National Technical and Vocational Qualifications Framework
PKSF	Palli Karma-Sahayak Foundation
RPL	Recognition of Prior Learning
RTO	Registered Training Organization
SCDC	Standard and Curriculum Development Committee
SDCMU	Skills Development Coordination and Monitoring Unit
SEIP	Skills for Employment Investment Program
SMI	Survey of Manufacturing and Industry
SSC	Secondary School Certificate
TI	Training Institute
TSC	Technical School and College
TTC	Technical Training Centers
TTTC	Technical Teachers Training College
TVET	Technical and Vocational Education and Training
VTI	Vocational Teacher Training Institute

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Palli Karma-Sahayak Foundation (PKSF) in connection with her partnership with Skills for Employment Investment Program (SEIP) launches this study to know the future skills demand along with the skills gap in the priority sectors of the economy including Construction sector in Bangladesh.

On this backdrop, PKSF entrusted Human Development Research Centre (HDRC) to perform this crucial and challenging task of skills demand survey. This survey is essential to explore occupation wise potential job demand and to determine the number of prospective human resources by skills level in Construction sector (e.g., less-skilled, semi-skilled and skilled) as per employers' demand in congruence with the objective of SEIP. Findings of this study are crucial to PKSF, as the data could be useful to formulate the action plan to ensure effective demand-driven skills training program for the less-skilled, underprivileged and low-income groups of people.

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Executive Summary

Palli Karma-Sahayak Foundation (PKSF) is working with Skills for Employment Investment Program (SEIP) to support the targeted group of people to enhance their employable skills with the purpose of meeting the skills demand of the industries and self-employment as well. PKSF, through 22 training centers, is providing training mostly to the poor and low income group participants to improve their skill and make them employable. This study aims to let PKSF know the present and future skills demand as well as skills gap in Construction sector of Bangladesh to formulate her future policy and program in the area of skills development.

In particular, this study aims to explore occupation-wise potential employment demand in Construction sector and determine the number of prospective human resources by category of less-skilled, semi-skilled and skilled. This task is likely to be accomplished according to employers' demand in congruence with the objective of SEIP. The specific objectives of the study are as follows.

- i. To identify occupation-wise job demand in Construction sector of home and abroad;
- ii. To examine the skills gap of existing human resources in comparison with potential job market demand;
- iii. To identify the causal factors of skills gap of existing human resources;
- iv. To formulate an action plan to ensure effective demand-driven skills training program for the less-skilled, underprivileged and low-income group.

Study Design and Implementation

The study adopted both quantitative and qualitative tools to collect data and information from primary and secondary sources. For estimating the future job demand in construction sector in Bangladesh and in the overseas market this study relies on BMET database along with data and resources published by Bangladesh Bureau of Statistics (BBS). Enterprise level survey was conducted to collect primary data on the job demand by occupations or trades; skills gap; and causal factors of the skills gap by interviewing both employer and employee using semi-structured interview schedule. For primary data collection, this study followed non-probabilistic or purposive sampling with a total number of 10 enterprises from construction and real estate sector located in Dhaka. Officially published data are also used extensively. Both quantitative and qualitative data are analysed and triangulated. In addition, relevant stakeholders and knowledgeable entrepreneurs of this sector were consulted in different phases of the study.

Study Findings

Future Job Demand Assessment in Home and Abroad

The projection on the future job demand in construction sector for domestic and overseas market is estimated separately. Although there are liberal and conservative estimates on the projection of overseas job demand, this study relies on conservative estimates. In 2027, the projected future job demand in domestic Construction sector is 5.40 million while the same for overseas Construction sector is 1.36 million. Estimates indicates that the total number of employment — both at home and abroad — in this sector will be 4.88 million by year 2022 and 6.7 million by year 2027 increasing from 3.77 million in the year 2017.

In both the domestic and overseas Construction sector, the lion share of employment in this sector lies under the less-skilled and semi-skilled category of occupation, although the share of less-skilled job will slightly decline in future in the domestic market (59.1% in 2017; 59.5% in 2022 and 58.7% in 2027). Despite the declining share of less-skilled job in total employment of Construction sector at home, the majority of employment will remain under this category where a total of 3.2 million jobs will be created by 2027 from 2.1 million in 2017. According to the estimate, in 2027 the highest number of job under this category in domestic market will be created for Mason (1.2 million), followed by Tiles and marble mosaic fitter (0.51 million) and Marble cutting worker (0.42 million).

In case of employment in semi-skilled job in the domestic Construction sector, it will be on rise from 38.6 per cent in 2017 to 38.8 per cent in 2027; likewise, the proportion of skilled employment in total employment will also increase by 0.2 per cent point in the next decade. A total of 2.1 million jobs will be created under semi-skilled category in the year 2027 from 1.7 million in the year 2022 and 1.4 million in the year 2017. It indicates a huge number of additional demand for future employment in this category of skills. Among the different occupations under semi-skilled category, the highest number of jobs will be created for Rod Binder (702,587) and Rigger (497,216).

In the overseas construction sector, the highest number of occupation falls under the category of either less-skilled or semi-skilled category. According to the projection estimates, of the most opportunities in overseas job demand will be created for occupations like Construction worker (602,704), Mason (289,434), Carpenter (198,858), Painter (108,282), Electrician (72,188), and Plumber (45,628).

Considering the future job demand in various occupations established by this study findings, skills development initiatives should target a number occupations/trades under semi-skilled and less-skilled occupations. Such occupation/trade primarily includes Mason, Tiles and marble mosaic fitter, Marble cutting worker in domestic market while construction worker, Mason, Carpenter, Painter, Electrician, and Plumber.

Skills Gap Assessment and Its Causes

Results of skills gap assessment by employers of Construction sector in Bangladesh unveil a depressing scenario exposing that there is only 11.2 per cent competent workers across different occupations while performing their job in Construction sector of Bangladesh. There is a 16.3 per cent workers who were found semi-competent in performing their current job. The remaining large segments of the existing workers (72.5%) were assessed as less-competent by their respective employers.

The highest in form of percentage, 33.3 per cent of the employees working as steel fabricator were assessed as competent by the employer. Cent per cent workers of skilled occupations (namely, project manager and site engineer) were evaluated as less-competent. Under the semi-skilled category of occupation or trade, estimates show that only three occupations or trades mentionably, Steel Fabricator and Plumber and Electrician were performed by some competent workers. Interestingly, some competent workers were employed in 8 less-skilled trades out of 11. However, the majority of the workers are either less-competent or semi-competent across the occupations or trades regardless of skills level. This assessment indicates that there is serious skills gap or skills shortage in various occupation/trade in Construction sector of Bangladesh.

Reportedly, high turnover rate; poor training content or curriculum are the two most compelling reasons behind the existing skills gap in Construction sector of Bangladesh.

Training has a vital role in skills development of workers. To unveil the provision of skills development at the current workplace, workers were asked about receipt of any further training by their employer enterprise. The inquiry revealed, a dismal scenario that no workers received any type of training from their current employers. Survey also finds that there was no provision on practical lesson in the training as reported by 60 per cent workers. Opinion on the future training needs by the current employees exposed that most of them (76.7%) are in favor of having training provisions in future. The reported major areas of training are plumber (17.4%), electrician (15.2%), rod binding (15.2%), and carpenter (10.9%).

Skills Development System

Under the Technical and Vocational Education and Training (TVET) system, there are 13,163 institutions in Bangladesh with a 1.1 million seat capacity. SEIP, being an umbrella initiative, operate different programs to improve the skills needs in Construction sector at home and abroad. Directorate of Technical Education (DTE), under SEIP, is imparting 6 courses for Construction sector. Each of the training courses has its own curriculum, duration, entry requirement and assessment procedure. Apart from DTE, Bangladesh Association of Construction Industry (BACI), Bureau of Manpower, Employment and Training (BMET) and PKSF have also training courses under SEIP for skills development in Construction sector.

Absence of nationally consistent approach for quality assurance, non-aligned standard of qualifications with the skills levels of industry, inappropriate quality of graduates and the lack of coordination are some critical issues of TVET (GoB, 2011). To address these, Industry Skills Council (ISC) is established under National Skills Development Council (NSDC) for Construction and other sectors. Administering competency based assessment of learning or competencies by external assessor registered with BTEB and recognition by prior learning (RPL) might be two avenues for assessment and certification.

Current State of Skills Acquisition

Skills acquisition status of the workers in Construction sector is not found encouraging. Survey findings exposed that only 11.7 per cent of workers had skill development training prior to joining their current job. Getting a job after completion of training and learning new knowledge (100%) were the two main factors motivating them to participate in the training. On the issue of conduciveness to find job, half of the employees mentioned that the training was conducive to a large extent in finding job while the other half did not find it helpful. Training prior to entering in the job was found beneficial for their performance in the current job as told by 50 per cent workers. All the respondents pointed about the beneficial impact of this training in their workplace.

At the survey time, employers indicated that soft skills were expected as training outcome. Among various types of soft skills, 80 per cent of employers keep the 'positive attitude of worker' and 'self-motivation' at the top of the list followed by team work (60%), mutual interaction, problem solving attitude and planning and organization (50%).

Recommendations and Action Plan

1. According to the projection on future job demand in home and abroad in 2027, there will be a total of 6.76 million jobs in Construction sector (5.40 million in domestic market and 1.36 million in overseas market). Both the domestic and overseas Construction sector employment is largely occupied by either less-skilled or semi-skilled workers and this situation is apprehended to continue in the next decade.

Estimates on the projection of future job market by occupations or trades in domestic Construction sector exhibit that the top ranking occupations or trades will include Mason (1.2 million), Tiles and marble mosaic fitter (0.51 million) and Marble cutting worker (0.42 million). Estimates on the projection of overseas Construction sector job market focus that the highest number of demand for employment will be created for occupations like Construction worker (602,704), Mason (289,434), Carpenter (198,858), Painter (108,282), Electrician (72,188), and Plumber (45,628).

The study also shows that there is huge skills gap across occupation/trade in this sector as the bulk segment of the workers (72.5%) are less competent in doing their works in the current employment under domestic market.

Considering the future job demand in various occupations as established by this study findings, skill development initiatives should target a number of occupations/trades under semi-skilled and less-skilled category. Such occupation/trade primarily includes Mason; Tiles and marble mosaic fitting; Marble cutting; Rod binding; Rigger; Wood designer; Carpentry, Electric works, and Plumbing.

A large number of less-skilled occupation/job will be created in Construction sector in home and abroad, it would be more useful to offer some basic training on soft skills including elementary foreign language of the major destination countries for Bangladeshi migrant workers.

NSDC is developing competency standards for the trainings of Construction sector, among others. The courses and their duration are stated below. Training for the above-mentioned high demand trades should be designed on the basis of the following trainings as per CBT&A developed and set by BTEB and NSDC.

a.	Aluminum Fabrication	360 hrs.
b.	Electrical Installation & Maintenance	360 hrs.
c.	Finishing Carpentry	360 hrs.
d.	Masonry	360 hrs.
e.	Painting	360 hrs.
f.	Plumbing	360 hrs.
g.	Rod Binding	520 hrs
h.	Tile work	360 hrs.
i.	Common (NPVC 2; pre vocational)	360 hrs.

2. PKSF is working with NGOs for poverty eradication and most of them are creating jobs through Employment and Income Generation (EIG) program. Since the recruitment process for employment in the domestic Construction sector is very much informal by nature, PKSF should support skills training in Construction sector. To this end, skills training should target few occupations/trades that primarily includes Mason; Tiles and marble mosaic fitting; Marble cutting; Rod binding; Rigger; Wood designer; Carpentry, Electric works, and Plumbing.

3. In order to ensure inclusion of people from low income group, following intervention strategy should be taken.
 - a. Trainee selection and need assessment should be done by the NGOs
 - b. For easy initial placement, trainings for trades should consider local demand
 - c. Common training (NPVC 2) could be provided in order to make them prepared for further training.
4. Competency-based learning materials (CBLMs) built upon the competency standard approved by BTEB has to be prepared and used in the training. Periodical review of the CBLM should be institutionalized to ensure updating knowledge and technology to be imparted by training institutes.
5. Skills development training for the construction sector, being imparted by the technical and vocational institutes in Bangladesh, should follow the new TVET. Competency standards are being prepared and certified by the concerned, but it is not found in practice. Most of the training centers are not following and preparing their learning material and imparting training according to CBT&A. Inability to do certain things such as imparting CBT; assessment by BTEB certified assessors and awarding NTVQF certificate will keep the recognition problem of the certificate, in home and abroad—as it is now—and will create problems to align the level of the certificate internationally.
6. Training participants under RTOs should be given opportunity to be assessed later on to get NTVQF certificate in case of unavailability of the BTEB accredited assessor on time.
7. Entry requirement to participate in training course should be followed by the standard of BTEB.
8. Based on the BTEB approved competency standards, learning material should include core, trade and soft unit of competency. In addition, it should focus extra unit on labor rights, decent work, safe migration, green job, climate change, disaster and worker migration.