



SKILLS DEMAND SURVEY IN AGRO FOOD, FOOD PROCESSING AND PACKAGING SECTOR



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CONTENTS

Abbreviations	
Acknowledgements	
Executive Summary	<i>i-iv</i>
CHAPTER 1	
STUDY BACKGROUND	1
1.1 Background of Agro Food, Food Processing and Packaging Sector	1
1.2 Study Background and Objectives	6
1.3 Understanding of Skills Demand	7
1.4 Study Design and Implementation	8
1.4.1 Data Source	8
1.4.2 Sampling, Data Collection, and Research Technique	9
1.4.3 Study Implementation	10
1.5 Limitations	10
CHAPTER 2	
JOB DEMAND AND SKILLS GAP ASSESSMENT	11
2.1 Introduction	11
2.2 Domestic Job Market Demand Assessment	11
2.3 Overseas Employment Status	16
2.4 Skills Gap Assessment and Its Causes	17
2.5 Status of Employment of Women and Underprivileged Groups	19
2.6 Job Requirements and General Hiring Practices	21
CHAPTER 3	
TRAINING OPPORTUNITY FOR AGRO FOOD, FOOD PROCESSING AND PACKAGING SECTOR	23
3.1 Technical and Vocational Education in Bangladesh	23
3.2 Training Facilities in Agro Food, Food Processing and Packaging Sector	26
3.3 Training Initiatives of Government and Non-Government Actors	27
3.3.1 SEIP and Bangladesh Agro-Processors' Association	28
3.3.2 Centre of Excellence Agro Food Skills Foundation	28
3.4 Trainee and Trainer Selection Criteria and Process	29
3.5 Assessment, Certification, and Accreditation	29
3.6 Quality Assurance Mechanism	30
3.7 Current State of Skills Acquisition	31
CHAPTER 4	
ACTION PLAN FOR SKILLS DEVELOPMENT	33
REFERENCES	36

Figures

1.1	Contribution to GDP by food manufacturing and processing sector (in %)	2
2.1	Skill-mix of future job demand in food manufacturing and processing sector (in %)	15
2.2	Overseas employment in Agro food, Food processing and Packaging sector in 2005-17	17
2.3	Competency assessment of the workers in agro food manufacturing and processing sector (in %)	18
2.4	Competency assessment of the workers by occupation (in %)	18
2.5	Share of male and female employment in last 5 years preceding the survey (in %)	20
2.6	Comparative consideration of experience and training in recruiting male and female in the AFP sector (in %)	22
3.1	Soft skills required reported by the employers (multiple response in %)	

Tables

1.1	Human resources in some of the agro-food industries in Bangladesh	3
1.2	Sample enterprise for primary data collection	9
1.3	Number of interviews/sessions conducted by data collection tools	9
2.1	Projection of future job demand in food manufacturing and processing sector for year 2017-27	13
2.2	Projection of future job demand in food manufacturing and processing sector under constant skill-mix scenario in 2017-2027	13
2.3	Projection of future job demand in food manufacturing and processing sector under changed Skill-mix scenario in 2017-2027	14
2.4	Employer's reported reasons behind skills gap or shortage (multiple responses in %)	19
2.5	Employers' reported occupations/trades where more woman and marginalized people can be employed (%)	20
2.6	Methods followed for recruitment (Multiple responses, in %)	21
3.1	National technical and vocational qualifications framework (NTVQF)	24
3.2	Courses for agro food, food processing and packaging imparted by TVET institutions	26
3.3	Details of the courses imparted by the BAPO for agro food and processing sector under SEIP	28

Diagrams

1.1:	Establishments of the Agro-Food sector in Bangladesh	2
1.2:	The broad tasks addressing objectives of the study	7
1.3:	Conceptualizing skills and understanding focus of the assignment	8

Boxes

1.1:	Agro-Food Industry Skills Council	4
1.2:	Bangladesh Skills for Employment and Productivity (B-SEP) Project-ILO-At a Glance	5
1.3	Food Focused Occupations of AFP sector under the study	8

ANNEXURE

Annex-1: Data Tables	38-43
Annex-2: Surveyed Enterprises	44-44
Annex-3: Study Team	45-45

Abbreviations

AFP	Agro Food, Food Processing and Packaging
BABBMA	Bangladesh Auto Biscuit Bread Manufacturers Association
BACCO	Bangladesh Association of Call Center and Outsourcing
BACI	Bangladesh Association of Construction Industry
BAPA	Bangladesh Agro Processor's Association
BASIS	Bangladesh Association of Software and Information Services
BBS	Bangladesh Bureau of Statistics
BDT	Bangladesh Taka
BEIOA	Bangladesh Engineering Industry Owners' Association
BER	Bangladesh Economic Review
BGMEA	Bangladesh Garments Manufacturing Employment Association
BIDS	Bangladesh Institute of Development Studies
BITAC	Bangladesh Industrial and Technical Assistance Center
BKMEA	Bangladesh Knitwear Manufacturing Employment Association
BMET	Bureau of Manpower, Employment and Training
BSCIC	Bangladesh Small & Cottage Industries Corporation
BTEB	Bangladesh Technical Education Board
BTMA	Bangladesh Textile Mills Association
CBLM	Competency-based Learning Material
CBT	Competency-based Training
CBT&A	Competency-based Training and Assessment
CEAFS	Centre of Excellence Agro Food Skill
CS	Competency Standard
DCI	Data Collection Instrument
DTE	Directorate of Technical Education
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry
FY	Financial Year
GAFSP	Global Agriculture and Food Security Program
GDP	Gross Domestic Product
GoB	Government of Bangladesh
GVA	Gross Value Addition
HDRC	Human Development Research Centre
ILO	International Labour Organization
IMT	Institutes of Marine Technology
ISC	Industry Skills Council
KII	Key Informant Interview
LFMEAB	Leather goods and Footwear Manufacturers & Exporters Association of Bangladesh
LFS	Labour Force Survey
MoE	Ministry of Education
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment

MoI	Ministry of Information
MoU	Memorandum of Understanding
MPO	Monthly Pay Order
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
SDCMU	Skills Development Coordination and Monitoring Unit
SEIP	Skills for Employment Investment Program
SME	Small and Medium Enterprise
SMI	Survey of Manufacturing Industry
TSC	Technical School and College
TTC	Technical Training Centers
TVET	Technical and Vocational Education and Training
USAID-AVC	USAID-Agricultural Value Chains
USD	US Dollar
VTTI	Vocational Teacher Training Institute

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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 skill level in AFP sector (e.g., less-skilled, semi-skilled and skilled) as per employers' demand in congruence with the objective of SEIP. This study is crucial to PKSF, as the results of this study could be useful to formulate an 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. PKSF, through 22 training centers, is providing training mostly to the poor and low income group participants to improve their skills and make them employable. This study aims to let PKSF know the present and future skills demand as well as skills gap in Agro Food, Food Processing and Packaging (AFP) 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 AFP 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.

- 1) To identify occupation-wise job demand in Agro Food, Food Processing and Packaging sector;
- 2) To examine the skills gap of existing human resources in comparison with potential job market demand;
- 3) To identify the causal factors of skills gap of existing human resources;
- 4) 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. Enterprise level survey was conducted to collect primary data on the job demand, skills gap and causal factors of 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 for sample survey. Officially published data are also used extensively. Both quantitative and qualitative data are analyzed and triangulated. In addition, relevant stakeholders and knowledgeable entrepreneurs of this sector were consulted in different phases of the study.

Study Findings

Domestic and Overseas Job Demand Projection

The estimated projection of future job demand in Food Manufacturing and Processing sector indicates that a total of 1.04 million jobs will be created by 2022 while the total number of jobs in this sector will be close to 1.91 million jobs by 2027. This sector is dominated by less-skilled job where share of less-skilled employment in total employment is estimated at 83.5 per cent in 2017 and will have a slight downward change (79.4% in 2027) while employment in semi-skilled job will increase to a small extent (19.8% in 2027 increasing from 15.8% in 2017) and the share of skilled jobs is expected to remain almost unchanged (less than 1%).

A total of 1.5 million job will be created under less-skilled category in the year 2027 from 0.84 million in the year 2022 and 0.47 million in the year 2017. The highest number of jobs will be created for Packaging/bottling which is accounted for 334,054 jobs in 2027 followed by Worker (238,610 in 2027) and Labeling assistant (209,977 in 2027). Under the semi-skilled category, the projected number of jobs created will be 377,959 in 2027 and 188,431 in

2022 from 89,301 in 2017; where the highest number of job will be created for Testing and quality assurance staff (108,806) followed by Machine technician (101,171) in 2027.

Skills Gaps Assessment and Its Causes

There is serious skills gap or skills shortage in various occupations or trades in the AFP sector of Bangladesh. Only 4.3 per cent workers of the AFP enterprises under the present study were competent in performing their job while only 36.9 per cent workers were semi-competent in doing their works. The remaining bulk amount of workers (58.8%) was less-competent in performing their designated duties. There are few competent workers in the four trades of less-skilled category and in one trade of semi-skilled category. Non-attractive financial benefits were found to be the leading reason behind the existing skills gap in the AFP sector.

Skills Development System

In Bangladesh, a good number of public and private TVET institutions provide a number of courses and training programme for Agro Food, Food Processing and Packaging sector. There are a total of 22 different courses and/or trades relevant to AFP sector skills development available in the market. Each of the training courses has its own curriculum, duration, entry requirement and assessment procedure. Bangladesh Agro-Processors' Association (BAPA) has a target to impart 9,800 participants under the SEIP-BAPA project. The association also has taken initiative to provide Training of Trainers (ToT) in order to create a pool of resource in skills development on: 1) entrepreneurship development and preparation of successful business plan; 2) Industry Assessor Program for Industry managers and supervisors; and 3) entrepreneurship development for TVET teachers. Through Nutrition and food engineering department of Daffodil International University; Narsingdi Polytechnic Institute; and Naogaon Polytechnic Institute, BAPA will create total 60 resource person to expatiate the skills development program. Centre of Excellence Agro Food Skills Foundation (CEAFS) is an apex body for skills development in agro food processing sector. CEAFS has imparted ToT to develop the capacity and knowledge of the agro food sector in productivity and food hygiene. It will, as a Center of Excellence in agro food sector, operate as a one stop services for industry driven training and course curriculum development as well perform other skills development events for the 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 in this sector are some critical issues of TVET. To address these, Industry Skills Council (ISC) is established under National Skills Development Council (NSDC) for AFP sector. Administering competency based assessment of learning or competencies by external assessor registered with BTEB and recognition of prior learning (RPL) might be two avenues for assessment and certification.

Current State of Skills Acquisition

An 11.67 per cent worker received some sorts of training from their current employers. Workers reporting on receiving on the job training mainly include Machine operator (28.6%), Packaging (28.6%), and labor law (42.9%). All the training recipient workers believed that such training was useful in their performance at the workplace. About one-third of the workers (30%) were in favor of training provisions in future. The reported areas of training among others are: Machine operator (33.3%), Quality assurance (22.2%) and Machine technician (16.7%).

The surveyed potential job seekers completed training on the trade courses like Packaging (20%); Agri. Engineering (20%); Quality Control (10%); Agro Mechanics (10%), Electrician (10%); Integrated Homestead Farming (10%); and Livestock management (10%). Verification by internal assessor was reported by 80 per cent of the trainees while the remaining 20 per cent mentioned of no verification of the training at all. 'Training will help to get job' was noted as motivation to take training by 50 per cent of the total trainees. Learning new skills was also reported as motivation by 50 per cent trainees.

Overall training quality along with training materials was satisfactory as most of them reported training quality as good, very good and moderately good. According to all of the potential employee/job seekers, training quality could be improved by taking few measures namely, increase number of practical session (100%); increase duration of training (100%); and appoint adequate number of trainer (100%). Majority of the trainees also mentioned two suggestions; introduce latest machinery and equipment (75%) and provide assistance in finding job (60%) to improve training quality in future. Assistance in getting job by the training providers was not strongly mentioned by the trainees as 80 per cent of them noted that there was no assistance to get job at the end of training.

Among various types of soft skills, positive attitude, being gender sensitive and mutual interaction were mentioned by half of the employees.

Recommendations and Action Plan

1. Considering the future job demand in various occupations established by the study findings, skills development initiatives should target a number of occupations/trades under the semi-skilled and less-skilled category. Such occupations/trades primarily include Packaging/bottling, Labeling; Machine operator, Production assistant, Production worker, Testing and quality assurance, Machine Technician, Cutter and trimmer, and Milling machine operator.
2. A large number of less-skilled and semi-skilled occupation/job will be created in Agro Food Manufacturing and Processing sector in Bangladesh; it would be more useful to include issues on soft skills in the training curriculum.
3. NSDC is developing competency standards for the trainings of AFP 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.

▪ Poultry and Meat Processing	590 hrs.
▪ Jute Bag and Box Making	360 hrs.
▪ Poultry	360 hrs.
▪ Common (NPVC 2; pre vocational)	360 hrs.
4. Skills training of PKSf for agro food manufacturing and processing sector should target few occupations/trades that primarily include Machine operation, Packaging/bottling, labeling, and Food and Beverage production and services.
5. In order to ensure inclusion of people from low income group, following intervention strategy should be taken.
 - Trainee selection and need assessment should be done by the NGOs
 - For easy initial placement, trainings for trades should consider local demand and
 - Common training (NPVC 2) could be provided in order to make them prepared for further training

6. Skills development training for the AFP sector, 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 materials and imparting training according to CBT&A. Unable to do certain things such as: imparting CBT; assessing by BTEB certified assessors; and awarding NTVQF certificate will keep the recognition problem of the certificate, in home and abroad at present and in future as well.
7. In order to minimize the mismatch of skills demand of industries and skills supply by the training institutions, it is important to ensure the competency acquired from training institutes (TIs). So, TIs imparting government-financed training program should follow the new system to increase the skills level and supply of Bangladeshi workforce to meet the future demand.
8. Competency-based learning materials (CBLMs) built upon the competency standard approved by BTEB have to be prepared and used in the training. Periodical review of the CBLM is needed. It will ensure updating knowledge and technology to be imparted by training institutes.
9. In order to maintain the quality of training and provide nationally accredited certification, training providers have to be registered training organization (RTO) and the outcome of training to be assessed by BTEB accredited assessors.
10. Training participants under RTOs should be given the opportunity to be assessed later on to get NTVQF certificate in case of unavailability of the BTEB accredited assessor on time.
11. Training institutions under the network of PKSF, to provide skills training, must have necessary equipment aligned with the industry at present and train instructors with industry experience in related course with pedagogy and English language training.
12. 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 right, decent work, safe migration, green job, climate change, disaster and worker migration.