

# Skill Gap Analysis for Selected Sectors

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# Objectives

- The objective is to assess labour and skills shortages, emerging trends, and training needs in the short-medium run in major/promising sectors.
- The methodology consisted of desk review of secondary data, survey of enterprises, generation of both quantitative and qualitative data. Enterprise surveys conducted – mainly large units selected for sample.
- A projection methodology was adopted based on future gdp growth rates, elasticity of value added of the sectors to gdp; employment elasticities of sectors wrt VA. Skill composition and shares derived from survey data.

- Existing shortages are quite large – especially for skilled workers and for more technical occupations.
- The projections indicate large emerging demand over the next 5 and 10 years
- The supply institutions are weak – both in the public and pvt sector – suggests acute labour market failures.
- Common: Apprentice-type approaches don't work so well.
- Choice of sector: Size and strategic importance – e.g. RMG and Construction for size; ICT – strategic.

# Concept of Skill Gap/ Shortage

Difficult to fill vacancies (not enough of them or do not possess right skills-mix)

Skill gap: “a situation where employers are hiring workers whom they consider under-skilled or that their existing workforce is under skilled relative to some desired level”.

# This Presentation

- Attempt to provide a broad cross-sectoral perspective
- Broad trends, insights into emerging labour market issues
- Sector-wise training situation and needs

# Sectors

Sector	Share of Employment %
Agro-Food	2.5(2013)
Construction	3.7(2013)
Health	1.1(2013)
Hospitality and Tourism	1.6(direct employment in 2014)
ICT	0.2(2013)
Leather Goods	0.2(2013)
Light Engineering	0.6(2013)
RMG	5.2(2013)
Shipbuilding	0.1(2013)

# % of GDP and % of Employment

- Among the 9 sectors, RMG sector has the highest share of GDP (11.3%) followed by construction sector (7.7%)
- Among the 9 sectors, RMG has the most share of employment (5.2%) followed by construction sector(3.7%).
- Agro-food and HTS come next (2.5% and 1.6% of employment)

# The Existing Skill Gap by Sector:

Sector	Existing Skill Gap
Agro-Food	Overall: 76% Skilled: 77% Semi-Skilled: 75% Unskilled: 75%
Construction	200,000
Health Care	Nurses: 96,000 Medical Technicians: 82,000
Hospitality and Tourism	Skilled:37,000 Semi-Skilled:62,000 Unskilled:126,000
ICT	88,000 (Gap is 40%)
Leather Goods	Unskilled: 6,935 Semiskilled:6,664 Skilled: 62,246
Light Engineering	Overall: 35.97% Skilled: 43.3% Highly skilled: 25%



# The Existing Skill Gap by Sector: (Continued)

Sector	Existing Skill Gap
RMG	Unskilled: 8,577 Semi-skilled: 48,130 Skilled: 119,479
Shipbuilding	

- Some are in percentages and some are in numbers.

# Skill Gap

- Existing skill gap is the highest in the agro-food sector followed by the RMG Sector.
- Skill gap for “skilled workers” is also high (40%) in the IT and leather sectors where this is a constraint.
- Generally skilled workers and semi skilled workers are in short supply in every sector.
- Interesting difference: There is a surplus in the supply of doctors in the health sector while nurses are in short supply.

# The Present and Future Labour Demand

Sector	Labour Demand (2015/16)	Labour Demand (2020/21)	Labour Demand (2025/26)	% Increase in future Labor Demand(2025/26)
Agro-Food	Skilled: 245,000 Semi-Skilled: 258,000 Unskilled: 142,000 Non Technical: 56,000	Skilled: 390,000 Semi-Skilled: 411,000 Unskilled: 226,000 Non Tech: 89,000	Skilled: 639,000 Semi-Skilled: 673,000 Unskilled: 370,000 Non Tech: 182,000	Overall: 261%
Construction	Skilled: 1,010,000 Semi-Skilled: 1,260,000 Unskilled: 910,000	Skilled: 1,220,000 Semi-Skilled: 1,530,000 Unskilled: 1,110,000	Skilled: 1,540,000 Semi-Skilled: 1,920,000 Unskilled: 1,390,000	Overall: 54%
Health Care	89,000	129,000	198,000	55.05%

## The Present and Future Labour Demand (Continued)

Sector	Present Labor Demand by Sector(2015/2016)	Future Labor Demand by Sector(2020/2021)	Future Labor Demand by Sector(2025/2026)	% Increase in future Labor Demand(2025/2026)
Hospitality and Tourism	294000 Skilled: 37000 Semi-Skilled: 67000 Unskilled: 190000	336000 Skilled: 43000 Semi-Skilled: 76000 Unskilled: 217000	392000 Skilled: 50000 Semi-Skilled: 89000 Unskilled: 253000	Skilled: 35% Semi-Skilled: 32.8% Unskilled: 33.1%
ICT	220000 Skilled=60% Semi-skilled=40%	310000 Skilled=60% Semi-skilled=40%	440000 Skilled=60% Semi-skilled=40%	100%

# The Present and Future Labour

Sector	Present Labor Demand by Sector(2015/2016)	Future Labor Demand by Sector(2020/2021)	Future Labor Demand by Sector(2025/2026)	% Increase in future Labor Demand(2025/2026)
Leather Goods	Skilled: 8404 Semi-Skilled: 8144 Unskilled: 83990	Skilled: 11 727 Semi-skilled: 11365 Unskilled: 117203	Skilled: 17404 Semi-skilled: 16867 Unskilled: 173943	Overall: 107%
Light Engineering	Unskilled: 6631 Semi-skilled: 164813 Skilled: 494558 Highly skilled: 32900	Unskilled: 7529 Semi-skilled: 189563 Skilled: 783892 Highly skilled: 58216	Unskilled: 7529 Semi-skilled: 189563 Skilled: 783892 Highly skilled: 58216	Unskilled: 13.54 Semi-skilled: 15.02 Skilled: 58.50 Highly Skilled 76.95

# The Present and Future Labour Demand

Sector	Labour Demand (2015/2016)	Labour Demand (2020/2021)	Labour Demand (2025/2026)	% Increase in future Labor Demand(2025/2026)
RMG	Unskilled: 618708 Semi-Skilled: 1230164 Skilled: 2258250	Unskilled: 444347 Semi-Skilled: 1345477 Skilled: 3666460	Unskilled: 599091 Semi-Skilled: 1829871 Skilled: 5027463	Unskilled: -3.17% Semi-Skilled: 48.75% Skilled: 122.6%
Ship building	Unskilled: 15075 Semi-Skilled: 12547 Skilled: 2767	Unskilled: 38473 Semi-Skilled: 32019 Skilled: 7061	Unskilled: 117192 Semi-Skilled: 97533 Skilled: 21509	Unskilled: 677% Semi-Skilled: 677% Skilled: 577%

# Present and Future Labour Demand

- Considerable sectoral variation
- Largest percent increase in shipbuilding and agro-food;
- RMG labour and skill demand is massive in absolute terms and percentage terms;
- IT sector only demands skilled labour – also sharp rise from low base

# Existing Training Situation

**Agro-food:** Most skill acquisition now is through on-the-job training rather than formal process

A few large factories have partial training facilities for own staff while others have to depend on highly inadequate public facilities, but most are unwilling to send them for training as they may be lost to higher bidders.



# Existing Training Situation

## **Construction sector:**

- Training capacity available currently of at most 70,500 per year for the construction related trades.
- The current set-up with moderate growth in training capacity will not be adequate to meet demand for skilled & semi-skilled workers in the construction sector in the medium-term.
  - If training capacity grows by 10% per year, in next 10 years shortage in training capacity will still exist.

# Existing Training Situation

## **Health Care:**

- A total 104 training institutes operate to train different categories of medical technicians (97 are in the private sector)
- Annual student intake capacity is 14,075 (11,391 are in the private sector).
- These institutes provide BSC degree in medical technology, 3 year diploma, and 1 year certificate courses in medical technical areas as laboratory, radiology and imaging, radiotherapy, physiotherapy, dental and sanitary inspectors.
- There are 64 academic institutions in the country teaching and training alternative medicine in the country
- Homeopathy remains the most popular alternative (offered by 41 different institutions)

# Existing Training Situation

- **Hospitality and Tourism Sector:** Lack of practical training, IT skill, and English Proficiency
- Preference toward overseas employment in HTS and non-HTS empt.
- Reluctance of bachelor graduates to work in ‘periphery’ areas (far from Dhaka).
- expectation of high salary by bachelor graduates, attitude problem in workplace, social stigma - main reasons of skill mismatch.

# Existing Training Situation

## **ICT Sector:**

Most of the existing IT training institutions impart sub-standard training programs, which could not fulfill the skills requirements. Therefore, it is important to streamline their curriculum and ensure certain standard of training in these institutions. Fresh graduates are not adequately trained to enter into the industry due to the outdated curriculums followed by the educational institutions and the lack of linkages between the industry and academia. The industry faces shortage of a strong pool of mid-level product/project managers that hampers the expected growth of the industry .

# Existing Training Situation

## **Leather Goods:**

A huge amount of money is needed to start and continue leather goods sector skill training programme. That is why the current institutional training programme in Bangladesh can be compared as a drop in the sea in this sector - reflects the very poor supply side conditions.

# Existing Training Situation

## **Light Engineering Sector:**

- Existing technical skills training provisions suffer from inadequate market relevance.
- There is a pressing need for establishing common facility center with one CNC training center in all the LE clusters of the country in order to meet the emerging skills needs of LE.

# Existing Training Situation

## **RMG:**

- 70 percent of surveyed large factories have in-house training facilities for their workers.
- Some training programs have been organized for all employees, such as basic training, fire safety training etc.
- The skill development training programs target unskilled, semi-skilled, and skilled groups separately.

# Existing Training Situation

## **Shipbuilding Sector:**

- Some training centers like BITAC and BOC provide upgrading courses in some specialist trades.
- Some industries have their in-house training arrangements
- Skills training at the Certificate level are delivered by 37 Technical Training Centres (TTCs) that are supervised by BMET.
- The Ministry of Expatriates' Welfare and Overseas Employment supervises the Institute of Marine Technology (BIMT) and its branches.

Four training institutes were interviewed: Almost 70% of their students get a job immediate after training.



# Future Training Needs

Sector	Training needed (2020/2021)	Training needed (2025/2026)
Agro-Food	15,000	21,000
Construction	1,220,000 Skilled: 54% Semi-Skilled: 46%	1,600,000 Skilled: 53% Semi-Skilled: 47%
Health Care	41,000	25,000
Hospitality and Tourism	144000 Skilled: 24000 Semi-Skilled: 39000 Unskilled: 81000	164000 Skilled: 28000 Semi-Skilled: 46000 Unskilled: 94000
ICT	100,000	1,059,000
Leather Goods	108,000	150,000
Light Engineering	309,000	423,000
RMG	1,547,000	2,117,000
Shipbuilding	39,000	53,000

# Future Training Needs

- Training demand will be the largest in RMG (1.5m in 2021 and 2.1m in 2026)
- Its share of employment more than double of all the other 8 sectors combined.
- Total for 2021: over 4m
- Total for 2025: over 5.6m

# Recommendations

## Health-Care:

- Policy recognition of the acute skill gap for nurses and medical technicians;
- Training facilities and infrastructure urgently needed
- Attention to quality of training is crucial

# Recommendations

## Agro-Food:

- Cleanliness and physical environment of the shop floor;
- Quality control including strict maintenance of HACCP points, lab testing facilities, interface between automated and manual processes for each specific food product, packaging;
- Formal training in higher level skills as scientists, food technologists and food engineering.

# Recommendations

## HTS:

- Increased duration (at least six months) of practical training at different interval should be the uttermost priority of the training institutes for both diploma and bachelor degrees.
- The training institutes should introduce more courses for developing the communication skill and language proficiencies (especially English).
- Employers' reluctance to recruit HTS graduate students as skilled labor. In most cases, the reputed hotels/resorts are run by foreign management, which seems to have inertia in recruiting bachelor graduates.
- Social perception regarding working at hotel/resorts needs to be changed through awareness building.
- Food and Beverage (Production) should be regarded as the first and foremost priority area of intervention.

# Recommendations

## ICT:

- Establish at least three IT training institutes under the aegis of three associations: BACCO, ISPAB and BCC/BCS.
- Create a strong pool of mid-level managers through training;
- Create a strong pool of IT trainers through arranging proper ToT (training of trainers) programs.
- Training durations should not be less than 3 months (6-month duration is better)
- Curriculum development
- Deficiencies of soft-skills of the workforce is a concern.
- New training programs on emerging thrusts of the sector such as IoT, Gaming, Mobile applications, Cyber security, Artificial intelligence etc. need to be designed and implemented.

# Recommendations

## Leather Goods:

- Establishment of more private sector training institutes to meet the demand of the leather goods sector should be encouraged. Focus on leather sewing operators, cutting operators and lasting, setting and assembling operator.
- Skill training facilities are required for technicians for labs

# Recommendations

## Light Engineering:

- Establishing common facility centres (CFCs) with facilities of metal testing, CNC training and heat treatment for joint use by cluster engineering firms.
- Setting up specialised institutes/centres to train up light engineering entrepreneurs/ workers on metal selection, composition, treatments, and mold dye designing etc.
- Modern testing laboratory could be established to encourage international standard products.
- Strengthen BSTI
- Making Skills Training Relevant to Market Needs



# Recommendations

## Ship Building:

- Set up proper employee training institutes
- Develop standardized quality training curriculums;
- Support for backward linkage development;
- Link the private sector in institutional management;
- Greater autonomy for public institutions and improved links between TVET and enterprises.

# Recommendation

## Construction Sector:

A major rethinking by way of investing in schooling and skilling of the labour force is needed to meet the growing domestic and foreign demand for construction workers and thereby remove one of the key binding constraints to accelerate economic growth in the next decade.

# Recommendations

## RMG:

- Supply of semi-skilled workers can come from existing and newly created training facilities. Even if enterprises prefer to create skill through in-house training, it may be easier for them to train the semi-skilled workers. The training organisations should re-orient themselves.
- Information on demand from firms need dissemination.
- Government's TVET organisations should introduce courses geared to the needs of export oriented RMG.
- There should be a thorough evaluation of the appropriateness of current training programmes.

# Conclusion

- Scale of the problem is enormous and set to get even bigger!
- Innovative supply-side approaches needed to fast-track – traditional approaches will not deliver.
- Has the potential to hold up development.

# List of Sector Researchers

- Agro-Food: Dr. M Asaduzzaman and Humayra Ahmed
- RMG: Dr. Rushidan Islam Rahman and Md. Iqbal Hossain
- Construction: Dr. Mainul Hoque, Md. Iqbal Hossain and Dr. Binayak Sen
- HTS: Dr. Mohammad Yunus and Tahreen Tahrima Chowdhury
- Leather: Dr. Nazneen Ahmed and Dr. Harunur Rashid Bhuyan
- Light Engineering: Dr. Abdul Hye Mondal and Md. Atiqur Rahman
- ICT: Dr. Monzur Hossain
- Shipbuilding: Dr. S.M. Zahedul Islam Chowdhury and Dr. Harunur Rashid Bhuyan
- Healthcare: Dr. Anwara Begum and Dr. Raisul Awwal Mahmud