

SKILLS GAP IN THE LEATHER AND FOOTWEAR SECTOR IN BANGLADESH

Study Team

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May 18, 2023

Background

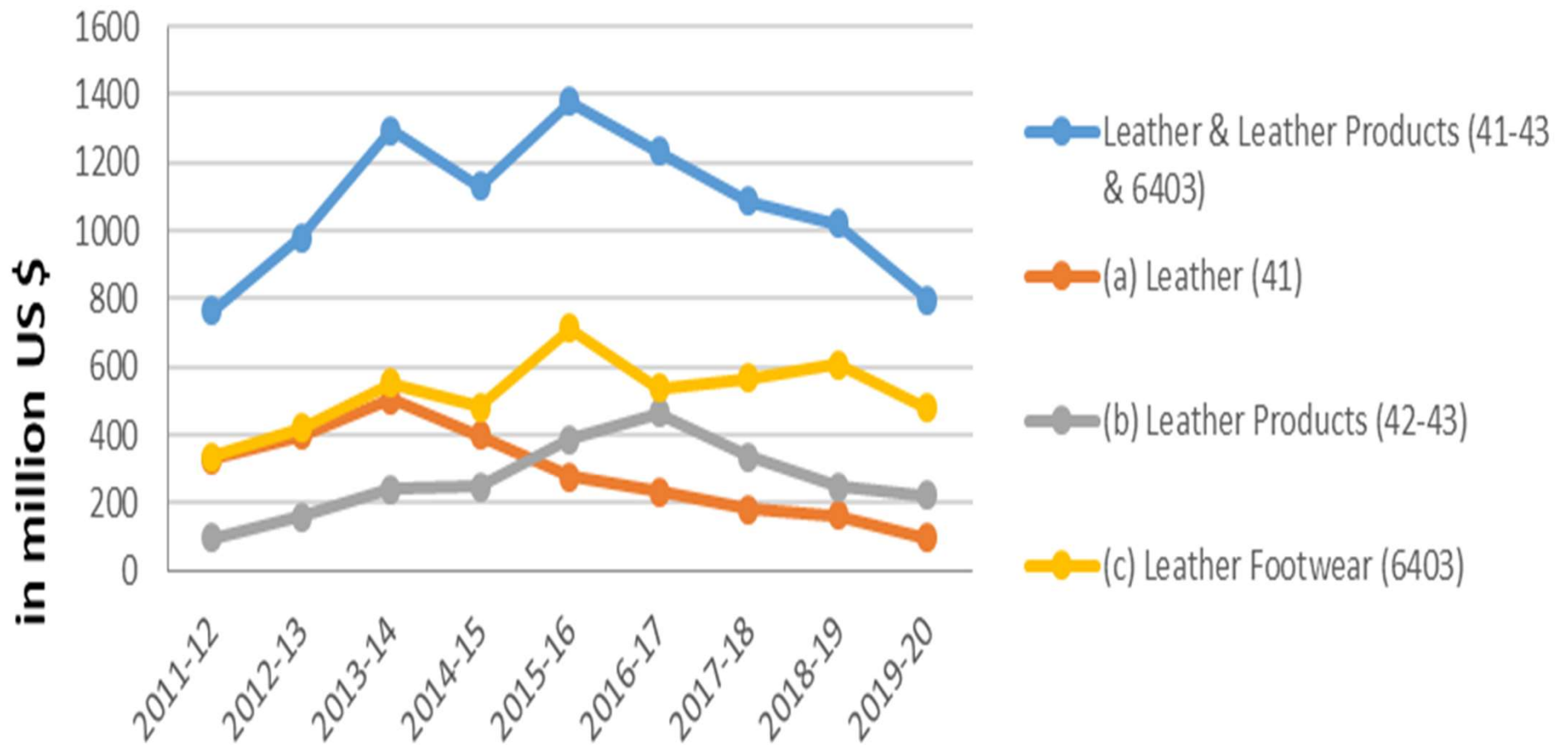
- Bangladesh has made a remarkable success in achieving steady and persistent acceleration of growth over the last few decades.
- The economy now aspires to attain the high middle-income status by 2030, and developed country status by 2041.
- To this end, in addition to factor accumulation (capital and labor), the economy requires to upgrade the skill base of the labor force to enhance the productivity.

Leather and Footwear Sector

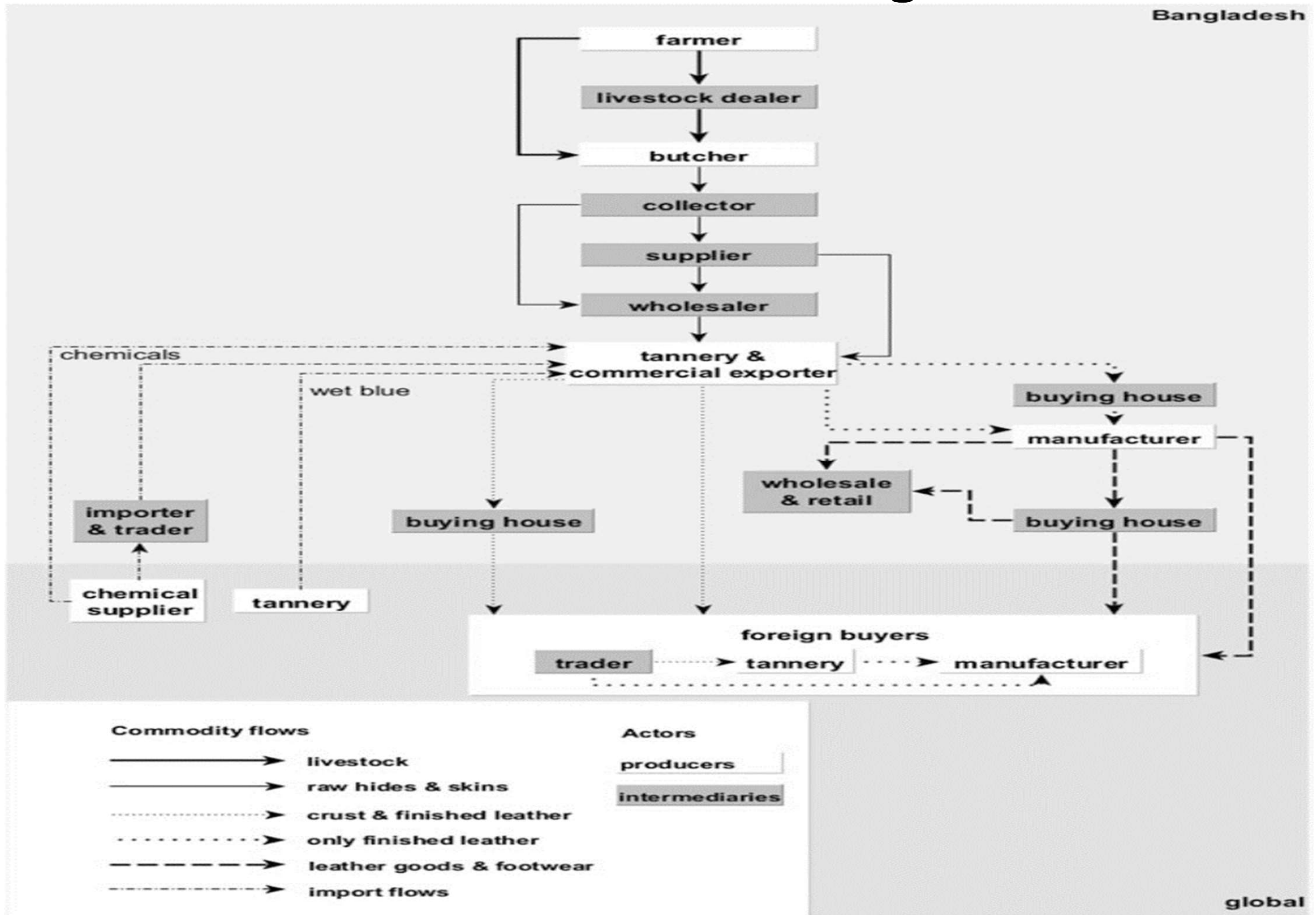
- In terms of export earnings, leather, and leather goods consists of the second-largest exporting sector of Bangladesh.
- This industry emerged in the early 1940s in East Bengal due to raw materials availability.
- Non-Bengali migrants from India, who had in-depth knowledge about leather processing, were the main entrepreneurs and employees of this sector during 1947-71.
- After independence, this sector came into the hand of Bangladeshi entrepreneurs through the government.
- Leather industry in Bangladesh had undergone a significant transformation during the past two decades from a low-value addition tanning activity to a producer of leather footwear and leather goods along with high value-added crust and finished leather.
- Though the availability of cheap raw materials, export earnings of this sector is declining after 2015-16 because of environmental issues, international market prices, and skills gap.

Export of Leather and Leather Goods

Figure: Export of Leather and Leather Goods



Leather Value Chain in Bangladesh



Why should we think about skills gap?

- It is argued that the productivity contribution in the production process has been very low in Bangladesh.
- The low level of skill and productivity of Bangladeshi labor is endemic, as indicated by labor force survey data that more than 60% of the labor force has either no education (40%) or only up to the primary level (23%).
- With the approval of the National Education Policy (NEP), 2010, and the National Skill Development Policy (NSDP), 2011, the government embarked on major education and training reforms.
- In 2014, the government of Bangladesh initiated the Skills for Employment Investment Program (SEIP), a multi-tranche financing facility supported by the Asian Development Bank (ADB) and Swiss Agency for Development and Cooperation (SDC), anchored in the National Skills Development Policy (NSDP), 2011.
- Under the first and second Tranches, 223,000 have been trained and certified with a job placement rate of nearly 70 percent. The combined training target under the first two Tranches is 502,000. Female participation among trainees is more than 30 percent.
- Against this backdrop, we have conducted a study on Skills Gap in the Leather and Footwear Sector in Bangladesh with the following objectives.

Objective of the study

- To take stock of the overall demand and supply of skill in the Leather and Footwear sector and how this demand and supply will change in the next 10 years.
- To measure various types of skill mismatch, including skill gap, skill shortage, over-education and under-education, horizontal mismatch, and other mismatch indicators in the Leather and Footwear sectors.
- To take stock of the government policy and interventions to produce and upgrade the skill of the Leather and Footwear sector.
- To assess the type of training programs required to meet the skill demands in the Leather and Footwear sector.

Methodology

- To fulfill the objectives of the study, both quantitative and qualitative methods have been used.
- It employed a variety of methodologies such as document review, questionnaire survey using structured questionnaire with concerned enterprises and employees.
- It also employed Key Informant Interview (KIIs) with government officials/leaders/representatives of associations to collect qualitative information.

Sampling

In determining the sample size of the factory survey, the study used the methodology widely used by the World Bank. The following formula has been used in determining the sample size:

$$n = \left[\frac{1}{N} + \frac{N-1}{N} \cdot \frac{1}{PQ} \left(\frac{k}{Z_{1-\alpha/2}} \right)^2 \right]$$

Where, N=population size, P=population proportion, Q=1-P, k=desired level of precision, $Z_{1-\alpha/2}$ is the value of the normal standard coordinate for a desired level of confidence, 1- α .

Justification of Sampling

- Given the limitations with the data, time and budget constraints, we use a 90 percent confidence interval and 7.5 percent level of precision, which is also used by the World Bank at the World Bank Enterprise Survey 2009. Here, the population is the number of leather factories, which are 411 . Thus, assuming these parameters, the estimated sample size using the above formula is 93.
- This study applied a stratified multistage sampling procedure considering geographical location, nature and size of factories to select the desired 93 enterprises. Therefore, the study randomly selected 93 leather factories considering their location, nature and size.

List of Surveyed Industries and Employees

Industry	Number of Surveyed Industry	Percent age	Number of Surveyed Employees	Percent age
Leather and Footwear	55	59.14	488	54.10
Tannery	38	40.86	414	45.90
Total	93	100	902	100

Data Collection and Analysis

- For the questionnaire survey, a pre-tested (on December 2020) structured questionnaire has been used. Guideline/Checklist are developed for KIIs to obtain information like skill gap/shortage, COVID-19 impacts for the sector, skill needs and labor demands, future projections for demand of labor, important suggestions for the development of the sector etc.
- Total of 93 enterprises survey and 902 employees survey from different categories and skills have been conducted from the Leather and Footwear industries and Tanneries.
- Employee survey has major focus related to production level workers, which covers almost 47.34% Plant and machine operators for Leather and Footwear industries and 55.56% for Tanneries.
- In addition eight KIIs have been conducted with association leaders/industrialists and one consultation meeting with industrialists or higher authorities has been completed.

Limitations

- Most of the time, industry owners hesitated to permit the entrance of the enumerators to their industries due to Covi-19. It took time to start the survey and make a few changes (around 10%) to operationalize it at the field level.
- Finally, the request from SEIP authority and Industry Ministry helped a lot in receiving access to those industries.
- This study surveyed representative numbers of Tanneries in Bangladesh, but in the case of Leather and Footwear, primary data are collected from a representative number of mainly export-oriented and large industries.
- A huge number of industries that mainly supply leather and footwear for the local market and belong to medium, small, micro, and cottage (Leather and Footwear) industries are kept beyond the antenna of this study. Those can be covered in future research.

Major Enterprise Related Findings (Tannery)

- This study includes 38 Tannery enterprises which employ 2232 employees in total.
- Overall output per enterprise in 2019 stands out 2574 (in Lac Taka) while the export per enterprise is 1545 (in Lac Taka).
- Nearly 60% of the revenues in the Tannery industry of Bangladesh comes from the export earnings.
- The capital-labor ratio per enterprise per employee stands at 7.44 (in Lac Taka).

Description of Employment Level and Conditions of Employees Across Tanneries

Occupation (BSCO Code 1 digit)	No. of firms	Total Employment	Employment Per Enterprise	Average age	Monthly average salary	Percentage of female workers
Managers	38	189	4.97	44	57268	1.63
Professionals	28	107	3.82	36	29394	2.21
Clerical support staff	13	31	2.38	36	20730	0.00
Service and sales workers	30	87	2.9	40	11911	0.00
Craft and related trades workers	38	929	24.45	34	21579	1.01
Plant and machine operators, assemblers	18	173	9.61	34	18674	1.85
Elementary occupations	33	716	21.7	30	10418	3.92
Full Sample	38	2232	11.27	37	25766	1.66

Extent of Difficulties in Filing up the Vacancies

Occupations BSCO code 1-digit	1 to 3 (Low level)	4 to 6 (Medium level)	7 to 10 (High level)	Mean	No. of vacancies currently	Total Employment level at present	Unfilled vacancies as % of total employment
Manager	24.17	58.33	17.5	4.8	0	189	0.0
Technicians & associate professional	22.86	40	37.14	5.5	2	107	1.9
Clerical support staff	46.15	53.85	0	3.2	6	31	19.4
Service and sales staff	51.52	42.42	6.06	3.5	0	87	0.0
Technical workers	29.84	44.35	25.81	4.8	21	929	2.3
Factory and machine operators, machine assemblers	22.22	74.07	3.7	4.4	0	173	0.0
Primary profession	56.25	39.58	4.17	3.5	10	716	1.4
Total	32.5	49.75	17.75	4.5	39	2232	1.7

Time taken to fill up the Vacant Positions in the Tanneries

Occupation (BSCO Code 4 digit)	Immediately	Less than a week	More than a week but less than a month	More than a month
Engineer and other professionals	0.00	40.00	48.00	12
Supervisors and line leaders	8.57	40.00	48.57	2.86
Sewing Operators	0.00	100.00	0.00	0
Machine Operator /Electrician	5.71	31.43	54.29	8.57
Cutting Operator and Aged Colors	0.00	50.00	50.00	0
Lasting, Setting and Assembling	11.11	22.22	66.67	0
Inventory, Material Selection and Completion	0.00	14.29	85.71	0
Quality Controller Operator	12.50	25.00	62.50	0
Accountant	0.00	50.00	50.00	0
Chemist	0.00	33.33	0.00	66.67
Fitterman	7.14	57.14	35.71	0
Hanging worker	0.00	100.00	0.00	0
Marketing officer	0.00	33.33	66.67	0
Packing & floor moving worker	0.00	100.00	0.00	0
Porter	16.67	38.89	44.44	0
Sample operator	0.00	50.00	50.00	0
Storekeeper	0.00	0.00	66.67	33.33
Table operator	0.00	40.00	60.00	0
Total	5.50	37.25	51.00	6.25

Training Needed: Tannery (Employee Opinion)

Occupation Category (BSCO 4 digit)	Training needed increase your skill?		Training needed for carrier progression?		Training needed to adapt with the technological change?		Opinion on extent of Automation replacing your job? 1 to 10 scale (1=not at all 10=replace all)
	Yes	No	Yes	No	Yes	No	
Packing man	0	100	0	100	0	100	2.67
Table asst. Operator	46.38	53.62	53.62	46.38	50.72	49.28	3.91
Split machine operator	34.78	65.22	47.83	52.17	36.26	63.74	3.33
Shift Machine Operator	41.3	58.7	56.52	43.48	39.13	60.87	2.63
Worker	29.41	70.59	29.41	70.59	17.65	82.35	2.53
Shading helper	33.33	66.67	66.67	33.33	33.33	66.67	1.80
Full sample	39.13	60.87	49.76	50.24	39.17	60.83	3.20

Extent of Average Growth in Labor Demand in Next 5-10 Years

Occupations BSCO code 1-digit	No Growth	Moderate Growth	High Growth	Very high growth
Manager	71.43	26.53	1.02	1.02
Professional	37.04	59.26	0	3.7
Clerical support staff	54.55	36.36	9.09	0
Service and Sales Staff	39.13	60.87	0	0
Technical workers	10.28	77.57	6.54	5.61
Factory and machine operators and machine assemblers	9.09	86.36	4.55	0
Primary profession	30.56	41.67	27.78	0
Total	36.73	54.63	6.17	2.47

Projected number of Job Growth

Occupations BSCO code 1-digit	Growth (%) with respect to current level of employment		
	By 2023	By 2025	By 2030
Manager	11.03	32.31	59.21
Professional	21.91	59.25	106.31
Clerical support staff	-31.43	-20	-2.86
Service and Sales Staff	-23.19	-1.45	24.64
Technical workers	16.25	62.98	158.26
Factory and machine operators and machine assemblers	30.04	83.58	138.71
Primary profession	6.14	33.02	67.13
Total	10.96	44.56	97.75

Major Enterprise Related Findings (Leather & Footwear)

- This study includes 55 Leather and Footwear enterprises which employ 14305 employees in total.
- Overall output per enterprise in 2019 stands out 7764 (in Lac Taka) while the export per enterprise is 4873 (in Lac Taka).
- Nearly 63% of the revenues in the leather industry of Bangladesh comes from the export earnings.
- The capital-labor ratio per enterprise per employee stands at 1.70 (in Lac Taka).

Description of Employment Level and Conditions of Employees Across Leather and Footwear

Occupation BSCO Code 1 digit	No. firms	Total Employment	Employment/ Enterprise	Average age	Monthly salary Tk.	Percentage of female workers
Managers	54	661	12	44	92285	8.42
Professionals	51	216	4	37	49454	1.16
Technicians and associate professionals	2	3	2	39	76417	0.00
Clerical support staff	22	62	3	36	36448	10.91
Service and sales workers	40	190	5	34	14442	2.50
Craft and related trades workers	55	7559	137	30	17503	22.43
Plant and machine operators, assemblers	47	4517	96	29	14713	40.73
Elementary occupations	48	1097	23	30	13952	7.43
Full Sample	55	14305	45	34	35552	13.66

Extent of Difficulties in Filing up the Vacancies

Occupations BSCO code 1-digit	1 to 3 (Low level)	4 to 6 (Medium level)	7 to 10 (High level)	Mean	No. of Unfilled vacancies currently	Total Employment level at present	Unfilled vacancies as % of total empl.
Manager	28.64	53.99	17.37	4.57	3	661	0.5
Professional	16.67	65	18.33	5.08	7	216	3.2
Technicians and associate professionals	50	0	50	4.50	0	3	0.0
Clerical support staff	40.91	54.55	4.55	3.82	4	62	6.5
Service and sales staff	40	57.5	2.5	3.73	0	190	0.0
Technical workers	30.98	49.41	19.61	4.49	50	7559	0.7
Factory and machine operators and machine assemblers	20.34	47.46	32.2	5.15	71	4517	1.6
Primary profession	44.62	55.38	0	3.62	2	1097	0.2
Total	30.31	52.93	16.76	4.47	137	14305	1.0

Time taken to fill up the Vacant Positions in the Leather & Footwear

Occupation (BSCO Code-4 digit)	Immediately	Less than a week	More than a week but less than a month	More than a month
Supervisors and line leaders	11.76	33.33	52.94	1.96
Sewing Operators	8.33	55.56	27.78	8.33
Machine Operator and Welder/Electrician	9.30	41.86	39.53	9.3
Cutting Operator and Aged Colors	4.65	41.86	48.84	4.65
Lasting, Setting and Assembling	8.57	40.00	51.43	0
Inventory, Material Selection and Completion	15.38	26.92	57.69	0
Advanced CAD design and pattern making	16.00	20.00	56.00	8
Quality Control Operator	8.33	33.33	58.33	0
Checker	0.00	0.00	100.00	0
Colors operator	0.00	100.00	0.00	0
Designer	0.00	100.00	0.00	0
Dry & color worker	0.00	100.00	0.00	0
Fitterman	0.00	12.50	87.50	0
Floor moving worker	0.00	100.00	0.00	0
Hanging worker	0.00	66.67	33.33	0
Mechanical/Mechanical engineer	0.00	0.00	100.00	0
Packing & floor moving worker	0.00	81.82	18.18	0
Porter	10.00	60.00	30.00	0
Sample operator	25.00	62.50	12.50	0
Sewing helper	100.00	0.00	0.00	0
Socks	100.00	0.00	0.00	0
Table operator	28.57	42.86	28.57	0
Technician	0.00	0.00	0.00	100
Full Sample	9.60	32.96	52.29	5.15

Training Needed: Leather & Footwear (Employee Opinion)

Occupation Category (BSCO 4 digit)	Training needed increase your skill?		Training needed for carrier progression?		Training needed to adapt with the technological change?		Opinion on extent of Automation replacing your job? 1 to 10 scale (1=not at all 10=replace all)
	Yes	No	Yes	No	Yes	No	
Engineer	0	100	100	0	0.00	100	3.50
Mechanical	0	100	0	100	0.00	100	1.00
Designer	50	50	50	50	33.33	66.67	4.70
Floor in charge	30	70	60	40	30	70	2.30
Ironman	0	100	0	100	0	100	1.00
Electrician	25	75	50	50	25	75	3.63
Cutting operator	57.14	42.86	62	38	52.38	47.62	3.05
Senior supervisor	39.29	60.71	42.86	57.14	37.50	62.5	3.78

Training Needed: Leather & Footwear (Employee Opinion) Con.

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	Yes	No	Yes	No	Yes	No	
Finishing in charge	42.50	57.5	50	50	35	65	3.45
Pasting helper	100	0	100	0	100	0	4.50
Table asst. Operator	49.25	50.75	53.73	46.27	50.38	49.62	4.12
Split Machine Operator	48.84	51.16	51.16	48.84	44.19	55.81	3.32
Shift Machine Operator	46.15	53.85	58.97	41.03	48.72	51.28	3.79
Worker	40.00	60	40.00	60	40.00	60	2.50
Shading helper	50.00	50	62.50	37.5	50.00	50	3.75
Full sample	43.65	56.35	52.05	47.95	42.09	57.91	3.61

Vocational Training Information (arranged by the employers): Leather and Footwear

Professionals	Duration of the course						Certifies		BTEB Certified		
	< 1 week	1-2 weeks	3-4 weeks	1-3 months	4-6 months	>6 months	Yes	No	Yes	No	don't know
Professionals	100	0	0	0	0	0	0	100	0	100	0
Craft workers & plant operators	62.5	0	0	37.5	0	0	0	100	0	33	67
Plant and machine operators, and assemblers	75	0	0	25	0	0	0	100	0	0	100
Elementary occupations	0	0	0	0	0	0	0	0	0	0	0
Full Sample	72	0	0	28	0	0	72	100	50	50	0

Vocational Training Information (not arranged by the employers): Leather and Footwear

Managers	Duration of the course						Certifies		
	< 1 week	1-2 weeks	3-4 weeks	1-3 months	4-6 months	>6 months	Yes	No	don't know
Managers	100	0	0	0	0	0	100	0	0
Professionals	50	8.3	8.3	33.3	0	0	58.3	41.7	0
Technicians and associate professionals	100	0	0	0	0	0	0	100	0
Service and sales workers	0	0	100	0	0	0	0	100	0
Craft workers & plant operators	15.4	0	0	84.6	0	0	53.8	46.2	0
Plant and machine operators, and assemblers	80	0	0	20	0	0	20	80	0
Elementary occupations	100	0	0	0	0	0	20	80	0
Full Sample	51.3	2.6	5.1	41	0	0	46.2	53.8	0

SEIP Training

- SEIP began training in the Leather and Footwear sector in the first phase or TRANCHE-1 with eight courses, which expanded to ten courses in TRANCHE-2.
- Total of 15,000 youths have been enrolled in the program and 13, 552 completed the course successfully with certification, with 90.34% completion rate. However, it should be mentioned that these courses were new skill and upskill training for the new entrance and on job people in selected trades.
- 300 Graduate diploma enrolment were under SEIP Trance 2 at East West University on Graduate Diploma where 268 completed their graduation and job placement was 73.31%.
- In Tranche 3 SEIP organized training with Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), targeting 10,000 trainees on Cutting Machine Operation, Sewing Machine Operation, Setting Operation (Footwear), Setting & Assembling Operations (Leather Goods), Lasting & Assembling Operation (Footwear), Advanced (Multitasking) Sewing Machine Operation and Advanced (Multitasking) Lasting & Finishing Operation. 4,769 enrolled, 3,622 completed certification, and 2,820 students received job placement (among them, 64.6% are female).

Extent of Average Growth in Labor Demand in Next 5-10 Years

Occupations BSCO code 1-digit	No Growth	Moderate Growth	High Growth	Very high growth
Manager	61.8	36.52	1.69	0
Professional	27.45	72.55	0	0
Technician and associate professional	0	100	0	0
Clerical support staff	58.82	41.18	0	0
Service and Sales Staff	30.3	69.7	0	0
Technical workers	9.82	76.79	10.27	3.13
Factory and machine operators and machine assemblers	1.92	80.77	15.38	1.92
Primary profession	26.79	62.5	10.71	0
Total	29.69	62.48	6.53	1.31

Projected number of Job Growth

Occupations BSCO code 1-digit	Growth (%) with respect to current level of employment		
	By 2023	By 2025	By 2030
Technician and associate professional	50	150	250
Clerical support staff	-8.57	11.43	45.71
Service and Sales Staff	-14.81	18.4	36.46
Technical workers	1.55	19.94	43.44
Factory and machine operators and machine assemblers	31.46	75.27	140.78
Primary profession	15.02	32.9	99.33
Total	9.03	29.73	64.29

Conclusion

- Findings from the survey of Tannery and Leather & Footwear Industries indicates that there are a number of skill gaps in workers in different occupations in this sector.
- It is expected that the Tannery industry in Bangladesh may demand labor for employment in the industry and this statement is corroborated by the views of enterprises who view that overall, there will be 55% moderate growth and 6% high growth in labor demand in next 10 years.
- Overall, the Leather and Footwear industry will experience around 9% job growth across all occupation categories by 2023. It is expected that the industry will have a 30% employment growth in 2025 from current stage and the same figure rose to around 64% in 2030.
- Survey findings corroborate the idea that hard-to-fill vacancies arise due to the skill shortage that is why, it is suggested to impart training to the existing labor force involved in the leather and footwear industry.

Overall Recommendations

- What actions should be/will be taken in near future to address the problem of skill gap across occupations in the industry need to be understood for the development of this sector. Training activity of practical work, more supervision of staff and more staff appraisals / performance reviews, training activity of practical work, and reallocating work appear to be the first three important actions for addressing the problem of skill gap in the Tannery and Leather & Footwear Industries in Bangladesh.
- Need to establish more programs on Industry-led Apprenticeship.
- CETP at the 'Savar Leather Industrial Park' needs to be functioning for achieving the target in the international market.

Specific Recommendations for Training in Leather and Footwear

- Supervisors and line leaders -Upskill, Training in new technology.
- Lasting, Setting, and Assembling Worker- Upskill, Training in new technology.
- Advanced CAD design and pattern making-New entrant, Upskill, Training in new technology.
- Quality Control Operator-Upskill.
- Designer- New entrant, Upskill, and Training in new technology.
- Finishing operator- New entrant, Upskill, and Training in new technology.
- Lasting operator- New entrant, Upskill, and Training in new technology.
- Table operator- Upskill, management, and Training in new technology.
- Cutting operator- New entrant, Upskill, and Training in new technology.

Thanks
Comments and Questions Please