

Bangladesh

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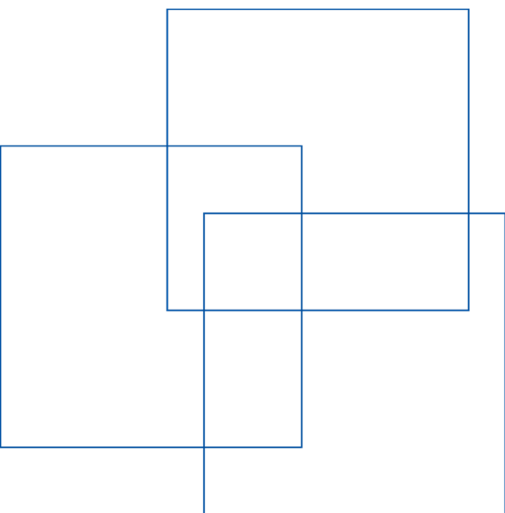
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Supporting Document

Main Findings of *Work-Related Injuries* *in Manufacturing and Service Sectors in* *Bangladesh* with a View to Implement an Employment Injury Compensation Scheme



Global Employment Injury Programme

Enterprises
Department

ILO Country
Office for
Bangladesh

Bangladesh

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ILO/Global Employment Injury Programme (ILO/GEIP)
Enterprises Department, Geneva

ILO Country Office for Bangladesh

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INTRODUCTION

In order to have an overall picture of the current situation of work-related injuries and deaths in Bangladesh, a survey was conducted by the Bangladesh Institute of Development Studies (BIDS). The goal of the survey was to provide some relevant information on workers in particular type of industries and the type of injuries diseases they faced at work. If such accident incurred, the survey would provide information on the type of injury the worker faced and the compensation that was paid.

This document provides main findings that are relevant to the establishment of a national Employment Injury Compensation Scheme in Bangladesh. Some of the results and raw data compiled from the survey were used to make the cost estimate of the proposed scheme for the RMG sector in December 2017. The cost estimate is presented in a report in the collection of documents related to ILO's *Technical Report on the Feasibility Assessment of an Employment Injury Insurance Scheme*.

This study is part of a collection of supporting document for:

“ILO Technical Recommendations on the Feasibility Assessment of an Employment Injury Insurance Scheme in Bangladesh”

Supporting documents:

- 1) *Preliminary feasibility study for the introduction of a National Employment Injury Social Insurance System*
- 2) *Health feasibility study: Health Care, Disability Assessment and Rehabilitation Services*
- 3) *A proposed legal framework for a Bangladesh Employment Injury Insurance scheme*
- 4) ***Main Findings of Work-related Injuries in Manufacturing and Service Sectors in Bangladesh with a View to Implement an Employment Injury Compensation Scheme (current document)***
- 5) *Main Findings of Work-related Injuries: the Case of Readymade Garment Sector of Bangladesh with a View to Implement an Employment Injury Compensation Scheme*
- 6) *Cost estimate of the proposed Employment Injury Compensation Scheme in Bangladesh*

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1 MAIN FINDINGS OF BIDS SURVEY

BIDS conducted a comprehensive survey that reflects the nature and extent of work-related injuries in key manufacturing and service sectors of Bangladesh. Quantitative data on accidents, injuries, compensations and other related issues were collected from registered establishments in the following sectors: Ready-Made Garment (RMG), textiles, cement, ship building, ship breaking, leather (both finished and tannery), pharmaceuticals, construction, real estate and transportation.¹

The study was conducted by the *Bangladesh Institute of Development Studies* (BIDS). Two separate questionnaires, namely, one for the employer and one for the employees, were shared and commented before distribution by various parties, including the ILO. The field survey was conducted from the first week of April 2017 and continued up to the first week of July 2017.² The survey focussed on these subjects:³

Employer's Questionnaire	Employee's Questionnaire
Characteristics of Establishment	Worker's Characteristics
Persons Engaged, Wages, Salaries & Turnover	Workplace Safety Measures
Workplace Safety Measures	Incidence of Injuries
Incidence of Injuries and Related Costs	Potential Exposures to Accidents
Potential Exposures to Accidents	

The survey covered firms with at least 50 workers in the RMG, textiles and cement sectors and firms with at least 10 workers in the ship building, ship breaking, leather, construction and real estate.⁴ Given the distinctive characteristics regarding the nature of participation or contract of employees in construction, real estate and transport sectors, it was decided to conduct case study and/or focus group discussions to gauge the nature and extend of injuries⁵.

Data collection faced hurdles throughout the process. In some sectors, the survey team faced constraints such as delaying tactics or downright refusal from the owners. In the transport sector, the research team faced difficulty in collecting information from the transportation associations since they were reluctant to provide information without the permission from the respective

¹ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page v

² Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page 6

³ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page 7

⁴ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page v

⁵ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page 6

owners. Moreover, access to transportation owners is difficult as they do not visit their association office regularly⁶.

Workers in the manufacturing sectors, even after gaining some experiences and job skills, receive small amount of salary most of which is spent to cover their household expenses. As workers are main wage earners of the family and as there is almost no room for them to save, the lower the income the more difficult it becomes for a worker to bear the costs of work-related injuries⁷.

The survey was conducted for 1,163 establishments in Bangladesh out of which 54.9 per cent were large factories, namely having more than 300 workers⁸. The average monthly household income and expenditure of the workers across the sector were Tk17,138 and Tk15,871 respectively, with little variation among different sectors. These survey results are comparable with the average monthly household income of Tk16,475 and expenditure of Tk15,531 reported by the Bangladesh Bureau of Statistics (2011) for urban population. This implies that workers spend more than 90 per cent of the household income on food and non-food items and that little financial resources left to cope with accident- and injury-related expenses⁹.

The workers surveyed are one of the key earning members of their households. They contribute about 76.6 per cent of their wages and salaries to household expenditures, and these percentages increases to nearly 90 per cent for workers in some sectors such as ship building, ship breaking and cement. This implies how vulnerable these workers are against any kind of work-related injuries. In case of any accident or injury, the impact falls not only on the victim of work-related injury but also on their respective family¹⁰.

The most common source of accidents in manufacturing sectors is hit by objects. It has been reported as a source of accident by 95 per cent of ship breaking factories, 68 per cent of ship building factories, 56 per cent of cement industries, 46 per cent of textile factories, 30 per cent of pharmaceuticals, 27 per cent of leather factories and 13 per cent of RMG factories¹¹.

The consequence of the injuries led to deaths (1.7 per cent for RMG, 2.4 per cent for textiles, 6.3 per cent for cement, 4.5 per cent for ship building, 15.0 per cent for ship breaking), to full disability (0.3 per cent in RMG, 1.7 per cent in ship breaking, 0.6 per cent in leather) and to partial disability (1.5 per cent in RMG sector, 1.2 per cent in textile, 18.8 per cent in cement, 3.3 per cent in ship breaking, 7.0 per cent in pharmaceuticals, 10.7 per cent in leather)¹². These accidents most probably bring financial hardship to the injured worker and his/her relatives as more than 90% of his/her income were spent for household expenses.

Medical costs of injured workers were provided as part of the survey. The highest amount for medical cost per accident substantially varies amongst sector¹³:

- Tk41,000 for eye injury in RMG sector
- Tk22,333 for eye injury in textiles
- Tk26,333 for head and/or brain injury in cement
- Tk25,133 for knee and ankle injury in ship building
- Tk76,667 for broken bones in ship breaking
- Tk21,229 for spinal cord injury in pharmaceuticals
- Tk15,547 for burns in leather

⁶ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, page 6

⁷ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, page vi

⁸ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, page 9, Table 2.1

⁹ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, pages 15 & 16

¹⁰ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, page 19

¹¹ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, page 27

¹² Workplace Injury in Manufacturing and Service Sectors of Bangladesh, Table 4.6

¹³ Workplace Injury in Manufacturing and Service Sectors of Bangladesh, Table 4.8

These amounts are more than the average monthly household salary provided by surveyed employees and workers will most probably exposed to substantial financial problems risk if they are not provided with an adequate work-related injury compensations.

The costs for establishments were provided in the survey. The average cost for the death of a worker amounts from Tk115,000 (textiles) to Tk400,000 (ship building), whereas for disability amounts from Tk60,000 (full disability in RMG) to Tk203,250 (partial disability in textiles)¹⁴. These amounts are low for disabled workers and families of deceased workers to survive for long time after the accidents.

The survey also shows that employee may have to face some part of the cost associated with the work-related accident. 11.8 per cent of the workers responded that they had to pay part (11.2 per cent) or wholly (0.6 per cent) of the medical expenses related to the work-related accident. Workers from the leather and textiles sectors have a higher probability of having to share part of or the whole cost of medical expenses¹⁵.

The contribution of employers for medical expenses can be implicit or explicit. Implicit contributions are made by hospital or medical centres run by the employer. While most of the workers stated that they get full reimbursement of expenses, some workers were in the opinion that they received only partial reimbursement. In some factories, medical expenses are met from the welfare fund of the respective factories¹⁶.

Since no survey data was gathered for the construction, real estate and transport sectors given the constraint mentioned above, qualitative interviews were conducted with employers and employees' focus group. The main finding of these interviews were that for the constructor sector, opinions from the social partners are not aligned regarding the provision of medical costs and injury related compensation. Workers reported that they are highly mobile and employed through sub-contractor daily. The sub-contractor usually does not preserve any injury information. If a worker faces minor injury, the sub-contractor or the employee himself bears the medical cost. However, in the case of major injuries, main contractor may bear the medical costs only in fear of media reporting on the issue or any possibility of workers' unrest¹⁷.

¹⁴ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, Table 4.10

¹⁵ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, Table 4.12

¹⁶ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page 36

¹⁷ Workplace Injuries in Manufacturing and Service Sectors in Bangladesh, page 38

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2 SELECTED TABLES FROM THE REPORT

Table 2.1 Distribution of the Sample Establishments

Sectors	Percent				Total (number)
	Micro (Up to 30 workers)	Small (31-120 workers)	Medium (121-300 workers)	Large (More than 300 workers)	
RMG	0.3	4.8	17.0	78.0	653
Textiles	3.6	33.5	24.6	38.3	167
Cement	0.0	18.8	31.3	50.0	16
Ship building	9.1	27.3	27.3	36.4	22
Ship breaking	0.0	15.0	70.0	15.0	60
Pharmaceuticals	4.7	33.7	29.1	32.6	86
Leather	12.0	66.7	13.8	7.6	159
All	2.8	20.6	21.7	54.9	1,163

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 2.1

Table 2.2 Household Size, Number of Earners and Economic Dependency Ratio¹⁸

Sectors	Household Size	Numbers of Earning Members	Economic Dependency Ratio (%)
RMG	4.5	2.1	87.5
Textiles	4.7	1.8	62.1
Cement	4.8	1.5	45.5
Ship building	5.2	1.6	44.4
Ship breaking	5.3	1.6	43.2
Pharmaceuticals	4.6	1.7	58.6
Leather	4.4	1.7	63.0
All	4.6	1.9	70.4

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 2.9

¹⁸ The economic dependency ratio is defined as the number of economically active members to inactive members within a household.

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Table 2.3 Monthly Household Income and Expenditure of the Workers

Sectors	Monthly Household Income (Tk.)	Monthly Household Expenditures (Tk.)
RMG	17,007	15,536
Textiles	16,485	15,307
Cement	17,099	16,369
Ship building	17,777	17,315
Ship breaking	17,784	16,560
Pharmaceuticals	17,610	16,786
Leather	17,775	16,834
All	17,138	15,871

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 2.10

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Table 2.4 Exposures of Workers to Hazardous Activities/Situations (in percentage of establishments)

Type of Exposures	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Inadequately guarded or fenced machinery	0.8	3.0	1.1	14.1	21.4	1.5	4.0
Materials handling/manual handling of objects (more than 10 kg)	4.0	5.9	5.9	12.8	38.1	5.0	15.1
Chemicals which may harm a person in some way	0.7	1.8	0.0	2.5	9.0	10.0	23.6
Working beneath a process where something could fall on the person below	0.9	0.1	2.1	15.1	11.9	0.0	1.3
Working at heights where somebody could fall	0.4	0.1	5.7	16.2	13.3	0.2	0.6
Working in excessively hot or cold conditions or outdoors	6.4	15.3	6.5	22.6	9.1	2.5	4.0
Working around moving vehicles and moving plant and equipment	7.4	10.8	6.2	5.7	6.5	7.3	5.8
Working directly with electricity	2.3	2.4	3.4	8.1	1.8	2.7	2.4
Working in dusty air or accumulated dust or fibres	3.3	11.3	5.8	12.3	15.4	0.0	1.4
Working in excessive vibration or excessive noise level	2.1	14.9	3.0	2.0	2.7	1.1	1.6
Working in poor postures or in confined spaces	0.0	0.0	0.0	14.9	22.0	0.0	0.4
Exposure to biological hazards such as organisms, waste or substances	0.0	0.2	0.1	2.9	1.2	3.5	8.4
Energy sources such as lasers or radiations	0.0	0.0	0.4	5.3	2.6	0.0	0.0
Exposure to explosive or inflammable gas	0.1	0.3	0.1	0.7	2.6	1.1	0.3

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 3.4

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Table 2.5 Incidence of Accidents by Sources/Causes (in percentage of establishment)

Causes of Accidents	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Falling from heights	1.5	1.2	18.8	13.6	16.7	3.5	2.5
Fall of objects	2.5	4.2	31.3	22.7	26.7	1.2	0.0
Hit by objects	13.3	45.5	56.3	68.2	95.0	30.2	27.0
Collapse of trench or scaffolding	0.6	4.2	12.5	9.1	1.7	0.0	2.5
Electric shock and or arc flash/blast	6.4	6.6	12.5	40.9	1.7	3.5	14.5
Toxic acid, hazardous material radiation	0.9	3.0	0.0	4.5	0.0	14.0	49.1
Explosion	0.6	0.0	0.0	0.0	0.0	0.0	4.4
Fire	1.1	4.2	0.0	4.5	18.3	2.3	2.5
High speed water flow	0.2	0.0	0.0	0.0	0.0	0.0	1.3
Airborne workplace hazards (dust, mist, vapour, gas or fume)	2.0	2.4	6.3	0.0	8.3	0.0	5.0
Glass/glass broken	6.1	1.8	0.0	0.0	0.0	50.0	9.4
Needle sticking	91.7	26.9	0.0	0.0	0.0	2.3	14.5
Commuting accident (with employer's transport)	1.7	3.0	6.3	0.0	0.0	0.0	0.6
Commuting accident (other transports)	3.1	5.4	6.3	4.5	0.0	7.0	0.6
Others	8.7	8.4	12.5	18.2	45.0	9.3	11.3

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.1

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Table 2.6 Incidence of Injuries by Types in 2016 (in percentage of establishments)

Type of Injuries	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Burns	2.6	5.4	0.0	4.5	18.3	1.2	4.4
Electrocution	2.1	4.8	12.5	40.9	0.0	4.7	11.9
Eye injury, including vision impairment or blindness	0.3	1.8	6.3	9.1	8.3	0.0	1.3
Fracture of bones	3.5	3.0	31.3	13.6	10.0	2.3	1.3
Knee and ankle injury	14.1	26.9	50.0	40.9	75.0	26.7	30.2
Neck, shoulder or back injury	6.4	11.4	31.3	9.1	23.3	10.5	6.9
Spinal cord injury, including damage that can cause paraplegia or quadriplegia	1.5	4.8	12.5	13.6	15.0	8.1	1.9
Illness caused by toxic chemical exposure	0.8	2.4	0.0	0.0	1.7	12.8	48.4
Head injury and/or brain injury	1.1	8.4	18.8	4.5	21.7	4.7	1.9
Others	53.9	52.7	18.8	36.4	73.3	58.1	27.0

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.4

Table 2.7 Incidence of Consequences of Injuries/Casualties at Workplace (in percentage of establishments)

Consequence of Injuries	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Death	1.7	2.4	6.3	4.5	15.0	0.0	0.0
Full disability	0.3	0.0	0.0	0.0	1.7	0.0	0.6
Partial disability	1.5	1.2	18.8	0.0	3.3	7.0	10.7
Not able to return to work on the next shift	29.1	53.3	50.0	31.8	71.7	37.2	19.5
Was absent up to 7 days due to injury	25.1	29.3	37.5	31.8	78.3	31.4	32.1
Was absent 8-15 days due to injury	3.4	5.4	31.3	13.6	45.0	16.3	27.7
Was absent 16-30 days due to injury	0.6	0.6	6.3	9.1	28.3	16.3	15.1
Was absent more than 30 days due to injury	0.5	1.8	12.5	9.1	23.3	5.8	4.4

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.6

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Table 2.8 Annual Medical Expenses of Establishments by Types of Injuries (in Tk.)

Type of Injuries	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Burns	10,829	3,600	-	600	14,773	3,000	15,457
Electrocution	3,077	2,575	13,300	6,337	-	6,600	6,401
Eye injury, including vision impairment or blindness	41,000	22,333	9,500	16,250	28,600	-	2,875
Fracture of bones	20,887	11,620	24,400	14,333	76,667	13,000	7,250
Knee and ankle injury	7,395	4,830	9,569	25,133	34,766	4,115	9,971
Neck, shoulder or back injury	5,515	11,405	6,000	1,200	34,214	5,239	5,318
Spinal cord injury, including damage that can cause paraplegia or quadriplegia	7,373	7,110	19,250	7,400	28,056	21,229	3,167
Illness caused by toxic chemical exposure	18,800	6,275	-	-	20,000	7,227	10,259
Head injury and/or brain injury	17,434	16,061	26,333	8,900	41,000	4,675	3,117
Others	10,524	3,888	4,567	3,689	32,461	7,621	14,810

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.8

Table 2.9 Annual Average Medical Expenses by Consequences of Injuries in 2016 (in Tk.)

Consequence of Injuries	RMG	Textiles	Cement	Ship building	Ship breaking	Pharmaceuticals	Leather
Death	189,546	115,000	140,000	400,000	255,556	-	-
Full disability	60,000	-	-	-	70,000	-	80,000
Partial disability	61,390	203,250	70,833	-	57,500	15,583	4,557
Not able to return to work on the next shift	8,347	3,310	9,213	5,844	24,863	3,754	6,017
Was absent up to 7 days due to injury	7,838	7,093	2,833	8,500	36,655	5,693	5,504
Was absent 8-15 days due to injury	6,783	15,944	8,800	17,967	24,511	8,321	10,690
Was absent 16-30 days due to injury	6,925	25,000	6,000	26,500	24,118	7,643	38,418
Was absent more than 30 days due to injury	58,333	12,833	209,000	108,000	84,667	9,000	45,714

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.10

Table 2.20 Sharing of Medical Expenses between Employers and Employees

Sectors	Who pays the treatment (% of respondents)				Have a welfare fund (% of establish.)
	Implicitly by employer	Full reimbursement	Partial reimbursement	Workers own cost	
RMG	19.9	71.2	8.7	0.3	17.2
Textiles	10.8	74.5	14.8	0.0	7.7
Cement	37.5	54.2	8.3	0.0	41.7
Ship building	10.6	84.9	4.6	0.0	22.7
Ship breaking	19.4	75.0	5.6	0.0	7.8
Pharmaceuticals	26.1	66.2	7.8	0.0	39.1
Leather	18.0	55.8	23.0	3.2	16.5
All	18.8	69.4	11.2	0.6	17.3

Source: Workplace Injuries in Manufacturing and Service Sectors of Bangladesh, Table 4.12