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Supporting Document

Cost Estimate of the Proposed Employment Injury Compensation Scheme in Bangladesh

Global Employment Injury Programme

Enterprises Department

ILO Country Office for Bangladesh

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

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CONTENTS

INTRODUCTION

Based on BIDS survey, this document proposes a cost estimate of the proposed injury compensation scheme in Bangladesh. Also, one possible bridging solution was proposed based on the calculations done as part of the cost estimate. This is one of the many possibilities that could be considered by the national tripartite partners in Bangladesh.

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*
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 (current document)***

1

1 COST ESTIMATE OF THE PROPOSED EMPLOYMENT INJURY COMPENSATION SCHEME IN BANGLADESH

Reproduced as originally published

Cost estimate of the proposed Injury Compensation Scheme in Bangladesh

This technical note presents the design and the cost estimate of the Employment Injury Compensation scheme proposed by ILO for the one hundred percent oriented ready-made garment (RMG) industry.

The report is organised in three sections. The first one presents the description of benefits. The second section presents an estimate of the contribution rate for the scheme, which is based on results of a survey conducted in selected industries in Bangladesh with a particular focus on the RMG sector. The third section presents the estimate of the contribution rate based on the data of three selected countries. The fourth section presents a proposal for the contribution rate relying on findings of Section 2 and 3.

Overview of the proposed Employment Injury Compensation Scheme

This section provides a general overview of the key coverage, contribution and benefit provisions.

Legislation framework

The ILO proposal, which is described in a file named: Framework Report Dec. 7, 2017 PDF.

Administering organisation

The Central Fund of the one hundred percent export oriented RMG industry

Coverage

Workers and employers of hundred percent export oriented ready-made garment industry.

Contributions

Contributions are expressed as a percentage of monthly insurable wages up to a maximum amount (to be determined).

Benefits (base scenario)

“Employment injury” covers both industrial injuries and occupational diseases. The qualifying condition for benefit is that of being in insurable employment at the relevant time.

“Medical benefit”, provided to victims of employment injury, includes: general practitioner and specialist in-patient and out-patient care, including domiciliary visiting, dental care, nursing care at home or in hospital or other medical institutions, maintenance in hospitals, convalescent homes, sanatoria or other medical institutions, dental, pharmaceutical and other medical or surgical supplies, including prosthetic appliances kept in repair and renewed as necessary, and eyeglasses, the care furnished by members of such other professions as may at any time be legally recognised as allied to the medical profession, under the supervision of a medical or dental practitioner and the following treatment at the place of work wherever possible: emergency

treatment of persons sustaining a serious accident and follow-up treatment of those whose injury is slight and does not entail discontinuance of work.

"Temporary disablement benefit" is paid in the event of certified incapacity for work arising out of an employment injury, subject to a waiting period of three days. The daily rate of benefit is 60 percent of the reference wage - i.e. one-thirtieth of the average assumed monthly wage over the preceding 'x' months - subject to a maximum of 'xx' takas per day. The benefit is payable for seven days a week until the temporary disablement ends.

"Permanent disablement benefit" is payable if permanent disablement, partial or total, results from an employment injury. The monthly rate of total disablement benefit is 60 percent of the reference wage. The benefit rate for partial disablement is proportional to the degree of disablement. If the degree is 20 percent or less, the benefit can be commuted into a lump sum. A constant attendance allowance tentatively set at 50 percent of the average monthly wage is payable to total disablement pensioners in need of assistance.

"Dependants' benefit" is payable in the event of death arising out of an employment injury, to a widow or widower, orphans and parents. The proposed monthly rates of benefit are presented in the following table. The total percentage must not exceed 60 percent. In case the total exceeds 60 percent, the share for each dependent is proportionately reduced.

Dependent	Percentage of reference salary	Benefit duration
Widow	40%	Life, terminates at remarriage
Dependent widower	40%	Life, terminates at remarriage
Child	10%	Termination reaching the age 21
Orphans (no surviving parent)	30% for the first one, and 15% for each additional one	Termination reaching the age 21
Dependent parents	45% if both are alive 30% if only one is alive	Life

Funeral benefits, preliminarily set at 5,000 takas, are payable to the heirs.

"Rehabilitation benefit", consisting of vocational and physical rehabilitation, is available to employees suffering from permanent disablement.

The proposed schedule of benefits is very different from that provided in the current legislation mainly for the severe injuries (permanent partial or total disability and death) as periodical payments based on the workers' earnings would be provided under the proposed scheme and their present value would be higher than the lump sums paid under the current legislation. Annex A presents the description of benefits provided under the current legislation in Bangladesh.

Data from the survey of Bangladesh Institute of Development Studies (BIDS)

Survey on establishments

In the following tables, data extracted from the BIDS are presented with a view to make a cost estimate of the EIC scheme. Data are presented for the RMG sector as well as for all non RMG sectors (textile, cement, shipbuilding, ship-breaking, pharmaceuticals, leather) altogether for comparison purpose. Since there is wide diversity between the sectors, the indicators may not be

representative of any specific sector among the six non RMG ones, though they are useful to give a general insight of the differences between RMG and those sectors.

Table 1 presents data on employers in the survey.

Table 1. Sample of employers 2016

	RMG	Non-RMG	Total
Data			
Output (million takas)	1,376,945	634,990	2,011,934
Employees (male)	309,427	150,358	459,785
Employees (female)	415,684	47,998	463,682
Employees Total	725,111	198,356	923,467
Salaries (million takas)	61,547	42,929	104,476
Other staff cost (million takas)[1]	37,192	10,808	48,000
Indicators			
(Salaries + staff costs)/outputs	7.2%	8.5%	7.6%
Average salary	84,879	216,423	113,134
Average other staff cost	51,292	54,488	51,978

[1] Other staff cost includes: overtime payments, other cash payments, meal or meal allowance, transportation or transportation allowance, residence or residence allowance, medical allowance, other allowances.

The difference between the average salary of the RMG and non-RMG sectors is significant. As the average salaries in the non-RMG sectors vary significantly, the average for non-RMG sector cannot be considered representative of any specific sector.

Table 2 presents data related to the incidence of employment injuries.

Table 2. Injury incidence 2016

	RMG	Non-RMG	Total
Data			
Number of incidents	19,198	8,355	27,553
Number of casualties	19,137	8,602	27,739
Number of injured	12,035	8,760	20,795
Death	14	18	32
Full disability	2	3	5
Partial disability	46	256	302
Unable next shift	2,899	2,196	5,095
Absent up to 7 days	1,606	1,564	3,170
Absent 8-15 days	85	510	595
Absent 16-30 days	9	204	213
Absent more than 30 days	7	47	54
Injured return to different work	61	116	177
Injured no return to work	4	42	46
Indicators			
Injured with lost days per 100 workers	0.24	1.17	0.44
Proportion of injured with lost days who return to different work	3.6%	5.0%	4.4%
Proportion of injured with lost days who do not return to work	0.2%	1.8%	1.1%
Proportion of injured with lost days with full disability	0.12%	0.13%	0.12%
Proportion of injured with lost days with partial disability	2.7%	11.0%	7.5%
Death per 100,000 workers	1.93	5.14	3.47

For the purpose of the cost estimation, the following indicators from table 2 can be used:

- Injured with lost days per 100 workers
- Proportion of injured with lost days who do not return to work
- Proportion of injured with lost days with full disability
- Proportion of injured with lost days with partial disability

The proportion of these people with long-term consequences, measured by the other indicators of Table 2, is relatively low.

Table 3 presents data related to the cost of benefits paid.

Table 3. Medical and other benefit cost - 2016 (takas)

	RMG	Other than RMG	Total
Data			
Medical costs only	5,660,454	10,193,943	15,854,397
Medical costs and cash benefit or cash benefit only			
Death	2,085,000	3,440,000	5,525,000
Full disability	120,000	150,000	270,000
Partial disability	613,900	904,975	1,518,875
Unable next shift	1,591,511	1,782,800	3,374,311
up to 7 days absent	1,293,286	2,588,320	3,881,606
8-15 days absent	156,004	1,490,058	1,646,062
16-30 days absent	27,700	1,561,450	1,589,150
more than 30 days absent	175,000	2,415,500	2,590,500
Total *	6,062,401	14,333,103	20,395,504
Estimate of cash benefits only[1]	4,343,151	6,751,075	11,094,176
Indicators			
Medical costs only per 100 salary	0.01	0.02	0.02
Medical costs and cash benefit or cash benefit only per 100 salary	0.01	0.03	0.02
Estimate of cash benefits only per 100 salary	0.01	0.02	0.01
Average cost by type of injured[2]			
Per death	148,929	191,111	172,656
Per full disability	60,000	50,000	54,000
Per partial disability	13,346	3,535	5,029
Per unable next shift	549	812	662
Per up to 7 days	805	1,655	1,224
Per 8-15 days	1,835	2,922	2,766
Per 16-30 days	3,078	7,654	7,461
Per more than 30 days	25,000	51,394	47,972

1 Aggregate data have been processed to estimate the cash benefits. It is not possible to make any adjustment by type of injured.

2 The average may include medical costs and cash benefits.

The values shown for the indicators of cost per 100 of salary are much lower than reasonably expected. That can cast doubt on the completeness of data. On the other hand, the observed relation of the average costs of benefits between the different categories of beneficiaries is reasonable despite the low level of costs.

Survey on workers

The survey on workers does not contain data that can be used for the cost estimate, but is useful to provide additional information and compare the information provided by workers and employers with a view to assess the range of differences between their input and that of employers. The number of workers interviewed is 3,489, namely 3 in each of the 1,163 establishments surveyed. Table 4 presents data related to answers to questions that shed some light on the socio demographic characteristics or interviewed workers and the employment injury information submitted provided by workers

Table 4. Workers survey 2016 data

	RMG	Other than RMG	Total
Data			
Average age	27	32	29
Proportion of males	41%	87%	61%
Average length at current job	5.1	6.6	5.7
Average previous experience	2.2	2.9	2.5
Average monthly salary excluding overtime	8,499	11,769	9,933
Average monthly overtime	1,624	1,114	1,400
Average number of family members	4.5	4.7	4.6
Average number of earning members	2.1	1.7	1.9
Average monthly family income	17,007	17,305	17,138
Average monthly family expenditure	15,536	16,300	15,871
Average contribution to monthly expenditure	73%	82%	77%
Number of injuries reported by workers	8,132	12,600	20,732
Calculation by author			
Ratio: Number of injured reported by workers / number of injured reported by employers	68%	144%	100%
Ratio: average salary[1] of interviewed workers / average salary of all workers	143%	71%	120%

[1] The salary reported by workers include overtime.

It is interesting to note that the number on injuries reported by workers was the same as that reported by employers (100%), though the ratio varies by sector (68% - RMG and 144% non-RMG).

The average salary of interviewed workers are higher than the average of all workers, and the ratios of the average interviewed workers' salary over the average salary of all workers in establishments vary significantly by sectors.

Overall, the data provided by workers do not have any substantial inconsistencies with the data from the establishment survey regarding the characteristics of workers and incidence of injury. Differences in the number of reported injuries are in reasonable range by taking into account the concept of each survey.

Table 5 presents data regarding severe injuries provided by workers and a comparison with the data reported by employers.

Table 5. Frequency of severe injuries

	RMG	Non-RMG	Total
Data			
Return to work in different job	3	64	67
No return to work	7	68	75
Total	10	132	142
Calculation by author[1]			
Ratio: Number return to work in different job reported by workers / Number return to work in different job reported by employers	5%	55%	38%
Ratio: Number no return to work reported by workers / Number no return to work reported by employers	175%	162%	163%
Ratio: Total reported by workers / Total reported by employers	15%	84%	64%

[1] See Table 2 for the numbers reported in the establishment survey.

It can be observed that there is a significant difference in the reported numbers of injured workers unable to return to their previous job or to any job. The difference is quite material in the RMG sector. It would be interesting to investigate the reasons behind this gap. For the present purpose, this analysis seems to indicate that the information obtained from the establishment survey is not substantially underestimated.

Assumptions for cost estimation based on BIDS survey

Table 6 presents assumptions based on Table 2 above for the purpose of the cost estimate. It should be noted that the concept of total disability used in defining the indicator in Table 6 refers to cases where workers "do not return to work" rather than cases "with full disability". It is a modest approach for the estimate to be prudent and conservative.

Table 6 Assumptions regarding incidence based on the survey

	RMG	Non-RMG
Temporary disability incidence	0.0024	0.0044
Proportion of temporary disability cases with total disability	0.0023	0.0114
Proportion of temporary disability cases with partial disability	0.0269	0.0749
Death cases per 1,000 workers	0.0193	0.0347

Table 7 presents the other assumptions that are necessary for the determination of the contribution rate. They are related to the determination of the amounts of benefits. As the survey does not provide useful information to determine these assumptions, some of them rely on other national data, including data obtained on Rana Plaza victims as well as international data. For example, the present values are based on the same mortality and economic assumptions as those used for the determination of benefits for Rana Plaza victims while the average duration in temporary disability is based on survey data and data of selected countries.

Table 7 Assumptions based on various sources

	RMG	Non-RMG	Base
Temporary disability duration	24 days	33 days	BIDS survey and international data
Average degree of partial disability	0.40	0.40	International data
Average present value per unit of annual disability pension	28	28	National data
Probability of having a spouse	0.50	0.50	National data
Average present value per unit of annual pension (spouse)	23	23	National data
Average number of children per deceased	0.5	0.5	National data
Average present value per unit of annual pension (orphan)	9	9	National data
Average number of parent per deceased	1.5	1.5	National data
Average present value per unit of annual pension (parent)	18	18	National data
Incidence rate of care taker (50% of permanent total disability incidence)	0.000003	0.000025	BIDS survey and international data
Health care and rehabilitation cost per 100 salary	0.01	.01	BIDS survey and international data

Estimated contribution rate based on BIDS survey

Annex B presents the calculation information regarding the calculation of a contribution rate on a terminal funding method for permanent disability benefits and survivors' pensions.

For the illustration purpose, an arbitrary number of 4 million workers has been used both for the RMG and the non-RMG sectors. The number of covered workers has no impact on contribution rate, although it influences absolute monetary amounts of benefits and the number of injured persons as well as survivors.

The benefit contribution rate for the RMG sector is estimated very low around the order of 0.1 percent of insurable earnings. The magnitude of the illustrative contribution rate for the non RMG sector at 1.20 percent is 12 times that of the RMG. The rate reflects the large weight of certain high risk industries and cannot be used as a reliable indicator.

It seems from this analysis that the determination of the contribution rate of the RMG sector may not uniquely rely on the data of the survey.

Selected international experience benchmarks

At the start of a new scheme, it is generally useful to look at the experience of existing schemes in countries that are socio-economically comparable. These comparisons should be made with caution because there are unavoidable differences in the characteristics of countries influencing workplace injury experience, including occupational health and safety practice. For the present purpose, benchmarks from three countries, namely Cambodia, Malaysia and Thailand, are presented. Key assumptions were derived from those countries and used in combination with the national data of Table 7 to estimate the cost of the benefits proposed for the Bangladesh scheme.

Cambodia

The Cambodia scheme is particularly interesting because the garment sector and footwear industry accounts for more than 50 percent of the insured workers. The data of the whole regime can therefore be used with a valuable degree of confidence. However, the scheme covers commuting accidents between home and work, which is not the case for Bangladesh, but a breakdown of certain statistics between all accidents and at work accidents can provide appropriate adjustments to indicators pertinent to the cost estimate.

The following four documents have been used:

1. Jean-Claude Hennicot, Actuarial Review of The NSSF Employment Injury Branch and Assessment of Social Health Insurance, Cambodia, January 2012
2. Report On The Annual Achievements in 2014 and the Action Plan in 2015, National Social Security Fund, Cambodia.
3. Report On The Annual Achievements 2015 and the Action Plans 2016, National Social Security Fund, Cambodia.
4. Jean-Claude Hennicot, Actuarial Review of The Employment Injury Branch of the National Social Security Fund, Cambodia, June 2017

Data of Table 8 for years the 2009 and 2010 were extracted from the actuarial valuation published in 2012 while data for years 2013 to 2015 are available in the actuarial valuation of 2017 and the annual reports. The scheme started in 2008 and registration has increased steadily and may have stabilized recently at about 1.1 million insured workers.

Table 8. Cambodia employment injury scheme

	2009	2010	2013	2014	2015
Insured workers	321,908	483,847	833,426	966,099	1,056,495
Insured workers (garment and footwear)	274,911	373,445	n/a	n/a	715,640
Total injuries	3,886	7,611	16,775	18,699	30,281
Injuries (garment and footwear)	3,270	n/a	n/a	10,164	15,693
At work injuries[1]	n/a	5,109	12,060	14,022	22,487
Total fatalities	15	39	96	96	181
Fatalities (garment and footwear)	14	21	n/a	n/a	n/a
Fatalities at work	n/a	5	n/a	25	49
Temporary disability claims	794	2,296	6,354	8,218	12,800
Permanent disability less than 20% claims	n/a	29	66	34	67
Permanent disability from 20% up claims	n/a	10	66	75	124
Temporary disability (million Riel)	133	356	767	1,108	1,916
Permanent disability less than 20% payment (million Riel)[2]	10	46	143	92	176
Permanent disability from 20% up payment (million Riel)			114	165	304
Medical treatment and care (million Riel)	915	1,938	5,251	7,339	8,222
Benefit expenditure (million Riel)	1,076	2,424	6,920	9,550	12,143
Administration cost	1,368	2,475	7,227	13,311	11,622
Inured earnings (million Riel)	1,388,005	2,487,902	5,378,385	7,111,010	9,266,114
PAYG rate benefits	0.08%	0.08%	0.13%	0.13%	0.13%
PAYG rate administration cost	0.10%	0.09%	0.13%	0.19%	0.13%

[1] At work data excludes commuting injuries.
[2] Sum of expenditures for both categories of disability in 2009 and 2010.

Other interesting indicators, such as the average number of compensated days for temporary disability and the average degree of disability, are available in the actuarial report, but not in the annual reports for the recent years. The relative stability of other indicators permits to conclude that those indicators probably remain of a comparable magnitude to those of 2009-2010.

For the purpose of illustrating the estimated cost of the Bangladesh scheme based on the Cambodia experience, assumptions have been established with the data presented so far by giving greater weight to recent trends. Table 9 presents the assumptions based on the Cambodia experience vis-à-vis the corresponding ones in those established from the Bangladesh survey. There are some structural differences in the data available for permanent disability cases so that assumptions cannot be easily compared. The note at the bottom of the table must be read to get an indication of the differences between the assumptions for those benefits. It has been assumed that 50 percent of commuting accidents occurring in Cambodia would be covered under the more restrictive Bangladesh Act.

Table 9 Assumptions regarding incidence based on the survey

Assumption	RMG Bangladesh survey	Cambodia
Temporary disability incidence per worker	0.0024	0..0090
Proportion of temporary disability cases with total disability	0.0023	n/a
Proportion of temporary disability cases with partial disability	0.0269	n/a
Proportion of temporary disability cases with permanent disability from 20% up	n/a	0.0097
Proportion of temporary disability cases with permanent disability less than 20%	n/a	0.0061
Temporary disability duration	24	17
Average degree of total permanent disability (Cambodia: from 20% up)[1]	100%	40%
Average degree of partial permanent disability (Cambodia: less than 20%)[1]	25%	9%
Incidence rate of care taker per worker	0.000003	0.000009
Health care and rehabilitation cost per 100 insured salary	0.01	0.08
Death cases per 1,000 workers	0.019	0.086

[1] For the RMG Bangladesh survey, the estimated number of permanently (total and partial) disabled is 284 and their average degree of disability is 31% while under the Cambodia based assumptions, the numbers are respectively 566 and 28%.

Table 10 presents the estimated contribution rates by type of benefits.

Table 10 Estimated contribution rate as percent of insurable salaries (terminal funding)

Benefit	RMG Bangladesh survey	Cambodia
Temporary disability	0.01%	0.03%
Permanent disability (including constant attendance allowance)	0.04%	0.08%
Death (survivors' pensions and funeral grants)	0.02%	0.10%
Health care and rehabilitation	0.01%	0.08%
Total [1]	0.08%	0.28%

[1] Due to rounding, the total is not the same as the sum of its components.

The estimated cost based on Cambodia data is three times and half the one based on survey data. The most important relative differences are in health care and rehabilitation benefits followed by death benefits.

The pay-as-you-go rate of administration costs has been fluctuating over the years. Its average was 0.15 percent over the years 2013-2015.

Malaysia

The Malaysia scheme has been in place for a few decades and several data and indicators are available. However, the RMG sector is relatively small and a limited number data are available for it. Nevertheless, they make it possible to judge the experience of this sector in relation to that of the whole scheme.

Commuting accidents to and from work are covered in Malaysia. Some data are separated between transportation accidents and industrial ones. It should be noted that some of the accidents due to transportation are related to industrial activities that would be covered in Bangladesh. Table 11 presents key statistical data that are useful for a cost estimation of the Bangladesh scheme based on Malaysia data.

Table 11. Malaysia employment injury scheme

	2013	2014	2015
Insured workers	6,089,054	6,198,657	6,349,984
Accidents reported	63,557	63,331	62,837
Industrial accidents reported	35,898	35,294	34,258
Commuting accidents reported	27,659	28,037	28,579
Funeral benefits	1,412	1,400	1,327
Temporary disability benefits -all	59,312	59,190	60,071
TD benefits – industrial and occupational diseases	33,095	32,246	31,714
Permanent disability benefits - all	16,458	17,353	17,705
PD benefits - industrial and occupational diseases	8,725	9,110	9,261
Death benefits - all	1,194	1,157	1,192
Death benefits – industrial and occupational diseases	415	348	364
Average number of TD days per beneficiary	53	55	57
Proportion of TD with PD less than 20%	0.2423	0.2579	0.2665
Proportion of TD with PD 20% and up	0.0163	0.0161	0.0153
Average degree of disability less than 20%	0.064	0.064	0.063
Average degree of disability 20% and up	0.415	0.416	0.417
Constant attendance benefits	29	41	49
Medical and rehabilitation benefits per 100 salary	0.02	0.02	0.02
Administrative expenditure per 100 salary	0.17	0.18	0.20
Contributions (million)[1]	2,518	2,689	2,838

[1] The contribution rate is 2.25 percent of insurable earnings for the employment injury branch and the invalidity branch.

Table 12 presents detailed statistics in the manufacture related to certain industries in textile and garment for 2015. Data of 2013 and 2014 for those industries are fairly consistent with those of 2015. Though the data are limited because they are high-level indicators and the number of active workers in the corresponding industries is lacking, they are useful to provide some hindsight on the severity of accidents.

Table 12. Data from selected industries - 2015

	Accidents reported	Temporary disability	Permanent disability	Death benefits
3211 Spinning, weaving and finishing textiles	80	72	22	1
3212 Manufacture of made-up textile goods except wearing apparels	30	30	5	1
3213 Knitting mills	28	24	2	0
3219 Manufacture of textile not otherwise classified	197	189	42	3
3220 Manufacture of wearing apparels except footwear	170	181	49	2

Table 13 presents key assumptions used for the cost estimate based on the industrial accidents and occupational diseases of Malaysia. All transportation accidents are excluded so that the result represents the lower bracket of a reasonable range of plausible outputs.

Table 13 Assumptions regarding incidence based on the survey

Assumption	RMG Bangladesh survey	Malaysia
Temporary disability incidence per worker	0.0024	0.0050
Proportion of temporary disability cases with total disability	0.0023	n/a
Proportion of temporary disability cases with partial disability	0.0269	n/a
Proportion of temporary disability cases with permanent disability from 20% up	n/a	0.0159
Proportion of temporary disability cases with permanent disability less than 20%	n/a	0.2761
Temporary disability duration	24	57
Average degree of total disability (Malaysia: from 20% up)[1]	100%	42%
Average degree of partial disability (Malaysia: less than 20%)[1]	25%	6.3%
Incidence rate of care taker per worker	0.000003	0.000008
Health care and rehabilitation cost per 100 insured salary	0.01	0.02
Death cases per 1,000 workers	0.019	0.064

[1] For the RMG Bangladesh survey, the estimated number of permanently disabled is 284 and their average degree of disability is 31% while under the Malaysia based assumptions, the numbers are respectively 5,844 and 8%.

Table 14 presents the estimated contribution rates by type of benefits.

Table 14 Estimated contribution rate as percent of insurable salaries (terminal funding)

Benefit	RMG Bangladesh survey	Malaysia
Temporary disability	0.01%	0.05%
Permanent disability (including constant attendance allowance)	0.04%	0.21%
Death (survivors' pensions and funeral grants)	0.02%	0.07%
Health care and rehabilitation	0.01%	0.02%
Total	0.08%	0.35%

The estimate based on the Malaysia scheme is four times that based on the BIDS survey. The relative and absolute differences concerning the permanent disability benefits are the largest.

For the Malaysia scheme, the administrative expenditures represent 0.20 percent of insurable earnings. The estimated total contribution rate would be 0.55 percent using that benchmark.

Thailand

Thailand's employment injury scheme has been in place for several decades. High level statistical and financial information is in available in the annual reports of the Workers' Compensation Fund and in the Social Security Statistics. The most recent year for which those reports are readily accessible to the public on the web site of the Social Security Office of Thailand (www.sso.go.th) is 2009.

Benefits for permanent disability are not consistent with ILO Convention C-121 as they are up to maximum period depending of the degree of disability (15 years for total disability and 2 months to 10 years for partial disability).

Table 15 presents data of interest for our purpose.

Table 15 Thailand employment injury scheme

Assumption	2008	2009
Total insured persons	8,135,606	7,961,384
Contribution	2,876	2,976
Estimated insurable earnings (million baht)[1]	734,026	618,208
Number deaths	613	597
Number permanent total disability[2]	15	8
Number permanent partial disability[2]	3,096	2,383
Number temporary > 3 days	45,719	39,850
Number temporary <= 3 days	127,059	106,598
Medical benefits (million)	764	709
Rehabilitation (million)	4	5
Incidence of TD with > 3 days per insured	0.0056	0.0050
Proportion of TD with > 3 days with PD (total and partial)	0.0068	0.0060
Deaths per 1,000 insured	0.0753	0.0752
Estimated contribution rate	0.0039	0.0048
Health care and rehabilitation cost per 100 insured salary	0.11	0.12

[1] As the average contribution rate is not known, the insurable earnings have been estimated by using information on other branches of social security for which the contribution rate is known.

[2] The number of permanent disability cases is established a few weeks after the end of the year and does not reflect the ultimate situation. Certain internal studies indicate that the ultimate number for total disability may be 2 times as high as the one reported while for partial disability, the corresponding adjustment should be about 30 percent.

Certain data are available for industries related to manufacture of textile and garment (code 300 in the classification system used in Thailand). Table 16 presents the data for this classification as well as for some of its sub-classes in 2009. The number of registered workers in this industry code was 568,469 in 2009.

Table 16 Manufacture textile and accessories -2009

Industrial classification	Death	PTD	PPD	TD>3	TD<=3	Total
300 textile and accessories	4		181	2,380	5,761	8,326
303 spinning and weaving by machine	1		128	1,254	2,535	3,918
307 wearing apparels	1		14	504	1,742	2,261
309 tanneries and products of leather	2		13	234	537	786
310 footwear			19	301	794	1,114
302, 304, 305, 306, 308[1]			7	87	153	247

[1] 302: cotton ginning and spinning, 304: silk, 305: pressing hemp or coconut fibres, 306: manufacture of cotton, cotton bud, 308: artificial flowers

The number of deaths per 1000 insured for classification code at 0.0070 is much lower than the indicator for all industries at 0.0753. The proportion of temporary disability claims with permanent disability at 0.0761 is moderately larger than the average for all industries, which is 0.0600 in 2009.

Table 17 presents key assumptions used for the cost estimate based on the industrial accidents and occupational diseases of the Thailand scheme. The experience of manufacture of textile and accessories has been used whenever possible.

Table 17 Assumptions regarding incidence based on the survey

Assumption	RMG Bangladesh survey	Thailand
Temporary disability incidence per worker	0.0024	0.0042
Proportion of temporary disability cases with total disability	0.0023	0.0005
Proportion of temporary disability cases with partial disability	0.0269	0.0777
Temporary disability duration[1]	24	20
Average degree of total disability	100%	100%
Average degree of partial disability	25%	10%
Incidence rate of care taker per worker	0.000003	0.000002
Health care and rehabilitation cost per 100 insured salary	0.01	0.12
Death cases per 1,000 workers	0.019	0.007

[1] Estimation based on internal data in 2006.

Table 18 presents the estimated contribution rate by type of benefits.

Table 18 Estimated contribution rate as percent of insurable salaries (terminal funding)

Benefit	RMG Bangladesh survey	Thailand
Temporary disability	0.01%	0.01%
Permanent disability (including constant attendance allowance)	0.04%	0.08%
Death (survivors' pensions and funeral grants)	0.02%	0.01%
Health care and rehabilitation	0.01%	0.12%
Total	0.08%	0.22%

For 3 out of 4 types of benefits, the contribution rate based on the Thailand data is close to the results obtained with the Bangladesh survey. The largest difference is related to medical services and rehabilitation.

Estimated contribution rate

Benefits

Additional information would be required to make the cost estimates presented earlier more robust. For example, it would be interesting to check the level of partial disability in the BIDS facility survey. This would require returning to employers and analyzing a few cases. This would be a long and costly process for possibly little added value.

Some additional data, possibly available in the agencies of the three countries discussed above, would improve the interpretation of certain data. For example, the number of insured workers in certain industries in Malaysia would be useful for more accurate indicators. The process would probably be long and its added value is uncertain. It may be worth getting into it.

Despite the shortcomings previously mentioned, the work done so far indicates with a sufficient level of confidence the order of magnitude of the cost of the scheme in Bangladesh. On the basis of the information gathered, it is true that the range of cost estimates for the benefits is wide (from 0.08 to 0.35 percent of insurable earnings), but the difference between the estimates for countries used as benchmarks seems reasonable (from 0.22 to 0.35 percent of insurable earnings). An analysis of results by type of benefits may be useful to make a judgment about the cost of the EIP scheme. Table 19 presents a summary of estimated contribution rates.

Table 19 Summary of estimated contribution rates

Benefit	RMG Bangladesh survey	Cambodia	Malaysia	Thailand	Average
Temporary disability	0.01%	0.03%	0.05%	0.01%	0.03%
Permanent disability (including constant attendance allowance)	0.04%	0.08%	0.21%	0.08%	0.10%
Death (survivors' pensions and funeral grants)	0.02%	0.10%	0.07%	0.01%	0.05%
Health care and rehabilitation	0.01%	0.08%	0.02%	0.12%	0.10%
Total	0.08%	0.28%	0.35%	0.22%	0.28%

[1] Due to rounding, the totals may not be the same as the sum of its components.

Recommending the use of the average rate of the four available estimates would be overly simplistic. However, we can analyze the results for each benefit with a view to use as efficiently as possible the results taking into account our understanding of database and administrative practices of agencies.

- **Temporary disability**: though the range of results is relatively large, the impact of the cost of this benefit over the total contribution rate is fairly limited. For this benefit, it is suggested to use the average of the three countries, which is 0.03 percent. We suggest not giving weight to the survey for the sake of prudence in the estimation.
- **Permanent disability**: the rate for this benefit is the largest component of the contribution rate and the range of results is wide. Uncertainty is substantial because important data, such as the average percentage of partial disability, is missing in certain data base and arbitrary assumptions had to be made. Results of the BIDS survey are troubling as they seem low as compared to the rest. It seems that using the arithmetic average at 0.10 percent sounds reasonable as it would cover the cost estimated from three out of the four data base and it is reasonably close to that of two countries (Cambodia and Thailand).
- **Death**: for this particular benefit, the survey can be reliable because deaths are events for which recording is reliable and the risk of underreporting is low. We can observe that the cost for one country, namely Thailand, is lower than the cost suggested by the BIDS survey. Using the simple arithmetic average rate of the four data base looks reasonable (0.05 percent).
- **Health care and rehabilitation**: practices vary considerably among jurisdictions. For example, the low cost in the Malaysia scheme is not well understood by analysts. Information from the survey may not be fully reliable as the employers may not take care of long-term costs and there is no binding formal rehabilitation program. This last element will deserve attention. At this point, our suggestion would be to rely on the average of the two countries for which the use of medical and rehabilitation services is well understood, Cambodia and Thailand, which is 0.10 percent.
- The result is a contribution of **0.28 percent for the benefits**. Should this rate be underestimated, the financial situation of the scheme would not be in jeopardy in the short-term as about half of its components, permanent disability and death, are mainly periodical payments and make no short-term pressure on liquidity needs. The risk of significantly overestimating the cost seems very low.[1]

[1] The estimated cost for the permanent disability and death benefits could be used for the costing of the bridging solution.

These suggestions can be expressed in terms of components of the cost for the cash benefits (incidence and other variables such as average duration for temporary disability) in order to allow comparing the observed results after the scheme will be implemented with the estimates and adjust assumptions in future forecasts. Table 20 presents the key results corresponding to the accidents that occur during a period of one year. It should be understood that it will take a few years before the ultimate number of certain data, such as the permanent disability cases, will be known because of the time required for the treatment and delays in the administrative decision process.

Table 20 Selected outputs of the estimate

Benefit	Estimation
Temporary disability cases	24,200
Temporary disability average duration	31 days
Permanent disability cases	2,085
Permanent disability – average degree of disability	16%
Fatality cases	176

Administrative expenditures

Cambodia and Malaysia probably provide a good idea of the possible range of the administration cost (0.15 to 0.20 percent of insurable earnings). However, the profile of employers and workers covered at the implementation of the Bangladesh scheme is different from those schemes and the development of the administrative agency will have to consider the specific characteristics of the clientele. For example, the number of employers in the RMG sector is fairly low while the number of workers is high. Because of this, it can be expected that the cost of collecting the contributions could be less than the available international benchmark.

According to an analysis of functions, the following departments should be organized in the administrative agency: finance, claims administration, legal, human resources, information technology, planning and development, internal audit, health and safety promotion. The size of each department would vary. For example, a significant proportion of the staff is typically in the claims department.

In order to estimate the administration cost, indicators relating the number of staff to various cost drivers, namely the number of employers and employers and the number of claims, can be useful. It is possible to rely on international experience to estimate some correlation between those indicators and the administration cost. The conclusion of the analysis is that there is no clear pattern. However, there is some evidence that there is a minimum threshold for the number of employees. This seems normal given the need for dedicated staff for various functions as described above. Economies of scale also appear to be highly variable, but they are likely to depend on the complexity of the services provided by the agencies.

The assumptions used for this estimate are to identify what might be considered reasonable in an efficient delivery service delivery context. The estimate is based on the following assumptions:

1. the needed staff would be around 500,
2. the average salary of the staff be around twice that of the RMG workers and
3. the cost for the staff would be 50 percent of the total administration cost.

The estimated administration cost is 170 million takas or 0.05 percent of insurable earnings (170/339,516). In light of the international experience, it seems to be the lower bound of a reasonable range. This percentage could be expected to increase when the system expands to

other industries and benefit less from the economies scale resulting from the favourable profile of the RMG sector. Depending on the use of technology by the agency for the administration, the estimate could rely on a smaller number of staff, but their salary would be higher and the net result could be about the same (e.g. 400 staff and average salary of 2.5 times that of RMG workers). If certain functions are outsourced, the number of staff would be reduced, but in theory, the cost should remain the same. The uncertainty of the estimate of the cost of benefits contaminates the estimate of the administration cost. For example, if the number of claims is much lower or higher than the estimated ones, this will have an impact of the cost of certain functions.

Administration costs would start to be incurred before the implementation of the scheme in order to put in place the basic infrastructure. It can be expected that the estimated number of staff would not be required before several months until the workload, especially in the claims administration, reaches some stability.

The total estimated contribution rate is 0.33 percent of insurable earnings. It is subject to uncertainty because of the gap between the indications from the survey and the international experience.

Impact on the employers' expenditures for compensation of work injuries

In order to consider the impact of the contributions to the proposed scheme on employers' expenditures, the following savings should be taken into account:

- Medical and allied care as well as cash benefits provided by the Labour Act would be covered by the scheme and employers would not have to incur these costs any more or purchase insurance to protect their assets.
- Cash benefits actually paid by the Central fund would be provided by the EI scheme and this would be saving to the Central financed by employers.

Practically, more than 50 percent of the total cost is already incurred by the employers under the individual liability scheme to the extent employers properly fulfill their obligations. Those savings correspond to:

- The cost of temporary disability benefits (0.03 percent of insurable salaries)
- The majority of medical care and rehabilitation services (estimated at 0.09 out of 0.10 percent of insurable salaries)
- Small part of cash benefits for permanent disability and death (saving estimated at 0.03 percent of salaries).

Overall, the additional cost to employers compared to the current situation would be due to adequate cash compensation of severe injuries (permanent partial and total disability as well as death) and improvement of rehabilitation services.

Annex A

Benefits for work-related injuries under 2017 Bangladesh legislation

Cash benefits

Compensation of victims in the event of work injuries or death to be paid by the employer is described in Sections 150 to 174 of CHAPTER XII COMPENSATION FOR INJURY CAUSED BY ACCIDENT of THE BANGLADESH LABOUR ACT, 2006, ACT NO. XLII OF 2006 [11 October, 2006], including amendments provided in the Bangladesh Labour (Amendment) Act, 2013, (ACT NO. XXX OF 2013).

The amounts of compensation to be paid by the employer are presented in Fifth Schedule of the Act as follows.

Monthly wages of the injured worker	Amount of compensation		Monthly payment as compensation for temporary disablement
	In case of death	In case of permanent total disablement[1]	
1	2	3	4
Whatever be the amount of basic wages of the worker	Tk/-1,00,000	Tk/-1,25,000	Compensation shall be paid for the period of disablement or for 1 (one) year, whichever is shorter. Such compensation shall be paid at the rate of full monthly wages for the first 2 (two) months, at the rate of two-thirds of the monthly wages for the next 2 (two) months and at the rate of half of monthly wages for the subsequent months. In the case of prolonged occupational disease, compensation for disablement shall be paid at the rate of half of monthly wages during the period of disablement, but such period shall in no case exceed 2 (two) years.

[1] In case of partial permanent disablement, Section 151 c) stipulates that the amount is proportional to the loss of earning capacity.

Under CHAPTER XV PARTICIPATION OF WORKERS IN THE PROFIT OF THE COMPANIES of Labour Act, provisions for the creation of funds set the basic to provide benefits to workers, Section 232 (3) stipulates that the government will make provisions by rules applying to hundred percent export oriented industrial sectors for the constitution of funds. Such funds provide benefits to workers in case of work-related injuries.

According to Section 214 (A) of Labour Rules, the main source of financing of the funds constituted according to Section 232 (3) of Labour Law is “0.03% of the total amount against each work order fully export oriented industries”

The compensation for work injuries financed by this fund is described in:

- Section 215 (A): three lac taka for death or permanent total disability for accident at work and
- Section 215 (C): up to one lac taka for "mutilation" not causing permanent disability.

Medical and allied care

Right to medical and allied care is provided to injured workers according to Section 89 (7) of the Labour Act, which reads as follows:

"The treatment of a worker or an employee suffered from professional disease or work-time accident shall be continued by a competent or specialist medical practitioner at the expense and responsibility of the employer until such worker or employee is fully cared or such disease, hurt or sickness."

According to the wording, there is no right for vocational rehabilitation when the worker cannot return to his previous work.

Annex B

Estimate of the contribution rate based on data of the BIDS survey

		RMG	Non-RMG
Insurable earnings and workers covered			
(1)	Number of insured	4,000,000	4,000,000
(2)	Average monthly salary	7,073	18,035
(3)	Density	1.00	1.00
(4)	Expected assessable earnings (million)	339,516	865,694
Temporary disability			
(5)	Incidence rate	0.00240	0.0117
(6)	Average number of days paid	24	39
(7)	Expected cost (million)	32.8	662.3
(8)	Cost per 100 insurable earnings	0.01%	0.08%
Permanent total disability			
(9)	Incidence rate	0.000006	0.000212
(10)	Average present value per unit of annual pension	28.0	28.0
(11)	Expected cost (million)	34.2	3,083.3
(12)	Cost per 100 insurable earnings	0.01%	0.36%
Partial disability			
(13)	Incidence rate	0.000065	0.001288
(14)	Average monthly benefit for 100% disability	4,244	10,821
(15)	Average present value per unit of annual pension	28.0	28.0
(16)	Average degree of disability	0.25	0.250
(17)	Expected cost (million)	92.7	4,683.1
(18)	Cost per 100 insurable earnings	0.03%	0.54%
Fatal cases (pensions)			
(19)	Incidence rate	0.000019	0.000051
(20)	Probability of having a spouse	0.50	0.50
(21)	Average present value per unit of annual pension (spouse)	23.0	23.0
(22)	Average number of children per deceased	0.5	0.5
(23)	Average present value per unit of annual pension (orphan)	9.0	9.0
(24)	Average number of parent per deceased	1.5	1.5
(25)	Average present value per unit of annual pension (parent)	18.0	18.0
(26)	Replacement before maximum	0.625	0.625
(27)	Expected cost (million)	73.9	501.5
(28)	Cost per 100 insurable earnings	0.02%	0.06%
Fatal cases (lump sums)			
(29)	Funeral	5,000	5,000
(30)	Expected cost (million)	0.4	1.0
(31)	Cost per 100 insurable earnings	0.00%	0.00%
Health care and rehabilitation			

(32)	Cost per 100 insurable earnings	0.01%	0.02%
Care and assistance			
(33)	Incidence rate (50% of permanent total disability incidence)	0.000003	0.000106
(34)	Expected cost (million)	14.3	1,284.7
(35)	Cost per 100 insurable earnings	0.00%	0.15%
Total benefits			
(36)	Total contribution rate for benefits	0.08%	1.20%

The estimated number of cases is presented in the following table.

Number	**RMG**	**Non-RMG**
Temporary disability	9,600	46,800
Permanent total disability	24	848
Permanent partial disability	260	5,152
Fatalities	77	206

2

2 A POSSIBLE BRIDGING SOLUTION BEFORE AN INTRODUCTION OF AN EMPLOYMENT INJURY PROTECTION SCHEME

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Bridging solution before an introduction of an employment injury protection scheme (EIP)

1. Rationale

It will take some time before the amended or new law for the employment injury protection (EIP) scheme is amended and the new scheme starts to provide compensations.

A short-term bridging solution is needed to provide adequate and fair compensation in line with the provisions of the ILO and Convention 121 and the future forthcoming public scheme to injured workers and dependents of deceased workers. The package of benefits is intended to complement the benefits provided under the current legislation. It will cover the economic sector to which the public scheme will apply at its launch, namely the hundred percent export oriented ready-made garment (RMG) industry.

Administration of the bridging solution must be simple, swift and cost effective while remaining conducive for the entry into force of the formal public EIP scheme. Those objectives may influence the design of benefits in order to ease their administration while respecting the spirit of ILO conventions.

The financing must be predictable and equitable. Financial monitoring and reporting should be transparent.

2. Administration

As this solution is temporary, it should be readily available and be kept at the lowest possible cost and its administration should rely on an existing platform that does not require any major development. We may propose an institutional blueprint or organogram with the basic structure of the administration. This will help the constituents to visualize what we are suggesting.

The administrative facilities of the Central Fund for the RMG recently put in place meets this condition as long as the benefit design remains into a manageable degree of complexity. No alternative scenario has been considered as practical as the Central Fund.

3. Coverage

The forthcoming EIP scheme is intended to cover all industries ultimately. However, it is understood that its implementation will be gradual and that it will concentrate in the first phase on the hundred percent export oriented industries. The present orientation is also to implement the system gradually in the hundred percent export oriented sectors. The RMG sector will be the first one covered. There is actually no time schedule for the extension to other export oriented sectors, though leather has been subject of specific attention by promoters of the EIP scheme and the Prime Minister has recently announced an intention to extend the Central Fund to all export-oriented sectors.

In terms of social protection objectives, immediate coverage of all hundred percent export oriented industries could be contemplated by the bridging solution. This could speed up the transition to the EIP scheme. However, since dialogue has not progressed with all sectors, it seems advisable to limit the application of the bridging solution to the RMG sector as a pilot. Discussions should be undertaken to extend the application of the solution to other hundred percent export oriented sectors.

4. Contingencies covered

The bridging solution aims at providing benefits in line with C-121 and protecting workers in situations where employers may not be able to fulfill their obligations under the Labour laws. The latter situation occurs when the financial resources of employers are not sufficient to provide adequate compensation. Certain types of benefits provided by current legislation, namely medical care and temporary disability appear adequate in light of C-121. They are financed by individual employers, which may buy private insurance to protect themselves. However, benefits for permanent loss of earning capacity and death of workers with dependents are lower than the minimum recommended in C-121. As the administrative capacity of the bridging solution will be limited, it seems preferable to concentrate efforts on incidents with significant financial impact on workers, namely severe injuries and deaths, and to leave high incidence cases with low cost outside the application of the bridging solution except in exceptional circumstances.

The bridging solution would provide cash benefits for permanent disablement above 5 percent and to survivors of deceased workers. According to C-121, periodical payments should be paid to those beneficiaries.

The bridging solution could also cover the cost of benefits that cannot be paid from assets of the bankrupted employer, namely medical care and temporary disability, but administrative feasibility of this provision would require further investigation and it does not fall in the scope of the present proposal.

5. Cash benefits

The proposed cash benefits are set a level that respects C-121 and the employers' capacity to pay. According to C-121, the minimum replacement rates are 60 percent for total loss of earning capacity or corresponding loss of faculty and 50 percent at the death of the breadwinner for a widow with two children. It is recommended to use these minimum replacement rates given the prevailing economic conditions.

For the sake of simplicity, it is recommended to pay pensions once a year at the date of the anniversary of the award (subject to survivorship of the benefit recipient at that date) rather than monthly, which the most prevailing practice.

The reference salary used in the determination of pensions will be subject to a maximum based on ILO conventions. Additional statistical information is needed to determine the appropriate level of this maximum. The reference salary could also be subject to a minimum

in certain circumstances in which the current salary of the injured worker does not properly reflect his/her loss of earning.

5.1 Permanent disability of 20% and above

For the injured workers with a degree of permanent loss of earnings capacity of 20 percent and above, it is recommended to provide periodical payments.

Annual pension payment paid equivalent to =

(60% of the reference salary multiplied by the disability percentage)

Minus the annuitized benefit value provided by other sources.

Note: the annuitized benefit value is determined as the total lump sum amounts received from other sources and multiplied by an actuarial PV conversion factor in function of gender and age.

The formula is as follows:

P = (0.60 x disability percentage x ref. salary) – (other benefits / present value factor)

5.2 Permanent disability below 20 percent

For the injured workers with degree of disability below 20 percent, administrative simplicity considerations suggest to pay lump sums rather than periodical payments as the administrative entity is not equipped to make periodical payments. Payment of lump sums is consistent with C-121 as long as the degree of disability is set to avoid hardship.

The benefit would be a lump sum to top-up benefits provided from other sources (Central Fund, Workers' compensation Act, Labour Law and Group Insurance) as follows:

(0.60 x Disability percentage x 20 lac) – other benefits

The lump sum determined by this formula is slightly different than the one that would result from the application of C-121 as it does not rely on the reference salary of the injured workers and their age. This modification is proposed to simplify the administration of the bridging solution: there is no need to determine the reference salary and to apply a present value factor to it. As the formula is also in line with certain schools of thought promoting equal benefits to all irrespective of their salary and age, there are reasons to believe that this compromise would be well accepted. The amount of 20 lac represents about 24 times the average annual salary of workers of the RMG[1] or, alternatively, the present value of an annual pension of 0.85 lac to a disabled aged about 40.

Whether this formula is used for the EIP scheme or whether it is replaced by another that would use the reference wage and take into account the age of workers should be determined later with the full package of benefits package of benefits of the EIP scheme.

[1] Estimate based on preliminary finding of a sample of employers (85,000 takas). The 20 lac takas could be reviewed upward if the average salary is higher at the time of implementation.

5.3 Survivors' pension

For the survivors of deceased workers, the benefit is an annual pension payment paid determined by applying a percentage to the reference salary minus the annuitized benefit provided by other sources. The percentage is based on the profile of dependents of the deceased worker.

Percentages aim at considering household practices in the country while respecting ILO conventions. For example, benefits provided to dependent parents are higher than those generally found in most countries.

The total percentage must not exceed 60 percent. In case the total exceeds 60 percent, the share for each dependent is proportionately reduced. Suggested percentages are as follows.

Dependent	Percentage of reference salary	Benefit duration
Widow	40%	Life, terminates at remarriage
Child	10%	Termination reaching the age 21
Orphans (no surviving parent)	30% for the first one and 15% for each additional one	Termination reaching the age 21
Dependent parents	45% if both are alive 30% if only one is alive	Life

The pension formula is as follows:

P = (percentage for dependents x ref. salary) – (other benefits / present value factor)

5.4 Frequency of pension payments after implementation of the EIP

All pensions are paid once a year as long as the law is not enforced at the anniversary date of the date of the first payment. After the adoption of the new or amended law, pensions will be paid once a month by the administrative agency.

All pensions are indexed in line with inflation at each date of anniversary of their start.

5.5 Administrative practices

For the calculation of benefits, the Central Fund would need to put in place an administrative system. It would include a mechanism to determine or review the percentage of disability of injured workers, clerical functions regarding the reception and maintenance of records (doctors' report, reference salary used for the calculation of periodical payments, information on dependents) and the calculation of the lump sum or periodical payments. The amount of each benefit awarded would be approved by the Board of Directors.

6. Financing

The financing provisions deal with questions regarding the sources of fund, the financial system and the reporting of income and expenditure. The financial system is a systematic way of raising resources in order to meet the projected expenditures of a scheme. It determines the contribution rate and the level of assets that will accumulate under the scheme.

Employers in the hundred percent export oriented RMG sector claim that their capacity to contribute is non-existent and require financial participation of buyers and government. International buyers as well as local employers are subject to international pressures. Both groups have an interest in putting in place a mechanism that is well accepted by the international community.

The cost of the social protection provided to workers is considered part of the cost of producing goods and services. This economic rationale would suggest including this cost in the price of produced goods. In addition employers in Bangladesh, as in many other countries, have a recognized legal responsibility to compensate workers for injuries arising in the course of their employment. This is why 100 per cent financing by employers is fairly common in EIP schemes. It can be argued that workers indirectly contribute to the financing through lower wages than what they would be in the absence of an EIP scheme. In the hundred percent export oriented sectors, it seems that it is difficult for the employers to argue with buyers that the contribution paid to an EIP scheme is a component of production cost and they would like that international buyers make a direct contribution to the EIP scheme. Stakeholders including the international buyers should recognize the basic economic principles and the concept of global remuneration.

EIP schemes are generally financed through contributions expressed as a percentage of the insurable earnings. For the financing of the bridging solution, this may not be the most practical method as the money collected by the Central Fund is expressed as a percentage of exported goods. Using this basis to fund the bridging solution would avoid having to develop a parallel billing system. It therefore seems reasonable to explore that avenue first. If this approach is not acceptable, then a mechanism should be put in place to collect contributions on the basis of insurable wages. Such development which will be necessary for the implementation of the EIP scheme as it will desirable to rely on a device that is more convenient to all sectors.

The compensation package includes benefits that will be paid in a single amount a few months after the occurrence of accidents and others that will be paid periodically for long periods. Two systems of financing can be contemplated: the pay-as-you go (PAYG) and the full-funding.

Under the PAYG system, rates are set to cover the cash payments expected in the contribution period while under the full-funding they are set to cover the full cost of injuries irrespective of the timing of payments. Assets are set aside and invested to pay benefits that become due over time. It is generally recognized that an advantage of the full-funding system is to allow for better allocation of costs among generations of employers. However, its administration is more complex. Funds must be invested in order to obtain sufficient yields and the level of funding (assets / liabilities) has to be monitored periodically.

For the bridging solution, ILO’s recommendation is to apply the full-funding system in order to fully recognize the cost of accidents as soon as they occur and to avoid sustained

significant rates increases after implementation[2]. When the EIP will be put in place, the assets accumulated under will be transferred to the new scheme and will be available to pay the pensions to beneficiaries of the bridging solution. This approach avoids transferring a financial burden to employers who will contribute under the new system.

A proper financial reporting system should be developed to monitor the financial situation and make proper adjustments in case of wide deviations between forecast and actual results.

7. Cost estimate of the bridging solution

The cost estimate of the bridging solution relies on the methodology and assumptions used for the cost estimate of the proposed scheme which are extensively described in a technical note named "Cost estimate of the proposed Employment Injury Protection Scheme in Bangladesh".

A specific assumption regarding the cost of "other benefits" appearing in the formulae of Section 5 had to be set for the cost estimate of the bridging solution. It has been assumed that only benefits paid by the Central described in Section 7 (A) in the Labour rules would be deducted, namely 3 lac takas in case of total permanent disability or death and a proportion of that amount in case of partial permanent disability.

The estimated cost by category of benefits as a percentage of insurable salaries is presented in the following table. It may be interesting to estimate the contribution per unit of output of the industry. Based on findings of a survey in the RMG enterprises, it has been assumed for illustration purpose that the ratio of salaries to units of output is 10 percent. This ratio should be revised at the time of implementation.

Estimated cost rate of the bridging solution as percent of insurable salaries and unit of output

Benefit	Insurable salaries	Unit of output
Partial permanent disability	0.05%	0.005%
Total permanent disability	0.02%	0.002%
Death (survivors' pensions)	0.04%	0.004%
Total	0.11%	0.011%

[2] As a significant part of benefits will be long-term periodical payments, the contribution rate would have to be increased significantly every year under the pay-as-you-go system as cohorts of new injured workers and dependents of deceased would pile up. For example, it periodical payments in year 1 are 1,000 units, they would be around 2,000 in the second year, 3,000 in the third year and so on (considering a stable injury record and omitting terminations and pension indexation).