

RMG SECTOR MINIMUM WAGE: PROPOSITION, CALCULATION AND THE RATIONALE

January 2023



Bangladesh Institute of Labour Studies – BILS

RMG SECTOR MINIMUM WAGE: OUR PROPOSITION

MINIMUM WAGE

3 different areas	3 different minimum wages (BDT)	USD (1USD=106BDT)
Dhaka	22,850	216
Satellite cities	21,000	198
Chattogram	20,400	192
Average	21,415	202

WE FURTHER PROPOSE THAT

- **Maintain a minimum of 7-10% wage increase between two grades.**
- **Must add realistically achieved increments/benefits and work-years with the new revised minimum wage.**
- **Introduce calculating and paying dearness allowance at the end of each 6 months.**
 - **Adopt an effective and flexible minimum wage implementation plan** [Only once, in case mentioned minimum wage is agreed].
- **Agree a tripartite social dialogue to systematically assess & monitor factory capacity to enable from a flexible to full-fledged implementation** (same as above).
 - **Adopt a legal binding to protect labour cost separately during price negotiation with buyers.**
[Even if all employers' side parameters of cost remain the same, on average, only a 10-12 cents more sharing from buyers for every single product must enable this new wage]
- **Reduce the present 7 grades to 5 grades and identify and regroup all existing positions accordingly.**

January, 2023
Md. Manirul Islam

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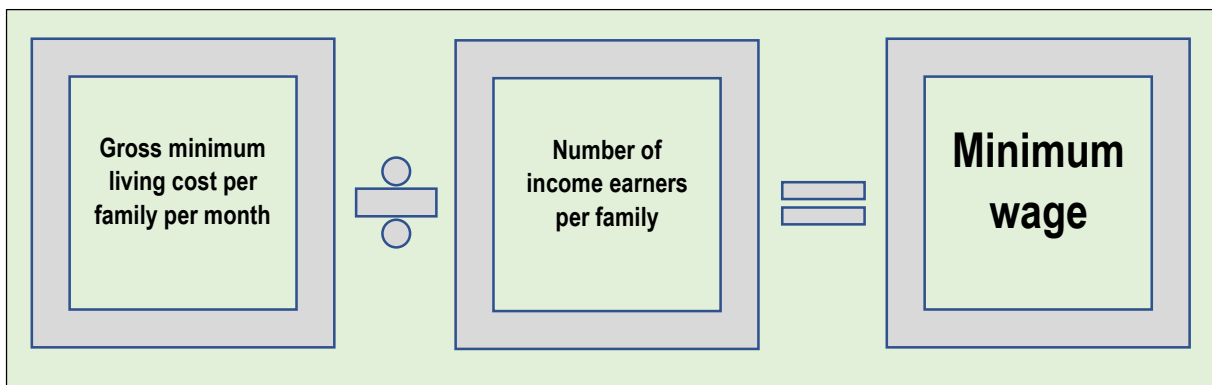
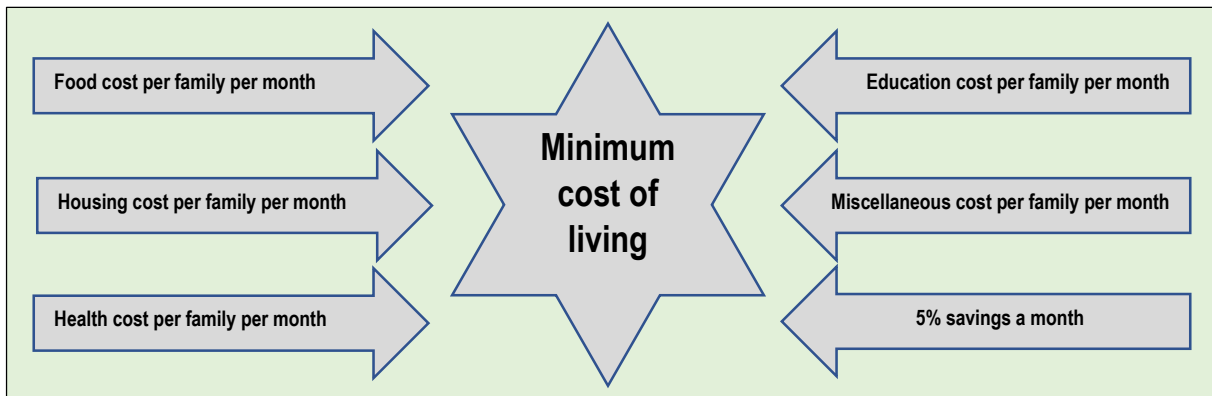
ACRONYMS

BDT	:	Bangladeshi Taka
BMT	:	Basal Metabolic Rate
GSKOP	:	Garments Sromik Kormochari Oikko Parishad (United front of Workers and Employees for Garments Sector)
HIES	:	Household Income and Expenditure Survey
IBC	:	IndustriAll Bangladesh Council
Kcal	:	Kilo Calorie
NFNH	:	Non-Food Non-Housing
NTUC	:	National Trade Union Center
PAL	:	Physical Activity Level
Sq. ft.	:	Square Fit
Sq. m.	:	Square Meter
USD	:	United States Dollar

METHODOLOGY

- Survey with RMG workers (457/Dhaka-Savar 132, Gazipur-Narayongonj 245, Chattogram 80)
 - FGD with workers' family members
 - Case study collection
 - Interview with Employers
 - Interview with Managers
 - Interview with Supervisors
 - Interview with TU Leaders
 - Interview with NGO/CSO/Experts/Activists
 - Consultation with the NTUCs
 - On the spot inspection of house rent (4 places)
 - On the spot inspection of food cost (2 times/4 places)
 - Literature review

HOW WE CALCULATE MINIMUM WAGE



MINIMUM WAGE CALCULATION & THE BASIS

Expenditure Items	Dhaka		Satellite cities		Chattogram	
	BDT	USD ¹	BDT	USD	BDT	USD
Food cost per family per month [{(BDT 109.73 per person per day X 365 days / 12 months) X 4 persons} + 980 gas]	14330	135	14330	135	14330	135
Housing cost per family per month [270-275 sq. ft./25-26 sq. m.]	10000	94	7600	72	7000	66
Non-food non-housing costs per family per month	7449	70	7112	67	6976	66
Health cost	1287		1052		1172	
Education cost	1256		1154		898	
Miscellaneous costs [Travel & communication, personal care, guest entertainment, clothing & footwear, furniture & household equipment, recreation & culture, outside eating, & various services (Bkash/dish/internet) & unforeseen others]	4906		4906		4906	
5% savings	1589	15	1452	14	1415	13
Total minimum household costs	33368	315	30494	288	29721	280
Divided by family income earners	1.46		1.46		1.46	
Net minimum wage	22855	216	20886	197	20357	192
Proposed minimum wage	22850	216	21000	198	20400	192

CALCULATION BASIS

- ➔ Minimum cost of living
- ➔ A reference family of 4 members
- ➔ 1.46 income earners out of 4 members in the family
- ➔ Research findings
- ➔ Commonly acceptable and practiced formula and parameters
- ➔ Most rational and logical calculation
- ➔ National and international legal mandate
- ➔ Consistent with research findings. In our survey, we asked individually 457 workers respondents to determine their minimum monthly wage needs over a number of main cost items. What they determine we have analysed as under:

Area	Required monthly wage
Dhaka	BDT22940
Satellite cities	BDT21330
Chattogram	BDT20760

¹ 1USD = 106BDT is calculated. This is the bank to bank transaction rate. Actual buying price is however higher than this.

HOW WE DETERMINE INCOME EARNERS PER FAMILY

We use [1.46 full-time equivalent income earners per family](#) to estimate wage. This means that the minimum living cost for a family of 4 persons is divided by 1.46 to determine our wage.

This is [based on our survey](#). Our survey finds that RMG workers' families have on average 1.46 full-time equivalent income earners. This is consistent with the findings of the HIES 2016. According to [HIES 2016](#), in urban Bangladesh, families have on average [1.33 income earners](#)².

WHY WE CONSIDER A 4 MEMBERS FAMILY SIZE

We use a family size of 4 persons (2 adults and 2 children/3 adults and 1 children) to estimate our wage. This is based on (i) the [survey](#), (ii) [fertility and child mortality rate](#), (iii) [HIES 2016](#), and iv) [Parents Care Act, 2013](#)³.

- (i) Our survey finds that the average household size of RMG workers is [4.2](#). On average, 86% workers have either 1 or 2 children. For nearly, one-third (32.6%) cases, either father or mother or both of them live together with the worker under the same roof.
- (ii) The [fertility rate](#) for urban Bangladesh is [2](#) and [>5 child mortality](#) is around [45 per 1000 births](#)⁴. That means, the probability of [loss per birth](#) is only around [0.09%](#). Thus, the number of children [born and surviving](#) to age 5 is [around 2](#) which implies an adjusted average family size of around [4](#) (2 adults and 2 children/3 adults and 1 child).
- (iii) According to the [HIES 2016](#), average [household size](#) in urban Bangladesh is [3.93](#).
- iv) [Parent's Care Act, 2013](#) compels every son/daughter to [look after parents](#) and provide them with food and shelter. If the parents live separately, every son/daughter is legally obligated to pay at least 10% of their income regularly to parents. In such a case, it is also a legal obligation to visit parents regularly. Under no circumstances, children can send their parents to old homes. Aggrieved parents can file cases for law violation. The punishment included BDT 200,000 as fine and, in default, six months jail.

HOW WE DETERMINE FOOD COST

- 1) For one (1) person, on average, [2188 Kcal](#)⁵ of food is considered. This is following [WHO recommended equations](#)⁶. Professor Richard Anker and his team in 2016⁷ based the same equation and found 2188 kcal of food as a minimum dietary needs for members of a RMG worker's family in Bangladesh. Following WHO equation, and considering basal metabolic rate against age, weight and height in Bangladesh, and size and composition of the reference family and assuming that all adults and children have moderate physical activity levels, this amount is calculated as a minimum dietary requirement.

² HIES (2016): table 4.1: Number of Members, Earners and Household Income Per Household and monthly income Per member and earner by Residence, p29

³Retrieve from

https://legislative.portal.gov.bd/sites/default/files/files/legislative.portal.gov.bd/page/a4e61cf7_dc53_479f_91fa_4f859ab4f464/Act%2049%20of%202013.pdf

⁴ National Institute of Population Research and Training (NIPORT), and ICF (2019) *Bangladesh Demographic and Health Survey 2017-18: Key Indicators*, Dhaka, Bangladesh, and Rockville, Maryland, USA Retrieve from <https://dhsprogram.com/pubs/pdf/PR104/PR104.pdf>

⁵ Detailed calculation of determining 2188 Kcal of food per person per day is given in the annex I

⁶ FAO/WHO/UNU. 2004. Human energy requirements: Report of a joint FAO/WHO/UNU expert consultation. FAO Food and Nutrition Technical Report Series 1. FAO, Rome Retrieve on 1st August 2022 from <https://www.fao.org/3/y5686e/y5686e.pdf>

⁷ Khan, M.E., Anker, R., Anker, M. and Barge, S. (2016). Living Wage Report: Dhaka, Bangladesh and Satellite Cities, Global Living Wage Coalition https://www.isealliance.org/sites/default/files/resource/2017-12/Dhaka_Living_Wage_Benchmark_Report.pdf

2) As per our calculation, food cost is **BDT 109.73 (1USD) per person per day**. This implies **BDT 13350 (126USD)** per month for the reference size **family of 4 persons**.

Table: Detailed Calculation of Food Cost

SL	Food items	Prevailing per capita food intake		Recalculated food intake considering 2188 Kcal		Market Price (Per KG in BDT)	Actual cost (BDT)
		Gram	Calorie	Gram	Calorie		
A	Cereals	363.5	1273.4	373.28	1307.64		
A.1	Rice	316.7	1097.4	321.66	1126.91	58	18.66
A.2	Wheat	26.2	89.7	26.29	92.11	48	1.26
A.3	Other (Maze, Buffed rice, Chira, Barley ⁸)	20.5	86.4	25.33	88.72	80	2.10
B	Potato	62.0	60.2	63.67	61.82	28	1.78
C	Vegetables	174.1	92.7	178.78	95.19	40	7.15
D	Pulse (Masoor & Khasari)	16.9	58.6	17.35	60.18	100	1.74
E	Milk	30.0	38.2	30.81	39.23	90	2.77
F	Edible oil	29.6	266.2	30.40	273.36		
F.1	Mustard	1.0	9.0	1.03	9.24	385	0.40
F.2	Soybean	28.6	257.1	29.36	264.01	210	6.17
G	Meat, Poultry, eggs	49.57	65.2	50.90	66.95		
G.1	Chicken	33.67	37.5	29.28	38.51	175	5.12
G.2	Eggs	15.9	27.6	21.55	28.34	225	4.85
H	Fish	67.9	89.8	69.73	92.21	250	17.43
I	Spices	75.0	73.5	77.02	75.48		
I.1	Onion	34.6	17.3	18.13	17.77	50	0.91
I.2	Chilies	12.3	16.9	17.71	17.35	160	2.83
I.3	Others ⁹	28.1	39.3	41.18	40.36	280	11.53
	(Turmeric powder 260 tk KG, Chili powder 300 tk KG, Ginger 100tk KG, Garlic 120tk KG, Cumin powder 500 tk Kg, Cinnamon 480, Coriander powder 200tk KG)						
J	Fruits (Guava/ Banana/Pineapple)	45.2	31.8	46.42	32.66	100	4.64
K	Sugar	7.6	30.1	7.80	30.91	80	0.62
L	Miscellaneous (tea 400 tk kg, betel leaf 400tk KG, biscuit 160tk KG, bread 100 tk KG)¹⁰	53.41	50.9	54.85	52.27	265	14.54
Total		974.7	2130.7	1001	2188		104.50
5% added food cost [Other foods + variation + waste]							5.23
Total: Per person per day							109.73
Total: Per person per month [BDT108.7 per day X 365 Days / 12 months]							3338
Total: Monthly Family food cost [BDT3306 per person per month X 4 persons]							13350
+ Cost of a single gas burner a month							980
Total monthly food cost							14330

⁸ Mean average figure of these four cereal items is considered

⁹ Mean average figure of these 7 spices items is considered

¹⁰ Mean average figure of these 4 items is considered

- 3) It is only possible to get home made food from this minimum pricing. In all four locations, our research finds, workers cook using a gas burner. Using a single gas burner costs BDT980 per month. This cost is finally added with the estimated amount. The gross food cost thus calculated to BDT14330 per month.
- 4) Food is a habit. It is not like that people shall start eating a newly prescribed diet. For this reason, initially we base the listed food items provided in the HIES 2016, that people in urban Bangladesh usually consume. Next to this, a minimum dietary requirement of 2188 Kcal is recalculated for these food items.
- 5) Only, beef and mutton eating habits are dropped from this list since in our survey we didn't find this food habit among workers on a regular basis. Calorie intake from beef and mutton is thus redistributed for chicken items.
- 6) Four teams have collected running food prices data from four different locations i.e., Dhaka, Gazipur, Narayangonj, and Chattogram. From each location, two market places are visited that sell the lowest priced food. From each location, food prices are collected two times for two different months such as late June 2022 and late July 2022 and the average figure is considered.
- 7) Our data collection team didn't find significant variation of food cost in the 4 different markets. For minor differences for some items, four (4) teams sit together, discuss every observation and agree on the best acceptable lowest average cost.
- 8) However, our data collection team finds significant price variation of some food items between two months. We have proposed for introducing dearness allowance payment.
- 9) There may be some other foods than the listed ones. It is not unlikely to eat beef or some other expensive variety once in 1/2/3 months. There is also waste and spoilage. For all of these, an additional 5% cost is further added. This is a top conservative assumption in any consideration.

Boubazar, Sherapara, Mirpur on 20/6/2022



TNT Bazar, Gazipur on 22/7/2022



Roufbad, Chattogram, on 26/7/2022



Ryerbag Kachabazar, Narayangonj, 20/6/2022



HOW WE DETERMINE HOUSING COST

Place	Size	Other standards	Cost		Total
			Rent	Utilities	
Dhaka	225 sq ft 1 room + 30 sq ft toilet + 42 sq ft kitchen = 297 sq ft.	Fully concrete building, separate toilet, comparatively clean kitchen, window in bed room, better light and air, near workplace, comparatively better environment	9000 including water bill	1000 Elec	10000
Satellite cities					
Gazipur	240 sq. ft. 2 rooms (1 pocket room) + 25 sq. ft. toilet + 42 sq. ft. kitchen = 307 sq. ft.	Fully concrete building, separate toilet and kitchen, window in bed room, sufficient air and light, near workplace, comparatively better environment	6300	800 Elec 300 Water	7400
Narayangonj	210 sq. ft. 1 room + 28 sq. ft. toilet + 42 sq. ft. kitchen = 280 sq. ft.	Fully concrete building, separate toilet and kitchen shared, window in bed room, good air and light flow, near workplace, comparatively better environment	6800 including water	1000 Elec	7800
Mean average for satellite cities					7600
Chattogram	260 sq. ft. 2 rooms (1 pocket room) + 25 sq. ft. toilet + 42 sq. ft. kitchen = 327 sq. ft.	Fully concrete building, separate toilet and kitchen shared by 2 families (7 persons), window in bed room, good air and light flow, near workplace, comparatively better environment	6000 including water	1000 Elec	7000
Since we have calculated gas bill with food cost, we drop gas bill from calculating into house cost					

🔍 **Criteria:** Having extensive literature review and talking to important RMG relevant stakeholders and experts, we first set the following standards for minimum acceptable housing for Bangladesh's RMG workers:

- Walking distance from the factory
- 270-275 square feet (25/26 square meters)¹¹ of living space
- Cement walls and cement floor
- Roof does not leak (tin or cement)
- Comparatively healthy sanitation and the users not more than eight (8)
- kitchen that is clean and not shared by more than two families
- Water source inside the home arrangement
- Environmentally in an acceptable location.

¹¹ For the low-income group, this is the most conservative assumption of living space. Indian government set standard for low income group is 28-48 square meter living space; In Vietnam it is 30 square meters; In Kenya it is 32 square meters.

- ❏ **Process:** Four different teams visited Dhaka, Narayangonj, Gazipur (including Ashulia), and Chattogram to find the minimum acceptable housing as per set criteria and to determine the housing costs. In each location, 4 homes are visited. Narayangonj and Gazipur are considered as satellite districts and finally the mean figure for them is taken.
- ❏ **Housing cost:** As per our set standards for minimum acceptable housing, costs ranged from BDT7000 to BDT 10,000 per month depending on locations. Housing cost is determined highest for Dhaka BDT 10,000 per month, followed by satellite cities BDT 7600, and lowest for Chattogram BDT 7000 only.

Shewrapara, Mirpur, Dhaka

Sample of Minimum acceptable housing

Pagar, Gazipur



- **Not acceptable:** Our teams didn't find the following housings as minimum acceptable

Place	Size	Other standards	Total	Accept or reject
Dhaka	10ft. X 8 ft. 1 room	Shared kitchen and toilet for 15 persons; 1 drinking water source for 4 families; unhealthy environment	4500	Reject
Gazipur	12 ft. X 10 ft. 1 room	21 families live in 21 rooms in 2 rows; 2 kitchen, 2 toilets, and 2 bathrooms for entire 21 families.	5000	Reject
Narayangonj	10 ft. X 8 ft. 1 room	Mud floor; Tin wall and roof; 4 families shared 1 kitchen; Unhygienic and unstructured toilet.	3925	Reject
Chattogram	10ft. X 8ft. 1 room	8 families live in 8 rooms; 2 kitchen, 2 toilet and 1 bathroom shared by 8 families	3500	Reject

Not acceptable housing

Dhaka

Narayangonj

Gazipur

Chattogram



HOW WE DETERMINE NFNH COSTS

HEALTH COST CALCULATION

Based on a scientifically representative survey of 457 RMG workers, health cost is determined. 132 workers are surveyed from Dhaka and Savar, 245 from Gazipur and Narayongonj, and 80 from Chattogram. This survey has calculated **BDT1287** health cost per worker's family for Dhaka, BDT1052 for satellite cities, and BDT 1172 for Chattogram.

Locations	Costs (Per household per month)
Dhaka (51) 132	1287
Satellite cities	
Gazipur (178)	1098
Narayangonj (67)245	1006
Mean	1052
Chattogram (80)	1172

- A main observation from the survey is that families which have accompanied old-aged members such as father/mother/in-laws, mostly have a regular and increased health costs. Apart from this, families having under five children, have relatively higher health costs.
- Survey findings are somewhat consistent with the national estimations on this. According to HIES 2016, medical costs account for 4.57%¹² of all consumption expenditure per family per month in urban Bangladesh. When the minimum food consumption cost is BDT14330 a month as we have determined in the earlier food cost section, which is 42.59% of all consumption expenditure as per HIES 2016, total consumption expenditure calculates to BDT33646 only. Now, 4.57% of BDT33646 means on average, every family, spent BDT1538 a month for medical purposes in urban locations.
- Secondly, according to HIES 2016, 21.4% of the population suffers an illness per month¹³. This implies 2.6 times illness a year. Thus, for a family of 4 members, the number of illness count is 10.4 (2.6 times X 4 persons) a year. The same survey noted that average outpatient medical expenses is BDT378 and the respective medicine cost is BDT701 in urban Bangladesh¹⁴. This implies BDT 935 medical cost per family per month [BDT 1079 (BDT 378 + BDT701) X 10.4 times /12 months].
- There are a number of other costs associated with illness such as loss of workdays and income of the second main earner of a workers family due to accidents/illnesses, caring cost to children during illness, and costs associated with a serious illness like kidney diseases. We didn't consider them. From this perspective, we can say our survey findings is only a conservative estimation of health cost and thus acceptable in any consideration.

¹² HIES (2016), Table no 21: Distribution of consumption expenditure of major groups of item by monthly household income groups, 2016, p227

¹³ HIES (2016), Table no 96: Distribution of population who suffered from some sorts of illness in the preceding 30 days by type of diseases, 2016, p506

¹⁴ BBS (2019) *Final report on household income and expenditure survey 2016*, p100

EDUCATION COST CALCULATION

- ✍ The same survey that determined health cost, has also determined education cost of RMG workers families. Survey findings show that education cost per workers family is **BDT1256 for Dhaka, BDT1154 for satellite cities, and BDT898 for Chattogram.**

Locations	Costs (Per Household Per Month)
Dhaka	1256
Gazipur (Satellite city)	1192
Narayanganj (Satellite city)	1115
Mean of satellite cities	1154
Chattogram	898

- ✍ The survey observed that education cost particularly cover **fees, costs for uniform, stationery, books, and sports and cultural costs and tiffin costs.** Majority of workers' children attend government school, close to their residences. Education is free in government schooling. The cost of sending a child to private school and madrassa is relatively higher, particularly because of fees.
- ✍ Our survey findings are consistent with a number of other estimations on this. According to the **HIES 2016**, the average expenditure of education is **BDT1502** per household per month in urban Bangladesh¹⁵. The same survey further has estimated that education costs account for 5.5-6%¹⁶ of all consumption expenditure in urban locations particularly for those who earn between BDT8000 to BDT19999 a month¹⁷. Given this estimation, when total consumption expenditure is BDT33646 a month, as we have determined in the earlier food cost section, education cost calculates to **BDT1851-1884** per family per month. Dr. Richard Anker and his team earlier in 2016 estimated that education cost is BDT891 for Dhaka and BDT 818 for satellite cities particularly for RMG workers families.

MISCELLANEOUS COSTS CALCULATION

- ✍ **BDT4863** is calculated miscellaneous cost per family per month. This cost included cost for **personal care** (laundry, baby feeder/soap/toothpaste/toothbrush/coconut oil/snow-powder /hair clippers/lipstick/nail polish/razor/saving cream/hair cut/mask & sanitizer/ sanitary napkin etc.), **travel and communication**¹⁸, **guest entertainment**, **clothing & footwear**, cost for **furniture and household equipment**, **recreation and cultural** costs, cost for **eating away from home**, costs for various services such as **Bkash/Dish/Internet** and **unforeseen others**.
- ✍ We applied a simple one go approach to determine miscellaneous costs. We base the **HIES 2016** for this. According to this survey, miscellaneous costs account for **14.58%** of all consumption costs in urban Bangladesh. Now, 14.58% of total consumption costs of BDT33646¹⁹ is BDT4906 a month.

¹⁵ HIES (2016), Table: 7.12: Per Household Expenditure on Education by sex and residence, p86

¹⁶ HIES (2016), Table no 21: Distribution of consumption expenditure of major groups of item by monthly household income groups, 2016, p227

¹⁷ HIES (2016), Table 21, p227

¹⁸ Our research finds that 57.1% of workers travel 1.1 to 5 Km per day to reach the workplace

¹⁹ According to HIES (2016), food cost accounts for 42.59% of all consumption costs which is equivalent to BDT14330 only as we have determined in the food cost section. Given this estimation, total consumption cost is calculated BDT 33646 only.

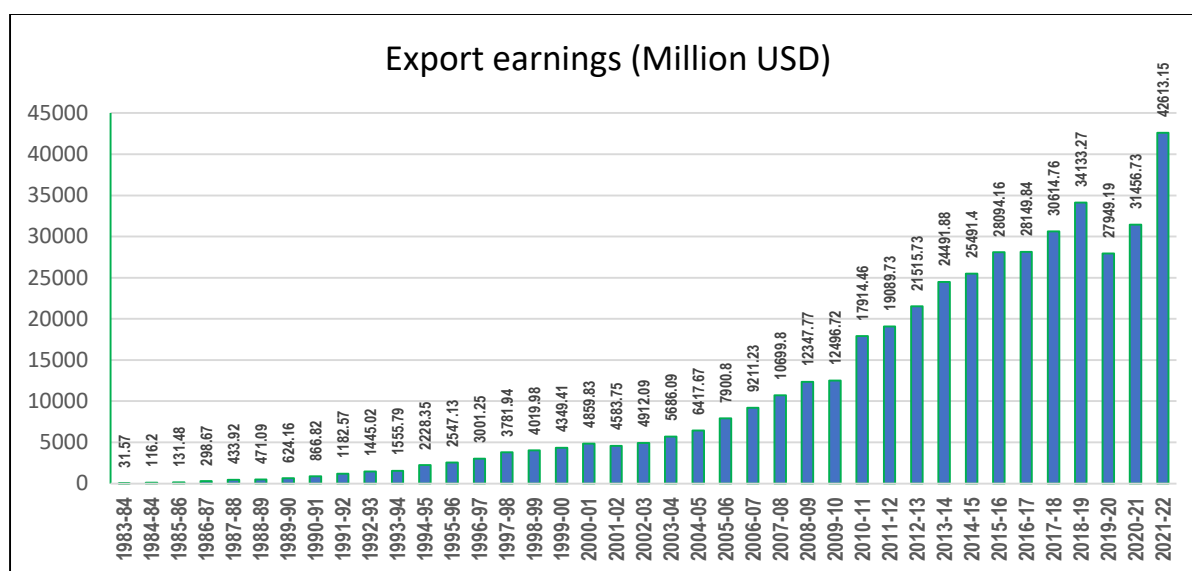
PROVISION FOR SOME SAVINGS

It is common when estimating a wage to add a small savings margin to allow for unexpected events. Most common figure is to keep a 5 to 10 percent savings margin. We use the lowest 5% savings margin for our calculation.

ANALYSIS OF RMG CAPACITY

3rd LARGEST EXPORTER IN THE WORLD

Bangladesh is the third largest readymade garment (RMG) exporter in the world only after China and Vietnam. RMG industry earns nearly 82% (eighty-two) of total export income. Export volume of this sector has mounted from only USD 31.57 million in 1983-84 to USD 42.61 billion in 2021-22.



Data Source: Export Promotion Bureau

EXPORT EARNING RATIO PER WORKER DOBOULED IN THE LAST FIVE YEARS

Export earnings ratio per worker in the RMG industry estimates as BDT 1,421,843 only in the fiscal year 2021-22²⁰. Available estimates suggest that export earnings ratio per worker has been more than double between last five years period²¹.

²⁰ According to BGMEA's latest count, 3862 export oriented RMG factories have employed 2,847,184 workers. Given this employment figure against USD 42.61 billion export earnings in the year 2022, export earnings ratio per worker estimates as BDT 1,421,843 (1 USD = 95BDT) only in the fiscal year 2021-22. Retrieve on 01 August 2022 from <https://mappedinbangladesh.org/>

²¹ According to the Labour Force Survey Bangladesh 2016-17, RMG industry employed 3137000 workers in the year 2016. Considering this figure against an export earnings of USD 28.15 billion, export earnings ratio per worker estimates as BDT 708,906 (1USD = 79BDT) only in the fiscal year 2016-17, which has been more than double BDT 1,421,843 only as per the latest count. Please see annexure1: Table S161: Distribution of employed persons aged 15 or older, by BSIC at 2-digit level, sex and area, BBS 2017, Quarterly Labour Force Survey 2015-16.

ROBUST EXPORT GROWTH AFTER INTIAL COVID SHOCK

In the financial year 2019-20, following the COVID outbreak, RMG export growth was negative, some 18%. In the subsequent years, export growth recovery has been robust. RMG export growth in the last financial year 2021-22 has been remarkably higher, around 35.44% with the highest export earning of nearly 43 billion USD. Our research

Financial Year	Export Earning (Billion USD)	Year on Year growth (%)	% of RMG to Total Export
2017-18	30.61	8.74	83.49
2018-19	34.13	11.50	84.21
2019-20	27.95	-18.12	83.00
2020-21	31.46	12.56	81.16
2021-22	42.61	35.44	81.82

Source: Export Promotion Bureau

findings further show that Bangladesh's RMG is a gainer from the ongoing Russia-Ukraine and USA-China crisis. Reportedly, more and more buyers who were earlier importing garments from China are now increasingly sourcing their products from Bangladesh. Few of the employers expressed their panic too about the time ahead, particularly in view of the global recession and ever increasing rate of inflation world-wide which, to one employer, may cause a cut of non-food consumption expenditures drastically.

INDUSTRY SIZE GROWS EXPONENTIALLY

From just only 50 (fifty) factories in 1980 the RMG industry now have several thousand factories. Bangladesh has now 3862 export oriented RMG factories²². The current members of the BGMEA and BKMEA are about 3584 units and 2416 units respectively.

STUDY FINDINGS: CPD RESEARCH

One of the CPD researches²³ shows that employer's share of profit is highest (8.9%) and the labour cost is lowest (2.7%) in Bangladesh in comparison to Vietnam and China.

Breaking of FOB Price into different actors and factors involved in the production of making Men's Basic 100% Cotton 5 Pocket Denim Jeans: A Comparative Analysis among 3 countries

Breaking of Cost	Countries					
	Bangladesh		Vietnam		China	
	USD	%	USD	%	USD	%
Fabric cost	4.49	59.4%	4.45	58.4	4.27	55.5
Packaging Cost	1.14	15.1%	1.13	14.8	1.11	14.4
Labour Cost (Workers)	0.20	2.7%	0.28	3.7	0.54	7.0
Overhead cost [Manufacturing Overhead & SGA (Selling, General, Administrative)]	0.18	2.4%	0.24	3.2	0.28	3.6
Wash/ Embroidery	0.40	5.3	0.40	5.2	0.40	5.2
Additional Seconds	0.26	3.4	0.23	3.0	0.20	2.6
Profit (Owners)	0.67	8.9	0.67	8.8	0.68	8.8
Freight/Insurance	0.23	3.0	0.22	2.9	0.22	2.9
Total FOB Price	7.57	100.00	7.62	100.00	7.69	100.00

²² BGMEA: Mapped in Bangladesh, Retrieve on 01 August 2022 from <https://mappedinbangladesh.org/>

²³ *Dr Khondaker G Moazzem*, CPD-FES Dialogue, Bangladesh Apparels Sector: Does Margin Matter for Ensuring Compliance? Presented on 12 August 2015, Dhaka

STUDY FINDINGS: BILS RESEARCH

- ❏ **83%** of workers said to us that there cannot be any reason not to pay workers a living wage. Employers' willingness only matters. **14%** of workers claimed that their factories are insolvent to pay workers a better wage. Some, **3%** blamed the buyers not to share required labour costs.
- ❏ Ten (10) of the factories whose employers and managers we talked to, have grown several times in the last ten years period, few have grown more than 10 times.
- ❏ Bangladesh is now home to the world's highest number of LEED certified green RMG factories²⁴. Bangladesh's RMG industry has more than 157 green buildings.
- ❏ **15-20%** of the RMG factories reportedly have the top capacity and another **40-50%** medium to upper medium capacity to pay for a satisfactory wage. However, reportedly, around **30-40%** factories have low to poor capacity.
- ❏ Out of total **3862 RMG factories**, 1760 factories are 91 to 100 percent compliant in line with advanced international occupational health and safety standards. Of them, 1260 factories are 91% to 100% compliant according to ACCORD set standards²⁵, 463 factories are fully compliant according to the standard set by the Safety Alliance Bangladesh²⁶ and the rest 37 factories have completed 91-100% safety standards under the supervision of DIFE²⁷. Thus, it can be analysed that 45.6% RMG factories are financially sound to pay for workers a better wage.
- ❏ FoB price is reportedly 30% to 35% of the tag price. Couple of RMG employers' said to us, "tag price is 2 to 2.5 times more than the FoB price". As per this estimate, when the tag price is 5USD, its FoB price calculates to 1.5-1.75USD. Rest 3.25-3.5USD remains with the buyer. Buyers share of cost largely cover carrying cost, business cost, and the profit.

From the earlier mentioned CPD research and from our research, we find that labour cost is 2.7-2.8% of the FoB price. That means for a shirt that finally sold in 5USD, labour cost is only 3 cents. Thus, for a 10 dollar tag priced product, labour cost is around 8-9 cents and for a 15 dollar product, it is around 12-13 cents. The average labour cost is only 7-8 cents. That means, even if all employers' side parameters of cost remain the same, on average, only a 10-12 cent more payment from buyer side for labour cost for every single product is enough to enable our calculated minimum wage. Individually for a 5USD tag priced product, it would require only at best 5cents and for a 10 USD and 15 USD product the cost sharing requirement is respectively around 12cents and 25 cents.

Tag price (USD)	FoB (USD) price	Labour cost (Cents)	Additional cost needed to enable proposed wage	% of labour cost needed to enable proposed wage	Buyers share (USD)
5	1.5-1.75	3 cents	4-6 cents	1.4% of tag price	3.25-3.5
10	3-3.5	8-9 cents	12-15 cents	1.4% of tag price	6.5-7
15	4.5-5.25	12-13 cents	18-20 cents	1.4% of tag price	9.75-10.5
On average	28-33%	7-8 cents	11-13 cents	1.4% of tag price	67-72%

²⁴ Leadership awards in Energy and Environmental Design (LEED) by the United States Green Building Council (USGBC)

²⁵ Sourced from <https://bangladeshaccord.org/updates/2021/04/07/safety-remediation-progress>

²⁶ Sourced from <http://www.bangladeshworkersafety.org/2-uncategorised/338-cap-completion-ba>

²⁷ Sourced from <https://lima.dife.gov.bd/public-report/factory-profile>

FINAL POINT OF ANALYSIS

Minimum cost of living of a family of 4 members' in urban Bangladesh is our basis of calculation of a minimum wage. Certainly, there is no space to go for a wage beneath this. However, behind the findings that around 30% are low to poor capacitated factories, it analyze meaningful to agree a flexible implementation plan along with our proposed minimum wage as per following:

- 15-20% top and upper capacitated factories shall implement the new minimum wage immediately after effect
- Medium and upper medium capacitated factories of around 40-50% shall be allowed preparatory time of 3/4 months for implementation of the declared wage after effect
- For rest around 30% poor/less capacitated factories, some special and different arrangements may offer for a specific time-period to enable them full-fledged implementation. Such a special and different arrangement can be for one in lifetime and the time period cannot be more than three years.
- A tripartite social dialogue can be thought of with the assigned responsibility to assess and monitor the capacity building aspects and the plan implementation. Over an interview, one influential BGMEA representative said to us, "I will welcome any such tripartite social dialogue to assess RMG capacity".
- Finally, to ensure fair share of labour cost from the byers, it is analysed appropriate to adopt a legal binding to protect labour cost separately during price negotiation.

DEVELOPING COUNTRY GRADUATION AND RELEVANT IMPLICATIONS

On 24 November 2026, Bangladesh will fully graduate to a developing country status in the UN processes. Along with the economic vulnerability index, per capita income and human development index are two other main criteria attached to the graduation processes.

Secondly, once graduated fully, duty and quota free access to the EU market will cease to exist. Onward, the country will have to apply for GSP+ facilities (zero duty market access up to 66% of tariff lines). To avail GSP+ facilities it is a must to ratify and effectively implement 27 core UN conventions plus to accept reporting requirements of all kinds. Among these, there are Conventions like 1) ICESCR 1966, and 2) Convention concerning Equal Remuneration of Men and Women Workers for Work of Equal Value, No 100 (1951). These require among others to ensure for workers a decent living wage which is equal for all.

Legally, this is going to be the last RMG sector wage review before Bangladesh graduates to a developing country status. As such, it is an opportunity too. It deserves to be a preparatory phase of wage review. Setting a wage that enables a minimum cost of living must offer a reasonable preparation for this.

CURRENCY DEVALUATION & INFLATION ADJUSTMENT: RECALCULATION OF BASE WAGE

- RMG is the leading export earning product. Currency devolution directly impacts export earnings.
- Labour cost in the RMG sector is earned in dollar or euro. It is thus rationale that labour cost is adjusted against currency devolution.

- Last minimum wage was declared in **2018**. That time, **1 USD** was equivalent to **82 BDT** (On average) only.
- As per this calculation, minimum wage for 7th grade was set **USD 98** only (BDT8000/82BDT=98USD).
- BDT has been devaluated against dollar significantly in the recent years. As per **last** set government rate, **1 USD** equals to **106 BDT**.
- That means, **employers earning** only **through currency exchange rate** has been **increased around 29%** in 2022.
- As per this newly set exchange rate, last set minimum wage recalculates to **BDT 10,388 (98USD X 106BDT)** only, without any change in the base minimum wage.
- **After inflation adjustment** against Bangladesh Bank estimated year on year consumer price index inflation rate (the actual rate is said much higher), the same figure further recalculates to **BDT 12345** (BDT10388 + BDT1957) or **BDT 12928** (121.96USD X 106 BDT, if calculated in USD) only in 2022.
- That means, for any further revision or wage increase, **BDT12345 or BDT12928** should be considered **the base minimum wage** for the 7th grade in the year **2022**. Any revision and/or wage increase to be added with this.

Table: Minimum wage after inflation adjustment

Year	CPI Inflation Rate (%)	Minimum wage in USD after inflation adjustment		Minimum wage in BDT after inflation adjustment	
		Before	After	Before	After
18-19	5.48	98.00	103.37	8000	8438
19-20	5.65	103.37	109.21	8438	8915
20-21	5.56	109.21	115.28	8915	9411
21-22	5.80	115.28	121.96	9411	9957
Total increase			23.96 (121.96-98)		1957 BDT (9957-8000)

WHAT IS THE LAST TAKING AMOUNT

Almost **five years** have **passed** since the effect of the last set minimum wage. Having included yearly increments, the **base income** of the workers have now revised and **increased** to a new level. As per our research findings,

the 7th grade RMG workers **now** on average, **earn BDT 10,231.00 per month** excluding overtime income. It is by all means logical that these achieved income and benefits are **added realistically**

when implementing the new revised minimum wage.

Table: Current wage taking

Grades	Monthly income excluding OT	Monthly income including OT
7 th Grade	BDT10231	BDT12873
6 th Grades	BDT10873	BDT13747

PREVAILING RMG MINIMUM WAGE & THE GAPS

There is a large gap between prevailing RMG minimum wage and other cost estimations. Current minimum wage is around 78% less than the upper poverty line wage²⁸. It is around 98% less than the 24th grade unskilled government employees like the cleaning worker, around 124% less than the Sawmill workers minimum wage, and around 200% less than the banking sector minimum wage (Cleaning workers/messengers). Global living wage coalition has calculated almost a three times higher minimum wage for RMG workers. On the other hand, wage estimates on the basis of running per capita income and as calculated by the Asian floor wage, reinforce nearly seven/eight times²⁹ higher the current minimum wage.

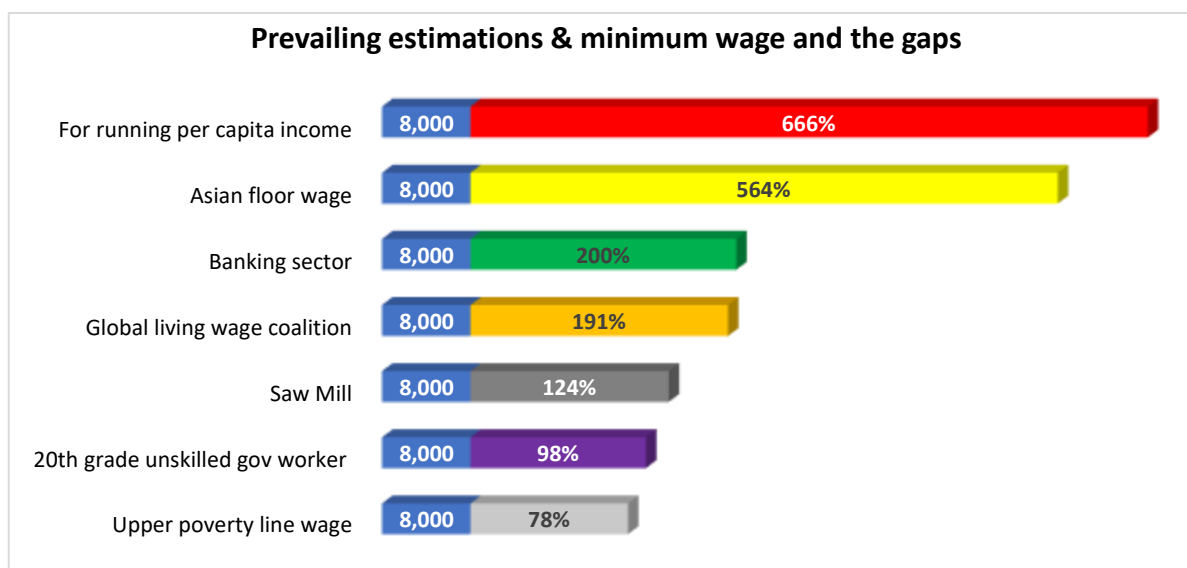


Table: Prevailing minimum wages and different estimations

Sectors and Estimations	Wage (BDT)
Minimum wage estimation considering per capita income	68343 (645\$)
Asian Floor Wage estimation of RMG Sector Minimum Wage	53104 (501\$) ³⁰
Global Living Wage Coalition estimation of RMG sector minimum wage	21648 (204\$) ³¹
Minimum wage for last grade Banking sector workers like cleaner (2022)	24000 (226\$) ³²
Minimum wage for last grade Sawmill workers (2022)	17900 (169\$) ³³
Minimum wage for 24 th grade unskilled government workers like cleaner	15850 (150\$)
Upper poverty line wage	14214 (134\$)

²⁸ According to HIES 2016, upper poverty line income in urban Bangladesh is BDT5,188 per person per month. Thus, upper poverty line wage calculates to BDT1 4,214 [BDT5188 per person per month X 4 persons a family / 1.46 income earners] only per workers per month.

²⁹ Current per capita income is 2824USD. Following this estimation, minimum wage for RMG worker is recalculated as BDT61,251 per month [2824USD per person X 4 persons family /1,46 income earners per family /12 months X BDT95]

³⁰ Retrieve from <https://asia.floorwage.org/living-wage/>

³¹ Retrieve from <https://www.globallivingwage.org/countries/bangladesh/>

³² Retrieve from <https://www.bb.org.bd/en/index.php/mediaroom/circular>

³³ Retrieve from http://www.dpp.gov.bd/upload_file/gazettes/44765_72791.pdf

RMG SECTOR MINIMUM WAGE VS GOVERNMENT SECTOR MINIMUM WAGE: A COMPARATIVE ANALYSIS

20th Grade government sector unskilled workers particularly included cleaner, messenger, cook etc. In 1985, the basic salary of 20th Grade government workers and 7th Grade RMG workers were respectively BDT 560/- and BDT 500/-

only. The difference was only 12%. Including additional allowances and benefits there however, marked nearly 46% differences between their wages in 1985-86. This wage difference widened further through successive wage reviews. Currently, 20th grade government

employees receive around BDT 15850/- a month in which basic salary is BDT 8250/-only, nearly two times higher (198%) than the RMG sector minimum wage. Apart from this, government employees enjoy significantly other social security benefits like pension and gratuity, child education allowance and New Year allowance.

Trends: Minimum Wage Increase in the RMG Sector

Wage Review Year	Minimum Wage (BDT)	% Increase
1986	627.00	Base Year
1994	930.00	48.33
2006	1,662.00	78.71
2010	3,000.00	80.51
2013	5,300.00	76.67
2018	8,000.00	50.94

Gap Analysis:

20th Grade Unskilled Government Sector Employees Vs 7th Grade Unskilled RMG Sector Workers

Year	Wage (Monthly Total)	Additional Facilities/Allowances	Increase (%)	Gap Between GOV & RMG (%)
1985	BDT 915	Pension, Gratuity, Festival, and Recreation Allowance	Base Year	45.93% (915Tk Vs 627Tk/86)
1991	BDT 1605	Pension, Gratuity, Festival, and Recreation Allowance	75.41%	155.98% (1605Tk Vs 627/86)
1997	BDT 2635	Pension, Gratuity, Festival and Recreation Allowance	64.18%	183.33% (2635Tk Vs 930Tk/94)
2005	BDT 4690 (Dhaka) BDT 4470 (Others)	Pension, Gratuity, & allowance for Festival and Recreation	77.99%/ 69.64%	182.19% (4690Tk Vs 1662Tk/06)
2009	BDT 7900 (Dhaka) BDT 7600 (Others)	Pension, Gratuity, Child Education, Festival and Recreation Allowance	68.44%/ 70.02%	163.33% (7900Tk Vs 3000Tk/10)
2015	BDT 15850 (Dhaka) BDT 15250 (Others)	Pension, Gratuity, Child Education, Recreation, New Year Allowance	100.63%/ 100.66%	198.13% (15850Tk Vs 8000Tk/18)

LEGAL NATIONAL CONTEXT: CALCULATION BASE

Instruments/ Institutions	Title & Articles/Sections	How living wage is explored
The Constitution of the People's Republic of Bangladesh	Fundamental Principles of State Policy, Article 15, 15a, 15b & 15d	One of the fundamental responsibilities of the State is to bring a steady improvement in the material and cultural standard of living. Basic necessities of life, including <u>food, clothing, shelter, education and medical care</u> shall be secured. Employment at a <u>reasonable wage</u> shall be guaranteed. <u>Right to social security</u> shall be addressed.
Vision 2021-41 & Perspective Plan 2021-2041		The vision 2021-41 and the perspective plan 2021-2041 envision Bangladesh to be an upper middle-income country by 2031 and high-income developed country by 2041, with <u>per-capita income</u> of over <u>USD 12500 a year</u> . To move to a high-income economy one of the core strategic goals is Urban transition.
BLA 2006 (Amended 2013)	Recommendation of minimum wage rates, Section 141	In making its recommendation the Wages Board shall take into consideration among others <u>cost of living and standard of living</u>
Labour Policy 2012	Labour Policy 2012	Wage must be sufficient to maintain a <u>standard of living</u> of the <u>workers and their family</u> members. Wage amount and the associated incentives must be <u>sufficient for physical and mental development</u> of the worker and helpful for increasing productivity.

LEGAL INTERNATIONAL CONTEXT

Minimum Wage as explored in Global Human Rights Documents		
Institutions/ Instruments	Title & Articles/Sections	How minimum wage is explored
UN UDHR 1948	Article 23 (3)	<u>Just & favourable remuneration</u> ensuring for <u>himself & his family</u> an existence worthy of <u>human dignity</u>
SDG	Goal 8	'Promote sustained, inclusive and sustainable economic growth, full and

		<u>productive employment</u> and <u>decent work</u> for all'. According to ILO, productive employment yield <u>sufficient</u> returns to labour to permit a <u>worker and his/her dependents</u> a level of <u>consumption above the poverty line</u> (ILO, 2012) ³⁴ .
ICESCR 1966	Article 7.	Remuneration which provides a <u>minimum decent living</u> to <u>worker and his/her family</u>
European Social Charter 1961	Part I.4.	A fair remuneration sufficient for a <u>decent standard of living</u> for <u>worker & his/her family</u>
ILO	Constitution, Preamble, 1919	An <u>adequate living wage</u> that can help to establish universal and lasting peace.
	Declaration on Social Justice for a Fair Globalization, 2008	<u>A minimum living wage</u>
	Resolution No. 30, 1928 Chapter-III	Wage that help workers to maintain a <u>suitable standard of living</u> .
	Convention No. 131, Article 3, 1970	Elements that deserve consideration in determining a wage are the 1) <u>needs of workers and their families</u> , 2) the <u>cost of living</u> , 3) <u>social security</u> benefits, and 4) the relative <u>living standards</u> of other social groups
Indian Constitution 49	Directive Principles of State Policy	A living wage that ensure a <u>decent standard of life</u> & full enjoyment of leisure & social & cultural opportunities.

NON-FOOD COSTS PRACTICES

Countries	General Non-Food Costs	State Addressing Non-Food Costs
India	Housing/Accommodation, Medical, Fuel/Transportation, Child Education, Old Age	Monthly pension from Retirement Fund and compensation and golden handshake matters are covered

³⁴ ILO (2012), Understanding Deficit of Productive Employment and Setting Targets A Methodological Guide, Chapter 2: Concepts and Definitions, p3, paragraph 3, International Labour Office, Geneva Retrieve at https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_177149.pdf

	allowance, Marriage and Dearness Allowance, Provident fund and Gratuity.	by National level Social Insurance Scheme.
Pakistan	House rent, Transport Allowance, Living Allowance and Dearness Allowance.	100% Compensation to occupational victims, maternity benefits and old age allowance are covered by a national level Social Security Insurance.
Indonesia	Domestic & dress allowance, child education, medical & maternity, transport, entertainment and savings allowance, provident fund and gratuity	100% Compensation coverage for occupational victim.
Cambodia	Medical, Accommodation, Transportation, Attendance Allowance and Seniority Allowance	100% Compensation coverage by the Compulsory National Social Security Fund.
Vietnam	Minimum wage is considered a living wage including required allowances for basic necessities.	Compulsory Social Insurance covers 100% compensation to occupational victims and monthly pension to workers after retirement.
Malaysia	Minimum wage is basic wage excluding any allowances or any other payments (Minimum Wage Order 2016).	National level Employees' Provident Fund, Employment Injury Insurance Scheme, Invalidity Pension Scheme, & Employer's Liability Scheme are maintained,
Philippines	Medical to dependents, Rice subsidy, Uniform and clothing allowance, Laundry, productivity and incentive bonuses and Separation pay.	Mandatory Social Security System (SSS) covers pension benefit and compensation to occupational victims. Compulsory Home Development Mutual Fund is also maintained.
Bangladesh	Housing, Medical and Transportation Allowance.	Negligible compensation, medical and child education coverage from National Social Welfare Foundation.

RMG WORKERS MINIMUM WAGE IN THE COMPETITIVE COUNTRIES

SL	Economies/ Countries	Total employment	Wages in USD (Monthly)	Hourly (USD)	Wages in BDT (Monthly)	Effective Date	Exchange Rate
01	Bangladesh	2.85 million	75.5	0.40	8000	2018	1USD = 106BDT
02	China ³⁵	15 million	262	1.26	24890	2020-22	1USD = 6.75RMB
03	India ³⁶	45 million	128	0.62	12160	2020-22	1USD = 79INR
04	Indonesia ³⁷	4.2 million	137	0.66	13015	2022	1USD = 14661.5IDR
05	Cambodia ³⁸	0.60 million	194	0.93	18430	Sep 2021	1USD = 1USD
06	Malaysia ³⁹	0.26 million	250 to 273	1.2 to 1.3	23750 to 25935	Feb 2020	1USD = 4.4MYR
07	Philippines ⁴⁰	0.55 million	244	1.2	23180	Jan 2022	1USD = 55.7PHP
08	Vietnam ⁴¹	2.5 million	168	0.8	15960	Jul 2022	1USD = VND23397
09	Turkey ⁴²	4 million	307	1.48	29165	Dec 2021	1USD = 17.94TRY

³⁵ Under 31 Provinces, 93 different minimum wages are effective, varies between 1320 RMB (US\$196) and 2360 RMB (US\$350) per month. Mentioned amount is mean average figure from all these counts. Retrieve on 01 August 2022 from <https://www.china-briefing.com/news/minimum-wages-china-2022/>

³⁶ Different provinces have different minimum wages. This is the mean average figure for top 16 garments making provinces. The minimum wage varies, between 6415 IRP (81USD) and 16506 IRP (209USD) in these provinces and cities. Retrieve on 1 August 2022 from <https://www.simpliance.in/minimum-wages>

³⁷ In Indonesia, around 85% of garment industry is concentrated in 4 provinces i.e., West Java, Central Java, East Java, and Banten. Minimum wage varies between USD124 and USD171 in these 4 provinces. Mean average figure is only counted here. Retrieve on 1 August 2022 from <https://gajimu.com/garment/Salaries-in-Garment/minimum-wage-garment>

³⁸ Retrieve on 1 August 2022 from <https://www.ethicaltrade.org/blog/eti-responds-to-cambodias-new-minimum-wage-garment-workers>

³⁹ Retrieve on 1 August 2022 from <https://wageindicator.org/salary/minimum-wage/malaysia>

⁴⁰ In Philippines, garment industry is mostly concentrated in 3 regions i.e., Central Luzon, Calabarzon, and National capital Region. Minimum wage varies between USD215 and USD244 in these 3 regions. Mean average figure is only counted here. Retrieve on 1 August 2022 from <https://wageindicator.org/salary/minimum-wage/philippines/archive/20220721>

⁴¹ 4 different minimum wages are affective in 4 different regions. Minimum wage varies between USD139 and USD200 in these 4 regions. Mean average figure is only counted here. Retrieve on 1 August 2022 from <https://wageindicator.org/salary/minimum-wage/vietnam>

⁴² Retrieve on 1 August 2022 from <https://wageindicator.org/salary/minimum-wage/turkey>

ANNEX I

CALCULATION OF 2188 KCAL

Table: Calculation Basics

Person	Age	Weight (Kg)	BMR ⁴³	PAL ⁴⁴	Dietary need (Mj) ⁴⁵	Dietary need (Kcal)
1 woman	18.1 -59.9	60	94.5	1.75	9.92	2371
1 Man	18.1-59.9	65	106	1.75	12.06	2882
1 Child (Boy or Girl)	2-4	9/10	342.5	1.45	4.47/4.97	1068/1188
1 Child (Boy or Girl)	10-11	23	256	1.7	10.00	2390
1 Adult (father/Mother)	60& +	65	85.5	1.75	9.73	2326

Formula 1:

1 woman + 1 man + 1 child boy or girl (2-4 years and 9/10 kg) + 1 adult (man/woman)

Food requirement:

[9.92 Mj + 12.06 Mj + 4.47 or 4.97 Mj + 9.73 Mj = 36.16 Mj (child is 9kg) or 36.68 Mj (child is 10kg) = 8642.46 Kcal or 8766.74 Kcal (1 Mj = 239.006 Kcal)] % 4 persons = **2162 Kcal or 2192 Kcal** per person per day.

Formula 2:

1 woman + 1 man + 1 child boy or girl (2-4 years and 9/10 kg) + 1 child boy or girl (10-11 years and 25Kg)

Food Requirement:

[9.92 Mj + 12.06 Mj + 4.45 or 4.97 Mj + 10.00 Mj = 36.43 Mj or 36.95 Mj = 8706.99 Kcal or 8831.27 Kcal (1 Mj = 239.006 Kcal)] % 4 persons = **2176 Kcal** (younger child is 9 kg) **or 2208 Kcal** (younger child is 10 kg) per person per day.

Average of formula 1 and Formula 2

2177 Kcal per person per day or **2192 Kcal** per person per day. Mean average of these two figure is 2185 Kcal per person per day.

Taking Point

- We have considered **2188Kcal** of food per person per day.
- Two of our calculated figures are slightly less than 2188 Kcal (younger child is considered 9 kg). The rest of the two figures are slightly above than 2188 Kcal. And the combined calculated mean average figure is 2185Kcal.
- Following the same UN equation, Professor Richard Anker and his team in 2016 calculated 2188 kcal of food as a minimum dietary need for RMG family members in Bangladesh. Since our calculation is consistent with this, we find it most rational to use the same figure here, to avoid any controversy.

⁴³ Based on clinical observation and considering age and weight UN has provided different Basal Metabolic Rates. Given figure is however author's recalculation considering age and weight of persons in the Bangladesh context. Mostly, mean average BMR is considered, to include required age groups and gender division. Please see FAO Food and Nutrition Technical Report Series 1. FAO, Rome, Retrieve on 1st August 2022 from <https://www.fao.org/3/y5686e/y5686e.pdf>

⁴⁴ This calculation has considered Moderate Physical Activity level (PAL) for all age groups. Based on clinical observation and considering age and weight, UN has provided a list of PAL in the same report as above.

⁴⁵ Dietary need equals to BMR X Weight X PAL

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Acknowledgement

Author would like to acknowledge the many different people, especially RMG workers and their family members, RMG employers, managers and supervisors, and trade unionists from SKOP and IBC, and many experts and activists who contributed their time, views and knowledge to help in the research and development of this report. A special note of appreciation is due to Dr. Rushidan Islam Rahman, Executive Chairperson, Centre for Development and Employment Research (CDER) and Syed Sultan Uddin Ahmed, Specialist on Workers Activities, ILO Decent Work Team for South Asia – for their valuable advice and comments from time to time that helped to enrich the document to its present shape. Finally, the author would like to register deep appreciation to the Bangladesh Institute of Labour Studies – BILS for providing this rewarding opportunity and financing and supporting at every step.

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