The State of the Manufacturing Workers in Bangladesh

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Structure of presentation

- Motivation

- Data & Methodology

- Component 1: Socio-demographic Profile including Education and Health of the Workers and Households

- Component 2: Trade Union and Collective Bargaining

- Component 3: Income, Expenditure & Poverty

- Component 4: Women's Empowerment in the Manufacturing Sector

Motivation

•**Disproportionate Growth**: From 2005-06 (base year, 2005-06 = 100) to 2019 (only SMI years), the Gross Output Index increased sixfold (from 100 to over 600) and the Gross Value Added Index increased similarly, while the Real Wage Index only tripled (from 100 to slightly above 300), highlighting a widening disparity.

•**Prosperity in Manufacturing sector and Stagnation in Worker Benefits**: Between 2012 and 2019, while the manufacturing sector's gross output and value addition accelerated sharply, reflecting the sector's growing contribution to GDP, real wage growth didn't show that acceleration, rather showed a significantly divergent gap. significantly, indicating that workers are not receiving a proportionate share of the sector's economic success

•This growing gap underscores the need to examine how manufacturing workers' wages, living conditions and working conditions, and benefits, motivating a detailed survey to address these critical questions.

Figure 1: Manufacturing sector's output growth and real wage Growth

Figure 2: Manufacturing sector's value addition and real wage Growth
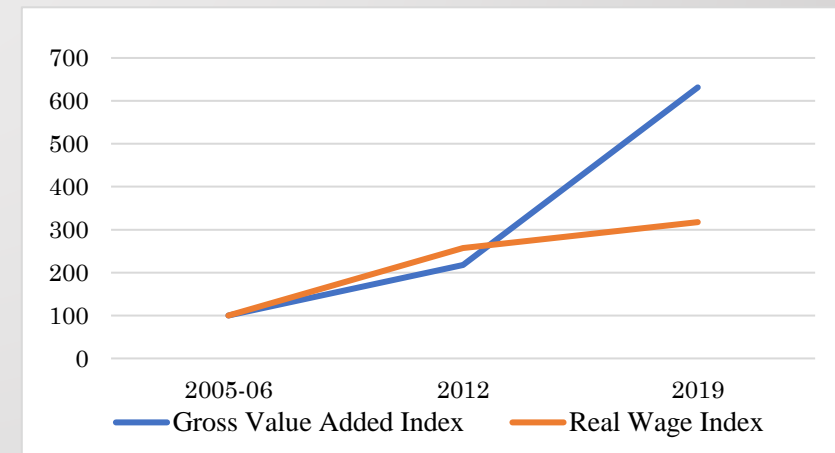
Source: BIDS calculation from SMI and BBS data

Data

The total number of production related workers and daily basis workers of the manufacturing sectors in Bangladesh is stands at 4991590 (SMI, 2019).

$$sample\ size = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

N=population size, p=population proportion, e=margin of error (percentage in decimal form), z=z score.

Using 95 percent confidence interval and 1.8 percent margin of error calculated sample is 2,963. Rounding this number total 3005 workers have been surveyed in this study.

Sample selection

- Although the manufacturing sector has experienced significant growth over time, as reflected in the substantial gap between its contribution and the increase in real wages, there have been some increases in real wages overtime.

- Within that increase in wages, there are notable variations in that and other benefits across different industries.

- To examine these variations and better understand the actual living and working conditions of workers in these industries, we conducted this survey across 20 industries, categorized into three broad sectors, .

- This study applied a stratified multistage sampling procedure considering the nature and size of sectors to select the desired 3005 workers for the survey.

Table: Detailed Sampling Distribution

Sl	Name of the Manufacturing Industries	Number of Workers	Area/Location/Upazila/Police Station
1	Manufacture of Export-oriented wearing apparel (readymade garments: Pants, Shirts, Sweater, Hosiery etc.)	1292	Dakshinkhan, Darus Salam, Dhamrai Bhasan Tek, Gulshan, Kafrul, Mirpur, Pallabi, Savar, Uttar Khan, Gazipur Sadar, Kaliakair, Rupnagar, Demra, Narayanganj Sadar
2	Manufacturer of Export-oriented non-RMG industries (Leather Goods, Agro-processing, Jute, Pharmaceuticals etc.)	863	Banani, Dhamrai, Savar, Gazipur Sadar, Kaliakair, Sonargaon, Bandar, Rupganj, Keraniganj, Sreepur, Narayanganj Sadar, Rupganj, Kafrul, Pallabi, Rupnagar
3	Domestic Industries (Apparel, Leather Goods, Textile & Spinning, Food Processing, Plastic Products, Furniture, Electronics & Electric, Paper & Printing, Light Engineering, Road & Iron, Medical Equipment, Ceramics etc.)	850	Gulshan, Kafrul, Pallabi, Savar, Gazipur Sadar, Narayanganj Sadar, Hazaribagh, Mirpur, Banani, Badda, Demra, Kaliakair, Sutrapur, Wari, Rupganj
	Total	**3005**	

Workers' selection and quality control

- Based on the location of workers in the respected industries, surveyed locations were divided into several clusters.

- Under three districts (Dhaka, Gazipur, and Naraynganj), around 28 Upazilas/Police Stations or Areas are selected based on the concentration of workers in each industry.

- After that, the workers were randomly selected based on the location of the industries, and at best, ten workers were selected from each industry.

- Seven industry worker leaders, who acted as industry-level worker selection supervisors, helped the enumerators find representative workers for interviews from each area.

- Five researchers from BIDS and two more supervisors supervised the enumerators to control the quality of the interviews.

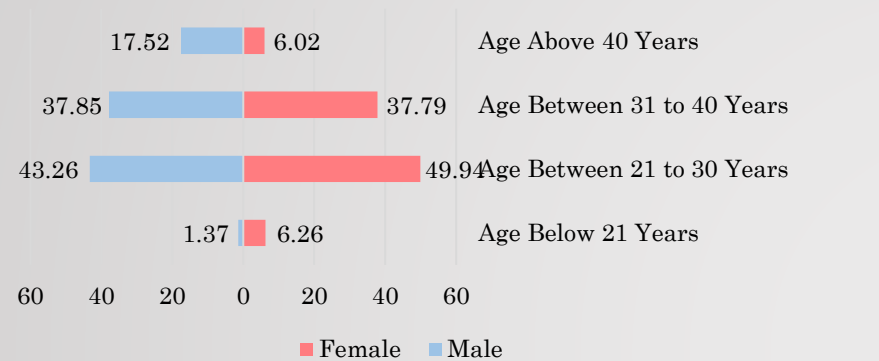- Completed a validation workshop with the respondents (workers)

Component 1: Socio-demographic Profile of the Workers and Households
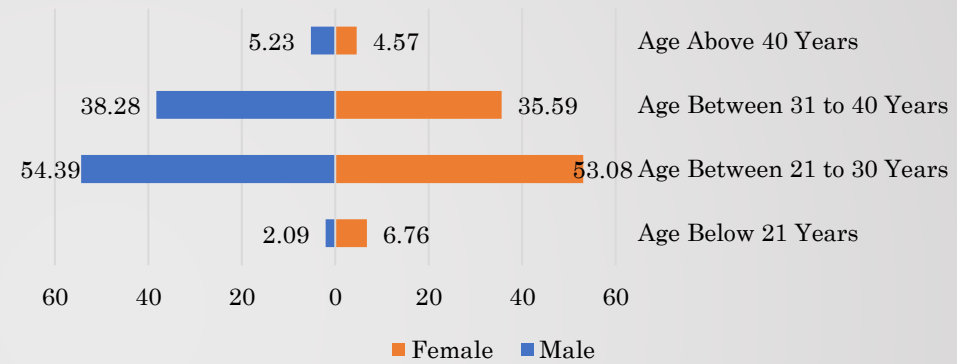
Profile of the Workers

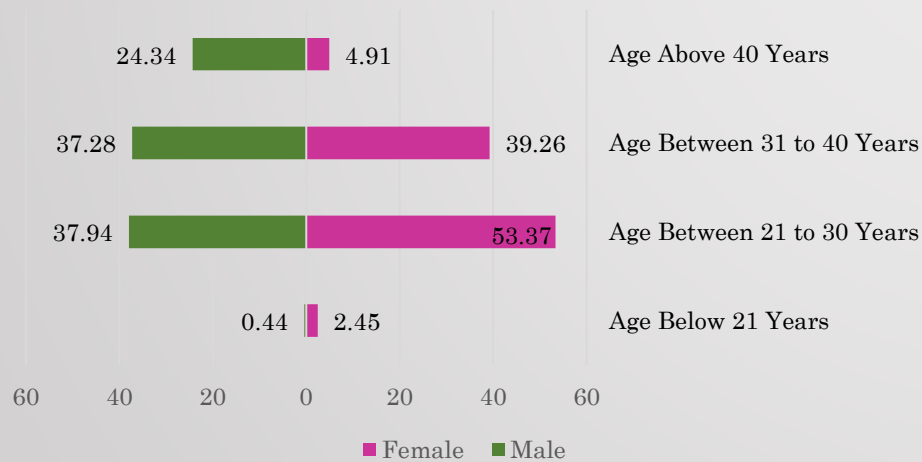| Demographic characteristics	All Surveyed Industries	Export-Oriented Garments Industries	Non-RMG Export Oriented Industries	Domestic Industries
Household size	3.50	3.34	3.67	3.60
Age of workers (in years)	30.22	28.89	31.68	30.80
Married male (%)	71.64	73.43	74.51	67.31
Married female (%)	77.74	78.47	80.69	73.01
Age of first marriage male (Years)	23.01	22.64	23.22	23.19
Age of first marriage female (Years)	16.62	16.48	17.06	16.60
Number of alive children of married women (number)	1.74	1.61	1.84	2.05
Human capital				
No education (%)	9.48	5.73	11.06	13.46
Primary (1-5) (%)	37.27	36.07	36.12	40.04
Secondary (6-10) (%)	42.96	47.83	41.15	37.60
Above Secondary (above 10) (%)	10.18	10.22	11.67	8.79

Source: BIDS Survey of Manufacturing Workers, 2024

Age Composition of Workers

All Surveyed Industries (%)

Male	Female	Age Group
17.52	6.02	Age Above 40 Years
37.85	37.79	Age Between 31 to 40 Years
43.26	49.94	Age Between 21 to 30 Years
1.37	6.26	Age Below 21 Years

■ Female ■ Male

Export-Oriented Garments Industries (%)

Male	Female	Age Group
5.23	4.57	Age Above 40 Years
38.28	35.59	Age Between 31 to 40 Years
54.39	53.08	Age Between 21 to 30 Years
2.09	6.76	Age Below 21 Years

■ Female ■ Male

Other Export-Oriented Industries (%)

Male	Female	Age Group
24.34	4.91	Age Above 40 Years
37.28	39.26	Age Between 31 to 40 Years
37.94	53.37	Age Between 21 to 30 Years
0.44	2.45	Age Below 21 Years

■ Female ■ Male

Domestic Industries (%)

Male	Female	Age Group
23.62	11.52	Age Above 40 Years
37.97	43.03	Age Between 31 to 40 Years
36.87	36.97	Age Between 21 to 30 Years
1.55	8.48	Age Below 21 Years

■ Female ■ Male

Source: BIDS Survey of Manufacturing Workers, 2024

Labor market Indicator

	All Surveyed Industries	Export-Oriented Garments Industries	Other Export-Oriented Industries	Domestic Industries
Work Experience in the industry (years)	5.04	4.20	6.50	4.93
Permanent workers (%)	78.48	95.04	62.07	69.52
Full time workers (%)	99.23	99.92	99.75	97.77
On the Job training (%)	22.47	16.26	39.95	16.76
Average Working Hours (In a week)	51.08	48.82	49.79	55.47
Average Over time hours(In a week)	11.96	11.94	11.82	12.19
Average Monthly Wage (including bonus in BDT)	14524.54	15983.79	13678.36	13196.8

Source: BIDS Survey of Manufacturing Workers, 2024

Table: Average Years of Education by Gender and Industry

Education Status (in years)	All Surveyed Industries		Export-Oriented Garments Industries		Other Export Oriented Industries		Domestic Industries	
	Male	Female	Male	Female	Male	Female	Male	Female
Father's Average Years of Education	2.75	2.02	3.08	2.33	2.28	1.33	2.85	1.74
Mother's Average Years of Education	1.92	1.33	2.22	1.53	1.55	0.83	1.96	1.21
Average Years of Education Manufacturing Workers	6.30	4.86	7.10	5.12	6.14	4.80	5.67	4.18

Source: BIDS Survey of Manufacturing Workers, 2024

- Gender gap in education
  - Male workers on average study for 1.44 years more than females
- Parents Education
  - On average fathers have higher average years of education than mothers
- Industry Variations
  - Both male and female workers of RMG factories have higher average years of education compared to other industries.

Table: Distribution of Worker's Education Level by parent's Education Level

Father's Education Level	Worker's Education Level			
	Illiterate	Below Primary Level	Completed Primary Education	Completed JSC and above
i. Illiterate	14.32%	36.20%	26.81%	22.67%
ii. Below Primary Level	3.69%	37.48%	30.87%	27.96%
iii. Completed Primary Education	4.27%	25.85%	33.33%	36.54%
iv. Completed JSC and above	2.89%	16.27%	26.25%	54.59%
N	285	970	855	895

Mother's Education Level	Worker's Education Level			
	Illiterate	Below Primary Level	Completed Primary Education	Completed JSC and above
i. Illiterate	13.64%	35.49%	27.54%	23.33%
ii. Below Primary Level	3.50%	35.15%	29.13%	32.23%
iii. Completed Primary Education	1.25%	22.75%	33.25%	42.75%
iv. Completed JSC and above	1.57%	12.57%	25.65%	60.21%
N	285	970	855	895

Source: BIDS Survey of Manufacturing Workers, 2024

Table : Intergenerational Rank Correlation (IRC) by Gender

Category	Spearman's Rank Correlation			
	All Surveyed Industries	Export-Oriented Garments Industries	Other Export Oriented Industries	Domestic Industries
Correlation with Father's Education				
1. Male Worker's Spearman's Rank Correlation with father	0.269***	0.207***	0.364***	0.246***
1. Female Worker's Spearman's Rank Correlation with father	0.256***	0.205***	0.243***	0.378***
Correlation with Mother's Education				
1. Male Worker's Spearman's Rank Correlation with mother	0.259***	0.241***	0.336***	0.207***
1. Female Worker's Spearman's Rank Correlation with mother	0.276***	0.286***	0.198***	.295***

Source: BIDS Survey of Manufacturing Workers, 2024

Table: Intergenerational regression coefficient (IGRC)

Dependent Variable: Worker's Years of Education	(1)	(2)
Father's Years of Education	0.137*** (0.020)	0.139*** (0.020)
Father's Wage	0.00004*** (0.00001)	0.00004*** (0.00001)
Mother's Years of Education	0.213*** (0.025)	0.216*** (0.025)
Worker's Gender (1 = Male)	1.475*** (0.120)	1.347*** (0.119)
Industry FE	Yes	No
Enterprise Location FE	Yes	Yes
R-squared	0.186	0.176
N	3,005	3,005

Source: BIDS Survey of Manufacturing Workers, 2024

Father's Education: Significant positive impact (0.137–0.139); each additional year of father's education correlates with ~0.137–0.139 more years for the worker.
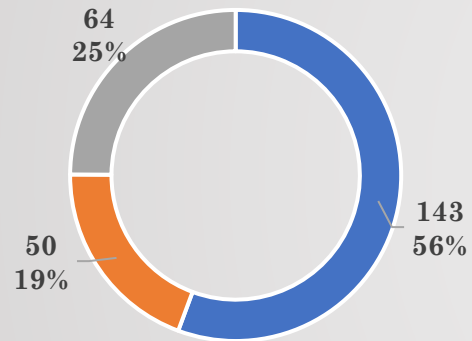**Father's Wage**: Small but significant positive effect (0.00004), indicating a modest influence on worker's education.
Mother's Education: has a stronger impact (0.213–0.216) than father's, highlighting maternal influence on educational outcomes.

Health Indicators

Workers suffering from chronic illness

64
25%

143
56%

50
19%

- Export-Oriented Garments Industries
- Other Export Oriented Industries
- Domestic Industries

**Workers suffering from acute illness**
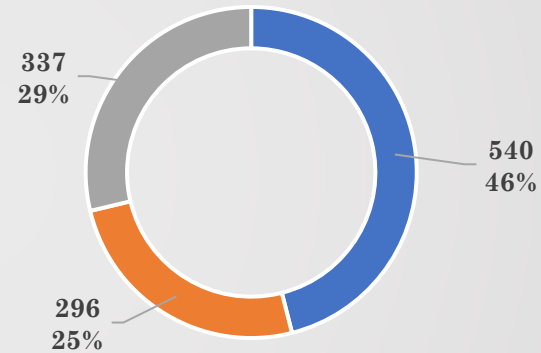
337
29%

540
46%

296
25%

- Export-Oriented Garments Industries
- Other Export Oriented Industries
- Domestic Industries

✓ Out of 3005 workers 257 suffer form long term diseases /chronic Illness
✓ Out of 3005 workers 1173 suffer from short term illness /acute illness

Treatment Cost

Cost of Medical Treatment (in BDT)

All Surveyed Industries	4875.413
Export-Oriented Garments...	3798.285
Other Export Oriented Industries	3689.916
Domestic Industries	4229.431
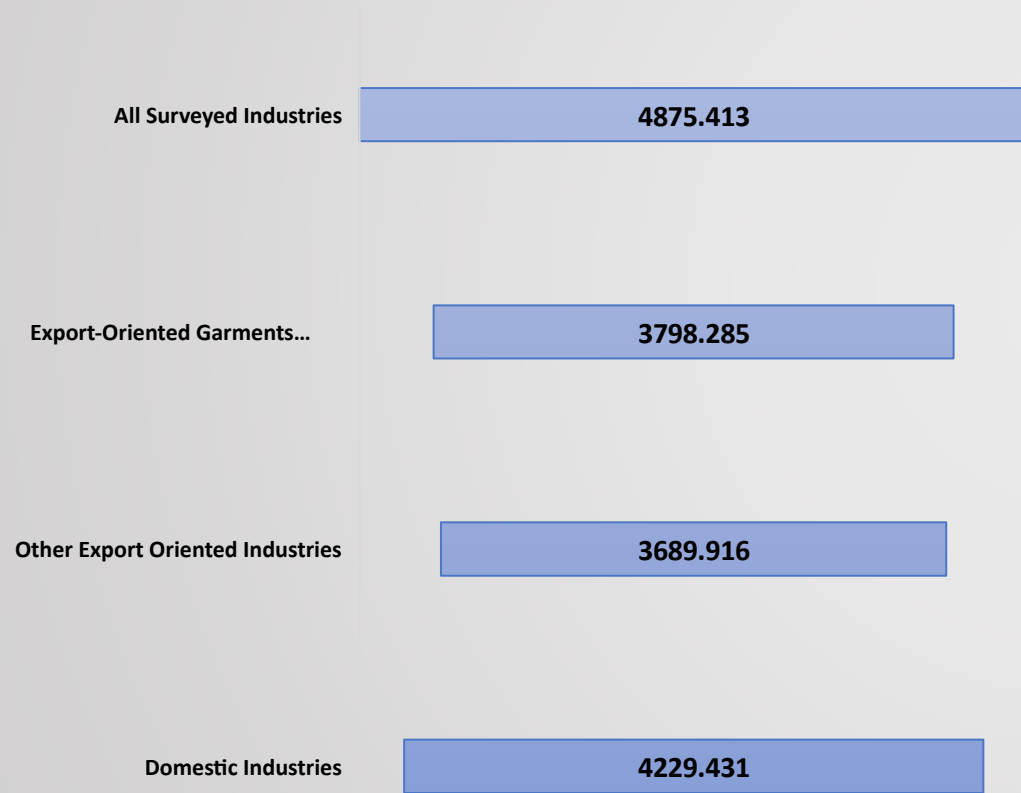
- For Treatment of Chronic Illness 70.82 percent Workers prefer private facilities : Private Clinic/Chamber,   Private Hospital, MBBS Doctor (Private) , compared to only 23.35 percent seeking public hospitals 7 facilities.

- For Treatment of Acute Illness workers go to Pharmacy Salesman (59.10%), followed by Unconventional Sources(20.45%) like kobiraj, homeo, ojha, village doctor etc. and private facilities (16.87%).

- Workers form the Domestic Industry spend highest amount of medical expenditure annually 4229.431 BDT.

Component 2: Collective Bargaining

Trade Union as an indicator of Collective Bargaining

• Trade unionism is a legislative system of organizing workers and raising voices for economic and social goods. Economic goods here refer to benefits that improve workers' financial well-being, while social goods refer to non-monetary benefits that enhance the social and working environment, such as safe working conditions, reasonable working hours, freedom from discrimination, and the right to be heard in workplace decisions.

Table: Worker level Unionization

Variables	Observation (n)	Percent of Total (%)	Rate of Unionization (%)
	3005	100	11.35
Type of Industries			
RMG Export	1,292	43.00	11.92
Non-RMG Export	814	27.09	16.34
Domestic	899	29.92	6.01

Source: BIDS Survey of Manufacturing Workers, 2024

Table: Collective Bargaining (participate in the wage bargaining process and Trade Union at Factory Level) (Number and percentage of respondents

	All Surveyed Industries		Export-oriented Garments Industries		Other Export-Oriented Industries		Domestic Industries	
Variables	n	%	n	%	n	%	n	%
Can participate in the wage bargaining process at the factory level (Number of respondents)	894	29.75	382	29.57	286	35.14	226	25.14
Trade Union at Factory Level (Number of respondents)	444	14.78	213	16.49	162	19.90	69	7.68

Source: BIDS Survey of Manufacturing Workers, 2024

We define individual (worker) level trade unionization rate as a ratio of workers who responded that they can participate in the wage bargaining process through the factory level trade union to all respondent workers.

Gross monthly Wages differential between Trade Unionized and non-unionized workers (Mean monthly wage in taka)

For the entire sample, trade unionized workers earn an average of BDT 15,824.99, which is BDT 1,467.04 more than earned by non-unionized workers, a difference that is statistically significant.

(Gross wage includes basic salary and other benefits)

	Trade Unionized	Not Trade Unionized	Differences in mean wages	T test
All Surveyed Industries	15824.991	14357.954	1467.038	5.95***
Export-Oriented Garments Industries	16257.21	15946.72	310.49	1.05
Other Export-Oriented Industries	16121.58	13201.2	2920.38	6.75***
Domestic Industries	13861.89	13154.3	707.59	1.15

Source: BIDS Survey of Manufacturing Workers, 2024

Non-wage Benefits of having trade union at factory level as an indicator of collective bargaining power as (% of respondents)

	Factory Level Trade Union	
	Have (% of respondents)	Don't have (% of respondents)
Earned leave allowance	58.33	45.77
Annual bonus	29.95	24.19
Eid Bonus / Festival Bonus	98.20	92.56
Additional Work Wages (Overtime)	80.86	69.70
Profit sharing	3.15	3.16
Attendance Bonus	58.56	44.83
Fixed Salary/Wage	96.40	85.90
Piece rate or production-based wages	3.60	15.34
Transportation facilities (lease car, company car, travel expenses)	1.35	1.07
Benefits such as food or food vouchers at subsidized prices, vouchers or discounted goods and services	0.23	0.21
Free lunch facility from factory	13.74	7.44
Free breakfast facility during overtime	58.56	44.83
Free medical facility	75.90	61.50
Facility to provide medicines at low cost	64.64	39.15
Providing sanitary napkins and painkillers to women workers during menstruation	22.97	12.78
Daycare center facility for keeping children	18.02	11.88
School facilities for children's education	1.58	0.77
Separate toilet for women	96.62	91.54

Source: BIDS Survey of Manufacturing Workers, 2024

Benefit of being Unionized for workers in terms of Subjective poverty of their household

we measured subjective poverty using both consumption and income methods.

Workers provided their estimates of the minimum cost required for a family of four, which was then converted into per capita values.

If a worker's per capita consumption or income fell below this expected minimum cost, they were classified as poor.

Table: Subjective Poverty Distribution of household of Unionized and non-unionized workers

	Unionized		Non-Unionized	
	Freq.	Percent	Freq.	Percent
Consumption Method				
Non- Poor	257	75.37	1,791	67.23
Poor	84	24.63	873	32.77
Total	341	100	2,664	100
Income Method				
Non- Poor	276	80.94	2,112	79.28
Poor	65	19.06	552	20.72
Total	341	100	2,664	100

Source: BIDS Survey of Manufacturing Workers, 2024

Does trade union at worker level unionization significantly raise wage earnings of manufacturing workers?

Being unionized is associated with a 3.46% increase in monthly earnings, which is significant.

Table: OLS regression to see the impact of unionization on total monthly earnings of workers

VARIABLES	Log of Monthly Earnings
Trade unionized	0.0346**
	(0.0156)
Worker's Years Education	0.00358**
	(0.00156)
Experience	0.0208***
	(0.00212)
Experience Square	-0.000250***
	(7.79e-05)
Have Training from this factory	0.0521**
	(0.0226)
Age	
Age20_34	0.226***
	(0.0247)
Age35_49	0.232***
	(0.0266)
Age50_68	0.211***
	(0.0355)
Married	0.0627***
	(0.0107)
Male	0.137***
	(0.00995)
Size of Industry	
Large Industry	-0.0598
	(0.0370)
Medium Industry	-0.114***
	(0.0371)
Small Industry	-0.115***
	(0.0366)
Have Health and Safety Certificate	0.0501***
	(0.00995)
Constant	8.764***
	(0.175)
Observations	2,973
R-squared	0.432

Does trade union at factory level unionization significantly raise Non-wage Benefits of manufacturing workers?

Having a trade union at the factory level significantly increases the likelihood of workers receiving low-cost medicine, one of the Non-wage Benefits, with a substantial marginal effect of 0.616

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1*
Marginal Effects: dy/dx for factor levels is the discrete change from the base level.

Note: Location (Upazilla) of the industry is controlled.

Table: Probit regression to see the impact of the trade union at the factory level on Non-wage Benefits (Medicine at low cost):

Medicine at low cost	Coefficients (Robust S.E)	Marginal Effects
Trade union at factory level	0.616***	0.177
	(0.0829)	
Type of Industry		
Readymade Garments	0.277***	0.080
	(0.0955)	
Others Export Oriented	0.273***	0.079
	(0.0876)	
Size of Industry		
Large Industry	2.441***	0.702
	(0.258)	
Medium Industry	2.295***	0.661
	(0.257)	
Small Industry	1.260***	0.363
	(0.260)	
Have Health and Safety Certificate	0.653***	0.188
	(0.0590)	
Constant	-2.304***	
	(0.825)	
Observations	2,957	

Source: BIDS Survey of Manufacturing Workers, 2024

Is Class Consciousness among workers necessary for better wages and better non-wage benefits?

Defining Class Consciousness

- Class consciousness actually means the self-understanding of members of a class. This modern sociological concept evolved from the Marxian idea of class.
- "Class in itself" is a simple social group whose members share a similar relationship with the means of production.
- When 'class consciousness' and 'class solidarity' develop, then this group converted to "class for itself"
- Patel (1994) empirically examines Marxian postulates of class consciousness "(i) the prominent activists, who participate more actively in trade union activities, are likely to have a higher degree of class consciousness than the non-prominent, and (ii) that the activists affiliated with the radical federations are likely to be more class conscious than those affiliated with reformist federations" using "three dimensions of working class-consciousness: (a) class-solidarity (b) economic radicalism and (c) class-militancy," and found both the postulates or assumptions of Marx were supported by data.

Class formation among manufacturing workers

Table: Methods Used to Negotiate Wages or Raise Salaries

Sl.	Bargaining Tools	All Surveyed Industries		Export-Oriented Garments Industries		Other Export Oriented Industries		Domestic Industries	
		n	%	n	%	n	%	n	%
a	Asking for a raise through personal relations	759	25.3	233	18.1	220	27.1	306	34.04
b	Through agitation	500	16.6	293	22.7	132	16.2	75	8.34
c	By raising demands with various trade unions	335	11.2	150	11.6	63	7.74	122	13.57
d	By raising demands with the wage board	93	3.09	41	3.17	39	4.79	13	1.45
e	Not demanding a rise in wages	1305	43.4	568	44	357	43.9	380	42.27
f	Other	13	0.43	7	0.54	3	0.37	3	0.33
	Total	3005	100	1292	100	814	100	899	100

Source: BIDS Manufacturing Workers Survey, 2024.

- Workers first become conscious of sharing common grievances against capitalists (thus forming a class "in itself") and eventually develop an awareness of themselves as forming a social class opposed to the capitalist, which becomes a class "for itself" (Marx). Simplifying this definition we have calculated variable (a+e+f) in Table 1 as less class conscious or "class in itself" and variable (b+c+d) in Table 1 as proper conscious to form a "class for itself".

- 69.12% of workers can be identified as a "class in itself," and the rest, 30.88%, belong to the "class for itself."

- In the export-oriented garments sector, 62.53% of surveyed workers belong to "class in itself," and the remaining 37.47% belong to the "class for itself" in terms of their consciousness.

- In the other export-oriented industries in Bangladesh, 71.26% of surveyed workers belong to a "class in itself," and 28.74% belong to the "class for itself."

- This scenario is even worse in domestic industries, where 76.6% belong to the "class in itself," and only 23.36% belong to the "class for itself."

Class consciousness based on the existence of trade unions, the size of industry, and safety certificate

Variables/Attributes	Class for itself (%)	Class in itself (%)
Trade Union		
Trade union	33.18	8.18
No trade Union	66.82	91.82
Size of the Industry		
Large Industry	60.61	48.53
Medium Industry	21.32	23.17
Small & Microenterprise	17.64	20.97
Microenterprise	0.43	7.33
Safety Certificate		
Directorate of Inspection of Factories and Establishments (DIFE)	82.15	87.05
Accord & Alliance	9.97	12.75
National Initiatives/BUET	7.61	0.20

Source: BIDS Manufacturing Workers Survey, 2024.

Regression results for factors that are associated with the class consciousness: Estimation of the Probit model

VARIABLES	Class for Itself
Non RMG Export	-0.1121***
	(0.0211)
Domestic Industry	-0.0593***
	(0.0218)
Female	-0.0197
	(0.0179)
Age	-0.0017
	(0.0011)
Primary	0.0051
	(0.0309)
Secondary	0.0089
	(0.0312)
Higher Secondary	-0.0396
	(0.0385)
Tertiary	0.1407*
	(0.0823)
Diploma & Technical	0.1474
	(0.1223)
Trade Union	0.3793***
	(0.0268)
Years of working in the factory	0.0066***
	(0.0019)
Peri-urban area	-0.0809***
	(0.0209)
A residential area	0.0282
	(0.0260)
Densely populated slum area	0.3977***
	(0.0286)
Labor-intensive area outside of city	0.0622
	(0.0688)
Chi Square	503.37
Observations	2,651

- Holding other things constant, workers employed in the non-RMG export industry and domestic industry have 11.20 and 5.82 percentage points less probability of having class consciousness compared to workers employed in the RMG export industry

- Workers employed in the RMG industry are more inclined to serve the collective interest rather than the individual interest.

- The gender of workers and age of the workers is not significantly associated with class consciousness.

- The education level of the workers is significantly associated with class consciousness.

- If there is any trade union facility in the factory, the workers' class consciousness in this factory becomes 37.97 percentage points higher than less trade union facilities.

- If workers are involved in an additional year in the industry, the probability of workers' class consciousness increases by 0.66 percent points.

- Workers who reside in the peri-urban area have an 8.11 percentage points lower likelihood of being class-conscious than the industrial area (base category).

Source: BIDS Manufacturing Workers Survey, 2024.

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

The result is obtained after controlling the upzila level fixed effect. In the survey, we collected samples from around 22 upazila in three districts. It controls the regional heterogeneity of workers and industries.

Regression result for whether the monthly wage is associated with class consciousness holding other variables constant: Estimation of Ordinary Least Square Estimation (OLS)

VARIABLES	Monthly wage	Log Monthly wage
Class for itself	346.06**	0.02*
	(155.79)	(0.01)
Non RMF Export	-3,632.63***	-0.28***
	(191.28)	(0.01)
Domestic Industry	-3,516.80***	-0.27***
	(185.49)	(0.01)
Female	-1,723.19***	-0.13***
	(139.46)	(0.01)
Age	73.47***	0.01***
	(9.49)	(0.00)
Primary	1,251.43***	0.09***
	(234.70)	(0.02)
Secondary	1,906.83***	0.13***
	(246.03)	(0.02)
Higher Secondary	3,183.38***	0.22***
	(380.51)	(0.02)
Tertiary	2,880.96***	0.19***
	(938.02)	(0.05)
Diploma & Technical	1,046.36	0.05
	(1,470.94)	(0.09)
Trade Union	204.80	0.02
	(225.98)	(0.01)
Years of working in the factory	216.29***	0.01***
	(16.23)	(0.00)
Constant	15,331.84***	9.59***
	(2,049.89)	(0.13)
Observations	2,773	2,773
R-squared	0.34	0.36

Source: BIDS Manufacturing Workers Survey, 2024.
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
The result is obtained after controlling the upzilla level fixed effect. In the survey, we collected samples from around 22 upazila of Dhaka city. It controls the regional heterogeneity of workers and industries.

- Class consciousness significantly affects the wage of workers controlling other variables such as education, type of manufacturing industry, gender, age of the workers, years of working in the factory, trade union existence in the industry, and residential fixed effect of the workers.
- The result of class for itself is statistically significant for both regressions after controlled variables.
- The result indicates that compared to the individual interest (base category) if workers serve the collective interest, they have a 346.06 BDT (Bangladeshi Taka) higher wage or 2 percent higher wage.

Discussions (Class Consciousness)

- Study results show that those who participate more actively in trade union activities, or trade union participation are likely to have a higher degree of class consciousness than the non-prominent. This result rebuilds the postulate of Patel 1994.

- Study results also suggest that the Marxian idea of class solidarity has a positive impact on collective bargaining, which finally results in wage increases for the workers.

- But, we are not sure from this survey that higher class consciousness or solidarity has any impact or positive effect on fellow workers' wellbeing.

- Those who are more class-conscious also help other workers to receive or achieve their rights could not be answered from this survey.

Component 3: Income, Expenditure & Poverty

Income

Table 1: Income of the manufacturing workers

Categories	Whole Sample		Export-Oriented Garments Industries		Others Export Industries		Domestic Industries	
	n	Mean	n	Mean	n	Mean	n	Mean
Monthly wage income	3,005	12474.68	1,292	13177.13	814	11891.57	899	11993.12
Monthly wage income (including all bonuses)	3,005	14524.54	1,292	15981.72	814	13678.36	899	13196.8
Mean difference		2049.947		2804.59		1786.78		1203.68
Monthly other income	2,304	12184.14	1,010	12533.72	574	11077.03	720	12553.21
Monthly total income	3005	23866.47	1,292	25792.65	814	21489.43	899	23250.54

- The average monthly wage of urban manufacturing workers is close to the minimum wage set by the Government of Bangladesh (GoB) in the RMG sector.

- The average difference between wages with bonuses and wages without bonuses is not much different. It implies opportunity to be involved with overtime is very low. Moreover, overtime and Hajira bonuses might be underpaid.

- The Average income of RMG workers is higher than the non-RMG and domestic workers owing to high minimum wage, bonuses, and income from other family members.

Expenditure

Table 2: Consumption expenditure of manufacturing workers

Categories	Whole Sample		Export-Oriented Garments Industries		Others Export Industries		Domestic Industries	
	n	Mean	n	Mean	n	Mean	n	Mean
Monthly average per capita food consumption	3,005	2910.35	1,292	3140.07	814	2702.87	899	2768.06
Monthly average per capita non-food consumption	3,005	5835.3	1,292	5921.3	814	6170.32	899	5408.35
Monthly average per capita total consumption	3,005	8745.65	1,292	9061.38	814	8873.19	899	8176.42
Share of food consumption (%)	3,005	38.52	1,292	38.66	814	37.36	899	39.35
Share of non-food consumption (%)	3005	61.48	1,292	61.34	814	62.64	899	60.65

Source: BIDS Survey of Manufacturing Workers, 2024

- The average monthly per capita expenditure is 8745.65 TK; where food consumption is lower than non-food expenditure

- The average consumption expenditure of RMG workers is close to that of non-RMG workers. However, The distribution of non-RMG is more rightly skewed than that of RMG indicating consumption expenditure of non-RMG is more concentrated in the lower tail of the distribution.

- The average expenditure of workers in the domestic industry is less than the RMG and non-RMG workers.

- It might be poverty rate would be higher for non-RMG and domestic industries than RMG.

Incidence of Poverty

Table: Poverty rate of manufacturing workers

	Upper Poverty line (%)				Lower poverty line (%)			
	Whole Sample	Export-Oriented Garments Industries	Others Export Industries	Domestic Industries	Whole Sample	Export-Oriented Garments Industries	Others Export Industries	Domestic Industries
Poverty line of HIES 2022	27.45	17.65	35.87	33.93	7.85	3.64	12.65	9.57
Own estimated line	28	18.19	36.12	34.37	8	3.64	12.9	9.79
Poverty line of HIES with 9.50 inflation	34.41	24.07	42.51	41.94	12.38	5.11	19.78	16.13

Source: BIDS Survey of Manufacturing Workers, 2024

- The estimated upper and lower poverty rate of manufacturing workers in Dhaka is 34.41% and 12.38% respectively.

- The poverty rate is much higher than the national poverty rate (18.7%) and twice the poverty rate of urban Dhaka (14.3%), indicating poverty is much more intense among the manufacturing workers.

- The Poverty rate of RMG workers is significantly lower than the workers of non-RMG export and domestic industries.

Subjective Estimation of Poverty

Table: Estimated Subjective Poverty

Categories	Whole Sample		Export-Oriented Garments Industries		Others Export Industries		Domestic Industries	
	n	Mean	n	Mean	n	Mean	n	Mean
Expected monthly salary	2,989	22979.22	1,285	24077.9	812	22750	892	21605.16
Expected per capita minimum cost	2,991	5389.29	1,286	5579.31	810	5172.37	895	5312.57
Percentage of workers whose per capita consumption less than the expected per capita minimum cost (%)	957	31.85	336	26.01	288	35.38	333	37.04
Percentage of workers whose per capita income less than the expected per capita minimum cost (%)	617	20.53	197	15.25	209	25.68	211	23.47

Source: BILS Survey on Minimum Wage Proposal, 2023

- The minimum cost for a family of four in this market including all food and non-food expenses is expected to be 22979.22 TK monthly. This coincides the workers' long time demand to make minimum wage between 19900 to 23900.

- The per capita minimum cost (5389.29 BDT) reported by the workers coincidently matches with the poverty line of HIES 2022 with a 9.50 inflation.

- 31.85% of workers spend money on their consumption which is less than the minimum cost required for the family.

- 20.53% of the workers earn less than the income than the expenditure for the family.

Table: Determinants of poverty for manufacturing workers

VARIABLES	Upper poverty (own estimated line)	Upper poverty (HIES 2022 with 9.50 inflation)	lower poverty (own estimated line)	Lower poverty (HIES 2022 with 9.50 inflation)
Industry dummy (Base: RMG)				
Non RMF Export	0.1011***	0.0984***	0.0551***	0.0499***
	(0.0209)	(0.0209)	(0.0126)	(0.0127)
Domestic Industry	0.0861***	0.0978***	0.0346***	0.0277**
	(0.0207)	(0.0202)	(0.0129)	(0.0117)
Gender (female=1)	0.0319**	0.0282*	0.0187*	0.0064
	(0.0157)	(0.0155)	(0.0108)	(0.0100)
Marital status (currently single=1)	0.0010	0.0021	-0.0164	-0.0013
	(0.0185)	(0.0189)	(0.0116)	(0.0113)
Age	-0.0004	-0.0012	-0.0010*	0.0006
	(0.0010)	(0.0010)	(0.0006)	(0.0006)
Education dummy (Base: No education)				
Primary	-0.0061	-0.0133	0.0114	0.0090
	(0.0239)	(0.0247)	(0.0160)	(0.0136)
Secondary	-0.0330	-0.0509**	-0.0046	-0.0008
	(0.0242)	(0.0250)	(0.0160)	(0.0137)
Higher Secondary	-0.1344***	-0.1547***	-0.0478**	-0.0248
	(0.0335)	(0.0350)	(0.0189)	(0.0171)
Tertiary	-0.1180*	-0.1539**	-0.0327	-0.0350
	(0.0623)	(0.0657)	(0.0420)	(0.0280)
Diploma & Technical	0.1067	0.2831**	0.1038	0.0163
	(0.1250)	(0.1385)	(0.0983)	(0.0535)
Household Size	0.1363***	0.1620***	0.0519***	0.0499***
	(0.0057)	(0.0043)	(0.0037)	(0.0032)
Years of working in the factory	-0.0022	-0.0030**	-0.0024**	-0.0047***
	(0.0014)	(0.0014)	(0.0010)	(0.0010)
Overtime (yes=1)	-0.0276*	-0.0261	-0.0020	0.0097
	(0.0158)	(0.0161)	(0.0105)	(0.0093)
Attendance bonus (yes=1)	-0.0187	-0.0180	-0.0092	-0.0315***
	(0.0175)	(0.0181)	(0.0110)	(0.0099)
Whether workers have other sources of income (yes=1)	-0.1612***	-0.1608***	-0.0895***	-0.1605***
	(0.0151)	(0.0152)	(0.0109)	(0.0101)
Social security (yes=1)	0.0070	0.0188	0.0125	-0.0149
	(0.0215)	(0.0224)	(0.0142)	(0.0154)
Accord & Alliance (yes=1)	-0.0520	-0.1119**	-0.0639*	-0.0384
	(0.0456)	(0.0463)	(0.0384)	(0.0338)
Locational dummy (Base: Industrial area)				
Peri-urban area	0.0485***	0.0238	0.0303**	0.0004
	(0.0187)	(0.0190)	(0.0127)	(0.0120)
A residential area	0.0213	0.0250	-0.0330**	0.0065
	(0.0240)	(0.0227)	(0.0132)	(0.0153)
Densely populated slum area	0.0556**	0.0469**	0.0904***	-0.0119
	(0.0224)	(0.0222)	(0.0196)	(0.0139)
Labor-intensive area outside of city	-0.0878**	-0.1016***	-0.0164	-0.0174
	(0.0356)	(0.0389)	(0.0209)	(0.0241)
Regional fixed effect	Yes	Yes	Yes	Yes
Observations	2,989	2,997	2,894	2,806

Source: BIDS Survey of Manufacturing Workers, 2024

Discussion

- The poverty rate of RMG workers is significantly lower than the workers of non-RMG export and domestic industrial workers. This result can be explained with a number of reasons

  - Minimum wage set by the RMG is higher than non-RMG and domestic industry

  - Opportunity to be involved with overtime or income earning from other bonuses such as Hajira bonus is higher for RMG than the non-RMG and domestic industry

  - Most importantly, Income earned from other family members (particularly spouse) is higher for RMG workers (61.46%) than that of non-RMG (51.58%) and domestic workers (51.13%). Why involvement in income earning by other family members in RMG is higher than non-RMG and domestic industry, we need to explore it further?

- Overtime and having income sources other than wage income, education level above secondary, and work experience contribute to reducing poverty while household size influences in increasing poverty.

Component 4: Women's Empowerment in the Manufacturing Sector

Decision-making Indicators among Three Sectors

Decision-making empowerment considering Yes = 1, No & Decides Together with HH Head and others= 0

Indicators	Whole Sample		RMG Export		Non-RMG Export		Domestic	
	N	(%)	N	(%)	N	(%)	N	(%)
Family Planning	88	8.23	60	9.36	16	7.92	12	5.31
Child's Education	175	16.37	112	17.47	26	12.87	37	16.37
Household Expenses	477	44.62	280	43.68	76	37.62	121	53.54
Treatment-related decisions	350	32.74	202	31.51	60	29.70	88	38.94
Asset Purchase or Sale	229	21.42	138	21.53	36	17.82	55	24.34
Mortgage	153	14.31	91	14.20	23	11.39	39	17.26
Saving	316	29.56	180	28.08	51	25.25	85	37.61

Source: BIDS Survey of Manufacturing Workers, 2024

Decision-making empowerment considering Yes & Decides Together with HH = 1, No & Otherwise = 0

Indicators	Whole Sample		RMG Export		Non-RMG Export		Domestic	
	N	(%)	N	(%)	N	(%)	N	(%)
Family Planning	741	69.32	451	70.36	136	67.33	154	68.14
Child's Education	758	70.91	457	71.29	142	70.30	159	70.35
Household Expenses	936	87.56	567	88.46	162	80.20	207	91.59
Treatment-related decisions	916	85.69	548	85.49	164	81.19	204	90.27
Asset Purchase or Sale	854	79.89	512	79.88	150	74.26	192	84.96
Mortgage	603	56.41	367	57.25	101	50.00	135	59.73
Saving	855	79.98	503	78.47	155	76.73	197	87.17

Source: BIDS Survey of Manufacturing Workers, 2024

Comparison with Urban Informal Sector-Empowerment Indicators

- **Autonomy to Visit Freely:** Over 50% of women in formal sectors report visiting autonomy, while only **6.69%** in the informal sector have this autonomy.

- **Empowerment in Household Purchases & Healthcare Decisions:**
  - **Strong Empowerment (Independent Decision-Making):**
  - Household Purchases: 36.10% in the formal sector vs. 3.74% in informal.
  - Healthcare: 22.68% in the domestic sector vs. 8.32% in informal.
  - **Weak Empowerment (Including Shared Decisions):**
  - Household Purchases: 88.54% in the formal sector vs. 80.05% in informal.
  - Healthcare: 87.93% in the domestic sector vs. 81.13% in informal.

- Women in the **domestic sector** exhibit the highest levels of empowerment across indicators among formal sectors.

Indicators	Informal Sector		Whole Sample		RMG Export		Non-RMG Export		Domestic	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Owns a Mobile Phone	5174	40.01	1027	97.90	618	97.17	196	98.99	213	99.07
Autonomy to Visit	796	6.69	487	59.39	295	59	107	66.88	85	53.13
Decision-making empowerment considering Yes = 1, No & Decides Together with HH Head and others= 0										
Household Purchase	453	3.74	296	36.10	174	34.80	45	28.13	77	48.13
Healthcare	1007	8.32	186	22.68	108	21.60	29	18.13	49	30.63
Decision-making empowerment considering Yes & Decides Together with HH = 1, No & Otherwise = 0										
Household Purchase	9687	80.05	726	88.54	449	89.80	124	77.50	153	95.63
Healthcare	9817	81.13	721	87.93	442	88.40	125	78.13	154	96.25

Source: BIDS Survey of Manufacturing Workers, 2024

Overview of Collective Bargaining Among Female Workers Across Different Sectors

- **Presence of Trade Union at Factory Level**

- All Surveyed Industries:15.25 have trade unions at their factories

- Export-Oriented Garments: 20.12%.

- Other Export-Oriented Industries: 5.94% mostly combined or industry-level unions)

- Domestic Industries: 9.73%.

- **Trade Union Participation of female workers**

- All Surveyed Industries: 11.13% involved in trade unions.

- Export-Oriented Garments: 15.13%.

- Other Export-Oriented Industries: 3.59% (lowest).

- Domestic Industries: 6.44%.

Presence of Trade Union at Factory Level								
Response	All Surveyed Industries		Export-Oriented Garments Industries		Other Export-Oriented Industries		Domestic Industries	
	n	%	n	%	n	%	n	%
Yes	163	15.25	129	20.12	12	5.94	22	9.73
No	906	84.75	512	79.88	190	94.06	204	90.27
Total	1069	100.00	641	100	195	100	233	100
Participation in Trade Union								
Response	All Surveyed Industries		Export-Oriented Garments Industries		Other Export-Oriented Industries		Domestic Industries	
	n	%	n	%	n	%	n	%
Yes	199	11.13	97	15.13	7	3.59	15	6.44
No	950	88.87	544	84.87	188	95.71	218	93.56
Total	1069	100.00	641	100	195	100	233	100

Source: BIDS Survey of Manufacturing Workers, 2024

Empowerment by Unionization

- **Higher Empowerment Among Members:** unionized female workers show significantly greater involvement in every indicator among all the three sectors.

- Treatment-related decisions and Household expenses: Unionized workers have 97.48%–100% decision-making power in household expenses and 95.79%–100% in treatment-related decisions, compared to non-unionized workers with 79.49%–91% and 80.51%–89.57%, respectively

- Asset Management and Savings: In both asset management and savings, union members have significantly better outcomes compared to non-members, particularly in the Non-RMG sector, which emphasizes the role of unions in financial empowerment

Indicators	Empowerment by Unionization							
	Trade Union Member				Non-member			
	Whole Sample	RMG Export	Non-RMG Export	Domestic	Whole Sample	RMG Export	Non-RMG Export	Domestic
Family Planning	79.83	79.38	85.71	80.00	68.00	68.75	66.67	67.30
Child's Education	79.83	81.44	85.71	66.67	69.78	69.49	69.74	70.62
Household Expenses	97.48	96.91	100.00	100.00	86.13	86.95	79.49	91.00
Treatment-related decisions	95.79	94.85	100.00	100.00	84.42	83.82	80.51	89.57
Asset Purchase or Sale	88.24	89.69	71.43	86.67	78.84	78.13	74.36	84.83
Savings	92.44	91.75	85.71	100.00	78.42	76.10	76.41	86.26

Source: BIDS Survey of Manufacturing Workers, 2024

Regression Result

- No significant difference between RMG and the domestic sector. Empowerment levels are higher in the domestic sector, likely due to an older, more experienced female workforce than younger workers in the RMG sector.

- Non-RMG Export Sector: No significant difference between RMG and the domestic sector. Coefficient: -0.**61** (Statistically significant at 5% level).

- The coefficient of the trade union is **0.54** (Statistically significant at 5% level). However, the existence of factory level union is insignificant

- The coefficient of overtime is **0.034** per additional hour of overtime.

- Age Groups: Significant empowerment gains were observed among **36-45** and **47-61** age groups.

Independent Variable of the OLS regression	Decision-Making Empowerment Score (Trade Union Member)	Decision-Making Empowerment Score (Factory Level Union)
RMG	0.257	0.271
Non RMG Export	-0.607**	-0.623**
Age (26-35)	0.262	0.242
Age (36-45)	**0.823***	**0.822***
Age (47-61)	**1.726***	**1.706***
Husband's characteristics		
Husband's income	0**	0**
Profession-Wage employment	0.427**	0.457**
Work-related Variables		
Experience	0.165*	0.165**
Health and Safety certificate	0.455**	0.441**
Overtime	0.0341**	0.0344**
Trade Union Membership	**0.540****	
Factory Level Union		**0.269**
Constant	3.499***	3.430***

Source: BIDS Survey of Manufacturing Workers, 2024
Note: Other related variables are controlled here

Conclusion

- A significant intergenerational effect on the worker's education is observed with both parental education and wages.
- Although there is a tendency for workers' real wages to remain flat, collective bargaining has a significant impact on raising wages, improving other benefits, and enhancing working conditions.
- Trade unionization among workers significantly enhances women's family decision-making power through stronger collective bargaining and advocacy, whereas factory-level unions lack sufficient influence on empowerment.
- Poverty rate among RMG workers is significantly lower than that of workers in non-RMG export and domestic industries due to the higher and stricter compliance, including adherence to minimum wage laws and the establishment of higher minimum wages in export-oriented RMG industries compared to export-oriented non-RMG and domestic industries.

Thanks for your patience in hearing