Dialogue on Ongoing Upgradation in RMG Enterprise: Results from a Survey

Paper on 'Ongoing Upgradation in RMG Enterprises: Preliminary Results from a Survey'

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Disclaimer: The findings and interpretations of the survey presented in the dialogue are of authors alone.

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Discussion Points

- 1. Objectives of the Study
- 2. Methodology of the Study
- 3. Sample Enterprises and Workers: Preliminary Findings
- 4. Overall Upgradation of Sample Enterprises
 - 4.1 Economic Upgradation
 - 4.2 Social Upgradation
 - 4.3 Gender-embedded Upgradation
- 5. Implications of Upgradation on Firm's Overall Performance
- 6. Concluding Remarks

1. Objectives of the Study

- The issues of enterprise level competitiveness are being increasingly linked with factors beyond economic and technical upgrading.
- There is renewed focus on competitiveness in terms of economic, social and gender embedded upgrading.
- CPD has carried out the study with a view to appreciate the enterprise level changes of upgradation during post-Rana Plaza period
- The objective of the study: To assess the capacity of apparel enterprises to undertake economic transformation as well as to upgrade physical and social compliances during post-Rana Plaza period
- This paper presents some preliminary findings of the study
- The paper highlights only a part of the study objectives; those are:
 - a) to analyse the benchmark condition of RMG enterprises
 - b) to estimate the level of upgradation of RMG enterprises
 - c) to analyse the enterprise-level upgradation in terms of size, location and other variables
 - d) to appreciate the possible impact of firm's upgradation on its overall competitiveness

2. Methodology of the Study

- Prepared a 'Data Universe' of 3596 enterprises (without EPZ enterprises) and 3504728 workers.
- Distribution of enterprises and workers in terms of size of enterprises is in reverse order.

Population Distribution of Factories and Workers

	Enterprises	Workers
Small	1739 (48.36%)	669403 (19.1%)
Medium	1592 (44.27%)	1868020 (53.0%)
Large	265 (7.36%)	963800 (27%)
Total	3596 (100)	3504728 (100%)

Distribution of Sample Factories and Sample Workers

	No. of Factories		Sample (No. of Workers)	
Size	Frequency	Per cent	Frequency	Per cent
Small	109	48.36	408	19.2
Medium	100	44.27	1131	53.3
Large	17	7.36	584	27.5
Total	226	100	2123	226

Source: CPD-RMG Study, 2017

Sample Frame

- Stratified multistage sampling
- Desired level of precision is considered to be 5% and 90% confidence interval
- Target sample size: 252; sample no. of worker: 2123
- Worker selection criteria: 8 from small, 12 from Medium and 18 from Large factories.
- Sample enterprises and workers: 488 workers (22%) from 61 small (enterprises 32%), 1188 workers (52%) from 99 medium enterprises (51%) and 594 workers (26%) from 33 large enterprises (17%).

2. Methodology of the Study

Conducting High Frequency Data Survey (HFDS)

- Conducted HFDS on issues related to line and worker level efficiency by collecting SMV related data
 - Such data is collected in three (3) consecutive days from selected number of factories and workers
 - A total of 24 lines of 12 enterprises and 1242 workers have been surveyed.

2. Methodology of the Study

Estimation Methods

- **Upgradation Index:** The estimation of upgradation of manufacturing enterprises is not so common in global value chain literature and unique in the context of Bangladesh.
 - The methodology has been developed following relevant literature (Standing, 2003)

Estimated three types of upgradation

- Firms' Social Benchmark Level Index = Employment sub-index (ESI) + Standard sub-index (SSI) + Rights sub-index (RSI) + Non-Discrimination Sub-index (NDI)
- Firm's benchmark level of economic upgrading = Weighted index of process upgrading sub-index+ Weighted index of product Upgrading sub-index+ Weighted index of functional upgrading sub-index
- Firms' Gender Embedded Social Benchmark Level Index = Gender Embedded Employment sub-index (GEESI) + Standard sub-index (GESSI) + Gender Embedded Rights sub-index (GERSI) + Non-Discrimination Sub-index (NDI)
- The study estimated technological readiness of sample enterprises

3.1 Distribution of Sample Enterprises and Workers

- Present study covers a sub-set of samples (193) out of total target number of sample enterprises (252).
- The distribution of sample enterprises is by and large similar to that of samples derived from the population
- The sample enterprises are located in major RMG clusters such as Dhaka (45%), Chittagong (31%), Gazipur or Savar (12.3%) and Narayanganj (11.5%).

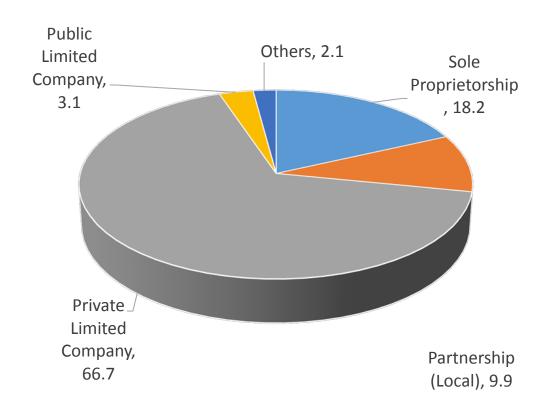
Distribution of Sample Enterprises (193) and Sample Workers (2270)

Size	Sample Enterprises		Sample Workers	
SIZC	Frequency	%	Frequency	%
Small	61	32.0	488	22.0
Medium	99	51.0	1188	52.0
Large	33	17.0	594	26.0
Total	193	100	2270	100

3.2 Ownership of Sample Enterprises

- Legal status of RMG enterprises has experienced changes: 67% are private limited and 3% are public limited companies
- 89% have boards; mostly family based
 - 3 out of 4 members are within the same family
 - 'Highly concentrated ownership, insider boards and limited disclosure' (Mckinsey, 2011)
- Owners are increasingly allowing factory management to take/participate in decision making process
 - Mainly in production planning, target setting and workers' grievances
 - Owners are still playing major role in price negotiations with buyers
 - More towards corporate structure

Legal Status of Sample Enterprises

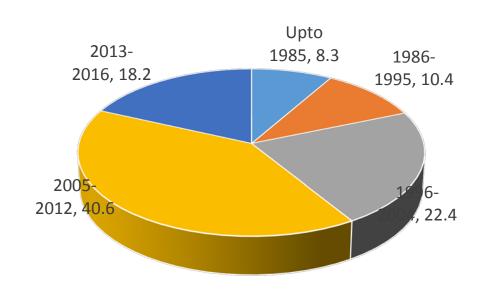


- The role of group of companies is increasingly visible in the RMG sector.
 - About 61% of enterprises are sister concerns of different groups.
 - Not only RMG based enterprises but also non-RMG based enterprises.
- A part of 'small' and 'medium' sized enterprises are subsidiaries of different groups.
 - 43% of total small enterprises, 65% of total medium enterprises and 100% cent of total large enterprises
- There is a growing concentration of RMG enterprises under different groups
 - Emergence of such groups in the RMG sector would provide financial and non-financial benefits to subsidiary companies.

3.3 Establishment and Operation of Sample Enterprises

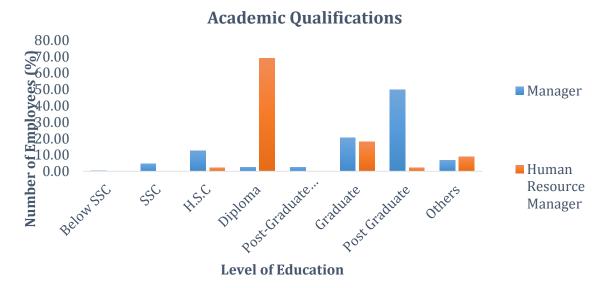
- A large share of RMG enterprises were established during 2013-2016 i.e. after the collapse of the Rana Plaza
 - Both entrepreneurs and buyers have kept their confidence on investing in the sector
 - Such investment have created additional employment at a time when workers lost their jobs due to closure of a good number of factories
- 41% of total sample enterprises operate their enterprises in rented spaces
 - About 34% of the factories operate in shared buildings where about 63% are RMG related establishments and the rest 37% are non-RMG related establishments.
- About 16% of sample entrepreneurs have mentioned that they will either relocate or close the factory which would happen within 1 to 5 years.

Year of Establishment



3.4 Management of Sample Enterprises

- About 50% of the managers have postgraduate degrees and 20% of them have graduation degrees (Figure)
 - A large section of the managers graduated in disciplines which have little relevance with management and operation of industrial enterprises
 - The same is true for other management professionals including HR managers and other mid-level management professionals.
- Managers are overwhelmingly male (Table)
 - High level of gender-imbalance in the management profession has been continued

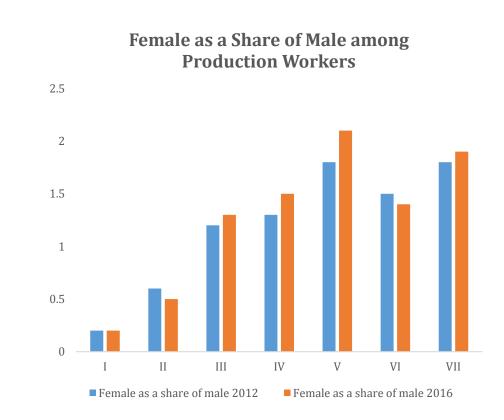


Managerial Position: Sex Distribution

	Managers		HR Ma	anagers
Sex	Frequency	Percentage	Frequency	Percentage
Male	190	99.5	176	90.7
Female	1	0.5	17	9.3
Total	191		193	100

3.5 Workers in Sample RMG Enterprises

- The employment growth in RMG enterprises has somewhat decelerated in recent years
 - Average yearly growth of employment in sample enterprises was 3.3% during 2012-16;
 - During 2005-2012, average yearly growth was 4.01% (BBS, 2005 and 2012)
 - The size of RMG enterprises, in terms of number of workers, has getting marginally bigger
 - Overall gender balance among production workers in RMG enterprises has become less female dominated
- Share of female employment in upper and middle grades are slowly rising particularly in case of Grade III, Grade IV and Grade V.
- Female workers remain scant in top grades such as Grade I and II.



3.5 Workers in Sample RMG Enterprises

- The survey found considerable presence of foreign professionals in different sections of sample enterprises
- About 16 per cent sample enterprises employed foreign staffs who have been working in almost all sections
 - Particularly in production planning (37.3 per cent of total foreign professionals), merchandising (20.1 per cent), quality assurance (11.9 per cent) and washing sections (8.2 per cent).
- According to the survey results, workers' monthly wage is on average BDT 7270 for male workers and BDT 7058 for female workers (excluding bonuses)
- Difference between male and female wages is about 3% which indicates gender-wage gap though at limited level
 - Female workers within grades III, IV and V, are paid lower than their male counterparts on average
 - For grades VI and VII, female workers received higher wages

Foreign Staffs Working in Different Sections

	Section wise share of total
Department	foreign staff
Merchandising	20.1
Production, Planning	37.3
Sewing Department	3.0
Knitting Department	3.0
Washing Department	8.2
Quality Assurance	11.9
Finishing and Packaging	0.7
Maintenance Department	2.2
Admin	6.0
Industrial Engineering	6.0
Research and Development	1.5
Total Officer	100.0

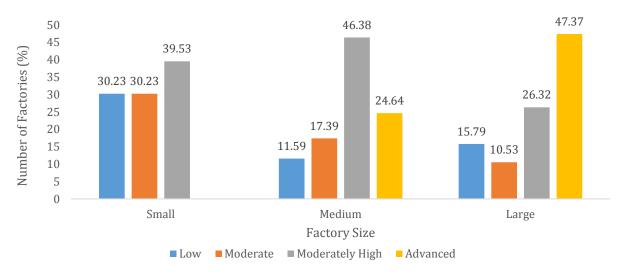
3.6 Machinery Use

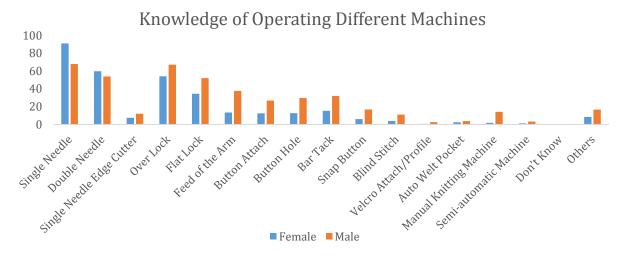
Less than 20% of sample enterprises have 'advanced' level of technologies while 41% of enterprises have 'moderately better' technologies.

47.37% of large enterprises and 25% of medium enterprises use advanced technologies

Female workers are proportionately less knowledgeable about operating different machines compared to that of male workers

Technology Use by Sample Enterprises





3.7 Buyers and Export



More than 60% of the factories received order from Brands



Still a number of small and medium scale suppliers take a part of their orders from buying houses



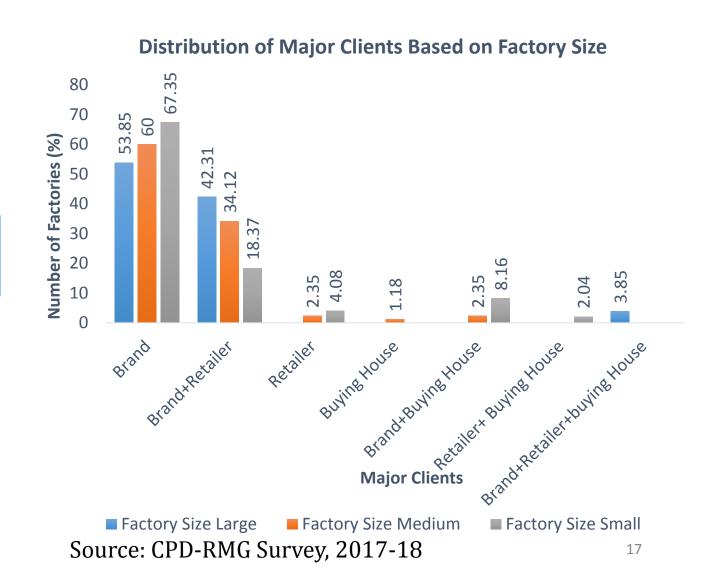
27.9% Yearly growth is found for the order received from int'l buyers

Orders received from local buyers have declined by 12.6 per cent

Sub-contracting activities has declined by 6.7%. About 17% enterprises are found to have either partial or full sub-contracting activities.



50.4% of factories maintain an avg. lead time of 3 months or less



3.8 Workers' Organizations

- Most of the firms have WPC (91%) while trade unions are almost non-existent (only 3.3%)
- According to the amended labor act 2013, members of the WPC shall be elected
 - 68.9% workers mentioned that workers in their factories have been elected by vote
 - A considerable share of enterprises is still not comply with the amended act
- More WPC in RMG factories are located in Chittagong followed by Dhaka and Gazipur
- Only a small section of workers availed the services of workers organisations
- Main grievances of workers discussed are: late payment, problem in fixing wage rate, over pressure for work, sexual harassment, leave and other financial benefits, workers' association related problems or promotion related issues

Formation of WPC in Sample Enterprises



Source: CPD-RMG Survey, 2017-18

Services availed by the WPC and Trade Union

Services Availed or Not?	Workers' Participation Committee (91%)	Trade Union (3%)
Yes	243	4
	(12.19)	(21.05)
No	1751	15
	(87.81)	(78.95)
Total	1994	19
	(100.00)	(100.00)

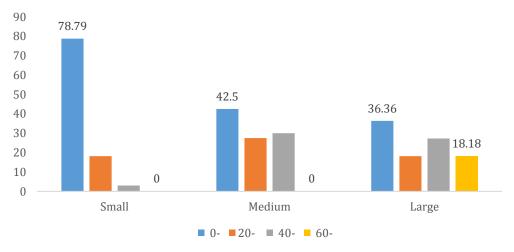
3.9 Overall Observation on Structure, Management and Operation of Sample Enterprises

- Overall, RMG enterprises have experienced changes in number of areas
 - Major changes observed in case of ownership, workforce and contractual arrangements with buyers.
- Ownership: family based, towards corporatization, better use of management and dominance of group led activities
- **Workforce**: Rise in skill composition, aged and married workers; female in upper grades; lowering the share of female in gender composition and considerable share of foreign staffs
- Contractual arrangements: Rising share of brands and retailers and declining share of subcontracting
- On the other hand, less change in the quality of management and technology use
- **Technology use**: Slow progress in using advanced machineries and technological changes; female workers are less skilled in operating diverse set of machineries
- Management: Lack of academic attainment and skill are major constraints of the managers and other staffs
- In this backdrop, the upgradation initiatives undertaken by samples enterprises after the Rana Plaza tragedy is likely to have diverse nature.

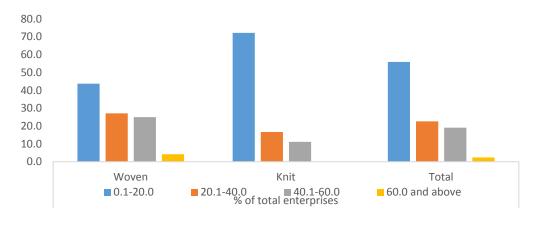
4.1 Economic Upgrading

- The overall score of economic upgrading index is low average score is only 23.5 with st. deviation of 15.4
- Firms are relatively better in process upgrading (average score is 37.0) followed by product upgrading (26.0) and functional upgrading (10.0).
- Around 18% of large factories have scores over 60, with none of the small and medium factories in the sample reaching that level
- Around 97% of small factories have scores in the low 0-40 range, showing their lack of progress in terms of economic upgrading.
- In general, knit enterprises are technologically behind those of woven enterprises
- Significant variation exists between different locations
 - Sharp contrast in Chittagong

Position of Economic Upgrading



Economic upgrading in Woven and Knit Enterprises



4.1.1 Components of Economic Upgrading

- **Process Upgradation:** It includes components such as line-worker ratio, no of machines, use of specialized machines and introduction of new departments etc.
 - The overall performance is somewhat better compared to other sub-indices (e.g. IE department)
- **Product Upgradation:** This refers to capacity to develop design of basic and normal designed products, changes in basic designs, in-house capacity to produce fashionable products as well as new products etc.
 - Product upgrading scores are mostly on the lower side (e.g. Product design facility)
- **Functional Upgradation:** This refers to extent of forward linkage facilities, branding of products, facilities for having advanced R&D, warehousing and marketing facility abroad and availability of design and marketing departments etc.
 - The overall performance is very poor

Has IE Department of Not?

	Small	Medium	Large	Total
No	41	41	8	90
	(83.67)	(71.93)	(42.11)	(72.0)
Yes	8	16	11	35
	(16.33)	(28.07)	(57.89)	(28.0)
Total	49	57	19	125
	(100)	(100)	(100)	(100)

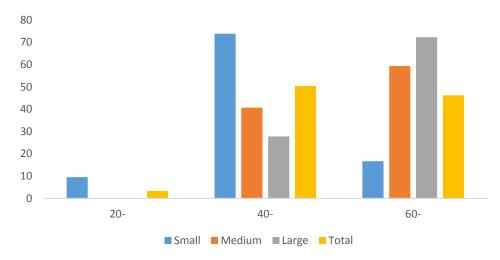
Factory has a Product Design Facility or Not?

	Sma II	Medium	Large	Total
No	40	43	8	91
	(81.63)	(75.44)	(42.11)	(72.8)
Yes	9	14	11	34
	(18.37)	(24.56)	(57.89)	(27.2)
Total	49	57	19	125
	(100)	(100)	(100)	(100)

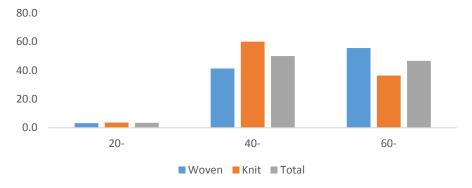
4.2 Social Upgradation

- Social upgrading is the area where enterprises make significant progress with an average score of 60.9 and low standard deviation (8.4)
- Better value of social upgrading is mainly influenced by impressive performance with regard to standards subindex (90.0) followed by non-discrimination (66) and employment security sub-indices (74).
 - Performance in rights sub-index is very poor (22)
- In the high scoring range of 60-80, there are only 17% of small factories and around 72% of large factories.
- There is no clear trend in variation of social upgrading according to type of factory; small enterprises are behind
- Some variation in social upgrading scores is discerned according to area
 - Chittagong is the area with sharp contrast though overall score is better

Size wise Distribution of Social Upgrading



Social Upgrading Score in Different Categories of Enterprises



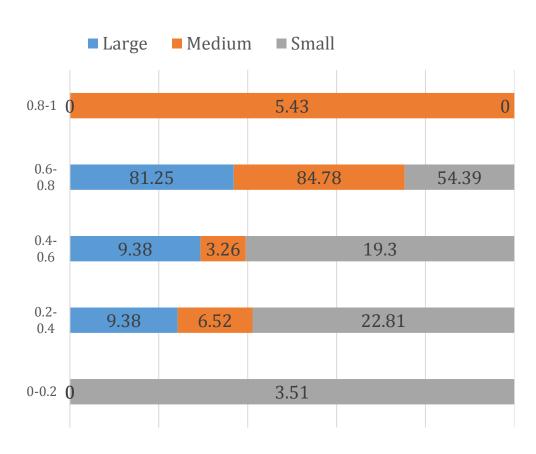
4.2.1 Components of Social Upgradation

- **Employment Security Sub index:** This includes issues such as having training facilities for newly recruited workers, apprenticeship facility, having committee for workplace safety, incidences of accidents, employment contract and assurance of retrenchment benefits etc.
 - Around 87% of all the factories of the sample have scores above 60, with approximately 35% scoring in the high range above 80.
- **Rights Sub-Index:** The Rights Sub Index includes issues such as firms having paid selective fringe benefits to workers, minimum wage paid was 50% of the average paid in the firm, having recognized trade unions, collective agreement covering wages and other labour matters, operational work forum and provision for profit sharing scheme etc.
 - The scores are relatively poorer around 53% have scores between 1-20, which is quite low
- **Standard Sub-Index:** Standard sub-index include compliances with regard to electrical, fire and structural issues of sample enterprises.
 - Overall, sample factories have good scores in standards sub index.
- **Non-Discrimination Sub-Index:** This includes issues such as no preference for men or women in the recruitment process, non-preference in case of providing training to workers, presence of female in managerial positions etc. The overall performance has been relatively better for all factories.

4.3 Gender Embedded Upgrading

- The overall performance of sample firms in gender embedded social upgrading is moderate.
- The average score of this upgrading is 51.7 with low standard deviation (7.5).
- The scores of different sub-indices have little variations between each other with highest score in gender embedded right based sub-index (59) followed by gender embedded employment security sub-index (53) and gender embedded non-discrimination index.
- A good share of small enterprises are found with low scores in gender upgrading.
- There is little variation among woven and knit factories.
- The progress in Chittagong and Gazipur is better than that of Dhaka and Narayangonj.

Gender Embedded Social Upgrading



Source: CPD-RMG Survey, 2017-18₂₄

4.4 Overall Observations

- The RMG sector has experienced two streams in terms of upgradation
 - In one stream very limited level of changes are discerned
 - In other stream significant changes are observed.
- The upgradation in RMG enterprises reveal a diverse pattern.
 - The upgradation is most prominent in case of social issues particularly with regard to standards, non-discrimination and employability but very poor in terms of rights
 - A moderate level of upgrading is discerned in case of gender embedded upgradation
 - In contrast, economic upgrading of sample enterprises in general are behind particularly because of poor performance in product and functional upgradation
- The upgradation is influenced by size of enterprises where large enterprises are found to be ahead of medium and small enterprises with regard to economic, social and gender related upgrading.
 - A section of small enterprises which perhaps are fall behind in all types of upgradation
- There is location-specific variation in upgardation Chittagong has sharp contrasts in terms of upgradation

4.4 Overall Observations

- An institution-led upgradation in social issues which had been undertaken over the last five years have yet to establish its natural link with economic issues.
- In that consideration, an uneven upgradation has taken place with limited focus on economic and technological issues, particularly those in small and medium enterprises.
- Such an unbalanced growth usually have limited positive impact in terms of firm's overall competitiveness especially those of small and medium enterprises

5.1 Price of Production Orders

- The suppliers usually expect that the investment in upgradation is most likely reflected in the price that is settled with the buyers.
- The study found that the relationship between price and upgradation is rather weak both in case of economic and social upgrading (Table)
- More importantly, relationship between price and social upgrading is rather weaker than that of economic upgrading.
- Needless to mention that price of product is influenced by different factors
 - Demand slowdown of global demand for apparels and low price offered for excess lead time etc.

Relationship between Price and Upgrading

	Economic Upgradation and Final Settled Price	Social Upgradation and Final Settled Price
Correlation Coefficient	0.3071	0.1039
Significance Level	0.0087	0.3352

5.2 Suppliers' Profit

- Suppliers' profit rate is estimated in terms of net profit over gross revenue per year.
 According to the survey, average profit rate has declined between 2012 and 2016 –
 from 6.6 per cent to 6.0 per cent. However, there is wide variation between firms in
 terms of profit rate.
- There is apparently no trend in the relationship between economic upgrading scores and profitability.
- Overall the relationship between firm's profit and economic and social upgrading is not so strong.

5.3 Distribution of Margin in the Value Chain

- Distribution of margin in the value chain remain the same as observed earlier.
- There is huge difference in the margin received by buyers and suppliers.
- There is considerable difference between suppliers' mark up in small, medium and large scale enterprises which also have implications on buyers' margin as well.
- Investment in social upgrading by sample enterprises appear to have limited implications on the final settled price as well as their mark up and labour costs.
- It is to be noted that a portion of products is sold below the tagged price
- Buyers' margin includes their costs for forward and backward linkage activities

Distribution of Margin between Buyers and Suppliers in the Value Chain

	Overall	Small	Medium	Large
Price Tag	21.3	21.9	21.5	20.1
% of tagged	100.0			
price		100.0	100.0	100.0
Buyer's Margin	78.9	82.2	77.8	72.4
Suppliers'	21.1			
Margin		17.8	22.2	27.6

5.4 Line and Worker Efficiency

- There is wide variation in efficiency in sample enterprises.
- The average line efficiency is found to be 52.2
 - However a sizable share of enterprises have very low level of efficiency (21%) and another 21% have moderate level of efficiency
- Workers' individual efficiency is found with wide variation. While the average level of efficiency is 62.2
- Over 50% workers have efficiency level higher than 60; on the other hand, the rest half of workers have diverse level of efficiency.

Likewise and Worker wise Efficiency (based on HFDS)

Level of efficiency	Line Efficiency	Worker Efficiency
Very Low (below 30%)	18.5	8.2
Below Average (30-40%)	3.7	12.9
Moderate (40- 50%)	18.5	12.7
Moderately High (50-60%)	18.5	13.1
High (60% and above)	40.7	53.1
Total	100	100

6. Conclusion

- This paper is an interim output of the CPD-RMG study
 - Prepared on the basis of the results from a primary survey derived from a sub-set of target number of samples.
 - The findings of this paper need to be interpreted with due caution.
- RMG sector has experienced two streams of changes in case of structure and composition of enterprises as well as their level of upgradation.
- The structure of RMG enterprises and their level of upgradation provide an indication that a sizable share of enterprises are likely to be situated at a level where they could either survive or become 'incompetitive'
 - Potentiality of survival/'taking off' depends on improvement in technological readiness, management practices and workers skills particularly that of female workers etc.
 - Without ensuring a balanced level of upgradation particularly in economic and technological issues, a section of enterprises (small and enterprises outside the group) would find it difficult to maintain their competitiveness
- Key stakeholders including government, business bodies, buyers/brands and development partners have specific role to play
 - For ensuring balanced level of upgrading across all enterprises particularly those of small and medium scale ones.

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Thank you.