



ORIGINAL RESEARCH PAPER

Engineering

IMPACT OF COVID 19 IN READYMADE GARMENTS INDUSTRIES OF BANGLADESH

KEY WORDS: RMG, Covid-19, Labor; Challenges, Recommendation

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ABSTRACT

As of now, Covid 19 is a worldwide threat to the entire world. The present situations of the clothing industry of Bangladesh are no exception to be influenced by Covid 19. As a result, the interest in this project topic has broadened. In this experiment, the research group has taken a few techniques particularly meetings and information assortment to collect data. Finally, discuss the actual scenario of the garments industry of Bangladesh before and after covid 19. In this project, the data collection process via email, questionnaire, direct interview method has followed for collecting the data. In this exploration, the research group has chosen 30 (Thirty) Woven, Knit, and Lingerie production lines from the diverse zone of Bangladesh. The Human Resources [HR] Department, the industrial facility work [Men's, Women's], the staff of the manufacturing plants [Admin, Welfare Officer, and Compliance officer] has gone to this meeting and gives positive information to orchestrating the report. In the wake of gathering the information [Before and After Covid 19], the exploration group has underlined a few variables to identify the effect of COVID 19 such as order flow, compensation for the worker's Order quantity, Labor quantity, Basic salary, their living and daily lifestyle and so on Subsequent to dissecting the variables, the project group discovers the consequences of this venture. In this study, the project group through certain suggestions for the RMG business of Bangladesh for future sustainability. Some key factors have come after analyzing this data. We can easily overcome the challenge post covid 19 situations.

INTRODUCTION

The RMG in Bangladesh is second largest after China and it alone contributes 20 percent of the country's GDP. According to the Asian Development Bank (ADB), Covid-19 will add more 13 million people to existing 34 million people below the poverty line [1].



Figure 1: Readymade garments industry

Covid-19 has taken a toll of 533 lives in Bangladesh and infected over 36,000 people. The world is ought to change post-Covid-19. However, the readymade garments (RMG) industries of Bangladesh which exported product worth \$34 billion in 2019 will face serious challenges [2]. Due to worldwide lockdown of shopping centres, Bangladesh is undoubtedly the worst hit due to this fallen industry since RMG contributes to about 80 percent of their total export and this has incurred a loss of \$6 billion to their exchequer. The RMG in Bangladesh is second largest after China and it alone contributes 20 percent of the country's GDP. According to the Asian Development Bank (ADB), Covid-19 will add more 13 million people to existing 34 million people below the poverty line. RMG in Bangladesh, being labour intensive, the impact of Covid-19 will be more evident. Around half of the 4000 garments factories in Bangladesh have opened on a

limited scale last week. This calls for a concerted effort by the government, RMG industries, RMG-associations, financial institutions, NGOs to come forward and work to mitigate the impact of Covid-19 and additionally prepare it for future-ready [3]. Country's largest RMG body, the 'Bangladesh Garment Manufacturers and Exporters Association' has issued guidelines to factory employers encouraging them to adhere to safety measures and prevent the spread of Covid-19 upon factory re-openings. The government should strictly follow strict international guidelines like enforcing social distancing, daily sanitizations of warehouses and factories, install wall-mounted IR thermometers, provide masks, hands-free sanitizers and washbasin, keep an on-site team of emergency doctors and an ambulance, prep up a vigilance team that closely monitors the employee's travel and family history on a day-to-day basis, and so on. These measures increase the cost to the company, therefore, industries must have to come with some innovative ideas or 'Jugeed' (a flexible approach to problem-solving that uses limited resources in an innovative way) to save monetary burden on factories. Another immediate measure the government should undertake is offering an economic stimulus package, especially for RMG. ADB has lent around \$3 billion separate from \$100 million to support the public health requirements to combat Covid-19. Many factory workers demanded to clear the previous salaries. Salaries should be directly transferred to their account. The announcement made by Prime Minister Sheikh Hasina to allocate \$5.8 billion for export-oriented industries is one right step towards clearing the impending wages at 2 percent interest rate. Similarly, an appeal made by the Commerce Minister, Tipu Munshi, to not fire any factory worker is a relief but not enough to the stressed workers which had no option but to leave the area of the factory. If the market demand does not resume, factory owners will have few choices left. To tackle this problem permanently, the government should plan decentralization of the garment manufacturing process [4]. Most of the RMG companies of

Bangladesh cater to the US and European markets. Sometimes they subcontract these orders to small vendors. Post-Covid-19 is probably also a time to engage in and develop micro-scale industries at individual tailoring/stitching unit at sewing machine level in addition to the sub-contractors. These units situated at workers' residence connected via mobile and road for easy information and goods flow will work as co-operatives. Amul cooperative is the biggest successful example of co-operatives. Design development, order acquisition from big buyers, raw material procurement and branding are a few money and high - skilled process but the later sewing processes are labour-centric and require limited specialized skill. Decentralization will have its own cost benefits – the big garment manufacturing houses will lessen its electricity burden, save on space and property rentals, machine's maintenance costs etc. For example, an industrial sewing machine which cost about Tk18,000 could easily be financed without collaterals by microfinance organizations in which Bangladesh microfinance organizations are efficient. These independent micro-sewing hubs will not just speed up and support the industrial process upon market demands but also increase entrepreneurship among workers beyond Covid-19 period. More than 80 percent of the workforce at the RMG industry in Bangladesh comprise of women who are vulnerable to workplace exploitations. Decentralization of the garment manufacturing process would not only give more financial and personal security to women but allow them to save commute time if they work from home. Another benefit of decentralization are big factories will be free from noose of labour law which is a major hurdle in labour-intensive industries [5]. RMG industries occasionally face industrial accidents and fires. Decentralization at micro-sewing level will also decrease casualties due to safety-related issues like fire, smoke etc. High safety measures further help in improving ranks in Generalized System of Preferences (GSP) and other safety indices helps to build clean cloth image. RMG industries could take this opportunity to diversify its domain for sustainability. One such measure could be the diversion of garments industry resources to PPE kit manufacturing hub post-Covid-19. China provides the majority of raw materials to Bangladesh's RMG industry, even for PPE. China has embarrassed itself with its export of poor quality PPE. Bangladesh can rise to this occasion though competing with China in manufacturing and marketing is no easy task [10]. The very limited use of artificial intelligence (AI) by Bangladesh RMG industries is another point of concern. Many online retailers use App-based virtual fitting room. This technology works on 3D body measurement that uses AI in conjugation with computer-vision technology for body scan and deep learning algorithms to analysis images and take precise body measurement. These technologies could be used by factories or online tailor-fit retailers via Apps to take the order of custom-fit or made-to-measure clothing and deliver customized clothes to customers that could be on the other side of the globe. Automation is ever-changing the labour-intensive businesses and as a venture capitalist, John Chambers reiterated, "40 percent of businesses will not exist in a meaningful way in the next 10 years." Post-Covid-19 is a watershed moment for Bangladesh's RMG to embrace for a sustainable change or perish [6]. The coronavirus pandemic is taking a heavy toll on Bangladesh, which is the world's second-largest garment exporter. The industry is rapidly losing orders, and millions of jobs are at stake. Bangladesh's ready-made garments sector accounts for around 80% of the

country's manufacturing income, with at least 4 million workers depending on it. Although the number of COVID-19 cases is not too high in the South Asian country, the pandemic poses a great risk to this sector and the livelihood of garment workers. The country's garment sector depends hugely on export orders, which have drastically decreased due to the rise of the novel coronavirus cases around the world, including Europe and the US [7]. From the above discussion, the project team has decided by the help of honorable supervisor, Engr. Md. Eanamul Haque Nizam, Assistant professor, BUET to work with this topic to know specific effect factors after Covid 19 situations that will be big concern for next garments owner need to overcome. This project has some specific objective which is stated in below:

1. To know about the present scenario of Bangladeshi RMG industries during Covid 19.
2. To know about the post scenario of Bangladeshi RMG industries after Covid 19.
3. To find out the actual effect factors after analysis the collected data's directly from the RMG industries and labor.
4. To find out some solutions to overcome this situations.
5. To find out some recommendations after Covid 19 era.
6. To know the actual effected sectors [Knit, Woven & Lingerie].
7. To compare with different finding factors to suggest for next steps.

MATERIAL & METHOD:

Material: For conducting this research the team of the project decided to take 10 woven, 10 knit & 10 lingerie factories. Among this factory, minimum 500 hundreds female and male worker has participated to provide us the interview. After collecting the data's the research team summarized the data to take future decisions.

Methodology: In this project, the data collection process via email, questionnaire, direct interview method has followed for collecting the data's. After collecting the data's, the research team has compiled this data for making the final summery. For analysis we are taking the 30 factories from different zone of the Bangladesh. The team of the project group discuss with the Human resources [HR] department and directly from the labor of those factories for the real scenario before and after covid 19. Factors list that the team want to find out: Order amount [Reduce/Increase], worker amount [Same or sack], worker lifestyle [Salary], Effected by Covid 19 etc.

Methodological Framework: In this methodological framework, the author tries to show the total method of working of this study. In this study, the author tries to pick up the 30 [thirty] woven, 30 [thirty] knit and 30 [thirty] lingerie factories from the diversified area zone of the Bangladesh. For the security purpose, the research group cannot disclose the name of the factories. The author collect the data's [Time: June-December, 2020] from different factories as per conditions. After collecting the data's, the author compile this data's for future decisions making after analysis the before and after Covid 19 situations of Bangladeshi factories.

RESULTS & DISCUSSIONS

The situations of RMG before & after covid 19

In these comparisons sections, the research team compare all the data's that has collected from the interview and directly from the factory.

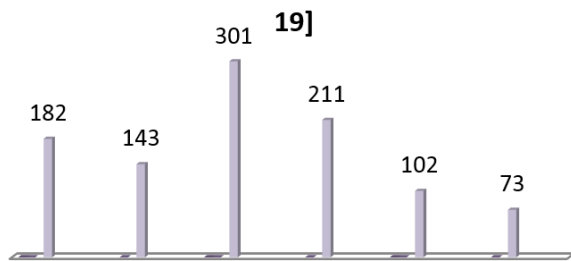
Table 1: Amount of Order [Before & After Covid 19]

List of the Factory	KNIT FACTORY				WOVEN FACTORY				LINGERIE FACTORY				% of Change [ORDER QUANTITY] [In Million]
	Before Covid19 [knit]		After Covide-19[knit]		Before Covide19 [Woven]		After Covide-19[Woven]		Before Covide-19[Lingerie]		After Covide-19,[Lingerie]		
Factory List	No. of Buyer	No. of Order	No. of Buyer	No. of Order	No. of Buyer	No. of Order	No. of Buyer	No. of Order	No. of Buyer	No. of Order	No. of Buyer	No. of Order	

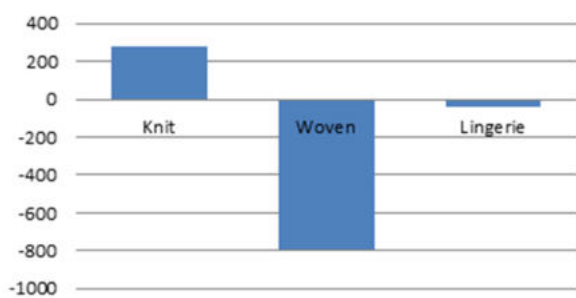
													K	W	L	
Factory-1	24	30 M	16	25 M	18	550 M	10	450 M	10	24 M	8	20M	-5	-100	-4	
Factory-2	26	50 M	20	40 M	50	530 M	30	470 M	12	26 M	10	21M	-10	-60	-5	
Factory-3	27	42 M	21	36 M	30	350 M	20	310 M	10	20 M	6	18M	-6	-40	-2	
Factory-4	16	80 M	28	60 M	22	480 M	15	390 M	4	10 M	3	8M	-20	-90	-2	
Factory-5	6	22 M	4	18 M	27	270 M	20	200 M	14	30 M	10	26M	-4	-70	-4	
Factory-6	15	35 M	10	25 M	38	400 M	34	350 M	12	36 M	8	30M	-10	-70	-6	
Factory-7	12	30 M	8	500 M	36	320 M	26	300 M	10	18 M	8	12M	+470	-20	-6	
Factory-8	28	600 M	22	500 M	14	180 M	10	110 M	8	20 M	6	16M	-100	-70	-4	
Factory-9	14	32 M	8	16 M	42	390 M	32	320 M	16	25 M	10	20M	-16	-70	-5	
Factory-10	14	35 M	6	18 M	24	510 M	14	310 M	6	14 M	4	12M	-17	-200	-2	
% of Change	182		143		301		211		102		73		+282	-790	-40	
[Buyer Quantity]	-39 M				-90 M				-29 M							

N.B: Here, (-) denote the decrease & (+) denote the increases amount the order and no of buyers.

Number of buyer [Before & after Covid



Number of Order [Before & after Covid 19]



Graph 1: Comparisons between knit, woven & lingerie items factories Amount of Order [Before & after Covid 19]

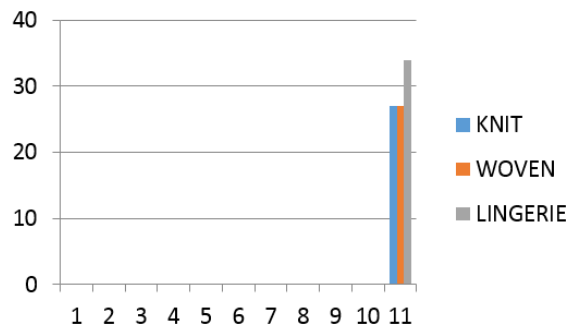
Discussions: from this section, we can see the scenario of the before and after Covid 19. The amount of order ultimately has increased both for woven, knit and lingerie item factories. In this graph number 1, we can see that the order quality has increased in knit factory [282 M], but on the other hand the, for woven [-790M] & Lingerie factory [-40M] has decreased. On the other hand, the no of buyers has decreased for woven [-39M], Knit [-90M] & Lingerie [-29M].

Table 2: Amount of Labor [Before & After Covid 19]

List of Factory	Amount of Labor Before Covid-19 [In thousand]			Amount of Labor After Covid-19 [In thousand]			Total change%		
	Knit	Woven	Lingerie	Knit	Woven	Lingerie	K	W	L
Factory -1	18	30	12	10	20	8	-8	-10	-4
Factory -2	20	18	14	14	12	10	-4	-6	-4
Factory -3	18	18	12	10	12	8	-8	-6	-4
Factory -4	12	16	18	8	8	12	-4	-8	-6
Factory -5	14	22	14	8	14	10	-6	-8	-4

Factory -6	16	12	20	12	8	15	-4	-4	-5
Factory -7	18	14	12	12	8	8	-6	-6	-4
Factory -8	15	16	14	8	8	10	-7	-8	-4
Factory -9	16	18	20	8	10	12	-8	-8	-8
Factory -10	18	12	15	10	8	10	-8	-4	-5
Subtotal:	-63	-68	-48						

N.B: Here, (-) denote the decrease the labor amount.



Graph 2: Comparisons between knit, woven & lingerie factories minimum salary of labor before and after covid 19

DISCUSSIONS:

From this section, we can see the from the graph 3 scenario of the before and after Covid 19. The amount of labor ultimately has decreased both for woven, knit and lingerie item factories. Among woven, knit & lingerie factories most of the salary [34K] decrease from lingerie factory. On the other hand, 27k has decrease from woven and knit factories.

Discussions: From this section, we can see the scenario of the before and after Covid 19. The lifestyle of labor ultimately has changed both for woven, knit and lingerie item factories.

RECOMENDATIONS

a) FISCAL AND FINANCIAL STIMULUS PACKAGE: In this time of crisis, the government enacted several policies to support the RMG sector like allowing deferment of payment of VAT and quarterly Advanced Income Tax (AIT) till June 2020, raising the export development fund to \$5 billion from \$3.5 billion at 2 per cent interest rate, allowing delayed payment of loan till June 2020, relieving from late fees for credit cards, extending tenures of trade instruments, and increasing usance period of back to back LCs opened under supplier's/buyer's credit up to 360 days (from existing 180 days). The government has announced subsidized credit for export-oriented industries under which a total of BDT 100.00 billion was allocated for paying workers' wages. Most of the workers got this money through Mobile Financial Services

(MFS). These initiatives had positive results in the short term, the government should plan long term plan to sustain this sector for future development [8,9].

b) DETERIORATED LIVELIHOOD CONDITION OF LAID-OFF AND RETRENCHED WORKERS:

Workers' have suffered a decline in living standards because of the disruptions in the supply chain. Delayed payments made it difficult to afford rents, food, and other basic amenities. Massive layoffs pushed many workers below the poverty line. The government introduced initiatives of open market sales (OMS) to give workers food supplies. But workers were benefitted at small scale from these services. These show that workers need more than wage support.

c) EXPOSED LACK OF STRENGTH IN PARTNERSHIP:

Covid-19 exposed the lack of strength in partnership between employers and workers. Workers' organizations claim that employers did not properly follow sections 12 and 16 of the labor act. The factories which are not a member of BGMEA and BKMEA or sub-contracting factories did not get any benefit from the stimulus package. There was limited effort to create a partnership among worker's organizations, employers, government, and brands/buyers to address workers' entitlements and rights. Both at the local and global level responsibility-sharing by key market players across the value chain were not strongly highlighted. There is a gradual rise in response from the sourcing countries as well as from the brands and buyers to rebuild the partnership [10, 11].

d) FAULT LINES IN PARTNERSHIP:

The Coronavirus pandemic has exposed the fault lines of the partnership in the RMG value chain. Back in January-February in 2020, supply of raw materials drastically declined due to the economic shutdown in China. Heavy reliance on Chinese raw materials with no sustainable alternative made Bangladeshi suppliers incur a lot of losses. After the raw materials crisis, came the crisis of order cancellation. During March-April of 2020, brands and retailers of major apparel importing countries cancelled/deferred their orders worth US \$3.16 billion (BGMEA, 2020). During April 2020, the country's RMG export growth has seen a historical decline of -84.86 per cent (BGMEA, 2020). Contract law experts say that applying the 'force majeure' to cancel orders for which wages have been paid is questionable. The next phase of the crisis began when the government announced 'public holidays' due to the Covid-19 outbreak, which stayed from March 29 to May 31 2020. Most of the factories were forced to shut down. The remaining open factories had questionable health and safety measures. Still, after all the factories have been operational, the production is at the level of 50-60 per cent of capacity. The BKMEA and BGMEA should take a long term plan to overcome these situations [12, 13].

5. LIMITATIONS AND RECOMMENDATION FOR FURTHER RESEARCH:

BGMEA President Ms. Rubana claimed that before the pandemic, 2,282 factories were running under BGMEA membership. After the closure of 317 factories, 1,965 are now running. As per the BGMEA database, about 76,000 workers lost their jobs and approximately 40 per cent went back to their former employment. The number of jobless workers is declining every day, she said. The BGMEA president urged all the stakeholders, including the government, to develop an unemployment protection scheme for the workers. [https://www.newagebd.net/] [14]. So, it's a real scenario of the Bangladeshi RMG industry of Bangladesh after covid 19. The research group has taken only 30 [thirty] factories from Knit, Woven & Lingerie item manufacturer. In future, the number of factories and worker or labor can be increased for more data collection. More factors can be analyzed by any research group if they want.

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CONCLUSIONS

The impact of COVID-19 has just started to unfold and will evolve fast. The full impact will be more visible in the next few months or beyond. In order to mitigate the impending economic and potential social crisis, it is needed to stay ahead of the curve and get ready with appropriate emergency assistance and post-crisis assistance in different forms as appropriate. Obviously, the impact of COVID-19 extends well beyond the RMG industry to other economic sectors. Assistance to the RMG industry, which is the largest contributor to urban poverty reduction, May help other associated sectors in the supply chain and normalize the economy significantly and faster [15]. As sufficient evidence is not yet available to determine the lifespan of COVID-19 on various surfaces (such as fabric, metal, plastic, etc.), it is possible that the virus may be transmitted across the border if the clothes are made by the COVID-19 infected workers. Therefore, Bangladesh RMG sector requires urgent coordinated and effective actions by all actors including global health communities, BGMEA, international brands/retailers, the GoB, and the International Labor Organization to safeguard workers' health and overall wellbeing during the COVID-19 pandemic as well as the health of people in other countries. In addition, the global supply chain and RMG trade needs to be tenured for the long term to support the economic sustainability of Bangladesh. The production of clothing during the COVID-19 pandemic must not go ahead without an urgent overview of the system and the development of a plan to ensure the health and safety of workers. In conclusion, it is worth noting that the United Nations Development Programme & Government has initiated a prompt assessment for global trades to conduct human rights due diligence in relation to the COVID-19 pandemic. It is time for the Bangladesh government and the RMG industry to heed this warning [16]. In conclusions, the RMG a sector of Bangladesh has affected so much comparative with another countries garments factories because of financial strength. The Bangladesh is still now low middle income country. So, here the people are living in the lower center line. Most of the families of these countries are depended on the factory income. That's why the government and the rich people should take a long planning for this low income labor and as well as to sustain our garments factories.

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