

Improving Ready-Made Garment Productivity by Changing Worker Attitude

Md. Monirul Islam (Rajib)

MBA in Product & Fashion Merchandising.

Lecturer, Department of Knitwear Manufacture & Technology, BGMEA
University of Fashion & Technology (BUFT), Dhaka, Bangladesh

ATM Adnan

Lecturer, Department of Business Administration, BGMEA University of
Fashion & Technology (BUFT), Dhaka, Bangladesh

doi: 10.19044/esj.2016.v12n4p436 [URL:http://dx.doi.org/10.19044/esj.2016.v12n4p436](http://dx.doi.org/10.19044/esj.2016.v12n4p436)

Abstract

Bangladesh is the 2nd largest readymade garment exporter in the world. But in terms of productivity, its performance is below the mark. Many studies were performed to increase the productivity of our readymade garment industry by applying proper line balancing, time study, lean manufacturing system etc. Similarly this paper is an attempt to analyze the potential increase in garment productivity by applying a non-monetary process that is related with changing the behavioral aspect of the readymade garment workers. The study shows only slight change in worker attitude along with proper supervision can bring about a tremendous increase in garment productivity which can make the readymade garment products more price competitive to the foreign buyers.

Keywords: Attitude, Competitive, Potential, Productivity, Readymade etc.

Introduction:

Clothing is one of the basic human needs. So each & every country is associated with Clothing business either by import or by export. RMG is the driving force for the economy of Bangladesh (Dowlah, C. A. F., 1999). Bangladesh has already occupied the 2nd position in RMG export in the world market (Kabear, N., & Mahmud, S. 2004). At present we are earning almost 81% of our foreign currency from RMG export (Sultana, S. et al., 2011). To retain this growth & safeguard our position in world RMG market there is no alternative to increased productivity (Ahmed, N. 2009). As china, the leading producer and exporter of RMG is making them expensive for foreign buyers for increased wage rate and high capital investment;

Bangladesh could be the next viable choice for international apparel buyers for its low production cost solely contributed by low domestic wage rate (Sarkar, L., 2014). But Bangladesh is lagging behind in terms of production efficiency in comparison to its other counterparts. Now with the fact of increased minimum wage rate of RMG workers by almost 77% production efficiency and productivity become a significant issue, moreover competition is so severe among exporting countries that chances of negotiation on price is becoming obsolete (Dr. Shibli, A., 2014). In most factories of Bangladesh, unnecessary talking and lack of concentration to work among sewing operators is a common phenomenon.

This leads to;

- Reduced productivity
- More alterations (Defective sewing operations)
- Disturbance to mindful workers
- More movements of people in the sewing line to pass the defective garments for corrections
- Unnecessary unfolding of different completed processes for back process alter corrections
- Unnecessary bottlenecks* in the line

*One or more operations where the general flow of total work is hampered.

When workers are habituated in unnecessary talking, this leads to more garment alterations and rejections. Because they pay less attention to their work & do not check the sewn garment properly before passing it to the next process operator. He/she is also negligent in checking the previous process before passing the garment to the next operator. Finally when the garment reaches to inline quality checker many alterations are found & the garment is sent back to the respective operators for corrections. Frequently more than one operation is unfolded to make the correction which affects the productivity of that sewing line. Sometimes expert & mindful workers get disturbed for the noise created in the line. To change such attitude of the workers and increase the productivity below experiment was performed at a woven shirt factory.

Literature Review

As the garments industries are labor intensive the best utilizing of labors of the industry will assure the highest profit from the industry. Productivity of the RMG producers needs to be improved for not only to counter the rise in the recent minimum wage rate of almost 77% of RMG workers (Salam, M. A., & McLean, G. N., 2014) but also to stay in competition by reducing the productivity gap with other close competitors of

this industry. In terms of the productivity recent study reveals that Bangladesh is ranked after China, India, Vietnam and Pakistan (Berg, et al., 2011). Literature review section exhibits some early works and findings related to the productivity of garments industry.

(Abdullah 2005) identified that low literacy rate, lack of formal institutionalized and non-institutionalized training are the main reason of low productivity , in addition to that lower wage rate plays a key contribution toward achieving higher productivity. More over some systematic risks such as political instability and inadequate infrastructures and firm specific factors such as unhealthy working condition plays a major role in productivity. The productivity of Chinese workers is four times more than that of Bangladeshi workers facilitated by the sufficient wage payment and legal overtime payment ((Abdin 2008). Empirical studies have proved that any expenses for improving working condition are offset by the productivity gains in the case of RMG sector (Berik and Rodgers 2008).

The key competitive advantage of Bangladesh, for example, cheap labor power has been balanced by different nations through predominant predictability of talented work strengths, modern infrastructures and political harmony (Abdullah 2009). Bangladesh is further challenged because most of the labors are unskilled with low productivity which results in increased per unit cost of production (Chowdhury, Ali and Rahman 2005). Study uncovered that the extent of talented specialists is high in big production lines than little and medium plants. The extent of incompetent specialists is high in little and medium factories than that of large endeavors. (Rahman, Bhattacharya and Moazzem, 2008).

An empirical study (Hossan, C. G., Sarker, M. A. R., & Afroze, R., 2012) suggested; reward system filled in as an impetus to make workers motivated and expand efficiency, they should be rewarded for their hard work and punctuality. For example, award for attendance. Work coordination is likewise vital to expand profitability and meet particular generation target. Sound worker conduct and proficiency reward additionally meet the objective and build efficiency.

Study showed (Saha, S. M. 2015). Ineffective management is the most significant factors that have strong impact a on the less productivity followed by Outdated system, Inadequate Monetary and non Monetary rewards, Unsafe working conditions and the insufficient and ineffective coworkers.

A new approach named visualization system (Ahsan, A. N., Hossan, M. J., & Efad, S. A., n.d.) has been introduced to visualized to the hour by hour output, the total numbers of defects and top five defective operators, So the line supervisor could easily identify the problems and could take corrective actions to reduce those problems. (Karim, R., n.d.) Found out

there was a significant impact of changeover time on productivity. Production is very much hampered due to long changeover time. It has been found that there has been a drastic fall in productivity in the changeover day. It has been also found that, there is an impact of change over time on products defect.

(Shafiqul, I. 2014) reveals the way to achieve productivity through technological adaptations, high-tech equipment investment, and human resource development and pay strategy – including both formal and informal labor incentives.

The central constraint against the higher productivity is the difference in individual capacity which is the mode of improper line balancing and bottle neck process.(Shumon, R. H., Zaman, K. A., & Rahman, A.,2010). The study gave importance on effective layout by pointing out the bottleneck point and application of Modular line and Traditional system to improve productivity.

(Khondker, B. H., Razzaque, A., & Ahmed, N., 2005) revealed that Share of labor in the RMG value chain is very low and hence a rise in workers' productivity might not result in substantial competitiveness gains for firms. For example, the integrated value chain analysis of T-shirt produced in Bangladesh, the labor cost associated with sewing and assembly accounts for only 4.7 per cent of the entire value chain, It can be calculated that, remaining all other things constant, a doubling of labor productivity (i.e., a 100 per cent improvement in labor productivity) would result in the reduction of cost by just \$0.03, which is likely to have not much effect on the competitive position of Bangladesh in the world market.

(Mlachila, M. M., & Yang, Y., 2004) argues that only the differences between the characteristics inherent in the workforce of these two countries explain the productivity difference. It could be that investment on capital is much higher in the countries with high productivity. In terms of annual average capital intensity, Bangladeshi garment factories spend less than \$1,500 per worker in comparison with more than \$4,000 spent by Chinese firms.

(Kaes, I., & Azeem, A., 2009) revealed another important discussion on which usually is not given importance in Bangladesh, is the managerial efficiency or management productivity. This may have some implications for overall low productivity. Some firms are not in a position to move to high value added items, or expand their current capacity of production because of their management inefficiency.

(Islam, M. A., Bagum, M. N., & Rashed, C. A. A., 2012) found that shortage of raw materials, absenteeism, machine malfunction, unexpected WIP, defective products, frequent changeover in production schedule,

production shutdown caused by political action and power supply problem are contributor to low productivity.

(Fernandes, A. M., 2006) found interesting facts that inefficient allocation of resources in textiles industries are the prime cause of low productivity. In addition to that less productive firms have a higher share of total industry output. Smaller firms are significantly more productive than firms in the largest size category firms with a more skilled workforce and more educated or more experienced managers are more productive.

Methodology

To eliminate the production deadening activities, below points were suggested to the management of a garment factory named Florence Fashions for implementation. A sewing line producing 100% Linen long sleeve men's shirt was selected to perform the experiment. The management gave permission to perform the experiment understanding that there were many possibilities to increase the productivity. The suggested points are --

- It is mandatory for every worker to use a mask
- Each worker should check his/her process properly before passing the garment to the next operator
- Top three process workers with the least number of alterations will be rewarded at the end of each month which was merely a small amount of money.

Results and Findings

Workers were given masks to reduce unnecessary talking among them. When workers use mask, they find it difficult to talk with each other. If the workers were told that this was due to increase the productivity, they might be negligent to it. So they were told the use of masks is a compulsion from the buyer and this will protect them from different diseases resulting from small fibers entering into the nostrils during work. When the workers were told to completely check each body before passing to next process operator, they opposed & complained this will reduce the production. In this case, time study was performed for each & every worker to show they are capable of fulfilling the set target along with checking the garments. Management was willing to reward the top three best performers of the line to make them mindful to their work. It was also declared that the photographs of the award winning operators will be displayed before the sewing line. Getting notified of these, their mind set was changed.

A sewing line designated as A1 at Florence Fashions was chosen to perform the result of the experiment. The product was 100% Linen L/S men's shirt of the Buyer Corona. The production report of previous two months for the same quality shirt as well as the existing productivity of the

same shirt in the line was taken into consideration as the basis. The average production for the product was 58 pcs/ hr with an average of 45 sewing operators working in the line. Below is the result of the experiment.

Table 1: Relationship among production, defects & attitude of workers towards new method.

| Day | No of Sewing Operators | Average Production/ Hour ¹ | Average Defects/ Hour (Inline) ² | Average Defects/ Hour (End line) ³ | Negligent workers to the new method ⁴ |
|-----|------------------------|---------------------------------------|---|---|--|
| 1 | 45 | 60 | 90 | 20 | 15 |
| 2 | 44 | 62 | 85 | 20 | 13 |
| 3 | 45 | 65 | 86 | 17 | 14 |
| 4 | 43 | 63 | 78 | 14 | 10 |
| 5 | 44 | 67 | 69 | 12 | 8 |
| 6 | 44 | 66 | 70 | 12 | 9 |
| 7 | 44 | 66 | 60 | 10 | 7 |
| 8 | 45 | 67 | 55 | 8 | 3 |
| 9 | 45 | 68 | 60 | 7 | 5 |
| 10 | 44 | 69 | 54 | 8 | 3 |

¹Production was less than regular shirts because of critical styling & linen fabric. ² There were 3 inline Quality Control tables in the sewing line for checking sewn garment panels.

³There was 1 endline Quality Control table at the end of the sewing line. ⁴This is the number of sewing operators talking excessively & removing masks frequently.

Figure 1: The graphical presentation of the relationship among production, defects & attitude of workers to the new method.

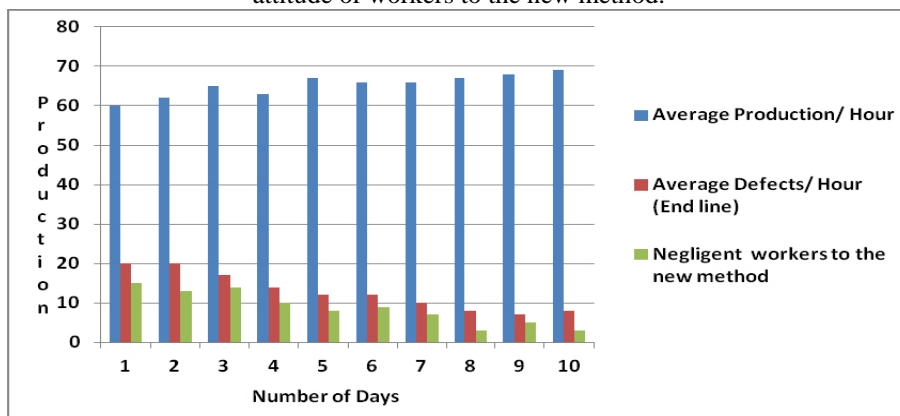


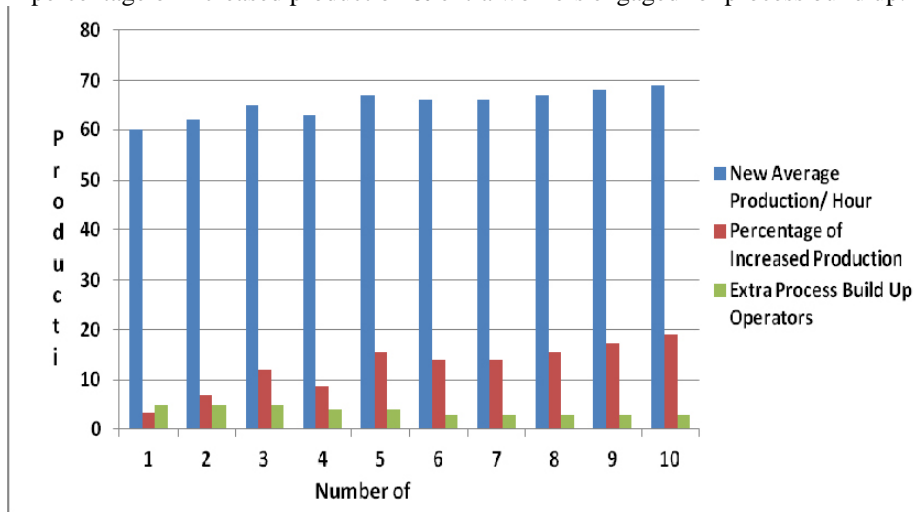
Table 2: Relationship among new average production, percentage of increased production & extra workers engaged for process build up after completion of regular work.

| Day | Previous Average Production/ Hour | New Average Production/ Hour | Increased Production (Pcs)/ Hour | Percentage of Increased Production | Extra Process Build Up* Operators |
|-----|-----------------------------------|------------------------------|----------------------------------|------------------------------------|-----------------------------------|
| 1 | 58 | 60 | 2 | 3.4 % | 5 |
| 2 | 58 | 62 | 4 | 6.9 % | 5 |
| 3 | 58 | 65 | 7 | 12.1 % | 5 |
| 4 | 58 | 63 | 5 | 8.6 % | 4 |
| 5 | 58 | 67 | 9 | 15.5 % | 4 |
| 6 | 58 | 66 | 8 | 13.8 % | 3 |

| | | | | | |
|----|----|----|----|--------|---|
| 7 | 58 | 66 | 8 | 13.8 % | 3 |
| 8 | 58 | 67 | 9 | 15.5 % | 3 |
| 9 | 58 | 68 | 10 | 17.2 % | 3 |
| 10 | 58 | 69 | 11 | 19.0 % | 3 |

*Process build up is the process of engaging extra operators at the end of the day for clearing the bottleneck processes like – Sleeve join, Side seam join, Pocket join etc.

Figure 2: The graphical presentation of the relationship among new average production, percentage of increased production & extra workers engaged for process build up.



The productivity of the sewing line on average increased by 12.6% during the 10 days experimental work. Therefore that line produces 100 Pcs of extra shirts/day with 8 hour regular work. The CM for 100 Pcs of shirts was extra profit for the owner since no extra investment was needed to achieve that. The environment of the line was quieter because of reduction in unnecessary communication. Quality of the product also increased since Quality inspectors needed to check only few defective garments & they could give more time in checking each garment.

Conclusion:

There are three key factors in RMG business, namely- Quality, Price Competitiveness & Lead Time. To remain competitive in terms of price we need to increase productivity. During increasing productivity we need to fulfill the product quality also. If these two are achieved, it will be easier for us to work with reduced lead time. Otherwise our competitors in the world market will surpass us with higher quality, reduced price & reduced lead time. Therefore, if we can ensure no unnecessary communication and no production deadening activities in sewing floor, it will surely boost up our production as well as quality which will ultimately results in more orders round the year from foreign customers.

References:

- Dowlah, C. A. F. (1999). The Future of the Readymade Clothing Industry of Bangladesh in the Post-Uruguay Round World. *The World Economy*, 22(7), 933-953.
- Kabeer, N., & Mahmud, S. (2004). Rags, riches and women workers: export-oriented garment manufacturing in Bangladesh. *Chains of fortune: Linking women producers and workers with global markets*, 133-164.
- Sultana, S., Alam, M. A., Saha, A. K., Ashek, U. M., & Sarker, M. A. T. (2011). Likely Impacts of Quota Policy on RMG Export from Bangladesh: Prediction and the Reality. *International Journal of Business and Management*, 6(11), p275.
- Ahmed, N. (2009). Sustaining ready-made garment exports from Bangladesh. *Journal of Contemporary Asia*, 39(4), 597-618.
- Dr. Shibli, A. (Oct 01, 2014), *WILL RISING MINIMUM WAGE AFFECT THE RMG SECTOR?. The Daily Star*. Retrieved from <http://www.thedailystar.net/will-rising-minimum-wage-affect-the-rmg-sector-44091>
- Sarkar, L. (March 28 2014). Global RMG market: Bangladesh projected as 'Next China' *The Financial Express*, Retrieved from <http://old.thefinancialexpressbd.com/2014/03/28/25672#sthash.HgVORCEG.dpuf>
- Salam, M. A., & McLean, G. N. (2014). Minimum Wage in Bangladesh's Ready-made Garment Sector: Impact of Imbalanced Rates on Employee and Organization Development.
- Berg, A., Hedrich, S., Kempf, S., Tochtermann, T. (2011). Bangladesh's ready-made garments landscape: The challenge of growth. *McKinsey & Company, Inc.*
- Berik, G., & Rodgers, Y. V. D. M. (2010). Options for enforcing labour standards: Lessons from Bangladesh and Cambodia. *Journal of International Development*, 22(1), 56-85.
- Abdin, M. (2008). Overall Problems and Prospects of Bangladeshi Ready-Made Garments Industries. *Overall Problems and Prospects of Bangladeshi Ready-Made Garments Industries (January 1, 2008)*.
- Abdullah, A. Y. M. (2005). Labor Productivity and Wastage: The Two Sides of a Coin Bangladeshi RMG Perspective. *The AIUB Journal of Business and Economics*, 4(2), 37-55.
- Abdullah, A. Y. M. (2009). The Influence of Work Environment and the Job Satisfaction on the Productivity of the RMG Workers in Bangladesh. *Journal of Management*, 1(1), 43-55.

- Chowdhury, M. A. M., Ali, M. M., & Rahman, R. (2006). WTO, Post-MFA Era and the Bangladesh RMG Sector: An Assessment of Performance and Challenges. *South Asian Journal of Management*, 13(1), 76.
- Rahman, M., Bhattacharya, D., & Moazzem, K. G. (2012). Bangladesh's Apparel Sector in Post-MFA Period: A Benchmarking Study on the Ongoing Restructuring Process (No. 23152).
- Hossan, C. G., Sarker, M. A. R., & Afroze, R. (2012). Recent Unrest in the RMG Sector of Bangladesh: Is this an Outcome of Poor Labour Practices?. *International Journal of Business and Management*, 7(3), p206.
- Shumon, R. H., Zaman, K. A., & Rahman, A. (2010, January). Productivity Improvement through Line Balancing in Apparel Industries. In *Proceedings of the 2010 International Conference on Industrial Engineering and Operations Management*.
- Saha, S. M. (2015). Impact of Working Environment on Less Productivity in RMG Industries: A Study on Bangladesh RMG Sector. *Global Journal of Management And Business Research*, 15(2).
- Ahsan, A. N., Hossan, M. J., & Efad, S. A. IMPROVING WORKING ENVIRONMENT AND PRODUCTIVITY OF A SEWING FLOOR IN RMG INDUSTRY: A CASE STUDY.
- Karim, R. Impact of Changeover time on productivity: A case study. *International Journal of Engineering & Technology IJET-IJENS Vol:13 No:06*.
- Shafiqul, I. (2014). Informal Labor Incentives and Firm Performance: A Case Study of RMG Industry in Bangladesh. *International Business and Management*, 8(2), 19-27.
- Khondker, B. H., Razzaque, A., & Ahmed, N. (2005). Exports, Employment and Working Conditions: Emerging Issues in the Post-MFA RMG Industry. *International Labour Office*.
- Mlachila, M. M., & Yang, Y. (2004). The End of Textiles Quotas: A Case Study of the Impact on Bangladesh (No. 4-108). *International Monetary Fund*.
- Kaes, I., & Azeem, A. (2009). Demand Forecasting and Supplier Selection for Incoming Material in RMG Industry: A Case Study. *International Journal of Business and Management*, 4(5), p149.
- Islam, M. A., Bagum, M. N., & Rashed, C. A. A. (2012). Operational Disturbances and Their Impact on the Manufacturing Business-An Empirical Study in the RMG Sector of Bangladesh. *International Journal of Research in Management & Technology*, 2, 184-191.
- Fernandes, A. M. (2006). Firm productivity in Bangladesh manufacturing industries. *World Bank Policy Research Working Paper*, (3988).