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**ANALYZING THE IMPACT OF DESIGN IN KNIT GARMENTS MANUFACTURING
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ANALYZING THE IMPACT OF DESIGN IN KNIT GARMENTS MANUFACTURING ORDER FROM BUYER

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ABSTRACT

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In Bangladesh most of the factory received order from foreign buyer. Most of the cases buyer at first placed order for one particular style of garments with one particular design which is called as basic style. After that with the help of development merchandiser in factory, buyer analyzes different design sample garments in one particular garments order where styling remains same. Then a product package is created in online with particular style number. In that particular style number product packages for one basic style garments (First placed order), buyer include different design garments as an additional order but styling remains same. Such a way most of the cases styling remain same but different designs are included in a product package after placed a garments order. This experiment discusses the cost analysis of a knit garment of a renowned buyer order, where style is same but designs are different through practical study. This experiment also discusses how far different design in one particular order can impact the factory in case of CM cost, profit, SMV and productivity. This study shows how quality of the product varies through different design. It also shows that what problems faces by the factory as well as merchandising team during executing an order and raw material sourcing in a particular order if a product package consist of different designed garments in same style.

Key words: *Style, Design, CM, SMV, Costing, AOP*

INTRODUCTION

When a product has, say five key attributes: price, quality, style, brand and packaging, these attributes and their associated levels represent the factors that materially affect consumer preferences (North and Vos, 2002). Style is a manner in which you present yourself or anything for that matter. Style does not necessarily refer to clothing. It could be about speech, life, way of thinking, writing etc. The basic idea behind style is personnel, every person is entitled to own style & number of style can ever be the ultimate. Other that, style is an absolute individual thing. Design could be said as an activity that translates an idea into a blueprint for something useful, whether it's a car, a building, a graphic, a service or a process. The important part is the translation of the idea, though design's ability to spark the idea in the first place shouldn't be overlooked. Design is one thing that existed before human did. The arrangements of billions of stars in billions of galaxies to the living cell organisms, everything has been designed. In case of garments style is a structural integrity of a product with unique design in it. Mainly fashion design operates many levels from subtle to extreme. Even uniforms can be subtly customized, showing the desire of individual identity and expression (Black *et al.* 2005). The physical form or design of a product is an unquestioned determinant marketplace success. A good design attracts consumer to a product, communicates to them and add value to the product by increasing the quality of the usage experiment associated with it (Bloch 1995). Design can create a garments product value upper level. In case of buyer product package, different designs are included. Buyer places order at first for a particular style, then includes additional order for a particular style with different design in it such like printing, embroider, new fabric quality or yarn quality but style remains same in it. This variety of design which actually behaved like different style which deviates from the first placed order garments style and design. Furthermore problem creates when this different design garments in one particular style, packing plan is assort color assort size garments which means different color different size garments which create problem in shipment. Factory merchandiser will have to face lots of this problem. At the second level of the overall business plan for apparel product development are four well defined areas that must interact seamlessly. They are merchandise line planning, development, creative design, including line adoption, technical design and production planning (Kaiser and Garner, 2012). Value of design and impact of design shows in history. Consumer have a great impact on style and design. It has been seen that generation of adolescents grew up in a consumer society and shows the greatest purchasing power of all generation of their group in French history. They have transformed the market by their number and activity (Badaoui *et al.* 2012). They don't just want design or fashionable things in a garments but also quality. To meet the consumer demand buyer placed different design garments in one product package and placed that order to the factory. Because of different design in one particular style factory faces problem from order received to until delivery of that goods. From consumer point of view they could not expect same quality of garments on one particular style. Factories point view they may get less profit, number of machine may be required more and calculated CM quoted in the cost sheet may vary to the actual CM cost which actually calculated by factory after delivery of that goods.

MATERIALS AND METHODS

As a analyzing procedure this particular order has been analyzed at least 3 month in factory from its development to delivery of goods. It has been closely observed that which sorts variation a buyer can provide in

a particular order and which sorts of problem factory actually faced until the delivery of goods. This experiment was done in renowned factory with renowned buyer, product specification with order details given in Table 1. Here for particular style buyer placed order for product 1(Fig. 1), after that as an additional order is placed which is product 2(Fig. 2), product 3(Fig. 3) and product 4(Fig. 4). Cost sheet of factory merchandiser given in Table 2, Table 3, Table 4 and Table 5. In this experiment a comprehensive analysis has been made with product 2(Fig. 2), product 3(Fig. 3) and product 4(Fig. 4) with product 1(Fig. 1). Product 1(Fig. 1), initially a basic style where product 2(Fig. 2), product 3(Fig. 3) and product 4(Fig. 4) are actually a additional order. For this experiment below are the steps actually taken as a analyzing procedure-

1. Collecting all sorts of data from buying office merchandiser, factory merchandiser and production floor for at least 3 month to make the comparison between first placed order with additional order.
2. At first analyzing the approved cost sheet from buyer which include Product-01(Basic style and first placed order) with product-02, product-03 and product-04 which is an additional order to see for which one buyer gives quality as a first priority.
3. Analyzing the design details of Product-01(Basic style and first placed order) compare with product-02, product-03 and product-04 which is an additional order.
4. Calculating the CM of Product-01(Basic style and first placed order) compare with product-02, product-03 and product-04 which is an additional order.
5. Calculating and analyzing the profit of factory for Product-01(Basic style and first placed order) compare with product-02, product-03 and product-04 which is an additional order.
6. Calculating SMV to make comparison with Product-01(Basic style and first placed order), product-02, product-03 and product-04.
7. Analyzing the production report of Product-01(Basic style and first placed order), product-02, product-03 and product-04.

Table 1. Product specification with order details

Order Name	T-Shirt			
Season	Fall 2015			
Lead Time	110 Days			
Fabric Type	100% Cotton S/J			
GSM	120			
Size Range	XS-XXL			
Supplier	A renowned factory			
Buyer	A renowned Buyer			
Country Of Production	Bangladesh			
	Product 1	Product 2	Product 3	Product 4
Color	White	White Stripe	Red Dark	Blue Dark
SMV	6.084 min	9.464 min	6.084 min	6.084 min
Allocated Line	2	2	2	2
Production/hr.	200	150	200	200
Production Target day @ 13 hr.	2600	1950	2600	2600
Man Power	24	28	24	24
Consumption	1.95	1.95	1.71	2.17
Required Fabric	8896 kg	7699 kg	6878 kg	8373 kg
Garments Quantity	53278 pcs	45754 pcs	46779 pcs	46034 pcs
Total Garments Quantity	191845 pcs			

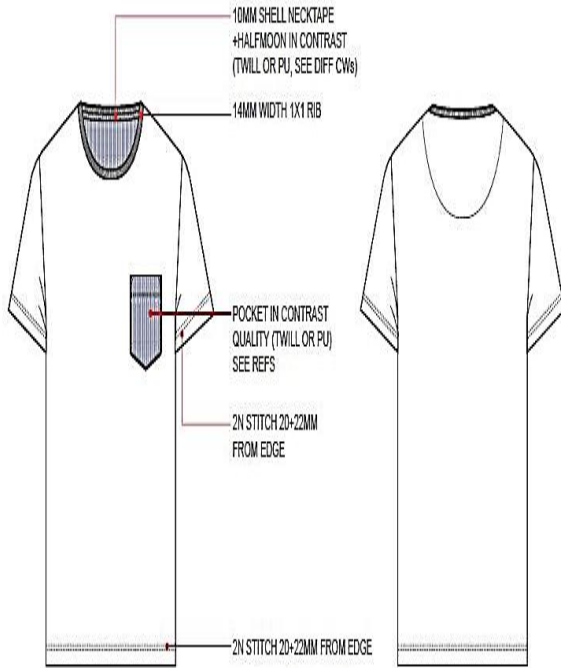


Fig. 1. Product-01(Basic style and first placed order)

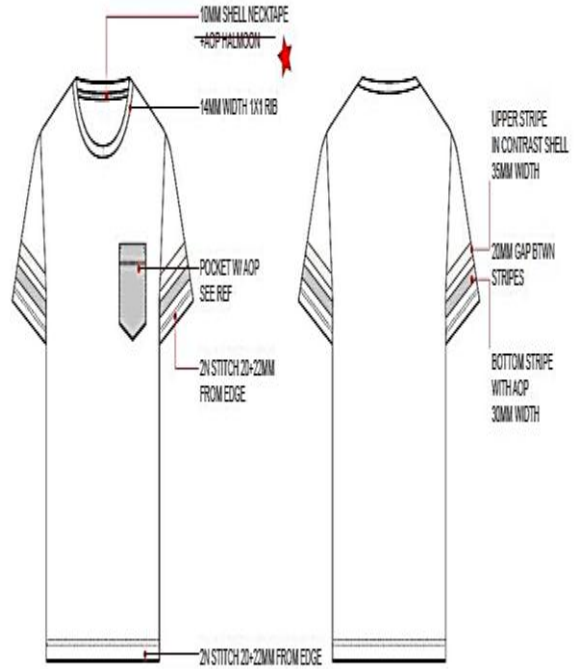


Fig. 2. Product-02(Additional order)

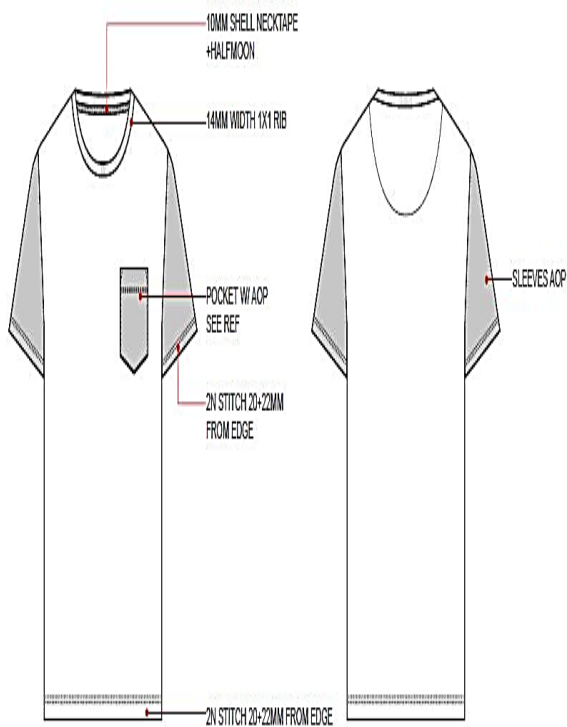


Fig. 3. Product-03(Additional order)

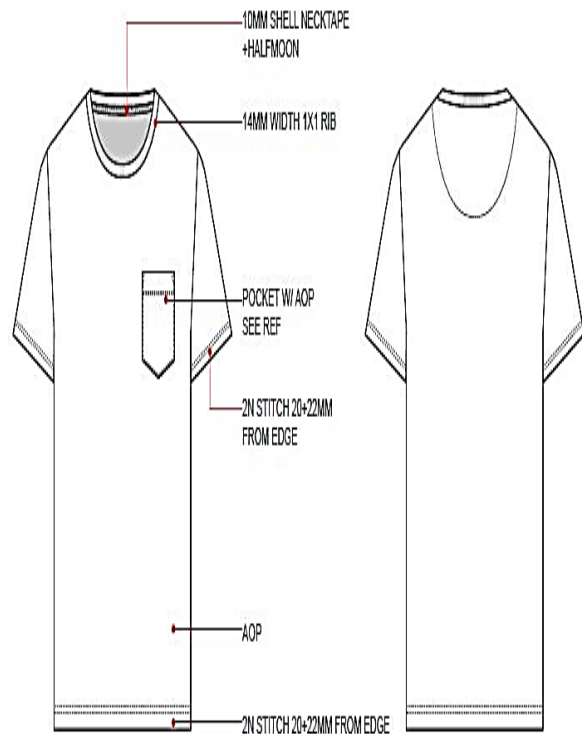


Fig. 4. Product-04(Additional order)

Table 2. Costing details of product-01(Basic style and first placed order)

Yarn Count	Yarn price/kg	S/J	1*1 Rib	Woven AOP
40s Cotton	\$4.40	\$4.40	\$4.40	
Woven Poplin	\$9.25			\$9.25
Commercial Expenses		\$0.09	\$0.09	\$0.19
Knitting Cost		\$0.33	\$0.33	\$0.00
Dye Stuff Cost		\$0.87	\$0.60	\$1.60
All Over Print		\$0.00	\$0.00	\$4.00
Process Loss (12%)		\$0.68	\$0.54	\$2.41
Total Cost		\$6.37	\$5.96	\$17.44
Consumption-1.95				
Body fabric cost(Per Dzn)			\$12.44	
S/J Neck Tape	0.06	\$6.37	\$0.38	
Aop poplin in Pkt & H. Moon	0.22	\$17.44	\$3.82	
1*1 Ctn Rib	0.16	\$5.96	\$0.95	
Total fabric cost(Per Dzn)			\$17.60	
Price tag			\$0.15	
Trims (5% Excess)			\$1.80	
Actual Cost			\$19.55	
Effective CM			\$5.00	
FOB price/dzn			\$24.55	
FOB price/pc			\$2.05	
FOB price including Commercial & Commission (3%)			\$2.10	

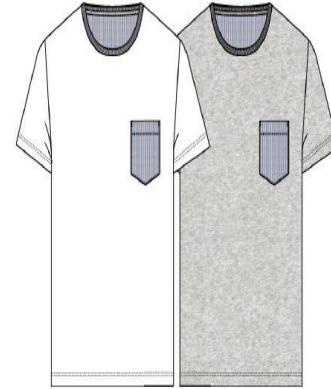


Table 3. Costing details of product-02(Additional order)

Yarn Count	Yarn price/kg	S/J	1*1 Rib	S/J AOP	Solid Contrast
40s Cotton	\$4.10	\$4.10	\$4.10	\$4.10	\$4.10
Commercial Expenses		\$0.08	\$0.08	\$0.08	\$0.08
Knitting Cost		\$0.33	\$0.33	\$0.33	\$0.33
Dye Stuff Cost		\$0.87	\$0.87	\$2.00	\$1.60
All Over Print		\$0.00	\$0.00	\$4.50	\$0.00
Process Loss (12%)		\$0.65	\$0.54	\$1.98	\$0.73
Total Cost		\$6..03	\$5.92	\$13.00	\$6.85
Consumption-1.95					
Body fabric cost(Per Dzn)			\$11.77		
S/J Neck Tape	0.06	\$6.03	\$0.36		
Aop S/J on Pkt, H.Moon & sleeve	0.17	\$13.00	\$2.24		
1*1 Ctn Rib	0.16	\$5.92	\$0.95		
Solid Contrast	0.13	\$6.85	\$0.87		
Total fabric cost(Per Dzn)			\$16.19		
Price tag			\$0.15		
Trims (5% Excess)			\$1.80		
Actual Cost			\$18.14		
Effective CM			\$7.00		
FOB price/dzn			\$25.14		
FOB price/pc			\$2.10		
FOB price including Commercial & Commission (3%)			\$2.19		



Table 4. Costing details of product-03(Additional order)

Yarn Count	Yarn price/kg	S/J	1*1 Rib	S/J AOP
40s Cotton	\$4.10	\$4.10	\$4.10	\$4.10
Commercial Expenses		\$0.08	\$0.08	\$0.08
Knitting Cost		\$0.33	\$0.33	\$0.33
Dye Stuff Cost		\$2.00	\$1.60	\$2.00
All Over Print		\$0.00	\$0.00	\$2.50
Process Loss (18%)		\$1.17	\$0.61	\$1.62
Total Cost		\$7.69	\$6.73	\$10.64
Consumption-1.71				
Body fabric cost(Per Dzn)			\$13.17	
S/J Neck Tape	0.06	\$7.69	\$0.46	
Aop S/J on Pkt & sleeve	0.49	\$10.64	\$5.25	
1*1 Ctn Rib	0.16	\$6.73	\$1.08	
Total fabric cost(Per Dzn)			\$19.95	
Price tag			\$0.15	
Trims (5% Excess)			\$1.80	
Actual Cost			\$21.90	
Effective CM			\$5.00	
FOB price/dzn			\$26.90	
FOB price/pc			\$2.24	
FOB price including Commercial & Commission (3%)			\$2.30	



Table 5. Costing details of product-04(Additional order)

Yarn Count	Yarn price/kg	S/J	1*1 Rib	S/J AOP
40s Cotton	\$4.10	\$4.10	\$4.10	\$4.10
Commercial Expenses		\$0.08	\$0.08	\$0.08
Knitting Cost		\$0.33	\$0.33	\$0.33
Dye Stuff Cost		\$0.87	\$0.87	\$2.00
All Over Print		\$2.25	\$2.25	\$2.50
Process Loss (14%)		\$1.07	\$1.07	\$1.62
Total Cost		\$8.07	\$8.07	\$10.64
Consumption-2.17				
Body fabric cost(Per Dzn)			\$18.17	
S/J Neck Tape	0.06	\$8.07	\$0.52	
S/J in H.Moon AOP	0.10	\$8.07	\$0.90	
		\$8.07		
1*1 Ctn Rib	0.16		\$1.39	
Total fabric cost(Per Dzn)			\$21.69	
Price tag			\$0.15	
Trims (5% Excess)			\$1.80	
GMTs Wash			\$2.00	
Actual Cost			\$25.64	
Effective CM			\$5.00	
FOB price/dzn			\$30.64	
FOB price/pc			\$2.55	



RESULTS AND DISCUSSION

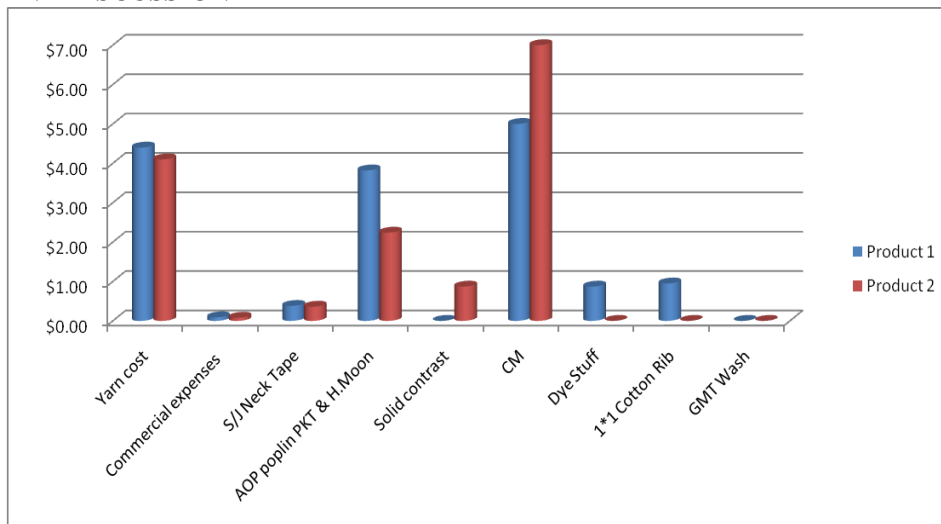


Fig. 5. Cost dissimilarities for product 1 vs. product 2

The order is confirmed on the basis of product 1 (Fig. 1) which is very simple & basic style that’s why the buyer focuses on yarn cost for better fabric quality. Though the yarn cost is higher in product 1 (Fig. 1) so the commercial expense is higher in product 1 (Fig. 1). The quality of product 1 S/J neck tape is better & it’s a basic style so that price is higher than product 2 (Fig. 2). In product 1 AOP poplin pocket & half-moon is used where S/J AOP is used in product 2 that’s why the cost is differ. The product 1 (Fig. 1) is very simple & basic style & it has no solid contrast that’s why costing is different. The product 2 (Fig. 2) consists of solid contrast in sleeve for that reason it requires more no of machine to produce it. That’s why CM cost is higher in product 2 (Fig. 2). Summary of Cost Dissimilarities for product 1 vs. product 2 (Fig. 5) shows that, product 1 (Fig. 1) is a basic style of T- shirt where buyer focus on the quality of the fabric. On the other hand they concentrated on the design in product 2 (Fig. 2) rather than quality of the fabric.

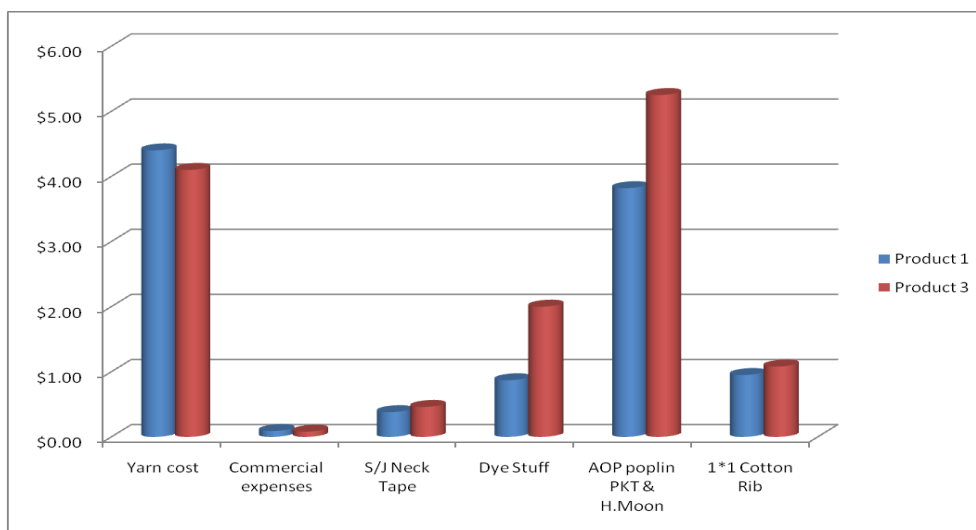


Fig. 6. Cost Dissimilarities for product 1 vs. product 3

Here, the order is confirmed on the basis of product 1 (Fig. 1) which is very simple & basic style that’s why the buyer focuses on yarn cost for better fabric quality. Though the yarn cost is higher in product 1 so the commercial expenses is higher in product 1 (Fig. 1). In product 3 S/J neck tape is better quality so costing is higher. The body fabric color of product 1 (Fig. 1) is white on the other hand body fabric color of product 3 (Fig. 3) is red Dark. So that product 3 (Fig. 3) required higher amount of dye stuff cost as well as finishing cost. In product 1 (Fig. 1) AOP poplin pocket & half-moon on the other hand product 3 consist of S/J AOP pocket & sleeve. The costing varying because of that. In product 3 (Fig. 3) 1*1 Cotton Rib is better quality so costing is higher. Summary of Cost Dissimilarities for product 1 vs. product 3 (Fig. 6) shows that, product 1 (Fig. 1) is a basic style of T- shirt where buyer focus on the quality of the fabric. On the other hand they concentrated on the design in product 3 (Fig. 3) rather than quality of the fabric.

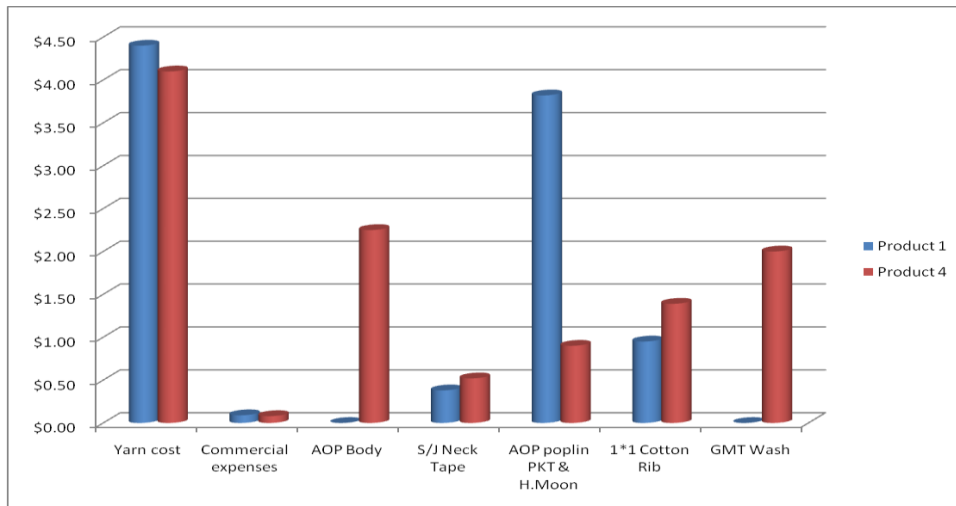


Fig. 7. Cost dissimilarities for product 1 vs. product 4

Here, the order is confirmed on the basis of product 1 (Fig. 1) which is very simple & basic style that's why the buyer focuses on yarn cost for better fabric quality. Though the yarn cost is higher in product 1 (Fig. 1) so the commercial expenses is higher in product 1 (Fig. 1). Product 1 (Fig. 1) which is very simple & basic style color is white on the other hand product 4 (Fig. 4) body fabric is AOP. In product 4 S/J neck tape is better quality so costing is higher. In product 1 (Fig. 1) AOP poplin pocket & half-moon on the other hand product 4 consist of S/J AOP pocket & sleeve. The costing varying because of that. In product 4 (Fig. 4) 1*1 Cotton Rib is better quality so costing is higher. In product 1 (Fig. 1) is a basic style of T-shirt where buyer focus on the quality of the fabric. On the other hand the concentrated on the design in product 4 (Fig. 4) rather than quality of the fabric. Better quality so costing is higher. In product 4 (Fig. 4) body fabric is AOP that's why washing is required.

SMV Calculation

Product 1 (Fig. 1)

$$\text{Production/Hr.} = \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{SMV}}$$

$$\begin{aligned} \text{SMV} &= \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{Production/Hr}} \\ &= \frac{24 \times 60 \times 0.65}{200} \text{ (Efficiency 65\%)} \\ &= 4.68 \text{ min} \end{aligned}$$

SMV = Basic minute + Bundle allowances + machine and personal allowances (Add bundle allowances (10%) and machine and personal allowances (20%) to basic time.)

$$\begin{aligned} &= 4.68 + 0.468 + 0.936 \text{ min} \\ &= 6.084 \text{ min} \end{aligned}$$

Product 2 (Fig. 2)

$$\text{Production/Hr.} = \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{SMV}}$$

$$\begin{aligned} \text{SMV} &= \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{Production/Hr}} \\ &= \frac{28 \times 60 \times 0.65}{150} \text{ (Efficiency 65\%)} \\ &= 7.28 \text{ min} \end{aligned}$$

SMV = Basic minute + Bundle allowances + machine and personal allowances (Add bundle allowances (10%) and machine and personal allowances (20%) to basic time.)

$$\begin{aligned} &= 7.28 + 0.728 + 1.456 \text{ min} \\ &= 9.464 \text{ min} \end{aligned}$$

Product 3 (Fig. 3)

$$\text{Production/Hr.} = \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{SMV}}$$

$$\begin{aligned} \text{SMV} &= \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{Production/Hr}} \\ &= \frac{24 \times 60 \times 0.65}{200} \text{ (Efficiency 65\%)} \\ &= 4.68 \text{ min} \end{aligned}$$

SMV = Basic minute + Bundle allowances + machine and personal allowances (Add bundle allowances (10%) and machine and personal allowances (20%) to basic time.)
 = 4.68+0.468+0.936 min
 = 6.084 min

Product 4 (Fig. 4)

$$\text{Production/Hr.} = \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{SMV}}$$

$$\begin{aligned} \text{SMV} &= \frac{\text{No of m/c} \times 60 \times \text{Efficiency}}{\text{Production/Hr}} \\ &= \frac{24 \times 60 \times 0.65}{200} \text{ (Efficiency 65\%)} \\ &= 4.68 \text{ min} \end{aligned}$$

SMV = Basic minute + Bundle allowances + machine and personal allowances (Add bundle allowances (10%) and machine and personal allowances (20%) to basic time.)
 = 4.68+0.468+0.936 min
 = 6.084 min

Table 6. SMV Calculation for product 1, product 2, product 3 and product 4

Product No	SMV
Product 1	6.084 min
Product 2	9.464 min
Product 3	6.084 min
Product 4	6.084 min

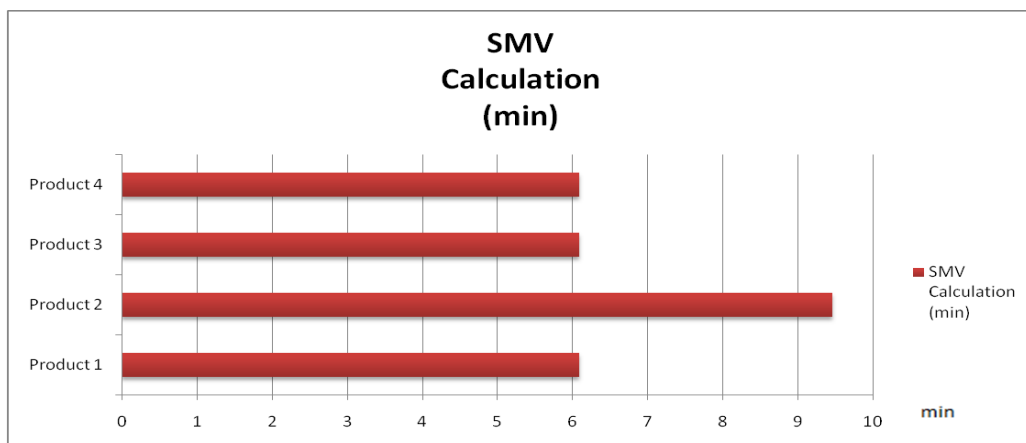


Fig. 8. SMV Calculation for product 1, product 2, product 3 and product 4

Here, product 1(Fig. 1) is a simple T-shirt based on solid body, AOP on Woven pocket & half-moon. Its sewing operations are not so difficult & the calculated SMV is near to average. Its value 6.084min(4.68). Similarly, product 3 is almost same as product 1(Fig. 1) except AOP in pocket & sleeve. But the sewing operation as like as product 1(Fig. 1) & so SMV 6.084 min. In product 4, the body & sleeve fabric is AOP. Here, the sewing operation also same as product 1(Fig. 1) as well as SMV. But product 2(Fig. 2) is based on solid body with solid contrast in sleeve. Here, sewing operation is difficult for matching the solid contrast. Therefore, no of machine is 28 which is more than product 1(Fig 1), product 3(Fig. 3), product 4(Fig. 4) and the calculated SMV is 9.464 min(7.28).

Table 7. Different allowance for SMV

Name of Allowance		Product 1	Product 2	Product 3	Product 4
Bundle handling (10%)		0.468 min	0.728 min	0.468 min	0.468 min
Machine delay (10%)		0.468 min	0.728 min	0.468 min	0.468 min
Personnel allowance (10%)	Fatigue (3%)	0.14 min	0.21 min	0.14 min	0.14 min
	Personnel Needs (3%)	0.14 min	0.21 min	0.14 min	0.14 min
	Personnel Relaxation (4%)	0.187 min	0.29 min	0.187 min	0.187 min

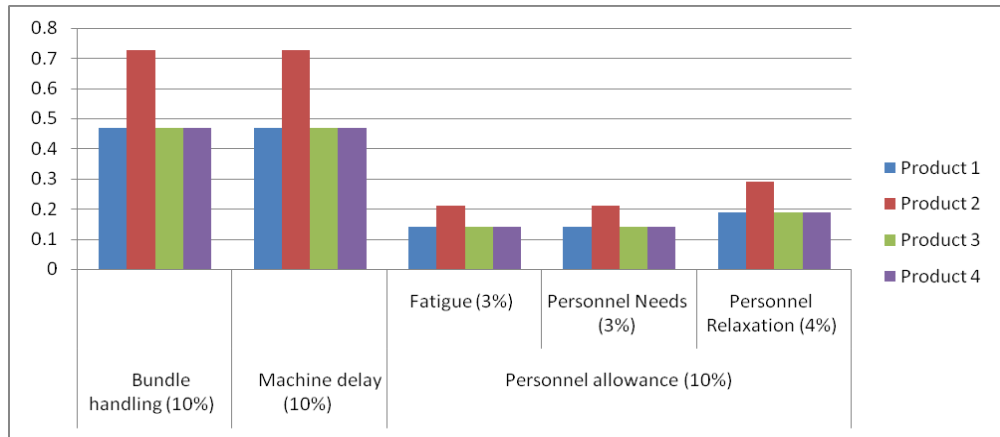


Fig. 9. Different allowance for SMV

From (Table 2) different allowance in SMV graph drawn in fig 9. It can say different allowances like Bundle handling, Machine delay, personnel allowance (Fatigue, personnel needs, personnel relaxation) are seems higher in Product 2 (Fig. 2) compared with product 1 (Fig. 1), product 3 (Fig. 3) and product 4 (Fig. 4) because it has solid contrast in sleeve which is a design from basic style of product 1 (Fig. 1).

CM Calculation

Product 1 (Fig. 1)

$$CM = \frac{\text{Over head m/c cost} * \text{Requried m/c for complete the garments}}{\text{Produce quqntity}} * 12$$

Here,

$$\begin{aligned} \text{Overhead cost machine cost} &= \text{Monthly expenditure of the factory} / \text{Total working day} * \text{Total no. of machine of the factory} \\ &= 3,00,00,000 / 26 * 607 \\ &= 1900.89 \text{ tk} \end{aligned}$$

$$\begin{aligned} CM &= \frac{\text{Over head m/c cost} * \text{Requried m/c for complete the garments}}{\text{Produce quqntity}} * 12 \\ &= (1900.89 * 24 / 200 * 8) * 12 \\ &= 342.16 \text{ tk [1\$ = 77 Tk]} \\ &= \$4.44 \end{aligned}$$

Product 2 (Fig. 2)

$$CM = \frac{\text{Over head m/c cost} * \text{Requried m/c for complete the garments}}{\text{Produce quqntity}} * 12$$

Here,

$$\begin{aligned} \text{Overhead cost machine cost} &= \text{Monthly expenditure of the factory} / \text{Total working day} * \text{Total no. of machine of the factory} \\ &= 3,00,00,000 / 26 * 607 \\ &= 1900.89 \text{ tk} \end{aligned}$$

$$\begin{aligned} CM &= \frac{\text{Over head m/c cost} * \text{Requried m/c for complete the garments}}{\text{Produce quqntity}} * 12 \\ &= (1900.89 * 28 / 150 * 8) * 12 \\ &= 532.24 \text{ tk [1\$ = 77 Tk]} \\ &= \$6.91 \end{aligned}$$

Product 3(Fig. 3)

$$CM = \frac{\text{Over head m/c cost} * \text{Requrisd m/c for complets the garments}}{\text{Produce quqntity}} * 12$$

Here,

$$\begin{aligned} \text{Overhead cost machine cost} &= \text{Monthly expenditure of the factory} / \text{Total working day} * \text{Total no. of machine} \\ &\text{of the factory} \\ &= 3,00,00,000 / 26 * 607 \\ &= 1900.89 \text{ tk} \end{aligned}$$

$$\begin{aligned} CM &= \frac{\text{Over head m/c cost} * \text{Requrisd m/c for complets the garments}}{\text{Produce quqntity}} * 12 \\ &= (1900.89 * 24 / 200 * 8) * 12 \\ &= 342.16 \text{ tk [1\$ = 77 Tk]} \\ &= \$4.44 \end{aligned}$$

Product 4(Fig. 4)

$$CM = \frac{\text{Over head m/c cost} * \text{Requrisd m/c for complets the garments}}{\text{Produce quqntity}} * 12$$

Here,

$$\begin{aligned} \text{Overhead cost machine cost} &= \text{Monthly expenditure of the factory} / \text{Total working day} * \text{Total no. of machine} \\ &\text{of the factory} \\ &= 3,00,00,000 / 26 * 607 \\ &= 1900.89 \text{ tk} \end{aligned}$$

$$\begin{aligned} CM &= \frac{\text{Over head m/c cost} * \text{Requrisd m/c for complets the garments}}{\text{Produce quqntity}} * 12 \\ &= (1900.89 * 24 / 200 * 8) * 12 \\ &= 342.16 \text{ tk [1\$ = 77 Tk]} \\ &= \$4.44 \end{aligned}$$

Table 8. Profit analysis of product 1, product 2, product 3 and oproduct 4

Product No	CM Calculation	Actual CM	Profit
Product 1	\$4.44	\$5.00	\$0.56
Product 2	\$6.91	\$7.00	\$0.09
Product 3	\$4.44	\$5.00	\$0.56
Product 4	\$4.44	\$5.00	\$0.56

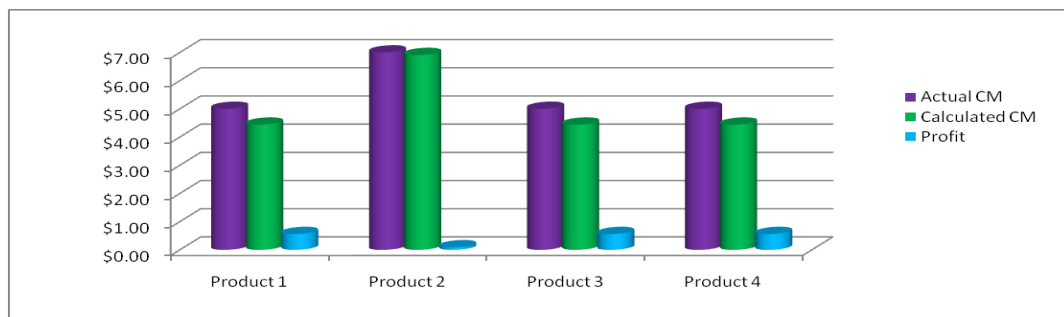


Fig. 10. Profit analysis of product 1, product 2, product 3 and oproduct 4

Fig. 10 shows that CM for product 1(Fig. 1), product 2(Fig. 2), product 3(Fig. 3) and product 4(Fig. 4). Here it has been found that the calculated CM for product 1(Fig. 1), product 3(Fig. 3), product 4(Fig. 4) are same and its value is \$4.44 because 24 machines is used, hourly production rate 200 pcs & 13 hours working time practically. But for product 2 (Fig. 2) calculate CM is \$6.91. The no of machine is used 28, hourly production rate 150 pcs & 13 hours working time practically. In this product the productivity is low due to solid contrast in sleeve and that's why no of machine used more than product 1(Fig. 1), product 3(Fig. 3) and product 4(Fig. 4). After calculating CM we get the difference between the actual CM (provided by merchandiser) which is termed as CM profit. The CM profit of product 1(Fig. 1), product 3(Fig. 3), product 4(Fig. 4) is same & it is a good amount because hourly production rate is same, productivity is high & less no of machine is used. But for product 2(Fig. 2) less amount CM profit because of comparatively higher no of machine is used than product 1(Fig. 1), product 3(Fig. 3), product 4(Fig. 4) & less productivity.

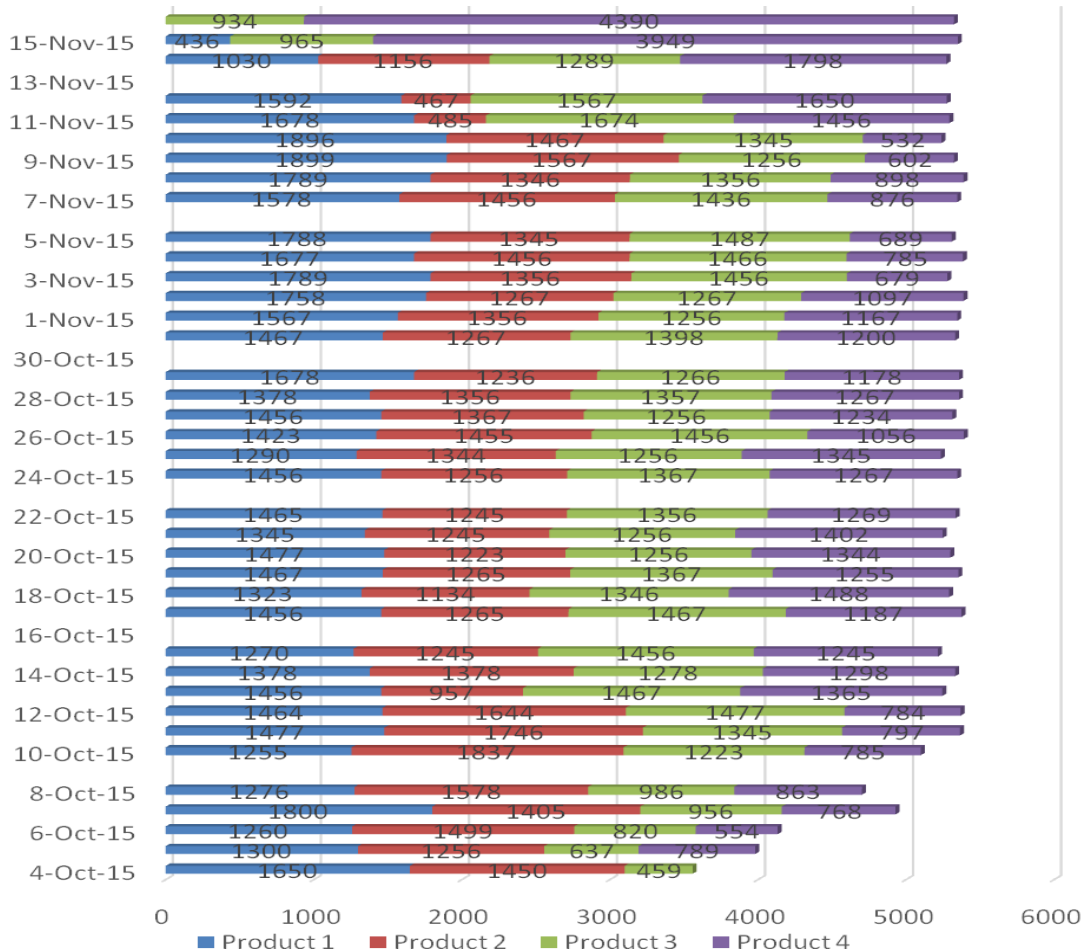


Fig. 11. Daily production report

From fig 11 shows that two lines are allocated for four different products. Here product 1(Fig. 1) & product 3(Fig. 3) produce in same sewing line, on the other hand product 2(Fig. 2) & product 4(Fig. 4) is produce in same line. This production shipment producer is assort color assort size.As a result in a particular line in one particular style different design {like product 2(Fig. 2), product 3(Fig. 3), product 4(Fig. 4)} will have to sewing regularly. That's burden for production facilities as a result productivity reduces. Trims & accessories of different design like {product 2(Fig. 2), product 3(Fig. 3), product 4(Fig. 4)} will have to in house at a time. For product 2(Fig. 2) they used 28 machine but 24 m/c is used in product 4 in same sewing line. So 4 m/c is unused when sewing the product 4. It can be drawn as a conclusive summary that Costing, SMV, CM profit differs due to change of different {product 2(Fig. 2)} design in basic style{product 1(Fig. 1)}. Productivity decrease due to of design in same style.

At a summary it can be said that when in one particular style buyer places different design in order-production facilities, Merchandising department & supply chain management system faces different problems particularly if shipment is done in assort color assort size. Design plays a major role. In one particular style one can not guarantee that the quality of the each product will same which most of the cases customer will not understand. Factory can not guarantee that in one particular style every different designed garment will have the same production problem. If there is too much variation in design in one particular style shipment factory merchandiser can play a major role in here. It has been seen in that research that due to different design profitability, quality, SMV, number of machine and production problem varies from product to product. When factory merchandiser receives that sorts of order from buyer they may advice buyer to create different product packages for this different design which actually too much varies from the basic style. Merchandiser and production team need to have a good communication and foreseeing power to analyze those things. Receiving order from buyers, development of sample and delivery of that goods not every things. Factory may face losses due to lack of imagination from factory merchandising and production team though there is succesful completion of delivery. In case of garments production and shipment before costing there is one scenarion but after approval of costing when factory go through production process they can face complete different scenarion. Different design is one of the elements in a product that can create this different scenarion.

CONCLUSION

When factory merchandiser receives order they should analyze all the factors. If they found too much variation in design they should talk to buyer to place that order in different product package or consider the designed garments as a unique style. As a result, factory gets change in total costing as a result profit margin will be increase. Production team faces less problem during production. Packaging procedure will be smooth for shipment. Consumer will gets better quality garments in one particular styles.

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