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Reduction in Cogs (Cost of Goods Sold) for Men's Casual Shirt in Apparel Retail Business

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Abstract:- Trends in garment industry change very fast. New fabrics and more demanding customers impose the need for flexible production which must be adjusted to all changes in production parameters for various garments. Due to rapid change in fashion trends, the customer wants something new, apparel products on the market cannot last forever and they must innovate and change to fit in today's competitive environment. It is imperative to understand customer needs, market strategy latest trends to retain customers and increase revenue. Like any business today, the apparel industry also requires the brand to continuously strive, in order to gain a competitive edge over its competitors. For this, a brand should be well aware of what its competitors are providing- both process and product wise so to do better in the market any brand should work on the COGS (Cost of Goods Sold). Reduction in COGS is an important factor that determines the profit margin (to achieve the desired multiplier) on the products.

Keywords:- *COGS, Multipliers, Profit, Apparel.*

I. INTRODUCTION

This research is conducted for Delhi-NCR (India) based one of the leading men's wear retail brands. Purpose of this research is to identify & analyze the key factors contribute in higher COGS. Work on all the factors properly and identify gaps that are lagging to achieve the desired multiplier in casual shirt category. In today's competitive retail market the growth depends on the profit and profit can be maintained or increase by achieving the desired multiplier.

Tradeshow is the place to showcase the new season range in physical form to the wide range of customers including own customers EBO (Exclusive Brand Outlets), LFR (Larger Format Retails like Lifestyle, Shoppers Stop, Pantaloons , Central , E-Commerce (for example- Amazon, Myntra & Flipkart) and most important MBO's (Multi-Brand outlet), where MBO's plays a vital role in establishing brand in India as its penetration is present in each and every place and corner of India and has a very defined & loyal customer base. Hence, standing in tradeshow & selling or showcasing the garments to different buyers, we faced several issues related to the category.

Going through the overall data analysis of the master sheet of the casual shirt of last two seasons and current trade show, it was observed that brand is lagging to achieve the desired multiplier in most of the styles. So there is need for a significant way of working to find out the exact reason for higher COGS and standardize all the factors to maintain the same.

A. What is COGS (Cost of Goods Sold):-

Cost of Goods Sold, often abbreviated COGS is the amount of money the company spent on manpower, materials, and overhead to manufacture or purchase products that were sold to customers during the year. The purpose of the COGS calculation is to measure the true cost of producing merchandise that customers purchased for the year. It helps to analyze how well purchasing and payroll costs are being controlled. Creditors and investors also use the cost of goods sold to calculate the gross margin of the business

B. What is Multiplier: -

This is a number that indicates the times of MRP of any product on total expenses added to ship the packed products into the warehouse.

In the apparel retail business

Multiplier = MRP / (Total cut make charge +Margin)

II. LITERATURE SURVEY

A. Profit Maximization

Mr. Ajoy has worked a lot on the profit maximization in the retail business by increasing the Multiplier. According to Mr. Ajoy Kumar Dey to stay competitive by creating higher value for consumers firms are in constant search for strategies and tactics that will maximize profit. Profits can be maximized by increasing per unit revenue, decreasing unit cost or a mix of both. His study has identified ten different approaches: Innovation, Brand Image, Customization – Mass

customization, Customer collaboration, Long tail effect, and Operational excellence, Outsourcing, Value engineering, moving away from unprofitable customers and reducing quality. Out of these approaches, a manager should select the one that fits the situation best. Maximizing profit by reducing quality should be avoided as it threatens long term survival[1].

B. Cost Analysis in the Garment Industry

Anshu Singh Choudhary and his team worked on Cost analysis in garment Manufacturing, as the topic implies, deals with the work of costing a garment which involves the expenses for fabric, trims, cuttings, labour, overhead, sales commission, manufacturer's profit & transportation. The production cost of the garment must be determined in order to set the wholesale price, the price that retailers' pay for goods that they purchase from manufacturers. There are two types of cost. The first one is pre-cost. Pre cost is the estimate of the garment before it is adopted into the line. The designs must keep the fabric, trim and the labour cost for each garment within the limit set by the company for a particular line price range. Another method is the final cost. It is the exact calculation by the costing or import department using actual figures for materials and labour. The costing Department uses the designer's worksheet or a prototype garment and the production pattern to analyze material and construction step by step. The designers may be consulted for information or to recommend more practical or cheaper ways to make the garment. Labour cost may be calculated by time study. In this case engineer's time operation such as closing a seam or how long it takes to make an entire garment or a prototype may be sent to a contractor for cost. Cost is varying on quality, style and reliability[2].

C. Emerging Trends in Retail Pricing Practice: Implications for Research

Mr. Michael Levy and his team worked for emerging trends in retail practice as per their study designed to examine the nexus between retail practice and research, with the goal of stimulating further research. This study provides emerging trends in pricing discusses recent advances in retail pricing optimization. We begin with a review of how retailers typically make pricing decisions using time-honored heuristics and attempt to infer the optimal decisions. However, current methods are suboptimal because they do not consider the effects of advertising, competition, substitute products, or complementary products on sales. Most fail to take into account how price elasticity changes over time, particularly for fashion merchandise, or how market segments react differentially to price+ changes. In addition, many retailers find it difficult to know how to price merchandise when their suppliers offer temporary "deals." They are also generally unaware of how their pricing strategy influences their overall image. As these issues demonstrate, optimal pricing is not a static problem. Retailers must be able to react quickly to changes in the environment or sales patterns. This paper also provides examples of the more sophisticated pricing techniques that are currently being tested in practice. Finally, we conclude with a discussion of the critical components that must be incorporated into retail pricing[3].

[1] Profit maximization, Ajoy Kumar Dey Birla Institute of Management Technology (Published in: Business Perspective Vol.9, Jan – June: 41 – 49)

[2] Anshu Singh Choudhary ASFD and T, Amity University Madhya Pradesh

[3] Michael Levy[a,*], Dhruv Grewal[a,1], Praveen K. Kopalle[b,2], James D. Hess[c,3]

III. DESIGN OF EXPERIMENT

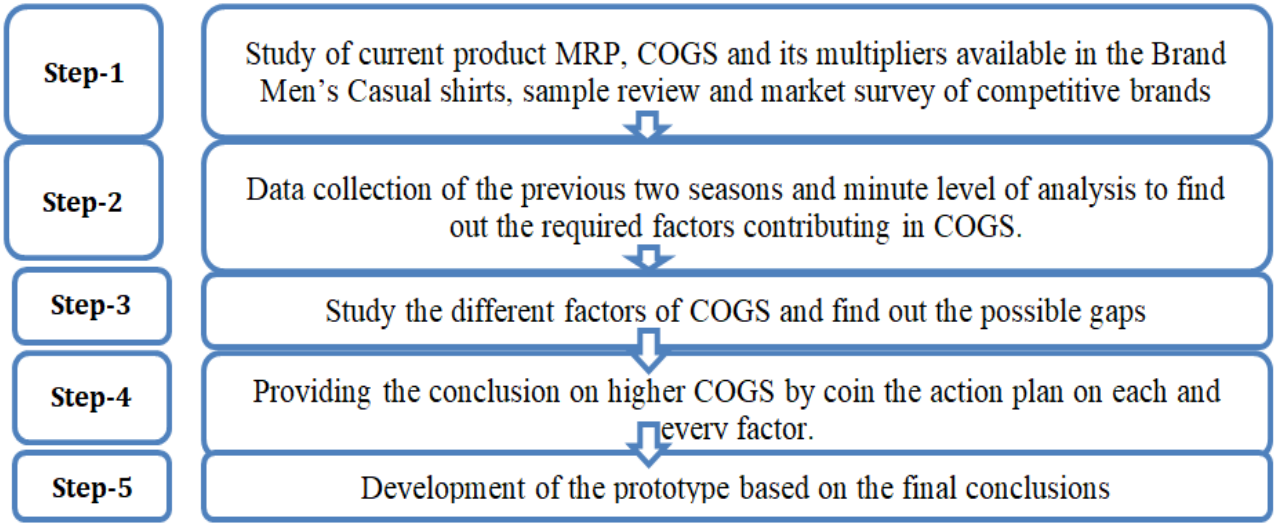

Fig 1

A. Factors contribute to COGS:-

1. Fabric (price and consumption)
2. Trims (price and consumption)
3. Cut make charges (C.M. Charges)
4. Factory margin
5. Transportation to warehouse.

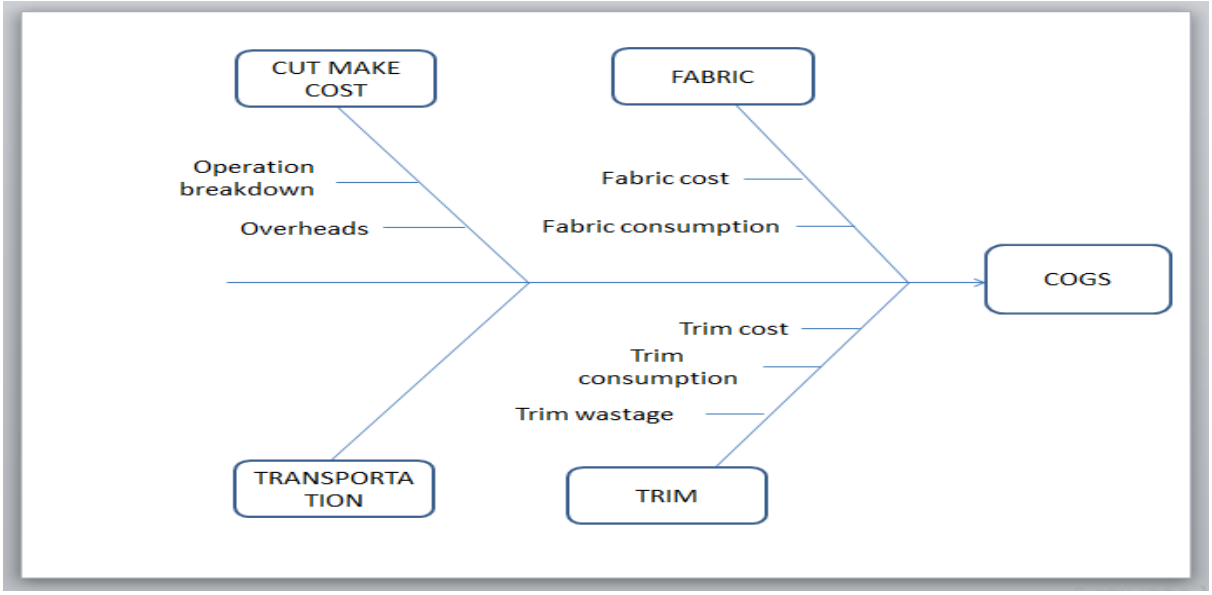

Fig 2:- Fishbone diagram of factors contributing in the COGS

B. Current product MRP, COGS and its multipliers of previous seasons:

Product Range of Last two seasons						
Season	**Average cost**	**Average MRP**	**Average Multiplier**	**Cost Range**	**MRP Range**	**Multiplier Range**
AW-19	570.2	2227	3.91	458-815	1695- 3295	3.21-4.80
SS-19	573.6	2215	3.86	481-928	1795- 2995	2.80-4.62
AW-18	542.4	2123	3.91	427-740	1695-2995	3.25-4.81

Table 1:- Season wise MRP, COGS and Multiplier details.

C. Season wise overall cost-sheet data to know precisely the current scenario:-

Season wise MRP range as per the fabric quality			
Seasons	**SS-19**	**AW-18**	**AW-19**
Type of Fabric	**MRP Range**		
Check	1795-2595	1895-2595	1795-2995
Digital print	1895-2595	N/A	2595-2995
Dobby	1895-2395	1895-2595	1895-2795
Print	1795-2595	1795-2395	1695-2995
Solid	1795-2995	1795-2995	1895-3295
Stripes	1995-2395	1895-2195	2395-2795
Yarn dyed	2095-2395	N/A	1995-3295

Table 2:- MRP Architecture season wise

D. Fabric price range/meters according to the quality selected for the particular style:-

Fabric Price/Mts. In different seasons							
Season	**Fiber dyed**	**Piece Dye**	**Piece Dye , Printed**	**Printed**	**RFD**	**Yarn Dye**	**Yarn Dye +Print**
AW-19 (Price range/mts)	**160-268**	**152-280**	**195-290**	**163-234**	**186-210**	**210-360**	**223-370**
SS-19 (Price range/mts)	**148-192**	**178-230**	**160-189**	**140-275**	**177-210**	**145-352**	**0**
AW-18 (Price range/mts)	**175-246**	**155-230**	**149-230**	**150-234**	**0**	**190-320**	**190-233**

Table 3:- Season wise COGS range

E. Action plan:-

The action plan includes the working on all the major factors contributes to Multipliers and COGS as Fabric, trims, CM Charge, factory margin and transportation. The focus is on Reduction in consumption/price of goods and services and wastage. SAM reduction, and Change in the Quality.

Factors	1. Fabric (Consumption and price)	2. Trims (Consumption and price)
Action	Reduction in the Shell fabric consumption by replacement with the combo fabric at Inner collar band, inner back yoke and inner cuff	Reduced unnecessary extra inputs in packaging Ex- U-clips & Collar bone ,hanger loop, price tag & Button spacer
	Shell Fabric is costlier than the Combo. By reduction in shell consumption and its replacement by combo, we are saving final fabric consumption prices	Changed quality of Packing trims (as per comparative study of rival brands), Ex- butter paper, carton box and back support
	Overhead charges reduced due to an overall reduction in total fabric prices	Reduced items prices by cost negotiation & changing the existing vendors based on previous performance in terms of cost and quality Ex. Seal string, Poly bags, Hangtag
		Reduced the trims wastage cost by reduction. Ex- 1.Trims wastage percentage 2. Reduction in total trims prices
Factor	**3. Cut make charges**	**4. Factory margin**
Action	Reduction in SAM by the change in the collar shape, Reduction in operation during yoke construction and attachment	Working on fabric/Trims and CM charges ultimately effected on factory margin
	Reduction in embroidery charges by Time & motion study on SAM & thread consumption standardization (SPI and stitches).	

Table 4:- Action plan on different factors

F. Results after application of action plan:-

By studying on all the factors of garment cost sheet and applying the proper action plan below are the changes in the data in current and projected

	Actual Data Before Project		
Seasons	**AW-18**	**SS-19**	**AW-19**
Average/ Mts. shell fabric price (Rs.)	194.2	203	198.3
Average Mts. / Garment shell fabric Consumption	1.4	1.4	1.4
Average shell Fabric cost / Garment (Rs.)	271.9	284.2	277.6
Average/ Mts. Combo fabric price (Rs.)	120	120	110
Average Mts. / Garment Combo fabric Consumption	0.02	0.02	0.02
Average Combo Fabric cost / Garment (Rs.)	2.4	2.4	2.2
Overheads @ 3% on shell and Combo fabric respectively	8.2	8.6	8.4
Average trims cost/Garment (Rs.)	95.0	100.0	98.0
Trims Wastage/Garment (Rs.)	1.9	2	2.0
Average Cut make charge/Garment (Rs.)	100	110	115
Average Processing Charges/Garment (Rs.)	10	10	10
Average Embroidery Charges/Garment	6	6	6
Average Additional cut make charges /Garment (Rs.)	15	17	18
Average Transportation charges/garments (Rs.)	5	5	5
Average Cost /garments (Rs.)	515.4	545.2	542.2
Average factory profit%/Garment	5	5	5
Average factory profit/Garment (Rs.)	25.8	27.3	27.1
Total average cost/ garment (Rs.)	541.2	572.5	569.3
Average MRP/garment (Rs.)	2123	2215	2227
Average Multiplier/Garment	3.92	3.87	3.91

Table 5:- Current cost sheet

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	Projected data, if project outcome applicable in the previous and current season		
Seasons	**AW-18**	**SS-19**	**AW-19**
Average/ Mts. shell fabric price (Rs.)	194.2	203	198.3
Average Mts. / Garment shell fabric Consumption	1.3	1.3	1.3
Average shell Fabric cost / Garment (Rs.)	246.6	257.8	251.8
Average/ Mts. Combo fabric price (Rs.)	120	120	110
Average Mts. / Garment Combo fabric Consumption	0.1	0.1	0.1
Average Combo Fabric cost / Garment (Rs.)	8.4	8.4	7.7
Overheads @ 3% on shell and Combo fabric respectively	7.7	8.0	7.8
Average trims cost/Garment (Rs.)	79.4	84.4	82.4
Trims Wastage/Garment (Rs.)	0.8	0.8	0.8
Average Cut make charge/Garment (Rs.)	100	110	115
Average Processing Charges/Garment (Rs.)	10	10	10
Average Embroidery Charges/Garment	4	4	4
Average Additional cut make charges /Garment (Rs.)	10.1	12.1	13.1
Average Transportation charges/garments (Rs.)	5	5	5
Average Cost /garments (Rs.)	471.9	500.5	497.6
Average factory profit%/Garment	5	5	5
Average factory profit/Garment (Rs.)	23.6	25.0	24.9
Total average cost/ garment (Rs.)	495.5	525.5	522.5
Average MRP/garment (Rs.)	2123	2215	2227
Average Multiplier/Garment	4.28	4.21	4.26

Table 6:- Projected cost sheet

G. Current and Projected Profit sheet:-

Reduction in the COGS up to 8% ultimately increases the additional profit margin as shown in the below table-

Season	**AW18**	**SS19**	**AW19**
Amount produce	1025000	1012000	1180000
Current Multiplier	3.92	3.87	3.91
Difference in multiplier	0.36	0.35	0.35
Standard Multiplier for Organization	4.30	4.30	4.30
Saving in landed cost per garment (INR)	45.63	46.92	46.78
MRP	**2123.0**	**2215.0**	**2227.0**
Current product cost	541.2	572.5	569.3
Total current product cost	554708290.5	579327394.8	671754329
Total selling cost before /after project	2176075000	2241580000	2627860000
Profit before project	1621366710	1662252605	1956105671

Table 7:- Current Profit sheet

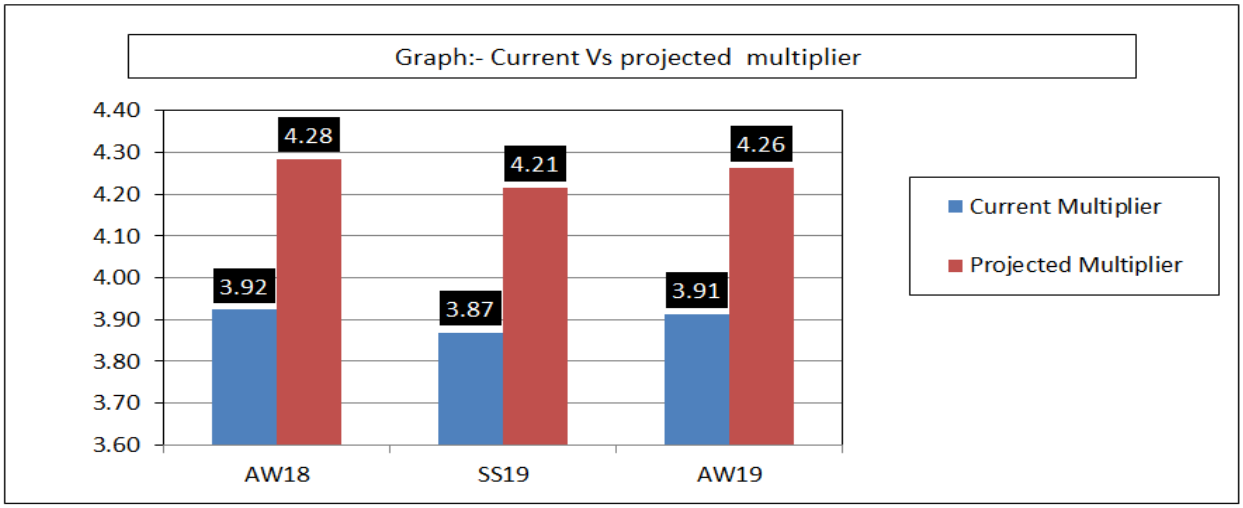
ISSN No:-2456-2165

	AW18	SS19	AW19
Amount produce	1025000	1012000	1180000
Projected Multiplier	4.28	4.21	4.26
Difference in multiplier	0.36	0.35	0.35
Standard Multiplier for Organization	4.30	4.30	4.30
Saving in landed cost per garment (INR)	45.63	46.92	46.78
MRP	**2123.0**	**2215.0**	**2227.0**
Projected product cost	495.5	525.5	522.5
Projected total product cost	507934809.9	531841926	616552332
Projected total selling cost	2176075000	2241580000	2627860000
Projected profit	1668140190	1709738074	2011307668
Total saving (INR)	46773480.6	47485468.8	55201997.1
Extra % profit	8.4	8.2	8.2

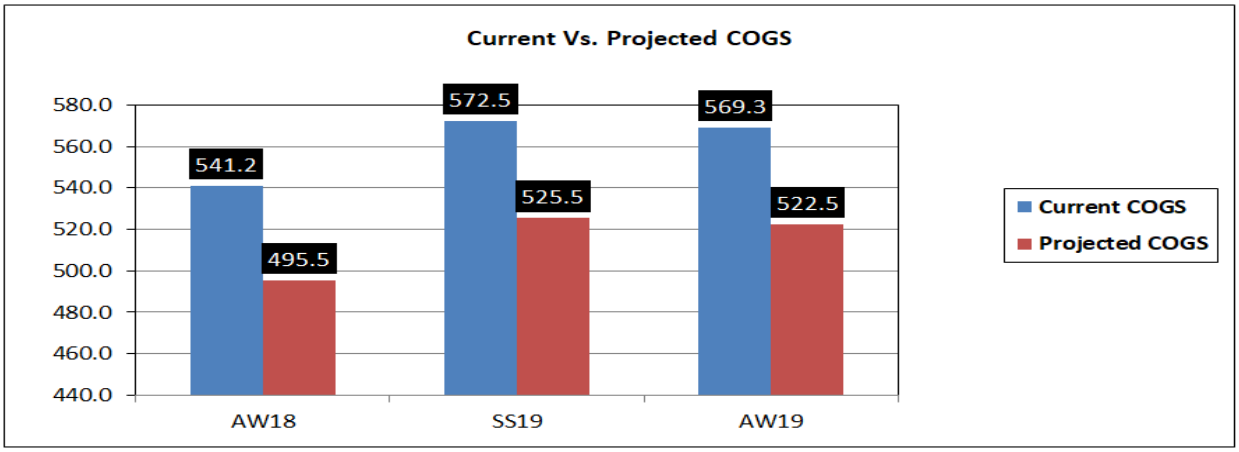
Table 8:- Projected Profit sheet

H. Current and projected Multiplier and COGS:-

The research outcome significantly helped in achieving the desired multiplier by reducing the COGS and the comparative graph is plotted season wise as per below-



Graph 1:- Current Vs. projected multiplier



Graph 2:- Current vs. projected COGS

IV. CONCLUSIONS

This research is the basis of the depth working on different factors contributing to COGS, which are mentioned below-

- **Multiplier -** Working on the major factors of Multiplier helped to achieve a significant difference in the current figure by 0.36.
- **COGS -** By Achieving significant figure in multiplier COGS is reduced by more than 8% in the current figure.
- **Projected profit -** Profit margin increases by more than 8% additionally on the current figure.

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