

**A COMPARATIVE STUDY ON ESTIMATED COST VERSUS ACTUAL COST OF THE GARMENTS MANUFACTURED IN AN APPAREL EXPORTER, TIRUPUR****Dr. Biswaranjan Ghosh*, Dr. A. Bhuvaneshwari**

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DOI: 10.5281/zenodo.3766197**KEYWORDS:** Actual Cost, Cost Control and Estimated Cost.**ABSTRACT**

Costs and its control have a major impact on firm's successes and thus must be managed for successful business. In apparel manufacturing and exporting industry the pre-costing (theoretical costing or estimated costing) of the product is being carried out before booking of an order. Later, after the accomplishment or execution of the order the final cost is being calculated to ascertain the profit margin and the cost effectiveness of the given style or order. It has been noticed on several occasions, the pre-costing and actual costing are varying significantly; and this variation has significant impact on the profitability and sustainability. The present study is planned with the objective to calculate and compare the pre and post cost variance of the styles executed in an apparel manufacturer and exporter located in Tirupur Apparel Cluster. Suitable statistical tools are applied to find the cost variance significance levels. The findings of the study reveals that no significant variation of cost at pre-costing and post-costing level and suggesting to reduce the variation by careful consideration of several cost influencing factors.

INTRODUCTION

Costs have a major impact on a firm's success and thus must be managed for successful business. **Cost control** is the practice of identifying and reducing business expenses to increase profits, and it starts with the budgeting process. **Cost control** is an **important** factor in maintaining and growing profitability. Performance reports compare budgeted and actual costs for materials, labor, overhead, or volume of production, etc in order to determine the cost variances. Cost variance has been defined as the difference between a standard cost and the comparable actual cost incurred during a period. Thus variance analysis is a part of the process of control of cost, which involves the calculation of variance to point out the specific areas responsible for the variance. The variance analysis ascertains the magnitude of each of the variances and the causes thereof for necessary corrective action to reduce the variation. Negative value of cost variance indicates that the actual costs exceed budgeted costs; immediate action should be taken to reduce the variance, this may involve changing a design, revising production procedures, or stopping production of a style. etc. Excessive variance can result in production bottlenecks, failure to meet deadlines, loss of profits and eventually business failure.

Keiser et al., (2008) indicates that the monetary value used to produce a garment is referred to as cost and this embraces the material, labor as well as overhead expenses of the company. The cost of manufacturing is obtained at the sample development stage by considering the general manufacturing parameters such as raw material cost (fabric, trims, and accessories), manufacturing overheads (cutting, sewing, finishing, and packing), administrative overheads expenses, cost of shipping and the profit. In most cases, cost is influenced by the existing market prices of the raw materials and overheads which are based on experience. At the sample development stage, the approved product cost is then negotiated with a potential buyer for placement of orders (Gandhi & Poonkuzhali, 2015). The major components in a garments cost are materials (fabrics), trims and labor. Trims, include support materials (interlining, lining and other support devices), closures, threads, elastics and labels. Fabric has often been found to be the biggest single cost. The type and quality of the fabric chosen makes a great difference in the overall cost of the garment. The quantity of fabric is also most difficult to estimate due to some waste encountered during the cutting process (Keiser et al., 2008). The cost of garment embraces components such as fabric, trims, cut, make and trim charges, value added services (such as printing, embroidery, washing, applique), testing of the garment quality, transportation and logistics cost and profit of the manufacturing organization (Kothari, 2013). Out of the three chief classes of cost for garment manufacturers, usually direct material costs take approximately between



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45-60 percent of the total garment cost, and on the average close to half of the total cost. This means that designers can influence cost through their choice of fabrics, trims and design details and that any decision taking during designing definitely affects garment cost (Jeffrey & Evans 2011, 8-9; Keiser & Garner 2008, 465-466). Direct labor also caters for 20% of the total cost whereas overheads forms about 30% of the total cost (Jeffrey & Evans, 2011, 8).

Garment costing involves several elements relative to many other styles of products. The different stage of product costing adopted by an individual manufacturer is based on its organization policy and process structure and specific requirements of buyers, if any. Myers-McDevitt-2011 opines about four stages of garment costing, namely; preliminary costing, cost estimating, detailed costing and actual costs. The actual costs being one of the most important costing processes can only be ascertained after production. The costs computation is made after all the data after production (actual cost of material, trims and labor) are known. In certain instances, the budgeted costs or estimated cost are exceeded due to unexpected circumstances. This only provides new information for future production and garment design (Keiser and Garner 2008, 467-471; Myers-McDevitt 2011, 14-15). Choudhary (2015), opine that there are two stages involved when costing garments- that is pre-cost and final cost. Pre-cost refers to the preliminary estimate of the garment prior to its adoption into the line. In this case the designers must keep the fabric, trim and the labor cost per each garment within the limit the company sets for a particular line price range. The final cost involves the use of actual figures for materials and labor to do the exact computation and this is more often than not done by the costing or import department. Actual Cost of manufactured Goods are not always the same as projected at the sample level due to various factors that influence cost of manufacturing a product which is dynamic in nature (Gandhi M.K. and Sarukesi .K. 2015).

NEED FOR THE STUDY

Analyses of variance are the most important step in the proper implementation if a budgetary control and standard cost system. It serves the following purposes.

Performance Evaluation: Variance analysis indicates the significance of variances in terms of their sources, causes and responsibility. This helps the management in evaluating individual performance by highlighting the difference it terms of costs between actual performance and budgeted performance.

Cost Control and Cost Reduction: Variance analysis is used as a tool of cost control and cost reduction; Variances are analyses to explain their causes. Depending upon the nature of causes, suitable corrective action is taken by the management to ensure compliance the targets in future operations. Thought past failure cannot be corrected, but the variance analysis is an important for performance improvement in future. For control point of view, it is necessary that each element of cost be analyzed.

Management by Exception: Management concentrates only on significant deviations of the actual performance from the budgeted performance reported to then, ignoring items or performances which correspond with norms or targets. Thus, suitably prepared variance reports require top management's attention only to exceptional variances.

OBJECTIVES OF THE STUDY

Primary Objective:

- To compare the estimated cost with actual cost

Secondary Objective:

- To calculate the cost variance.
- To find out the reasons for the variance
- To suggest the remedial measures to reduce the gap between the estimated cost and actual cost

HYPOTHESIS:

- (i) Null hypothesis (Ho): There is no significant difference between the estimated and the actual cost.



- (ii) Alternative hypothesis (H1): There is a significant difference between the estimated and the actual cost.

METHODOLOGY

The present descriptive study is carried out in a garment manufacturer and exporter located in the dollar city of Tirupur-Tamilnadu. For analysis, five different styles/orders, which had been executed during the period of January-2019 to May 2019 of a particular buyer/importer have been selected for the study by following a convenient sampling procedure. The primary data has been collected through observation method and direct interview with the merchandisers and top management. The secondary data has been collected from the company's record, journals, books, internet etc. Suitable statistical tools had been applied to analyse the data using the software SPSS.

ANALYSIS AND INTERPRETATION

The standard costing procedure has been followed to determine the estimated and actual cost. The initial or pre-costing has been derived during the sample development process and final costing has been calculated after the shipment.

The fabric suggested by the buyer is 100 % super combed cotton interlock of GSM 200 for all the five styles. The overall costing and cost comparison for all the styles are depicted in Table Number 1, 2 and 3.

Table 1: Determination of Fabric Cost per Kg. in Rupee

Particulars	Style 1: Single Baby Body Half Sleeve	Style 2: Baby Pyjama	Style 3: Baby Bibs	Style 4: Single Baby Jump Suit with Feet	Style 5: Baby Body Half Sleeve:
	Cost(in Rs)				
Yarn cost/kg	190	186	185	187	187
Knitting charge/kg	15	14	14	15	15
Dyeing charge/kg	72	69	65	75	70
Compacting charge	7	7	6	8	8
Fabric wastage @ 5%	14.20	13.80	13.65	14.25	14.00
Fabric cost per kg	300.20	288.80	286.65	309.25	294
Fabric consumption per garment	80 gm	125 gm	45 gm	110 gm	90 gm
Fabric cost per garment	24	36.10	12.89	34.07	26.46

Garments Costing:

Table 2: Estimated Cost of the Garment in Rupee

Particulars	Style 1: Single baby body half sleeve	Style 2: Baby Pyjama	Style 3: Baby bibs	Style 4: Single baby jumpsuit with feet	Style 5: Baby body half sleeve:
	Cost(in Rs)				
Yarn cost/kg	190	186	185	187	187
Fabric cost per garments	24.00	36.10	12.89	34.07	26.46
Cost of Trims and Accessories	13	13	9.90	15	10



CMT Charges	8	8.5	7	8.0	7.7
Rejection of garments (commonly 3%)	1.35	7.30	0.38	1.712	1.31
Cost of garment	46.35	64.9	32.77	56.28	45.27
Local Transport	1.80	2	2.5	2.50	1.50
Profit @ 15 % approximately	6.95	9.74	4.92	8.81	6.79
Price of Garment	55.10	76.64	40.20	70.00	53.56

Table 3: Comparison of Actual Cost with Estimated Cost

Components	Style 1			Style 2			Style 3			Style 4			Style 5		
	E	A	D	E	A	D	E	A	D	E	A	D	E	A	D
Yarn	190	188	2	186	183	3	185	187	-2	187	190	-3	187	184	3
Dyeing	72	70	2	69	65	4	65	68	-3	75	78	-3	70	66	4
Knitting	15	14	1	14	14	0	14	14	0	15	16	-1	15	14	1
Compacting	7	7	0	7	6	1	6	6	0	8	8	0	8	7	1
CMT	8	7.5	0.5	8.5	7.9	0.6	7	7.5	-0.5	8	8	0	7.7	7.5	0.2
Trims & Accessories	13	11.5	1.5	13	12.1	0.8	9.9	11	-1.1	15	17.2	-2.2	10	9.5	0.5

Findings of Actual Cost (A) compared with Estimated Cost (E) and Difference (D):

The style wise interpretations are given below.

Style 1:

- ❖ The yarn cost is decreased by Rs.2 per kg. This may be due to the economies scale of production and yarn manufacturer being a regular core supplier of yarn over a long period of time.
- ❖ The dyeing charges have decreased by Rs.1 per kg. This is due to the change of shade requirements and better utilization of resources in a given shade.
- ❖ No changes in compacting cost.
- ❖ The CMT charges have been decreased by Rs.0.5 per piece; this decreasing was because of higher order quantity and better productivity.
- ❖ The accessories cost decreased by Rs1.50 per piece, This is due to the change in the material content by the buyer in post sample development stage and rupee was appreciated against the dollar leading to decrease of cost for the imported accessories.

Style 2:

- ❖ The lesser actual cost of the yarn is due to the price fluctuation in the volatile global market, which is getting influenced by several market forces.
- ❖ The dyeing costs have decreased by Rs.4 per kg, this is due to the requirement of lighter shade of fabric in the pre-production sample.
- ❖ The actual compacting and CMT cost is less than estimated cost. This may due to the better scale of production.
- ❖ The accessories cost decreased by Rs 0.8 per piece. This is due to the change of the supplier.

**Style 3:**

- ❖ The increase of actual yarn cost is due to the fluctuation of price in a global market.
- ❖ The dyeing charges have increased by Rs.3 per kg. This is due to the last minute change of shade tone specification made by the buyer
- ❖ The CMT charges have been increased by Rs. 0.5 per piece. This is due to small order quantity
- ❖ The accessories cost increased by Rs.1.10 per piece. This is due to the change of consumption of elastic owing to its abnormal shrinkage.

Style 4:

- ❖ The deviations of yarn's cost from estimated one is due to the volatile yarn market
- ❖ The actual dyeing costs have increased by Rs.3 per kg. This is due to increase of the cloth consumption per garment owing to change of measurement sheet and also due to the change of quality characteristics and requirements.
- ❖ The actual knitting cost increased by Rs.1 per garment. This is due to ineffective and faulty knitting process and machines.
- ❖ No changes of cost in case of CMT and compacting.
- ❖ The Accessories cost are increased by Rs.2.20 per piece. This is due to the imported elastics and toggles, which is costlier than the indigenous elastic and toggle.

Style 5:

- ❖ The actual yarn cost decreased by Rs.3. This is due to the better economies of scale of production at the supplier level and also due to the volatile yarn market. Here it may be noted that, 40's Ne is the count of yarn for the desired style, a common count used to have versatile application.
- ❖ The dyeing cost has decreased by Rs.4 per kg. This is due to less wastages and better utilization of material.
- ❖ The knitting, compacting and CMT cost is lesser than the estimated one. This is due to the higher productivity.

FINDINGS OF CHI-SQUARE TEST

The estimated and the actual cost of all the five orders are analyzed using chi-square test. The calculated value is less than the table value for all the five orders at 95% confidence level. Hence we accept the null hypothesis that there is no significant difference between the estimated and the actual cost.

SUGGESTION

- ❖ To improve the profit margin of the company, focus has to be made to minimize the deviation between actual cost and estimated cost. Importantly, the yarn or fabric, a major cost component's price fluctuation needs to be monitored closely. Future price prediction forecasting model needs to be developed based on the past history.
- ❖ For economies of scale and minimization of cost, bulk purchasing of fabric or yarns can be considered for multiple styles of same or similar raw materials.
- ❖ Indigenous supplier relationship management needs to be strengthened or developed. This will help to avoid import of raw material at higher price
- ❖ A better knowledge about the buyer's market and profit margin will enable the merchandiser to quote exact price rather than to quote under or over costing. This will also minimize the gap between estimated and actual cost.
- ❖ Product development or sampling department's coordination with merchandiser should be seam less. This will enable to avoid last minute changes of material, specification and requirements and hence maintain the consistency between quoted and actual cost.
- ❖ CMT needs to be calculated by the industrial engineer. This will narrow the gap between actual and estimated CMT cost. In addition, this will minimize the cost of production and maximize the utilization of resources by improving productivity



CONCLUSION

Perfect product costing is a prerequisite requirement to book an order in international competitive market. The present study's comparison between the estimated cost and actual cost reveals that raw material cost, CMT and dyeing costs are prone to be getting varied as compared to other cost components. A suitable scientific approach towards costing by predicting the future market and well organized product development team coupled with efficient merchandising will help to minimize the variation of cost. Lesser the variation will lead to have better sustainability and profitability.

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