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**08.05.2018**

**CERTIFICATE**

This is to certify that **Ms. VASANTHA M (1AY16MBA85)** a student pursuing **MASTER OF BUSINESS ADMINISTRATION**, from **ACHARYA INSTITUTE OF TECHNOLOGY, BANGALORE**, has completed her project work successfully at BEML Ltd. Bangalore Complex, during the Period from 07/02/2018 to 08/04/2018, as a part of her curriculum and has submitted a report titled **"A STUDY ON COST ANALYSIS AND BENEFITS OF METRO PROJECT" AT BEML LTD,**

During her project work, we have found her to be diligent and honest in her work and we wish her all success in her future endeavors.

for BEML LIMITED,

  
**(SYED SHUIYBUDDIN K.Z.)**  
**OFFICER-HR**



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# ACHARYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Approved by AICTE, New Delhi and Accredited by NBA and NAAC)

25/05/2018

## CERTIFICATE

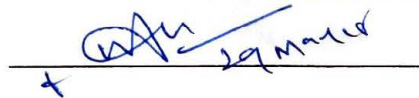
This is to certify that **Ms. Vasantha M** bearing USN **1AY16MBA85** is a bonafide student of Master of Business Administration course of the Institute 2016-18 batch, affiliated to Visvesvaraya Technological University, Belgaum. Project report on “**A Study on Cost Analysis and Benefits of Metro Project of BEML Ltd, Bangalore**” is prepared by her under the guidance of **Dr. Prakash B Yaragol** in partial fulfillment of the requirements for the award of the degree of Master of Business Administration, Visvesvaraya Technological University, Belgaum, Karnataka.



Signature of Internal Guide



Signature of HOD  
Head of the Department  
Department of MBA  
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Signature of Principal

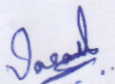
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## DECLARATION

I, **Vasantha M**, bearing USN **1AY16MBA85** hereby declare that the Project report entitled “**A Study on Cost Analysis and Benefits of Metro Project of BEML, Bangalore**” prepared by me under the guidance of **Dr. Prakash B Yaragol**, faculty of M.B.A Department, **Acharya Institute of Technology** and external assistance by **Mr. Jasmal Ali** and I also declare that this Project work is towards the partial fulfillment of the university Regulations for the award of degree of Master of Business Administration by Visvesvaraya Technological University, Belgaum. I have undergone a summer project for a period of ten weeks. I further declare that this Project is based on the original study undertaken by me and has not been submitted for the award of any degree/diploma from any other University / Institution.

Place: Bengaluru

Date: 29/5/18

  
Vasantha M  
1AY16MBA85

## **ACKNOWLEDGEMENT**

I would like to thank all of those who have helped and supported me in completing this project successfully.

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## **EXECUTIVE SUMMARY**

My project done in BEML Limited is aimed at the study of Cost analysis and cost benefits of Metro rails in Bangalore manufacturing unit,

Since the foremost segment of the total turnover of the company is metro. The problem in this learning is to know the cost manufacturing metro rail coaches and its pricing strategies and how to reduce cost of the manufacturing of metro rail and metro rail coaches.

Cost regulator and saving is a continuous process that begins with an annual budget of the firm. It is very significant to compare actual results to the project result, in sort to defeat the crisis of excess expenditure. Therefore, this study is conducted to recognize the tools and techniques followed in cost control at BEML Limited and suggestion are given for reducing the cost in sequence to improve the profitability, currently the project is focused in the Bangalore region.

The main objective is to understand about the BEML's manufacturing unit in Bangalore, to know how BEML get its projects and how it gets its funds and the investment patterns. It capital budgets and the capital requirement and its investing partners,

The primary focus is to know the technique which company uses two controls its cost reduction process and even to know the company maintains its cost benefits of metro rails, It is found that the raw material cost is more which accounts up to 55 to 60% and the company is known for labor intensive. Next get to identify each department works, The sequence of operation needs to be placed on building the metro for effective time consumption.

Cost analysis and inventory analysis is done. Based on these relevant recommendations are prepared to progress the cost control of BEML metro rail manufacturing

# **Chapter-1**

## **INTRODUCTION**

---

### **1.1 INTRODUCTION**

This report is a short clarification of ten weeks, which was finished with the M B A program in my undertaking days. The focal point of the examination on cost investigation and advantage of metro undertaking of BEML constrained. Also, the center towards profoundly costs acquired around that specific year and they decreased that specific cost.

An extensive variety of association, regardless of whether the advantage, assembling or exchanging, requires cost bookkeeping to track their exercises cost bookkeeping has for quite some time been utilized to enable supervisors to comprehend the cost of maintaining a business. Current cost bookkeeping began amid the mechanical unrest, when the complexities of maintaining a substantial scale entrepreneurs and chiefs settle on a choice

Cost accounting guides administration in respects towards complex of offering costs of the item. It is additionally steady to formulate propositions, then citation.

### **1.2 Topic for Research Study**

Study on Cost Analysis and Benefits of metro Project at BEML LIMITED

### **1.3 Industry profile**

Enterprises are the coordinating lighting fixtures toward the improvement of an financial system and are the establishment of the Nation. The trade and development of a country for the maximum component depends infinite deliver of its economy.

India is the fundamentally a business-based nation. It is after the freedom, India has offered critics to the advancement of present day change through five-year orchestrating programs. The government has taken a primary stroll to up heave the advancement of industrialization. For any nation, little or immense, created or creating, require great foundation offices, for example, streets, dams, burrows and so forth., the infrastructural offices are the essential requirements for the transportation or development of products. Roads accept a pivotal part in this edge.

Gigantic improvement has happened in science and advancement, which has mechanized each work in each field. Physically finished work is less productive and dreary. As needs, be to extend capability and profitable, mechanical apparatus showed up and for all intents and purposes each

field is mechanized. As needs be, the enthusiasm for such mechanical apparatuses has extended enormously.

India has been overseen by nonnatives for a significant drawn-out period of time. What's more, such, after opportunity India has offered need to invigorate the countries shield Compel. A couple of organizations making barrier gear has been begun by started by the governing body of India from that point on India felt the need of having strong obstruction which is prepared for shielding its outskirts from neighbors. BEML has been developed by service of barrier.

#### **1.4 COMPANY PROFILE**

BEML Limited (in the beyond Bharat Earth Movers Limited) Was installation in May 1964 as an open segment Undertaking for fabricate of Rail Coaches and Space Part and timing tools at its Bangalore Complex. The employer possesses in element disinvested and via and by using Government of India 54% of aggregate fee and rest 46% is held by using Public, Financial Institutions, Foreign Institutional, Investor Banks and Employees, BEML Ltd, a " Mini Ratna-Category-1, Plays an urgent part and serves India's center segments like a shield, Rail, Power, Mining and Infrastructure.

The enterprise began with an unassuming turnover of Rs. 5Cr amid 1956 and nowadays, on account of its numerous commercial enterprise portfolios, the employer has possessed the ability to perform a turnover of extra than Rs 3500 Cr. Its 3 noteworthy Business verticals, Mining and Construction, Defense and Rail and Metro are served by its 9 assembling devices situated in Bangalore, Kolar GoldFields (KGF), Mysore, Palakkad and Subsidiary Vignyan Industries Ltd, in Chikkamangalur District. BEML objects are sold and altered thru its huge showcasing Network unfold anywhere all through the nation. BEML objects are traded to in extra of 56 countries. As a main factor of organisation's globalization methodology. The employer has prolonged its worldwide company in Indonesia and Brazil as of late what is extra Malaysia and China offices.

The organisation works underneath three noteworthy Business verticals viz. Mining and Construction, Defense and Rail& Metro. Every one of the above Business goes by using a Director who is going approximately as CEO of the Business and reports to the Chairman and Managing Director of the agency. Trading Division offers in non-corporation items. BEML produces and components Defense Ground Support Equipment, as an example, Tetra based High

Mobility Trucks, Recovery Vehicles, Bridge System, Vehicles for Missile Projects, Tank Transportation Trailers, Metrorail wagons.

Research and improvement framework and institution in accordance with predictable method of the company to the innovative requests via in-hour R&D and key specialized tie-up with states of America with worldwide accumulating

### 1.4.1 Promoters

**BOARD OF DIRECTORS**



**Shri D K Hota**  
Chairman & Managing Director



**Smt. Surina Rajan**  
Government Nominee Director  
Additional Secretary (Defence Production)  
Ministry of Defence



**Shri Sanjay Prasad**  
Government Nominee Director  
Joint Secretary (Land System)  
Dept. of Defence Production, Ministry of Defence



**Shri Sudhir Kumar Beri**  
Independent Director



**Shri M G Raghuvver**  
Independent Director



**Shri B P Rao**  
Independent Director



**Shri Aniruddh Kumar**  
Director  
(Rail & Metro Business)



**Shri B R Viswanatha**  
Director (Mining &  
Construction Business)



**Shri R H Muralidhara**  
Director  
(Defence Business)

## **1.4.2 VISION:**

Transform into a market pioneer, as an superior organization, giving quality things and organizations to portions, for instance, Mining and Construction, Rail and Metro, Defense and Aerospace and to create as a noticeable universal player

## **MISSION:**

- Improve aggressiveness through hierarchical change and cooperation, key organizations together and joint endeavors, to maintain and upgrade piece of the pie in item bunches BEML works.
- Grow productively by forcefully seeking after business and market grow opportunity in residential and global markets.
- Attract and hold individuals in a fulfilling and rousing condition by cultivating innovativeness and advancement with lesser steady loss levels.
- Offer innovation and financially savvy adds up with answers for upgrading consumer loyalty

## **Quality policy**

BEML Limited point of view great exchange as a business framework and in this way stays proactive in the zones of the matters and businesses great. At BEML, a company Quality association complementing Total Quality Management ensures that the nice device embraced brings about precepts companies and techniques that meet stringent standards and simple execution standards. An alternate Quality Department states that driven in the direction of Total Quality Management. All the accumulating units of the affiliation have been assured for ISO 9001-2000 pleasant administration gauges. The workplaces fuse hand created take a look at tracks to evaluate the execution of the rigging.

Moreover, the gathering divisions are extended to test places of work available at its research and development Technology Division. The thought of 5S, Kaizen and Quality Circles are wiped clean at grass root stage. BEML is adequately looking for after "SIX SIGMA" Methodologies to attain leap ahead in technique updates, in 2006, it has driven outstanding "Six Sigma"

advancement and the action has grabbed constrain with numerous on-going endeavors progressing commendably and completed endeavors being found out viably.

This will always bring stronger well worth to our buyers, by means of the visit advancement of methods and objects.

### **QUALITY OBJECTIVE**

- Well-composed utline and improvement strategy, remembering the present and fourth coming needs of customers.
- Improved customer in-time transport of blemish free items and powerful life cycle arrangement.
- A constant selection of upgraded foundation and HR.
- Commonly accommodating relationship with providers.

### **1.4.3 PRODUCT PROFILE**

BEML items durables of universal principles, hardware's and framework intended to withstand through workplace under changed atmosphere condition. It makes extensive variety of items to address the issues of development, mining, control, water system, bond, steel, and resistance and railroad areas. The different made are recorded underneath: -

#### **MINING AND CONSTRUCTION**

- Hydraulic excavators
- Loading shovel
- Backhoe
- Bulldozers
- Pipe layers
- Electric rope shovels
- Walking dragline

#### **RAILWAYS**

- Track laying equipment's
- Rail coaches
- Spoil disposal units
- Treasury vans

- Mail rail coaches
- Metro coaches

**DEFENCE**

- BEML Tatra heavy duty trucks
- Heavy duty trailers 20,30 ton

**PRODUCTS OF BEML**

➤ **Mining and Construction:**



**Crawler Dozers**



**Wheel Dozers**



**Excavators**



**Dump Trucks**



**Loaders**



**Backhoe Loaders**



**Walking Dragline**



**Rope Shovel**



**Sprinklers**



**Graders Underground**



**Tyre Handler**



**C-Crane**



**Mining**

➤ **Rail and Metro:**



Stainless Steel Metro Cars



Passenger Coaches



AC Electric Multiple Units



Stainless Steel A C EMUS



DC Electric Rails Bus Multiple Units



Rail Bus

➤ **Overhead Equipment Inspection Cars:**



Treasury Vans Equipments



Spoil Disposal



Track Laying



Sky Bus Units



Utility Track



8-WheelerOHE



4-WheelerOHE



➤ **Engines:**



**Diesel Engines**



**Diesel Generator Set**

➤ **Hydraulic Aggregates:**



**Hydraulic Pump**



**Hydraulic Cylinder**



**Hydro-Pneumatic**



**Control Valve  
Suspension**

➤ **Power Line Aggregates:**



**Transmission**



**Axle**



**Bevel Gear**

➤ **Aggregates for BMP:**



**Transmission**



**Ejector & Air Cleaner**



**Final Drive**

#### **1.4.4 Area of Operation**

BEML has 9 manufacturing units spread over the following locations.

1. Kolar Gold Fields (KGF) Complex ( around 100 K m from Bangalore)
  - Earth Moving Divisions
  - Rail Coach Unit
  - Heavy Fabrication Unit
  - Hydraulic &Power line Division
  
2. Mysore Complex (around 130 Km from Bangalore)
  - Truck Division
  - Engine Division
  
3. Bangalore Complex
  - Rail & Metro Division
  
4. Vignyan Industries.  
A subsidiary located at tarikere (around 300 km from Bangalore)
  
5. Palakkad Complex  
Defence & Rail Division BEMLs wide network of sales offices.

#### **1.4.5 INFRASTRUCTURE FACILITY**

BEML has eight assembling divisions situated in five areas:

- Kolar Gold Fields (KGF) Complex (AROUND 100 km from Bangalore) o Earth Moving Division
- Rail Coach Unit 2
- Heavy Fabrication Unit
- Hydraulic and Power line Division
- Mysore Complex (around 130 km from Bangalore)

- Truck Division
- Engine Division
- Aerospace Manufacturing Division
- Bangalore Complex-Rail & Metro Division
- Palakkad Complex Kerala State – Defense items Manufacturing
- BEML-Tatra Trucks 12

#### **1.4.6 Competitor's information**

- BBS Kraftfahrzeugtechnik AG
  - Construction, manufacturing, automobiles
- Dejana Truck & Utility Equipment Inc.
  - Manufacturing, machinery manufacturing, automobiles, commercial and residential construction
- Champion Home Builders, inc.
  - Consumergoods, manufacturing, construction, automobiles.
- Supreme industries, Inc
  - Manufacturing, construction, automotive.
- Skyline Corporation
  - Construction, manufacturing, automobiles, wood production

## **1.4.7 SWOT ANALYSIS**

### **STRENGTH**

- Established producing foundation, information base, talented labor with overwhelming piece of t All generating units, licensed with ISO 9001-2000 affirmation.
- Established R&D base with innovation, retention and description capability.
- Technology independence for current object run and in addition for advent
- Development of High End Electric Drive Dump Trucks and Excavator.
- The wide scope of objects to recall patron needs he pie crosswise over classifications.

### **WEAKNESS**

- High wage cost-Flat deals, prompting higher overheads.
- Technology levels of specific items don't make the grade regarding worldwide levels and patterns.
- Uncertainty in orders for Rail Coaches.
- Margins are low because of directs of the market.

### **OPPORTUNITIES**

#### **Mining and Construction:**

- Increased push by the Government in framework advancement.
- Dredger gear Business/Business from saves for existing dredgers.

#### **Rail and Metro:**

- Indian Railways are graduating to stainless Steel EMUs.
- Metro Rail stretching out to Tier-2 urban areas in the Country.

#### **Resistance:**

- Make in India approach of the Government is helping to Indian industry and spotlight is on for Indigenous generation.
- Emerging business for protection necessities.

#### **New Areas:**

- Demand for top of the line Electric Drive Dump Trucks and Excavators.
- Emerging business open doors for Light Rail.

## **THREATS**

- Domestic and worldwide monetary situation yet to get.
- Post progression, innovation pioneers working straightforwardly than separating innovation with Indian partners.
- Mergers & Acquisitions in Mining and Construction hardware industry.
- Dumping of items.
- Increased FDI tops in Defense division.
- Uncertainty in Defense business.
- Operating up of Defense buy two private division expanding further rivalry.
- Increasing the weight on lessening proprietorship costs.
- High desire for the temporary worker fragment.

## **1.4.8 FUTURE GROWTH AND PROSPECTS**

The accomplishments of the organization are the products of the vision and commitment to seniors who established a sound framework for the achievement of the unit.

What's to come is requested, cutting edge plan, ceaseless innovation development and client benefit with financially savvy arrangements. Gear and parts are getting to be out of date even before they enter the market. In such a situation, the opportunity has already come and gone that eliminated a portion of the outdated Technologies like semiconductors and transmitting tubes and differentiated into the frameworks and arrangement region, fundamentally in merchants, maritime framework, and sitcom and strategic correspondence frameworks. In parts division, Today clients are all the more requesting and forceful. Indeed, even protection clients look towards private and outside organizations for new and better items. The difficulties must be confronted and settled. The item, blend and labor profile have changed and it is the ideal opportunity for the organization with the requests of present day business. Proverb "QUALITY TECHNOLOGY, INNOVATION" in every one of the exercises.

## 1.4.9 Financial statement

### PROFIT AND LOSS ACCOUNT

<b>PARTICULARS</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Sales Turnover</b>	<b>3120.17</b>	<b>2999.17</b>	<b>3287.44</b>	<b>2834.66</b>
<b>Excise Duty</b>	<b>208.66</b>	<b>189.98</b>	<b>303.72</b>	<b>0.00</b>
<b>Net Sales</b>	<b>2911.51</b>	<b>2809.19</b>	<b>2983.72</b>	<b>2834.66</b>
<b>Other Income</b>	<b>79.28</b>	<b>59.65</b>	<b>39.02</b>	<b>62.44</b>
<b>Stock Adjustment</b>	<b>-97.06</b>	<b>-209.26</b>	<b>-243.71</b>	<b>125.09</b>
<b>Total Income</b>	<b>2893.73</b>	<b>2659.58</b>	<b>2779.03</b>	<b>3022.20</b>
<b>Raw materials</b>	<b>1631.57</b>	<b>1385.51</b>	<b>1489.99</b>	<b>1354.04</b>
<b>Power and Fuel cost</b>	<b>35.76</b>	<b>33.05</b>	<b>32.52</b>	<b>32.49</b>
<b>Employee Cost</b>	<b>716.76</b>	<b>769.11</b>	<b>767.89</b>	<b>780.73</b>
<b>Other manufacturing expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Selling and Admin expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>3.09</b>	<b>2.24</b>
<b>Miscellaneous Expenses</b>	<b>317.20</b>	<b>342.61</b>	<b>318.13</b>	<b>644.65</b>
<b>Preoperative exp capitalized</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total Expenses</b>	<b>2701.29</b>	<b>2530.28</b>	<b>2611.62</b>	<b>2814.15</b>
<b>Operating Profit</b>	<b>113.16</b>	<b>69.65</b>	<b>128.39</b>	<b>145.60</b>
<b>PBDIT</b>	<b>192.44</b>	<b>129.30</b>	<b>167.41</b>	<b>208.05</b>
<b>Interest</b>	<b>110.46</b>	<b>70.51</b>	<b>49.03</b>	<b>47.80</b>
<b>PBDT</b>	<b>81.98</b>	<b>58.79</b>	<b>118.38</b>	<b>160.25</b>
<b>Depriciation</b>	<b>53.56</b>	<b>52.14</b>	<b>53.21</b>	<b>61.98</b>
<b>Other Written off</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Profit before tax</b>	<b>28.42</b>	<b>6.65</b>	<b>65.17</b>	<b>98.27</b>
<b>Extra-ordinary items</b>	<b>-19.34</b>	<b>0.27</b>	<b>-0.89</b>	<b>13.84</b>
<b>PBT (Post Extra-</b>	<b>9.08</b>	<b>6.92</b>	<b>64.28</b>	<b>84.45</b>

ordinary Items)				
<b>Tax</b>	<b>4.40</b>	<b>0.16</b>	<b>11.62</b>	<b>1460.10</b>
<b>Reported Net Profit</b>	<b>4.68</b>	<b>6.76</b>	<b>0.00</b>	<b>0.00</b>
<b>Total Value addition</b>	<b>1069.72</b>	<b>1144.77</b>	<b>52.65</b>	<b>16.66</b>
<b>Preference Divident</b>	<b>0.00</b>	<b>0.00</b>	<b>1121.63</b>	<b>3.39</b>
<b>Equity Divident</b>	<b>4.16</b>	<b>4.16</b>	<b>16.66</b>	<b>146.45</b>
<b>Coporate Divident</b>	<b>0.71</b>	<b>0.85</b>	<b>3.39</b>	<b>20.28</b>
<b>Tax</b>				
<b>Share in issue (laksh)</b>	<b>416.45</b>	<b>416.45</b>	<b>416.45</b>	<b>80.0</b>
<b>EarningPer Share(Rs)</b>	<b>1.12</b>	<b>1.62</b>	<b>20.28</b>	<b>523.85</b>
<b>Equity Divident (%)</b>	<b>10.00</b>	<b>10.00</b>	<b>80.00</b>	<b>234.54</b>
<b>Book Value (Rs)</b>	<b>499.43</b>	<b>498.69</b>	<b>523.85</b>	<b>523.85</b>

### BALANCE SHEET

Particulars	2017	2016
<b>ASSETS</b>		
<b>1. Noncurrent assets</b>		
(a) Property, Plant and Equipment	51843.99	52730.30
(b) Capital work-in –progress	7942.33	5883.43
(c) Intangible assets	5242.26	1715.58
(d) Intangible assets under development		4504.95
(e) Financial assets		
1. Investments	257.64	257.64
2. Loans	1680.10	2494.49
3. Other financial assets	157.13	58.25
(f) Deferred tax assets (net)	11117.57	10370.63
(g) Other non-current assets	10026.27	20987.26
<b>Total Non-Current Assets</b>	<b>88267.29</b>	<b>99002.53</b>
<b>2. Current Assets</b>		



(a) Inventories	197445.58	169628.49
(b) Financial Assets		
1. Investments	51.83	62.14
2. Trade receivables	143037.35	120716.69
3. Cash and Cash equipment's	1401.02	6578.99
4. Loans	821.55	837.43
5. Other financial assets	509.91	1321.70
(c) Other current assets	39477.69	38265.72
<b>Total Current Assets</b>	382744.93	337411.16
<b>Total Assets</b>	471012.22	436413.69
<b>Equity and Liabilities</b>		
<b>Equity</b>		
(a) Equity share capital	4177.22	4177.22
(b) Other Equity	213978.12	208722.85
<b>Total Equity</b>	218153.34	212905.07
<b>Liabilities</b>		
<b>(1) Non –current liabilities</b>		
(a) Financial liabilities		
1. Borrowings	31052.30	36265.22
2. Other financial liabilities	41.60	32.99
(b) Provisions	17494.24	16064.26
(c) Other non-current liabilities	34189.87	36268.99
<b>Total non-current liabilities</b>	82778.01	88631.46
<b>(2) Current liabilities</b>		
(a) Financial liabilities		
1. Borrowings	11285.16	15367.44
2. Trade payables		
Micro & Small Enterprises	1819.71	1396.92
Other than Micro & Small Enterprises	47865.19	39750.54
3. Other financial liabilities	3216.48	7405.35

(b) Other current liabilities	89648.90	56069.27
(c) Provisions	14940.35	13512.15
(c) Current tax liabilities (Net)	1303.08	1375.49
<b>Total current liabilities</b>	170078.87	134877.16
<b>Total equity and liabilities</b>	471012.22	436413.69

## CHAPTER-2

### Conceptual Back ground and Literature Review

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#### 2.1 Theoretical Background of the Study

##### **Cost:**

Cost is the cash utilized to produce something.

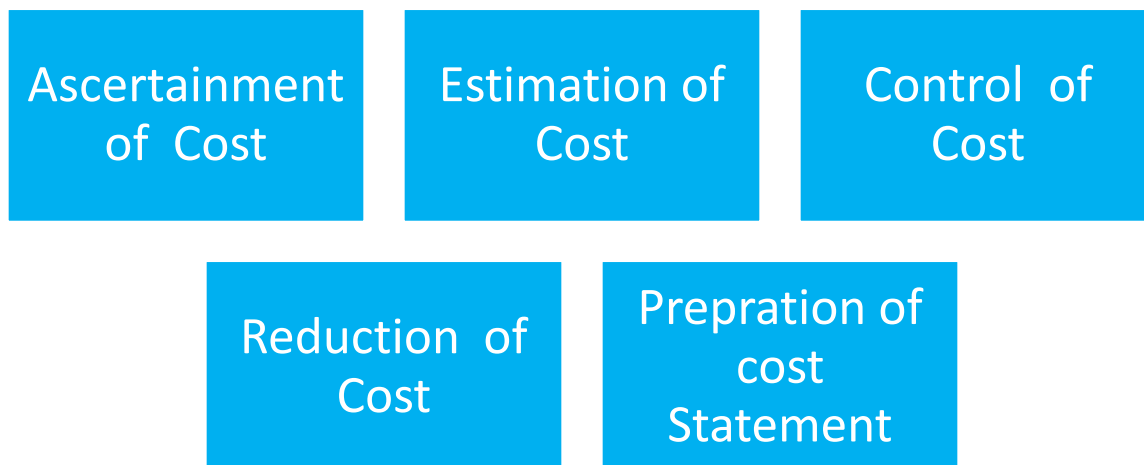
##### **Cost accounting:**

The recording of the extensive number of fees caused in a commercial enterprise in a way that can be applied to enhance its management

##### **Cost analysis:**

The manner toward growing and after that analyzing cost data from independent business components and for which assessing entire assets predicted to assist present and destiny enterprise.

##### **Objective of cost accounting**



### **1. Ascertainment of Costs:**

The procedure of ascertainment of expenses includes calculation of costs, which has been caused. The expenses might be discovered for various items. Administrations or exercises utilizing different costing techniques. The determination of expenses is important to control them and for giving cost data to the best administration for basic leadership.

### **2. Estimation of Cost:**

While costs are discovered after it has been acquired, the estimation of expenses is done before the real incidence. With the purpose of estimation.

### **3. Control of Cost:**

Cost control is identified with controlling and reducing costs to improve proficiency. Cost control can accomplish this proficiency by full usage of output at least cost.

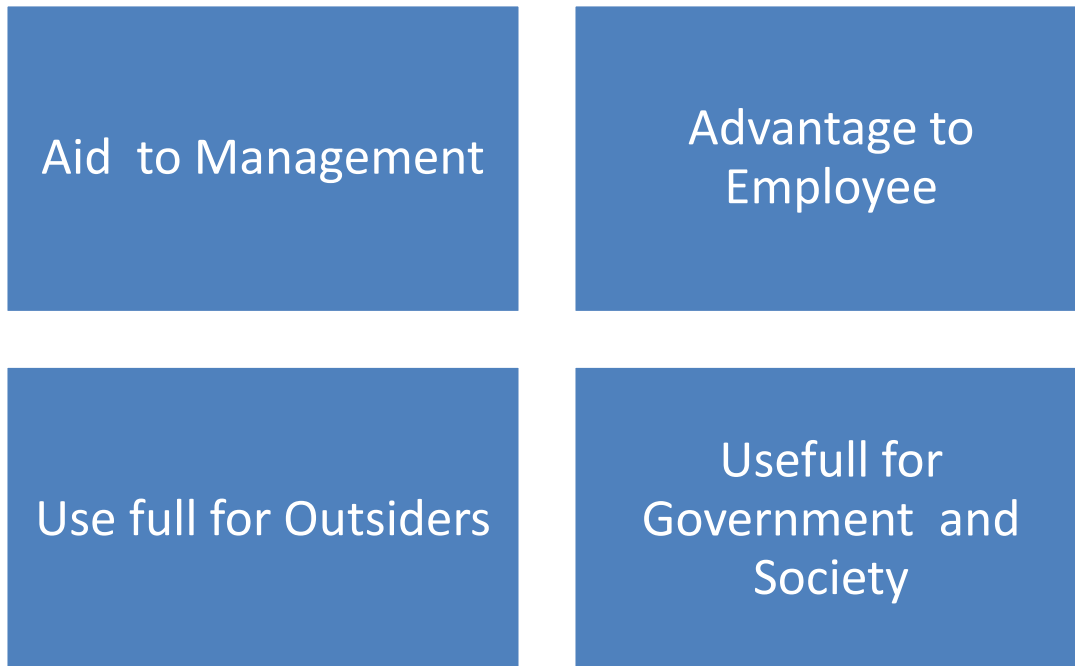
### **4. Reduction of Cost:**

The consummation of the Cost Control work is the beginning of cost lessening capacity. It includes making actual and changeless permanent reductions in the creation expenses of products and enterprises. It achieves the goal by eradicating wasteful inefficient activities.

### **5. Preparation of Cost Statement:**

Different elements of total costs are shown via a cost statement. This statement shows total cost, unit cost, units produced and sold, Closing stock in terms of units and value.

## Advantages of cost accounting



### **1. Aid to management:**

Cost bookkeeping helps the administration in taking different choices in regards to various capacities. The information gave by cost bookkeeping helps the administration in deciding unprofitable activities, it likewise helps in estimating productivity of different process.

### **2. Advantage to Employee:**

Cost bookkeeping helps in diminishing expenses and expanding benefit as to cost caused and creation unit required in various offices and procedures. It is additionally useful to introduce a motivator pay framework and extra designs.

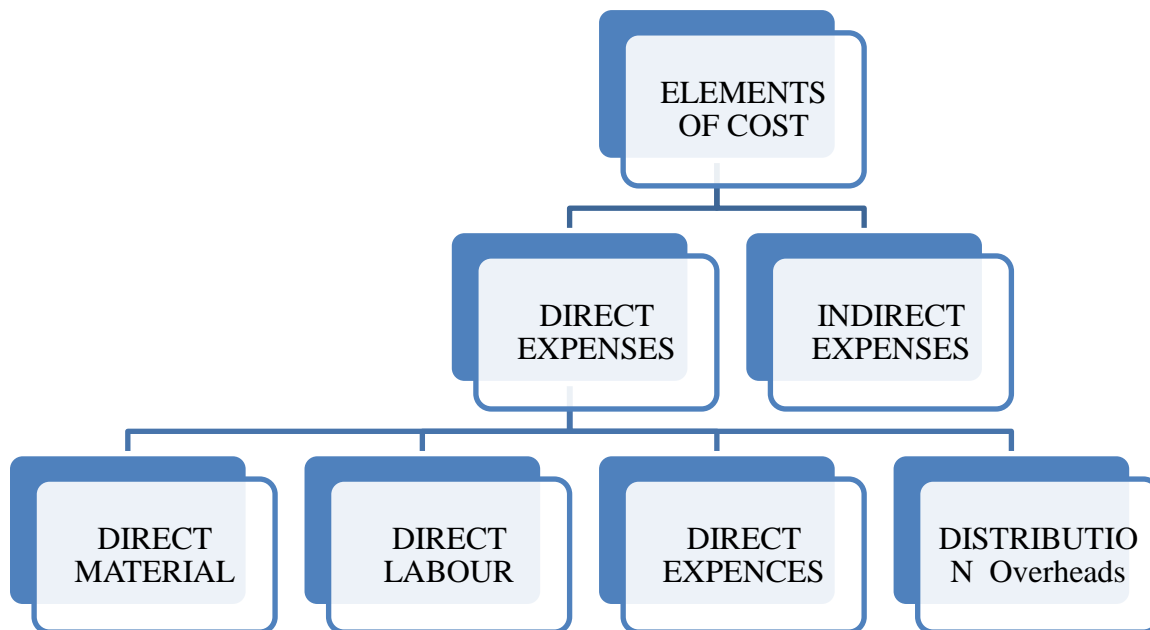
### **3. Useful for Outsiders:**

As effective, cost book keeping framework is useful for outsiders. The information gave by cost bookkeeping framework help them in assessing the budgetary soundness of the association.

#### 4. Useful for Government and the Society:

Cost bookkeeping helps associations in decreasing expenses and expanding benefits. This helps the general public and economy by paying higher duties. Cost control helps in giving products at bring down expenses. Cost bookkeeping likewise helps in making national strategies.

#### Elements of Cost



##### 1) Material

- Substances utilized for assembling items.
- Direct Material: Easily estimated and charged specifically to the item.
- Indirect Material: These are not immediate materials as these can't be specifically followed back to the item.

## 2) Labor

- Direct Labor: it incorporates representatives and specialists straightforwardly associated with the generation of the merchandise.
- Indirect Labor: This is subordinate to the creation of products or administrations.

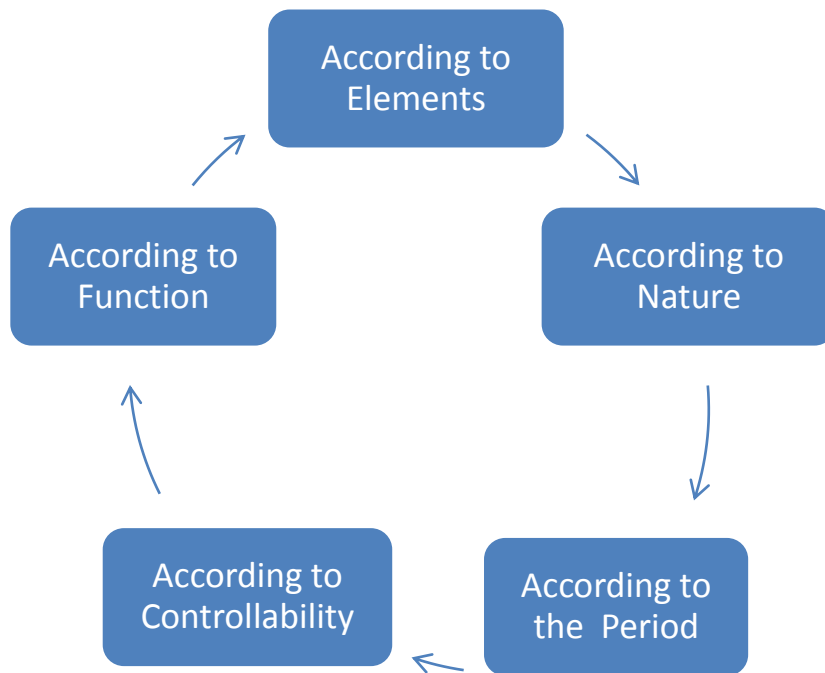
## 3) Expenses:

- Direct Expenses: costs which are acquired during the time spent assembling of products or rendering administrations.
- Indirect Expenses: costs which are not specifically identifiable with a specific item or administrations.

### **Overheads:**

- **Production or Factory Overheads:** This class demonstrates the total of backhanded wages, indirect material expenses and indirect costs brought about for different assembling exercises.
- **Administration Overhead:** This class incorporates indirect material cost, aberrant wages and indirect expenses incurred for strategic, control and organization purposes.
- **Selling Overhead:** This class demonstrates the total of all roundabout material costs, aberrant wages and circuitous costs acquired in creating and managing interest for item and administrations.
- **Distribution Overhead:** This classification incorporates circuitous material cost, backhanded wages and aberrant costs are acquired in pressing completed items for dispatch and making them accessible to clients. Characterization of expenses

## CLASSIFICATION OF COST



### 1) **According to Elements:**

Direct Cost

Indirect Cost

### 2) **According to function**

Production Cost

Administration Cost

Selling Cost

Distribution Cost



**3) According to Nature:**

Variable Cost

Fixed Cost

Semi-Variable Cost

**4) According to Controllability:**

Controllable Cost

Uncontrollable Cost

According to Decision-Making:

Marginal Cost

Differential Cost

Joint Cost

Sunk Cost

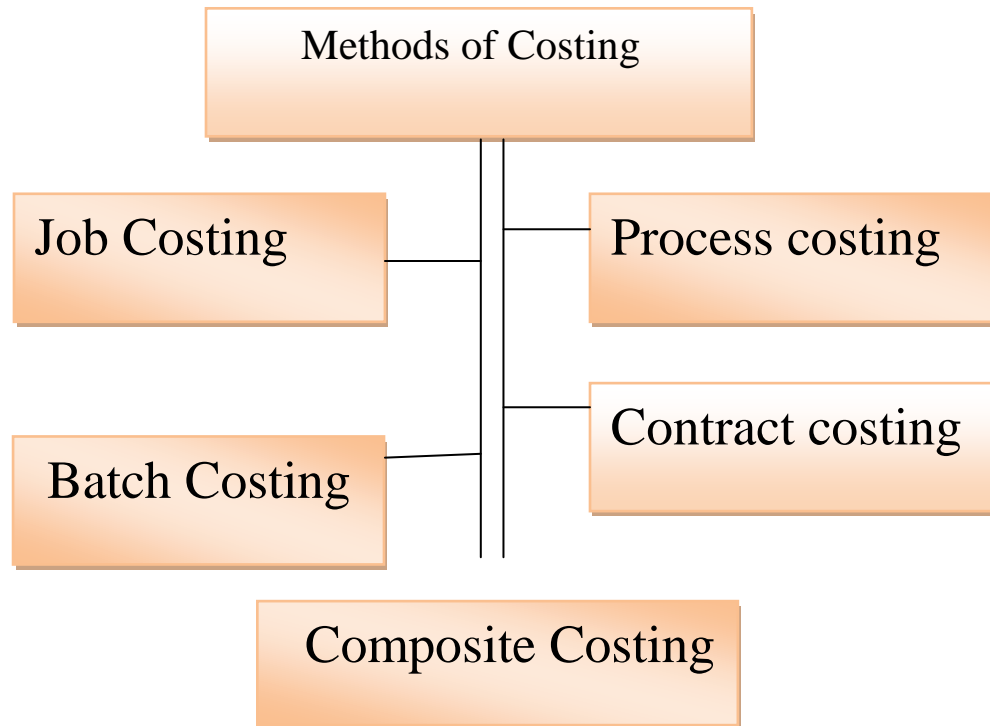
Replacement Cost

**5) According to the period**

Historical Cost

Future Cost

## METHODS OF COSTING



- **Job Costing:** It is utilized as a part of those business concerns where generation is completed according to particular request and client's details. Each activity is separated and distinct from alternate occupations or items.
- **Process Costing:** This costing strategy is utilized as a part of those ventures where generation is done continuously, Such as chemicals, oil, gas, paper, and so on.
- **Batch Costing:** This strategy is utilized to decide the cost of a gathering of identical or comparative items. The bunch comprising of comparative items is the unit and not the single thing inside the batch.
- **Contract or Terminal Costing:** This strategy for costing, in light of the rule of occupation costing is utilized by house developers and common contracts

- **Multiple or Composite Costing:** This costing strategy is utilized as a part of those businesses where the idea of the item is unpredictable, for example, motor cars, planes.

### Cost management tools



- **Value chain analysis:**

An esteem chain investigation is the entire arrangement of procedures that proselytes crude materials into completed and semi-completed items and afterward conveyed to a definitive clients. An esteem chain is an arrangement of tasks that a firm working in a specific industry accomplishes keeping in mind the end goal to convey an important item or office for the commercial center.

- **Just-In-Time**

In the nick of time (JIT) is a stock strategy wherein associations execute to raise the productivity and diminish squander by obtaining merchandise just as they are required in the creation procedure, in this way diminishing stock cost

□ **Target cost:**

An objective cost is the market decided cost Desired benefit. It is the distinction between the business value wanted to catch in planned piece of the overall industry and the coveted benefit per unit.

□ **Total Quality Management:**

It is a procedure in which administration creates strategies and practices to guarantee that the organizations items and administrations surpass clients' desires.

## **2.2 LITERATURE REVIEW**

The goal of the literature review was to grow an outline for the study and it gave the total comprehension and data on the information on the “cost management processes and practices” for different “development project methods”. It additionally gave some system for the present research, highlighted by the best specialists

- **Yetis-charm and Ballard (1998)**

"The earned esteem strategy is a venture control method that gives a quantitative measure of work execution. It is viewed as the most progressive procedure for joining of timetable and cost. Investigate of earning esteem technique incorporates: 1 while each cost record or movement is thought to be free in the earned esteem strategy, they ought to be viewed as reliant. 2 administrators can control work groupings while discharging work to the field and it is conceivable to discharge the work task that is not protected from vulnerability 3 so as to make cost differences positive, chiefs endeavor to diminish the real cost of work executed however much as could reasonably be expected'.

- **Khaledemirates and Amrkandic (2005),**

"The standard two-dimensional time-cost tradeoff examination to an advanced three-dimensional time-cost-quality tradeoff examination as a multi objective genetic computation gives the capacity of assessing and thinking about quality being developed progression".

- **Elizabeth Kraft and Paulis. Chinowsky (2003),**

"In this transformative advancement, the overwhelming demeanor inside the development business has been that vital business administration and long haul business arranging did not make a difference to the development business because of the continually changing nature of the activities. Be that as it may, in the changing monetary world, a resurgence of intrigue is happening in the significance of association administrator to the accomplishment of organizations in the an/e/c industry".

- **William c. Ibbs, Clarence k. Wrong and youthful HoonKwak (2001)**

"Changes in ventures are normal. Be that as it may, it influences the cost, the length of activities, both specifically and in a roundabout way. A thorough undertaking changes administration framework that is established, 2. Recognize change, 3. Assess change, 4 execute change 5. Continuously enhances from lessons learned. By applying this wander change organization system, expand individuals can constrain malignant change and progress profitable change".

- **Oaken 1 (et al) (April 2015)**

The paper suggested that the organization keen on minding out cost control methodology must be fundamentally be worried about cost decrease strategies as a method in accomplishing its points.

- **Anaphoraathalya (et al)**

This paper center around effect of cost control and cost decrease methods of introducing situation, It will enable business to enter cost must survive, develop and thrive just with the undesirable cost must control and diminish it essentially through with the assistance of different cost control procedures.

- **Radu marginean (etal) (March 2014),**

This paper utilizes the objective costing techniques to control the generation cost and it decides whether an item is productive or not.

- **Dr. Ram Nivas Saini (APRIL 2015)**

In light of this the concoction business received different cost controlling methods to control the additional cost brought about in the assembling procedure. Cost control is the only methods which enable the administration of synthetic assembling to the organization in the best of the examination.

- **Adiam S Maiga (etal) ( October 2013)**

This paper suggested that it terms of cost control framework, for example, ABC, IT coordination ought to be embraced as it communicated with the cost control framework to essentially affect fabricating plant, money related execution.

- **The Federal High way Administration (FHWA)**

This has influenced an interstate asphalt to outline [FHWA, 1998 year] life cycle cost examination of normal endeavors. In the investigation of life-cycle cost examination of semi-unbending base blacktop asphalt, Oscar Wilde and others [1999], the semi-inflexible base course – unbending base course blacktop asphalt life cycle cost parts system. As organization costs, client expenses and outside expenses of parts that the three segments of the cost. In the expenses of parts, this incorporates starting speculation costs, upkeep, recovery and cover. As indicated by the outline of the underlying expenses and figured by trouble expectation will occur toward the end of every time of restoration and upkeep costs.

- **Svetlana Popova, SatyaMohapatra, and JurgenRehm (2011 Aug):**

Cost-advantage investigations of liquor reliance (AD) tranquilize treatment and psychotherapy. Writing ventures of numerous electronic bibliographic databases. Hunt decides from the United States seven mental inquires about and two from the European medication treatment. In psychotherapy investigates, the primary advantages are normally observed in the initial a half year of treatment. Money saving advantage proportions extending from 1.89 to 39.0. Most accessible treatment choices by promoting appears to have noteworthy financial advantages.

- **Vladislav Pascal, AriasterChimeli, Roy Bold (April 2012)**

This report gives an autonomous survey of the cost and advantage gauges reusing stream alternatives by fluorine B&W Portsmouth. LIC, United States execution of vitality (DOE) temporary worker in the previous Portsmouth vaporous dispersion plant (port) Cost/advantage investigation reason for existing is as a guide in basic leadership. This examination is the fundamental thought behind the premiums, expenses or exchange starting with one gathering then onto the next, the measure of its incentive in dollar terms, and contrasted them to watch if the advantages exceed the expenses in the proposed framework impacts of a proposed venture.

- **Fit sum Kidane (2012):**

Cost examination of its part in the administration of the association. Significance of bookkeeping in administration choices, are as of now in the writing. Particularly in the region of real cost information, administration, bookkeeping, cost examination and cost assays. Choice in these regions the cost of information and investigation to enable chiefs to like a benefit, arranging, estimating, venture, showcasing and capital administration basic leadership.

- **Henrick J, Harwood, Deepti Malhotra, ChristelVillarivera, Connie Liu, Umi Chong, Jewelry GILANI (2002):**

Treatment suppliers, policymakers and citizens keep on facing how to utilize constrained assets to create the most customers, and social welfare issues. Despite the fact that it is natural for any treatment, enhances comes about, diminishing costs, providers, purchasers and leaders all the more frequently confront higher expenses and more viable treatment than presently gave by the choice. In this manner, it is fundamental that they have proven based data to help educate choices expanded effectiveness should increment as the cost of a unique treat.

- **Glick, Henry A:**

Studied, Basic example size and power recipe for money saving advantage examination has been in the writing. These formulae are inspected, depicts the example size and energy of the money saving advantage examination and different persistent variable investigation on the progressions of circulatory strain or weight contrasts and likenesses. Test size and normal computation likewise presented a money saving advantage investigation of meter writes and

parameter esteems on the presumption that the subsequent effect, and influence, at long last, the manner by which this information can be gotten.

- **Ellsworth, Richard K:**

Studied Cost investigation can be utilized to change over data in venture cost estimation of task cost for an assortment of enterprises. Cost volume connections the 1950 years considers have demonstrated that utilizing the suitable cost and limit factor for a specific thing write, limit with regards to new undertakings, from a known cost and limit advancement venture cost gauges.

- **Choodoung, Sakkarin Smutkupt, Uttapol:**

Examination, cost is by and large considered shows that the Key components of Production Efficiency. In this investigation, we bring the suitable get together arrangement getting ready for the advancement of strong wood furniture industry cost examination of wood industry General Assembly Sequence arranging and an extraordinarily created flighty similar examination and thought. Examination by 2 models include: wooden seat, utilizing the outline procedure and wooden materials restricted thought named 2-legged Chair: and model, One of the six wooden seats of the pandemic in the United States

- **Global Data Company Operational Analysis:**

. Considered Cost Analysis is the maximum recent file from Global Data, the enterprise exam masters, that offers exhaustive information on the operational and money associated execution of the agency. The record is a fundamental hotspot for key operational facts, research and critical information into agency. The report gives most recent yearly and quarterly define of technology, holds, proportion price execution, store changes, Capital consumptions

- **Wayne F Schramm**

The primary position of this research turned into to determine whether WIC pre-beginning cooperation is associated with a lessening in Medicated charges inside 30 days after birth, and, supplied that this is proper, regardless of whether or not the lower in Medicated charges is extra



prominent than the WIC changed into carried out using 7628 Missouri Medicated facts coordinated with their evaluating 1980 Birth statistics

- **Ennio Cascetta;**

Dynamic the Campania Regional Metro System venture is a case of integrated land-make use of framework and operational arranging. The whole project depends on coordinating the modern railroad traces right into a solitary physical device by constructing some new connections, new stations and new modular change places of work. The RMS task coordinates likewise operational segments, for instance, benefit traces, timetables and incorporated estimating. Notwithstanding the travel “supply – aspect” components

# Chapter 3

## Research Design

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### 3.1 Statement of the problem

Since the major portion of the total turnover of the company is metro. The problem in this study is to know the cost of manufacturing metro rail coaches and its pricing strategies and how to reduce cost of the manufacturing of metro rail and metro coaches.

### 3.2 Need for the study:

- In a highly competitive market, cost analysis is the only way to maximize the profits
- Fix prices for their products or services to control costs

### 3.3 Objective of the study

- To analyze the various cost reduction techniques implemented in the organization.
- To determine the wastage of material handling in the organization
- To examine the cost and benefit analysis
- To find out the cost of each coach and its impact on metro rail.

### 3.4 Scope of the study;

The research study was conducted in BEML, Ltd, Bangalore. And the duration of the study will be for 2 months (10 weeks). The scope of the study is confined to the financial department with the information provided by the company as well as the time duration of the project. The data used is related to the income statement of the company for the period 2016-2017.

### 3.5 Research methodology

In the analysis of cost and benefit, analytical research design is used. In which past data of the company are used to interpret the cost control and benefit technique in the company.

### **3.5.1 Research Design**

#### **Descriptive approach**

This deals with the findings of modern processes to figuring out the nearest artwork via taking antique earlier courses as a sensible start line.

This study is based on a face to face interview with company staffs, managers and accounts also based on the availability of various data through annual reports, cost sheets and academic books

### **3.5.2 Sources of Data**

#### **Secondary data:**

Secondary data will be collected by referring to journals and magazines and costing books.

### **3.6 Limitations**

- The study was conducted within the available source and also within the limited line period.
- Confidentiality- confidentiality of the cost accounting another limitation of the study

### **3.7 Chapter scheme**

Chapter 1: It gives a brief description about the Industry profile and the company's profile, promoters, Vision, mission and Quality policy and SWOT analysis of the company.

Chapter 2: It gives the theoretical background of the study and the literature review.

Chapter 3: It gives a brief note on the research design and all other functional departments of the organization`

Chapter 4: It deals with study and understanding of the data collected in the organization.

Chapter 5:It gives the summary of Findings , Conclusions and suggestions.

# CHAPTER-4

## Data Analysis and Interpretation

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This section includes the projection of project's main theme and what are the methods implemented to draw the conclusion and also methods used for measuring the performance. Key note included here will be calculation and analysis of rates and overheads which effect on the investment made. Following stage is to make sure the Financials which are for the investigation. These figures from. These are appropriate in the working out of expenses.

Requirement for examination of budgetary articulation

As indicated by Myers, "budgetary articulations investigation is to a great extent an investigation of the relationship between different money related factors in a business as revealed by a solitary arrangement of explanation and investigation of the pattern of the factor as appeared in a progression of proclamation

### **Materials:**

- Direct materials
- Indirect material

### **Labour:**

For the conversion of materials into finished goods, human efforts are very much needed. Such human efforts are known as “Labour”. They can be both direct and indirect as well.

- **Direct Labor:** he is the one who takes action and direct part in the production of a particular commodity.
- **Indirect Labor:** work utilized to carry out takes incidental to products delivered or benefits is given is aberrant work.

### **Overheads:**

- Production or Factory Overheads
- Administration Overhead
- Selling Overhead
- Distribution Overhead

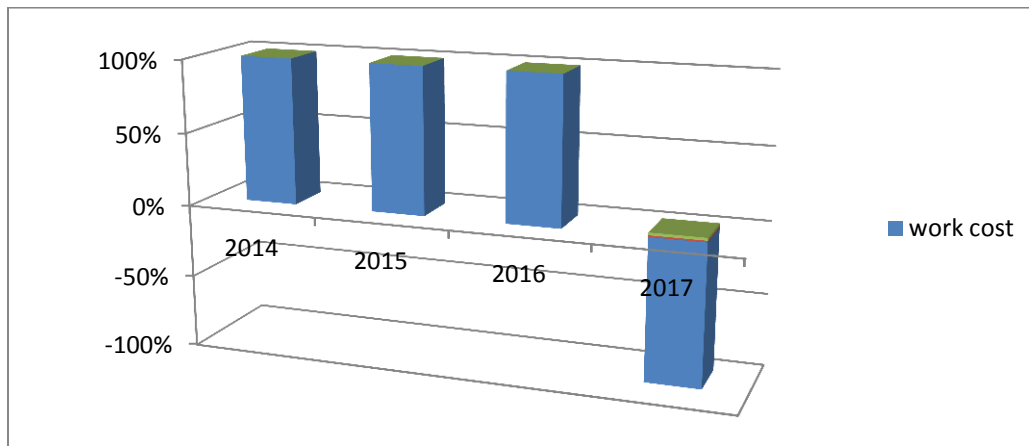
#### 4.1 WORK COST

The actual price of labor achieved are the sum of all of the fees incurred in undertaking work that is achieved for a given term for a plan movement or work breakdown structure element. It consists of direct fee and oblique cost

**TABLE -4.1: Table Showing Works Cost during 2014-17**

Year	Work cost (in lakh)
2014	31969.1
2015	35942.14
2016	61460.44
2017	-260.03

**Graph -4.1: Graph Showing Works Cost during 2014-17**



#### **Analysis and interpretation:**

The above table presenting the work cost for the previous 4 years of BEML Limited. Here it is growing in the metro cab works cost for the last 4 years. It has better advance in the production. The above graph displays the works cost for the last 4 years of BEML Limited. Here we can see there was a huge drop in the year 2017 due to the saving of projects on the railways, but in the 2016 there was a drastic hike in their work cost because of getting the Delhi and Kolkata metro project. From then on there is a better improvement in production and labour.

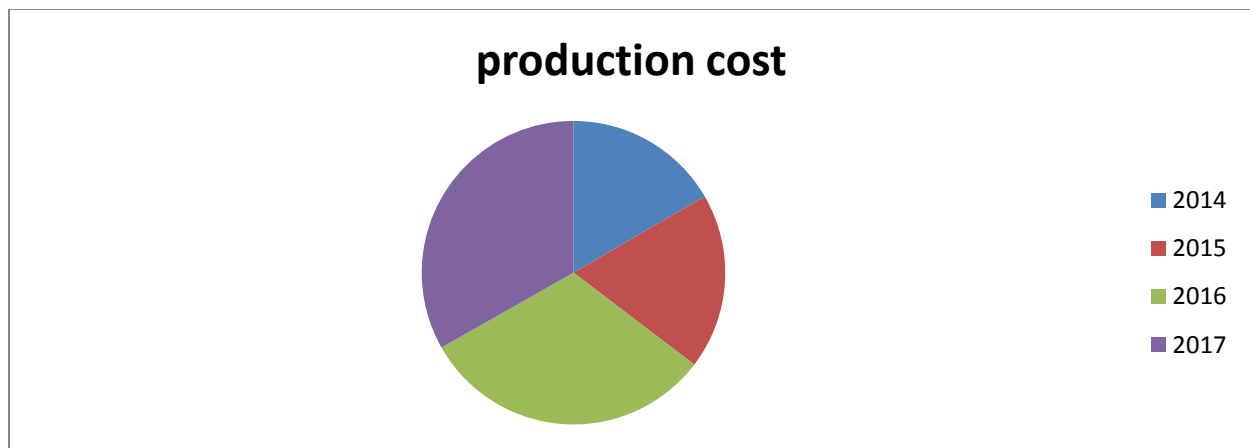
## 4.2 Production cost

Service Production costs may combine raw material as well as the labour.

**TABLE:-4.2: SHOWING PRODUCTION COST during 2014-17**

Year	Production cost (in lakh)
2014	33849.76
2015	38183.28
2016	64068.25
2017	67669.25

**Graph-4.2: SHOWING PRODUCTION COST during 2014-2017**



### **Analysis and interpretation:**

The over table shows the production cost for the last 4 years of BEML Ltd. It has better improvement in the production cost. In the year 2014 production cost are Rs 33849.76 in the next year that is 38183.28 production cost have slightly been increased

From the collected information from the above table, we can observe that production cost has increased year by year, it is a good sign for the company's growth, production increased in the since demand for the products of the company increased.

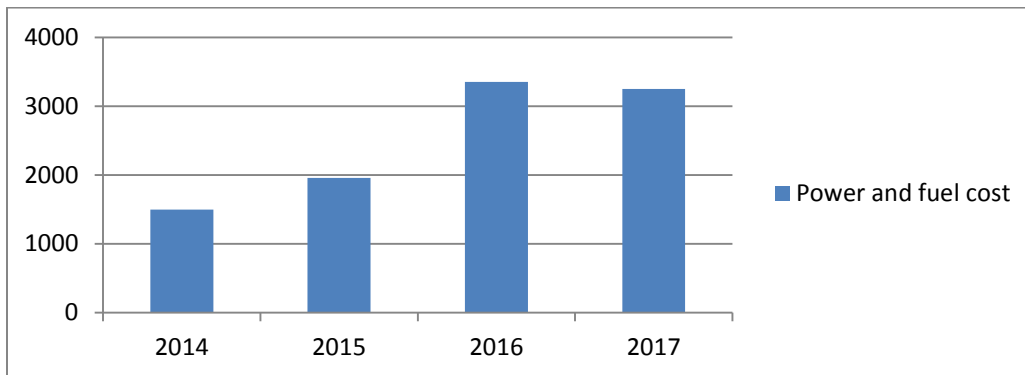
### 4.3 Power and fuel cost

. Brake particular fuel utilization is a measure of the fuel proficiency of any prime mover that consumes fuel

**TABLE -4.3: SHOWING POWER AND FUEL COST during 2014-2017**

Year	Power and fuel cost
2014	1497.64
2015	1957.32
2016	3353.98
2017	3248.99

**GRAPH -4.3: SHOWING POWER AND FUEL COST during 2014-2017**



#### **Analysis and Interpretation:**

The above table shows that power and fuel cost for the last 4 years of BEML Ltd it is not constant it is fluctuating year to year, it is a little bit difficult to predict next year power and fuel cost.

From the above table, we can observe that the power and fuel cost increasing Year by year. BEML needs to work on the alternative method to reduce this cost so that it reduces its expenses in the year 2014 by 1497.64.

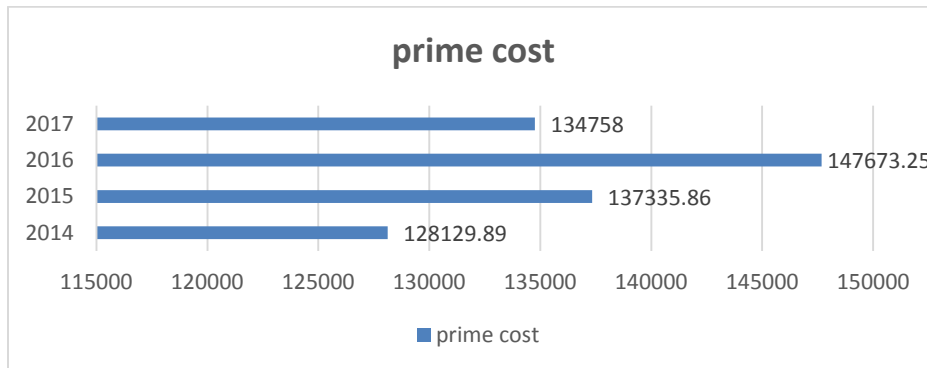
#### 4.4 Prime cost

The operational expense of the materials and work it is utilized as a part of production is known as prime cost. It is a method for estimating the aggregate cost of the generation inputs expected to make a given yield. An organization can decide the amount it charges for its completed item keeping in mind the end goal to make a benefit by examining its prime expenses,

**TABLE – 4.4: SHOWING PRIME COST during 2014-2017**

Year	Prime cost
2014	128129.89
2015	137335.86
2016	147673.25
2017	134758.00

**GRAPH-4.4: SHOWING PRIME COST during 2014-2017**



#### Analysis and interpretation:

On top of the table shows the prime cost for the 4 years of BEML Ltd. Here it is slight increasing in the metro cab consumable store cost for the last 4 years. It has better improvement in the cost. On the top of the graph we can observe that by lowering its prime costs, a company can increase its profit margin. In the year 2014 Rs 128129.9, in the next year that is 2015 cost have increased to Rs 137335.9. As we can observe that there is increasing in the prime cost, the company needs to reduce this cost so that it attracts the more customers and it gives a tough competition to its competitors.



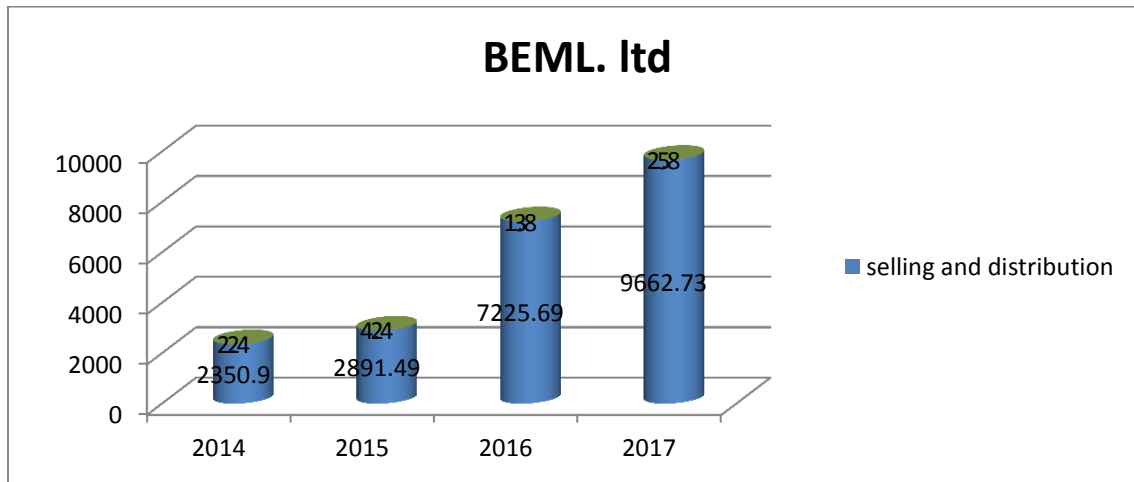
## 4.5 Selling and distribution expenses

Cost that a business brings about to showcase and distribute its item that can incorporate such things as publicizing, deals commission.

**TABLE -4.5: SHOWING SELLING AND DISTRIBUTION EXPENSES during 2014-2017**

Year	Selling and distribution expenses( in lakh)
2014	2350.9
2015	2891.49
2016	7225.69
2017	9662.73

**GRAPH-4.5: SHOWING SELLING AND DISTRIBUTION EXPENSES during 2014-2017**



### Analysis and Interpretation:

The graph is based on the cost incurred in promoting the products it increases the growth of the company, however, in the year 2017, 9662.73 is increased when compared to previous years.

This table clearly shows that selling and distribution expenses in 2017 is 9662.73 lakes it is increased compared to previous years selling and distribution expenses of 2016 is 7226.69 and in 2015 is 2891.49, company spending more amount in 2017, it's because of reaching its products to its customer in all areas so this way it increases revenue to the company also.

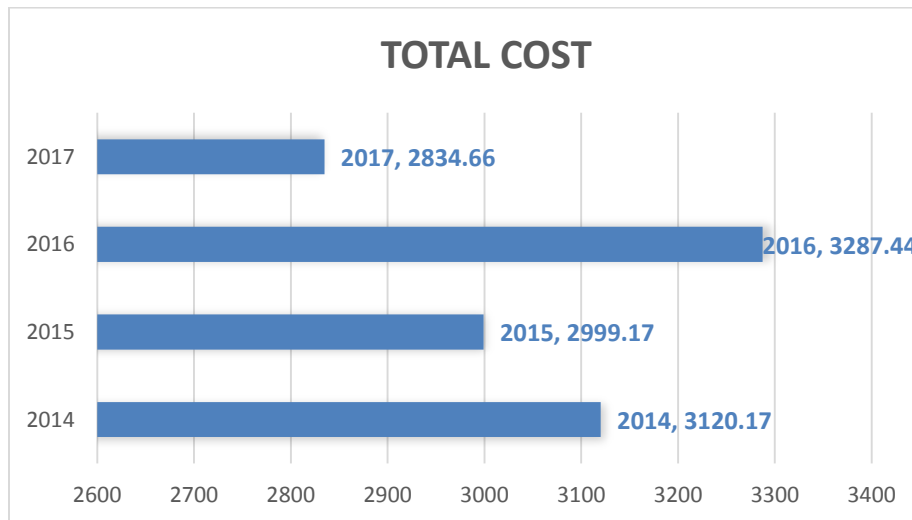
## 4.6 TOTAL COST

The aggregate financial cost of generation and is made up of variable costs, which fluctuate as indicated by the amount of products delivered and incorporate information sources, for example, work and materials.

**TABLE-4.6: SHOWING TOTAL COST during 2014-2017**

YEAR	TOTAL COST(in lakh)
2014	3120.17
2015	2999.17
2016	3287.44
2017	2834.66

**GRAPH -4.6: SHOWING TOTAL COST during 2014-2017**



### **Analysis and interpretation:**

From the exceeding table, we can understand that total cost of the company is reducing year to year in 2017 Rs 2834.66 and in 2016 it is 3287.44. Total cost is decreasing year to year, so it is the good sign of the company to achieve its desired goal. Because all the companies want to reduce total cost to earn desired profit. This graph indicates that company using different costing methods to reduce the cost

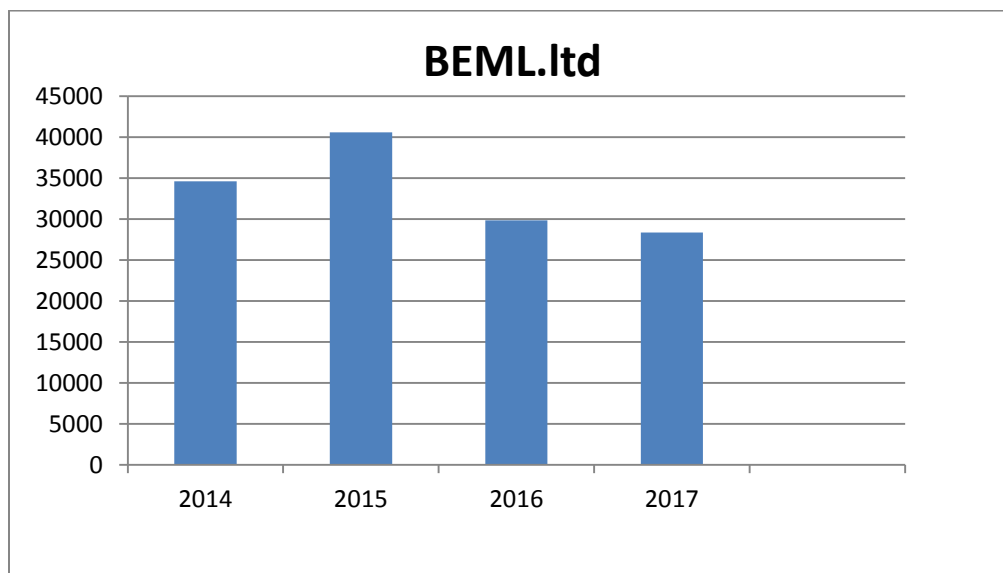
#### 4.7 SALES REVENUE:

It is one of the activities of organization where the firm make the selling the product or rendering the services and making the profit.

**TABLE: -4.7: SHOWING SALES REVENUE during 20114-2017**

Year	Sales
2014	34635.03
2015	40578.03
2016	298372
2017	283466

**GRAPH: -4.7: SHOWING SALES REVENUE during 2014-2017**



#### Analysis and Interpretation:

From the table, we can observe that sales are not constant because sales include many factors, in the year 2017 sales is 283466 and in the year 2016 it is 298372 in the sense it decreasing the value of the sales

Company need to take some measure to increase the volume of sales by attracting customers with affordable prices.

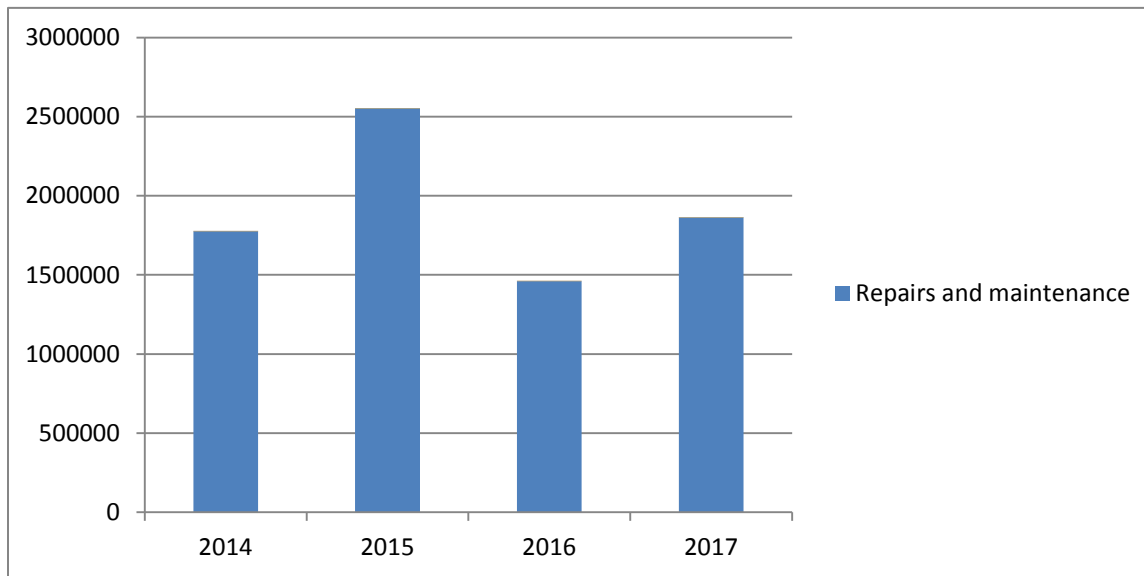
#### 4.8 Repairs and Maintenance Cost:

Repair and renovation value entails in fixing any type of mechanical, plumbing or the electrical device which turn out to be out of order or say damaged ( which may also be referred to as restore, unscheduled, or casualty maintenance)

**Table 4.8: SHOWING REPAIRS AND MAINTENANCE COST during 2014-17**

YEAR	Repairs and maintenance cost
2014	1774800
2015	2251300
2016	1459520
2017	1862500

**Graph -4.8: SHOWING REPAIRS AND MAINTENANCE COST during 2014-17**



#### Analysis and Interpretation:

The above table shows the Repair and maintenance cost for the previous year of BEML LIMITED. Here it has better improvement in the R and M cost. In the year 2016 cost are 1459520 in 2015 cost have drastically been increased to Rs 2251300. We can see that in the year 2015 there was very high expense on the repairs and maintenance due to the introduction of

the metro rails but the company has constantly working on their production by using good quality of material therefore there is reduction in their R&M cost in 2016. This is a very good sign to the company.

## CHAPTER: 5

### SUMMARY OF FINDINGS, CONCLUTIONS AND SUGGESTIONS

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#### 5.1 FINDINGS

- The work cost as been increasing from past 3 years since 2014 to 2016, but in 2017 the work cost as been drastically decreased 260.03 lakhs.
  
- As I observed in the BEML company the power and fuel cost has constantly fluctuating in the year 2014 is 1497.64 and it has again increased for 2015 that is 1957.32 and again 2016 and 2017 it has been decreased for rupees 3353.98 and 3248.99 due to economic condition.
  
- As I analyzed in the BEML company sales revenue in the year 2014 is 34635.03 where as 2015 is 40578.03 and in the year 2016-2017 is 298372 and 283466 is decreasing so company need to take some measure to increase the volume of shares
  
- The overall cost of the organization has decreased in the 2017 is 2834.66 and it has increased 2016 is 3287.4, so company is concentrating on reducing the cost to achieve desire profit
  
- The company gives high preference to quality of the production.
  
- The company documentations are fully computerized, as the company is working with SAP.
  
- The company has well defined purchase and policies.
  
- Repair and maintenance has increased from the year 2014-2017

## 5.2 SUGGESTIONS

- .They should concentrate more on assembling items like rail and metro items to increment in their benefit of the organization
- The organization should give more spotlight on diminishing crude material wastage, which may bring about better use of accessible assets.
- The company ought to enhance their deal advancements procedure remembering the ultimate objective to diminish offering and dispersion costs.
- The organization should more spotlight on JIT (Just in Time) systems to diminish costly. It is vital to lessen the assets.
- The company should give, the more imperative on settling on or purchase choice. It will decrease the cost.
- ABC investigation uses in cost administration and control the cost.
- KAIZEN costing is the most vital to diminish the cost and upkeep cost control.

### 5.3 CONCLUSION

This report gives an entire learning of the different rate and advantages of venture arranging. This task has their own particular quality and shortcoming. One thing for MSP is totally its adaptability for customization and working measurements limit with Microsoft Excel.

The rail and metro industry are the one is having a vast framework venture cost and numerous more things. At bring down levels MSO will be adequate since it is anything but difficult to deal with and utilize.

The favored chance of doing the two-month long summer venture ended up being very advantageous in the administration point of view. It gives a useful information about the verdure of the corporate cost and it empowered me to have a presentation genuine exercise identified with an organization working, structure and so forth. It likewise helped me know the reasonable use of the speculations in the corporate cost.



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### **WEBSITES**

<http://www.bemlindia.com>

Money control.com

## ANNEXTURE

### COST SHEET

A cost sheet for the year 2016-2017

(in lakhs)

<b>Particulars</b>	<b>Amt</b>
Cost of material consumed	134757.95
<b>PRIME COST</b>	<b>134757.95</b>
Add: Factory Overheads:	
Consumable store	538.28
Hire charges	958.71
Power and fuel	3248.99
Insurance	352.13
Rent	445.47
Repair and maintenance	1862.50
Add: Opening work in process	50059.12
Less: Closing work in process	57725.23
<b>WORK COST</b>	<b>-260.03</b>
Add: Office overheads:	
Salaries	58888.93
Contribution to PF	5797.22
Staff welfare expenses	6474.13
Rates and taxes	443.42
Printing and stationary	138.51
Auditor remuneration	25.27
General expenses	585.34
Legal and professional	216.85

<b>COST OF PRODUCTION</b>	72569.67
Add: Opening stock of finished goods	37099.07
Less: Closing stock of finished goods	41999.49
<b>COST OF GOODS SOLD</b>	<b>67669.25</b>
Add: Selling and distribution overheads:	
Commissions and brokerage	45.02
Miscellaneous expenses	6641.33
Warranty and unexpired obligations	1290.93
Travelling	1461.70
Advertisement	223.75
<b>TOTAL COST</b>	<b>211829.9</b>
<b>PROFIT</b>	<b>20.51</b>
<b>SALES</b>	<b>283466.00</b>

A cost sheet for the year 2015-2016

(in lakhs)

Particulars	Amount
Cost of material consumed	147673.25
<b>PRIME COST</b>	147673.25
Add: Factory Overheads:	
Consumable store	809.58
Stores consumed	898.82
Power and fuel	3353.98
Rates and taxes	659.58
Rent	286.58
Repair and maintenance	1459.52
Hire charges	556.63
Add: Opening work in process	58494.87

Less: Closing work in process	50059.12
<b>WORK COST</b>	61460.44
Add: Office overheads:	
Salaries	56842.03
Contribution to PF	5752.86
Insurance	264.34
Directors' remuneration	24.92
Printing and stationary	138.51
Telephone and postage	156.64
Auditor remuneration	24.92
Bank charges	706.51
Legal and professional	157.52
<b>COST OF PRODUCTION</b>	64068.25
Add: Opening stock of finished goods	52593.00
Less: Closing stock of finished goods	50059.12
<b>COST OF GOODS SOLD</b>	66602.13
Add: Selling and distribution overheads:	
Commissions and brokerage	1025.65
Miscellaneous expenses	3231
Warranty and unexpired obligations	2011.23
Travelling	649.23
Advertisement	285.49
Carriage outwards	3.09
<b>TOTAL COST</b>	282961.51
<b>PROFIT</b>	15410.49
<b>SALES</b>	298372.00



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ACHARYA INSTITUTE OF TECHNOLOGY DEPARTMENT OF MBA  
INTERNSHIP WEEKLY REPORT (16MBAPR407)

Name of the student:Vasantha.M

Internal guide:Dr.Prakash.Byaragol

USN No: 1AY16MBA85

Specialisation: Finance

Title of the project:"A study on cost analysis and benefits of metro project" at BEML LTD

Company Name: BEML LIMITED

Company address:P.B.No. 7501, New Thippasandra Post, Bangalore-560075

Week	Work undertaken	External guide signature	Internal guide signature
1 <sup>st</sup> week	Introduction about BEML and its operation		
2 <sup>nd</sup> week	Learning about different operation and products of BEML		
3 <sup>rd</sup> week	Gathering information about BEML		
4 <sup>th</sup> week	Analysing the position of the company in the BEML		
5 <sup>th</sup> week	Research problem identification		
6 <sup>th</sup> week	Preparation of the research instrumental for data collection		
7 <sup>th</sup> week	Theoretical background of the study and interpretation of the data collected during the survey		
8 <sup>th</sup> week	Interpretation of the data collected during the survey and preparation of report.		



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